

KG

11365

617

15-inch

CARD

149716

KG 11365.617

H

KG 11365.617



Lat. Oct. 14, 1916

RC Obs. 15" E. eq.

RC Jr. Recs.
FEB 13, 1917

Catch med

Uranus

21 15 - 16.4

Phot T.

35" slow at 6.35

20 30

0 45 E

Declans Westphal.

P.A. 210

652 20

191.0 Uranus Dis

248.0

57.0 ✓

15.3

45.9

61.2

102.9 ✓

- 1.5-9

I
> "Cap med

P.A. 30

271.9

69.5 ✓

341.4

80.2

87.2

167.4

149.7

- 0.5-8

P.A. 30

271.6

78.0

349.6

57.2

99.8

159.0

135.2

- 0.47

- 1.555

- 0.725

2.280

1.14

6.43

Magn = 5.69

P.A. 210

16.0

46.6

62.6

59.1

190.7

105.7

- 1.52

658 20

249.8

655 20

655 55

2115 1.497

Oct. 14, 1916

7 4 10

*9.8

67.4

191.0

245.8

P.A. 210

57.6

54.8

112.4 - 1.36

II

P.A. 30

*95.6

154.5

271.3

342.8

58.9

71.5

130.4 - 0.97

98.6

159.4

277.8

342.3

60.8

64.5

125.3

- 1.08

-1.385

-1.025

2.410

1.20

6.43

5.63

P.A. 210

192.4

245.8

10.8

67.8

53.4

57.0

110.4 - 1.41

7 9 0

7 06 35

7 07 10

2 11 51.505

Oct. 14, 1916

Pa. 210

III

713 35 192.2
 246.2
 17.1
 63.2

54.0
461
 100.1 — 1.66

Pa. 30

283.0
 344.3
 96.8
 156.0

61.3
59.2
 120.5 — 1.18

276.6
 345.9
 97.0
 163.0

69.3
66.0
 135.3 — 0.87

— 1.525

— 1.025
2.550
 1.28
6.43
 5.55

Pa. 210

16.0
 67.0
 189.8

51.0
60.0
 111.0 — 1.39

71910 249.8

45

7 16 22

7 16 57

21151.512

Oct. 14, 1966

7² 35 10

16.0
69.7
191.3
244.6
~~99.7~~

Pa. 210

IV

53.7
53.3
107.0 - 1.49

Pa. 30

99.7
157.9
275.4
346.6

60.2
71.2
131.4 - 0.95

- 1.44
- 0.96

95.4
163.0
282.0
344.8

67.6
62.8
130.4 - 0.97

2.40
- 1.20
6.83
5.63

Pa. 210

189.4
242.7
14.1
72.1

53.3
58.0
111.3 - 1.39

7 30 0
55 10

7 27 35

7 28 10

21151.519

Oct. 14, 1916

V

7 3420 187.2
 249.4
~~16269.2~~
 67.2

P. A. 210

62.2
57.0
 113.2 — 134

P. A. 30

97.6
 159.8
 268.8
 345.2

62.2
76.4
 138.6 — 0.80

96.4
 164.4
 278.5
 342.4

68.0
63.9
 131.9 — 0.94

— 1.575
 — 0.870
2.385
 1.19
6.83
 5.64

P. A. 210

198.0
 241.7

43.7
55.1
 98.8

— 169

7 740 20 13.3
 68.4

7 37 20
 7 37 55

21151.526

7

Oct. 14, 1916

Pa. 210

746 50 188.8
 246.7
 14.8
 65.5

57.9

50.7

108.6

- 1.45

VI

Pa. 30

280.2

342.6

92.2

164.3

6.24

72.1

134.5

- 0.89

- 1.430

- 0.925

273.3

344.4

98.8

158.8

71.1

60.0

131.1

- 0.96

2355

1.177

- 1.18

6.83

5.65

Pa. 210

12.4

67.4

191.4

246.8

55.0

55.4

110.4

- 1.41

7530

99 50

49 55
 55 30

745

R. Senti sec f.g. 15.4

R. Corn. sec f.g. 15.7

F. 9.3

21151.535

Oct. 14 1915

7

Prod 3424

now in use
= 122 feet at 9:00

8920 12.4

71.3

194.0

275.3

P. G. 210

58.9

51.3

110.2

- 1.41

VII

P. G. 30

98.2

164.2

275.3

348.2

660

72.9

138.9

- 0.80

95.0

168.2

277.3

341.8

73.2

64.5

137.7

- 0.82

- 1.47

- 0.81

228

- 1.14

6.83

5.69

P. G. 210

194.0

242.3

11.4

81330

68.4

X

48.3

57.0

105.3

- 1.53

Oct. 14 1916

205-204

Miss Channon's Algol.

22 05

1 13 W.

7 in cap.

+4.4584

Disc. axis wien 7
pica. 7

P. a 190

8 24 50 354.4

84.2

182.1

261.0

L var. dis

89.8

758.9

168.7

~~168.7~~

- 0.21

P. a 10

77.6

180.4

261.8

102.8

97.4

200.2

159.8

+ 0.38

8 27 25

359.2

8 27 30

86.4

178.8

260.2

360.8

92.4

100.6

193.0

167.0

+ 0.24

0.25

+ 0.31

+ 0.03

P. a. 190

266.2 (comp * dis)

354.8

75.7

88.6

106.5

195.1

164.9

- 0.29

Sp. 4.6

P. a. 189.0 A

Dec + 5.2

H. A 133 W

S. 7 22 20

8 29 55

182.2

Oct. 14 1916

9

7th cap.

Mars again

P. A. 210

8 40 50
 16.8
 69.6
 188.3
 247.4

51.8
 59.1

 110.9 - 1.40

VII

P. A. 30

³
 8 48 5

99.7
 163.3
 273.7
 341.8

63.6
 68.1

 131.7 - 0.94

8 43 25

98.8
 165.8
 278.3
 340.7

67.0
 62.4

 129.4 - 0.99

⁶
 - 1.440
 - 0.965

 240² 5-
 1.202

- 1.201
 6.83

P. A. 210

8 45 25

197.5
 243.4
 9.7
 69.4

45.9
 59.7

 105.6 - 1.52

 5.62

1916phae.proj..618C
10
160-1733
2 fac

Oct. 14 1916

P.A. 210

8 58 5-

190.4
247.6
14.2
66.8

57.2
52.6
109.8

- 1.42

IX

P.A. 30

9 00 20

272.7
346.4
100.0
161.8

73.7
61.8
135.5
3

- 0.87

9 00 30

283.2
343.4
96.0
167.4

60.2
71.4
131.6

- 0.95

- 1405
- 0.916

2315
1.157

- 1.16
6.83

5.67

P.A. 210

9 02 25

15.2
63.8
187.0
249.6

48.6
12.6
111.2

- 1.29

Sf. 15.0
P.A. 189 211. A
D.S.C. - 16.4
H.A. 1 52 W.
S.J. 23 00

Tues. Oct. 17th 1916

Recob 15th 8th Recob
Miss Cannon's Var.

Prod 3424 = 15th feet
at 8:00

Phot T
20 52 + 0.2 7ⁱⁿ
21 45 52 7ⁱⁿ Cap
1.00 53 W &

P.A. 190

8 7 10	173.1	98.0	← var. disp	I
	271.1	74.24		
	2.4			
	76.8	172.74	- 0.15	

P.A. 10

254.8	107.0	
361.8	94.1	
84.3		
178.4	201.1	+ 0.40
	<u>158.9</u>	

P.A.

262.6	100.2	- 0.215
362.8	113.8	+ 0.525
75.8		+ 0.310
189.6	214.0	+ 0.155
	<u>146.0</u>	

P.A. 190

350.8	91.4	
82.2	74.0	
187.7		
814 15	261.7	165.4 - 0.28

Oct 17 1916

Min. Camm. Var.

P. G. 190

8 24 40

358.4

74.8

176.2

222.2

76.4

860

162.4 - 0.33

77

P. G. 10

71.7

183.6

263.8

358.8

111.9

95.0

206.9

153.1 + 0.51

- 0.330

+ 0.415

0.745

+ 0.04

81.7

179.8

261.6

360.6

98.1

99.0

197.1

162.9

+ 0.32

P. G. 190

176.6

263.2

4.6

80.4

86.6

75.8

162.4

- 0.33

8 30 5-

8 27 22

Oct. 17 1916

13

Same var.

P.C. 190

III

8	36	55	182.8	75.0	
			257.8	86.8	
			358.2	<u>161.8</u>	- 0.35
			85.0		

P.C. 10

261.4	98.6	
361.0	89.3	
81.8	<u>187.9</u>	+ 0.17
171.1	172.1	

- 0.295
+ 0.180

265.2	94.6	
359.8	95.6	
82.8	<u>190.2</u>	
178.4	169.8	+ 0.19

0.475
0.115
0.05
- 0.06

P.C. 190

1.2	795	
87.80.7	88.1	
176.8	<u>167.6</u>	- 0.24
842.00	264.9	

Sp. 4.6
P.C. 189. A
Dec. + 5.2
16.9 157 W
S.7. 22 44

Seeing very poor
especially in fine group.
Fine group should have
1/2 weight

Oct. 17, 1916

V Draconis 175654

2306

510 W +55.0

Red = 2

set = 12.3

W. Draconis 180555

 $\pi_{sd} = 4$

X Draconis 180666

Red. —

W, set = 9.4

X, set. * var. suspected mag. 13.5 ±
select fainter comp. * for sequence

S.V. Draconis 183149

Red. = 4

2314

set = 12.7

443 W +49

R. G. Lyrae 1841 ~~334~~ $\pi = -$ 2329

448 W +43.6

set = 13.8

R X Lyrae 185032

R.

2334

444 W +32.9

set = X 3 N

Oct. 17th 1916

$$\begin{array}{r}
 2 \text{ Lyrae } 181634 \\
 \underline{2336} \\
 440W + 34.6 \\
 \text{sat} = 14.1
 \end{array}
 \quad \pi = -$$

$$\begin{array}{r}
 V \text{ Lyrae } 190529 \\
 \underline{2340} \\
 435W + \cancel{29.0} \\
 \text{sat} = < 14.0
 \end{array}
 \quad \pi = -$$

$$\begin{array}{r}
 S \text{ Lyrae } 190925 \\
 \underline{2345} \\
 436W \\
 \text{sat} = < 14.0
 \end{array}
 \quad \pi = -$$

$$\begin{array}{r}
 \pi V \text{ Lyrae } 190941 \\
 \underline{2347} \\
 438W \\
 \text{sat} = 11.0
 \end{array}
 \quad \pi = 4$$

$$\begin{array}{r}
 \pi S \text{ Lyrae } 190933 \\
 \underline{2350} \\
 441W \\
 \text{sat} = 14.0
 \end{array}
 \quad \pi = -$$

Oct. 17, 1916

U Drac. 190967 est
 $\begin{array}{r} 2355 \\ \hline 446 \end{array} + 67.5$

P = 4

sat = 11.6

T Z Cygni 191350
 $\begin{array}{r} 2358 \\ \hline 445 \end{array} W$

P = 4

sat = 10.8

U Lyrae 191637
 $\begin{array}{r} 2402 \\ \hline 446 \end{array} W$

P = 8

sat = 10.3

T Y Cygni 192928
 $\begin{array}{r} 2407 \\ \hline 438 \end{array} W$

P = -

sat = 14.1

R. Z Cygni 194048
 $\begin{array}{r} 2410 \\ \hline 430 \end{array} W$

P = 2

sat = 7.8

Oct. 17 1916

J U Cygni 194348

R. = -

$$su = 13.8$$

X Cygni 194632

R = 4

$$\begin{array}{r} 2417 \\ \hline 431 \text{ W} \end{array}$$

$$su = 13.2$$

Z Cygni 195849

R = 4

$$\begin{array}{r} 2428 \\ \hline 430 + 49.8 \end{array}$$

$$su = 9.2$$

Q 2 Ceti 021403

R.

$$\begin{array}{r} 0032 \\ \hline \end{array}$$

$$\begin{array}{r} N.E. su = x0 \text{ PC} \\ \hline \quad \quad = x0 \text{ FEB} \end{array} \quad \begin{array}{r} 142 \text{ E} \end{array}$$

20 - 20 C
1 - 1 B
64 - 1797 plin

Oct. 17^a 1916

Ph. R

O Ceti 021403

10 35 12

251.4

← var. dis P. A 210

225.2

72.7

83.6

13.8

109

24.7

- 4.83

P. A. 30

161.4

174.2

342.2

353.4

12.8

112

24.0

- 4.89

- 4.935

- 4.875

162.2

174.7

341.2

353.1

12.5

11.9

24.4

- 4.86

- 4.90

9.19

4.29

P. A. 210

72.0

82.4

254.4

263.76

10.4

12.80

22.74

- 5.04

10 42 12

177 24

10 3A 21

21154 651

Fri. Oct. 20 - 1916.

15" inch objective was cleaned
today.

Signed

W.R.G.

Stat. Oct. 21, 1916

L.C. Obs. 15" E. Eq.

6 55 Too cloudy to start
observing yet.

7 45 R Coronae 154428 F₄₅ - at 6.0 (K₀)
— — — — 5.9 F₄₅

U Cephei Phot T.

00 53 21. F

22 17

2 36 2

9 24

Oct 21 1916

21

N. Caphei

7 no. 3424 +9.00

21.5 sec. time

P. A. 200

8 10 Clouds in region

8 12 104.8

52.6 ← var. disp

8 12.5 Clouds

71.0

157.4

123.6

- 1.11

276.3

347.3

P. A. 20

8 14 ~~195.0~~ Clouds8 17 ~~195.0~~

8 24 192.3

55.5

247.8

42.6

16.8

98.1

- 1.70

59.4

- 1.185

- 1.685

196.6

46.8

- 2.870

243.4

52.5

- 1.44

10.8

99.3

- 1.67

63.3

8.41

6.97

P. A. 200

280.8

62.5

343.3

54.6

102.8

117.1

- 1.25

8 26 30

157.4

† Further enlargement of clouds
in above group.
(Reject same)

Oct 21 1916

H Cephei

P.C. 200

8 26 45 286.4
 337.4
 98.2
 158.4

57.0
 60.2
111.2 - 1.39

~~X~~
 I

P.C. 20

8 29 00 18.8
 59.7
 199.8
 244.0

40.9
 44.2
85.1 - 2.05

- 1.385

- 1.995

8 29 10 16.4
 60.6
 196.6
 241.6

44.2
 45.0
89.2 - 1.94

- 1.69
 8.41
6.72

P.C. 200

8 30 50 102.2
 159.0
 281.8
 330.8

56.8
 55.0
111.8 - 1.38

21158.562
 57.427
1.135

Oct 21 1916

23

H. Caphei

P. G. 200

8 36 00 ~~98.2~~

35 100.4

161.7

278.8

344.0

61.3

65.2

126.5

- 1.05

~~NI~~II

P. G. 20

200.8

244.4

21.2

8 39 05

59.0

43.6

37.8

81.4

- 2.15

- 1.100

- 2015

8 39 15

196.0

241.2

15.3

61.4

45.2

46.1

91.3

- 1.88

311.5

- 1.53

8.41

6.85

P. G. 200

280.0

341.8

98.8

8 41 30

158.8

61.8

60.0

121.8

- 1.15

21158.569

59.427

1.142

Oct 21 1916.
H. Cephei.

P. A. 200

8 45 00 281.1
338.7
102.8
160.2

57.6
57.4
115.0 - 1.30

III

P. A. 20

8 47. 10 16.6
61.4
197.4
243.8

44.8
46.4
91.2 - 1.88

- 1.240
- 1.905

8 47 20 15.2
59.6
197.8
242.8

44.4
45.0
89.4 - 1.93

3185
- 157
8.41
6.84

P. A. 20

8 49 30 99.4
161.6
282.0
340.4

62.2
58.4
120.6 - 1.18

21158.574

57.427

1.147

Mon clouds in
regions

Sp. 3.7
P. A. 196.0 A
H. A. 1 46 E
Drc. + 81.4

20 c.
1 B.
64-1861/11/12

Dec. 21 1916.

Miss Cannon's Algol.

205²04

Phot. T

23 10

2 18 W.

8 55

clones

9 10 Too cloudy to continue
with advantage.

Tues. Oct. 24, 1916

R.C. Cobb.

15" E. Eq.

J.S.B. Rec.

Miss Cannon's Algol

20 52 04

23 02

2 10 m + 5.2

1/

P.A. 190

8 42 15 → 35-4.2
80.9
184.4
25-8.7

← var. dis.

86.7
74.3
161.0

- 0.36

P.A. 10

73.4
183.9
265.6

110.4
90.8

201.2
158.8

+ 0.40

- 0.425
+ 0.295
- 0.130
- 0.06

8 44 55 85-2
174.7
259.6
360.0

89.5
100.4
189.9
170.1

+ 0.19

21151.572
59.17
2.455

P.A. 190

185.3
260.6
354.2

65.3
89.1
154.4

- 0.49

8 46 45 83.3

$\begin{array}{r} 20 \\ 1 \\ 32 - 1893 \end{array}$

Oct. 24th 1916

Miss Cannon Var. (again)
P.C. 190

8 50 20 178.8
 262.2
 2.0
 76.8

$\begin{array}{r} 8 \\ 3.4 \\ 74.8 \\ \hline 158.2 \end{array}$

- 0.42

II

P.C. 10

264.2
 357.0
 84.8

$\begin{array}{r} 92.8 \\ 93.0 \\ \hline 185.8 \\ 174.2 \end{array}$

+ 0.11

- 0.355

+ 0.135

8 52 30 177.8
 267.7
 350.4
 76.3
 182.2

$\begin{array}{r} 82.7 \\ 105.9 \\ \hline 188.6 \\ 171.4 \end{array}$

+ 0.16

- 0.220

- 0.11

P.C. 150

351.8
 84.4
 184.4
 256.6

$\begin{array}{r} 92.6 \\ 72.2 \\ \hline 164.8 \end{array}$

- 0.27

Sp. 4.6
 P.C. 189 H

Dec. +5.2

H.C. 237 W

S. 7. 23 27

8 55 20

~~211.57~~

$\begin{array}{r} 211.57 \\ 59.11 \\ \hline 2.461 \end{array}$

Possibly clouds near horizon during observations.

Prod. 3425 = 33 feet at 9.00

Wed. Oct. 25, 1916

PC obs. 15" eq. L. L. Rec.
205204 Min. Cas. Algol
Phot T.

Prod 3424 used
=

Pa. 190

6-7-30	2584	804	comp & dis.	I
6 8 10 ±	3674	181.2	100.8 ✓	
10	8846	268.6	44.1 ✓	
		352.7	144.9 ✓	
		<u>175.1</u>	- 0.09 ✓	

Pa. 10

185.4	
254.4	69.0 ✓
2.6	<u>73.0</u> ✓
95.6	142.0 ✓

+ 0.73 ✓

+ 0.025 ✓
+ 0.635 ✓
<u>0.720</u> ✓
+ 0.360 ✓

178.8	
258.1	79.3 ✓
3.6	<u>72.6</u> ✓
96.2	151.9 ✓

+ 0.54 ✓

6
21152.467
<u>62.553</u>
- 0.086

Pa. 190

273.2	
348.1	74.9 ✓
86.0	<u>91.4</u> ✓
1479.4	166.3 ✓

+ 0.26

6
150
<u>1235</u>

Mounted by
1/2 Wright

Oct. 25-1916.

-	20	c
-	1	B
16	1909	

6 20

All cloudy

P.A. 190

II

6

P.A. 10

P.A. 190

6

Thurs. Oct. 26-1916

#2 LCCOls 15th E. eq. RGP Rec

Ensonia.

Prod. 3424

22 14 + 7.5

used = 32² fast

20 40

at 7:00

1 342

Comp * = +7.4873(8.0) (1855) 22^h 19 + 7.2

P.A. 280

62050 183.2 comp * dis & brighter

250.8

67.6 ✓

14.2

45.4 ✓

59.6

113.0 ✓ + 1.35

P.A. 100.

289.4

334.8

47.4 ✓

93.2

70.6 ✓

163.8

118.0 ✓ + 1.24

275.0

345.8

70.8 ✓

102.8

52.6 ✓

155.4

123.4 ✓ + 1.12

+ 1.59

+ 1.18

+ 1.38

P.A. 280

17.1

40.5 ✓

157.6

52.7 ✓

195.7

93.2 ✓

+ 1.83

6 22 53
2116 3.474
63.426
0.068

6 25 00 248.4

Thurs. Oct. 26-1916.

L.C. Jones

II

63552 12.7
 62.8
 200.0
 240.1

P. 9.280

50.1 ✓
 40.1 ✓
 90.2 ✓ + 1.91

103.1
 152.2
 298.0
 343.7

P. 9.20

49.1 ✓
 65.7 ✓
 114.8 ✓ + 1.31

101.5
 160.9
 283.2
~~639.0~~ 329.6

+ 1.85

59.2 ✓

+ 1.415

46.4 ✓

+ 1.63

105.6 ✓ + 1.52

6 38 19
 21163.485 ✓

63.426

0.059

199.0

241.4

10.1

62.6

P. 9.280

424 ✓

52.5 ✓

94.9 ✓ + 1.79

6 4250

~~6370~~

6. 38 19

Oct. 26 - 1918

6 46 35 196.1
 246.2
 17.1
 59.1

PA₉₈₀

50.1 ✓
 42.0 ✓
 92.1 ✓ + 1.86

111PA₁₀₀

103.2
 154.2
 280.4
 340.1

51.0 ✓
 59.7 ✓
 110.7 ✓ + 1.40

98.8
 159.1
 286.6
 333.4

60.3 ✓
 46.8 ✓
 107.1 ✓ + 1.49

+ 1.925

+ 1.445

3.370

+ 1.685

PA₉₈₀

204.6
 240.1
 12.4
 64.2

35.5 ✓
 51.8 ✓
 87.3 ✓ + 1.99

6 51 40

98 15

6 49 08

2 116 3.492

426

0.066

Oct. 26-1916

P.A. 200

IV

71 5 193.6
 243.8
 19.4
 587

50.2 ✓
 39.3 ✓
 89.5 ✓ + 1.93

P.A. 100

288.5
 333.4
 1008
 1602

44.9 ✓
 59.4 ✓
 104.3 ✓ + 1.55

282.8
 338.6
 103.2
 153.0

55.8 ✓
 49.8 ✓
 105.6 ✓ + 1.52

+ 1.98
 + 1.535
 + 1.76

P.A. 200

18.7
 55.4
 196.6
 245.6

36.7 ✓
 49.0 ✓
 85.7 ✓ + 2.03

75 50

7 3 20
 2 2 56
 21163.502 ✓
 .426
 0.076

Oct. 26-1916.

