

1912phae.proj..613B

KG
11365
612

15
INCH

KG-11365.612



KG 11365.612



2

Tuesday, December 10, 1912.

S. I. B. and B. C. B. observe.

Comparison of 60-inch and 15-inch telescopes.

Region H. B. C. 1, tested with both instruments.

Using 60 inch from 4.45 to 5.30 East Time.

Images with 60 inch show but double A : "A"
distinctly seen. Power about 300.

Star 25 readily seen and Star 30 seen 31 not seen

With 15 inch power 103 double not readily separated
Star 25 seen with difficulty, more readily seen
with power 250 which shows double readily
Both observers find 25 and 30 near limit of
visibility in two instruments, respectively.

December 12. 1912.

9 13 30

S. Ursa majoris

Index right and blaw

123.5

107.2

- 0.42

230.7

94.8

202.0

308.5

Compass star disappearing

43.3

- 0.46

122.1

237.1

115.0

91.6

- 0.51

309.0

206.6

40.6

Index reversed

207.0 142.1

327.0 211.8

34.7

134.0

120.0

99.8

219.8

- 0.77

- 0.74

216.7

315.1

26.9

145.3

98.9

118.4

217.3

- 0.72

$$\begin{array}{r} 9\ 43\pm \\ \hline 9\ 28\pm \end{array}$$

- 0.60

8.81

S. U. maj

8.21

S Ursae maj

Dec. 19[?] 1912

pm

Below 230 circle

42.1

151.0

231.1

3 25.4

46.8

2.4
112.9

219.8

331.7

108.9

94.3

203.2

- 0.44

9

46.1 ?

111.9

208.0

- 0.54

- 0.49

The 4 on the circle is 1
and easily mistaken for 1

above 50.

309.5

65.0

133.3

232.8

317.7

52.5

134.1

243.8

115.5

99.5

215.0

- 0.67

94.8

109.7

204.5

- 0.47

- 0.57

- 0.53

8.81

8.28

18

S. Ursae maj

Abaco 50

309.1

113.0

62.1

100.1

135.1

- 0.64

235.4

213.1

319.0

- 0.60

52.5

93.5

128.7

115.8

244.5

209.3

- 0.56

Belaw 230

38.9

116.9

155.8

93.0

230.9

209.9

- 0.57

323.9

49.6

95.3

- 0.56

144.9

113.6

- 0.55

240.3

208.9

333.9

10.30 Am

S. I. B. obsr
FEN Recorder,

- 0.58

881

R A 8^h

E

8.23

Dec +60.1

night with moon + phase.

8.28

8.23

210.1

322.0

37.1

138.0

10 00

215.4

Instrument stopped by
pair

S. I. B. Obsr.

F. E. H. Recorder.

6 Page 32

S Ursae Maj
Circle 50 above.

January 9. 1913.

1005 PM

124.5

comp. star disappearing.

248.1

317.4

123.6

61.3

103.9

-.93

135.0

227.5

235.9

-.88

304.0

100.9

65.7

121.7

-.83

222.6

Circle 230 below.

220.0

113.0

333.0

99.6

-.63

49.1

212.6

148.7

229.1

-.59

324.9

95.8

39.2

112.9

-.55

152.1

208.7

-.74

8.81

8.07

Circle 230 below.

220.7		
332.4	111.7	
49.6	<u>96.4</u>	- .54
146.0	208.1	
231.8		- .56
326.0	94.2	
41.1	<u>116.7</u>	- .59
157.8	210.9	

Circle 50 above.

302.0	128.4	
70.4	<u>106.4</u>	- 1.08
133.9	234.8	
240.3		- 1.06
313.0	107.2	
60.2	<u>126.4</u>	- 1.05
123.5	233.6	
249.9		
		- 0.81
		<u>8.81</u>
		8.00

Professor Bailey Obs
Hinkley Recorder.

8.07
8.00

8 Page 38

January 13. 1913

8 45-

Circle 50 above.

Prof. Bailey Obsr.

Hinkley Recorder.

128.1

248.0

314.9

60.1

131.8

238.8

307.2

63.8

119.9

105.2

225.1

107.0

116.6

223.6

- 0.88

- 0.85

- 0.86

Circle 230 below.

