

KG ~~H86~~
11366
v. 357

1899phae.proj.1361W

Con. from Book B. 10v.

Apr. 14. 1899.

Nova Sagittarii.

1A	51 ^m	-13.0
17	24	
<hr/>		
1	27	
12	00	
<hr/>		
10	33	

A. & S. gr. used. 2A.

Copied &
Ledgered.

15 ^t	32 ^m	46 ^s
<hr/>		
15	31	52 ^v

46.1	49.2 ^v	
95.9		
47.3	46.4 ^v	
93.7	96.2 ^v	1.7 ^v

48.9	44.9 ^v	
93.8		1.7A ^v
46.9	42.7	
	50.2	
97.1	95.1	
95.6	93.6 ^v	1.22 ^v

RB

134.3		
187.2	52.9 ^v	
136.8		
187.4	50.6 ^v	
	103.5 ^v	1.57 ^v

39 ^m	50 ^s
<hr/>	
3A	56 ^v
15	35

137.0	47.3 ^v	1.63 ^v
184.3		
135.6	51.4 ^v	
187.0	92.7 ^v	1.69 ^v
		Mean 1.70 ^v

Apr. 12. 1899.

R.B.

Copied &

Ledgered

15 42^m 13^s~~VR~~15 41 19^v~~133.1~~

135.0

148.9

137.0

146.3

VR 39^v49.3^v103.2^v1.52^v

137.9

144.5^v

134.4

~~148.0~~

147.2

46.6^v+1.62^vVR 2.2^v99.4^v1.67^v

2a

226.1

275.8

227.0

276.1

49.7^v49.1^v92.2^v1.69^v

228.2

273.9

224.2

275.0

45.7^v+1.72^vVR 0.2^v96.5^v1.74^vmean +1.67^v49^m 40^s~~VR~~42 46^v15 45 2^v mean.

April 19, 1899 (Wednesday)

Comp. Stars for.
R. Lepantis.

(W. Obs.)

9 35 7.4
9 30
50 25

9 20 - 5.0
9 39
09

Copied

2 5 B

0 4 8

8 1.5 8

0 4 3

3 4 Eta

Eta 4 K

K 3.5 0

0 5 2

2 2.5 2

2 5 u

7 45.0

3 13.0

12 48.0 Grand Total

Watch 3 minutes slow.

April 19, 1899

R. Sextantis. m 612.

Star compared with (5.2)

Left & Above

Copied.

	325.5		
7	354.1	25.3	
	327.0	<u>26.0</u>	+3.22
	353.0	51.3	

	327.4		+3.22
	353.6	26.2	
	328.1	<u>24.9</u>	+3.23
	353.0	51.1	

Right & Below.

55.1

	52.5	27.5	
	58.0	<u>23.6</u>	+3.36
	51.6	48.1	

8	04.0	57.0		+3.30
7	5	53.0	25.4	
12	58.5	57.5	<u>25.6</u>	+3.23
		53.1	51.0	

Mean = +3.26

Star extremely faint especially in moon-light, observations difficult.

April 19, 1899.

5 20.0 Clouds.

R. Sextantis.

Star comp with 8.2

Right & Below.

231.3

8 26.0

269.3

231.8

276.3

225.9
27.
2.
2.

Left & Above.

3

Clouds.

Reject the above readings.

S. Ursa minoris.

15 59 178.2

11 06

~~14~~ 53

7 ~~51~~ 07

April 19, 1899

I Nasa Min

$$\begin{array}{r}
 15 - 49 + 75.2 \\
 \hline
 11 \quad 12 \\
 4 \quad 37 \\
 7 \quad 23
 \end{array}$$

Left Column Standard Count with (0)

326.0

355.3

29.3

Opined

9 37.0

324.4

33.3

2

+2.76

357.7

62.6

+2.70

323.3

355.1

34.8

325.7

31.3

+2.64

357.0

66.1

Right Column

53.0

57.2

34.2

58.8

34.0

+2.57

57.8

68.2

+2.56

53.0

55.0

35.0

9 42.0
39.5
 3.

53.3

33.5

+2.56

58.5

68.5

Mean = +2.63

14 42.5 Substituted

April 19 1899

P Ursa Minoris

Star e comp with (g.o)

Right & Below

Copied

9 44.0

56.0

55.0

29.0

55.2

32.6

+2.80

57.8

61.6

+2.52

55.0

55.6

30.6

55.0

30.3

+2.53

55.3

60.9

Right & Above

144.6

175.4

30.5

144.4

31.7

+2.77

176.1

62.5

+2.72

144.0

176.3

32.3

144.2

32.5

+2.68

176.7

64.8

Mean = +2.77

9 50.0

47.0

3

14 50.0 hr m. time.

Notation that on supplementary Chart.

April 17, 1899.

U. Coronae. Phot. T. W. (Lb.)
 Comp. Star = +32° 25' 70" (9.3)

15 5 - 33.8
 12 4
 3 4
 5 5.6

Clouds above
 Right & Below.

These are copied & Ledgered.
 Full aperture used.

10 21 45 32 140.0 140.0
 357.7 137.2
 183.0
 139.7
 180.1

45.8

40.4

86.2

- 2.02

32

138.0

-1.97

23 40

183.0

45.0

137.1

44.8

-1.92

181.9

89.8

Left & Below.

4764.6416

4762.5398

+1.8018

26 20

272.3

41.6

229.1

45.1

-2.00

274.2

86.7

4764.
 4762.8437

-1.97

228.3

272.9

44.6

228.2

44.3

-1.94

274.5

88.9

mean -1.97

Apr. 19, 1899

U Coronae

Left & Below

	229.0		
10 29 10	272.6	43.6	
	228.0	44.2	-1.97
	272.2	87.8	

-1.99

	225.5		
30 25	272.5	44.0	
	229.6	42.4	-2.01
	272.0	86.4	

Right Above

	319.1		
32 35	311.9	42.8	
	315.2	48.8	-1.87
	4.0	91.6	

-1.89

	317.6		
33 40	315.5	46.2	
5 50	315.2	44.0	-1.91
10 31 28	2.2	90.2	
5 -	-5.7		

15 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

mean = -1.94

April 19, 1899,

M Cronas

III

Right above.

10 42 25	319.5	137.3		
10 35 35	1.5	154.0	46.7	
	154.0	319.2	<u>44.0</u>	-1.90
	316.3	3.2	90.7	

44 00	4.3	135.0		-1.55
35 40	1	152.6	44.6	
	3	316.5	<u>46.9</u>	1.57
	4	3.4	91.5	

Left above

	47.2		
47 35	97.0	49.8	
	228.5	<u>41.8</u>	-1.87
	270.6	91.6	

	50.0		-1.92
49 40	92.0	42.0	
23 40	228.3	<u>45.7</u>	-1.98
10 45 55	274.0	87.7	
5 -55			

15 44 57 G.M. Time.

47646563
 4762.5398
 +1.8165

Mean = -1.90

April 19, 1899.

U Coronae

IV

Left Hand

1052 15	46.0		
	95.5	49.8	
	228.5	<u>43.7</u>	- 1.82
	272.2	93.5	

-1.94

54 15	50.7		
	90.5	40.2	
	225.0	<u>44.6</u>	- 2.06
	272.2	84.8	

Right Hand Below

56 10	317.5		
	4.2	46.4	
	137.5	<u>45.3</u>	- 1.87
	152.5	91.7	

-1.90

57 15	315.3		
	2.9	44.6	
	135.0	<u>45.0</u>	- 1.92
10 55 06	152.0	89.6	
5	5.2		

15 54 F. G. M. Time.

4764.6626

4762.8398

+ 1.8228

Mean = -1.92

April 19, 1899

V Coronae

V

Right & above

317.9

10 59 05

2.6

44.7

138.6

44.2

-1.94

152.8

88.9

315.6

-1.92

11 00 40

3.0

44.4

138.3

45.7

-1.91

154.0

90.1

Left & Below

228.3

03 00

273.6

45.3

50.3

40.5

-2.03

90.8

85.8

229.9

-2.00

04 30

272.0

42.1

7 15

48.3

45.3

-1.98

11 1 49

93.6

87.4

mean = -1.96

5 0 51

57.9

4764.6673

Bond 394

16 0 51

57.9

4762.8395

11 16 00

11 17 00

58.0

+1.8275

11 17 00

April 21, 1899 (Friday.)

Plot T.

U. Coronae.

(W. Obs.)

15 8 +33.9

9 45

5 23

6 37

6 49

Full aperture used.

15 8 +33.9

9 50

5 18 There is Ledgered &
6 42 Copied.

Right Above

75225 136.9 ~~134.2~~ 134.2
75030 124.0 153.2 510

317.1 47.0 -1.71
4.1 95.0

5825 136.2
155.2

315.6 49.0
6.5 50.9 -1.66
99.9

-1.68

Left Below

5810 47.6 48.2
95.8 46.9 -1.75
227.2 95.1

-1.80

4766.5356
4766.2919
+ 0.2467

50530 47.8 45.5
22630 43.3 48.2 -1.52
75638 274.0 93.7

mean = -1.74

April 21, 1899

Left Elbow

II

45.5
 5 02 55 93.2
 228.5
 273.1

47.4
 44.6
 92.0

-1.86

-1.84

05 03

48.0

93.3

226.5

275.5

45.3

48.7

94.0

-1.81

Right Elbow

314.6

07 15

7.7

139.0

183.3

53.1

44.3

97.4

-1.72

-1.76

317.2

3.4

196.2

184.0

46.2

47.8

94.0

-1.81

Mean = -1.80

09 20
 24 35
 8 6 9
 5 -1 -5
 13 5 1

Gr. M. Time.

4766.5451

4766.2919

+0.2532

April 21, 1999

Right above

111

3152

8 11 10

6.0

50.8

1367

48.0

-1.69

184.7

98.8

-1.74

317.0

13 00

4.2

47.2

137.2

48.0

-1.75

7

185.2

95.2

Left below

2255

15 40

2748

46.3

-1.85

48.5

45.0

93.5

91.3

-1.83

228.2

17 10

2744

46.2

-1.78

17 00

48.2

49.0

95.2

8 14 15

97.2

5 -1 -8

13 13 7 Sum Time

4766.5508

4766.2919

+0.2589

mean = -1.78

April 21, 1899.

Left Below.

IV

5 20 00

227.5

274.6

48.8

94.4

~~47.1~~~~45.6~~~~92.7~~

92.7

-1.54

-1.55

23 25
22 70

220.8

274.7

49.5

93.8

49.9

44.3

92.2

-1.56

Right Above.

25 30

137.9

184.7

315.5

5.2

46.8

49.7

96.5

-1.74

-1.76

27 10

135.7

185.0

318.6

4.0

49.3

45.4

94.7

-1.79

27	10	05
16	05	
24	1	
-1	-5	

13 22 53 G.M. Time

Mean = -1.80

4766.5575

4766.2919

+0.2656

April 21, 1899.

Right & Above

V

	138.0		
8 30 30	153.3	45.3	
	316.0	<u>50.3</u>	- 1.77
	6.3	95.6	

	135.3		-1.7F
32 30	155.3	50.0	
	317.2	<u>45.1</u>	-1.7F
	2.3	95.1	

Left & Below

	50.2		
36 00	93.7	43.5	
	227.8	<u>46.0</u>	- 1.92
	273.8	89.5	

	47.5		-1.8F
37 40	95.5	45.0	
<u>16 40</u>	228.4	<u>44.6</u>	- 1.54
5 34 10	273.0	92.6	
5 -1 -5			

mean = 1.83

13 33 2	Y.M. Time
4766.5646	
4766.2919	
<u>0.2727</u>	

April 21, 1899.

Left Below

VI

8 43 20 \rightarrow 49.2
 93.4 44.2
 227.5 46.7 -1.59
 274.2 90.9

-1.56

45 20 46.5
 96.0 49.5
 228.8 44.2 -1.82
 273.0 93.7

Right Above

48 30 318.0
 4.0 46.0
 136.1 47.9 -1.51
 154.0 93.9

-1.52

316.6

50 40 5.0 48.4
 157.50 138.5 44.7 -1.53
 22 47 25 153.2 93.1
 5 -1 -5

13 46 20 Gr. M. Time.

Mean = -1.54

4766.5724

4766.2919

+ 0.2805

April 21, 1899

Rig. & Above.

VII

318.8

8 54 45

3.2

44.4

137.5

46.9

-1.55

154.4

91.3

-1.56

315.6

57 55

4.8

49.2

137.5 139.0

44.1

-1.53

153.1

93.3

Left & Below

229.5

9 01 35

273.8

44.5

48.0

46.6

-1.55

94.6

91.4

-1.90

229.2

03 35

274.5

45.3

237 50

49.4

44.4

-1.92

2 59 25

93.8

59.7

51 -1 -8

13 55 20 Gr. M. Time.

mean = -1.55

4766.5521

4766.2919

+ 0.2319

+ 0.2902

April 21 1899

Left of Below

VIII

9 06 35 230.8
 272.5 41.7
 48.8 46.2 -1.97
 95.0 87.9

08 35 227.2 -1.97
 272.8 45.6
 50.2 42.3 -1.97
 92.5 87.9

Right Above

10 55 139.2
 182.8 43.6
 317.8 46.6 -1.91
 4.4 90.2
 + -1.89

12 25 137.2
 154.5 47.3 -1.87
 317.9 44.8
 9 35 50 2.2 91.6
 9 35
 5 -1 -8

Mean = -1.90

14 8 80 Gr. N. Time

4766.5593

4766.2919

+0.2974

April 21, 1899.

♂ Librae. Plot T. WOB.
14 53 - 5.0

11 42

3 11

8 49

14 53 - 5.0

12 12

2 41

9 19

14 53 - 5.0

12 26

2 37

9 33

See next page for measurements.
6 inch. cap used on following measurements of ♂ Librae

April 21, 1899.

These Mr. Lodgred

S Lituae

Copied~~Left~~ above. Comp. Star = $52 - 7^{\circ} 39' 43''$ (7.0) +

Nardis. 321.3

10 14 53 1.2

137.3

152.0

39.9

44.7

84.6

-2.06

-2.00

315.0

16 35 5.0

141.3

180.6

50.0

39.3~~89.3~~

89.3

-1.94

Below

232.0

15 20 270.5

49.0

95.4

38.5

46.4

84.9

-2.05

-2.06

229.0

19 35 272.3

49.7

91.1

43.3

41.4

84.7

-2.06

10 17 21 91.1
5 -1 -5

15 16 13 Grm. Time.

4766.6363

4764.5034

71.5329

2.3273

0.4944

Mean = -2.03

April 21, 1899.

Below

233.0

10	21 00	271.5	38.5	
		48.5	<u>43.5</u>	- 2.13
		92.3	82.3	

- 2.10

229.0

22	20	274.0	45.0	
		51.7	<u>38.9</u>	- 2.05
		90.6	83.9	

Above

139.0

23	30	152.0	43.0	
		320.5	<u>42.5</u>	- 2.03
		3.3	55.8	

- 1.99

138.2

27	00	182.6	44.4	
		319.5	<u>44.4</u>	- 1.95
10	23 55	4.0	55.5	

5 - 1.5

15 22 50 G.M. Time.

mean = -2.04

4766.6409
4764.8034
 + 1.5375
 2.3273
- 0.4595

April 21 1899

Above

III

135.2

10 30 20

181.3

43.1

317.0

450

-1.55

5.0

91.1

-1.55

137.8

33 05

185.0

47.2

317.3

43.7

-1.59

3.0

90.9

Below

49.3

36 15

90.0

41.7

228.5

45.0

-2.00

273.5

86.7

49.2

-2.04

375.0

93.4

44.2

17 30

231.0

40.0

-2.07

10 34 22

271.0

84.2

5 1 18

15 33 14 Gr. M. Time.

mean = -1.96

4766.6451

4764.5034

+1.5447

+2.3273

+0.4626

April 21, 1899

Below

IV

10-4025	50.4	40.6	
	96.0	<u>41.0</u>	-2.15
	280.3	81.6	
	271.3		

-2.10

4230	48.2	45.0	
	93.2	<u>39.3</u>	-2.04
	281.8	85.3	
	271.8		

Above

4500	320.6	41.6	
	2.2	<u>46.3</u>	-1.97
	137.5	87.9	
	183.8		

-1.91

4655	313.0	52.2	
	25.2	<u>40.3</u>	-1.55
1450	141.0	92.5	
104342	181.3		
-5-1-8			

mean = -2.00

15 42 34 82.9m Time

4766.6546

4764.8034

+1.8512

+2.3273

0.4761

April 21, 1899

K

10 50 00 Above
 319.5
 1.2 41.7
 138.7 44.2 - 2.03
 182.9 85.9

52 43 318.4 - 2.00
 4.0 45.6
 139.0 42.8 - 1.96
 151.8 88.4

Below

55 05 220.7
 270.5 39.5
 48.4 45.3 - 2.05
 93.7 85.1

228.8 - 2.05

57 10 272.0 43.2
 15 00 51.3 39.7
 10 53 45 91.0 82.9 - 2.11
 5 -1 -8

15 52 37 2 M. Time.

mean = - 2.04

4766.6615

4764.8034

+ 1.8581

232.73

- 0.4692

April 21, 1899.

Below

231.4

10 59 05 272.0
~~50.0~~
 92.5

40.6

42.5

- 2.10

83.1

229.0

- 2.10

11 00 15 273.0
~~51.5~~
 91.0

44.0

39.5

- 2.09

83.5

Above

140.6

02 20

182.0

41.4

318.2

46.3

- 1.95

4.5

87.7

139.2

- 1.95

03 30

184.4

45.2

5 10

319.7

42.3

- 1.95

11 1 18

2.0

87.5

5 -1 -5

mean = - 2.04

16 0 10 2 20 Time,

4766.6665

4764.8034

+1.8634

2.3273

- 0.4639

April 21, 1899

Above

VII

138.2

11 05 30

153.2

45.0

315.5

44.7 -1.92

3.2

59.7

-1.92

06 45

138.3

152.6

44.3

318.5

45.0

-1.93

3.5

59.3

Below

50.8

08 00

92.4

41.6

239.5

42.5

-2.08

272.3

54.1

-2.06

49.3

10 35

93.4

44.1

31 50

230.9

41.1

-2.05

272.0

55.2

11 57 55

5 -1 -5

16 6 50

4766.6714

4764.5034

+1.5650

+2.3273

-0.4593

mean 2 -1.99

Bond 3921

11 21 00

11 22 00

April 22, 1899. (Saturday)

U Coronae

$$\begin{array}{r} 15 \text{ } 5 \text{ } +33.9 \\ 9 \text{ } 47 \\ \hline 3 \text{ } 21 \\ 6 \text{ } 39 \end{array}$$

Right above Full aperture used. I.

These observations copied,
and Ledgered

$$\begin{array}{r} 7 \text{ } 56 \text{ } 45 \text{ } 3.5 \text{ } 44.5 \\ 136.5 \text{ } 47.5 \\ \hline 153.0 \text{ } 92.0 \end{array} \quad -1.86$$

Clouds rather thick

$$\begin{array}{r} 318.8 \\ 5 \text{ } 5 \text{ } 30 \text{ } 4.4 \text{ } 45.6 \\ 138.7 \text{ } 42.6 \\ \hline 151.3 \text{ } 55.2 \end{array} \quad -1.91$$

Left & Below

$$\begin{array}{r} \text{Clouds thick } 230.0 \\ 8 \text{ } 10 \text{ } 00 \text{ } 271.2 \text{ } 41.2 \\ 45.3 \text{ } 45.7 \\ \hline 94.0 \text{ } 86.9 \end{array} \quad -2.00$$

$$\begin{array}{r} 2281.1 \\ 11 \text{ } 50 \text{ } 274.2 \text{ } 46.1 \\ 257 \text{ } 10 \text{ } 49.8 \text{ } 41.2 \\ \hline 8 \text{ } 4 \text{ } 18 \text{ } 91.0 \text{ } 87.3 \\ 5 \text{ } -1.4 \end{array} \quad -1.99$$

Mean = -1.96

13 4 4 2. M. Time.

$$\begin{array}{r} 476.7 \text{ } 544.5 \\ 4766.291.2 \end{array}$$

April 22, 1899 Saturday

McConal

Left Below

231.2

II

8 14 10

270.1

38.9

48.3

46.4

- 2.04

94.7

85.3

225.6

- 2.02

15 45

273.6

45.0

50.5

41.6

- 2.01

92.4

86.6

Right above

135.0

18 10

152.0

44.0

314.0

51.0

- 1.75

5.0

95.0

135.7

- 1.84

19 55

153.5

47.8

28 00

318.5

43.2

- 1.91

8 17 00

2.0

91.0

5 -14

13 16 46

4767.5534

4766.2919

+1.2615

Mr. M. Tins.