PA 280

V

7 13 25 122
62.8
201.6
240.4

50.6 ✓
38.8 ✓
89.4 ✓ + 1.93

PA 100

98.4
155.6
288.6
332.2

57.2 ✓
43.6 ✓
100.8 ✓ + 1.64

102.6
150.7
287.2
337.8

48.1 ✓
50.6 ✓
98.7 ✓ + 1.69

+1.910
+1.665
1575
1.78

PA 280

196.7
245.5
16.8
58.8

48.8 ✓
42.0 ✓
90.8 ✓ + 1.89

7 18 10
11 35
7 15 48
21163.510 ✓
63.426
0.084

Oct. 26-1916

F8/B3

VI

7 29 20 195.2
243.4
12.2
64.4

PA 280
48.2 ✓
52.2 ✓
100.4 ✓ + 1.65

7 31 30 286.0
339.6
97.8
155.4

PA 100
53.6 ✓
57.6 ✓
111.2 ✓ + 1.39

7 31 45 286.2
341.6
94.0
~~160.5~~
155.8

55.4 ✓
~~68~~ ✓
61.8
117.2 ✓ + 1.25

+ 1.605

+ 1.320

292.5
+ 1.46

7 33 45 10.4
69.2
199.8
245.6

PA 280
58.8 ✓
45.8 ✓
104.6 ✓ + 1.54

6 20
7 31 20
30 48
21163.522
426
0.096

Oct. 26th 1916

P.G. 280

VII

7 35- 25-	11.5		
	14.9	48.4 ✓	
	63.3	53.2 ✓	
	195.2	<u>101.6</u> ✓	+ 1.62
	248.4		

P.G. 100

	93.8	67.0 ✓	
	160.8	56.0 ✓	
	285.2	<u>123.0</u> ✓	+ 1.13
7 38 5-	341.2		

+ 1.52
+ 1.25
+ 1.40

7 38 15-	101.5	55.3 ✓	
	156.8	56.7 ✓	
	285.1	<u>112.0</u> ✓	+ 1.37
	341.8		

P.G. 280

	192.2	55.7 ✓	
	247.9	50.8 ✓	
	14.4	<u>106.5</u> ✓	+ 1.50
7 39 55	64.2		

7 39 55	31 40
37 55	23
2116 3.526	
<u>426</u>	
0.100	

Region on meridian & obs. more difficult in last two groups.

7 45-	200	R. Cor.	f. g.	6.2	Large in region low
7 45-	200	R. Semi.	f. g.	5.2	

F. E. B.

Dec. 26th 1916

7 56 50 197.4
 245.2
 9.0
 66.4

P. A. 280

III

47.8 ✓
 57.4 ✓
 105.2 ✓ + 1.53

7 58 50

282.2
 339.4
 99.6
 158.7

P. A. 100

57.2 ✓
 59.1 ✓
 116.3 ✓ + 1.27

7 59 05

282.7
 339.7
 93.2
 161.0

57.0 ✓
 67.8 ✓
 124.8 ✓ + 1.09

+ 1.405

+ 1.180

2585

1.29

+ 1.29

P. A. 280

8 01 00

7.4
 69.8
 195.8
 249.4

62.4 ✓
 53.6 ✓
 116.0 ✓ + 1.28

35 45
 7 58 56 ✓
 21163.540
 426
 0.114

Sp. 2.3

P. A. 278.5 A

Dec. + 7.4

H. C. 0.19 W

S. J. 22 37

Oct. 26-1966

Telescope Reversed.

P.A. 280

8	10	20	275.4	69.3 ✓	<u>IX</u>
			344.7	52.4 ✓	
			103.3	<u>121.7</u> ✓	
			155.7	+1.16	

P.A. 100

			19.4	39.3 ✓	
			58.7	60.6 ✓	
			192.8	<u>99.9</u> ✓	+1.66
8	12	40	253.4		

+1.170

+1.595

8	12	50	10.0	54.6 ✓	<u>+1.385</u>
			64.6	50.6 ✓	
			195.6	<u>105.2</u> ✓	
			246.2	+1.53	

P.A. 280.

			96.1	62.2 ✓	
			158.3	58.4 ✓	
			283.8	<u>120.6</u> ✓	+1.18
8	15	30	342.2		

	11	20
8	12	50
21163.550		
63426		
0.124		

Oct. 26-1916

PA 280

X

8 28 05

95.2
160.4
283.5
344.4

65.2 ✓
60.9 ✓
126.1 ✓ + 1.06

PA 100

8 30 40

195.1
250.2
9.9
66.5

55.1 ✓
56.6 ✓
111.7 ✓ + 1.38

+ 1.045

+ 1.385

8 30 55

193.6
254.4
14.2
64.6

60.8 ✓
50.4 ✓
111.2 ✓ + 1.39

+ 1.215

+ 1.22

PA 280

8 33 05

281.3
342.4
94.6
161.0

61.1 ✓
66.4 ✓
127.5 ✓ + 1.03

2 45

8 30 41
2116 3.562 ✓

552
0.010

Oct. 26 - 1916

P. G. 280

XI

8 45 15

285.3

339.8

96.3

159.9

64.5 ✓

63.6 ✓

118.1 ✓

+ 1.23

P. G. 100

10.0

63.7

196.3

247.1

53.7 ✓

50.8 ✓

104.5 ✓

+ 1.55

8 47 35

+ 1.125
+ 1.525

8 47 50

14.5

64.4

196.2

252.7

49.9 ✓

556.5 ✓

106.4 ✓

+ 1.50

+ 1.325

P. G. 280

96.8

162.3

279.0

341.7

65.5 ✓

62.7 ✓

128.2 ✓

+ 1.02

8 49 55

30 35

8 47 39

21163.574 ✓

63.42

0.022

Oct. 26th 1916

P. C. 280

9 00 55-

99.8
163.4
276.6
345.5

63.6 ✓
68.9 ✓
132.5 ✓

+ 0.93

XII

P. C. 100

9 3 00

194.3
243.2
137
68.8

48.9 ✓
55.1 ✓
104.0 ✓

+ 1.58

+ 0.925
+ 1.490

9 3 20

193.1
148.7
15.6
67.9

55.6 ✓
54.3 ✓
109.9 ✓

+ 1.42

2415
1208
+ 1.21

P. C. 280

9 5 15-

277.7
345.3
99.2
164.6

67.6 ✓
65.4 ✓
133.0 ✓

+ 0.92

12 30

9 3 08
21163.585 ✓

63.552

9 11

9 26

e Ceti
e Ceti

021503
021503

eye & spec. at 4.3 - L.C. Ref=6
spec. at 4.3 + spec. Ref=6

Oct 26-1916

PA 280

XIII

9. 17 40	281.2	62.4 ✓	
	343.6	57.6 ✓	
	101.6	<u>120.0 ✓</u>	+1.19
	159.2		

PA 100

	13.6	52.3 ✓	
	65.9	45.6 ✓	
	197.8	<u>97.9 ✓</u>	
9 19 55	243.4		+1.71

H.09

+1.63

9 20 05	15.8	48.2 ✓	
	64.0	56.1 ✓	
	192.0	<u>104.3 ✓</u>	+1.55
	248.1		

+1.36

PA 280

	94.0	70.3 ✓	
	164.3	59.4 ✓	
	281.8	<u>129.7 ✓</u>	+0.99
9 22 5	341.2		

39 45

9 19 56 ✓

21163.597

63.552

0.045

Oct. 26 - 1916

Pa. 280

XIV

9 28 30	99.0	61.4 ✓	
	160.4	59.5 ✓	
	281.2	<u>120.9</u> ✓	+1.17
	340.7		

Pa 100

	191.0	56.3 ✓	
	247.3	43.2 ✓	
	17.8	<u>99.5</u> ✓	+1.67
9 30 35	61.0		

9 30 45	194.4	52.4 ✓	
	246.8	49.2 ✓	
	17.7	<u>101.6</u> ✓	+1.62
	66.9		

1.198
+1.645

283.5
+1.42

Pa. 280

	280.8	59.0 ✓	
	339.8	60.2 ✓	
	98.7	<u>119.2</u> ✓	+1.21
9 32 45	158.9		

9 30 39	
9 30 07	
21163.604	
<u>62552</u>	
0.052	

Oct. 26^a 1915

P. a. 280

9 39 5- 283.0
 341.5
 96.6
 100.2

58.5[✓]
 63.6[✓]
 122.1[✓] + 1.14

XV

P. a. 100

9 41 10 12.6
 64.0
 195.5
 242.4

51.4[✓]
 46.9[✓]
 98.3[✓] + 1.70

+ 1.880

+ 1.805⁻

9 41 30

18.8
 61.0
 196.0
 243.8

42.2[✓]
 47.8[✓]
 90.0[✓] + 1.91

2985⁻
 + 1.49

P. a. 280

99.6
 161.0
 282.4
 309.8

61.4[✓]
 57.4[✓]
 118.8[✓] + 1.22

43
 9 54 45
 5 30
 9 41 22
 50 50[✓]
 21163.612
 552
 0.060

Coel. 26^u 1916

P. G. 280

9 49 25 106.0
 158.2
 280.0
 339.6

522 ✓
 59.5 ✓
 111.8 ✓

+ 1.38

XVI

P. G. 100

9 51 25 198.6
 245.2
 16.9
 61.1

46.6 ✓
 44.2 ✓
 90.8 ✓

+ 1.89

+ 1.365

+ 1.825

9 51 45 197.6
 242.8
 14.2
 65.0

45.2 ✓
 50.8 ✓
 96.0 ✓

+ 1.76

+ 1.60

3190

P. G. 280

280.1
 340.8
 101.8
 155.0

60.7 ✓
 53.2 ✓
 113.9 ✓

+ 1.33

9 53 40
 6 15
 9 51 34
 9 51 02

211 63 619

552
 0.067

Oct. 20^a - 1916

P.A. 280

10 04 45

285.8

333.9

99.0

159.2

48.1[✓]60.2[✓]108.3[✓]

+1.46

XVII

P.A. 100

16.8

63.2

199.4

10 7 10

241.8

46.4[✓]42.4[✓]88.8[✓]

+1.95

+1.335

+1.880

10 7 25

17.9

62.2

195.3

245.0

44.3[✓]49.7[✓]94.0[✓]

+1.81

3215[✓]

+1.61

P.A. 280

100.0

160.4

281.0

339.6

60.4[✓]58.6[✓]119.0[✓]

+1.21

10 9 35

10 28 55

10 07 14

10 06 42

21163.636[✓]

552

0.078

Oct. 26 1916

10 15 40

99.8

154.2

281.3

339.2

P. G. 280

54.4 ✓

57.9 ✓

112.3 ✓ + 1.36XVIII

P. G. 100

195.8

245.9

14.6

10 18 00

62.0

P

50.1 ✓

47.4 ✓

97.5 ✓ + 1.72

+ 1.24

+ 1.74

10 18 15

198.8

246.7

16.6

64.6

47.9 ✓

48.0 ✓

95.9 ✓ + 1.76

+ 1.49

P. G. 280

278.9

240.2

95.6

10 20 30

161.2

157.6

61.3 ✓

62.0 ✓

123.3 ✓ + 1.12

52 25

10 16 08

10 17 34

211 63.637

.552

0.085

Oct. 26 1916

P. a. 280

10 23 10

285.8

340.4

95.8

158.6

54.6 ✓

62.8 ✓

117.4 ✓ + 1.25

XIX

P. a. 100

13.7

66.6

196.0

10 25 15

243.2

52.9 ✓

47.2 ✓

100.1 ✓ + 1.65

1.220

1.585

10 25 30

16.8

65.2

193.3

250.4

48.4 ✓

57.1 ✓

105.5 ✓ + 1.52

+ 1.40

P. a. 280

97.3

164.4

285.2

338.1

67.1 ✓

52.9 ✓

120.0 ✓ + 1.19

10 27 40

10 21 35

10 25 24

10 26 52

21163.642

$$\begin{array}{r} 552 \\ 0.090 \end{array}$$

Oct. 26-1916

P. A. 280

XX

10 37 20	97.8	58.8 ✓	
	156.6	63.2 ✓	
	281.6	122.0 ✓	+ 1.15
	344.8		

P. A. 100

	194.2	54.0 ✓	
	248.2	49.1 ✓	
	14.6	103.1 ✓	+ 1.58
10 39 20	63.7		

			+ 1.15
			+ 1.49
			<hr/>
			+ 1.32
10 39 35	192.0	54.2 ✓	
	246.2	56.5 ✓	
	12.3	110.7 ✓	+ 1.40
	68.8		

P. A. 280.

	282.2	59.4 ✓	
	341.6	62.6 ✓	
	98.8	122.0 ✓	+ 1.15
10 41 50	161.4		

10 37 45
10 39 26
10 38 54 ✓

21163.652
552
0.100

Transit

1. 2 1/2	36	1 2 3
22	18	

55 see next page for better

transits.

Oct. 26-1916

Sid Rock.
+23 58

1 24 26

25 29 +2 1.05

26 10° 39 Comp. + 1.0

Francis

(f.3) Mean T. 10:50

Inter. almost same dec. as
sec. star.

(855) (f.3)

22 17 19.7 +7 27.4

+1 5

22 18 24.7

(855) (f.0)

22 19 6.1 +7 10.0

- 0 39

22 18 27.1

22 18 24.7

11.8

Eumonia. Pos = 22 18 25.9 spot 1855 Decl = +7 11

CO ce. 26⁰⁰ 1916

P. a. 280

10 51 25	280.6		
	340.0	59.4 ✓	
	94.0	69.6 ✓	
	163.6	129.0 ✓	+ 1.00

XXI

P. a. 100

	12.0		
	66.4	54.4 ✓	
	196.0	46.8 ✓	
10 54 00	242.8	101.2 ✓	+ 1.63

+ 1.095

+ 1.135

2630

+ 1.32

10 54 15	13.3		
	64.6	51.3 ✓	
	190.4	57.8 ✓	
	248.2	109.1 ✓	+ 1.44

P. a. 280

	96.6		
	157.6	61.0 ✓	
	282.2	59.0 ✓	
10 56 20	341.2	120.0 ✓	+ 1.19

0.98

16 00
10 54 00
10 53 20

21163.662 ✓

552

0.110

Oct. 26^a 1916

P.G. 280

10 59 5-

97.2

160.6

273.4

345.4

63.4[✓]72.0[✓]135.4[✓] + 0.87XXII

P.G. 100

~~180.4~~

187.2

249.6

10.8

71.4

62.4[✓]60.6[✓]123.0[✓] + 1.13

+ 0.93

+ 1.16

X

11 0² 00

11 2 40

189.8

248.6

7.9

69.4

58.8[✓]61.5[✓]120.3[✓] + 1.19

2.09

1.04

P.G. 280

276.3

346.4

99.6

159.2

70.1[✓]59.6[✓]129.7[✓] + 0.99

11 5 20

9

05-

11 02 16

11 01 46

21163.668[✓]

552

0.116

Oct. 26th 1916

P.C. 280

11 7 45 279.8
 343.7
 93.3
 162.2

63.9 ✓
 68.9 ✓
 132.8 ✓

+ 0.92

XXIII

P.C. 100

11 10 00 12.8
 70.4
 190.2
 247.5

57.6 ✓
 57.4 ✓
 115.0 ✓

+ 1.30

0.905

+ 1.260

11 10 15 10.8
 68.4
 189.2
 250.4

57.6 ✓
 61.2 ✓
 118.8 ✓

+ 1.22

2.165
 + 1.08

P.C. 280

11 12 35 92.0
 164.6
 279.0
 340.9

72.6 ✓
 61.9 ✓
 134.5 ✓

+ 0.89

00 35
 11 10 09
 11 09 37
 21163.674

55.2
 0.122

Oct. 20 1916

P.A. 280

11 16 10

96.9

158.6

277.2

350.2

61.7 ✓

73.0 ✓

134.7 ✓

+ 0.88

XXIV

P.A. 100

186.9

247.6

12.8

11 18 30

66.8

60.7 ✓

54.0 ✓

114.7 ✓

+ 1.31

+ 0.885

+ 1.235

2 120

+ 1.06

11 18 40

191.0

247.7

6.0

71.0

56.7 ✓

65.0 ✓

121.7 ✓

+ 1.16

P.A. 280

274.8

346.8

97.6

160.0

72.0 ✓

62.4 ✓

134.4 ✓

+ 0.89

11 20 50

34 10

11 18 32

11 18 00 ✓

21163.679

679

0.000

Oct 26-1916

Algol Var - 10.193

$$\begin{array}{r} 4 \ 37 - 11.0 \\ 2 \ 00 \\ \hline 2 \ 37 \ 2 \end{array}$$

Phot T

I.

Compt - -10.992 (95)
P. G. 350

11 38 50

24.8 ← var. dis.

$$\begin{array}{r} 53.9 \\ 202.4 \\ 234.8 \\ \hline 29.1^{\checkmark} \\ 32.4^{\checkmark} \\ 61.5^{\checkmark} \end{array} \quad - 2.80$$

P. G. 170

$$\begin{array}{r} 112.0 \\ 146.3 \\ 290.0 \\ \hline 34.3^{\checkmark} \\ 40.7^{\checkmark} \\ 75.0^{\checkmark} \end{array} \quad - 2.35$$

11 41 45

330.7

*-2.975-

A-2.305-

11 42 00

109.8

150.7

293.0

329.8

$$\begin{array}{r} 40.9^{\checkmark} \\ 36.8^{\checkmark} \\ \hline 77.7^{\checkmark} \end{array} \quad \begin{array}{r} * 2.26 \end{array}$$

$$\begin{array}{r} 5.280 \\ - 2.64 \end{array}$$

$$\begin{array}{r} 6 \ 55^{\checkmark} \\ 11 \ 41 \ 46 \\ 11 \ 41 \ 12 \\ \hline 21163.695 \end{array}$$

209.0

231.6

24.4

54.6

P. G. 350

$$\begin{array}{r} 22.6^{\checkmark} \\ 30.2^{\checkmark} \\ \hline 52.8^{\checkmark} \end{array} \quad \begin{array}{r} * 3.15 \end{array}$$

11 44 20

56

Oct. 26th 1916~~Miss~~ Algol Var.

again

P.A. 350

11 48⁸ 10

209.6

235.8

283.4

54.7

26.2[✓]31.3[✓]57.5[✓] - 2.96

II

P.A. 170

11 50 50

289.2

329.4

112.6

148.7

40.2[✓]36.1[✓]76.3[✓] - 2.31

- 3.145

- 2.355

5.500

- 2.75

11 57 05

292.0

329.2

110.8

147.0

37.2[✓]36.2[✓]73.4[✓] - 2.40

- 2.75

- 2.60

P.A. 350

Mean both = - 2.70

34.8

56.1

204.7

232.0

21.3[✓]27.3[✓]48.6[✓] - 3.33

11 53 40

3 45

11 50 56

11 50 24

21163.701

Sf. 9.1

P.A. 347.5 A

Dec. - 10.8

16.0. 204 E

Sf. 2.31

Fri Oct 27 - 1916

L.C. Ob. 15" Eq. P. Gr. Rec
Eumonia

22 22 + 0.5
20 30
1 52 2

I

B. First 3424 used
34.5 feet at 7:00

P. H.

Same comp as last night
= + 7.4873 (20)

P. A. 260

5 555 185.2 comp & dis.

252.4

67.2 ✓

14.8

46.3 ✓

61.1

113.5 ✓ + 1.34

P. A. 80

284.0

333.8

49.8 ✓

99.6

600 ✓

159.6

109.8 ✓ + 1.42

278.8

342.6

63.8 ✓

102.2

57.4 ✓

159.6

121.2 + 1.17

+ 1.365

+ 1.295

2.660

+ 1.33

21164.456

P. A. 260

14.3

66.8

52.5 ✓

189.6

58.6

5 59 45 248 2

111.1 + 1.39

P. A. 260

Spr 1.2

Oct 27-1916

~~PA. 310~~ II
 Comp with (P. 3) = +7.486A (P. 3)

6 6 10 84 . 4 ~~comp~~ ~~dis~~
 173 . 6 29.2 ✓
 260 . 6 1012 ✓
 364 . 8 190.4 ✓
159.6 ✓ - 0.39

~~PA. 130~~
 3 5 7.8 ~~comp~~ ~~dis~~ ✓
 8 3.3 25.5 ✓
 184.6 72.2 ✓
 257.4 158.3 ✓ + 0.41

~~PA. 310~~
 4 . 0 ✓
 76 . 0 720 ✓
 179 . 1 81.7 ✓
 260 . 8 153.7 ✓ + 0.50

~~0.435~~
~~0.235~~
 + 0.455
+ 0.220
 + 0.11

19 30
 6 09 45
 21164.465

~~260.8~~ ~~PA. 310~~
 178 . 7 ~~comp~~ ~~dis~~ ✓
 262 . 8 23.3 ✓
 351 . 8 92.2 ✓
 84 . 0 175.5 ✓ - 0.08

PA. 310
 Spr. 8.0

Oct 27-1916

Comp with 8.0

P. A. 260

6 20 5 193.2
 249.6
 17.6
 661.9

56.4 ✓
 44.1 ✓
 100.5 ✓ + 1.64

III

Pa 80

285.1
 337.7
 97.4
 161.2

52.6 ✓
 63.8 ✓
 116.4 ✓ + 1.27

+ 1.625

283.8
 340.6
 104.0
 155.0

56.8 ✓
 51.0 ✓
 107.8 ✓ + 1.47

+ 1.370

2.995

+ 1.50

Pa 260

17.8
 61.7
 194.2

43.9 ✓
 58.0 ✓
 101.9 ✓ + 1.61

6 25 10252.2

5 15
 6 22 38

21164.47 ✓

Oct 27 - 1906
with (8.3)

Pa 310

IV

6 29 45	90.2	<comp #dis ✓
	167.2	77.0
	270.2	81.5 ✓
	351.7	158.5 ✓ + 0.41

Pa - 130

256.3	<var dis ✓
36 6 0.8	110.5 ✓
86.2	95.0 ✓
181.2	205.5 ✓
	<u>154.5</u> ✓ + 0.49

264.4	var dis 6 ✓	+ 0.255
351.2	84.8	+ 0.485
70.1	118.3	+ 0.367
188.4	205.1 ✓	
	<u>154.9</u> ✓	+ 0.448
	Pa 310	

347.8	var dis ✓
93.0	105.2 ✓
181.4	80.0 ✓
6 35 45	201.4
	185.2 ✓
	<u>174.8</u> + 0.10

6 32 45

21164 481

Oct 27, 1916

with 5.0

6 43 25 14.9

61 4

191 .8

249 .8

Pa. 260

V

46.5 ✓

58.0 ✓

104.5 ✓ + 1.3-4

Pa. 80

96.4

156.8

285.6

335.8

60.4 ✓

50.2 ✓

110.6 ✓ + 1.40

105.2

155.2

280.0

340.6

50.0 ✓

60.6 ✓

110.6 ✓ + 1.40

+ 1.43

+ 1.40

+ 1.42

Pa. 260

182.6

251.1

16.4

62.2

68.5 ✓

45.8 ✓

114.3 ✓ + 1.32

6 48 15

11 40

6 45 50

21164.490

Probably affected by cld.