Mean = - 1.93

April 22 1899

U. Coronae

III

Right Above

139.0

8 24 15	151.5	41.2	
	315.6	48.6	-1.92
	4.2	89.8	

136.0

-1.92

25 45	153.0	49.0	
	320	41.4	-1.93
	319.8	89.4	
	4.12		

Left Below.

50.5

29 05	92.0	41.5	
	227.2	46.8	-1.96
	274.0	88.3	

-1.96

49.0

31 00	95.5	46.5	
110 05	229.2	41.4	-1.97
8 27 31	270.6	87.9	
5	-44		

Mean = -1.94

13 27 17	G.M. Time.
4767.5606	
4766.2919	
+1.2687	

April 22, 1899

N Coronaie

IV

Left Elbow

50.0

8 34 50

93.0 430

228.9 441 -1.99

273.0 871

-2.01

10 45.4

35 25

92.5 44.4

-2.03

228.5 41.4

271.2

Right Elbow

319.0

35 10

3.0 440

~~2.0~~ 457 -1.92

137.3 89.7

183.0

-1.92

317.2

40 45

0.6 43.4

-1.91

149 10

137.4 46.6

90.0

8 37 18

184.0

mean = -1.96

5 14

13 37 04 S. M. T. 12.

4767.5675

4766.2919

+1.2756

April 22, 1899.

U. Coronae.

V

Right above

317.5

8 43 30

5.0

47.5

138.5

44.7

-1.86

183.2

92.2

-1.85

318.7

45 00

3.4

44.7

137.6

45.9

-1.90

183.3

90.6

Left below

227.3

3.5

46.2

49 00

49.9

43.3

-1.93

93.2

89.5

-1.97

2

230.0

50 35

271.6

41.6

-2.01

188 05

45.8

45.0

5 47 01

93.5

86.6

Mean = -1.92

5 14

13 46 47 Mr. M. Tins.

4767.5742

4766.2919

+1.2823

April 22, 1899.

Left Below

VII

8 52 10	227.5		
	274.0	46.5	
	50.0	<u>42.3</u>	-1.95
	92.3	88.8	

-1.98

53 30	230.0		
	271.3	41.3	
	48.2	<u>45.6</u>	-2.00
	98.5	86.9	

Right Above

55 30	137.4		
	184.3	46.9	
	319.0	<u>43.3</u>	-1.91
	319.0 2.3	90.2	

-1.91

57 00	137.6		
	159.0	44.4	
	318.0	<u>45.8</u>	-1.91
	3.8	90.2	

54 32	
5 -14	

13 54 15 min Time.

mean = -1.94

4767.5794

4766.2919

+1.2875

April 22, 1899

Right Above

177

	135.0		
9 01 00	153.5	45.5	
	315.6	42.8	-1.96
	<u>1.4</u>	88.3	
	135.7		-1.92
	135.7		
02 05	153.0	43.3	
	317.0	47.7	-1.89
	4.7	91.0	

Left Below.

	149.5		
04 10	96.0	48.2	
	229.5	43.6	-1.87
	273.1	91.8	

	149.4		-1.92
05 40	93.0	43.6	
12 55	225.3	44.7	-1.96
9 3 14	273.0	88.3	
5 14 3 00	<u>-14</u>		

Gr. M. Time

Mean = -1.92

4767.5854

4766.2919

+1.2935

April 22, 1899.

U. coronae.

Left & Below.

VIIII.

9 07 50

47.3		
91.5	44.5	
229.5	<u>41.9</u>	-2.01
278.4	86.4	

-1.98

09 15

49.0		
93.2	44.2	
228.3	<u>44.1</u>	-1.96
272.4	88.3	

Right & Above

11 00

318.0		
4.0	46.0	-1.91
135.0	<u>44.2</u>	
152.2	90.2	

-1.92

12 10

319.5		
3.0	43.5	-1.93
137.2	<u>45.8</u>	
153.0	89.3	

40	15
9	10
5	-14

14 9 50 Gr. M. T. inv

Mean = -1.95

4767.5902

4766.2919

+1.2983

April 22, 1899.

J Librae

(Cap of 6 inches aperture used) Phot. T. M. W. L.

14 53 - 5.0

11 38

3 15

5 45

I.

Above

320.0

9 26 00

3.6

43.6

137.7

43.3

-2.00

181.0

86.9

316.2

-1.96

2740

4.2

48.0

139.5

41.9

-1.92

151.4

89.9

~~316.2~~ Below

230.5

30 25

271.2

40.4

48.0

42.8

-2.10

91.8

83.2

230.3

2.05

32 15

273.2

42.9

+9.5

11 6 20

50.0

42.0

-2.05

9 29 05

92.0

84.9

2.02

5 -14

mean = +9.7

14 28 51 yr. M. T. min.

4767.6034

4767.1311

+0.4723

April 22, 1899.

Libra

II.

Below

9 35 05	229.2		
	271.2	42.0	
	49.3	<u>43.8</u>	-2.04
	92.5	85.5	

-2.04

3 6 40	228.7		
	273.5	44.8	
	49.8	<u>40.5</u>	-2.04
	90.3	85.3	

Above

39 10	139.8		
	181.4	41.6	
	317.5	<u>46.1</u>	-1.98
	3.6	87.7	

-2.01

41 20	137.5		
152 15	152.2	44.7	
9 38 04	319.6	<u>40.6</u>	-2.04
5 -14	0.2	85.3	

Mean = -2.02

14 37 50 Gr. in Time.

4767.6096
 4767.1311
 04755

April, 22, 1899

Librae

III

above

9 44 15	139.8		
	151.4	41.6	
	319.0	45.0	-2.01
	4.0	86.6	

-2.00

45 10	139.0		
	153.2	44.2	
	319.3	43.5	-1.98
	2.8	87.7	

Below

46 20	41.0		
	91.2	40.2	
	230.0	43.0	-2.10
	278.0	83.2	

-2.08

47 05	49.4		
	93.8	44.4	
22 50	230.3	40.5	-2.05
9 45 42	270.5	84.9	

Mean = -2.04

5	14	270.5	
14 45 25 1/2		W. Trine.	
4767.6150			
4767.1311			
+0.4839			

April 22, 1899

Librae

Below

9 50 00 Clouds

IV

Clear again.

10 13 55

49.5

91.8

420

229.2

43.3

-2.04

2725

25.3

-2.05

15 05

49.0

91.8

428

-2.06

230.0

41.8

271.8

84.6

Above

385.2

17 00

25

44.3

139.4

44.4

-1.95

182.5

88.7

385.4

-1.94

18 25

3.6

45.2

24 25

139.1

44.5

-1.92

10 16 06

183.6

89.7

5 14

15 15 52 Gr. M. Tuv.

Mean = -2.00

4767.6360

4767.1311

0.5049

April 22, 1899.

J. Litras

IV

Above

10 24 15
Clouds

318.5

3.2

434

135.3

471

-1.90

152.4

90.5

-1.90

318.5

24 15

41.6

458

135.2

449

-1.90

Below,

90.7

231.4

27 10 271.5

40.4

49.2

448

-2.05

94.0

85.2

-2.09

230.7

25 45

271.6

40.9

21 25

50.4

41.4

-2.13

10 25 21

92.5

82.3

5 -14

Mean = -2.00

15 25 07 Yr. M. Time.

4767. 6425

4767. 1311

+0.5114

April 22, 1899

L. Librae.

✓

Below

230.2

10	33	45	272.6	424	
			50.3	<u>43.7</u>	-2.02
			94.0	86.1	

-2.06

230.2

35	30	271.6	41.4	
		51.0	<u>41.4</u>	-2.11
		92.4	82.8	

Above

37	40	139.1		
		182.7	43.6	
		318.2	<u>44.8</u>	-1.96
		4.0	88.4	

-1.97

139.5

40	15	154.0	44.5	
14	7	318.5	<u>43.1</u>	-1.95
10	36	1.6	87.6	
5		-14		

15 36 34 1/2 H. T. min.

Mean = -2.02

4767.6504

4767.1311

+0.5193

April 22/1899

I Lihae.

VII

Above

135.2

10 43 50

152.0

43.8

318.6

44.3

-196

2.9

88.1

-1.94

139.0

45 40

153.5

44.8

319.0

44.7

-1.93

3.7

89.5

Below

50.5

45 10

92.0

41.2

229.2

43.3

-2.07

272.5

84.5

-2.06

49.2

49 35

93.6

44.4

-2.05

27 15

230.4

40.6

10 46 49

271.0

85.0

5 -1.4

Mean = -2.00

15 46 35 Gr. M. Time

4767.6573

4767.1311

+0.5262

April 22, 1899

I Libae.

Experimental observations with another.
 Comp. Star (= Not to be used.
 Below 320.1 ~~above~~

10	54 40	0.5	40.4	
		141.5	<u>38.6</u>	- 2.22
		150.4	79.0	

- 2.22

		321.3		
56	05	2.1	40.8	
		141.7	<u>38.8</u>	- 2.21
		150.5	79.6	

Above

233.0

55	20	262.5	29.8	
		52.5	<u>37.2</u>	- 2.61
		90.0	67.0	

- 2.44

		230.1		
	59 35	268.0	37.9	
	<u>28 40</u>	52.0	<u>39.6</u>	- 2.27
10	57 10	91.6	77.5	
5	- 14			

Mean = - 2.33

15 56 56 Hr. in Time.

April 22, 1899.

J Libras

Same again.

Above
233.0

11 00 50

266.9

33.6

53.0

37.6

-2.47

90.6

71.2

230.4

-2.40

02 10

268.5

38.1

52.0

37.9

-2.32

89.9

76.0

Below

141.0

04 20

179.0

38.0

-2.31

323.2

38.2

1.4

76.2

-2.23

139.5

03 35

171.5

41.7

-2.15

321.5

39.7

1.5

81.4

Mean = -2.32

12 55

11 3 16

5 -14

Bond 394.

Arnold & Lent
~~Bond 394.~~

16 3 2

11

19

00

11

18

13.8

11

20

00

11

20

14.0

April 24, 1899 (Monday)

U Coronae

1.5 5 133.9

9 43

5 25

6 35

Rigel below

(Full aperture used on following)

138.5

7 33 10

152.3

43.5

These observations copied and
Ledgered

315.0

50.0

-1.52

5.0

93.5

-1.54

136.5

34 33

152.7

46.2

318.3

46.0

-1.86

4.3

92.2

Clouds.

Left below

50.2

3830

92.8

42.6

-1.97

229.3

45.4

274.7

88.0

-2.05

48.8

140 00

91.6

42.8

-2.13

146 15

230.7

39.5

7 36 34

270.2

82.3

5 25

Mean = -1.94

12 36 06

Gr. m. Trine

4769 5251

4766 2919

532332

April 24, 1899.

II

Left & Below

7 42 40	49.7	43.8	
	93.5	47.0	- 1.89
	226.8	90.8	
	273.8		

- 1.92

44 40	47.0	46.2	
	93.2	43.0	- 1.94
	230.0	89.2	
	273.0		

Right & Above

47 00	317.2	46.0	
	3.2	51.2	- 1.73
	135.0	97.2	
	186.2		

- 1.72

45 50	314.3	51.8	
	6.1	45.8	- 1.72
22 10	137.7	97.6	
7 45 32	153.5		
5 - 28			

mean = - 1.82

12 45 4 Gr.M. Time

4769.5314

4766.2919

+ 3.2395

April 24, 1899.

U Coronae

Right Above.

III.

7	52	15	4.0	47.0	
			135.5	50.3	-1.72
			185.5	97.3	

-1.54

54	05	315.7	409	
		36.6	47.3	-1.94
		137.0	88.2	
		184.3		

Left Below.

		280.0		
		271.8	41.8	
56	55	48.0	45.3	-1.99
		93.3	87.1	

230.0 -2.00

55	45	273.6	43.6	
22	00	49.5	43.1	-2.00
7	55	92.6	86.7	
5	25			

12 55 22 hr. m. time.

4769.5385
4766.2919
+ 3.2466

mean = -1.92

April 24, 1899

U Coronae.

IV

Left Below

8 02 13 231.3

272.5

41.5

48.0

46.2

-1.95

94.2

87.7

-1.92

226.6

14 00

273.5

46.9

49.0

45.3

-1.56

94.3

92.2

Right Above

137.0

06 35

183.2

46.2

316.0

45.6

-1.79

4.6

94.5

-1.52

137.2

05 15

184.0

46.5

21 05

317.8

45.9

-1.56

5 05 16

3.1

92.1

5 28

13 04 45th M. T. clouds

mean = 1.87

4769.5450

4766.2919

+3.2531

April 24, 1899.

V. CoronaeClouds; stars gone.
Right & Above.

V.

8	15 30	317.6	6.4	49.8	
		137.2		46.0	-1.76
		153.2		95.8	
		318.2			-1.54
20	50	3.2	45.0		
		138.0	44.8	-1.92	
		152.5	89.8		

Left & Below

228.3

24	10	272.7	44.0		
		50.0	44.3	-1.96	
		94.3	88.3		

228.5

-1.94

26	30	272.2	43.7		
		48.2	46.2	1.92	
27	00	94.4	89.9		
27	28			Mean = -1.59	

13 22 22 Gr. M. Time.

H769.5572

H766.2919

+3.2653

April 24, 1899.

U. Coronae

Clouds:

Left & Below

226.3

5 43 40 273.0

Clouds:

VI.

Right & Above.

Reject above readings.

Troubled throughout evening by clouds & stopped by clouds.

9.40

Amold & ext

9 42 27.5

9 43 27.7

Bond 39.4

9 42 00

9 43 00

April 26, 1899. (Wednesday)

♂ Librae

14 53 - 5.0

9 53

5 00

~~7~~ 00

Abandoned for the present; too low.

U. Coronae

15 8 + 33.9

9 54

5 14

6 46

See next page for measurements of
U. Coronae

April 26, 1899.

Phot. T. (Wolbach)
I

Above & Right

U. laonaeThese observations Copied
7.94 & Ledgered.

7 33 35	138.5	
	152.3	43.8
	315.1	<u>45.1</u>
	3.2	88.9

-1.86

35 20	136.0	
	153.6	47.6
	317.0	<u>47.2</u>
	4.2	94.8

-1.79

Left & Below

37 15	50.4	
	94.6	43.7
	228.6	<u>44.6</u>
	273.2	88.3

-1.96

-1.95

35 45	45.0	
	94.0	46.0
	229.0	<u>43.1</u>
	272.1	89.1

-1.94

Mean = -1.90

12 35 37 yr M. Time.

4771.5247
4769.7440
<u>+ 1.7807</u>

April 26, 1899

U. Bronae

Left & Below

H

51.0

7	40	15	92.6	41.6	
			228.1	<u>459</u>	-1.98
			274.0	875	

-1.98

			47.7		
41	25		94.1	46.4	
			230.1	<u>41.0</u>	-1.98
			271.1	87.4	

Right Above

315.5

43	40		1.8	43.3	
			138.0	<u>46.4</u>	-1.92
			154.4	89.7	

-1.90

			317.2		
45	30		4.3	47.1	
			139.5	<u>44.0</u>	-1.88
			183.5	91.1	
9	42	42			
5		37			

Mean = -1.94

12 42 05 Gr. M. Time

4771.5293
4769.7440
<u>1.7853</u>

April 26, 1899

These observations of Librae
Copied & Ledgered.

Blue T. W. 6 to

14 53 - 80

Cap of birches used 6 26
on following meas. 4 27
of δ Librae 7 33

I.

7 55 30 315.6 Above
7.2 48.6
135.4 44.6
183.0 93.2

-1.83

-1.84

5 00 40 315.4
50 49.6
139.0 42.5
181.5 92.1

-1.86

Below.

02 40 239.2
270.8 41.6
48.3 44.7
93.0 86.3

-2.01

-2.02

04 15 260.3
272.4 42.1
50.4 43.4

-2.04

8 01 31 93.8 85.5
5 -37

Mean 1.93

13 00 54 J. M. Tinsie 2.32 73
4771.5422 2.02 41
4769.4582
+2.0841
-0.2432

April 26, 1899

Libra

II

Below

230.0

8 05 25

270.7

40.7

48.5

45.9

-2.01

94.4

86.6

229.0

-2.03

10 10

1272.1

43.1

51.0

41.8

-2.05

92.8

84.9

Above

140.0

12 35

152.2

42.2

315.0

46.0

-1.95

4.0

88.2

-1.96

137.8

13 50

184.7

46.9

45 00

320.0

41.1

-1.97

8 11 15

1.1

88.0

5 -37

Mean = -2.00

13 10 38

Gr. M. Time.

4771.5490

4769.4552

+2.0908

April 26, 1899.

III

Above

5 16 15	139.8	40.5	
	180.3		
	<u>315.8</u>	<u>49.2</u>	-1.92
	5.0	89.7	

12 00	137.8		-1.96
	183.1	45.3	
	<u>319.2</u>	<u>41.6</u>	-2.00
	0.8	86.9	

Below

21 00	37.2		
	791.4	40.2	
	228.0	<u>45.0</u>	-2.05
	278.0	85.2	

	49.0		-2.04
22 35	93.4	44.4	
<u>77 50</u>	<u>229.8</u>	<u>41.7</u>	-2.02
8 19 28	271.5	86.1	
5 27			

Mean = 2.00

1318 51 Gr. m. Time
 4771.5548
 4769 4552
42.0966

April 26, 1899.

Below

IV

8 26 40	50.0		
	92.3	42.3	
	229.1	42.7	
	271.8	85.0	

-2.05

-2.04

28 20	45.7		
	93.5	44.8	
	230.1	40.9	
	270.0	85.7	

-2.03

Above.

31 40	318.4		
	2.8	44.4	
	136.2	48.1	
	184.3	92.5	

-1.85

-1.84

33 35	316.0	48.0	
120 15	4.0	45.6	
30 04	138.5	93.6	
5 37	183.8		

-1.82

13 29 27 Gr. M. Time.

mean = -1.94

4771.5622

4769.4552

+2.1040

April 26 1.599

Above

V

83910	135.6	45.6	
	154.2	<u>49.1</u>	-1.79
	316.0	94.7	
	5.1		

4045	137.6	47.5	-1.52
	155.1	<u>44.7</u>	
	315.1	92.2	-1.56
	2.5		

Below

4400	51.0	41.6	
	92.6	<u>45.7</u>	-1.99
	228.9	87.3	
	274.6		

4615	48.0	44.3	-1.95
	<u>92.3</u>		
	229.2	<u>43.5</u>	+1.98
8 42 38	272.7	87.8	
5 37			

mean = -1.90

13 42 01 *lfr* in *Turn*

4771.5708

4769.4552

+2.1126

April, 26, 1899

Below

VII

5049.5

8 5045

92.5

228.6

273.8

49.0

52 45

93.0

228.4

274.0

Above

Clouds

3.

Reject the above readings.

13.

15.

3.

13.

15.

April 26 1899

H.