6 53

all cloudy.

Oct. 27 - 1916
with (F.3)

PA. 310

VI

> 30 Too cloudy to continue.

PA. 130

PA. 310

10 15 Sky clear now.

22 22 455

25 05

2 43 W

Oct 27 - 1906

Eumonia resumed
with S.O.

Pa. 260

VI

10 34 45⁻ 91.8 < comp * dis
 163.6 71.8
 280.6 54.6
 335.2 126.4 + 1.05⁻

Pa. 50

199.4
 239.4 400
 12.6 55.0
 67.6 95.0 + 1.78

190.4 + 1.095⁻
 253.3 629 1.575⁻
 16.4 492 670
 65.6 112.1 + 1.37 + 1.34

Pa 260

283.7
 337.4 53.7
 92.2 68.6
 10 40 55 160.8 122.3 + 1.14

10 37 50

21164.651

Pa 142A

Spc 1.1

Oct 27 - 1916

with 8.3

P.A. 310

VII

10 44 00

191.2 \angle comp + dis

248.2 57.0

7.8

72.6

80.4

129.2

+ 0.99

P.A. 130

262.4

355.2

92.8

92.4

74.4

166.4

167.2

+ 0.24

271.4

345.6

74.2

79.4

98.0

177.4

172.2

+ 0.15

+ 0.955

+ 0.195

+ 0.575

P.A. 310

0.8

76.3

75.5

190.2

57.5

10 51 30

247.7

133.0

+ 0.92

95 30

10 47 45

21164.658

with 8.3

P.A. 311A

Oct 27 - 1916

with so
Pa 260VIII

10 01 10

99.4		
158.8	59.4	
268.4	<u>79.0</u>	
347.4	138.4	+ 0.81

Pa. so

194.8		
243.8	49.0	
10.6	<u>61.6</u>	
72.2	109.6	+ 1.43

190.5			+ 0.71
253.4	62.9		+ 1.37
12.4	<u>57.8</u>		
64.2	114.7	+ 1.31	+ 1.04

Pa 260

276.0		
343.7	67.7	
84.3	<u>81.7</u>	
166.0	148.4	+ 0.61

11 08 30
09 40
 11 04 50
 20164.669

Oct 27-1916
with P.3
P.A. 310

IX

11 10 20 ~~352.8~~
78.8 P.O.O
187.9 627
250.6 142.7 + 0.72
P.A. 130

91.9
170.2 78.3
256.7 106.5
363.2 184.8
175.2 - 0.09

A1.8 + 0.645
184.3 102.5 - 0.060
271.6 79.2
350.8 181.7 + 0.615
178.3 - 0.03 + 0.31
P.A. 310

187.7
250.8 63.1
357.4 84.0
81.4 147.1 + 0.63

11 16 20

11 13 20

21164.676

Oct 27 ~ 1916

With A.O.

Pa. 260

X

11 2500 27 3.0
 345.2
 0.0
 84.4

72.2
 844
 156.6 + 0.45
 Pa. A.O.

11.6
 69.2
 124.3
 255.5

57.6
 71.2
 128.8 + 1.00

4.7
 81.2
 191.5
 247.6

76.5
 571
 133.6 + 0.90

+ 0.595
 + 0.95
 + 0.77

Pa. 260

99.6
 161.8
 271.2

62.2
 79.4

11 32 10 350.6

141.6 + 0.74

57 10
 11 28 35
 21164.686

Oct 27-1916

with 8.3

Pa. 310

11 33 45 44
 74.4
 176.6
 258.8

700.
 822
 1522 + 053

XI

Pa. 130

749
 186.3
 266.2
 348.3

111.4
 821
 193.5
 166.5 - 0.25

88.3
 168.9
 258.8
 358.6

80.6
 99.8
 180.4
 179.6 - 0.01
 Pa. 310

+0.55
 -0.13
 +0.42
 +0.21

180.2
 262.2
 5.8

820
 684
 150.4 + 0.57

11 41 45 74.2

11 37 45
 21164.69

Oct 27-1916

with Po

Pa. 260

11.50 15 244.8

338.8

~~81.2~~~~171.2~~

81.2

172.2

Pa. 80

540

91.0

145.0

+ 0.67

XII

5.8

64.2

175.4

258.9

58.4

83.5

141.9

+ 0.74

4.4

86.0

189.8

249.8

81.6

60.0

141.6

+ 0.74

+ 0.76

+ 0.74

+ 0.75

Pa. 260

101.8

156.8

268.4

(157) 30 349.6

7 45

1153 52

21164.703

55.0

81.2

136.2

+ 0.85

0

21^c
4^B
2533
208-1

Oct 27-1916

with 83

P.A. 310

XIII

11 59 20

7.6
74.2
178.6
263.3

66.6
24.7
151.3 + 0.55

P.A. 130

76.8
187.7
269.8
346.4

110.9
76.6
187.5
172.5 - 0.14

91.4
175.4
256.4
357.2

84.0
98.8
182.8
177.2 - 0.05

+0.465
- 0.095
0.370
+0.18

P.A. 310

173.4
262.2
5.3

88.8
71.1
159.9 + 0.38

12 05 20

76.4

12 02 20

21164710

Sat Oct. 25 - 1916

P.C. Obs 15" E Eq.

Eumonia with (A. 3)

2222 + f. 5

Prod 3624 med

$$\begin{array}{r} 20 \ 44 \\ \hline 1 \ 34 \ 2 \end{array}$$

I

Pa 310

6 07 15 - FK 2 - comp Xolis

181.2

97.0

260.9

$$\begin{array}{r} 921 \\ \hline \end{array}$$

353.0

189.1

$$\begin{array}{r} 170.9 \\ \hline \end{array}$$

- 0.17

Pa 150

177.4

261.6

44

74.2

FK 2

698

$$\begin{array}{r} 1580 \\ \hline \end{array}$$

+ 0.50

188.2

252.2

357.7

76.2

64.0

785

$$\begin{array}{r} 142.5 \\ \hline \end{array}$$

+ 0.72

Pa 310

256.1

356.2

87.2

178.7

1001

91.5

$$\begin{array}{r} 191.6 \\ \hline \end{array}$$

$$\begin{array}{r} 168.4 \\ \hline \end{array}$$

- 0.22

- 0.195

+ 0.610

+ 0.415

+ 0.21

Pa 311.5A

Sfr 98

6 13 15

$$\begin{array}{r} 6 \ 10 \ 15 \\ \hline \end{array}$$

6 09 31

20165.465

Oct 28 - 1946

A.3 with A.0
P.A. 300
L.A. dis

I

6 14 45 - 192.6
 247.8
 11.4
 68.4

55.2
 57.0
 112.2 - 1.37

P.A. 120

269.6
 350.2
 90.2
 169.4

80.6
 79.2
 159.8 - 0.3A

268.8
 346.3
 93.3
 165.2

77.5
 71.9
 149.4 - 0.59

-1.345
 -0.445
 1.830
 -0.915
 -0.92

P.A. 300

10.3
 65.1
 191.6

54.8
 59.6
 114.4 - 1.32

6 19 55 - 251.2

14 40
 6 17 20
 21165.470

P.A. 304 A
 Apr. 9.3

Oct 28-1966

Euryomia 8 P.O.
P.A. 310

6 3320 275.2
350.4
76.6
1834

75.6
106.8

182.4
177.6
P.A. 130

- 0.05

II

~~76.6~~
172.9
259.4
10.3
714

86.5
61.1

147.6

+ 0.62

- 0.185³
+ 0.650

186.7
252.0
- 0.6
802

65.3
79.6

144.9

+ 0.68

~~0.834~~
⁵²
0.465
+ 0.26

P.A. 310

256.4
358.8
86.4

102.4
89.0

6 3920 175.4

191.4
168.6

- 0.22

6 3620

21165.483

Dec. 28 1916

(A.3) with (A.0)

P. G. 300

6 40 00

192.2/8.0 dia

250.8

13.7

63.8

58.5

50.1

108.7

-1.45

II

P. G. 120

274.8

340.7

92.2

168.4

65.9

76.2

142.1

-0.73

- 1.400

- 0.745

2.145

- 1.07

271.2

348.4

96.8

150.2

77.2

63.4

140.6

-0.76

P. G. 300

12.8

64.7

191.8

252.7

51.9

60.9

112.8

-1.35

$$\begin{array}{r} 6 \ 43 \ 30 \\ \hline 5 \ 30 \end{array}$$

$$\begin{array}{r} 6 \ 42 \ 45 \\ 21165.48 \end{array}$$

Dec. +7.5

H.G. 052 E

21 26

Oct. 28th 1916.

75

I.C. obs. Reapp. of Jup. I. 7.5.B. Rec.

True. 34 2K
 37.5 sec. fast
 at 6.52 (4 light)

Photo R.

Comp with main Sat
 on opp. side = Sat

L.V.

6 56 3K

65.2

52

88.8

22.6

5-7 3

68.0

32.2

14

89.2

45.8

6 56 5K

3K

3.47

16 56 20

- 483

8 5K

8 5K

8 5K

7 01 50

suspected

7 02 52

seen

03 03

87.2

14

94.4

7.2

18.4

+ 6.01

02 30[✓] 113

26

85.8 annul

28.6

37.2

+ 3.93

02 42[✓] 101[✓]

37

91.4 annul

20

3

+ 3.70

54[✓] 89

49

62.0

34.4

41.2

+ 2.55

03 05[✓] 78

57

96.4

29.4

58.8

+ 2.91

16[✓] 67

04 15

changed pos. of major

30

41.4

55.0

11.10

+ 1.39

03 38^{6✓} 47

44

120.4

79.0

15.80

0.62

59[✓] 24

56

34.2

86.2

17.24

+ 0.14

04 12[✓] 11

05 7

125.4

91.2

18.24

- 0.05

24[✓] + 1

18

24.0

81.4

18.28

+ 0.05

1204 34[✓] + 11

20.24 157.6

- 0.43

Oct 27-1916

7.5-	32	131.5	107.5	2150	1450	X - 0.67	12 04 47	+24
	47	26.0	105.5	2110	149.0	- 0.59	05 14	39
	58	129.8	103.8	2076	152.4	- 0.53	14	51
06	9	34.4	95.4	190.8	169.2	- 0.20	12 05 36	63
	19	131.5	97.2	194.4	165.6	- 0.27	36	73
	31	28.8						13
	45	129.8	101.0				2 06 50	
	57	31.2	97.6				5 38	
07	7	128.8	198.6			- 0.35	12 06 12	+ 109
	24	28.8	161.4					
	36	130.4	101.4				2 07 42	
	47	30.4	90.4				5 38	
08	01	120.8	191.8			- 0.22	12 07 04	161
	13	31.2	168.2					
	24	120.4	89.2				7 08 31	
	37	30.8	91.2				38	
	50	122.0	180.4			- 0.01	12 07 53	210
			179.6					
09	01	30.1					7 09 20	
	12	124.0	93.9				12 08 42	259
	29	32.2	95.0					
	38	127.2	188.9			- 0.17		
			171.1					
10	24	29.4					7 10 38	
	34	124.4	95.0				12 10 00	+337
	44	29.8	95.2					
10	50	125.0	190.2			- 0.19		
			169.8					

Sat. reap close to limit of
 exp. so rather difficult to
 measure at first.

Oct 27 - 1916.

Eumonia with (8.3)

7 34 05

89.2

164.4

274.2

350.2

P.Q. 310 130
comp * dis

75.2

76.0

151.2

* 0.55

III

P.Q. + 70 310

192.8

245.0

9.6

7 30 55

67.7

52.2

58.1

110.3

+ 1.41

- four readjusted

7 37 05

189.7

250.4

11.1

66.8

60.7

55.7

116.4

+ 1.27

* 0.38

+ 1.34

1.72

+ 0.86

0.96

+ 0.48

P.Q. 310 150

275.3

346.1

80.2

70.8

98.2

169.0

* 0.21

7 39 10

178.4

27 15

7 36 49

12 11 55.525

Best to reject this group
on acct of poor form.
Four readjusted

78

Oct. 28 1916

~~Summ.~~

8.0 with 8.3

P.A. 120

~~III~~

7 40 00

197.2

244.2

10.6

64.0

- 8.0 clis

47.0

52.4

100.4

- 1.65

P.A. 300

267.1

341.8

91.8

7 42 30

167.4

74.7

75.6

150.3

- 0.57

7 42 50

273.7

347.7

87.6

159.8

74.0

72.2

146.2

- 0.65

- 1.525

- 0.610~~9.75~~

2.135

- 1.07

P.A. 120

9.4

67.6

195.6

248.0

58.2

52.4

110.6

- 1.40

7 43⁴ 55

10

15

7 42 34

21165.529

Oct 20 - 1966
Eumonia with P.3

79

PA. 130

IV

8 00 55	268.8	$\angle 8.3$ disp.	
	347.2		
	82.6		
	177.8		
			$\begin{array}{r} 78.4 \\ 95.2 \\ \hline 173.6 \end{array} + 0.12$

PA. 310

	7.0	66.8	
	73.8	63.2	
	188.6	$\hline 130.0$	+ 0.98
8 03 20	251.8		

			+ 0.210
			+ 0.905
			$\hline 1.115$
8 03 35	10.8	58.6	
	69.4	78.4	
	178.6	$\hline 137.0$	+ 0.83
	257.0		
			+ 0.56

PA. 130

	84.8	90.4	
	175.2	73.8	
	272.8	$\hline 164.2$	+ 0.30
8 05 50	346.6		

$\hline 1340$

8 03 25

21165.544

Oct. 28 1916

8.0 with 8.3

P. C. 180

8 06 20 13.0
63.2 ← 8.3 dia.

190.8	50.2	
252.8	62.0	- 1.37
	<u>112.2</u>	

IV

P. C. 300

8 09 10	89.0	76.6	
	165.6	65.0	
	276.7	<u>141.6</u>	- 0.74
	341.7		

- 1.365

- 0.685

8 09 20	98.4	63.4	
	161.8	83.7	
	266.3	<u>147.1</u>	- 0.63
	350.0		

- 1.02

P. C. ~~300~~ 120

8 12 00	192.6	58.0	
	250.6	54.3	
	11.8	<u>112.3</u>	- 1.36
	66.1		

36 50

8 09 12

21165.548

Oct 2 F - 1906

Ennomia with F. 3

P.A. 130

8 18 45

79.2

30 div

177.1

264.7

349.8

97.9 ✓

85.1 ✓

183.0 ✓

177.0 ✓

- 0.06

P.A. 310

189.2

254.4

2.2

70.4

65.2

74.2

139.4

+ 0.79

+ 0.025

+ 0.795

+ 0.41

8 21 25

180.5

252.0

7.2

69.6

76.1

62.4

138.5

+ 0.80

P.A. 130

271.6

347.0

80.7

179.2

75.4

98.5

173.9

+ 0.11

8 23 40

21165.556

Oct. 28 1916

do with f. 3
P.A. 120

8 24 25	196.8		
	248.2	51.4	
	9.2	60.5	
	69.7	<u>111.9</u>	-1.37

V

P.A. 300

	275.4		
	348.4	73.0	
	100.0	64.4	
8 26 35	164.4	<u>137.4</u>	-0.83

8 26 45	277.6	64.6		-1.385
	342.2	80.8		-0.750
	87.8	<u>145.4</u>	-0.67	-1.067
	168.6			

P.A. 120

	7.8		
	68.8	61.0	
	196.8	49.6	
8 28 45	246.4	<u>110.6</u>	-1.40

211 65-560

Oct. 28 ^u 1915

Sunrise with 8.3

P.G. 130

8 46 40	353.8	\angle Emission	94.6	<u>VI.</u>
	88.4			
	181.0		79.4	
	260.4		<u>174.0</u>	

$\bar{x} 0.11$

P.G. 310

	76.8	\angle Emission	98.6
	175.4		103.8
	254.6		<u>202.4</u>
8 49 15	248.4		<u>157.6</u>

$+ 0.43$

8 50 35	73.8	105.6	$\bar{x} 0.160$
	179.4	100.4	$+ 0.465$
	258.4	<u>206.0</u>	<u>0.625</u>
	358.8	<u>154.0</u>	+ 0.31

$+ 0.50$

P.G. 130

182.8	\angle Emission	74.0	0.305
252.8			$+ 0.15$

8 51 45	351.4	94.8	$\bar{x} 0.21$
	86.2	<u>168.8</u>	

38 15

8 49 34

21165.576

Dec. 28 1915

8.0 with 8.3

P. a. 120

8 53 20 196.8
245.0
9.8
68.7

48.2

58.9

107.1 - 1.49

VI

P. a. 300

8 55 35 268.7
347.4
94.8
160.6

78.7

65.8

144.5 - 0.68

- 1.485

0.570

8 55 45 272.5
347.7
86.5
167.4

75.2

80.9

156.1 - 0.46

- 1.03

P. a. 120

10.8
69.4
195.4

58.6

48.9

107.5 - 1.48

8 57 55 244.3

22 35

P 55 39

21165.581

Oct. 28-1916

Eumonia 8 P. 3

P.A. 130

9 12 00	261.2	← 8.3 dia	<u>VII</u>
	355.6	94.4	
	79.6	102.6	
	182.2	<u>197.0</u>	
		163.0	
		<u>197.0</u>	- 0.32
		<u>163.0</u>	P.A. 310

	357.2	← 8.3 dia	
	82.2	100.0	
	182.2	85.0	
9 14 40	256.8	<u>74.6</u>	
		159.6	
			+ 0.39

9 14 55	7.8		- 0.22
	74.2	66.4	+ 0.41
	166.4	<u>91.2</u>	
	257.6	157.6	+ 0.19
			+ 0.10

P.A. 130

	84.2	4.3 dia	
	184.4		
	262.8	100.2	
9 17 25	349.4	<u>86.6</u>	
		186.8	
		<u>173.2</u>	
			- 0.13

21165, 2⁵93

Oct 28 - 1916

So with f 3

Pa. 120

VII

9 17 45

13.2
61.8 ← 8.0 dis
187.2 48.6
251.1 63.9
112.5 - 1.36

Pa. 300

9 19 55

87.6
162.8 75.2
278.8 62.3
341.1 137.5 - 0.82

1.36
- 6.80
2.16
1.08

9 20 5

97.8
152.7 58.9
267.7 80.7
348.4 139.6 - 0.78

Pa. 120

9 22 20

189.6
250.4 60.8
12.6 51.8
64.4 112.6 - 1.36

21165. ~~639~~
597

Oct. 28 1916
 Eumonia with 8.3

87

P. G. 130

9 36 55

179.4

Eumonia
 $\leftarrow 8.3 \text{ dis}$

267.4

88.0

355.7

79.7

75.4

167.7

- 0.23

VIII

P. G. 310

256.6

Eum

 $\leftarrow 8.3 \text{ dis}$

362.6

68.7

106.0

9 39 25

182.8

114.1

220.1

139.9

+ 0.78

9 39 35

259.8

105.7

365.5

89.4

81.8

171.2

195.1164.9

+ 0.29

- 0.140

+ 0.535

.395

+ 0.20

P. G. 130

358.4

82.1

80.5

95.1

176.2

177.2

- 0.05

9 41 55

271.3

21165.610

Oct. 2 A - 1916
8.0 with 8.3

P.A. 120

9 42 35

9.6
643.8
189.7
252.2

← 8.0 air

54.2
62.5

116.7

- 1.27

~~IX~~
VIII

P.A. 300

89.5
163.8
277.6
347.2

74.3
65.6

139.9

- 0.78

1.225

0.565

9 45 00

94.8
151.0
257.0
352.2

66.2
95.2

161.4

- 0.35

1.790
0.89

P.A. 120

186.6
252.8
11.2
65.5

66.2
54.3

120.5

- 1.18

47
9 52 00

21165.614

Oct 2P-1916

Summa with 8.3

P.A. 130

9 58 15

263.8

360.8

~~81.0~~

84.6

173.1

← 8.3 dis

97.0

88.5

185.5

P.A. 310

174.5

- 0.10

TX

11.6

72.2

178.4

256.3

60.6

77.9

138.5

+ 0.80

10 02 00

8.0

70.6

185.3

253.2

62.6

67.9

130.5

+ 0.97

- 0.075

+ 0.885

.810

+ 0.40

P.A. 130

88.8

174.6

260.4

357.2

85.8

96.8

182.6177.4

- 0.05

10 03 05

21165.626

Oct. 28 1916
8.0 with 8.3

10 04 55

$$\begin{array}{r} 12 \\ 58.8 \end{array}$$

63.8

193.3

251.5

P.G. 120

50.0 ✓

58.3 ✓

$$\begin{array}{r} 58.3 \\ 108.3 \end{array}$$

- 1.46 ✓

IX

10 07 00

85.7

161.8

274.5

345.0

P.G. 300

76.1 ✓

70.5 ✓

$$\begin{array}{r} 70.5 \\ 146.6 \end{array}$$

- 0.64 ✓

- 1.380 ✓

- 0.595 ✓

10 07 10

93.9

167.8

271.8

349.0

73.9 ✓

77.2 ✓

$$\begin{array}{r} 77.2 \\ 151.1 \end{array}$$

- 0.55 ✓

$$\begin{array}{r} 1975 \end{array}$$

0.987

- 0.99

P.G. 120

189.5

253.2

12.4

10 09 15

63.9

63.7 ✓

51.5 ✓

$$\begin{array}{r} 51.5 \\ 115.2 \end{array}$$

- 1.30 ✓

21165.629

Oct 28 1916

Eumonia with 8.3

P. G. 130

10 21 25

171.8

Eum.