Belgrave

136.0

9 25 45

153.8

47.9

316.3

48.5

-1.74

5.1

96.7

-1.74

30 30

136.2

155.3

49.1

316.6

47.9

-1.73

48.5

97.0

Below

48.6

33 45

93.4

44.8

228.8

45.3

-1.91

274.1

90.1

-1.87

3505

47.5

95.5

48.0

F 05

229.0

45.2

1.53

9 32 01

274.2

93.2

Mean = -1.80

5 -37

14 31 24 Gr. M. Time

4771.6052

4769.4582

+2.1470

April 26, 1899

Belvoir

VII

9 37 20

~~48.5~~

92.9

44.1

228.0

~~47.6~~

-1.87

275.6

91.7

47.2

-1.86

35 45

94.5

47.3

228.4

45.0

-1.85

273.4

92.3

Above

42 00

~~31.7~~

3.8

46.7

136.4

~~48.9~~

-1.76

185.3

95.7

-1.70

313.6

44 45

5.9

52.3

-1.63

2 50

136.2

48.8

9 40 42

185.0

101.1

5 87

Mean = -1.78

14 40 05 1/2 hr. in Time

4771.6612

4769.4552

+2.1530

April 26, 1899

Clouds

VIII

Above

316.3

94910

5.2

45.9

136.2

50.0

-1.68

156.2

95.9

-1.68

3154

5045

5.0

49.6

135.8

49.5

-1.68

155.8

99.1

Below

Clouds.

95740 2255

95410 274.5

46.3

clouds 46.3

50.0

-1.75

96.3

96.3

-1.78

237.3

108340

273.5

46.5

-1.82

22115

47.8

47.0

95519

94.8

93.5

53

145442 Gr. M. Time.

mean = -1.73

4771.6213

4769.4522

+2.1631

April 26, 1899 -

Librae

Clouds

10 33 15

Clouds

Below

227.3 226.1

27 274.5

45.4

97.0

48.4

51.6

100.0

-1.66

IX

-1.66

34 35

225.6

275.4

45.8

95.3

49.8

49.5

99.3

-1.67

Above

136.0

37 35

125.6

49.6

313.5

54.7

8.2

104.3

-1.55

-1.52

40 20

135.0

125.6

53.6

-1.48

146 05

312.9

53.6

6.25

107.2

10 36 31

5 -37

15 35 54 Gr. M. Tins.

4771.6499

4769.4082

+2.1917

2.3273+

-0.1356+

Mean = -1.59

April 26 1899

Above

X

10	42.50	134.2	51.6	
		185.8		
		312.8	55.1	-1.49
		7.9	106.7	

-1.46

44	25	133.2	54.8	
		188.0	54.8	-1.43
		311.8	109.6	
		6.6		

Below

47	05	47.2	49.0	
		96.2	50.8	-1.66
		225.2	99.8	
		276.0		

-1.67

45	40	45.4	49.8	
		195.2	49.2	-1.68
		226.8	99.0	
		2300		

10	45	45
5	-37	

Mean = -1.56

18-45 08 Gr. M. Tins.

4771.6557

4769.4582

+2.1975

2.3273

Omitted by mistake

Omitted by Mistake

April 26 1899.

XV

Below

47.8

10 50 50

96.2

48.9

225.2

51.6

-1.64

277.0

100.5

-1.67

53 10 21

425.8

94.5

48.7

226.2

49.5

-1.70

275.7

98.2

Above

312.2

55 40

8.3

56.1

134.8

52.4

-1.45

187.2

108.5

313.2

-1.46

57 15

6.1

52.9

133.3

54.5

-1.45

187.8

107.4

10 54 15
5 -37

mean = -1.56

15 53 38

Gr. M. Time

4771.6622

4769.4552

+ 2.2040

April 26, 1899

Above.

XII

11 00 25	3 11.5		
	9.5	58.0	
	133.9	53.0	-1.39
	150.9	111.0	

-1.44

02 50	3 15.1		
	7.5	52.4	
	132.2	54.6	-1.49
	156.8	107.0	

Below.

06 00	226.0		
	275.0	49.0	
	46.0	51.2	-1.65
	97.2	100.2	

-1.60

05 00	225.0		
	276.1	51.1	
	44.6	53.5	-1.54
11 04 19	97.8	104.6	

5 37

16 03 42 Mr. M. Tins.

Mean = -1.52

4771.6692

4769.4582

+2.2110

April 26, 1899

Below

XIII.

225.0

1110 35

276.3

51.3

46.8

50.7

-1.61

97.5

102.0

224.5

-1.52

11 12 25
clouds

276.4

51.9

45.7

51.9

-1.56

97.6

103.5

Above

133.0

17 00
Clouds

159.3

56.3

310.3

58.9

-1.53

91.2

105.2

clouds

131.5

-1.42

20 40

158.7

57.2

60 40

311.1

57.7

-1.31

11 15 10

8.8

114.9

5 -37

16 14 33 Gr. Intime.

mean -1.50

4771.6768

4769.4552

+2.2186

April 26 (F) 99

Above

XIV

	132.0		
11 29 00	159.0	57.0	
	312.0	<u>56.9</u>	-1.33
	8.9	113.9	

-1.30

	131.5		
29 50	159.7	57.9	
	312.3	<u>58.2</u>	-1.28
	10.5	116.1	

Below

	430		
31 00	98.5	53.5	
	223.0	<u>56.0</u>	-1.38
	279.0	114.8	

-1.32

	480		
62 25	102.0	60.0	
	222.5	<u>56.6</u>	-1.27
11 30 34	279.1	116.6	
5 -37			

Mean = -1.31

16 29 57^h mⁱⁿ Timir Stopped by clouds and troubled
continually throughout evening by clouds

4771.6875

4769.4552

+2.2293 clouds.

A large part of mass. made through

Mar:

April 26, 1899.

Arnold & Leant

11 42 36

11 43 37

Bond 39.4

11 42 00

11 42 00

April 27, 1899 (Thursday)

S Cancri Phot. T. (Wobs)

8 35 +19.6

9 55

1 17

8 35

10 02

1 24

γ East Time. $10^{\text{hr}} 3^{\text{m}} 5.9^{\text{s}}$ Sid. Time.

+19.9

$\gamma^{\text{h}} 21^{\text{m}} = \text{H.A.}$

See next page for measurements on S. Cancri.

April 27, 1899.

I Canon.

~~Left~~ Above

I

~~Below~~ Right & Above

216.0 var. dis.

These are copies of Ledgered.

7 36 50

256.2

70.2

39.3

65.3

-0.87

104.6

135.5

-0.88

218.0

38 50

253.0

65.0

36.1

69.2

-0.89

105.2

134.2

~~Left~~~~Right~~ Below.

4

123.2

41 35

195.5

75.3

307.3

66.5

-0.74

13.8

141.8

-0.78

127.6

44 10

193.2

65.6

1 25

305.1

71.6

-0.53

7 40 21

16.7

137.2

5 -37

12 39 42

Gr. M. Time.

Mean = -0.83

4772.5276

4772.2499

+0.2777

April 27, 1899.

Left

Right & Below

H

125.50

7 49 30

197.0

720

306.4

67.0

-0.79

13.4

139.0

127.8

-0.81

193.4

65.6

57 15

304.6

71.7

-0.83

16.63

137.3

Right & Above

35.1

54 30

102.5

64.7

-1.04

219.6

62.5

252.1

127.4²

-0.98

37.2

56 40

104.2

67.0

-0.93

261.55

217.3

65.5

7 52 59

282.1

132.5

5 - 37

12 52 22 J. M. Tunic

4772.5364

4772.2499

mean = -0.90

+0.2865

April 27, 1899

Right Above

III

8 00 30	38.4		
	102.6	64.2	
	215.1	<u>64.1</u>	-1.01
	282.2	128.3	

02 50	38.8		-1.04
	102.2	62.4	
	219.5	<u>62.7</u>	-1.06
	282.2	126.1	

Left Below

06 20	306.1		
	16.0	69.9	
	128.8	<u>64.0</u>	-0.90
	192.8	133.9	

	308.0		-0.94
--	-------	--	-------

08 20	128	64.8	
18 00	128.3	<u>65.8</u>	-0.97
8 04 30	194.1	130.6	
5 - 37			

mean = -0.99

13 03 53 Mr. M. T. ...
 4772.5443
 4772.2499
 0.2944

April 27. 1899

Left Below

IV

3068

8 15 20

14.0

67.2

129.2

63.0

-0.97

192.2

130.2

307.4

-0.95

18 10

12.4

65.0

~~128.0~~ 125.0

67.5

-0.93

195.5

132.5

Right Above.

220.0

22 10

983.2

63.2

-1.08

39.2

62.0

101.2

125.2

-1.09

219.6

24 20

252.6

63.0

50 00

40.2

61.2

-1.10

8 20 00

101.4

124.2

5 -37

Mean = 2.02

13 19 23 1/2 M. Time.

4772.5552

4772.2499

0.3053

April 27, 1899

Right & Above

23

V

8 39 10	217.8		
	251.8	64.0	
	38.5	<u>62.8</u>	-1.05
	101.3	126.8	

-1.07

34 15	219.2		
	252.3	63.3	-1.09
	40.2	<u>61.3</u>	
	101.5	124.6	

Left & Below

36 15	127.2		
	193.5	66.3	
	309.1	<u>62.7</u>	-1.00
	71.8	129.0	

-1.04

38 40	129.5		
	191.8	62.0	-1.07
	308.4	<u>63.6</u>	
5 35 20	12.0	125.6	

Mean = -1.06

5 37		
13 34 43	Gr M. Tunic	

4772.5652

4772.2499

+0.3159

April 27, 1899.

Left Belt

VI

	125.2		
40 00	192.8	64.1	
	308.4	<u>63.4</u>	-1.03
	11.8	127.5	
			-1.05
	131.1		
50 45	193.8	62.7	
	309.3	<u>63.2</u>	-1.07
	12.5	125.9	

Right Above

	40.5		
52 50	102.0	61.5	
	220.1	<u>61.2</u>	-1.13
	281.3	122.7	
			-1.10
	39.8		
54 50	102.2	62.4	-1.07
	219.6	<u>63.2</u>	
	282.8	125.6	
			Mean = -1.08

13 50 57 Mr. M. Trine.

4772.5771

4772.2499

0.3272

April 27. 1899.

Right and Above

VII.

40.4

9 04 20

99.2

54.8

222.3

58.0

-1.26

280.0

116.8

-1.2³₂

40.4

05 35

100.0

59.6

221.0

68.0-1.2²⁰₂

281.0

129.6

Left & Below

309.7

05 10

10.2

60.5

130.4

68.5

-1.17

190.9

121.0

-1.13

310.3

09 50

11.2

60.9

27 55

127.8

64.0

-1.09

9 06 59

191.5

124.9

5 37

Mean = -1.18

14 06 22 Gr. M. Time.

4772.5875

4772.2499

+0.3379

April 27, 1899

Left Below

VII

	308.6		
7 14 20	11.5	⁶ 52.9	
9 19 20	131.1	<u>59.6</u>	-1.26
	190.7	112.5	

-1.26

	309		
	310.0		
20 40	11.2	61.2	
	131.5	<u>59.8</u>	-1.17
	191.3	121.0	

Right Above

	222.1		
22 33	279.3	57X ²	
	42.0	<u>58.0</u>	-1.30
	100.0	115.X ²	

-1.28

24 10	279.8	59.0	
<u>6 45</u>	41.6	<u>58.6</u>	-1.25
9 21 41	100.2	117.6	
<u>5 37</u>			

mean = -1.25²

14 21.04 Gr.M. Time.

4772.5950
4772.2499
<u> </u>
+0.3451

April 27, 1899

Right Above,

IX

221.0

9 26 55	278.5	57.8	
	40.6	58.4	-1.28
	99.0	116.2	

-1.28

221.0

29 05	279.0	58.0	
	42.0	58.0	-1.28
	100.0	116.0	

Left Below

132.9

31 05	189.1	56.2	
	308.4	53.0	-1.21
	11.4	109.2	-1.21

-1.16

130.0

33 55	192.8	62.8	
1 00	369.2	60.6	-1.12
9 30 15	10.5	123.4	
5 37			

Mean = -1.22

14 29 38 Grm. Time.

4772.6039

4772.2499

+0.3540

April 27, 1899.

A. L. S. 952.
 9 53 36.9
 54 36.9

B 394.
 9 53 0.0
 54 0.0

Reapers Sat II Phot R. Wobs.
 Campbell Rec.
 Comp. with sat. on preceding sidg. =
 Sat I.

Chron. Correction = - 37 secs.

Limit of Visibility

10 00 25 / 0

00 05

76.5

- 37

13

23.3 99.8

9 59 48

25

21.2 76.0

37

22.2 97.2 + 3.5

L

10 04 47

05 26

Reery

53

05 34

02.2

05 15

52

53.6 115.8 + 1.5

27

06 04

58.4 57.4 + 1.3

42

19

61.8 119.2 + 1.1

58

35

65.0 57.2 + 1.0

06 07

44

67.8 122.0 + 0.9

69.8 + 0.8

April 27, 1899.

10 06 14 10 06 5-1

22

33

42

52

07 02

12

20

29

37

49

58

08 59

-37

08 22

09 42

-37

09 05

10 20

-37

09 43

06

5-1

59

07

10

19

29

39

49

57

08

06

14

26

35

43

51

09

03

21

30

36

46

55

10

06

14

25

36

63.8 52.2 +1.0

66.0 116.0 +0.9

73.8 50.0 +0.6

74.3 123.5 +0.6

72.5 49.5 +0.7

71.0 122.0 +0.7

73.0 51.0 +0.7

74.2 124.0 +0.6

72.2 49.5 +0.7

76.0 122.0 +0.5

76.0 46.0 +0.5

122.0

45.7

76.3 122.0 1

79.5 44.0

77.9 123.5 +0.5

45.0

79.2 127.2 2

81.7 47.0

80.4 125.7 +0.4

45.0

74.8 122.5

75.4 47.0 3

75.1 122.4 +0.6

April 27, 1899.

10 10 55 ⁺	10 10	43	45.0
<u>-37</u>		57	77.0 ⁺ 123.0 4
10 10 18 ⁺		59	79.5 49.2
	11	05 ⁻	<u>78.2</u> 125.7 +0.5 ⁺
11 33 ⁺		13	45.1
<u>-37</u>		21	72.7 119.1 20.5
10 56 ⁺		44	67.7 57.1 ⁺
		55	<u>70.2</u> 115.5 +0.8 ⁺
12 30	12	11	52.7
<u>-37</u>		24	63.3 ⁺ 116.0 6
11 53		35 ⁻	70.0 ⁺ 49.2
		45	<u>66.6</u> 119.2 +0.9 ⁺
14 10 ⁺	13	01	53.0
<u>-37</u>	13	12 20	68.8 ⁺ 121.8 7
13 33	15	05 ⁻	71.3 49.8 ⁺
	15	13	<u>70.0</u> 121.3 +0.4 ⁺
15 45 ⁺		22	52.0
<u>-37</u>		34	66.5 ⁺ 115.0
15 08 ⁺		44 51	65.8 ⁺ 52.1 2
	16	12	<u>65.9</u> 117.9 +0.9 ⁺

Lat reep. on light of Jupiter causing some delay in first readings especially, and settings consequently not quite so accurate.

April 27, 1899

a & LD
 10 21 370
 10 22 368

B 394
 10 21 00
 10 22 00

S Canori (again) $+19.6$ \times
 $\begin{array}{r} 5 \quad 35 \\ 13 \quad 08 \\ \hline 21 \quad 30 \end{array}$

Right & Above
 43.6

10 35 00 100.2 56.6
 225.0 52.3
 277.3 108.9 -1.44

 -1.52

36 35 42.9
 96.2 53.3 -1.61
 230.0 48.8
 278.8 102.1

Left & Below

4772.6508
4772.2499
 + 0.4009

38 25 306.8
 10.8 53.4 -1.21
 132.5 55.7
 188.2 129.1 -1.22

39.40
 10 29 40
 3 37 40
 1537 03 192.2
 131.0 61.2
 118.8 -1.22

Mean = -1.37

April 27, 1899

Left Below

132.5

10 44 40 159.0

310.6

11.0

56.5

60.4

116.9

-1.26

131.8

46 10

191.8

310.2

102

60.0

60.0

120.0

-1.22

-1.19

Right Above

44.5

48 40

98.2

223.0

276.6

53.7

53.6

107.3

-1.48

44.7

50 10

98.0

224.0

276.2

53.3

52.2

105.5

-1.50

-1.52

10 47 25
5 37

15 46 48 Gr. m. Time.

4772.6575

4772.2499

0.4076

Mean = -1.36

April 27, 1899.

Rigids Above.

XII

10 52 40	43.0		
	98.3	55.3	
	223.2	<u>54.9</u>	-1.41
	278.1	110.2	

-1.42

54 30	48.2		
	98.0	54.8	
	228.2	<u>54.2</u>	-1.44
	277.4	109.0	

Lift Below

56 30	312.5		
	10.0	57.2	-1.25
	132.4	<u>58.7</u>	
	191.1	115.9	-1.29

59 30	309.8		
	10.0	60.2	-1.30
	133.7	<u>58.0</u>	
10 55 45	185.7	115.2	

5	37	
15 55 11 1/2	in Time.	

4772.6633

4772.2499

+0.4134

Mean = -1.36

April 27, 99

Left Below

XIII

310.8

11 06 05 9.6

55.8

130.2

59.5

-1.23

159.7

118.3

-1.26

310.1

05 33 10.4

60.3

-1.29

138.9

55.2

159.1

115.5

Right Above

222.0

12 10

277.8

55.8

42.2

55.9

-1.38

95.1

111.8

223.1

-1.39

13 50

278.6

55.5

43.0

55.1

-1.40

98.1

110.6

11 10 10

5 37

Mean = -1.32

16 09 33 Gr. m. Time.

4772.6733

4772.2499

+0.4234

April 27, 1899

Right take.

~~111~~

11 20 00	222.8		
	278.4	35.2	
	42.7	54.5	-1.42
	97.2	109.7	
			-1.40

21 55	223.2		
	278.8	55.6	
	42.2	55.4	-1.39
	97.6	111.0	

Left Below

25 00	138.4		
	190.3	56.9	
	310.2	56.3	-1.34
	9.5	115.2	

-1.24

27 45	134.8		
14 40	191.5	59.7	
11 23 40	311.2	58.3	-1.24
5 37	9.5	115.0	

16 23 03 Gr M. T. mic.

mean = -1.34

4772.6527
 4772.2499
 +0.4328

April 27, 1899

Left & Below

XV.

	131.5		
11 30 00	159.3	57.5	
	310.4	<u>60.4</u>	-1.24
	10.5	117.9	
			-1.24
	132.0		
31 40	190.3	58.3	
	311.2	<u>59.6</u>	-1.24
	10.5	117.9	

Right above.

	42.0		
3430	99.0	57.0	
	223.5	<u>54.7</u>	-1.38
	277.5	111.7	
			-1.38
	42.4		

56 20	98.6	56.2	-1.39
<hr/> 12 30	223.4	<u>55.0</u>	
11 33 05	278.4	111.2	
5 37			

mean = -1.31

1632 31 52 M. Time.
 4772.6593
4772.2499
 + 0.4394

April 27, 1899

Right Above.

42.2

11 41 15

100.4

55.2

222.7

53.7

-1.37

276.4

111.9

-1.43

43.2

43 15

93.0

49.8

-1.49

222.0

56.9

278.9

106.7

Left Below.

311.4

46 10

85.1

57.1

132.5

58.8

-1.28

191.3

115.9

-1.23

309.2

48 20

10.7

61.5

-1.45

19 00

132.0

59.3

11 44 45

191.3

120.8

5 37

mean = -1.33

16 44 05 Gr. m. Time.

4772.6973

4772.2499

+0.4474

April 27 1899

Left Below

XVII

11 50.50	309.0	11.2	62.2	
	132.4		<u>60.0</u>	-1.14
	192.4		122.2	

5300	310.83	10.5	60.2	
	133.0		<u>58.5</u>	-1.22
	191.5		118.7	

Right Above

5305	228.7	278.5	55.1	
	42.5		<u>56.3</u>	-1.39
	98.8		111.4	

-1.38

56 15	221.5	279.0	57.5	-1.36
<u>15 10</u>		42.6	<u>55.2</u>	
11 53 48		97.8	112.7	
5 27				

mean = -1.28

16 53 11 1/2 m. Time.