270.4

← ~~8.3~~ dis.

357.8

98.6

83.7

85.9

184.5

+ 0.08

P. G. 310

254.4

365.9

70.0

10 24 40

185.1

111.5

115.1

226.61334

+ 0.91

10 24 55

248.6

368.8

74.8

180.4

120.2

105.6

225.81342

+ 0.89

+ 0.11

+ 0.90

101

+ 0.50

P. G. 130

356.2

84.2

172.6

88.0

99.6

187.6

172.4

+ 0.14

10

10 27 05

272.2

21165.652

Oct 28th 1915
8.0 with 8.3

P.A. 120

10 27 45

12.5

← 8.0 air

66.2

191.4

249.8

53.7

58.4

112.1

-1.37

P.A. 300

90.8

166.0

275.0

10 29 45

343.5

75.2

68.5

143.7

-0.70

-1.330

-0.685

10 29 55

95.6

161.2

272.3

351.8

65.6

79.5

145.1

-0.67

2015

1.007

-1.01

P.A. 120

187.8

251.0

15.2

10 32 25

67.4

63.2

52.2

115.4

-1.29

21165.645

Oct. 28-1916

Ennomia 88.3

P. A: 130

10 43 20⁰ 273.6
 347.4
 82.8
 172.2

← 8.3 dis
 73.8
 89.4
 163.2 + 0.32

~~XX~~XI

P. A 310

6.8
 73.1
 187.4
 10 46 35 253.2

66.3
 65.8
 132.1 + 0.94

10 46 50 9.7
 70.8
 181.3
 256.6

61.1
 75.3
 136.4 + 0.85

+ 0.295

+ 0.895

+ 0.595

P. A. 130

84.4
 175.5
 272.2
 10 49 00 347.1

91.1
 749
 166.0 + 0.27

21(65.65)

Dec. 28 1916
8.0 with 8.3

P. a. 120

10 49 35

13.2

66.8

187.8

251.0

53.6

63.2

116.8

- 1.26

~~XI~~

XI

P. a. 300

84.8

163.8

276.0

10 57 35

342.3

79.0

66.3

145.3

- 0.67

- 1.180

- 0.735

10 57 50

99.0

160.8

274.2

351.1

61.8

76.9

138.7

- 0.80

1.915

0.957

- 0.96

P. a. 120

186.0

253.1

8.8

10 53 55

66.0

67.1

57.2

124.3

- 1.10

21163.660

Oct. 20 - 1916
 Sunrise with 8.3

P. a. 130

11 03 25⁻ 274.8
 350.0
 85.6
 176.8

8.3 dis
 75.2
 91.2
 166.4 + 0.26

~~XIX~~
 XII

P. a. 310

11 05 40 3.8
 76.2
 179.8
 253.8

72.4
 74.0
 146.4 + 0.55

11 05 50 9.4
 71.8
 175.5
 256.6

62.4
 81.1
 143.5 + 0.70

+ 0.175
 + 0.675
 850
 + 0.42

P. a. 130

11 8 00 80.2
 180.1
 272.2
 347.6

99.9
 754.
 175.3 + 0.09

21165.670

96

Oct. 28 1915

8.0 with 8.3

11 08 40

15.5

61.6

191.5

252.3

P.A. 120

46.1

60.8

106.9 - 1.49

XII

11 10 50

86.9

164.9

170.2

348.4

P.A. 300

77.9

72.2

150.1

- 0.57

- 1.390

- 0.605

11 11 00

93.7

158.8

271.4

352.9

65.1

81.5

146.6

- 0.64

- 0

- 1.00

P.A. 120

188.7

254.8

140.02

63.8

66.1

49.6

115.7

- 1.29

11 13 05

21165.674

218
H B
295
=

Sun Oct 29-1916

Reap Jup II : Rec Ob.
Phot R. 15" E. E. 9.

at 6 40 45 - (Prod 3424) reap

Jup II.
Obs'd thru some clouds.

Prod 3424 = 40° fast at 6:46:50
by light on roof.

\therefore Con time of Reap II = 6:40:05

⊙ Nov. 1st 1915

algol
Miss Cannon Jan. 2052 of

20 52 04
22 32
1 40 W + 5.0

Plot T.
R.C. Ch
FEB Rec.

Prod 3424

face 54 sec at 8.00 P.A. 10

7 43 15- 12.2
65.8 ← comp * air
181.6
250.0
53.6 ✓
68.4 ✓
122.0 ✓ + 1.15

P.A. 190

+ 1.225
+ 0.930
21.45
+ 1.07

7 45 45- 91.8
167.9
279.6
337.4
76.1 ✓
57.8 ✓
133.9 ✓ + 0.90

7 46 00 98.8
163.6
280.8
346.7
64.8 ✓
65.9 ✓
130.7 ✓ + 0.96

7 44 54 P.A. 10
21169.531
189.6
250.7
13.8
68.8
61.1 ✓
55.0 ✓
116.1 ✓ + 1.28

Nov. 1-1916

Pa. 10

7 57 15

193.7

250.2

1.1

71.9

56.5

70.8

127.3

+ 1.04

II

Pa. 190

275.6

341.0

89.2

7 59 45

172.2

65.4

83.0

148.4

+ 0.61

A

+ 1.155

+ 0.655

8 00 00

271.0

346.2

98.1

167.0

74.6

68.9

143.5

clouds

+ 0.70

1810

+ 0.90

Pa. 10

15.9

70.6

189.6

251.2

54.7

61.6

116.3

Clouds

+ 1.27

8 5 00
00 00~~8 00 45~~
8 00 45

8 59 51

21169.545

Influence of clouds by in the latter half of this group.

f 10

all cloudy

Nov 1st 1916

Miss Car' Algol Var. again.

P.C. ~~190~~ 10114

8 25 00	4.8	69.5	
	74.3	60.2	
	190.8	<u>129.7</u>	+0.99
	251.0		

P.C. 190

	91.0	76.6	
	167.6	87.3	
	268.7	<u>163.9</u>	+0.30
8 27 15	356.0		

			+0.950
			+0.355
			<u>+0.65</u>
8 27 30	82.2	90.9	
	173.1	67.8	
	275.4	<u>158.7</u>	+0.41
	343.2		

P.C. ~~190~~ 10

	192.6	54.4	
	247.0	79.1	
	0.0	<u>133.5</u>	+0.91
8 29 30	79.1		

21169 560
<u>69 424</u>
0.136

Nov. 1, 1916

Pa 10

IV

8 43 05-

184.4

252.9

X 6.2

74.4

72.5

68.2

140.7

+ 0.76

Pa 190

274.6

342.9

80.9

8 45 10

174.4

68.3

93.5

161.8

+ 0.35

+ 0.745

+ 0.330

+ 0.54

8 45 20

269.4

355.2

92.8

170.7

85.8

77.9

163.7

+ 0.31

Pa. 10

X. 8.4

66.4

178.2

8 48 25

262.4

58.0

84.2

142.2

+ 0.73

21159.572

x 20

100

Pa. 10. A

Spc. 4.6

17a. 30W

Dec +5.2

N.T. 23 47

Nov. 1-1916

Comp. 2 8.0 0 8.3 on Oct 28-1916 Phot 7

$$8.0 = +7.4873$$

$$8.3 = +7.4868$$

$$22 \quad 22 \quad +0.5$$

$$\begin{array}{r} 23 \quad 52 \\ \hline \end{array}$$

$$1 \quad 30 \quad W$$

$$\text{Dec } 9.3$$

$$P.A. \quad 120$$

$$P.A. \quad 300$$

$$8 \quad 59 \quad 245$$

$$275.0 \leftarrow 8.0 \text{ dia.}$$

$$351.2$$

$$76.2$$

$$90.2$$

$$74.8$$

$$+0.56$$

$$165.0$$

$$\begin{array}{r} 151.0 \\ \hline \end{array}$$

$$P.A. \quad 3 \quad 120$$

$$17.0$$

$$63.2$$

$$190.6$$

$$9 \quad 01 \quad 55$$

$$248.4$$

$$46.2$$

$$57.8$$

$$\begin{array}{r} 104.0 \\ \hline \end{array}$$

$$+1.56$$

$$-0.695$$

$$-1.425$$

$$\begin{array}{r} 2120 \\ \hline \end{array}$$

$$-1.06$$

$$9 \quad 02 \quad 05$$

$$8.6$$

$$68.8$$

$$192.2$$

$$247.8$$

$$60.2$$

$$55.6$$

$$\begin{array}{r} 115.8 \\ \hline \end{array}$$

$$+1.29$$

$$P.A. \quad +20 \quad 300$$

$$101.8$$

$$163.0$$

$$273.6$$

$$9 \quad 04 \quad 40$$

$$349.8$$

$$61.2$$

$$76.2$$

$$\begin{array}{r} 137.4 \\ \hline \end{array}$$

$$+0.83$$

$$P.A. \quad 124 \quad A$$

$$\text{sp. } 9.2$$

$$\text{Dec. } +8.0$$

$$15.6 \quad 148W$$

$$5.7 \quad 0.4$$

Nov. 1, 1916

Transit of ~~Sun~~ ^{8.0}

0 — 0.5 — 0.5 + 2

07 13

8.0 + 7.4873 1 47

08 30

Eumonia

2 24

09

10¹ 9 54

* 2 + 6.5027

1 44

11² 10 14

* 3 + 7.4880

Eumonia 0.7 of way in decl
 from 2.0 to * 2.

Nov. 1, 1916

 $(+7.4870)^{68}$ 8.3 with $7.9 + 8.4863$

P. a. 10

9 19 35

9.0

75.0

193.3

245.6

66.0

52.3

118.3

← 7.9 dis

+ 1.23

P. a. 190

95.6

163.8

269.8

9 22 05

347.8

68.2

78.0

146.2

+ 0.65

1.315

0.605

1.920

+ 0.96

9 22 15

86.4

174.6

279.0

341.8

88.2

62.8

1451.0

+ 0.56

P. a. 10

196.0

247.2

10.8

9 24 25

70.4

51.2

59.6

110.8

+ 1.40

P. a. 10 A

Sp. 10.2

Dic. + 8.4

H. a. 2 7 W

S. 7. 0 22

Nov. 1 1916

$$+8.4863 = 7.9 \text{ mil} - 7.8 = +8.4870$$

P. G. 70

$$\begin{array}{r} 9 \ 37 \ 55 \\ 262.2 \\ 350.6 \leftarrow 7.9 \text{ dis} \\ 91.6 \\ 170.0 \\ \hline 166.8 \end{array}$$

- 0.25

P. G. 250

$$\begin{array}{r} 357.4 \\ 81.8 \\ 177.6 \\ 263.6 \\ 84.4 \\ 86.0 \\ \hline 170.4 \end{array}$$

- 0.18

$$\begin{array}{r} 9 \ 40 \ 35 \\ 4.8 \\ 81.2 \\ 184.6 \\ 248.6 \\ 76.4 \\ 84.0 \\ \hline 140.4 \end{array}$$

- 0.57

$$\begin{array}{r} - 0.165 \\ - 0.375 \\ \hline - 0.27 \end{array}$$

P. G. 70

$$\begin{array}{r} 92.7 \\ 170.0 \\ 260.0 \\ 358.4 \\ 77.3 \\ 98.4 \\ \hline 175.7 \end{array}$$

- 0.08

P. G. 73. H

Sp. 10.8

Dec. +8.5

H. H. 2 23 W

S. J. 0 40

Nov. 1 1916

$$+8.4870 = 7.8 \text{ with } 5.8 = +8.4874$$

P. G. 70

9 46 40

19.6
61.3

← 5.8 div

201.0

41.7

237.2

36.2

77.9

+ 2.26

P. G. 250

98.2

157.4

286.2

337.1

59.2

50.9

110.1

+ 1.42

9 49 10

+ 2.300

+ 1.455

3.755

+ 1.88

5.635

7.70

9 49 20

106.5

150.7

280.0

342.6

44.1

62.6

106.7

+ 1.49

P. G. 70

200.6

240.2

322.4

48.0

39.6

35.6

75.2

+ 2.34

9 52 15±

P. G. 70 a

sp. 9.4

Dec. 789

H. G. 2 30 W

S. 7. 0 49

Nov. 1-1916

Orion Susp Var near X Camelopard.

10. 21 Too cloudy for this region.

Looks exp. clear.

Q Ceti

Phot R.

10 23 Q Ceti 021403 exp var. 3.9 L.C. R = 6
P.A. 170 Index below 3.9 75B. R = 6

10 31 30 255.5 ← var. dis

263.2

75.6

7.7

84.7

$$\begin{array}{r} 9.1 \\ 16.8 \end{array}$$

-5.67

P.A. 350 Index above.

165.2

9.0

174.2

9.8

343.8

$$\begin{array}{r} 18.8 \end{array}$$

-5.43

10 35 5 353.6

-5.64

-5.45

10 35 25 164.4

9.1

173.5

9.3

345.1

$$\begin{array}{r} 18.4 \end{array}$$

-5.47

354.4

Magn

$$\begin{array}{r} 9.19 \\ 3.65 \end{array}$$

P.A. 170

76.4

8.5

84.9

8.8

255.2

$$\begin{array}{r} 17.3 \end{array}$$

-5.61

10 38 10

264.0

Nov. 1 1916

S. U. Jauri 5 x 4319

10 50

$\text{int. } 10.9$ * dec. in brightness
 (large spots) appar.
 $\text{int. } 10.7$ (clear)

S. U. Jauri

Photo P.

P.A. 70

comp. * = 10.1

11 00 35

298.4 ← comp * dis
 35.4
 119.8
 224.2
 97.0 ✓
 104.4 ✓
 201.4 ✓
 158.6 ✓ - 0.41
 P.A. 250

11 05 25

211.4
 307.4
 218.8
 132.2
 96.0 ✓
 103.4 ✓
 199.4 ✓
 160.6 ✓ - 0.37

11 05 35

220.4
 307.2
 30.8
 131.0
 86.8 ✓
 100.2 ✓
 187.0 ✓
 173.0 ✓ - 0.13
 P.A. 70

- 0.425
 - 0.25
 - 0.34
 10.11
 9.77

11 8 40

116.2
 218.8
 299.8
 40.2
 102.6
 100.4
 203.0
 157.0 - 0.44

seeing poor.

$\begin{array}{r} 2 \\ 2 \\ 160 \end{array} - \begin{array}{r} 23 \\ 6 \\ 3113 \end{array} \epsilon$

Nov. 1 1916

S. H. Janie

11 20 u - sec of var. = 10.0 @. & B.

former visual observation
effective of clouds

$\pi = 4.$

Thurs Nov. 2-1916

P.C.B. 15^h 15^m E 29

Moon at First Quarter

S Coronae 15 17 31 est 13.0

21 12

6 18

5 55 W + 31.)

Z Coronae 15 5 29

21 27

5 35 W + 29.9

est 10.5 redness 2

X Coronae 15 45 36 est 13.8

21 28

5 43 + 36.9

V Coronae 15 46 39 est 13.8

Redness A

R U Hare 16 06 25 est 10.4

21 40

5 34 + 25.8

R = 4

H W Coronae 16 11 38 est 12.5

21 48

5 37 + 38.5

Red = 4

W Hare 16 31 37 est 11.1

21 52

5 21 W + 37.0

R = 4

Nov. 2 - 1916

$$\begin{array}{r}
 \text{RV Herc } 165631 \text{ est } 12.8 \\
 \underline{2157} \\
 502 + 21.2
 \end{array}
 \quad R=4$$

$$\begin{array}{r}
 \text{TT Urs Maj } 123160 = 120 \\
 \underline{2201} \\
 930W + 605
 \end{array}
 \quad R=4$$

$$\begin{array}{r}
 \text{RS Urs Maj } 123459 \text{ est } 11.6 \\
 \quad \quad \quad R=4
 \end{array}$$

$$\begin{array}{r}
 \text{S Urs Maj } 123161 \text{ est } 11.6 \\
 \quad \quad \quad R=5
 \end{array}$$

$$\begin{array}{r}
 \text{T Urs Min } 133273 \text{ est } = 12.2 \\
 \underline{2210} \\
 838W + 735
 \end{array}
 \quad R=2$$

$$\begin{array}{r}
 \text{S Bootis } 141954 \text{ est } = 13.2 \\
 \underline{2214} \\
 755 + 540
 \end{array}
 \quad R=—$$

$$\begin{array}{r}
 \text{R Camelopardalis } 142584 \text{ est } = 13.1 \\
 \underline{2218} \\
 753 + 845
 \end{array}
 \quad R=—$$

$$\begin{array}{r}
 \text{RT Herc } 170627 \text{ est } = 13.7 \\
 \underline{2223} \\
 517 + 274
 \end{array}$$

Nov. 2-1916.

T Serpens 182306

22 24

4 05 + 6.2

set 13.8

~~the~~ The 13.1 near var.
too bright.

S V Herc. 182224

22 34

4 12 W

set 13.9

S V Dra. 183149

22 38

4 7 W

5 21 W

set.

R = 2

R J Aquil 193311

22 40

3 7 W

set 13.8

R V Aquil 193509

22 45

3 11

set 10.8

R = 2

see BB. sample X Aquil 194604

22 48

3 2 Wset = S, O var. 14th ±

R

Nov. 2nd 1916

R. R. Aquil. 19 52 02

22 53

3 1 W

R = 4

set. 12.4

R S Aquil 19 53 08

22 56

3 03 W

set < 13.5

S y Aquil. 20 02 12

22 58

2 52 W.

set. 14.0

var. at L.V.

Z Aquil. 20 09 06

23 04

2 55 W

set. 12.2

R = 4

8.00

Z Delph. 20 28 17

23 08

2 40 W

set. 14.0

y Delph. 20 36 11

23 18~~2 56 W~~

2 32 W

set. 10.5

R = 4

on 10' chart & marked with arrow
at the Var is not y, according
to my identification Var = 10.5^{sec}
above, and now marked with O the *
marked & is very faint < the 13.0 along
side just by 3/4 magn. are both Var?

Nov. 2-1916

T Aquar. 204405° est 7.6 June
 $\begin{array}{r} 2330 \\ \hline 246 \text{ W-5-5} \end{array}$ $R=4$

Y Aquar. 203905°
 $\begin{array}{r} 2337 \\ \hline 258 \text{ W} \end{array}$

sub. $\frac{8}{11} \frac{N}{=}$

W. Aquar 204104° est 13.4
 $\begin{array}{r} 2340 \\ \hline \end{array}$

X Delphi 205817° est. $X=13.8$
 $\begin{array}{r} 2342 \\ \hline 252 \text{ W} \end{array}$ $\begin{array}{l} \text{Susp. var.} \\ \text{near 12.6} \end{array}$
 $R=4 : \text{Susp.}$

R Y-Lyras 184134°
 $\begin{array}{r} 2350 \\ \hline 59 \text{ W} \end{array}$ $\begin{array}{l} \text{est. } 12.4 \\ R=4 \end{array}$

X Cygni 194632° est 11.8
 $\begin{array}{r} 2357 \\ \hline 412 \text{ W} \end{array}$ $R=7$

W X Cygni 201437° est. = 10.6
 $\begin{array}{r} 2403 \\ \hline 349 \text{ W} \end{array}$ $R=8$

Nov. 2nd 1916

R Epsilon 21 08 12 sec 14.0
 24 05
 —————
 2 57 W

U X Cygni 20 50 30a sec = 12 4
 24 12
 —————
 3 22 W $R = 4$

X Pegasi 21 16 14 sec 99
 24 16
 —————
 30 + 14.0 $R = 2$

9 25 8 0 Ceti sec. 3.8 7.5 B.
 9 25 — — — 3.7 L.C.

39 - 62 C

1 - 7 B

— 3113 phtn

Fri. Nov. 3 - 1916

Rob 15" E eq.

6 00 Sky 3 Cu Scatt 4

R Sagitt 191019 est 11.8 R=6

$\frac{2125}{2}$

15 W - 19.2

RW Sagitt est 9.5 R=2

R X Sagitt est 11.4 R=4

S Sagitt 191319 est < 13.3

Z Sagitt 191321 est 11.1 R=5

RY Sagitt 191033 est

var imp but not certainly seen
at least < 11.0. Region very low
impossible to observe it again this
season.

T Sagitt. 191017 est 10.1 R=5

NT Sagitt 195512 est 10.0

$\frac{2150}{2}$

35 W - 12.9

R=5

Var not correctly marked on
10¹ enlargement.

Nov. 3 - 1916

$$\begin{array}{r} \text{W Aquilae } \underline{191007} \text{ est } 11.5 \text{ } R=3 \\ \underline{2200} \\ 250 - 7.0 \end{array}$$

$$\text{Sunp Var between } (9.9) \text{ \& } (11.0) = 10.6 = R=4$$

$$\text{Xol Min Human Var} = 10.8; R=2$$

$$\text{R Capricorn } \underline{200514} \text{ est } 11.9 \text{ } R=5$$

$$\text{W Capric } \underline{200822} \text{ est } 11.4 \text{ } R=2$$

$$\text{R T Capric } \underline{201121} \text{ est } 7.0; R=9$$

$$\begin{array}{r} \text{RU Capric } \underline{202622} \text{ est } 9.6 \text{ } R=4 \\ \underline{2215} \\ 149 - 22.5 \end{array}$$

$$\begin{array}{r} \text{U Capric } \underline{204215} \text{ est } 13.0 \\ \underline{2230} \\ 148 - 15.2 \end{array} \text{ Difficulty in mean light.}$$

$$\begin{array}{r} \text{V Capric } \underline{210124} \text{ est } 11.4 \\ \underline{2232} \\ 12932 \end{array} \text{ } R=4$$

$$\begin{array}{r} \text{X Capric } \underline{210221} \text{ est } \overset{N}{\cancel{11.3}} \\ \underline{2235} \\ 1323 \end{array} \text{ } m \text{ } \overset{N}{\cancel{3}} \text{ } \underline{N}$$

Nov. 3rd 1918⁶

Rec'd. FEB Rec & P.C.Jr.
 Eumonia Phot T.

$$22 \quad 22 + 8.5$$

$$22 \quad 22$$

$$0 \quad 20W$$

~~For 22 22~~

~~main~~

$$7 \quad 48 \quad 15 \quad Pa \quad 210$$

$$89.9$$

$$174.7$$

$$271.8$$

$$348.6$$

$$21 \quad 12 - 16.4$$

$$22 \quad 45$$

$$1 \quad 33$$

Comp & dis P.C.Jr. Rec

Eumonia (runned)

22 22 + 8.5 ~~Don + 6.507 with~~
 Prob. Eumonia with Don + 7.4880
 Pa 30 448

$$76.5$$

$$161.6 + 0.35 -$$

$$191.4$$

$$248.4$$

$$3.8$$

$$72.8$$

$$57.4$$

$$69.0$$

$$126.4 + 1.05 -$$

$$191.6$$

$$248.8$$

$$10.8$$

$$71.7$$

$$57.2$$

$$60.9$$

$$118.1$$

$$+ 1.23$$

$$+ 0.205 -$$

$$1.140$$

$$1.345$$

$$+ 0.67$$

$$Pa \quad 210$$

$$7 \quad 51 \quad 02$$

$$272.8$$

$$356.4$$

$$83.3$$

$$178.6$$

$$P3.6$$

$$933$$

$$176.9$$

$$+ 0.06$$

$$Comp * = 47.4880$$

$$22 \quad 22 \quad 22 + 7.16'$$

Nov. 3 - 1916

Same as I

~~Emission~~~~II~~

75820 266.4

352.4

86.8

174.2

15.7

68.8

183.2

249.8

Pa. ~~100~~ 210

8860

874

~~86~~

173.6 + 0.13

Pa. 30

53.1

666

1197 + 1.20

7.6

74.8

191.8

246.0

67.2

542

121.4 + 1.16

+ 0.14

+ 1.18

1.32

+ 0.66

Pa. 210

908

172.2

265.8

356.4

21.4

90.6

172.0 + 0.15

8250

~~35~~

80035

21171.542

Nov. 3, 1916.
Prob. Emission

~~Sum + 6.5027 with + 7.4880~~

P.A. 210

III

8850 87.8

178.4

269.4

348.5

90.6

79.1

169.7 + 0.20

P.A. 30

189.2

245.8

7.4

712

56.6

63.8

120.4 + 118

+ 0.205

+ 1.065

1816.5

252.2

7.8

73.4

65.7

65.6

131.3 + 0.95

1270

+ 0.635

P.A. 210

269.2

348.3

83.3

173.2

79.1

79.9

169.0 + 0.21

0672

0660

0635

167

0.656

8130

21 50

8 10 55

21171.549

Preceding three groups
not on Emission
but on a star just preceding
it. See fol. paper for Emission

Nov. 3-1916

L.C. vs. Not Eimmuna with $+7.4$ to 75.3 Rec.
PA. ~~210~~ 190
$$\begin{array}{r} 2245-274.8 \\ 346.0 \\ 86.8 \\ 178.7 \end{array}$$

comp & dis

$$\begin{array}{r} 71.2 \checkmark \\ 91.9 \checkmark \\ \hline 163.1 \checkmark \end{array} + 0.32$$

? as to what the
object is. see
remarks on
page 129

I

PA. 10

Prob. $+6.5027$

$$\begin{array}{r} 1.8 \\ 72.8 \\ 190.2 \\ 8 \ 25-00 \quad 249.8 \end{array}$$

$$\begin{array}{r} 71.0 \checkmark \\ 596 \checkmark \\ \hline 130.6 \checkmark \end{array} + 0.57$$

$$\begin{array}{r} +0.33 \checkmark \\ +1.00 \checkmark \end{array}$$

$$\begin{array}{r} 25 \ 10 \quad 6.7 \\ 68.9 \\ 186.6 \\ 251.8 \end{array}$$

$$\begin{array}{r} 622 \checkmark \\ 65.2 \checkmark \\ \hline 127.4 \checkmark \end{array} + 1.03$$

$$+0.66 \checkmark$$
PA. ~~210~~ 190
$$\begin{array}{r} 85.5 \\ 174.4 \\ 270.6 \\ 27 \ 05 \quad 344.0 \\ \hline 20 \ 00 \end{array}$$

$$\begin{array}{r} 88.9 \checkmark \\ 73.4 \checkmark \\ \hline 162.3 \checkmark \end{array} + 0.34$$

$$\begin{array}{r} 25 \ 00 \\ 23 \ 57 \end{array}$$

$$\begin{array}{r} 21171.558 \\ 71.551 \\ \hline 0.007 \end{array}$$

Nov. 3 1916

P.G. 190

8 38 50

92.5

170.7

271.8

346.9

78.2

75.1

153.3

+ 0.51

11

P.G. 10

183.7

251.6

13.6

67.9

58.8

126.7

+ 1.05

8 40 55

72.4

+ 0.425

+ 0.995

1420

+ 0.71

8 41 05

188.9

250.4

5.2

75.6

61.5

70.4

131.9

+ 0.94

P.G. 190

271.9

347.2

90.4

177.2

75.3

86.8

162.1

+ 0.34

8 43 10

4 00

8 41 00
8 39 57
21171.569551
0.018

Nov. 3 1916

P. G. 190

III

8 57 10	276.4	67.2	
	343.6	82.9	
	89.4	<u>150.1</u>	+ 0.57
	172.3		

P. G. 10

	5.8	69.0	
	74.8	48.7	
	191.8	<u>127.7</u>	+ 1.03
8 53 30-	250.5-		

+ 0.480

+ 1.015

+ 0.745

8 53 45-	11.2	60.2	
	71.4	689.9	
	185.7	130.1	+ 0.98
	255.6		

P. G. 190

	86.88	87.6	
	174.4	72.1	
	270.3	<u>159.7</u>	+ 0.39
8 55 50	348.4		

14 20
 8 53 35-
 21171.570
 551
 .027

900 Flood 342V = 1 3 min fast at 9:00/30

Nov. 3, 1916

Pa. 190

IV

9 5 45 92.2
172.7
268.8
351.6

80.5 ✓
82.8 ✓
173.3 ✓ + 0.32
6

Pa. 10

185.4
254.6
10.8
9 7 55 72.2

69.2 ✓
61.4 ✓
130.6 ✓ + 0.97

+ 0.320
+ 0.920

9 8 05 88.2
250.6
3.8
76.8

62.4 ✓
73.0 ✓
135.4 ✓ + 0.87

121.4 ✓
+ 0.57
+ 0.62

Pa. 190.

266.4
351.7
95.8
9 10 20 173.6

85.3 ✓
77.8 ✓
163.1 ✓ + 0.32

32 5
9 01 01
9 06 58
211 71.588
551
037

Nov. 3-1916

P.A. 180

V

9 20 10

~~27~~

275.9

345.7

86.8

178.0

69.8

91.2

151.0

+ 0.36

P.A. 10

4.4

73.3

189.8

9 22 15

245.6

68.9

55.8

124.7

+ 1.09

9 22 25

11.6

71.4

185.8

256.3

59.8

70.4

130.2

+ 0.97

+ 1.19

+ 0.39₃+ 1.04₃153

- 0.76

1.42

+ 0.71

P.A. 190

89.8

175.2

275.8

348.6

85.4

72.8

158.2

+ 0.42

24
9 X 30

9 20

9 22 20

9 21 17

211.71.598

551

047

126

18 - 80 ^c B
 1 - 8
 136 - 3249 ^{photo}

Nov 3, 1916

P. G. 190

VI

9 47 35 94.0
 165.5
 265.4
 351.6

71.5 ✓
 86.2 ✓
 157.7 ✓ + 0.43

P. G. 10

+ 0.69

181.1
 254.2
 10.0
 gene
 68.2

73.1 ✓
 58.2 ✓
 131.3 ✓ + 0.95
 clouds

9 49 45
 9 48 30
 9 47 27
 21171.616
 551
 .065

190.0
 gene
 247.4
 gene

clouds
 clouds

P. G. 190

PA 110 A
 Spr. 6.9
 occ + 7.4
 16.6 238W
 5.7. 103

Troubled by clouds, repeat.

Too cloudy to continue.

9.00 0 celi sat ~~sp~~ f.g. 3.9 7.5B
 9.30 0 celi (sps) sat. 3.7 L.C
 7.5.3 R = 8
 L.C. R = 7

Sunday Nov. 5th 1916

L.C. Or. Reapp. Jup. II.

7.53. Re

Prod. 3424

9 15 30 ± seen (faintly)								
9 15 40	150.4							
58	197.0	46.6	93.2	+1.83	1.88			
16 10	147.6	49.4	98.8	1.69	1.74			
20	194.2	46.6	93.2	1.82	1.87			
32	147.1	47.1	94.2	1.82	1.85			
43	203.0	55.9	111.8	1.38	1.43			
57	143.0	60.0	120.0	1.19	1.24			
17 10	206.3	63.3	126.6	1.05	1.20			
23	138.4	67.9	135.8	0.86	0.91			
35	208.3	69.9	139.8	0.78	0.83			
51	134.0	74.3	148.6	0.60	0.65			
18 4	209.2	75.6	151.2	0.55	0.60			
19	130.0	79.6	159.2	0.40	0.45			
32	213.2	83.2	166.4	0.26	0.31			
49	128.4	84.8	169.6	0.20	0.25			
		83.3	166.6	0.25	0.30			
19 03	211.7	82.6	164.2	0.30	0.35			
18	129.6	84.6	177.2	+0.05	0.10			
30	218.8 ²							
45	129.0							
59	217.4	88.4						
20 14	125.5	87.7		+0.07	0.12			
28	213.2	176.1						
43	129.7							
52	216.7	87.0						
21 06	124.3	93.3		-0.01	+0.04			
21 21	217.6	180.3						
		179.7						

Nov. 5th 1916

9 21	35	126.6							
	45	215.0	88.4						
	58	126.2	88.9						
			177.3	+	0.05	+	0.10	14	19 44 +254 ²⁰
22	10	215.1							
	22	128.9							
	33	218.0	89.1						
	44	126.2	88.9						
	57	215.1	178.0	+	0.04	+	0.09	14 21	31 +301 ²⁰
23	08	126.4							
	20	218.0	91.6						
	29	122.8	94.8						
	41	217.6	186.4						
			173.6	-	0.12	-	0.07	14 22	16 +346
24	54	126.4							
	12	220.2	93.8						
	25	122.3	96.1						
	36	218.4	189.9						
			170.1	-	0.19	-	0.14	14 23	06 +400 ⁵⁴
	48	125.0							
	58	216.7	91.7						
26	10	119.4	99.4						
	19	218.8	188.1						
				-	0.21	-	0.16	14 24	56 +506

L.V.

9 26	40	157.2							
	54	189.4	32.2						
27	08	154.0	38.8	+	2.61	+	2.66	14 25	54 +564
27	24	188.8	61.0						

Flood 3x24 = 1 ^m 8.5 fast by Rooflight.
at 9:30:00

80 β photo
8 299
50-

Nov. 5-1916

Ennomia.

2222 + 1.5

2502

240

10 30 Object measured for Ennomia
on last occasion (Nov. 3rd) was
not Ennomia, but a star due
south of comparison star. Setting
photo. at same position angle
Sprocket, 12 el. & 10. A. from brings
two images into field as in the
3rd showing conclusively that the
object could not have been
Ennomia.

Mon. Nov. 6-1916

Rec'd. 15" E eq. #

Uranus

Phot 171

21 14 - 16.4

21 27

0 13 W

Same comp X as
on prev. night.
= -16.5 - 40 = 6.23

P.A. 210 A

Fried 3x24
used

6 23.6

~~72.0~~

193.2 Uran dis

251.6

56.4

18.3

52.1

70.4

110.5 - 141

~~P.A. 30~~

192.6

- 1.33

247.3

54.7

10.7

62.5

73.2

117.2 - 1.25

~~188.6~~

P.A. 30

Mean = -1.21

103.8

6.23

157.0

53.2

5.62

278.3

67.5

345.8

120.7 - 1.14

96.4

- 1.09

164.7

68.3

283.0

60.4

343.4

128.7 - 1.00

6 30.5

6 27.0

6 25.8

21174.476

Nov. 6-1916

Zeramus again.

PA. ~~210~~³⁰ A

II

6 35.5

99.8
159.4
272.6
345.0

59.6
66.4

126.0 - 1.06

PA. 210

192.2
246.6
17.2
69.0

54.4
51.8

106.2 - 1.51

187.8

249.2

15.9
70.7

61.4
54.8

116.2

~~+~~
- 1.28

- 1.09
- 1.395

- 1.24
683

3559

PA. 30

245.3
340.0
99.0

54.7
68.8

123.5

- 1.12

6 41.3 167.8

6 38.4

6 37.2

21174.485

Nov. 6-1916

Pa. 30

III

$$\begin{array}{r}
 6 \ 50.2 \quad 274.6 \\
 \quad \quad 346.3 \quad 71.7 \\
 \quad \quad 98.2 \quad 67.0 \\
 \hline
 165.2 \quad 138.7 \quad -0.80
 \end{array}$$

Pa. 210

$$\begin{array}{r}
 15.3 \\
 66.6 \quad 51.3 \\
 192.2 \quad 63.0 \\
 \hline
 255.2 \quad 114.3 \quad -1.32
 \end{array}$$

$$\begin{array}{r}
 10.8 \\
 71.3 \quad 69.5 \\
 194.4 \quad 55.4 \\
 249.8 \quad 115.9 \quad -1.28
 \end{array}$$

$$\begin{array}{r}
 -0.855 \\
 -1.300 \\
 \hline
 2.155 \\
 -1.08 \\
 6.83 \\
 \hline
 5.75
 \end{array}$$

Pa. 30

$$\begin{array}{r}
 103.3 \\
 164.3 \quad 61.0 \\
 275.8 \quad 72.5 \\
 \hline
 6 \ 55.4 \quad 34.83 \quad 133.5 \quad -0.91
 \end{array}$$

$$\begin{array}{r}
 6 \ 52.9 \\
 6 \ 51.7 \\
 21174.494
 \end{array}$$

Nov. 6-1916

Pa. ~~30~~

IV

6 58.8

95.2
164.6
277.4
340.0

69.4
62.6
132.0 - 0.94

Pa. ~~30~~ 210

194.7
245.8
11.5
68.6

51.1
57.1
108.2 - 1.46

188.6

251.7

12.3

70.2

63.1

57.9

121.0

- 1.17

Pa 30

281.6

342.4

95.6

704.4

165.7

70.1

130.9

- 0.96

- 0.95

- 1.315

2.265

- 1.13

6.83

5.70

> 01.6

> 00.4

21074.580

> 00

Prod 3624 = 1^m 12^m fast

Nov. 6 - 1966

$$\begin{array}{rcl}
 & Pa & 30 \\
 & \hline
 7 \quad 12.4 & 277.8 & \\
 & 344.8 & 67.0 \\
 & 98.2 & \underline{61.2} \\
 & 159.4 & 128.2 - 1.02
 \end{array}$$

$$\begin{array}{rcl}
 & Pa & 210 \\
 & \hline
 & 12.5 & \\
 & 67.3 & 54.8 \\
 & 18.78 & \underline{62.2} \\
 & 250.0 & 117.0 - 1.26
 \end{array}$$

$$\begin{array}{rcl}
 & & - + \\
 & 10.0 & - 0.955 \\
 & 73.6 & - 1.215 \\
 & 192.5 & \underline{2.170} \\
 & 250.0 & - 1.08 \\
 & & 6.83 \\
 & & \underline{5.75}
 \end{array}$$

$$\begin{array}{rcl}
 & Pa & 30 \\
 & \hline
 & 97.2 & \\
 & 166.0 & 68.8 \\
 & 276.4 & \underline{65.6} \\
 & 342.0 & 134.4 - 0.89
 \end{array}$$

$$\begin{array}{r}
 7 \quad 15.0 \\
 7 \quad 13.8 \\
 21174.510
 \end{array}$$

Nov. 6 - 1916

H. S. B. Rec

$\begin{array}{r} 29 \ 40 \\ 97.4 \\ 167.6 \\ \hline 283.3 \\ 344.3 \end{array}$

PA. 30

VI

$\begin{array}{r} 70.2 \\ 61.0 \\ \hline 131.2 \end{array}$

- 0.95

PA 210

$\begin{array}{r} 195.5 \\ 248.4 \\ 11.3 \\ \hline 68.3 \end{array}$

$\begin{array}{r} 52.9 \\ 57.0 \\ \hline 109.9 \end{array}$

- 1.42

- 1.0505

- 1.410

$\begin{array}{r} 192.9 \\ 247.3 \\ 15.3 \\ \hline 71.5 \end{array}$

$\begin{array}{r} 54.4 \\ 56.2 \\ \hline 110.6 \end{array}$

- 1.40

2.4105

1.292

- 1.20

6.83

5.623

PA. 30

$\begin{array}{r} 281.2 \\ 341.8 \end{array}$

$\begin{array}{r} 60.6 \\ 65.4 \\ \hline 126.0 \end{array}$

1.06

$\begin{array}{r} 33 \ 45 \end{array}$

$\begin{array}{r} 97.1 \\ 162.5 \end{array}$

$\begin{array}{r} 31 \ 42 \end{array}$

$\begin{array}{r} 30 \ 30 \end{array}$

$\begin{array}{r} 21174521 \end{array}$

Nov. 6-1916

7 37⁸ 10

283.3

343.8

101.0

167.0

Pa. 30

VII

60.5 ✓

66.0 ✓

126.5 ✓ - 1.05

Pa. 210

13.6

69.4

198.7

249.2

55.8 ✓

58.5 ✓

114.3 ✓ - 1.32

- 109.5 ✓

- 1.380 ✓

12.8

70.4

194.8

246.2

57.6 ✓

51.4 ✓

109.0 ✓ - 1.44247.5 ✓

1.237 ✓

- 1.24 ✓

6.83

5.59 ✓

Pa. 30

99.4

159.2

279.6

342.3

59.8 ✓

62.7 ✓

122.5 ✓ - 1.14

7 43 40

21 50

7 40 55

7 39 43

21 174.528

Nov. 6 - 1916

> 50 40

95.2
164.0
283.3
344.6

Pa. 30

68.8 ✓
61.3 ✓
130.1 ✓

- 0.98

VIII

Pa. 210

191.2
250.0
12.6
69.6

58.8 ✓
57.0 ✓
115.8 ✓

- 1.29

- 0.975 ✓

- 1.295 ✓

191.5
248.0
14.4
73.2

56.5 ✓
58.8 ✓
115.3 ✓

- 1.30

2.270 ✓

1.135 ✓

- 1.14 ✓

6.83 ✓

5.69 ✓

Pa. 30

281.8
342.4
96.8
166.8

60.6 ✓
70.0 ✓
130.6 ✓

- 0.97

> 54 55

> 52 44

> 51 36

21174.536

Nov. 6 1916

P.A. 30

XX

8 01 30

283.0

342.8

99.4

161.8

5

79.8

62.4

182.2~~-0.73~~

-1.14

P.A. 210

14.8

69.4

188.3

249.2

54.6

60.9

115.5

-1.29

-1.09

-1.315

13.3

187.7

192.0

246.9

58.4

54.9

113.3

-1.34

1.20

6.83

5.63

P.A. 30

100.6

165.4

281.2

343.4

64.8

62.2

127.0

-1.04

8 05 25

203 28

1 12

202 16

21174.543

Nov. 6-1916

P. A. 30

X

8	20 00	96.2	67.4 ✓	
		163.6	63.3 ✓	
		280.7	<u>130.7</u> ✓	0.96
		344.0		

P. A. 210

193.7	52.3 ✓	
246.0	61.0 ✓	
11.2	<u>113.3</u> ✓	-1.34
72.2		

191.8	57.6 ✓	
249.4	58.2 ✓	
13.2	<u>115.8</u> ✓	-1.29
71.4		

- 0.975 ✓
- 1.315 ✓
<u>2.290</u> ✓
1.145 ✓
4
- 1.18
6.83
<u>5.69</u>

P. A. 30

	282.2	61.1 ✓	
	343.3	68.4 ✓	
	95.2	<u>129.5</u> ✓	-0.99
8	24 20	163.6	

8 22 10

8 20 50

21174.556

Nov. 6-1916

Pa. 30

XI

8 36 25

98.2
163.6
277.4
344.4

65.4 ✓
67.0 ✓
132.4 ✓

-0.93

Pa. 210

194.9
249.4
9.7
68.2

54.5 ✓
58.5 ✓
113.0 ✓

-1.35

-0.89

-1.265

192.3
250.4
5.2
67.7

58.1 ✓
62.5 ✓
120.6 ✓

-1.18

-1.08

6.83

5.75

Pa. 30

275.2
344.4
96.7
167.8

69.2 ✓
67.1 ✓
136.3

-0.85

8 40 15

8 38 20

8 37 08

21174.567

Nov. 6-1916

P.A. 30

XII
~~8 48 5~~ ~~346.8~~
~~96.0~~

0.2

 8 49 30
 275.6
 343.9
 100.4
 162.4

 68.3 ✓
 62.0 ✓
 130.3 ✓

- 0.97

P.A. 210

 14.4
 62.2
 186.6
 251.8

 47.8 ✓
 65.2 ✓
 112.0 ✓

- 1.35

- 0.995

- 1.330

 8.8
 67.8
 193.0
 248.6

 59.0 ✓
 55.6 ✓
 114.6 ✓

- 1.31

23 25

- 1.16

683

5.6 x 7

P.A. 30

 105.5
 160.8
 271.7
 344.4

 55.3 ✓
 72.7 ✓
 128.0 ✓

- 1.02

 53
 8 48 15

8 51 22

8 50 10

2117 4576

 Observations becoming
 increasingly difficult now.