4772.7036

4772.2499

+0.4537

April 27, 1899

Right & Above

XVIII

222.4

11 57 50

275.5

56.1

43.4

54.2

-1.41

97.6

110.3

-1.38

12 00 05
~~12 00~~

222.6

275.5

53.5

-1.36

~~41.4~~ 42.0

52.5

~~99.1~~ 95.5

112.3

Left Below

132.0

02 33

185.5

56.8

311.2

57.0

-1.33

8.2

113.8

-1.31

132.3

04 30

189.0

56.7

-1.29

311.3

58.9

19.2

115.6

Mean = -1.34

5 00

12 01 15

5 37

17 00 38 1/2 M. Time.

4772.7057

4772.2499

0.4555

Apr. 27. 1899.

A + 2952,			B. 394.		
12	36	36.0	12	36	0.0
	37	36.0		37	0.0

Re. of Sat. (Jup.) I Phot R
 W. Obs.

Compared with nearest sat. on same
 side = sat II.

Chron. Correction = - 36 secs.

12 59 26^x 13 00 02 Suspected.
 36 00 12 Seen

42 ^x	00	18	56.0 ⁺	149.0	+ 1.4 ⁺
56 ^x		32	55.0 ⁺	205.0	+ 1.4 ⁺
13 00 07 ⁺		43	57.0 ⁺	150.0	+ 1.3 ⁺
15 ⁺		51	61.6 ⁺	207.0	+ 1.1 ⁺
23 ⁺		59 ⁺	67.6 ⁺	145.4	+ 0.9 ⁺
35 ⁺		11	71.2 ⁺	2213.0	+ 0.7 ⁺
49 ⁺		25 ⁻	70.1 ⁺	141.8	+ 0.8 ⁺
58 ⁺		34	72.9 ⁺	211.9	+ 0.7 ⁺
13 01 09 ⁺		45 ⁻	77.8 ⁺	139.0	+ 0.5 ⁺
21 ⁺		57	75.8 ⁺	216.8	+ 0.5 ⁺

Apr 27, 1899

13	01	81	02	07	70.9 ⁺	141.0	+0.7 ⁺
		40		116	72.0 ⁺	211.9	+0.7 ⁺
		49		25-	79.7 ⁺	139.9	+0.4 ⁺
		57		33	82.8 ⁺	219.6	+0.3 ⁺
02	12			48	81.2 ⁺	136.8	+0.3 ⁺
	19			55-	80.1 ⁺	218.0	+0.2 ⁺
	30	03	06		82.9 ⁺	132.9	+0.3 ⁺
	39		15-			215.8	
			27				
	03	48 ⁺	34			137.1	
03	07	-36	43		82.9 ⁺	220.0	1
	17	03 12 ⁺	53		91.3 ⁺	135.7	
	28	04	04		87.1 ⁺	227.0	+0.1 ⁺
	38	04 28 ⁺	14			132.1	
	45	-36	21		93.7 ⁺	225.8	2
	59	03 52 ⁺	35-		92.2 ⁺	130.1	
04	08		44		92.0 ⁺	222.3	-0.1 ⁺
	22	05 16 ⁺	58			131.6	
	33	06 05-	09		91.6 ⁺	223.2	3
	46	04 40 ⁺	22		92.8 ⁺	132.2	
	57		33		92.2 ⁺	225.0	-0.1 ⁺
	09	06 00 ⁺	45-			130.4	
	16	-36	52		98.8 ⁺	229.2	
	26	05 24 ⁺	06	02	99.0 ⁺	128.8	4
	17		23		98.9 ⁺	227.8	-0.3 ⁺
		06 54 ⁺	34			128.0	
		-36	45-		94.0 ⁺	220.7	
		06 18 ⁺	50		102.3 ⁺	222.0	-0.3 ⁺
			58		98.2 ⁺	122.9	

Apr. 27, 1899.

07 46 ^x	07 14	225.2	
-36	23	126.7	
<u>07 10^x</u>	41	97.3	224.0 6
	54	95.2 ⁺	127.9
08 33	08 04	96.2 ⁺	223.1 -0.2 ^x
-36	18		132.0
<u>07 57</u>	28	94.0 ⁺	226.0
	37	95.0 ⁺	133.0 7
09 13 ⁺	49	94.3 ⁺	228.0 -0.2 ^x
-36	09 01		129.9
<u>08 37^x</u>	02	94.9 ⁺	224.8
	16	92.1 ⁺	132.0 A
	27	93.5 ⁺	224.1 -0.1 ^x

Limit of Visibility

11 44 ^x	11 21	15.9.0	
-36	36	47.1	206.1
<u>11 08^x</u>	52	47.7 ⁺	156.3 +1.8 ^x
	12 05	47.4	204.0

Seeing at times unusually fine, but - blurry at intervals.

Sat. reappeared on limit of Jupiter causing delay in first settings.

Settings probably somewhat more uncertain than usual on account of close proximity to limb

Apr. 27. 1899.

A. L. D. G. S.
13 25 35.5
26 35.5

B 394
13 25 0.0
26 0.0

April 25, 1899 (Friday)

Eros.

(Wols.)

4 59 +24.0
 10 15
 5 16

Eros. prec. star d.

4.9
 5.0

5.0

4.5

4.6

4.5

4.2

10.0

Eros prec. star d.

3.1

3.1

3.2

3.0

3.0

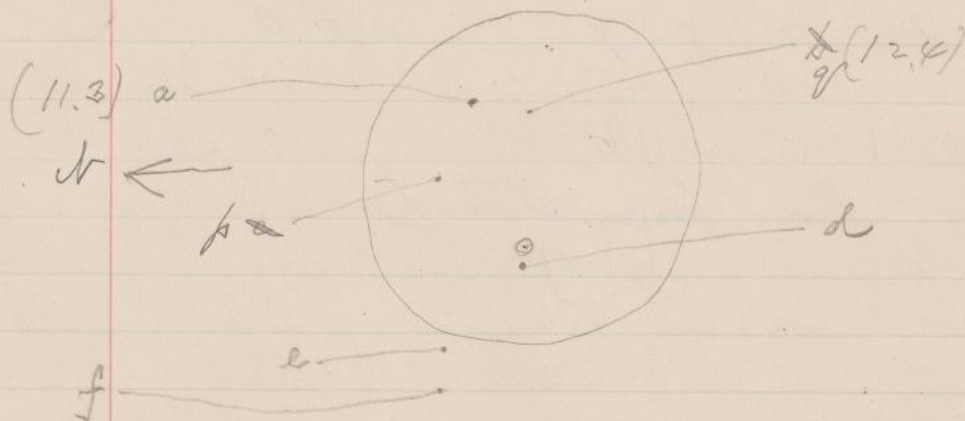
2.9

17.

Apr. 24. 1899.

Polar 270. Field 11.7

A 30 f & 4.5 Eros.
 g to 1.5 Eros.



a fol. δ hr. $+24^\circ$ δ 13 (9.5) 27.5 sec. alt
 3' north.

p & fol. a. 16 sec. 1' north

d " a 32.5 " 2.3 south.

e " d 12.5 " 2.5 north magn. of e 12.2

f " d 21.5 " 2.7 north " " f 11.7

g. 0. Eros now follows star d by several seconds,
 slightly north, having passed centrally
 over star d.

Transits cannot be taken as region is
 very low and sky some hazy, so that Eros
 cannot be seen as it crosses bar,

April 28, 1899.

R. Lepantis

(Wob2)

$$\begin{array}{r}
 9 \ 35 \quad -7.4 \\
 12 \ 12 \\
 \hline
 3 \ 37
 \end{array}$$

Star is compared with (F. 2)

Left & above

Copied.

$$\begin{array}{r}
 9 \ 40.0 \\
 155.0 \\
 165.7 \\
 334.1 \\
 348.2 \\
 13.7 \\
 24.1 \\
 27.8
 \end{array}
 \quad +4.57$$

+4.56

$$\begin{array}{r}
 154.0 \\
 165.4 \\
 333.5 \\
 347.3 \\
 14.4 \\
 13.8 \\
 28.2
 \end{array}
 \quad +4.54$$

Right Below

$$\begin{array}{r}
 64.0 \\
 78.0 \\
 243.7 \\
 257.0 \\
 14.0 \\
 13.3 \\
 27.3
 \end{array}
 \quad +4.61$$

+4.55

$$\begin{array}{r}
 9 \ 55.0 \\
 14 \ 48.0 \\
 68.7 \\
 78.0 \\
 243.1 \\
 257.6 \\
 14.3 \\
 14.5 \\
 28.8
 \end{array}
 \quad +4.49$$

mean = +4.56

Star extremely faint and difficult in photometer.

April 28, 1899.

R. Sextantis

R. + B. Star \times compared with (A. 2)lopid.

10 00.5

57.8

53.8

239.5

262.0

25.0

22.5

47.5

+ 3.39

+ 3.42

59.0

51.6

238.4

261.5

22.6

23.4

46.0

+ 3.46

Left & above

327.4

352.9

149.0

172.1

25.5

23.1

48.6

+ 3.33

+ 3.32

327.7

352.8

148.7

172.9

25.1

24.2

49.3

+ 3.30

Mean = + 3.34

10 11.0

15 5.8 km. h. T.

April 25, 1899

Rel. Est. on R. Lertontia

α 4 13

β 4 1

γ 1.5 2

δ 4.5 3

ϵ 5 eta

eta 4 12

κ 4 8

θ 5.5 1

λ 2 1'

λ' 4.5 22

copied

10 160

S Ursa Minoris.

Selection & Meas. of comp. stars. (W. obs.)

15- 49 + 75.2

13 6

2 43

9 17

See next page for measurements of comp. stars.

April 25, 1999

S Ursa Minoris

Star d compared with (9.0)

Left & Above

~~142~~

Copied

141.8

10 35.0

175.2

36.4

322.7

36.9

+2.40

359.6

73.3

142.8

+2.42

178.0

35.2

322.0

36.8

+2.44

358.8

72.0

Right & Below

53.0

88.6

35.6

+2.59

234.2

31.8

266.0

67.4

+2.56

53.4

88.4

35.0

48.0

233.6

34.6

+2.52

15 430 H.M.T.

268.2

69.6

Mean = +2.49

April 28, 1999

S. Wsa. Min. ris.

Star e comp with (9.0).

Right & Below

Cupid.

105 3.5

55.0			
57.0 56.5	31.5		
235.6	<u>28.6</u>	+ 2.86	
264.2	60.1		
			+ 2.85

55.3			
86.0	30.7		
235.2	<u>29.9</u>	+ 2.84	
265.1	60.6		

Left & Above

323.3			
356.0	32.7		
145.2	<u>32.1</u>	+ 2.68	
177.3	64.8		
			+ 2.70

323.6			
355.9	32.3		
11 05.0	<u>31.1</u>	+ 2.73	
11.8.5	63.4		
14 5.6			
176.7			

10 59.2 Br. M. Tunc.

Mean = + 2.75

April 29, 1899. (Saturday)

Reas. 2 (Jup) I Phot. R. Wobz.
Campbell. Rec.

Comp. with ^{nearer} of two satellites on preceding side =
Sat II Chronometer Cor = -38 sec.

7 28 41	7 29 19	seen
54	32	63.9 ⁺ 242.0 (+1.0)
29 08	46	61.7 ⁺ 305.9 (+1.1)
26	30 04	65.8 ⁺ 244.2 (+0.9)
36	14	70.0 ⁺ 310.0 (+0.8)
55	28	242
30 12	→ 33	73.5 ⁺ 240.0 (+0.6)
29	→ 50	81.3 ⁺ 315.3 (+0.3)
55	31 → 07	82.6 ⁺ 234.2 (+0.3)
31 21	→ 33	83.0 ⁺ 316.5 (+0.3)
40	→ 59	81.2 ⁺ 233.5 (+0.3)
	→ 32	315.0
	15	231.0 →
	36	
32 58	52	82.0 ⁺ 319.8
-38	33 06	87.1 ⁺ 231.0
32 20	20	87.6 ⁺ 315.1 (+0.1)
	37	232.8
30 00	55	84.3 ⁺ 316.3
-38	34 17	87.1 ⁺ 231.9 (+0.2)
33 27	25	85.7 ⁺
	39	319.1
		231.1

april 29, 1899.

$$\begin{array}{r} 7 \ 35 \ 00^+ \\ -38 \\ \hline 7 \ 34 \ 22^+ \end{array}$$

$$\begin{array}{r} 36 \ 01^+ \\ -38 \\ \hline 35 \ 23^+ \end{array}$$

$$\begin{array}{r} 37 \ 46^+ \\ -38 \\ \hline 37 \ 08^+ \end{array}$$

$$\begin{array}{r} 40 \ 40^+ \\ -38 \\ \hline 40 \ 02^+ \end{array}$$

$$\begin{array}{r} 42 \ 12^+ \\ -38 \\ \hline 41 \ 34^+ \end{array}$$

$$\begin{array}{r} 43 \ 18^+ \\ -38 \\ \hline 42 \ 40^+ \end{array}$$

$$\begin{array}{r} 7 \ 34 \ 54 \\ 35 \ 04 \\ \hline 23 \\ 36 \end{array}$$

$$\begin{array}{r} 36 \ 57 \\ 11 \\ \hline 21 \\ 37 \ 09 \end{array}$$

$$\begin{array}{r} 37 \ 31 \\ 34 \\ \hline 35 \ 32 \\ 40 \ 15 \end{array}$$

$$\begin{array}{r} 40 \ 26 \\ 35 \\ \hline 41 \ 23 \\ 38 \\ 45 \end{array}$$

$$\begin{array}{r} 42 \ 10 \\ 20 \\ \hline 32 \\ 45 \end{array}$$

$$\begin{array}{r} 43 \ 04 \\ 16 \\ \hline 25 \\ 41 \end{array}$$

$$\begin{array}{r} 88.1^+ \ 320.0 \\ 89.5^+ \ 230.5 \\ 88.8^+ \ 320.0 \ 0.0^+ \\ \hline 231.0 \end{array}$$

$$\begin{array}{r} 89.0^+ \ 320.0 \\ 89.9^+ \ 230.1 \ 0.0^+ \\ 89.4^+ \ 320.0 \\ \hline 225.0 \end{array}$$

$$\begin{array}{r} 90.0^+ \ 315.0 \\ 83.6 \ 233.5 \\ 86.8^+ \ 317.1 \ (+0.1^+) \\ \hline 232.0 \end{array}$$

$$\begin{array}{r} 88.8^+ \ 320.5 \\ 89.9 \ 230.1 \\ 89.4^+ \ 320.0 \ (0.0)^+ \\ \hline 22.5 \end{array}$$

$$\begin{array}{r} 90.9^+ \ 319.7 \\ 91.0^+ \ 225.0 \ (0.0)^+ \\ 91.0^+ \ 319.0 \\ \hline 229.4 \end{array}$$

$$\begin{array}{r} 94.6^+ \ 324.0 \\ 90.4 \ 229.0 \\ 92.5^+ \ 319.4 \ (-0.1) \\ \hline \end{array}$$

April 29, 1899

$$\begin{array}{r}
 7 \ 45 \ 01^* \\
 - \ 38 \\
 \hline
 7 \ 44 \ 23^* \\
 \hline
 \end{array}$$

Limit of Visibility

7	44	44		247.4
		54	58.6	306.0
	45	05	57.1	247.7
		24	57.8	304.5 (+1.3)

	Arnold and Dent
7	48 38.5
	49 38.2
	50 38.0

	Bond 394
7	45 00
7	49 00
7	50 00

Sat. reap. close to limit of Jup. Jupiter low; seeing quite bad; Jupiter boiling and jumping somewhat in field; a part of the time even after Satellite had attained full brightness, it could not be seen because of poor seeing, so that W. had to ^{wait} ~~wait~~ at intervals all through to get his settings.

On account of above reasons first setting probably a little late, and other settings necessarily made slowly. Settings however thought to be pretty good, considering the circumstances.

April 29, 1899.

Comp Stars for R. Sextantis

9	35	-7.0
11	05	
1	30	

Left & Above

331.6

Star & comp. with (8.2)

Copied

8 30.0

349.4

17.5

152.4

166

+ 4.10

169.0

34.4

154.7

44.07

169.3

17.6

~~332.8~~

17.5

+ 4.04

331.6

35.4

349.4

Right & Below

62.0

79.6

17.6

241.3

17.5

+ 4.06

258.8

35.1

+ 4.06

63.4

8 45.0

20.9

17.5

17.6

+ 4.06

10 37.5

244.5

35.1

13

259.1

mean = 4.06

April 29, 1899.

Went over to west dome to revise sequence on Hy ab
 Selection of Comp Stars,
γ Hydrae

$$\begin{array}{r} 9 \quad 48 \quad -21.8 \\ \underline{12 \quad 25} \\ 2 \quad 37 \end{array}$$

Star Rhocomp with

Left & above

Copied.

90 55.5

310.2

10.9

60.7

131.0

58.2

+1.22

159.2

118.9

+1.28

312.0

9.6

57.6

134.1

55.5

+1.35

159.6

113.1

Right & Below

220.5

250.6

60.1

+1.25

41.9

57.4

99.3

117.5

+1.22

222.3

252.2

59.9

+1.20

40.6

59.7

100.3

119.6

mean = 1.23

10 02.0

157.5

9

58.5

14

58.5

April 29, 1899.

Hydrae.
Star Chicomwith

Right Below

Copied.

10 03.5

224.0

280.4

56.4

41.3

59.1

+ 1.29

100.4

115.5

224.6

+ 1.29

282.3

57.7

42.5

58.0

+ 1.29

100.5

115.7

Left Above

132.1

190.0

57.9

312.0

59.2

+ 1.26

11.2

117.1

+ 1.26

132.7

189.7

57.0

310.6

60.3

+ 1.25

10 11.0

10.9

117.3

Mean = + 1.28

14.5

Stars low; observations difficult.

10 7.2

15 7.2 Gr. N. Tmra

April 29, 1899.

Librae

Phot. T (Wols.)

14 53 -8.0

14 53

-8.0

13 2513 15

1 25

1 35

10 35

10 25

Copied

Cap of 6 inches used on following.

Right above

Ledgered

1350

10 45 50

151.5

43.5

315145.7

-1.94

3.8

89.2

-1.98

47 25

139.0

182.5

43.5

320.0

42.6

-2.02

2.6

86.1

Left & Below

49 45

51.4

291.0

39.6

231.8

41.8

-2.15

273.6

81.4

-2.12

51.40

49.1

292.8

43.7

-2.08

19.2 40

232.0

40.2

10 45 10

5 38

15 47 32

Gr. m. Time.

Mean = -2.05

April 29 1899

Left Below

H

10 5300	59.5		
	90.8	40.0	
	231.0	41.6	-2.15
	272.6	81.6	

Copied
Ledgered

	49.0		-2.14
55 10	92.3	40.3	
	232.0	38.8	-2.13
	270.8	82.1	

Right Above

58 10	322.0		
	2.3	40.3	
	139.1	42.6	-2.08
	152.7	83.9	

	319.3		-2.06
11 00 20	2.8	40.5	
226 40	140.3	41.7	-2.05
	182.0	85.2	

10 56 40	38
5	

15 36 02	Gr. M. Time
----------	-------------

4774.6639
4774.1130
0.5509

Mean = - 2.10

April 29, 1899.

III

Right + Above

Expended
Ledgered

11	03 25	0.2	41.1	
		139.1	<u>44.0</u>	-2.05
		153.1	85.1	

-206

06	10	319.5		
		2.2	42.7	
		139.5	<u>41.7</u>	-207
		151.5	84.4	

Left + Below

10	40	232.6		
		271.5	39.2	
		49.3	<u>42.0</u>	-216
		91.3	81.2	

-212

12	00	230.8		
		272.5	41.7	
		50.0	<u>41.8</u>	-209
11	08 04	91.8	83.5	
5	38			

Mean = -2.09

16.07.26 Gr. m. Time.

4774.6718
4774.1120
+0.5598

May 3, 1899

(Wednesday)

Cap of size bunches used on following measurements
J. Libae.

Phot. T. (Notes.)