Nov-6-1916

Pa 30

XIII

9 2 40

96.2

164.8

275.8

346.0

68.6 ✓

70.2 ✓

138.8 ✓

- 0.80

Pa. 200

196.0

250.4

x 2.6

72.2

54.4 ✓

69.6 ✓

124.0 ✓

- 1.11

190.6

253.3

10.8

68.0

62.7 ✓

57.2 ✓

119.9 ✓

- 1.19

Pa. 30

284.4

338.2

190.4 *

168.4

53.4 ✓

68.0

121.4

- 1.16

- 0.95

9 7 00

9 04 50

9 03 38

211 74.586

* assumed

0.940

~~0.875~~

- 1.150

2.635

1.078

- 1.07

6.83

4.82

- 3.76

Nov. 6 - 1916

Pa. 30

XIV

9 7 25 278.8
345.0
98.8
158.2

66.2 ✓
59.4 ✓
125.6 ✓ - 1.07

Pa 210

196.4
248.8
11.4
68.4

52.4 ✓
57.0 ✓
109.4 ✓ - 1.43

193.8
248.4
10.8
68.0

54.6 ✓
57.2 ✓
111.8 ✓ - 1.38

1.052
- 1.405
245.5
1.227
- 1.23
6.83
5.60

Pa 30

99.2
159.8
277.5
344.4

60.6 ✓
66.9 ✓
127.5 ✓ - 1.03

9 11 20

P.A. 32. A

9 01 22

Too low and major of 4.5

9 05 10

too poor to follow

Sec. - 16.4

20176589

any further.

H.C. 3 20 W

S.J. 0 32

Repair
hand light

Nov. 6 - 1916

New cord
for clock.

Ennomia

22 22 + 85

S. Time Clock. Transit of Sun.

1 21 15-2 + 6° 50' 22 22 + 6 55-
22 15

22 40

22 54

23 40

46 Ennomia

23 57

24 22

25 Ennomia

24 40

24 57

17 + 6° 50' 32 22 23 9 + 6 42

Setting on
Ennomia
Comp # + 70 48 40

P.A. 334. A

Sp. 8.3

Pec. + 7.7

H.A. 3 21 W

S.T. 1 44

Setting of P.A. and Sp. The same
as on Nov 3rd on the last groups
taken for Ennomia produces the
same excitation tonight, therefore
these groups were not on Ennomia.
Setting P.A. at 30 does not give
a pair of images therefore it is
probable that the first three
groups taken that night may
have been on Ennomia.
cord or clock broke so could not
make measurements.

24-3523
20 8 13
24-3523

10 30

Tues. Nov. 7 - 1916

RC. Alb

15" E Eg.

RC. Bar

~~Euromed~~

22 22 + 8.5

21 27

Plot T.

0 55 E

+ Rod 3x24

+6° 50' 32"

with

Comp X =

+7° 48' 46" (7.8)

PA 30

at 22

24.5 + 7° 3'

(125.5)

6 20.0

22.2

Comp X dis.

I

64.4

42.2

191.5

54.9

246.4

97.1

+ 1.73

PA, 210

93.1

166.8

73.7

279.7

58.1

337.8

131.8

+ 0.94

99.6

162.0

62.4

276.8

68.8

341.6

131.2

+ 0.95

PA. 30

196.3

247.4

51.1

6 26.8

18.9

46.6

65.5

97.7

+ 1.71

6 23.4

6 22.

21175.474

+ 1.720

+ 0.945

2.665

+ 1.332

Nov. 7-1916

Eunomia.

II

Pa-30

6 32.1

199.2

240.8

15.4

65.2

41.6

49.8

91.4

+ 1.88

Pa. 210

276.6

344.6

100.2

164.1

68.0

63.9

131.9

+ 0.94

281.6

337.3

97.6

166.8

55.7

69.2

124.9

+ 1.09

+1.790

+1.015

2.805

+1.402

Pa 30

11.6

69.6

196.8

237.0

58.0

40.2

98.2

+ 1.70

6 35.4

6 34.3

211 75.482

Nov. 7-1916

Pa 30

III

6 44.3

20.0

64.2

191.8

249.0

44.2

57.2

101.4

+ 1.62

Pa. 210

96.4

165.0

283.7

337.8

68.6

54.1

122.7

+ 1.13

101.7

161.2

274.2

344.4

59.5

70.2

129.7

+ 0.99

+ 1.675

+ 1.060

+ 1.368

Pa. 30

193.8

244.7

18.4

6 51.9

64.4

50.9

46.0

96.9

+ 1.73

6 48.1

6 46.0

21175.7491

Nov. 7-1916

6 52.7

197.3

241.4

16.4

67.6

P.A. 30

IV

44.5

57.8

95.3 + 177

P.A. 210

278.2

344.4

101.2

167.2

66.6

66.0

132.6 + 0.92

283.4

338.4

97.4

166.2

55.0

68.8

123.8 + 1.11

+1.810

+1.015

+1.412

P.A. 30

17.8

69.2

203.4

244.4

51.4

41.0

92.4 + 1.85

7 04.7

7 01.7

7 00.6

21175.501

Sp. = 2.0

P.A. 25 A

Nov. 7, 1916

7 12.3

17.6
644
~~1859~~
194.2
242.9

P.A. 30

V

468
487
955 + 177

P.A. 210

95.3
166.2
282.6
340.6

70.9
58.0
128.9 + 1.00

101.4
167.0
281.4
342.4

65.6
61.0
126.6 + 1.05

+ 1.765
+ 1.025
2.790
+ 1.395

P.A. 30

194.2
244.3
19.4
65.2

50.1
45.8
95.9 + 176

7 18.7

15.5
14.4

21175.510

Nov. 7th 1916

F. G. P. R.

VI

P. G. 30

7 30 5-	200.0		✓	
	241.3	41.3	✓	
	15.3	<u>52.4</u>		+ 1.82
	67.7	93.7	✓	

P. G. 210

276.6	66.7	✓	
343.3	58.2	✓	
104.0	<u>124.9</u>	✓	+ 1.09
162.2			

+ 1.860

+ 1.135

288.2	46.9	✓	
335.1	73.9	✓	
96.0	<u>120.8</u>	✓	+ 1.18
169.9			

<u>2995</u>
1.497
+ 1.498

P. G. 30

19.6	45.3	✓	
64.9	45.2		
199.8	<u>90.5</u>	✓	+ 1.90
245.0			

7 34 35
<u>40</u>

7 32 20
<u>31 16</u>
21175.522

Nov. 7-1916

7 43 35 20.4
64.6
197.7
245.2

Pa. 30

$$\begin{array}{r} 44.2 \\ 47.5 \\ \hline 91.7 \end{array}$$

+ 1.87

VII

101.6
170.4
280.8
339.5

Pa. 210

$$\begin{array}{r} 68.8 \\ 548.8 \\ \hline 127.6 \end{array}$$

+ 1.03
+ 1.25

101.6
166.7
278.8
343.8

$$\begin{array}{r} 65.1 \\ 65.0 \\ \hline 130.1 \end{array}$$

+ 0.98

$$\begin{array}{r} + 1.720 \\ + 1.115 \\ \hline 2.835 \\ + 1.418 \end{array}$$

$$\begin{array}{r} + 1.720 \\ + 1.005 \\ \hline 2.725 \\ + 1.362 \end{array}$$

194.4
249.2
16.4
65.2

Pa. 30

$$\begin{array}{r} 54.8 \\ 48.8 \\ \hline 103.6 \end{array}$$

+ 1.57

7 48 35
12.10

$$\begin{array}{r} 7 46.05 \\ 45.01 \\ \hline 21175.531 \end{array}$$

152

Nov. 7th 1915

P.A. 30

VIII

7 53 30

18.4

65.1

196.6

246.2

46.7 ✓

49.6 ✓

96.3 ✓

+ 1.75

P.A. 210

94.7

165.3

276.6

342.6

706 ✓

66.0 ✓

136.6 ✓

+ 0.84

+ 1.725 ✓

0.945 ✓

2670 ✓

+ 1.335 ✓

101.0

158.6

275.7

344.6

57.6 ✓

68.9 ✓

126.5 ✓

+ 1.05

P.A. 30

197.7

246.8

17.2

66.3

49.1 ✓

49.1 ✓

98.2 ✓

+ 1.70

$$\begin{array}{r} 57\ 58\ 25 \\ 11\ 55 \\ \hline \end{array}$$

$$\begin{array}{r} 55\ 57 \\ 54\ 54 \\ \hline \end{array}$$

21175.538

$$\text{Prod } 3624 = 1\ 4.5^{\frac{21}{2}} \text{ fact at } 8.00 \text{ (Bell)}$$

Nov. 7 - 1916

8 9 5

198.2

244.7

15.2

65.8

Pa. 30

46.5 ✓

50.6

97.1 ✓

+ 1.73 ✓

IX

Pa. 210

273.6

347.2

100.6

160.0

73.6 ✓

59.4 ✓

133.0 ✓

+ 0.92 ✓

277.6

342.8

95.0

165.2

65.2 ✓

70.2 ✓

135.4 ✓

+ 0.87 ✓

+ 1.760 ✓

+ 0.89 ✓

26 ✓ ✓

1.3 2 ✓

+ 1.328 ✓

Pa. 30

16.7

67.0

198.2

242.8

50.3 ✓

44.6 ✓

94.9 ✓

+ 1.79 ✓

8 14 55

~~30~~
12 00

8 10 56

21175.549

~~Nov.~~ Nov. 7-1916

8 25 00

21.2

62.8

196.7

247.0

Pa. 30

41.6 ✓

50.3 ✓

91.9 ✓ + 1.86

X

Pa. 210

96.4

166.2

279.2

342.1

69.8 ✓

62.9 ✓

132.7 ✓ + 0.92

+ 1.850 ✓

+ 0.955 ✓

280.5 ✓

1.402 ✓

+ 1.40

100.2

160.0

274.4

344.2

59.8 ✓

69.8 ✓

129.6 ✓ + 0.99

Pa. 30

197.5

243.2

16.6

63.7

45.7 ✓

47.1 ✓

92.8 ✓ + 1.84

Pa. 26 A

Sp. 7.3

Dec. + 7.4

H.A. 132W

S.T. 23 55

8 29 45

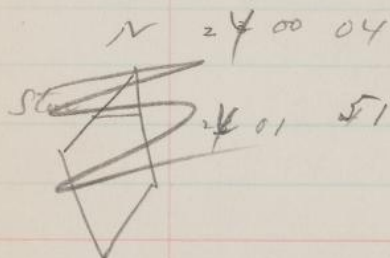
8 27 22

8 26 18

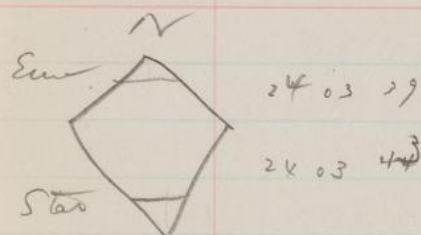
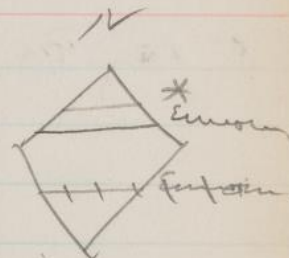
21175.560

Nov. 7 1916

Transit for Sumatra



23 59 58 star +6.5027
 00 00 9 star
 01 31 } Emon.
 02 11 }



24 03 29.5 Emonia
 03 29.5 * +6.5032
 03 49 Emonia
 03 57 Star

Object Surely is Emonia.

23 59 56
 0 0 9
 24 00 02

24 01 31
 24 02 11
 24 01 51
 24 00 02
 1 49

Δ^2 Δ Emon.
 13 40 -17

+6 520
 -21
 +6 499

22 22 0
 +1 49
 22 23 49

Emon.
 24 03 29.5
 24 03 49
 24 03 39.2

*
 24 03 29.5
 24 01 57
 24 03 43.2

Δ^2 Δ Emon.
 27 20
 +47

22 23 51
 4
 22 23 47
 Mean 22 23 48

$\log 17^2 = 1.23045$
 $\log 7.5 = 0.87506$
 $\log \cos \delta = 9.99692$
 $126''.6 = 2.10243$
 $126''.5 = 2' 7''$

$\log 47^2 = 1.67210$
 $\log 7.5 = 0.87506$
 $\log \cos \delta = 9.99692$
 $358''.0 = 2.54408$
 $889.8 = 9' 0'' + 6 40.3$
 $539''.8 = 9' 0'' + 6 48.3$
 Mean $\Delta \delta = +6 49.6$

Nov. 7 1916

P. G. 210 30

XI

8 52 40

194.8

245.0

19.8

61.8

50.2 ✓

42.0 ✓

92.2 ✓

+ 1.86

P. G. 210

276.4

347.2

97.1

161.8

70.8 ✓

64.7 ✓

135.5 ✓

+ 0.87

+ 1.83

+ 0.84

265

1325

280.2

348.8

92.3

162.8

68.6 ✓

70.5 ✓

139.1 ✓

+ 0.79

P. G. 30

14.8

61.8

198.7

246.8

47.0 ✓

48.1 ✓

95.1 ✓

+ 1.78

8 59 25

10 05

8 55 02

2 1175.579

Nov. 7 1916

P.G. 30

9 7 25- 22.3
 69.8
 199.2
 244.4

47.5
 45.2
92.7 + 1.84

XII

P.G. 210

96.6
 164.6
 274.7
 341.0

68.0
 66.3
134.3 + 0.89

0
 181.4
 157.3
 276.2
 345.8

5
 45.9
 69.6
125.5 1.07
 + 1.29

+ 1.790
 + 0.985
2.775
 1.388

P.G. 30

194.8
 245.45-
 17.7
 64.8

49.7
 47.1
96.8 + 1.74

9 12 40
20 05

9 10 02

21175.590

Nov. 7 - 1916

P. a. 30

XIII

9 20 40

18.2

44.0 ✓

62.2

45.6 ✓

195.6

89.6 ✓ + 1.92

241.2

P. a. 210

95.1

67.6 ✓

162.7

62.2 ✓

282.2

129.8 ✓ + 0.98

344.4

+ 1805

+ 0.920

98.6

69.6 ✓

168.2

66.2 ✓

275.0

135.8 ✓ + 0.86

341.2

2725

+ 1.362

P. a. 30

192.6

51.2 ✓

243.8

47.3 ✓

18.4

98.5 ✓ + 1.69

9 26 00

65.7

9 23 20

9 22 16

21175.599

Nov. 7 1916

9 38 5-	195.7	P. A. 30	
	241.2	45.5	✓
	16.7	48.8	✓
	65.5	<u>94.3</u>	✓ + 1.80

XIV

	275.0	P. A. 210	
	346.6	71.6	✓
	97.2	<u>7.02</u>	✓
	167.4	141.8	✓ + 0.74

	280.4	58.4	✓
	338.8	72.5	✓
	94.3	<u>130.9</u>	✓ + 0.96
	126.8		

+ 1.77	✓
+ 0.85	✓
<u>2 6 2</u>	✓
+ 1.3 10	

	17.5	P. A. 30	
	65.2	47.7	✓
	196.0	49.0	✓
9 43 30	245.0	<u>96.7</u>	✓ + 1.74

81 35
9 40 48
9 39 44
21175.611

Nov. 7-1916

P.G. 30

XV

9 53 50

16.9
64.2
193.6
242.4

47.3 ✓
48.8 ✓
96.1 ✓

+ 1.75

P.G. 210

97.6
168.2
281.9
339.8

70.6 ✓
57.9 ✓
128.5 ✓

+ 1.01

+ 1.75 ✓

+ 1.000 ✓

27.55 ✓

1.377

+ 1.378

98.8
164.8
279.4
342.8

66.0 ✓
63.4 ✓
129.4 ✓

+ 0.99

P.G. 30

195.4
242.2
17.5
66.7

46.8 ✓
49.2 ✓
96.0 ✓

+ 1.76

9 59 40

9 56 45

9 55 44

21175.622

Nov. 7 1916

P. G. 30

XVI

10 10 40

194.6

246.0

16.6

64.2

51.4[✓]48.6[✓]99.0[✓]+1.6[✓]

P. G. 210

279.8

341.0

98.2

166.0

61.2[✓]67.8[✓]129.0[✓]

+1.00

+1.70^{25✓}+0.990[✓]

281.4

340.8

97.0

167.7

59.4[✓]70.7[✓]130.1[✓]

+0.98

289+1.345[✓]

2.715

1.358

P. G. 30

14.7

61.6

196.2

244.8

46.9[✓]48.6[✓]95.5[✓]

+1.77

10 16 30

10 13 35

10 12 31

21175.634

Nov. 7 1916

P. A. 30

10 33 10

19.7

65.8

192.2

247.6

46.1 ✓

55.4 ✓

101.5 ✓ + 1.62

XVII

P. A. 210

96.6

163.8

280.4

342.6

67.2 ✓

62.2 ✓

129.4 ✓ + 0.99

+ 1.69 ✓

+ 1.03 ✓

$$\begin{array}{r} 27.2 \\ + 1.360 \\ \hline \end{array}$$

100.2

164.2

280.6

342.2

64.0 ✓

61.6 ✓

125.6 ✓ + 1.07

P. A. 30

194.2

244.4

17.6

63.4

50.2 ✓

45.8 ✓

96.0 ✓ + 1.76

10 38 30

11 40

10 35 50

10 34 46

21175.649

Nov. 7 1916

10 47 30

199.2

244.4

17.6

64.0

P.G. 30

45.2 ✓

46.4 ✓

91.6 ✓

+ 1.87

XVIII

P.G. 210

272.4

343.8

102.1

160.8

71.4 ✓

58.7 ✓

130.1 ✓

+ 0.98

283.7

338.8

94.0

166.9

55.1 ✓

72.9 ✓

128.0 ✓

+ 1.02

+ 173.5 ✓

+ 1.000 ✓

273.5 ✓

+ 1.368 ✓

P.G. 30

17.4

67.5

192.8

244.9

50.1 ✓

52.1 ✓

102.2 ✓

+ 1.60

10 53 35

05

10 50 32

21175.659

P.G. 27 A

Sp. 7.2

Dec.

H.A.

S.T.

— 80 C
 — 8 P
 288 - 3811 phatun

all phatun to Edgworth's house.

Wed. Nov. 8-1916

RL Obs 15" E. Eg.

Phot T

Object observed for Eumonia
last night, not that
today but $\Delta m + 6^{\circ} 50' 32''$

$$\begin{array}{r}
 \text{Eumonia} \\
 22 \ 22 \ + 8.5 \\
 \hline
 21 \ 22 \\
 1 \ 0 \ 2
 \end{array}$$

Flod 3x2 used

Pa 200

Comp $\times = + 7^{\circ} 48' 86'' (7.9)$

$$\begin{array}{r}
 6 \ 16.4 \ 267.6 \ \leftarrow \text{comp} \times \text{dis} \\
 350.4 \\
 95.0 \\
 166.7 \\
 \hline
 82.8 \\
 71.7 \\
 \hline
 154.5 + 0.49
 \end{array}$$

Pa 20

$$\begin{array}{r}
 196.6 \\
 245.4 \\
 11.4 \\
 70.6 \\
 \hline
 48.8 \\
 59.2 \\
 \hline
 108.0 + 1.46
 \end{array}$$

$$\begin{array}{r}
 189.8 \\
 255.8 \\
 19.0 \\
 71.2 \\
 \hline
 66.0 \\
 52.2 \\
 \hline
 118.2 + 123
 \end{array}$$

$$\begin{array}{r}
 + 0.505 \\
 + 1.345 \\
 \hline
 1.850 \\
 + 0.875 \\
 \hline
 + 0.925
 \end{array}$$

6 19.0 Pa 200

$$\begin{array}{r}
 90.6 \\
 172.0 \\
 273.2 \\
 344.6 \\
 \hline
 81.4 \\
 71.4 \\
 \hline
 152.8 + 0.52
 \end{array}$$

$$\begin{array}{r}
 623.8 \\
 620.1 \\
 \hline
 2176.472
 \end{array}$$

Nov. 8-1916.