1456 - 8.0

14 56 - 8.0

104110 26

4 15

4 30

7 45

7 30

These observations Ledgered,
(Plotted & Copied)

Above

136.2

7 43.00

184.2

+ 5.0

319.2

44.3

- 1.55

3.5

92.3

139.4

- 1.80

7 45.00

182.6

43.2

317.8

46.0

- 1.94

3.8

99.2

Below

48.8

4778.5314

4776.4400

47 12

93.8

45.0

+ 2.0914

230.6

41.6

- 2.01

+ 2.3273

272.2

86.6

0.2359

52.2

- 2.06

48 38

599

37.7

226.5

45.3

- 2.11

273.5

83.0

Mean = - 1.98

23 50

7 45 58

5 52

12 45 06 Gr. M. Tuna

May 3 1899

II

Below.

Clouds.

7 51 57 92.1
229.8
271.8

42.9
42.0
84.9

-2.05

-2.0A

53 35 50.5
90.6
230.6
273.5

40.1
42.9
83.0

-2.11

Above.

7 57 10 316.6
4.5
137.9
154.4

47.9
46.5
94.4

-1.80

-1.8A

58 46 319.7
3.0

43.3

21 28 139.0

45.5

-1.95

7 55 22 184.5
-52

55.5

12 54 20 82. m. Time.

Mean = -1.98

4778.5377
4776.4400
+2.0977

2.0977
2.3273
0.2296

May 3, 1899

III

Above

8 05 00	317.0	47.3	
	4.3		
	139.5	43.2	-1.90
	182.7	90.5	

-1.88

06 36	318.2		
	2.7	44.5	
	137.6	47.9	-1.85
	185.5	92.4	

Below

08 46	229.7		
	273.0	43.3	
	50.3	40.7	-2.05
	91.0	84.0	

230.6

-2.06

11 00	271.2	41.2	
	49.2	44.1	-2.04
31 22	93.3	85.3	
5 7 50			
5 7 52			

13 6 58 Gr. M. Time

mean = -4.97

4778.5465

4776.4400

+2.1065

2.3273

0.2208

May 3, 1899.

Below

IV

229.7

275.4

50.8

91.8

45.7

41.0

86.7

-2.00

-1.95

227.0

272.5

48.0

93.1

45.5

45.1

90.6

-1.90

above

136.2

186.8

317.0

36

50.6

46.6

96.6

-1.74

-1.79

138.5

184.0

317.0

3.3

46.5

46.3

92.8

-1.84

21 00

7.1 23

22	57	51
22		-52

13 16 59 82 M. Time

4778.5535

4776.4400

+ 2.1135

2.3273

2.1135

0.2138

mean - 1.87

May 3, 1899.

V

Above

136.6

22 45

186.1

49.5

315.2

47.1

-1.74

2.3

96.6

~~136.6~~

-1.54

138.3

25 15

182.7

44.4

318.4

44.8

1.94

3.2

89.2

Below

51.0

27 33

930

42.0

229.4

42.5

-2.06

272.2

84.5

2.00

49.0

29 00

~~229.3~~

44.2

24 36

229.5

44.5

-1.95

5 26 09

274.3

88.7

5 52

13 25 17 Yr. Time

4775.5592

2.3273

4776.4400

2.1192

+2.1192

0.2081

mean = 1.92

May 3/1899.

J Lihao (resumed.)

14 56 - 20

11 45

3 11

A 49

Reject this group IIClouds
Cloudy

Below

47.0

9 25 15

96.0

49.0

Clouds thick.

226.3

45.5

- 1.72

274.8

97.5

- 1.76

47.8

27 45

95.2

47.4

- 1.51

229.3

46.5

275.5

93.9

Above

314.0

Clouds,

30 20

8.3

57.3

1.47

139.8

49.5

- 1.91

189.3

107.8

- 1.56

316.2

- 1.68

31 45

1.6

45.4

- 1.64

1150.5

132.0

55.1

- 1.66

9 28 47

187.1

100.5

Mean = - 1.77

14 30 52

May 3, 1899

VII

Above

9 36 20	314.3		
	7.6	52.3	
	138.0	45.5	-1.71
	188.5	97.8	
			-1.72

37 40	318.0		
	45	46.5	
	136.0	50.0	-1.74
	46.0	96.5	

Below

40 00	229.1		
	275.4	46.3	
	49.3	41.7	-1.97
	97.0	88.0	

-1.96

Clouds

229.4		
42 25	270.5	41.1
15 6 25	48.0	47.0
9 39 06	95.0	88.1

-1.96

Clouds again

mean = -1.84

5- 52	
14 38 14	Gr. W. Time
4775.6095	23.273
4776.4400	2.1695
+ 2.1695	0.1575

May 31 Egg

VIII

Below

225.6

9 46 00

274.6

49.0

48.2

46.5

-1.77

94.7

95.5

-1.7A

45 00

226.5

272.5

46.0

47.1

48.9

-1.79

96.0

94.9

Above

13.00

50 45

153.7

47.7

316.2

47.8

1.77

4.0

95.5

-1.71

13.00

52 05

155.5

49.5

315.5

50.6

-1.65

6.1

100.1

mean = -1.74

14 48 20 Gr. m. Time

4775.6169

2.3273

4776.4400

21769

+ 2.1769

0.1504

Mar 3/599

Above

IX.

95.6 30	135.0	49.5	
	184.5	45.0	- 1.88
	317.8	<u>94.5</u>	
	2.8		

-1.72

58 00	136.8	47.0	
	83.8	53.5	- 1.64
	314.0	<u>100.5</u>	
	7.5		

Below

1600 20	46.1	51.3	
	97.4	46.1	- 1.72
	227.6	<u>97.4</u>	
	273.7		

-1.76

0145	45.0	46.0	
236 35	94.0	48.0	- 1.81
9 59 09	227.9	<u>94.0</u>	
5 52	275.9		

Mean = -1.73

1458 17 Grm. Time.

4775.6238

4776.4400

+ 218.35

23273

0.1435

May 3, 1899

X

Below

10 05 10	46.3		
	97.6	57.3	
	227.8	43.7	-1.78
	271.5	<u>95.0</u>	

-1.76

10 40	48.0		
	95.5	49.5	
	226.1	49.3	-1.74
	275.4	<u>96.8</u>	

Above

13 10	311.6		
	8.7	57.1	
	135.0	52.8	-1.42
	187.8	<u>109.9</u>	

-1.53

15 00	316.0		
	5.6	49.0	
	135.0	52.5	-1.62
	187.5	<u>101.5</u>	

10	47 00
11	45
5	52

15 10 53 Gr. M. Time.

4776.6325	2.3273
4776.4400	2.1925
<u>+ 2.1925</u>	<u>0.1348</u>

Mean = -1.64

XI.

1/3-8

165.3

-1.72

1.73

mean = -1.65

John C. Welbach Lib

May 31 599

Below

XII

10 34 00

227.0

275.7

44.2

95.8

48.7

51.6

100.3

-1.65

-1.60

35 45

224.6

279.0

46.0

95.5

54.4

49.5

103.9

-1.56

Above

13 5 20

135.2

186.8

312.4

6.4

51.6

57.0

105.6

-1.57

-1.47

39 45

133.0

190.6

314.0

6.0

57.6

52.0

109.6

-1.43

10 36 54

5 52

15 36 02

Gr. M. Tunic.

mean = -1.54

4778.6500

4776.4400

+2.2100

27

2.3273

2.2100

0.1173

Apr May 3, 1899

XIII

Above
 134.6
 1044 00 159.3
 312.4
 9.3
 54.7
 56.9
 111.6
 -1.38
 -1.42

133.0
 40 30 159.3
 315.2
 7.2
 56.3
 52.0
 108.3
 -1.46

Below
 475
 45 20 97.0
 222.6
 270.6
 49.5
 56.0
 105.5
 -1.52
 -1.55

44.6
 19 56 96.5
 27 40 226.5
 10 46 50 27 46
 3 52
 52.2
 57.1
 103.3
 -1.56

Mean = -1.48

15 46 03 Hr. m. Time.

4775.6570

4776.4400

+2.2170

+2.3273

0.1103

May 31 1899

Below

XIV

10	52 50	45.8	97.3	51.5	
		225.0		<u>54.0</u>	-1.52
		279.0		103.5	

-1.54

54	50	42.5	96.0	53.2	
		227.4		<u>51.2</u>	-1.55
		278.6		104.4	

Above

57	35	343.7	5.2	545	
		130.9		<u>58.2</u>	-1.36
		189.1		112.7	

-1.52

		311.4			
	59 10	29.0	57.6		
	<u>23 25</u>	<u>134.2</u>	<u>52.4</u>	-1.66	
10	55 51	186.0	100.0		
5	52				

mean = -1.52

15 54 59 42 m. Tunc.

4775.6632	2.3273
4776.4400	<u>2.2232</u>
<u>4.2.2232</u>	0.1041

May 31 + 99

XV

Above

11 02 55	315.5	52.7	
	5.3		
	130.7	<u>58.4</u>	-1.39
	189.1	111.1	

-1.30

04 00	30.4	60.2	
	10.6		
	130.7	<u>58.5</u>	-1.22
	189.2	118.7	

Below.

06 40	226.5	47.9	
	274.7		
	45.4	<u>53.4</u>	-1.62
	98.5	101.3	

-1.50

08 25	220.4	58.0	
	275.4		
	43.8	<u>53.4</u>	-1.39
	97.2	111.4	
22 00			
11 5 30			
5 52			

mean = -1.40

16 04 38 Gr. M. Tunic.

47766695	2.3273
47764400	<u>2.2298</u>
+2.2295	0.0975
2-373	

May 3, '899

Beber

223.0

~~24~~

11 10 00

275.8

50.8

45.4

53.8

-1.54

+99.2

104.6

-1.46

220.3

11 30

278.3

58.0

458.

53.8

-1.38

99.6

111.8

Above.

x

130.6

15 10

188.8

58.2

311.5

59.3

-1.25

10.5

117.5

-1.24

x

129.0

17 10

190.7

61.7

312.6

57.0

-1.22

9.6

118.7

13 50

11 13 28

5 52

16 12 36 82 h. Time.

mean = -1.35

4775.6754

4776.4400

+ 2.2354

2.3273

0.2919

May 3, 1899.

Arnold's lent
 11 28 52.0
 29 51.9

Bond 394
 11 28 00
 29 00

Clearness variable throughout evening

Steadiness 5

Size 5

Troubled by clouds especially during middle
 of evening; clearer during first & last part.

May 4 1899

Thursday

U. Coronae

(W 10 52)

15	5	+33.9
61	13	
3	55	
2	05	

Variable proper abandoned.

There is a star about 5.5 magn. preceding $DM + 33^\circ 25' 61''$ (3.2) by 25 secs, about 12.0 North which is not in the DM . This star was noticed the first night that U. Coronae ^{was} looked up.

$DM + 33^\circ 24' 62''$ (5.0) follows 2461 by 5 secs and is 0.2 North of it.

$DM + 33^\circ 24' 63''$ (9.3) follows 2461 by 30 secs and is 4.5 North of it. Magn 9.4

A 9.4 follows $DM + 33^\circ 25' 61''$ & 5 secs and is 10.5 North of it.

A 9.0 follows this last star ~~by~~ ^{1^m} 2 secs and is 10.0 N. of it. This is $DM + 34^\circ 26' 19''$ (9.0)

There is a 9.3 magn preceding $DM + 34^\circ 03' 61''$ (9.0) by 56 secs, and is 3.0 North of it which is not in the DM

May 4, 1899

Means of Comp Stars for
Y Hydrae.

9	45	-21.5
12	30	
2	52	

Comp Star = Rappa. (K)

Star P comp with K.

Copied.

134.5 Left & Above

9 43.0

192.8

62.5

310.3

63.2

+1.11

135

123.7

~~+1.17~~

132.7

+1.17

190.6

59.9

+1.23

312.0

58.3

103

118.2

Right & Below

44.0

99.6

53.6

+1.42

224.8

54.2

279.0

109.8

+1.34

44.8

9 45.0

100.4

58.6

+1.25

221.0

58.7

14 45.5

279.7

117.3

Mean = +1.26

May 4 1899.

Right Star Phi comp with (R)
~~Left~~ Below

Left

219.1

275.3

43.5

98.5

59.2

55.0

114.2

+1.32

226.8

277.6

43.5

99.8

55.5

52.3

112.1

+1.37

+1.34

Left alone.

132.0

193.8

314.6

8.7

61.8

54.1

115.9

+1.25

+1.25

132.8

190.0

311.1

10.0

57.2

58.9

116.1

+1.25

10 00.0

14 54.5

Mean +1.31

May 4, 1899

Star α consp with K.

Left & Below

leaped.

	122.0		
	200.3	75.3	
10 06.0	302.3	76.7	+0.45
	18.0	<u>155.0</u>	

+0.53

121.0

195.5

303.3

~~18.8~~

74.5
<u>75.5</u>
150.0

+0.55

Right & Below

32.7

110.0

212.3

285.9

77.6
<u>73.6</u>
151.2

+0.55

+0.55

34.0

108.0

213.6

288.2

74.0
<u>73.6</u>
147.6

+0.62

10	15.0
<hr/>	
15	12.5

Mean = +0.56

May 4, 1899

S. Lebrun.

15	04	-19.2
14	02	
<hr/>		
1	02	
10	58	

May. 4. 1899.
 A. + S. 954. B. 394.
 12 25 55.4 12 25 0.0
 26 55.4 26 0.0
 Re. Jup. II Phot. R.

W. Obs.

Coburn Recorder

Compared with sat. on following side = sat III

Chronometer Correction = - 55 secs.

Limit of Visibility.

12	38	54	173.2
12 39 11 ⁺	39	07	200.9
- 55	15-	27.7 ⁺	174.0
<u>12 38 16⁺</u>	27	<u>26.0⁺</u>	200.0 (+3.1 ⁺)
		<u>26.8⁺</u>	

41 08 12

42 03

plew.

20 ⁺	42	15-	28.9 ⁺	174.2	+ 2.9 ⁺
28 ⁺		23	35.1 ⁺	203.1	+ 2.5 ⁺
34 ⁺		29	36.9 ⁺	168.0	+ 2.4 ⁺
40 ⁺		35-	36.9 ⁺	204.9 ⁺	+ 2.4 ⁺
48 ⁺		43	37.2 ⁺	168.0	+ 2.4 ⁺
55 ⁺		50	39.1 ⁺	205.2	+ 2.2 ⁺
42 06 ⁺	43	01	43.7 ⁺	2166.1	+ 2.0 ⁺
15 ⁺		10	40.6 ⁺	209.8	+ 1.9 ⁺
22 ⁺		17	44.8 ⁺	165.2	+ 1.9 ⁺
29 ⁺		24	45.0 ⁺	210.0	+ 1.9 ⁺

May 4. 1899.

42 30 ⁺	30	45.5 ⁺	16.520	+1.9 ⁺
42	37	48.9 ⁺	210.5 ⁻	+1.7 ⁺
48	43	57.2 ⁺	161.6	+1.6
54	49	50.3 ⁺	212.8	+1.6 ⁺
43 00 ⁺	55 ⁻	50.5 ⁺	162.5 ⁻	+1.6 ⁺
11	44 06	54.1 ⁺	213.0	+1.5 ⁺
16	11	55.1 ⁺	158.9	+1.4 ⁺
24	19	55.2 ⁺	214.0	+1.4
	26			
38 ⁺	33	57.2 ⁺	158.8	+1.3 ⁺
44 ⁺	39	57.0 ⁺	216.0	+1.3 ⁺
54 ⁺	49	58.6 ⁺	159.0	+1.3 ⁺
59 ⁺	54	62.6 ⁺	217.6	+1.1
44 06	45 ⁻ 01	63.8 ⁺	155.0	+1.0 ⁺
13	08		218.8	
<hr/>				
45 ⁻ 30 ⁺	17		154.0	
- 55 ⁻	25 ⁻	65.1 ⁺	219.1	
<u>44 35⁺</u>	36	63.5	156.0	1
	44	64.3 ⁺	219.5 ⁻	(+1.0) ⁺
	52		154.8	
46 04 ⁺	46 01	65.7 ⁺	220.5 ⁻	
- 55 ⁻	08	65.5 ⁺	154.0	2
<u>45 09⁺</u>	14	65.6 ⁺	219.5 ⁻	(+1.0) ⁺
	22		152.7	
46 40 ⁺	32	65.4 ⁺	218.2	3
- 55 ⁻	48	67.1 ⁺	153.2	
<u>45 45⁺</u>	57	66.2 ⁺	220.3	(+0.9) ⁺
	47 06		152.2	
	18		223.0	4

May 4. 1899.

$$\begin{array}{r} 47 \ 22^x \\ -55^- \\ \hline 46 \ 27^x \end{array}$$

$$\begin{array}{r} 48 \ 06^x \\ -55^- \\ \hline 47 \ 05^x \end{array}$$

$$\begin{array}{r} 48 \ 33 \\ -55^- \\ \hline 47 \ 38 \end{array}$$

$$\begin{array}{r} 49 \ 06^x \\ -55^- \\ \hline \end{array}$$

$$\begin{array}{r} 48 \ 11^+ \\ \hline \end{array}$$

$$\begin{array}{r} 50 \ 53^x \\ -55^- \\ \hline 50 \ 00^+ \end{array}$$

$$\begin{array}{r} 26 \\ 37 \\ \hline 45^- \end{array}$$

$$55^-$$

$$48 \ 05^-$$

$$15^-$$

$$20$$

$$30$$

$$37$$

$$45^-$$

$$54$$

$$49 \ 03$$

$$10$$

$$17$$

$$25^-$$

$$31$$

$$51 \ 12$$

$$32$$

$$\begin{array}{r} 70.8 \ 15-11.0 \\ 70.1 \ 221.1 \\ \hline 70.4 \ 15-11.0 \end{array} \quad (+0.8)^x$$

$$69.5^- \ 220.5^- \quad v^-$$

$$\begin{array}{r} 67.0^- \ 15-4.1 \\ 68.2^+ \ 221.1 \end{array} \quad (+0.8)^x$$

$$15-3.9$$

$$66.1^+ \ 219.0 \quad 6^x$$

$$\begin{array}{r} 69.1^+ \ 15-3.7 \\ 68.6^- \ 222.8 \end{array} \quad (+0.8)^x$$

$$15-3.5^-$$

$$66.4^+ \ 219.9 \quad 7$$

$$\begin{array}{r} 67.9^+ \ 15-4.0 \\ 67.2^+ \ 221.9 \end{array} \quad (+0.8)^x$$

$$15-2.0$$

$$69.2^+ \ 221.2 \quad 2$$

$$\begin{array}{r} 74.5^- \ 15-0.0 \\ 71.8^- \ 224.5^- \end{array} \quad (+0.7)^x$$

Seeing somewhat - blurry, but good at intervals.

$$\begin{array}{r} A + S. \ 95-2. \\ 13 \quad 0 \quad 55.2 \\ \quad 1 \quad 55.2 \end{array}$$

$$\begin{array}{r} B. \ 39\% \\ 13 \quad 0 \quad 0.0 \\ \quad 1 \quad 0.0 \end{array}$$

May 4. 1899.

St. Cygni. Phot. J.

Yr. Sh.

21 34 +42.6
16 35
— 5 9
7 1

13 43 46

17.4 = Comp. star dis.

127.1 109.7
309.6 191.8 117.2
309.6 227.5 132.5 0.93

45

12.0 116.6 (0.98)
128.6
194.8
307.1 1123 224.9 131.1 0.96

283.0 116.2
39.8
108.9 102.4
217.3 225.2 134.2 0.22

50 23

285.8 110.1 (0.21)
35.9
104.3 106.2 102.3 141.6 0.74
114.5

94 9
47 4
55

mean = 0.22

46 09 Gr. m. Time.

Same again. May 1899

52 50

285.8 110.1
35.9
106.1 104.3
214.4 218.4 141.6 0.7K
~~287.1~~

280.0
36.9 111.9 (0.7K)
105.9 110.4
216.3 222.3 137.7 0.42

194.0
307.0 113.0
14.8 112.1
126.9 225.1 134.9 0.44

195.8 112.6 (0.46)
308.4 111.0
10.0 223.6 136.4 0.45

14 00 00

112 50

13 56 25
35

~~123.0~~ 125.0

Mean 0.42

Gen mean = -0.45

13 55 30 $\frac{1}{2}$ stamp. Star in above message, is star u (in old notation) = star e (in final notation).

14 v.

Low auroral arch in north. Altitude of top of arch = $\frac{1}{6}$ alt. of Polestar.

May 1899.

A. + S. 952.
 14 27 55.0
 2A 55.0

B. 398.
 14 27 0.0
 2A 0.0

Re Jup I Phot. R.

W. Obs.

Caleon Records

Chronometer Correction = - 55 secs.
 Compared with more remote of two
 nears near sat. on following side = sat II. (Sat III being some distance off on following side)

14 50 32.14
 - 55
14 49 37

50 08 169.8
 21 - 32.0 201.8
 43 33.7 170.2
 53 32.8 203.9

14 53 28.2
 31

54 22.5
 26

~~seen~~ suspected.
 seen

38

33 30.8 171.2

50

41 - 41.7 202.0

54 01

56 49.7 160.3

12

55 - 07 48.0 210.0

20

15 - 49.8 162.0

29

24 49.7 211.8

41

36 50.9 162.1

48

43 53.1 213.0

56

51 52.8 159.9

55 05

56 00 60.7 212.7

May 4, 1899

		13	14
14 55-29		24	70.0 ⁺ 15.2.0 6
36		31	71.0 ⁺ 222.0
		39	
58		53	71.4 ⁺ 157.0
56 07	57	02	73.2 ⁺ 222.4
10		10	76.5 ⁺ 149.2
26		21	76.1 ⁺ 225.7
35		30	71.4 ⁺ 149.6
44		39	71.3 ⁺ 221.0
52		47	74.6 ⁺ 149.7
59		54	224.2
	58	02	150.6
58 15		10	69.6 ⁺ 220.2
33		19	75.2 ⁺ 148.8
57 20		28	72.4 ⁺ 224.0
		35	149.0
58 48 ⁺		41	75.1 ⁺ 224.1
55		51	77.9 ⁺ 148.2
57 53 ⁺	59	00	76.5 ⁺ 226.1
		13	148.7
59 25 ⁺		21	77.4 ⁺ 226.1
53		29	77.0 ⁺ 149.0
58 30 ⁺		36	77.2 ⁺ 226.0
		43	149.9
59 54		51	75.8 ⁺ 225.7
55		58	72.4 ⁺ 150.8
58 59 ⁺	00	04	74.1 ⁺ 223.2
		16	148.0

May 4, 1899.

$$\begin{array}{r} 15\ 00\ 27^{\times} \\ -55^{\times} \\ \hline 14\ 59\ 32^{\times} \end{array}$$

$$\begin{array}{r} 00\ 58^{\times} \\ -55^{\times} \\ \hline 15\ 00\ 03^{\times} \end{array}$$

$$\begin{array}{r} 01\ 35^{\times} \\ -55^{\times} \\ \hline 00\ 40^{\times} \end{array}$$

$$\begin{array}{r} 02\ 08^{\times} \\ -55^{\times} \\ \hline 02\ 03^{\times} \end{array}$$

$$\begin{array}{r} 24 \\ 31 \\ 36 \\ \hline 44 \\ 52 \\ 01\ 04 \\ 14 \\ \hline 23 \\ 29 \\ 40\ 39 \\ 48 \\ \hline 54 \\ 60 \\ 10 \\ 15 \\ 32 \\ \hline \end{array}$$

$$\begin{array}{r} 78.8 \\ 74.8^{\times} \\ 76.8^{\times} \\ \hline 73.9^{\times} \\ 76.6^{\times} \\ 75.2^{\times} \\ \hline 78.2^{\times} \\ 78.6^{\times} \\ 78.4^{\times} \\ \hline 77.0^{\times} \\ 79.0^{\times} \\ 78.0^{\times} \\ \hline \end{array}$$

$$\begin{array}{r} 226.8 \\ 150.2 \\ 225.0 \\ \hline 149.9 \\ 223.28 \\ 147.3 \\ 223.9 \\ \hline 148.2 \\ 226.4 \\ 147.4 \\ 226.0 \\ \hline 148.0 \\ 225.0 \\ 146.0 \\ 225.0 \\ \hline \end{array}$$

Setting made especially at the first—somewhat slowly as Jupiter was rather low and seeing rather unsteady

A. + S. g.v. 2.
15 26 55.0
27 55.0

B. 394
15 26 00
27 00

Aurora in north still visible although daylight is coming.

May 5, 1899. (Friday)

Eros.

5 40 + 24.5
 10 52
 5 12

8 02.0

11.0
 11.2
 11.5
 11.4
 11.3

8 03.0

5.3
 5.5-
 6.0
 5.5-
 6.0
 5.4
 5.5-
 6.0
 5.3
 6.0
 5.3
 5.6
 5.5-
 5.4
 6.0

May 5, 1899.

a with 8.8

8 16

10.2

10.3

10.0

10.0

10.0

9.5

9.5

9.6

9.4

b with 8.8

8 18

9.5

2.3

2.3

2.5

2.5

2.3

8.6

8.1

8.2

8.3

8.1

8.2

8.0

8 26

May 5/15/99

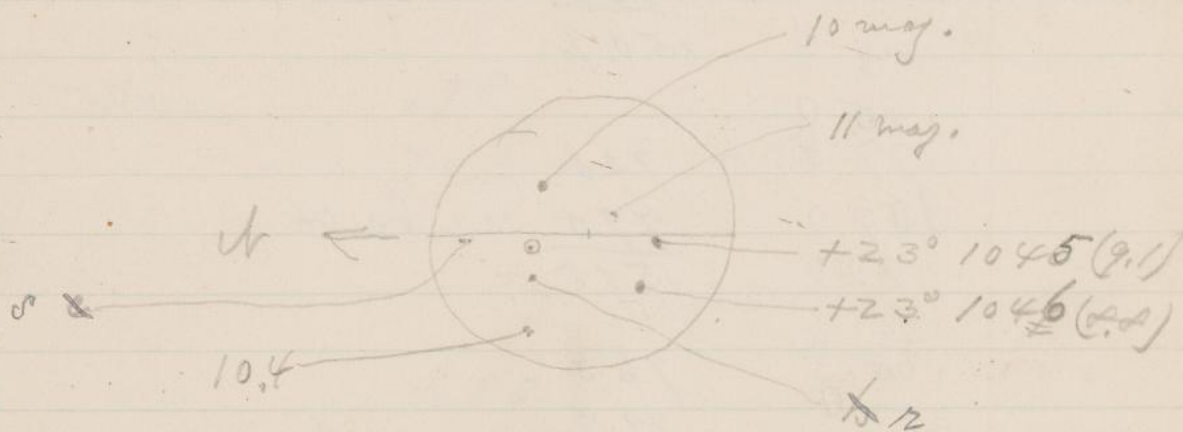
Star δ^2 precedes the (S.F.) 2.4 sec
and is 5.5 N. Magn = 12.2

Star ϵ^5 precedes star δ^2 about
5 sec and is 2.7 N.

Star a is the asteroid
~~b $\frac{3}{2.5}$ Eros~~
Eros

2 36

δ^2 2.5 Eros
Eros 5.5 ϵ^5



Field 11.7.

Power 270.

Phot. put on, but impossible to measure
Eros. Eros practically invisible in photometer
when circle is set for Eros at full brightness.

May 5, 1899.

s 57 Eros is now very close to star b.Areas - of Comp. Stars for
γ Hydrae Revised.

			9 45	-21.5
			12 25	
			2 40	
	Left & Above		Star (true) comp. with (K)	
Kappa disc	122.7			
	197.3	74.6		
9 34.0	303.3	76.3	+0.56	
	19.6	150.9		
	125.0			+0.55
	197.8	72.8		
	303.0	79.0	+0.54	
	22.0	151.8		
	Right & Below			
	32.2			
	108.5	76.3		
	210.6	79.5	+0.46	
	259.5	155.8		
	33.0			+0.49
	111.0	78.0		
9 41.0	212.0	75.0	+0.52	
	287.0	153.0		
9 37.5				
MC 37.5				
				Mean = +0.52

May 5, 1899.

Star H Comp. with (K)

Lipid.

Left
 K. dis. $\begin{array}{r} 35.2 \\ 107.1 \\ 217.5 \\ 255.0 \end{array}$
 9 49.0
 $\begin{array}{r} 721 \\ 67.5 \\ \hline 139.6 \end{array}$ + 0.78
 + 0.81

$\begin{array}{r} 37.2 \\ 102.4 \\ 212.6 \\ 284.0 \end{array}$
 $\begin{array}{r} 65.2 \\ 71.4 \\ \hline 136.6 \end{array}$ + 0.84

Right
 $\begin{array}{r} 306.0 \\ 15.8 \\ 123.8 \\ 197.0 \end{array}$
 $\begin{array}{r} 69.8 \\ 73.2 \\ \hline 143.0 \end{array}$ + 0.71

$\begin{array}{r} 308.1 \\ 16.1 \\ 127.6 \\ 195.1 \end{array}$
 9 57.0
 14 53.0
 $\begin{array}{r} 68.0 \\ 67.5 \\ \hline 135.5 \end{array}$ + 0.87
 + 0.79

Mean + 0.80

May 5, 1899.

Star Li comp with π π dis. \rightarrow

Right Above

Leopold

10 030

102.6

221.0

116.4

~~277.2~~119.5

-1.14

250.5

237.9

40.0

122.1

x

-1.16

103.3

220.8

117.5

278.2

121.6

-1.17

39.8

239.1

120.9

Left Below

11.0

129.7

118.7

191.7

119.6

-1.16

314.9

238.3

121.7

9.8

-1.12

10 10.0

129.0

118.2

5 06.5

193.8

117.0

-1.09

310.0

235.2

124.8

mean = -1.14

May 5, 1899

Store T' camp with. π

Left below

Copied

10 11.0 175
 π dis. 123.5
 196.2
 308.0

105.7
114.8
 217.5
142.5

-0.72

16.0

-0.72

127.0

111.0

197.5

106.7

-0.73

304.2

217.7

Right & Alt

142.3

255.5

254.0

36.0

35.0

116.0

104.4

105.5

105.2

217.2

311.0

216.2

143.2

-0.70

257.1

36.2

109.1

-0.72

10 23

104.5

108.7

213.2

217.8

-0.73

15 17 1/2 M. time

142.2

Mean = -0.72

May 5 1899

S Libras

15	4	-19.2
14	4	
<hr/>		
1	00	
11	00	

May 6, 1899 (Saturday)

S Comori.

$$\begin{array}{r} 8 \ 35 \quad +19.6 \\ 10 \ 58 \\ \hline 2 \ 20 \end{array}$$

Cloudy
7.30

$$\begin{array}{r} 8 \ 33 \quad +20.4 \\ 11 \ 07 \\ \hline 2 \ 34 \end{array}$$

$$\begin{array}{r} 10 \ 05 \\ 1 \ 21 \\ \hline 8 \ 44 \quad +19.6 \\ 11 \ 02 \\ \hline 2 \ 18 \end{array}$$

Cloudy
8.00

$$\begin{array}{r} 8 \ 33 \quad +20.4 \\ 11 \ 15 \\ \hline 2 \ 45 \end{array}$$

$$\begin{array}{r} 8 \ 36 \quad +18.7 \\ 11 \ 30 \\ \hline 2 \ 54 \end{array}$$

Cloudy
9.00

$$\begin{array}{r} 8 \ 36 \quad +18.7 \\ 12 \ 19 \\ \hline 3 \ 41 \end{array}$$

$$\begin{array}{r} 8 \ 36 \quad +18.7 \\ 12 \ 23 \\ \hline 3 \ 47 \end{array}$$

May 6 1899

Stancro

I

Right Above

var. dis > 26.2

9 17 20 115.0

26.0

Clouds thicker. 117.5

9 29 10 203.2

Clouds thick 293.6

25.5

32 10 117.0

Clouds thick

Stars gone.

Reject Above

Clouds thick.

May 6, 1899.

These observations
Ledgered & plotted
and copied.

Right above

various

207.0	295.2
294.3	225
9 35 00	9 57 30

Cloud thicker

Right above

935 30

116.4

97.4

199.7

10 25

302.2

196.9

162.1

+ 0.32

2H 3

+ 0.32

59 35

122.4

98.1

199.3

98.1

297.4

196.2

163.5

+ 0.31

Left Below

286.2

10 01 45

32.2

106.0

109.3

92.2

208.5

198.2

161.8

+ 0.35

293.0

+ 0.36

04 15

30.8

97.8

244 05

111.3

101.9

+ 0.35

10 01 01

213.2

199.7

5 -1 -01

162.3

mean = +0.34

15 0 0

Shutter interferes slightly

May 6, 1899

Kamari

II

Left Below

10 05 20	291.9		
	30.9	99.0	
	111.1	<u>99.1</u>	+ 0.3 ⁴
	210.2	198.1	
		<u>161.9</u>	

+ 0.36

09 50	291.8		
	31.8	100.0	
	110.5	<u>99.7</u>	+ 0.3 ⁴
	210.2	199.7	

Right & above
160.3

11 50	300.0	96.4	
	22.4	<u>101.0</u>	
	123.4	197.4	+ 0.33
		<u>162.6</u>	

+ 0.32

13 15	200.2		
	299.2	99.0	
43 15	21.1	<u>97.3</u>	
10 10 49	115.4	196.3	+ 0.31
5 -1 -01		<u>163.7</u>	

15 09 45
 4751.6318
 + 772.2498
9.3526
 9.3510

Gr M. Time.

9.4545	9.3510
<u>9.3526</u>	<u>9.4545</u>
-0.1019	0.1035

Median = + 0.34

May 6, 1899

Right & Above

III

	203.3		
10 15 30	300.8	97.5	
	19.6	101.4	
	121.0	198.9	+0.36
		<u>161.1</u>	

	201.0		
16 50	302.5	101.5	+0.36
	209	98.0	
	178.9	199.5	+0.37
		<u>160.5</u>	

Left & Below

	112.8		
19 20	211.1	98.9	
	290.7	103.7	+0.43
	34.4	202.6	
		<u>157.4</u>	

	108.5		+0.45
22 10	211.2	102.4	
	290.7	102.3	+0.47
7 3 50	93.0	204.7	
10 12 28		<u>155.3</u>	
5-01 -01			

15-17 27 1/2 M. Time

mean = +0.40

4771.6372	9.4545	9.4545
4772.2802	9.3560	9.3564
<u>9.3861</u>	<u>-0.0955</u>	<u>0.0951</u>

May 6 '99

Platoni

Left & Below

IV

10 28 00	109.8	103.2	
	213.0	103.6	+0.51
	290.0	<u>206.8</u>	
	33.6	<u>153.2</u>	+0.54
29 40	109.1	104.8	
	213.9	105.7	+0.55
	288.1	<u>210.5</u>	
	213.5	<u>149.5</u>	

Right & Above

46 10	20.2	19.1	
32 30	122.3	126.0	106.9
	197.5	198.0	<u>106.6</u>
	303.0	304.6	213.5
			<u>146.5</u>
48 10	18.5	15.2	+0.62
35 00	122.8	127.8	108.8
	298.8	195.0	<u>102.0</u>
15 2 00	309.8	306.0	216.8
			<u>143.2</u>
10 38 00			
5 -01 -01			

15 36 59 Gr M. Tuzi

mean = +0.61

4751.6507

4772.2507

98999

9.4840

9.2999

0.0246

May 6 1899

Plancu.

✓

Right above

19.8

10 41 10 123.9

1499.4

303.4

21.3

Left Below.

Stopped by clouds and trouble & more
or less throughout by clouds during
sittings.

A & Dent.

11 13 0.7

11 14 0.8

B and 394

11 12 00

11 13 00

May 9, 1899.

(Tuesday)

Eros

5	55	+ 23.2
11	17	
5	22	

Stars a & B.

sid time

52

5.5

5.2

5.0

5.0

5.0

Stars a & C

9.0

9.0

8.5

8.5

8.5

56

Stars

4.2

4.5

4.5

4.0

4.0

02

Cannot find Eros; region low; twilight strong
 clearing somewhat sudden; strong wind
 rising: Seeing F. b. 5.

May 9. 1899.

Meas. of comp. stars. W. obs. Phot. T.

of Hydrine

9	45	-21.5
12	15	
<hr/>		
2	30	

Star π comp. with R.

Left

K dis.

~~1037~~~~275.5~~

220.1

9 37

255.2

36.2

106.2

65.1

700

1351

+0.89

Copied.

217.4

253.3

110.1

101.5

Right.

126.0

195.0

300.5

17.0

65.5

61.7

127.2

+1.04

720

765

147.5

+0.62

9 46

122.4

290.0

202.0

18.5

77.6

76.5

154.1

+0.50

+0.56

Mean = +0.76

May 9, 1899

~~Comet Halley~~
W Virginia

Wobs

13 16 -4.2

13 6

-4.2

13 45

13 36

0 32

0 30

Comp. Star = $\sqrt{2} - 2^{\circ} 36.44$ (40)

Left Above

I

54.2

These observations Ledgered, Copied,
Plotted.

10 34 55

57.0

32.8

231.5

38.5

+246

270.0

71.3

+251

53.6

36 10

88.3

34.7

234.7

33.6

+256

267.3

68.3

Right Below

323.5

38 30

38.2

34.4

143.8

33.0

+259

176.8

67.4

+256

324.0

40

10

357.8

33.8

14.9

45

144.0

35.8

+252

10 37

26

179.8

69.6

5 37

-17

15 37

9 gr. M. Time.

Mean = +254

May 9, 1899

Right Below

II

10 41 50	321.7		
	357.5	36.1	
	144.2	<u>33.0</u>	+ 2.54
	177.2	69.1	

	323.6		
43 25	357.5	35.2	
	142.6	<u>36.8</u>	+ 2.44
	179.4	72.0	

Left Below

	232.8		
44 53	265.5	36.0	
	55.0	<u>31.4</u>	+ 2.59
	86.4	67.4	

	234.6		
50 35	267.2	33.6	
	<u>55.0</u>	<u>30.8</u>	+ 2.70
18 4 45		64.4	
10 46 11	87.0		
5 -17			

10 45 54 Gr. m. Time.

mean = + 2.56

4754.6565
<u>4750.7655</u>
3.8913

May 9, 1899

L. & R.

III

234.0

1.0 52 05

2655

34.5

54.1

31.9

+ 2.63

86.0

66.3

+ 2.64

233.4

53 40

267.64

34.3

55.0

31.3

+ 2.66

86.3

65.6

R. & B.

143.4

55 50

179.7

36.3

324.3

32.7

+ 2.54

357.0

69.0

x

+ 2.54

143.7

57 15

177.9

34.2

322.4

35.2

+ 2.53

18 50

357.6

69.4

10 54 42

5 - 17

15 54 25 Gr M. Time.

Mean = + 2.59

4724.6628

4750.7655

3.4973

May 7, 1899

R P B

TV

10 59 05	143.3		
	177.6	34.3	
	328.6	<u>33.2</u>	+ 2.59
	356.8	67.5	

+ 2.54

11 11 50	143.2		
	175.4	35.2	
	322.4	<u>35.6</u>	+ 2.48
	358.0	70.8	

L. H. A.

13 35	53.3		
	56.7	33.5	
	234.0	<u>34.6</u>	+ 2.57
	268.6	68.1	

+ 2.56

14 45	53.5		
	56.3	32.8	
279 15	233.2	<u>35.6</u>	+ 2.56
11 9 49	268.5	68.4	
5 -17			

16 9 32 Gr. in. Time

Mean = + 2.55

4724.6733

4720.7655

3907.8

May 9 '99.

V

L & A.

Comp. dis. 1
11 16 00 53.4
57.5 34.1
233.3 35.5 + 2.52
268.8 69.6

54.1 + 2.56
17 20 57.5 33.4
234.3 33.5 + 2.61
267.8 66.9
R. 1 B.

19 10 323.2
358.7 35.5
642.7 34.3 + 2.57
177.0 69.8

+ 2.57

3240
20 40 358.7 34.7
143.7 35.1 + 2.57
73 10 178.5 69.8

11 18 18
5 -17

16 18 01 Gr. M. Trino.