Eumonia.
P.A. 200II

6 32.4 91.8
 162.4
 267.4
 351.8

76.6 ✓
 84.4 ✓
 161.0 ✓ + 0.36

P.A. 20

8.3
 69.4
 196.8
 251.3

61.1 ✓
 54.5 ✓
 115.6 ✓ + 1.29

135.2
 67.4
 192.6
 255.0

52.2 ✓
 62.4 ✓
 114.6 ✓ + 1.31

+0.345
 +1.30
 1.645
 +0.822

P.A. 200

271.6
 353.8
 89.0
 6 40.4 170.0
 6 36.4
 6 35.3

81.7 ✓
 81.0 ✓
 162.7 ✓ + 0.33

21176.483

Nov. 8-1916

Eumonia (cont)

Pa. 200

III

6 45.7

272.0

344.0

83.9

174.4

72.0 ✓

905 ✓

1625 ✓

+ 0.33

Pa. 20

~~258.6~~

8.2

75.0

191.2

250.4

66.8 ✓

59.2 ✓

126.0 ✓

+ 1.06

14.4

70.0

185.0

259.2

55.6 ✓

74.2 ✓

129.8 ✓

+ 0.98

+ 0.2395

+ 1.028

1.4275

+ 0.708

Pa. 200

269.6

347.7

92.4

170.2

78.1 ✓

77.8 ✓

155.9 ✓

+ 0.46

6 53.3

6 49.5

6 48.4

21176.492

Nov. 8-1916

6 58.7

274.8

341.8

90.4

170.6

Pa 200

IV

670 ✓

80.2 ✓

147.2 ✓

+ 0.63

Pa-20

190.4

250.6

12.3

~~6~~

70.6

60.2 ✓

58.3 ✓

118.5 ✓

+ 1.23

193.7

250.2

11.0

72.6

56.5 ✓

61.6 ✓

118.1 ✓

+ 1.23

+ 1.23

+ 0.60

+ 0.915

Pa 200

91.4

173.4

277.2

345.5

820 ✓

68.3 ✓

150.2 ✓

+ 0.57

7 06.1

7 02.4

7 01.3

21176.501

Nov. 8 - 1916

7.513. Rec.

Pa 200

VI

7 34 00

99.0

166.8

277.7

345.6

67.8 ✓

67.9 ✓

135.7 ✓

+ 0.86

Pa 20

14.8

67.7

191.8

247.5

52.9 ✓

55.7 ✓

108.6 ✓

+ 1.45

Pa

18.2

63.6

197.4

250.4

45.4 ✓

53.0 ✓

98.4 ✓

+ 1.70

+ 1.875

+ 0.535

2.410

1.070

Pa 200

274.4

349.2

96.3

166.8

74.8 ✓

70.5 ✓

145.3 ✓

+ 0.67

+ 0.765

+ 1.575

2.340

1.17

7 40 00

7 37 00
7 35 52

21196.525

Nov. 8-1916

Pa. 200

V

$$\begin{array}{r} 7 \cdot 13.5 \\ 93.2 \\ 169.4 \\ 273.6 \\ \hline 345.6 \end{array}$$

$$\begin{array}{r} 76.6 \\ 720 \\ \hline 148.6 \end{array} + 0.60$$

Pa. 20

$$\begin{array}{r} 12.2 \\ 71.7 \\ 188.8 \\ \hline 252.2 \end{array}$$

$$\begin{array}{r} 59.5 \\ 63.4 \\ \hline 122.9 \end{array} + 1.13$$

$$\begin{array}{r} 13.5 \\ 67.3 \\ 190.0 \\ \hline 253.6 \end{array}$$

$$\begin{array}{r} 53.4 \\ 63.6 \\ \hline 117.4 \end{array} + 1.25$$

$$\begin{array}{r} +0.64 \\ +1.19 \\ \hline 1.83 \\ +0.915 \end{array}$$

Pa. 200

$$\begin{array}{r} 90.6 \\ 166.7 \\ 277.0 \\ \hline 345.8 \end{array}$$

$$\begin{array}{r} 76.1 \\ 68.8 \\ \hline 144.9 \end{array} + 0.687$$

$$\begin{array}{r} 7 \cdot 20.9 \\ \hline 34.4 \end{array}$$

$$\begin{array}{r} 17.2 \\ 16.1 \end{array}$$

21176.571

see page 168 for sum VI

170

Nov. 8 - 1916

Pa. 200

VII

7 50 40

277.8

341.3

93.4

170.4

63.5 ✓

77.0 ✓

140.5 ✓

+ 0.76

Pa. 20

10.8

72.2

194.8

248.3

61.4 ✓

53.5 ✓

114.9 ✓

+ 1.31

+ 0.83

+ 1.47

14.2

66.4

194.8

243.8

52.2 ✓

49.0 ✓

101.2 ✓

+ 1.63

230

+ 1.15

Pa. 200

100.8

163.6

274.8

345.8

62.8 ✓

71.0 ✓

133.8 ✓

+ 0.90

7 58 20

7 54 30

7 53 22

21176.537

Nov. 8 - 1916

P. a. 200

VIII

8 17 55

51.1

169.8

281.1

341.7

78.7 ✓

60.6 ✓

139.3 ✓

+ 0.79

P. a. 20.

194.6

246.2

14.7

67.4

51.6 ✓

52.7 ✓

104.3 ✓

+ 1.55

+ 0.770 ✓

+ 1.575 ✓

197.0

242.8

14.0

70.4

45.8 ✓

56.4 ✓

102.2 ✓

1.60

234.5 ✓

+ 1.172 ✓

P. a. 200

276.4

341.5

90.4

166.4

65.1 ✓

76.0 ✓

141.1 ✓

+ 0.75

8 23 25

8 20 40

19 32

21176.552

Nov. 8^a 1916

P. a. 200

IX

8 35 45

273.4

348.6

93.8

168.3

75.2 ✓

74.5 ✓

149.7 ✓

+ 0.58

P. a. 20.

+ 1.06

17.8

66.7

191.4

247.2

48.9 ✓

55.8 ✓

104.7 ✓

+ 1.54

+ 0.57 ✓
+ 1.40

12.0

71.2

192.4

246.8

59.2 ✓

54.4 ✓

113.6 ✓

+ 1.34

1.955 ✓
0.987

P. a. 200

+ 0.895

90.0

169.1

273.7

350.8

79.1 ✓

77.1 ✓

156.2 ✓

+ 0.45

8 41 55

8 38 50

8 37 42

21176.568

Nov. 8 - 1916

Pa 200

X

8 51 50

93.2

174.0

276.2

346.6

80.8 ✓

70.4 ✓

151.2 ✓

+ 0.55 ✓

Pa 20

0.905 -

193.6

245.2

8.4

73.7

51.6 ✓

65.3 ✓

116.9 ✓

+ 1.26 ✓

+ 0.600 ✓

+ 1.325 ✓

1.925 ✓

+ 0.962 ✓

193.6

253.0

15.6

67.4

59.4 ✓

51.8 ✓

111.2 ✓

+ 1.39 ✓

Pa 200

+ 1.02

278.4

345.8

91.4

170.1

67.4 ✓

78.7 ✓

146.1 ✓

+ 0.65 ✓

8 57 05

8 54 28

8 53 20

21176.578

Flod = 1^m 8.5 fast at 9:00

Nov. 8 - 1916

9.6 50 Pa. 200 XI

269.4	82.2	
351.6	68.8	✓
100.4	<u>151.6</u>	✓ + 0.56
169.2		

Pa 20 + 1.085

19.8	48.1	✓
67.9	54.0	✓
192.8	<u>102.1</u>	✓ + 1.61
246.8		

7.1	65.9	✓
73.0	57.3	✓
190.7	<u>123.2</u>	✓ + 1.12
248.0		

+ 1.365
+ 0.495
1.860
0.93

Pa 200 + 0.775

95.1	76.5	✓
171.6	81.0	✓
271.2	<u>157.5</u>	✓ + 0.43
352.2		

9 11 30
14 20
9 09 10
9 08 12
2116/6. 589

Nov 8 - 1916

Pa. 200

XII

9 21 55 86.3
 173.2
 274.4
 343.3

86.9 ✓
 68.9 ✓
155.8 ✓ + 0.46

Pa. 20 + 0.815

195.6
 247.2
 86.6
 76.2

51.6 ✓
 69.6 ✓
121.2 ✓ + 1.17

+ 0.445
 + 1.125
1570
 0.785

186.2
 254.4
 13.7
 70.8

168.2 ✓
 57.1 ✓
125.3 ✓ + 1.08

Pa. 200 + 0.755

274.8
 350.8
 92.0

76.0 ✓
 81.3 ✓
157.3 ✓ + 0.43

9 27 25 173.3

9 24 40
 9 23 32
 21176.600

Nov. 8 1916

P.G. 200

9 34 40

269.4

352.2

91.2

172.6

82.8 ✓

81.4 ✓

164.2 ✓

+ 0.30

XIII

P.G. 20

+ 0.695

10.0

71.4

189.2

252.7

61.4 ✓

63.5 ✓

124.9 ✓

+ 1.09

+ 0.370

+ 1.115

8.8

74.7

192.8

249.4

65.9 ✓

56.6 ✓

122.5 ✓

+ 1.14

+ 0.742

1.485

P.G. 200

+ 0.790

92.6

171.4

270.6

348.8

78.8 ✓

78.2 ✓

157.0 ✓

+ 0.44

9 41 15

9 37 58

9 36 50

21176.609

Nov. 8th 1916

P. G. 200

XIV

9 51 15⁻ 88.4
 170.0
 272.2
 349.2

81.6 ✓
 77.0 ✓
158.6 ✓

+ 0.41 ✓

P. G. 20

193.3
 245.0
 10.0
 69.6

51.7 ✓
 59.6 ✓
111.3 ✓

+ 1.39

+ 0.45 ✓
 + 1.25 ✓

187.2
 254.6
 11.7
 68.3

67.4 ✓
 56.6 ✓
124.0 ✓

+ 1.11

1.70 ✓
 + 0.85 ✓

P. G. 200.

272.0
 343.3
 87.2
 170.4

71.3 ✓
 83.2 ✓
154.5 ✓

+ 0.49

9 58 20
 7 35⁻

9 53 48

~~9 54 05~~

9 52 40

21176.620

Nov 8 1916

P.G. 200

XV

10 3 15

271.8

351.8

90.0

166.7

80.0 ✓

76.7 ✓

156.7 ✓

+ 0.44

P.G. 20

12.8

69.4

189.4

248.1

56.6 ✓

58.7 ✓

115.3 ✓ + 1.30

+ 1.23 ✓

+ 0.38 ✓

48.7

71.7

194.4

248.5

67.0 ✓

54.1 ✓

121.1 ✓

+ 1.17

+ 1.62 ✓

+ 0.80 ✓

P.G. 200.

86.4

168.2

270.4

352.2

81.8 ✓

81.8 ✓

163.6 ✓ + 0.31

10 8 30

11 45

10 05 52

10 04 44

2117 6.62 ✓

Nov. 8th 1916

P.G. 200

10 16 00

89.8

170.4

273.3

349.4

80.6 ✓

76.1 ✓

156.7 ✓

0.44

XVI.

P.G. 20

191.6

248.8

12.6

72.2

57.2 ✓

59.6 ✓

116.8 ✓ + 1.26

+ 0.510 ✓

+ 1.245 ✓

190.8

250.2

13.3

72.3

59.4 ✓

59.0

118.4 ✓ + 1.23

1755 ✓

0.878

P.G. 200

277.4

347.4

85.0

10 21 20

168.8

70.0 ✓

79.8 ✓

149.8 ✓ + 0.58

10 18 40

21176.637

Nov. 8 1916

P.G. 200

10 27 54⁵

272.2

347.2

94.0

168.8

75.0 ✓

74.8 ✓

149.8 ✓

+ 0.58

XVII

P.G. 20

11.4

72.0

192.2

257.4

60.6 ✓

65.2 ✓

125.8 ✓

+ 1.07

+ 0.600 ✓

+ 1.245 ✓

1.845

+ 0.922

10.8

69.6

195.5

246.6

58.8 ✓

57.1 ✓

109.9 ✓

+ 1.42

P.G. 200

94.4

166.0

276.0

352.2

71.6 ✓

76.2 ✓

147.8 ✓

+ 0.62

10 33 20

10 30 38

10 29 30

21176.646

P.G. 185. A

sp. 4.2

Dic. + 7.4

H.C. 3 37 W

S.T. 2 01

Fri Nov. 10 - 1916.

P.C.Cob. $15'' \text{ E. Eq.}$ Ref. Rec
 Maurer

Prod. 3424
 used

$21 \ 14-16.8$ Phot T.
 $21 \ 18$ $\text{P.A.} = 203^\circ$
 $0 \ 4w$ $\text{Sfr} = 4.0$

$\text{Same Comp. X as on prev. night.}$
 $\text{P.A. } 210$ $= -16.5740 - (6.83)$

$5 \ 54 \ 20 \ 196.2$ Maurer dis.
 249.0 52.8
 11.4 58.2
 65.6 107.0 -1.49

$\text{Pa } 30$

273.8
 351.2 77.4
 91.7 76.7
 168.4 157.1 -0.50

266.0
 347.2 81.2
 91.0 79.2
 170.2 160.4 -0.37

-1.345
 -0.435
 1.780
 -0.890
 6.830
 5.940

$\text{Pa. } 210$

$5 \ 56 \ 50$
 $-1 \ 34$
 $5 \ 55 \ 38$
 $2117 \text{ A. } 456$ 10.8
 69.2 58.4
 190.0 61.4
 $5 \ 59 \ 20 \ 251.4$ 119.8 -120

Nov. 10 - 1916

Transit Count. II

Pa. 210

6 05 20

10.5		
70.8	60.3	
197.8	<u>50.2</u>	
248.0	110.5	- 141
	Pa. 30	

90.4		
171.8	81.4	
267.2	<u>82.8</u>	
350.0	164.2	- 0.30

96.8			- 1.315
168.2	71.4		- 0.395
268.0	<u>82.8</u>		<u>1.510</u>
350.8	154.2	- 0.49	- 0.855
			<u>6.830</u>
	Pa. 210		<u>5.975</u>

192.2		
249.4	57.2	
9.6	<u>61.5</u>	
71.1	118.7	- 122

6 09 40

6 07 30

6 06 - 18

21178.462

Nov. 10 - 1916

Uranus (Cont)

III

6-16 40

193.6

P.A. 210

248.8

55.2

15.2

57.2

66.4

106.4 - 1.50

P.A. 30

269.4

350.6

81.2

89.2

81.2

170.4

162.4 - 0.33

266.6

354.8

88.2

92.8

74.9

167.7

163.1 - 0.32

- 1.385

- 0.325

1.710

- 0.855

6.30

- 5.975

P.A. 2110

9.8

65.6

55.8

189.8

60.6

6-21-00

250.4

116.4

- 1.27

37 60

6 18 50

6 17 28

21178.471

Nov. 10-1916

6-27-0

10.8

66.4

196.0

249.6

Pa 210

55.6

53.6

109.2

- 144

IV

Pa. 30

97.4

185.6

272.8

349.9

7

8.2

771

155.3

- 0.47

92.8

168.8

269.9

346.0

760

76.1

152.1

- 0.53

-1455

-0.500

1.955

-0.978

6.830

5.852

Pa 210

192.9

248.7

17.2

68.4

56.5

51.2

107.7

- 1.47

6-31-20

6 29 10

6 28 58

21178.478

Nov. 10-1916

$$\begin{array}{r}
 6-3700. \quad 19.18 \\
 253.0 \\
 10.8 \\
 68.2 \\
 \hline
 \end{array}
 \begin{array}{r}
 P.A. \ 210 \\
 61.2 \\
 59.4 \\
 \hline
 118.6
 \end{array}
 \begin{array}{r}
 V \\
 -1.22
 \end{array}$$

$$\begin{array}{r}
 271.9 \\
 348.6 \\
 93.0 \\
 166.0 \\
 \hline
 \end{array}
 \begin{array}{r}
 P.A. \ 30 \\
 76.7 \\
 73.0 \\
 \hline
 149.7
 \end{array}
 \begin{array}{r}
 -0.58
 \end{array}$$

$$\begin{array}{r}
 266.4 \\
 347.0 \\
 91.2 \\
 167.4 \\
 \hline
 \end{array}
 \begin{array}{r}
 80.6 \\
 76.2 \\
 \hline
 156.8
 \end{array}
 \begin{array}{r}
 -0.44 \\
 -1.26 \\
 -0.51 \\
 \hline
 1.77 \\
 -0.885 \\
 \hline
 68.30 \\
 \hline
 5.945
 \end{array}$$

$$\begin{array}{r}
 13.0 \\
 67.0 \\
 191.8 \\
 641.90 \\
 253.0 \\
 \hline
 \end{array}
 \begin{array}{r}
 P.A. \ 210 \\
 54.0 \\
 61.2 \\
 \hline
 115.2
 \end{array}
 \begin{array}{r}
 -1.30
 \end{array}$$

6 39 10
6 37 58

21178.485

Nov. 10-1916

Pa 210

VI

650 40

11.4

64.2

192.0

248.2

52.8

562

1090

- 1.44

Pa 30

95.2

166.8

269.8

349.7

71.6

79.9

157.6

- 0.54

93.3

164.8

273.3

349.7

71.5

76.0

147.9

- 0.62

- 1.415

- 0.580

1.995

0.998

682

6830

5.832

Pa 210

191.6

248.0

11.2

65.8

56.4

54.6

111.0

- 1.39

65535

615

65308

65156

21178.494

Nov 10-1916

$$\begin{array}{r}
 7450 \quad 198.6 \\
 \quad 247.6 \\
 \quad 13.4 \\
 \quad 68.2 \\
 \hline
 \end{array}
 \begin{array}{r}
 Pa. 210 \\
 49.0 \\
 55.8 \\
 \hline
 104.8
 \end{array}
 \begin{array}{r}
 VII \\
 - 1.54
 \end{array}$$

$$\begin{array}{r}
 266.8 \\
 348.7 \\
 92.8 \\
 168.7 \\
 \hline
 \end{array}
 \begin{array}{r}
 Pa. 30 \\
 81.9 \\
 75.9 \\
 \hline
 157.8
 \end{array}
 \begin{array}{r}
 - 0.42
 \end{array}$$

$$\begin{array}{r}
 266.2 \\
 350.4 \\
 93.8 \\
 168.7 \\
 \hline
 \end{array}
 \begin{array}{r}
 84.2 \\
 74.9 \\
 \hline
 159.1
 \end{array}
 \begin{array}{r}
 - 0.40 \\
 - 1.365 \\
 - 0.410 \\
 \hline
 1.775 \\
 - 0.888 \\
 6.830 \\
 \hline
 5.942
 \end{array}$$

$$\begin{array}{r}
 12.2 \\
 67.8 \\
 188.8 \\
 253.8 \\
 \hline
 \end{array}
 \begin{array}{r}
 Pa. 210 \\
 55.6 \\
 65.0 \\
 \hline
 120.6
 \end{array}
 \begin{array}{r}
 - 1.19
 \end{array}$$

7850
 70650
 70538
 21178.504

Nov. 10 - 1916

Pa 210 - VIII

$$\begin{array}{r}
 71320 \\
 14.8 \\
 65.5 \\
 194.4 \\
 \hline
 249.4
 \end{array}
 \begin{array}{r}
 50.7 \\
 53.0 \\
 \hline
 103.7 - 15.7
 \end{array}$$

Pa 30

$$\begin{array}{r}
 98.8 \\
 166.0 \\
 270.8 \\
 \hline
 352.0
 \end{array}
 \begin{array}{r}
 67.2 \\
 81.2 \\
 \hline
 148.4 - 0.61
 \end{array}$$

$$\begin{array}{r}
 95.3 \\
 169.2 \\
 270.6 \\
 \hline
 347.2
 \end{array}
 \begin{array}{r}
 73.9 \\
 76.6 \\
 \hline
 150.5 - 0.56
 \end{array}$$

$$\begin{array}{r}
 -1.530 \\
 -0.585 \\
 \hline
 2.115 \\
 -1.058 \\
 \hline
 6.830 \\
 \hline
 5.772
 \end{array}$$

Pa 210

$$\begin{array}{r}
 195.8 \\
 248.8 \\
 11.4 \\
 65.6 \\
 \hline
 7+8-10.
 \end{array}
 \begin{array}{r}
 52.7 \\
 58.2 \\
 \hline
 106.9 - 1.49
 \end{array}$$

$$\begin{array}{r}
 1130 \\
 71545 \\
 71433 \\
 \hline
 21178.511
 \end{array}$$

Nov. 10 - 1916.

7-27-20. 192.0
 250.8
 12.8
 69.7

P.A. 210

58.8

54.9

113.7 - 1.33

IX

~~XXXX~~

P.A. 30

269.3

346.4

94.0

167.4

77.1

73.4

150.5 - 0.57

273.0

350.2

92.2

163.1

77.2

70.9

148.1 - 0.61

- 1.33

- 0.59

1.92

- 0.960

6.830

5.870

P.A. 210

16.2

669.6

191.0

7-3230251 6.

53.4

60.4

113.8 - 1.33

5940

72950

72838

21176520

Nov. 10 - 1916

7-42-0.