4724.6792

4722.7655

3.9137

mean = +2.54

May 9. 1899

R P L.

11	30	17.5
11	31	17.0

Bond 394

11	30	00
11	31	00

(May 10 1899.) (Wednesday)

Cap. 6 inches wood of Librae. (Wob.)

14	56	-5.0	14	56	-A.0
11	03		10	56	
3	53		4	00	
8	07		8	00	

Copied & Ledgered

14	53	-5.0
11	13	
3	40	
8	20	

Above

319.7

2.6

134.2

155.0

42.9⁺50.8⁺ - 1.52⁺93.7⁺-1.79⁺

313.7

5.2

139.5

153.5

Below

229.2

271.2

46.6

93.0

228.4

273.0

51.1

89.1

42.0⁺46.4⁺ - 1.96⁺28.4⁺-2.04⁺44.6⁺32.0⁺ - 2.12⁺22.6⁺mean = -1.92⁺

7 51.10

7 52.50

7 54.50

4755.5372⁺4753.4227⁺2.1145⁺2.3273⁺

-0.2129

56 25

15 15

7 53.49⁺15-53-212⁺12 53.29⁺

May 10, 1899.

Below

II.

	231.3		
00 00	273.5	42.5 ⁺	
	47.5	45.2 ⁺	-1.9A ^x
	93.0	87.7 ⁺	
			-2.00 ^x
	229.6		
01 15	275.5	45.9 ⁺	
	51.0	39.2 ⁺	-2.03 ^x
	90.5	85.7 ⁺	

Above

	139.2		
03 50	150.4	41.2 ⁺	-1.92 ^x
	316.2	82.6 ⁺	-2.20
	47.2	89.2 ⁺	
			-1.91 ^x
	135.2		-2.20
05 15	154.2	48.4 ⁺	
10 20	319.7	42.2 ⁺	-1.90 ^x
5 2	35 ^x	90.6 ⁺	
5 2	-22		
13 2	13 ⁺ Gr. M. Time		-1.96 ^x
	475.5-543.2		mean = -2.02
	475.3. 4227		
	2.1205 ⁺ Gr. M. Time		
	2.3273		
	-0.206		

May 19, 1899.

III

above

$$\begin{array}{r}
 135.4 \\
 152.0 \\
 316.5 \\
 6.0 \\
 \hline
 43.6^x \\
 49.5^x \\
 93.1^x
 \end{array}
 \quad
 \begin{array}{r}
 -1.23^x
 \end{array}$$

 -1.24^x

$$\begin{array}{r}
 137.1 \\
 154.2 \\
 318.0 \\
 2.6 \\
 \hline
 47.7^x \\
 44.6^x \\
 92.3^x
 \end{array}
 \quad
 \begin{array}{r}
 -1.25^x
 \end{array}$$

Below

$$\begin{array}{r}
 50.2 \\
 93.2 \\
 228.0 \\
 273.0 \\
 \hline
 43.0^x \\
 45.0^x \\
 88.0^x
 \end{array}
 \quad
 \begin{array}{r}
 -1.97^x
 \end{array}$$

 -2.00^x

$$\begin{array}{r}
 16 \quad 35 \\
 50 \quad 30 \\
 12 \quad 38^+ \\
 5 \quad -22 \\
 \hline
 94.5 \\
 229.5 \\
 271.0 \\
 \hline
 44.7^x \\
 41.5^x \\
 86.2^x
 \end{array}
 \quad
 \begin{array}{r}
 -2.02^x
 \end{array}$$

13 12 16 yr. m. Time

$$\begin{array}{r}
 4755 = 5502^+ \\
 4783, 4227 \\
 \hline
 +2.1275^+ \\
 2.3273 \\
 2.1275 \\
 \hline
 -0.1998
 \end{array}$$

Mean = -1.92^+

May 10, 1899

IV

Below
50.0

25 15	93.6	43.6 ⁺	
	228.2	44.8 ⁺	-1.96 ⁺
	273.0	56.4 ⁺	
			-2.00 ⁺

	45.8		
26 40	93.8	45.0 ⁺	-2.05 ⁺
	231.0	40.1 ⁺	
	271.1	55.1 ⁺	

Above
318.3

28 30	4.0	45.7 ⁺	
	136.6	46.0 ⁺	-1.52 ⁺
	154.6	93.7 ⁺	
			-1.56 ⁺

317.0

30 00	4.5	47.8 ⁺	
110 25	135.5	43.0 ⁺	-1.59 ⁺
5 27 36	151.5	90.8 ⁺	
5 22			

13 27 14⁺ 92 m. Trans.mean = -1.93⁺

4755.5605
4753.4227
+2.1378 ⁺
+2.3273
-0.1895

May 10, 1899

Above

V

$$\begin{array}{r}
 31 \quad 35 \\
 316.5 \\
 5.0 \\
 137.6 \\
 154.2 \\
 \hline
 46.2^+ \\
 46.6^+ \\
 92.8^+
 \end{array}
 \quad -1.84^+$$

 -1.82^+

$$\begin{array}{r}
 3250 \\
 316.4 \\
 5.0 \\
 141.0 \\
 152.1 \\
 \hline
 46.6^+ \\
 41.1^+ \\
 87.7^+
 \end{array}
 \quad -1.92^+$$

Below

$$\begin{array}{r}
 3450 \\
 229.5 \\
 272.0 \\
 45.8 \\
 93.7 \\
 \hline
 42.5^+ \\
 44.9^+ \\
 87.4^+
 \end{array}
 \quad -1.94^+$$

 -2.00^+

$$\begin{array}{r}
 3636 \\
 1545 \\
 3356 \\
 5-22 \\
 \hline
 229.1 \\
 273.8 \\
 49.3 \\
 90.7 \\
 \hline
 44.7^+ \\
 41.4^+ \\
 86.1^+
 \end{array}
 \quad -2.02^+$$

Mean = -1.94^+

13 33 34 Gr. m. Time

4725.5650

4723.4227

2.1423

2.3273

-0.1850

May 10, 1899.

VI

Below

8 39 05	230.5	41.0 ⁺	
	271.5	45.2 ⁺	-2.02 ⁺
	47.2	46.2 ⁺	
	92.4		

-2.01⁺

40 25	229.0	47.4 ⁺	
	276.4	39.5 ⁺	-2.00 ⁺
	50.5	46.9 ⁺	
	90.0		

Above

42 30	139.5	43.0 ⁺	
	152.5	52.2 ⁺	-1.74 ⁺
	315.4	95.2 ⁺	
	5.0		

-1.74⁺

43 40	136.6	50.4 ⁺	-1.74 ⁺
	157.0	44.6 ⁺	
165 40	315.4	95.0 ⁺	
5 41 25 ⁺	3.0		
5 -22			

mean = -1.59⁺13 41 03⁺ Gr. m. Time4755.5701⁺

4753.4227

2.1474⁺

2.3273

-0.1799

May 10, 1899

VII

Above

	135.5		
A 45 50	153.5	45.0 ⁺	
	316.1	49.4 ⁺	-1.50 ⁺
	5.5	<u>94.4⁺</u>	

-1.76⁺

	135.7		
47 10	155.8	50.1 ⁺	
	317.1	46.9 ⁺	-1.73 ⁺
	317.1	<u>97.0⁺</u>	
	4.0		

Below

	50.0		
49 44	91.7	41.7 ⁺	-1.97 ⁺
	228.5	46.3 ⁺	
	275.1	<u>88.0⁺</u>	

-1.93⁺

	47.3		
51 31	94.4	47.1 ⁺	
194 15	230.0	43.2 ⁺	-1.59 ⁺
A 48 34	273.5	<u>90.9⁺</u>	
5	-22		

13 45 12 Mr. M. Tins.

4755.5951⁺

4723.4227

+2.1524⁺

2.3273
2.1524
<u>-0.1749</u>

Mean = -1.54⁺

May 10, 1899

VIII.

Below

$$\begin{array}{rcl}
 854 \ 22 & 45.3 & \\
 & 93.4 & 45.5^+ \\
 & 227.4 & 47.9^+ \\
 & 275.3 & 93.4 \\
 & & -1.52^+
 \end{array}$$

 -1.54^+

$$\begin{array}{rcl}
 53-47 & 47.1 & \\
 & 93.5 & 46.4^+ \\
 & 227.7 & 46.1^+ \\
 & 273.4 & 92.5^+ \\
 & & -1.55^+
 \end{array}$$

Above

$$\begin{array}{rcl}
 \cancel{50-47} & 315.0 & \\
 52 \ 31 & 4.3 & 46.3^+ \\
 & 133.8 & 52.4^+ \\
 & 154.6 & 99.1^+ \\
 & & -1.62^+ \\
 & & -1.66^+
 \end{array}$$

$$\begin{array}{rcl}
 5959 & 7.6 & 51.8^+ \\
 2589 & 136.9 & 42.3^+ \\
 & 154.6 & 100.1^+ \\
 857 \ 10^+ & & \\
 3 & -22 & \\
 \hline
 1356 & 18.4 & \text{mean} = -1.75^+
 \end{array}$$

Gr. m. Time.

$$\begin{array}{rcl}
 4725.5211^+ & 2.3273 & \\
 4723.4227 & 2.1524 & \\
 \hline
 +2.1524^+ & -0.1649 &
 \end{array}$$

May 10, 1899

IX

Above

9 02 04	315.4	45.2 ⁺	
	45.2		
	134.2	51.3 ⁺	-1.73 ⁺
	155.5	97.1 ⁺	

04 07	314.3	50.9 ⁺	-1.73
	5.2		
	137.3	46.3 ⁺	-1.73 ⁺
	153.6	97.2 ⁺	

Below

07 23	229.4	43.7 ⁺	
	273.1		
	45.3	49.7 ⁺	-1.52 ⁺
	95.0	93.4 ⁺	

11 27	226.5	45.0 ⁺	-1.79 ⁺
	274.5		
	49.5	46.7 ⁺	
25 01		94.7 ⁺	
9 06 15 ⁺	47.5		
5 -22 ⁺	94.5		
14 05 43 hr. m. Time.			mean = -1.76 ⁺
	475.55784 ⁺	2.3273	
	475.34227	2.1647	
	+2.1647 ⁺	-0.1626	

May 10. 1899

X

Below.

9	15 07	228.6	45.0 ⁺	
		273.6	47.2 ⁺	
		410.5	<u>92.2⁺</u>	-1.56 ⁺
		94.0		

225.0

-1.70⁺

1949

275.0

53.0⁺

45.5

45.7⁺-1.69⁺

94.2

95.7⁺

above

135.3

2236

155.2

50.5⁺

315.2

51.0⁺-1.62⁺

6.2

101.5⁺-1.60⁺

133.2

24 03

157.7

53.9⁺

54 35

316.2

45.9⁺-1.59⁺9 21 09⁺

5.1

102.5⁺

5 22

14 20 47 82 M. Turner.

mean = -1.69⁺4755.5872⁺

4723.4227

2.1751⁺

2.3273

-0.1522

May 10, 1899

Meas. of Comp. Stars for
γ Hydrae. Phot. T. Wobs.

9	42	- 21.5
13	04	
3	16	

Abandoned.

Comp. Stars for
 V Virginis (Wobs.)

13	16	- 4.2
13	24	
0	02	

See next page for measurements.

May 10 1899.

V. Virginis with
Star comp. K.R. & A.12 dia.
10 15.0

> 46.6

94.4

226.0

275.0

47.2⁺49.0⁺96.2⁺+ 1.74⁺+ 1.81⁺

49.1

96.2

226.6

270.8

47.1⁺44.2⁺91.3⁺+ 1.52⁺L. & B.

314.3

9.4

133.2

152.8

55.1⁺55.1⁺110.2⁺+ 1.41⁺+ 1.44⁺

314.0

7.2

133.3

157.3

53.8⁺54.0⁺107.8⁺+ 1.47⁺Mean = +1.62⁺

19.8

34.5

10 17.4

5 - .4

15 17.0

M. T. T. T. T.

May 10 1899.

W. Virginia

~~Star camp with H.~~

Left & Above

I
Copied & Ledger
PlottedComp. I. dis. } 235T⁺
10 24 07 267.4

56.2

55.4

320⁺ $\frac{29.6^+}{61.6^+}$ + 250⁺+ 250⁺

25 33

236.1

266.0

29.9⁺

55.3

31.3⁺+ 251⁺

56.6

61.2⁺

Right & Below.

27 55

144.9

174.0

325.2

356.2

33.1⁺31.6⁺+ 2.69⁺64.7⁺+ 2.70⁺

145.4

31.1⁺+ 2.72⁺32.5⁺63.9⁺mean = + 2.75⁺

29 37

176.0

323.7

356.5

27 12

10 26 48

5 22

15 26 26

47 5.6

47 50.7655

+ 4.2779⁺

May 10, 1899

II.

Rigel Below

10 32 54	144.5	33.2 ⁺	
	172.0	30.6 ⁺	+ 2.72 ⁺
	324.5	<u>63.8⁺</u>	
	355.4		

+ 2.73⁺

34 04	144.4	30.2 ⁺	
	175.2	32.5 ⁺	+ 2.74 ⁺
	324.3	<u>63.3⁺</u>	
	356.8		

Sept 8 Above Below

36 05	55.5	31.2 ⁺	+ 2.71 ⁺
	57.0	30.0 ⁺	
	205.1	<u>61.2⁺</u>	
	265.1		

+ 2.77⁺

37 45	53.3	30.7 ⁺	+ 2.73 ⁺
20 45	56.0	33.0 ⁺	
10 35 12 ⁺	234.3	<u>63.7⁺</u>	
5 22	267.3		

Mean = + 2.75⁺

15 34 50⁺ Gr. M. Time 2.

4755.6492⁺

4750.7655

+ 4.5537⁺

May 10 1899.

III

Left & above

55.5

10 40 20

57.0

31.2⁺

235.5

31.5⁺+ 2.76⁺

267.0

62.7⁺+ 2.74⁺

55.6

42 15

56.5

31.2⁺

235.3

32.2⁺+ 2.73⁺

267.5

63.4⁺

Right & Below

323.3

46 30

356.9

33.6⁺

145.5

30.9⁺+ 2.69⁺

176.7

64.5⁺+ 2.64⁺

324.7

42 06

356.6

31.9⁺

144.6

33.4⁺+ 2.67⁺

175.0

65.3⁺10 44 10⁺
5 -22⁺

15 43 56

Gr. m. Time.

4755.6555⁺4750.7655⁺+ 48900⁺Mean = +2.71⁺

May 10, 1899.

Right of Below

IV.

10 57 23

~~324.9~~

356.3

145.1

176.6

32.3⁺31.5⁺63.8⁺+ 2.72⁺+ 2.74⁺

52 50

323.4

355.6

144.3

176.5

30.2⁺32.5⁺62.7⁺+ 2.76⁺

Left of Below.

57 10

235.1

267.6

56.0

86.9

32.5⁺30.9⁺63.4⁺+ 2.73⁺+ 2.75⁺

59 30

234.7

266.7

55.6

56.1

32.0⁺30.5⁺62.5⁺+ 2.77⁺

20 5.3

10 54 13⁺

5 22

15 54 51 ^{hr} m. Time.4725.6631⁺4750.7655⁻4.5976⁺Mean = + 2.74⁺

May 10 1899.

K.

Left & Above.

11 03 04

234.3

267.2

55.6

56.6

32.9⁺31.0⁺63.9⁺+ 2.72⁺+ 2.74⁺

2 341.5

2 66.5

55.7

56.8

31.7⁺31.1⁺62.8⁺+ 2.76⁺

11 05 04

Right & Below

144.5

177.6

324.4

356.8

33.1⁺32.4⁺65.5⁺+ 2.66⁺+ 2.66⁺

05 30

144.6

177.2

324.2

357.1

32.6⁺32.9⁺65.5⁺+ 2.66⁺

10 42

27 20

11 06 50

5 - 22

16 06 25 Gr. m. Time.

4755.6712⁺4750.7655⁻4.9057⁺mean = + 2.70⁺

May 10. 1899

Arnold & Hunt.

11 24 22

11 25 22

Bond 394

11 24 00

11 25 00

May 11. 1899. (Thursday)

7 0

Cloudy.

7 30

"

8 0

"

8 30

" with no prospect of clearing.

May 12, 1899. (Friday)

U. Corvax

15 F + 33.9

11	22
3	44

8	14
---	----

Right Above

13 F. 2

Ledgered

Copied

Plotted.

A 642

152.6

44.4*

312.6

53.4*

6.0

97.8*

-1.71*

-1.76*

135.5

A 33

156.2

50.7*

319.1

43.1*

2.2

93.8*

-1.51*

Left Below.

50.8

11 45

92.0

41.2*

225.2

53.1*

275.3

94.3*

-1.50*

-1.85*

48.0

13 12

94.0

46.0*

-1.96*

40 125 230.7

42.4*

15 273.1

55.4*

2 10 04

5 -30

13 9 344* M. Tins

47 207 544.3*

47 207 005.2

+ 2.54 1*

Mean = -1.52*

May 12 / 1899

U Coronae

II

Left Below

8	1557	51.2		
		92.2	41.0 [*]	
		226.3	42.5 [*]	-1.93 [*]
		274.5	89.5 [*]	
				-1.99 [*]

17	19	45.5		
		93.7	45.2 [*]	-2.05 [*]
		234.5	40.0 [*]	
		271.5	85.2 [*]	

Right Above

19	41	320.3		
		1.5	41.5	-1.95 [*]
		132.0	47.0	-1.69
		125.0	88.5 [*]	-1.94 [*]

21	17	317.3		
		2.9	45.6	
7	14	139.0	43.9	-1.93 [*]
5	1A	344	89.5 [*]	
	30	152.9		

Mean = -1.96^{*}

13 15 04 Jr M. Trine.

4727.5543^{*}

4727.0052

0.54914

May 12, 1899

U. Coronae

III-

Right Above

$$\begin{array}{r}
 2307 \\
 315.7 \\
 3.7 \\
 136.7 \\
 153.9 \\
 \hline
 45.0^* \\
 47.2^* \\
 92.2^*
 \end{array}
 \quad -1.56^*$$

 -1.92^*

$$\begin{array}{r}
 2425 \\
 315.3 \\
 4.2 \\
 140.0 \\
 128.1 \\
 \hline
 45.9^* \\
 42.1^* \\
 88.0^*
 \end{array}
 \quad -1.97^*$$

Left Below

$$\begin{array}{r}
 2626 \\
 231.3 \\
 272.7 \\
 47.1 \\
 95.2 \\
 \hline
 41.4^* \\
 45.1^* \\
 86.5^*
 \end{array}
 \quad -1.93^*$$

 -1.90^*

$$\begin{array}{r}
 2755 \\
 275.2 \\
 50.5 \\
 90.5 \\
 \hline
 50.2^* \\
 41.0^* \\
 91.2^*
 \end{array}
 \quad -1.57^*$$

$$\begin{array}{r}
 2527 \\
 5 \\
 30 \\
 \hline
 132455
 \end{array}$$

Gr. M. Time.

$$\begin{array}{r}
 4727.5590^* \\
 4727.0052 \\
 \hline
 +0.5538^*
 \end{array}$$

mean = -1.91^*

May 12, 1899.

U. Coronae.

IV

Left of Below

230.5

F 30 16

274.2

47.7

95.4

43.7⁺47.7⁺91.4⁺-1.55⁺

225.6

32 06

275.5

50.3

98.0

49.9⁺42.7⁺92.6⁺-1.55⁺-1.46⁺

Rings Above

138.2

35 45

152.6

316.8

6.3

44.4⁺49.5⁺93.9⁺-1.57⁺

136.0

156.0

319.8

0.5

50.0⁺41.0⁺91.0⁺-1.59⁺-1.55⁺

36.56
 15 06
 F 33 46⁺
 5 30

13 33 16 82. m. Time.