10.4
67.8
188.5
249.3

Pa. 210

X

57.4

608

1182

- 1.28

Pa. 30

97.1
164.7
274.4
348.6

67.6

742

1416

- 0.74

93.5
167.8
267.2
346.5

74.3

793

153.6

- 0.50

- 1.265

- 0.620

1.885

- 0.942

6.830

5.888

Pa. 210

192.3
251.8
10.1

59.5

579

1174

- 1.25

~~7-62-6~~ 7484.5
7 48 45 68.6

7 45 22
21178.531

Frod $\frac{1}{3} = 1$ 12.5 fast at 8.50

Nov. 10 - 1910

PA. 210

8 3 35 195.8
245.4
12.8
67.7

49.6 ✓
54.9 ✓
104.5 ✓

- 1.55

XT

PA. 30

275.8
345.2
93.6
166.2

69.4 ✓
72.6 ✓
142.0 ✓

- 0.73

270.8
352.2
94.8
165.0

81.4 ✓
70.2 ✓
151.6 ✓

- 0.54

- 1.415

- 0.635

2050

- 1.025

6830

✓. 805

P. 9.210

18.8
66.4
193.0
283.3

55.6 ✓
60.3 ✓
115.9 ✓

- 1.28

8 7 45

8 05 40
8 04 28

21172.544

Nov. 10th 1916

P.G. 210

XII

8 15 35

11.7

64.0

190.6

248.4

52.3 ✓

57.8 ✓

110.1 ✓

- 1.42

P.G. 30

98.0

164.2

271.0

353.2

66.2 ✓

82.2 ✓

148.4 ✓

- 0.61

- 1.38

- 0.66

93.7

162.8

270.2

344.2

69.1 ✓

74.0 ✓

143.1 ✓

- 0.71

2.04

- 1.02

6.83

5.81

P

P.G. 210

194.0

249.4

8.9

66.8

55.4 ✓

57.9 ✓

113.3 ✓

- 1.34

8 19 55

8 17 45

8 16 33

2117 P. ~~533~~ 553

Nov. 10th 1916XIII

P.A. 210

8 31 55	196.6	54.2 [✓]	
	250.8	56.6 [✓]	
	± 9.8	<u>110.8[✓]</u>	- 1.40
	16.4		

P.A. 30

271.4	78.0 [✓]	
349.4	64.8 [✓]	
98.0	<u>142.8[✓]</u>	- 0.72
162.8		

270.6	7	
348.0	84.4 [✓]	
95.8	69.8 [✓]	
165.6	<u>154.2[✓]</u>	- 0.89
	4	

-1.355
-0.785
<u>2060</u>
-1.080
6830
<u>5750</u>
5.50

P.A. 210

8 36 20	11.4	53.6 [✓]	
	65.0	68.9 [✓]	
	190.3	<u>114.5[✓]</u>	- 1.31
	251.2		

8 15

8 34 05

8 32 56

21178.565

Nov. 10^a 1916

8 42 40

6.8
66.8
196.2
248.4

P.G. 210

64.0 ✓
52.2 ✓

112.2 ✓ - 1.37

XIV

P.G. 30

96.0
164.6
273.7
346.4

68.6 ✓
72.7 ✓

141.3 ✓ - 0.75

- 1.415

0.705

2120

1.060

6.830

5.770

95.6
167.8
274.0
347.4

72.2 ✓
73.4 ✓

145.6 ✓ - 0.66

P.G. 210

198.8
249.7
6.8
64.2

50.9 ✓
57.4 ✓

108.3 ✓ - 1.46

8 47 5

9 45

8 44 52

8 43 40

21176.572

Nov. 10 - 1916

8 ⁵³
~~48~~ 5019⁴~~8~~³

248.0

10.4

66.2

P. G. 210

XV

53.7 ✓

55.8 ✓

109.5 ✓

- 1.43

P. G. 30

271.6

350.7

90.4

162.3

87⁹.1 ✓

71.9 ✓

151.0 ✓

- 0.56

275.6

344.4

74.0

162.8

68.8 ✓

68.8 ✓

137.6 ✓

- 0.82

- 1.405

- 0.690

2095

1048

6830

57182

P. G. 210

12.4

67.4

192.7

249.4

55.0 ✓

56.7 ✓

111.7 ✓

- 1.38

8 58 35

25

8 56 12

8 55 00

21178.580

Nov. 10^a 1916

P. G. 240

XVI

9 10 15

12.8
63.8
193.7
252.2

51.0 ✓
58.5 ✓
109.5 ✓ - 1.43

P. G. 30

95.8
161.6
274.2
347.4

65.8 ✓
73.2 ✓
139.0 ✓ - 0.79

- 1.415
- 0.745

97.7
166.2
268.6
344.0

68.5 ✓
75.4 ✓
143.9 ✓ - 0.70

2160
1.080
683
5.75

P. G. 240

194.9
248.8
10.9
67.6

53.9 ✓
56.7 ✓
110.6 ✓ - 1.40

9 14 38

9 12 22

9 11 10

21172.591

Nov. 10 - 1966

XVII

9 20 45	194.4	P.G. 210	
	248.2	53.8	
	12.0	53.6	
	65.6	<u>107.4</u>	-1.48

	P.G. 30	
270.4	76.2	
346.6	75.2	
92.2	<u>151.4</u>	-0.55
167.4		

275.8			-1.495
245.8			-0.690
347.4	1271.6		<u>2.185</u>
97.0	65.4		1.092
162.4	<u>137.0</u>	-0.83	<u>6.830</u>
2			5.738

	P.G. 210	
12.8	53.6	
66.4	52.6	
195.8	<u>106.2</u>	-1.51
9 27 15	248.4	

9 24 00
9 22 48
2117 A.599

198

Nov. 10 - 1916

P.C. 210

XV/11

9 33 25

12.2

62.2

192.8

248.8

50.0 ✓

56.0 ✓

 106.0 ✓ - 1.51

P.C. 30

98.2

166.4

273.0

345.0

68.2 ✓

72.0 ✓

 140.2 ✓ - 0.77

99.0

163.4

274.3

347.6

64.4 ✓

73.3 ✓

 137.7 ✓ - 0.82

- 1.470

- 0.795

 2265

1.132

6830

 5.698

P.C. 210

195.8

249.4

X 13.2

69.2

53.6 ✓

58.0 ✓

 109.6 ✓ - 1.43

9 37 35

9 33 36

9 34 18

2 1178.607

P.C. 225 A

Sp. 3.9

Dec. - 16.4

K.C. 4.2W

S.T. 1.12

Nov. 10-1916

0 Ceti Phot R
021403
 P.G.

P.G. 340

10 45 45

257.2

265.1

~~78.0~~

77.4

86.2

7.9 ← var. dis.

8.8

16.7

- 5.68

P.G. 160

167.4

175.8

347.1

352.3

8.4

9.2

17.6

- 5.57

- 5.71

- 5.54

1725

- 5.62

9.19

3.57

166.2

175.8

347.8

352.3

9.6

8.5

18.1

- 5.57

P.G. 340

77.2

85.3

257.1

265.3

8.1

8.2

16.3

- 5.74

10 5 2 35

Sat. Nov. 16/1916

RCdbz

15" E. 2g

mann

Plot T

21 16 - 16.4

21 28

0 12W

is watch used / Same con of * as last night

PA 210

Full aperture
seeing poor

5 55.4

192.0 < mann dis

243.8

51.8

120

50.6

62.6

1024

- 1.60

1/2 weight on
acct of very
poor seeing.

PA 30

268.2

353.0

248

90.2

820

172.2

1668

- 0.25

- 1.505

268.4

- 0.340

349.4

81.0

95.6

76.6

- 0.922

172.2

157.6

- 0.43

6.830

5.908

PA 20 210

5 58.4

10.8

211 79.457

66.7

55.9

195.4

543

6 01.4

249.7

110.2

- 1.41

Nov. 11, 1916

7" Cap used

Pa. 210

II

$$\begin{array}{r}
 6 \ 12.0 \quad 16.4 \\
 \quad \quad 65.6 \\
 \quad \quad 190.4 \\
 \quad \quad 247.8 \\
 \hline
 \quad \quad 106.6 \quad - 1.50
 \end{array}$$

Pa 30

$$\begin{array}{r}
 94.2 \\
 168.4 \\
 272.4 \\
 343.6 \\
 \hline
 143.4 \quad - 0.71
 \end{array}$$

$$\begin{array}{r}
 99.6 \\
 162.6 \\
 266.4 \\
 348.4 \\
 \hline
 145.0 \quad - 0.67
 \end{array}$$

$$\begin{array}{r}
 -1.425 \\
 -0.69 \\
 \hline
 -0.747 \\
 6.836 \\
 \hline
 6.083
 \end{array}$$

Pa. 30

$$\begin{array}{r}
 191.4 \\
 247.6 \\
 11.8 \\
 6 \ 14.4 \quad 68.4 \\
 \hline
 6 \ 11.2 \\
 6 \ 11.0 \\
 21179.466
 \end{array}$$

$$\begin{array}{r}
 1.425 \\
 0.690 \\
 \hline
 2.115 \\
 -1.058 \\
 6.830 \\
 \hline
 5.772
 \end{array}$$

Nov. 11, 1916

Pa 210

III

6 18.8

197.0

246.8

10.6

69.4

49.8

58.8

108.6

- 1.45

Pa. 30

266.8

350.0

97.8

163.6

83.2

6.5.8

149.0

- 0.59

277.4

344.6

95.8

168.0

67.2

72.2

139.4

- 0.79

Pa. 210

- 1.37

- 0.69

2.06

1.03

6.83

5.80

11.0

71.0

190.8

6 240

246.8

60.0

55.6

115.6

- 1.29

6 21.4

6 21.2

21179.47³

Nov. 11, 1916

Pa. 210

TV

6 28.0 15.0
 67.2
 196.0
 244.4

52.2
 48.4
100.6 - 1.64

Pa. 30

93.8
 164.8
 272.2
 346.6

75.0
 74.4
149.4 - 0.59

93.3
 163.8
 266.8
 352.6

70.5
 85.8
156.3 - 0.45

- 1.50
- 0.52
 - 1.01
 6.83
5.82

Pa. 210

194.4
 250.6
 11.8

56.2
 56.4
112.6 - 1.36

6 33.6 68.2
616

6 30.8

6 30.6

21179.480

Nov. 11-1916

PA. 210

V

6 45.4

196.0

247.6

11.4

69.8

51.6

58.4

110.0

- 1.42

PA. 30

271.7

348.6

99.8

170.6

76.9

70.8

147.7

- 0.62

271.7

347.6

97.4

167.2

75.9

69.8

145.7

- 0.66

- 1.375

- 0.640

2.015

1.008

6.830

5.822

PA. 210

14.8

68.8

195.2

64.0

49.8

113.8

- 1.33

6 50.6

6 48.0

6 47.8

21179.492

Nov. 11-1916

6 54.5 16.4
 70.2
 193.3
 2496

P.A. 210

VI

538
56.3
 1101 - 1.42

P.A. 30

92.8
 174.4
 2716
 346.2

81.6
746
 156.2 - 0.45

96.7
 164.4
 266.2
 353.0

67.7
86.8
 154.5

- 0.49

- 1.465
- 0.470
 1.935
- 0.968
 0.967
0.830
 5.862

P.A. 210

194.8
 248.8
 12.2
 642

54.0
52.0
 106.0 - 1.51

2 00.2

6 57.4
 6 57.2

21179.497

Ciswatch = 10^2 feet at 7.00 (Ball)

Nov. 11-1916

7 06.2

196.6

246.8

10.4

68.8

Pa

210

VII

50.2

58.4

108.6

- 1.45

Pa 30

264.1

350.8

97.6

167.2

86.7

69.6

156.3

- 0.45

275.3

345.6

97.2

166.6

70.3

69.4

139.7

- 0.78

Pa 210

10.8

70.4

197.6

246.6

59.6

49.0

108.6

- 1.45

7 11.8

7 09.0

21179.506

- 1.450

- 0.615

2.065

1.032

6.830

5.798

Nov. 11-1916

P.A. 210 VIII

~~706.2~~ 196.6

718.4 14.6

65.6

195.8

248.8

51.0

530

104.0 - 1.56

P.A. 30

93.2

170.6

269.8

345.2

77.4

75.4

152.8

- 0.52

93.6

164.4

271.2

349.0

70.8

77.8

148.6

- 0.60

- 1.515

- 0.560

2.075

1.038

6830

5.792

P.A. 210

~~200.0~~

196.0

245.0

84.2

63.0

49.0

58.8

107.8

- 1.47

725.0

434

721.7

721.5

21179.515

Nov. 11-1916

P.A. 210

IX

7	33.5	200.6		
		249.6	49.0	
		13.6	54.8	
		68.4	103.8	- 1.56

P.A. 30

	267.4		
	349.6	82.2	
	94.2	74.0	
	168.2	156.2	- 0.45

	273.2		
	351.8	78.6	
	94.8	72.4	
	167.2	157.0	- 0.56

- 1.450
- 0.505
<u>1.955</u>
- 0.978
<u>6.830</u>
5.852

P.A. 210

	10.3		
	69.4	59.1	
	192.4	54.3	
7	38.7	246.7	113.4 - 1.34

7 36.1

7 35.8

21179.525

Nov. 11-1966

Food used
temperature & on.

Pa. 210

X

752.45	13.8	✓	
	67.2	53.4	
	194.7	53.7	✓
	248.4	107.1	✓
			- 1.49

Pa 30

97.7	63.0	✓	
160.7	70.0	✓	
275.8	133.0	✓	- 0.92
345.8			

99.6	66.5	✓	
166.1	77.8	✓	
268.0	144.3	✓	- 0.69
345.8			

Pa. 210

194.6	54.7	✓	
249.3	53.4	✓	
13.4	108.1	✓	- 1.46
66.8			

755.25
8 10

754.05
53

21179.53)

- 1.4705
<u>0.8005</u>
- 0.8005
<u>20570</u>
- 1.025
<u>- 1.475</u>
- 0.8005
<u>2280</u>
1.140
<u>6.830</u>
5.690

Nov. 11-1916

P.G. 210

XI

8 4 40

195.2

245.8

10.0

67.4

50.6 ✓

57.4 ✓

108.0 ✓

- 1.46

P.G. 30

269.8

349.8

97.2

166.2

80.0 ✓

69.0 ✓

149.0 ✓

- 0.57

275.5

348.3

95.0

170.2

72.8 ✓

75.2 ✓

148.0 ✓

- 0.61

- 1.53

- 0.60

2.13

1.065

6830

5.765

P.G. 210

12.0

69.2

198.0

243.0

57.2 ✓

45.0 ✓

102.2 ✓

- 1.60

8 8 35

8 06 38

8 05

21179.545

Nov. 11. 1916

8 20 30

17.2
62.8
196.0
247.8

P.G. 210

45.6 ✓

171.8 ✓

 97.4 ✓

-1.72

XII

P.G. 30

96.4²
169.8
271.8
345.8

73.6 ✓

74.0 ✓

 147.6 ✓

-0.52

96.4
167.6
268.8
349.2

71.2 ✓

80.4 ✓

 151.6 ✓

-0.54

-1.595
-0.580

2.175
1.088

6.830
5.742

P.G. 210

194.9
248.7
12.8
66.8

53.8 ✓

54.0 ✓

 107.8 ✓

-1.47

8 24 35

8 22 32
8 21
21179.556

Nov. 11-1916

P.G. 210

XIII

8 41 55

197.3

245.8

5.8

67.6

548.5 ✓

64.8 ✓

110.3 ✓ - 1.41

P.G. 30

268.2

346.6

98.8

164.6

78.4 ✓

65.8 ✓

144.2 ✓ - 0.69

- 1.475

- 0.680

275.5

346.8

94.4

168.4

71.3 ✓

74.0 ✓

145.3 ✓ - 0.672.155

- 1.078

6.830

5.752

P.G. 210

10.8

62.2

193.8

247.4

51.4 ✓

53.6 ✓

105.0 ✓ - 1.54

8 45 50

8 43 52

8 42

21179.572

From 3432 - 1^m 10^{sec} from at
9 o'clock
(Bell)

Nov. 11 1916

P.G. 210

XIV

8 56 5-

15.6
64.2
194.0
258.0

48.6 ✓
56.0 ✓
104.6 ✓

- 1.54

P.G. 30

91.4
168.2
275.8
346.0

76.8 ✓
70.2 ✓
147.0 ✓

- 0.63

96.2
169.4
286.3
352.8

73.2 ✓
86.5 ✓
149.7

- 0.85

1.415
- 0.605
2.020
1.01
6.23
5.22

P.G. 210

192.2
254.7
13.8
66.8

62.5 ✓
53.0 ✓
115.5 ✓

- 1.29

9 00 10

8 58 8

8 56 58

21179.58/

Nov. 11-1916

9 10 25

194.6

245.8

9.2

69.2

PA-210

57.2 ✓

60.0 ✓

117.2 ✓

- 1.39

~~XV~~
~~XV~~

PA-30

268.8

350.8

97.8

162.2

82.0 ✓

64.4 ✓

146.4 ✓

- 0.65

277.4

345.6

94.4

166.8

68.2 ✓

72.4 ✓

140.6 ✓

- 0.76

- 1.355 ✓

- 0.705 ✓

206.0 ✓

1.030 ✓

683.0

5.800

PA-210

5.8

72.4

196.5

244.2

66.6 ✓

47.7 ✓

114.3 ✓

- 1.32

9 14 40

9 12 32

9 11 22

21179.591

Nov. 11-1916

P.A. 210

~~XVII~~

9 20 20

15.0

162.2

195.6

249.8

47.2 ✓

54.2 ✓

101.4 ✓

- 1.62

P.A. 30

97.6

167.8

276.4

343.2

70.2 ✓

66.8 ✓

137.0 ✓

- 0.83

- 1.505 ✓

- 0.700 ✓

98.8

164.2

270.2

349.8

65.4 ✓

79.6 ✓

145.0 ✓

- 0.67

2255 ✓

1.128 ✓

6830 ✓

5702 ✓

P.A. 210

153.2

251.2

12.6

65.6

58.0 ✓

53.0 ✓

111.0 ✓

- 1.39

9 24 30

9 22 25

9 21 15

2117559A

Nov. 11 1916

P.G. 210

~~XVII~~

9 30 20

196.0

50.0

246.0

~~60.9~~
55.2

10.8

110.9

66.0

- 1.53

71.7

105.2

P.G. 30

262.8

83.2

346.0

66.6

97.8

- 0.58

164.4

149.8

- 1.535

- 0.605

274.6

70.8

345.4

76.6

91.8

- 0.63

168.4

147.4

6.83

5.76

P.G. 210

11.0

54.6

65.6

50.0

196.0

104.6

- 1.54

9 35 35
5 55

246.0

P.G. 200 a

9 32 58

Last group very difficult
too low to continue.

sp. 3.7

9 31 48

Dec. - 16.4

21179.606

H.G. 4 2W

S.J. 1 13

Nov. 11-1916

Miss Cas Algol Var Phot T.

205204

2517

425 w +5.2

Pa. 189A

Apr 4.6

P. a. 200

9 45 15 76.4

178.2

267.6

354.2

comp * dis.

101.8 ✓

86.6 ✓

188.4 ✓

171.6 ✓

-0.16

P. a. 20

184.6

255.6

356.6

76.2

71.0 ✓

89.6 ✓

160.6 ✓

+0.37

182.3

256.1

5.4

74.4

73.8 ✓

69.0 ✓

142.8 ✓

+0.72

-0.185

+0.145

+0.360

+0.180

9 47 05

P. a. 200

21179.616
29732

-0.116

265.3

355.1

78.7

180.2

89.8 ✓

101.5 ✓

191.3 ✓

168.7 ✓

-0.21

9 50 15

9 50 15

Nov 11 - 1966

Miss Can Van (205204)

11

10 04 00

81.8

Comp * ch

P.A. 200

179.0

97.2

265.8

84.4

350.2

181.6

178.4

- 0.83

P.A. 20

6.8

~~72.2~~

Comp * ch

65.4

81.0

74.2

190.6

59.1

249.7

133.3

+ 0.91

7.8

73.3

183.4

258.0

65.5

74.6

140.1

+ 0.77

P.A. 200

355.5

77.0

82.2

171.4

274.4

< Vardis + 6.7

1030

1897

170.3

+ 0.18

10 12 40

10 08 20

10 07 10

21179.630

79.732

-0.102

Clds nearby

Too low to continue

+ 0.075

+ 0.840

915

+ 0.458

Apr 4.7

PA 190A

Dec +5.2

Ha. —

ST 1.55

Nov. 11-1916

Reap Jup. I. Phot R
 P.C. Ob. 15th Eq. FEB 1906
 Comp with Sat. II. in
 opposite side.

Prod 3024 Reading

~~10 46 35 275.5~~

10 47 27 339.0

15 47 40

44 9.3

57 341.0

48 8 8.8

L.V. 30.3

27.8

58.1 + 2.93 - 440 + 3.67

Cor.

M.T.

15 52 53

~~10 46 35 275.5~~

10 47 40 341.0

seen

- 127

53 05

12 339.4

18

18 12.2

32

37 326.3

46

47 27.2

54 00

57 314.4

10

15 36.3

24

25 312.8

38

42 37.5

53

55 367.2

55 08

58 11 42.3

20

24 306.1

33

37 43.3

44

49 304.2

10 56 38 44.4

32.8 65.6

+ 2.66

115 + 320

45.9 91.8

+ 1.87

102 2.81

60.9 121.8

+ 1.15

84 1.79

72.8 145.6

+ 0.66

74 1.10

81.9 163.8

+ 0.31

60 1.05

83.5 167.0

+ 0.25

50 0.89

84.7 169.4

+ 0.20

36 0.84

90.3 180.6

179.4

- 0.01

22 0.63

95.1 190.2

169.8

- 0.19

- 0.7 0.85

96.2 192.4

167.6

- 0.24

+ 0.8 0.80

97.2 194.4

166.6

- 0.27

20 0.87

99.1 198.2

161.8

- 0.35

33 0.79

100.2 200.8

159.6

- 0.39

44 + 0.75

220

Nov. 11-1916

15 55 56	10 57 09	301.3	+56	10 3.1	206.2	1538	-0.50	+0.24
56 04	20	49.5	64	10 8.2	216.4	1436	-0.70	+0.04
14	29	300.2	74	10 9.3	210.6	141.4	-0.75	-0.07
15 56 24	40	57.0	84	11 0.8	221.6	138.4	-0.81	-0.17
	53	301.2						
15 58 02	58 04	49.5		10 8.3			+182	
	20	301.3		107.5				
	31	48.8		215.8				
				144.2	-0.69	+0.05		
	46	300.0						
15 58 50	58	46.0		106.0		170		
	59 11	301.2		107.0		+220		
	23	48.2		213.0				
				147.0	-0.63	+0.11		
	37	298.9						
	50	46.2		107.3				
59 48	11 00 5	300.8		106.9				
	18	47.7		214.2				
				145.8	-0.66	+0.08		
	31	303.0						
	42	48.9		105.9				
16 00 40	54	298.0		112.0				
	01 7	50.0		217.9				
				142.1	-0.73	+0.01		
	22	299.8						
	31	48.9		109.5				
0 27	42	299.8		110.4				
	54	50.2		219.9				
				140.1	-0.77	-0.03		
	02 46	299.2						
	59	450.8		111.2				
16 02 53	03 09	299.1		109.7				
	11 13 18	48.8		220.9				
				139.1	-0.79	-0.05		

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4	11 05-25	298.2	111.9	
16 05 36	38	30.1		576
	50	301.1	108.8	+636
	06 01	49.9	220.7	
			139.3	-0.79 -0.04

	13	298.0		
5	23	57.2	113.2	3
16 06 36	38	300.0	109.8	+646
	11 06 49	49.8	223.0	-0.23 -0.09
			137.0	

Troubled by clouds, especially at the beginning of obs.

Flod 3424 = 11:08:09.5-
 Light on roof = 11:07:00.0

4745
 Phetw ledgered to Lane

10.0 +

665-1
668*

121 665
 32
 125
 12
 54

64.439
64.566
64.693

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