4747.564⁺

4747.0052

0.5594⁺mean = -1.56⁺

March 12, 1899

W coronae

V

Rings Above

F 3902	139.5		
	151.0	41.5 [*]	
	315.6	47.4 [*]	-1.94 [*]
	3.0	54.9 [*]	

-1.94^{*}

4032	137.0		
	154.0	470 [*]	-1.94 [*]
	319.5	420 [*]	
	1.5	490 [*]	

Rings Below

	50.0		
4325	94.2	442 [*]	
	225.5	460 [*]	-1.91 [*]
	274.5	902 [*]	

-1.94^{*}

4534	490		
	94.5	435 [*]	
	230.7	426 [*]	-1.96 [*]
	273.3	58.1 [*]	

162 93	
542 05	
5 30	
1341 35	
4727.0705 [*]	
4727.0052	
0.5653 [*]	

Gr. M. Tuis.

mean = -1.94^{*}

May 12, 1899

y wydrae.

9 45 - 21.5

$$\begin{array}{r} 12 \ 41 \\ \hline 2 \ 53 \end{array}$$

Copied

Before Star & comp with π .207.0 $\angle \pi$ dis.

9 23.5

42.3

101.3

220.2

121.3⁺112.9⁺240.2⁺119.5⁺-1.20⁺~~278.7~~

35.5

102.0

215.6

Left Below

194.2

306.3

12.3

125.0

119.5⁺116.6⁺236.4⁺123.6⁺-1.11⁺-1.16⁺

193.0

307.0

13.7

127.4

112.1⁺115.7⁺227.4⁺132.2⁺-0.93⁺-0.93⁺

29.5

53.0⁺9 26.5⁺

5 - .5

14 26.0⁺ Dr. m. Time.114.0⁺113.7⁺227.7⁺132.3⁺-0.93⁺mean = -1.04⁺

May 12, 1899

Hydrae

$$\begin{array}{r} 9 \quad 42 \quad -21.5 \\ 12 \quad 28 \\ \hline \end{array}$$

40

Copied

Star & comp with H.

0 dis. >
9 34.0

Below

132.3

125.2

314.3

10.1

55.9⁺55.2⁺111.7⁺-1.32⁺-1.36⁺

134.2

127.3

310.0

10.0

53.1⁺60.0⁺113.1⁺-1.35⁺

Above

221.4

275.5

45.0

96.9

54.1⁺51.9⁺106.0⁺-1.51⁺

9 50.0

225.2

274.0

54.0⁺

44.3

45.2⁺50.7⁺109.9⁺-1.46⁺-1.42⁺9 42.0⁺

95.0

5 - .5

14 41.3⁺

Gr. m. Tarn 2

Mean = -1.42⁺

May 12, 1899

Saturn.

$$\begin{array}{r}
 17 \quad 27 \quad -21.7 \\
 14 \quad 22 \\
 \hline
 3 \quad 05 \\
 4 \quad 55
 \end{array}$$

11 00
~~4 01~~
 Japetus 3 c Saturn ~~is~~
 23.5 sec and is 6'5" S of it.

A slightly fainter star precedes Saturn 11 sec. and is 2'2" South of it.

A 5m. mag. star precedes Saturn 39.5 sec and is 4'2" S of it.

a 9.1 mag. precedes Saturn 15.5 sec and is 1'3" S of it.

a 9.3^m precedes Sat. 10 sec. & 3.5" N. of it
~~a 9.4^m follows " 19.7 sec. & 2'05" S of it.~~
 A 9.4 mag. follows Saturn 1 min. 1 sec. and is 2'0" south. This is comp. star.

May 12/1899

Jupiter

~~Angles~~ Above

44.5

< comp. S. dis.

(Ledgered) ~~+~~
(Copied)

11 19 46

95.3

51.0⁺

225.2

46.2⁺+1.71⁺

272.0

97.2⁺+1.79⁺

45.1

21 45

91.6

43.5⁺

226.2

42.2⁺+1.27⁺

275.0

91.7⁺~~Angles~~ Below

312.4

24 50

92.3

54.2⁺+1.60⁺

135.0

47.7⁺

185.7

102.5⁺+1.56⁺

314.5

26 40

6.2

51.7⁺+1.51⁺

9.3 01

134.0

57.5⁺11 23 15⁺

188.5

106.2⁺

5 -30

16 22 45 1/2 m. Time

mean = +1.6⁺

47.7.

May 12, 1899

Japetus. again.

Below

IT

1130 10

312.3

7.2

134.6

153.5

54.9⁺48.9⁺103.8⁺+1.56⁺+1.56⁺

32 30

316.4

6.4

134.8

159.0

50.0⁺44.2⁺104.2⁺+1.55⁺

This, and the preceding group, were obs. of a star
and not Japetus, as it turned out.
above.

224.0

35 35

274.5

42.1

93.7

50.8⁺51.6⁺102.4⁺+1.60⁺+1.70⁺

226.6

35 10

272.5

46.4

95.2

45.9⁺48.2⁺94.7⁺+1.79⁺

16 25⁺
11 34 06⁺
5 30

16 33 36⁺

Gr. N. Time.

mean = +1.63⁺

Comp. star for Japetus, above, = $5^{\circ} 5' - 21^{\circ} 46' 48''$ (9/1)

May 12, 1899

Arnold's Lent

11	52	30.2
11	53	30.5

Bond 394.

11	52	00
11	53	00

May 15, 1899. (Monday)

U Coronae Phot. T. (W. obs.)

10- 2
 11 32
 3 36
 8 24

10- 8 + 33.9
 11 5
 4 3
 7 57

Abandoned; too cloudy in this region.
 J. Lebrae

14 56
 12 01
 2 55
 9 05

14 56 - 5.0
 11 55
 3 01
 8 59

Phot. T. (W. obs.)

Cap of 6 inches used on following meas.

Clouds.

See next page for measurements.

May 15, 1899.

J Lebaile

Above

Copied & Ledgered

I.

	140.0		
F 21.00	151.0	41.0 ⁺	
	313.8	<u>50.4⁺</u>	-1.44 ⁺
	6.2	91.4 ⁺	

-1.43⁺

	136.3		
22 20	157.0	50.7 ⁺	
	317.5	<u>44.5⁺</u>	-1.72 ⁺
	2.0	95.2 ⁺	

Clouds
Clouds

Below

26 25	51.0		
	91.2	40.2 ⁺	-1.92 ⁺
	227.0	<u>47.2⁺</u>	-2.06
	274.2	274 ⁺	

~~2.03~~-1.99⁺

31 03	51.0	51.0	
27 43	95.2	92.0	41.0 ⁺
Clouds	229.1	<u>45.9⁺</u>	2.00
	275.0	274 ⁺	

100	50
2 25	12
5	-45

13 24 27⁺ Gr. M. Time.

4790.5576 ⁺
<u>4790.4047</u>
+0.1539 ⁺

Mean = -1.91⁺

May 15, 1899.

J. Libal

Clouds
stars gone.

H

Below.

45.0

5 34 15

94.5

46.2⁺

229.0

43.0⁺-1.92⁺

272.0

29.2⁺-2.00⁺

51.0

1 36 00

90.5

39.5⁺-2.07⁺

230.1

44.0⁺

274.1

23.5⁺

above.

317.3

39 00

4.2

46.9⁺

137.5

44.2⁺-1.52⁺

152.0

91.1⁺-1.90⁺

319.1

40 35

2.8

43.7⁺-1.94⁺

Clouds.

137.0

46.5⁺

152.5

99.2⁺mean = -1.95⁺47 37 25
48 4313 36 43⁺ M. M. Time.4790.5672⁺

4790.4047

40.6625⁺

May 15, 1899.

of Libral

III.

Above

f 45 25	315.4	42.6 ⁺	
	7.0	43.4 ⁺	-1.56 ⁺
	135.6	<u>92.0⁺</u>	
	152.0		
	3		-1.56 ⁺

46 45	319.2	43.2 ⁺	
	3.0	42.1 ⁺	-1.56 ⁺
	135.2	<u>91.9⁺</u>	
	153.0		

Below.

45 30	225.3	45.1 ⁺	-2.11 ⁺
	293.4	37.5	
	53.5	<u>52.9⁺</u>	
	91.3		-2.06 ⁺

50 20	230.5	42.5 ⁺	
	273.0	44.4 ⁺	-2.00 ⁺
	191.00	46.9 ⁺	
2 47 45	92.6		
5 - 45			

13 47 00 $\frac{1}{2}$ m. Time.

4790.5743 ⁺
4790.4047
<u>+0.1696⁺</u>

mean = -1.96⁺

May 15, 1899

Librae

IV

Below

9 39 45
~~5 52 00~~

~~225.1~~
~~274.1~~ 5

51.0
96.2
233.6
272.5

43.2⁺
32.9⁺
24.1⁺

-2.00⁺

-2.00⁺

Clouds.
Clouds thick.

41 05

52.2
91.6
230.3
274.5

39.4⁺
44.5⁺
23.9⁺

-2.00⁺

Above

315.2

42 35

5.0
138.5
151.0

49.2⁺
42.2⁺
92.0⁺

-1.56⁺

-1.56⁺

315.5

46 05

4.3

45.2⁺

169 30

137.5
154.3

46.2⁺
92.6⁺

-1.54⁺

9 42 22⁺
5 45⁺

14 41 37⁺ 2⁺ M. Tru 2.

4790.6122⁺

4790.4047

+0.2075⁺

mean = -1.96⁺

May 15, 1899

V.

Above

313.3

9 45 15

4.5

139.7

152.3

49.5⁺42.6⁺92.1⁺-1.56⁺-1.24⁺

319.4

49 35

2.5

137.3

154.2

43.4⁺46.9⁺90.3⁺-1.91⁺

Below

227.7

51 30

275.1

52.1

93.1

47.4⁺41.0⁺58.4⁺-1.96⁺-2.05⁺

231.1

39 00

271.6

45.1

59.5

40.5⁺41.4⁺51.9⁺-2.14⁺9 50 40
5 -45

14 49 50 1/2 M. Time

4790.6150

4790.4047

+0.2133⁺mean = -1.96⁺

May 15 1899.

Librae

VII

Below

231.0

9 56 40

269.5

49.1

92.3

38.2⁺43.2⁺82.0⁺-2.14⁺

228.0

-2.10⁺

57 25

273.2

51.5

91.3

45.2⁺39.5⁺84.7⁺-2.06⁺

Above

143.0

1000 30

150.3

314.8

2.2

37.3⁺47.4⁺84.7⁺-2.06⁺

139.1

-2.07⁺

01 45

154.4

237 20

319.8

358.3

45.3⁺38.5⁺83.8⁺-2.08⁺9 59 20⁺
45⁺

1452 33.92 M. Tmiz.

4790.6240⁺

4790.4047

+0.2193⁺mean = -2.04⁺

May 15.1 F F 9.

J Libore

Above

VII

101900	134.5	44.5 ⁺	
	153.0	45.7 ⁺	
	316.3	<u>90.2⁺</u>	-1.91 ⁺
	2.0		

-1.93⁺

2010	138.2	46.6 ⁺	
	154.5	41.9 ⁺	
	315.2	<u>88.5⁺</u>	-1.95 ⁺
	0.1		

Below

2210	51.6	39.2 ⁺	
	90.5	41.2 ⁺	
Clouds	231.5	<u>80.4⁺</u>	-2.14 ⁺
Stars gone	273.0 273.0		

-2.10⁺

2755	44.3	45.1 ⁺	
	93.4	41.3 ⁺	
59 15	230.1	<u>86.4⁺</u>	-2.01 ⁺
10 22 19	271.4		

5 45⁺

15 21 34 Gr. M. Truss.

Mean = -2.02⁺4790.6400⁺

4790.4047

+0.2353⁺

May 15, 1899

Libras

Below

VII

10 29 00

51.7

39.5[✓]

90.8

225.7

46.3[✓]

275.0

25.8[✓]-2.04⁺

clouds.

52.3

34.5[✓]-2.14⁺

30 45

90.8

232.2

269.8

37.6[✓]
76.1[✓]-2.31⁺

Above

32 15

321.3

39.0[✓]

0.3

136.5

42.5[✓]
27.5[✓]-1.92⁺

185.0

315.8

43.7[✓]-2.02⁺

33 45

2.5

125 45

141.0

40.2[✓]

10 31 26

181.5

45.5[✓]-2.06⁺

5 45

15 30 41

mean = -2.10⁺4790.6463⁺

4790.4047

+0.2416⁺

May 15, 1899

Japetus: Wob. chot T.

	17	26	- 21.7
Same comp star	17	42	
used as on previous	2	44	
night.	9	16	

Ledgered.
Copied.

Loc above

11 06.0	39.5	< Comp + dis	
	105.2	65.4 ⁺	
	220.5	58.7 ⁺	+110 ⁺
	279.2	124.1 ⁺	

+1.16⁺

448.0

95.5	55.4 ⁺	
218.3	62.9 ⁺	+1.22 ⁺
251.2	114.7 ⁺	

Right & Below

304.5		
13.0	62.2 ⁺	
131.8	60.0 ⁺	+1.02 ⁺
191.5	122.2 ⁺	

+1.11⁺

310.5

11 12.0	55.5	57.7 ⁺	
	125.9	61.2	+1.20 ⁺
11 09.0	190.7	129.5	
5 - .7		119.5	
16 04.3	Gr. M. Time 2.		Mean = +1.14 ⁺

May 15, 1891

Same as Agarr

Right of Below

306.4

Left of above

~~1354.3~~

35.3

136.3

11.31.0

~~192.0~~

L. & A.

35.3

11 31.0

104.6

69.2^x

218.0

63.5^x+0.92^x

251.5

132.6^x+1.00^x

44.4

100.0

55.6^x

213.5

69.5^x+1.02^x~~252.2~~ 253.3125.1^x

R. & B.

307.0

10.2

63.2^x+1.17^x

133.0

58.0^x

191.0

121.2^x+1.09^x

312.0

59.9⁺

11 39.0

~~10.7~~ 10.964.6^x+1.01^x

11 35.0

127.2

124.5⁺

5 -7

195.5

16 34.3 1/2 M. Time.

mean = +1.04^x

May 15, 1899

Titan

Right of Below

~~Copied~~

(Ledgered.)

Copied

11 20.0

215.3

250.0

61.7*

36.4

66.6*

*1.01

103.0

128.3

217.2

*1.02

254.0

66.2*

~~103.5~~ 425

60.5*

*1.04

~~103.4~~ 103.0

127.3*

Left of Above

149.6

305.6

119.0*

11.7

115.8*

127.5

234.2*

*1.05

125.2*

190.3

*1.10

11 27.0

310.6

120.3*

12.0

116.6*

11 28.5

125.6

236.9*

*1.13

123.1*

5 -7

16 22.2 Dr. M. P. ...

Mean = *1.06

May 187599.

Titan Again

R. & B.

252.0

11 460

40.7

103.5

240.5

clouds.

11 2.7⁺106.7⁺225.4⁺134.6⁺+0.52⁺+0.91⁺

255.2

34.5

101.9

220.5

109.6⁺115.6⁺225.2⁺131.2⁺+0.94⁺

Left above

191.1

305.6

12.2

125.0

117.5⁺115.2⁺233.3⁺126.7⁺+1.05⁺+1.10⁺

192.1

309.7

10.3

131.0

117.6⁺120.7⁺238.3⁺121.7⁺+1.16⁺mean = +1.00⁺

11 57.0

11 49.5

11 51.5

5 51.5

16 51.5

16 51.5

16 51.5

16 51.5

16 51.5

16 51.5

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May 15, 1899

Arnold & Lent.

12 05 45

12 06 45

Bond 394

12 05 00

12 06 00

May 17, 1899 (Wednesday)

Lenses here throughout most of evening
showed the moon and Jupiter, with
general explanations.

Saturn	Jupiter	Plot. T. Wols.
17	26	-21-7
14	30	
2	56	
9	04	

See next page for measurements

May 17, 1899

Titare

Copied.

Left Above

~~296.2~~

300.0

Compt dist \times 49.0

121.0

10 45.0 227.3

301.2

47.0

122.0

227.7

Right Below

209.1

319.3

26.0

135.6

206.0

10 55.0 322.0

27.0

15 50.0 \times 142.3

4792.

109.0^{*}106.3^{*}215.3^{*}144.7^{*}105.2^{*}105.7^{*}211.5^{*}142.5^{*}110.2^{*}111.2^{*}222.0^{*}132.0^{*}116.0^{*}115.3^{*}231.3^{*}122.7^{*}+0.62^{*}+0.64^{*}+0.60^{*}+0.81^{*}+0.90^{*}+1.00^{*}mean = +0.77^{*}

May 17, 1899

Right Below Same again
~~Left above~~Ledgered
Expried.

10 55.5

212.0 - comp. flat dis.

320.0

102.0⁺

24.7

115.3⁺+0.84⁺

140.0

223.3⁺136.7⁺

209.0

+0.86⁺

319.6

110.6⁺

25.0

115.0⁺

143.0

225.6⁺+0.89⁺134.4⁺Left Above
~~Right Below~~

120.5

227.83

106.8⁺

300.5

106.0⁺+0.63⁺

46.5

212.8⁺147.2⁺+0.68⁺

120.0 300.0

+0.71⁺

11 05.0

226.4

47.2

107.2⁺

120.5

299.2

115.0

110.4⁺

16 20.2 2nd m. Time.

228.4

217.6⁺+0.73⁺142.4⁺Mean +0.77⁺

May 17, 1899

	Left Above	Japetus.	Leveled.
11 07.0	147.0		
	203.5	56.5 ^x	
	325.0	<u>42.8^x</u>	+1.53
	16.2	105.3	
	145.4		+1.41
	200.6	52.2 ^x	
	324.0	<u>57.2^x</u>	+1.43
	21.2	109.4 ^x	
	Right Below.		
	49.6		
Probs.	112.5	69.2 ^x	
	<u>224.5</u>	<u>70.6</u>	
	295.1	139.2	+0.72
	54.1		+1.00
	56.1		
	112.0	55.9 ^x	
1115.5	230.2	63.1 ^x	+1.21
	<u>25.5</u>	<u>119.0^x</u>	
16 12.5	293.3		
	Gr. M. Time.		

Mean = +1.24

Clouds especially troublesome on Japetus.
 Readings settings somewhat uncertain.

May 17, 1899.

Law again (Dapetus.)

53.0

11 19.5

Meas. on both Dapetus & Titan difficult
on account of increasing haze & clouds

Dapetus especially difficult; clouds
becoming thicker so that second group
on Dapetus could not be taken.

Comp. Star for Dapetus and Titan,
on this date = $-21^{\circ} 46' 41''$ (9.0)

May 22, 1899 (Monday.)

U. Coronae Phot. T. (Wolfe)

$$\begin{array}{r}
 15 \cdot 2 \\
 11 \cdot 40 \\
 \hline
 3 \cdot 25 \\
 2 \cdot 32
 \end{array}$$

+ 33.9

7.30 Cloudy

15.2

+ 33.9

$$\begin{array}{r}
 12 \cdot 0 \\
 \hline
 3 \cdot 8 \\
 47 \cdot 52
 \end{array}$$

9.10

Thickly cloudy with no prospect of clearing. no chance for any work.

May 22, 1899. (Tuesday)

Cap 46 inches.

Librae Phot T. (W. H.)

14 56

-5.0

12 26

1 30

Copied
Ledger
~~Phot~~

Above

241.2

2 30 50

254.1

42.9

52.0

57.2

-1.65

109.2

100.1

-1.7³₄

235.5

22 10

258.0

49.2

61.0

44.6

-1.21

105.6

93.4

Below

155.0

24 10

193.6

34.6

330.5

44.4

-2.11

15.2

23.0

2520
clouds

149.2

-2.04

195.6

46.4

12 30.0

332.0

41.2

-1.96

2 23 7.5

13.2

44.2

5 - 1 - 24.2

13 21 42.7 Gr. M. Time

Mean = -1.24

4795.5567

2.3273

4797.3869

1.1692

+ 1.1692

-1.1575

May 23, 1899

J Libras

II

Below

154.6

527 33

192.0

333.6

14.5

151.0

29 10

194.0

332.5

Clouds thick

Reject Above.

Above

9 30

Thickly cloudy, with no chance for anything further.

Arnold & Sant.

21 16 24.5

21 17 25.0

Bond 394.

21 15 00

21 16 00

1899
4
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7
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(

1898ohse.proj.1261W