216.0

338.9

45.0

148.9

- 221.6

329.0

39.3

159.4

122.9

103.9

226.8

107.4

120.1

227.5

- 0.91

- 0.92

- 0.93

- 0.89

8.81

7.92

Circle 230 below.

$$\begin{array}{r}
 218.4 \cdot \quad 114.7 \cdot \\
 333.1 \cdot \quad \underline{107.5 \cdot} \\
 42.6 \cdot \quad 222.2 \cdot
 \end{array}
 \quad -0.82 \cdot$$

$$150.1 \cdot$$

$$226.8 \cdot$$

$$330.5 \cdot \quad 103.7 \cdot \quad -0.83 \cdot$$

$$\begin{array}{r}
 36.6 \cdot \quad \underline{119.7 \cdot} \\
 156.3 \cdot \quad 223.4 \cdot
 \end{array}
 \quad -0.84 \cdot$$

Circle 50 above.

$$\begin{array}{r}
 127.8 \cdot \quad 120.1 \cdot \\
 247.9 \cdot \quad \underline{102.5 \cdot} \\
 315.3 \cdot \quad 222.6 \cdot
 \end{array}
 \quad -0.83 \cdot$$

$$57.8 \cdot \quad -0.84$$

$$134.2 \cdot$$

$$238.5 \cdot \quad 104.3 \cdot$$

$$\begin{array}{r}
 306.0 \cdot \quad \underline{119.1 \cdot} \\
 65.1 \cdot \quad 223.4 \cdot
 \end{array}
 \quad -0.84 \cdot$$

$$\begin{array}{r}
 \text{NA } 7^h 30^m \text{ E Dec. } +61.5 \cdot \quad -0.84 \cdot \\
 \hline
 8.81 \cdot \\
 \hline
 797 \cdot
 \end{array}$$

$$\begin{array}{r}
 7.92 \\
 7.97
 \end{array}$$

10 Page 58

February 1, 1913.

Prof Bailey Obs.

Hinkley Recorder.

8 55.

S Ursae Maj.

126.9.

Circle 50 above.

250.2.

123.3.

Com. star disappearing.

310.6.

110.3

- 1.05.

60.9.

233.6.

130.8.

- 0.92.

239.0.

108.2.

112.8

313.8.

221.0.

- 0.79.

66.6.

Circle 230 below.

219.2.

115.8.

335.0.

99.8

- 0.69.

45.2.

215.6.

145.0.

226.4.

- 0.74.

329.6.

103.2.

40.2.

118.1

- 0.80.

- 0.83.

- 158.9.

221.3.

8.81

Circle 230 below.

7.98.

218.2.

119.1.

337.3.

103.3

45.9.

222.4.

- 0.82.

149.2.

- 0.78.

228.0.

328.0.

100.0.

37.9.

117.6

- 0.73.

155.5.

217.6.

Circle 50 above.

122.2.

129.7.

251.9.

103.5.

-1.03.

315.0.

232.2.

58.5.

-1.00.

133.6.

106.4.

240.0.

123.8.

-0.98.

304.8.

230.2.

68.0.

- 0.89.- 8.81.

7.92.

Seeing poor - strong wind.

7.98

7.92

Thursday Feb'y 13. 1913.

8

S Ursae Maj. circles 50 above.

8 24.

124.0.

125.6.

250.6.

104.0.

- .97.

314.5.

229.6.

58.5.

- 0.88.

135.4.

102.2.

237.6.

119.2.

308.6.

221.4.

- 0.80.

67.8.

Circles 230 below.

226.0.

102.1.

328.1.

92.5.

- 0.28.

47.1.

194.6.

139.6.

- 0.34.

226.1.

93.3.

319.4.

107.1.

44.0.

200.4.

- 0.39.

151.1.

- 0.61.

Circles 230 below.

222.9.

103.3.

8.81.

326.2.

93.9.

8.20.

49.4.

197.2.

- 0.33.

143.3.

- 0.33.

229.6.

89.4.

319.0.

108.0.

43.9.

197.4.

- 0.33.

151.9.

circle 50 about

308.3

64.9

137.5

237.1

116.6

99.6

216.2

- 0.70

- 0.72

133.5

237.6

309.2

63.6

104.1

114.4

218.5

- 0.74

- 0.52

8.81

8.29

9 05
f 44

f 34

f 54

6^h 5 East + 61.1

8.20

8.29

Thurs. Feby 13.

E aurigae

circle 350 above

9 35

101.4

271.9

282.8

90.4

283.5

90.0

101.9

271.9

170.5

167.6

338.1

- 5.09

- 5.02

166.5

170.0

336.5

- 4.94

circle 170 below

14.1

176.9

198.2

353.6

16.1

173.8

197.0

356.0

162.8

155.6

318.4

- 3.69

- 3.64

157.7

159.0

316.7

- 3.59

- 4.33

7.2

2.88

circle 170 below

12.4

176.6

197.9

354.2

15.5

176.1

199.0

354.2

164.2

156.3

320.5

- 3.79

160.6

155.2

315.8

- 3.67

- 3.55

Circle 350 above

102.0	168.7	
270.7	164.8	-4.67
285.3	333.5	
90.1		-4.62
103.5	166.0	
269.5	166.3	-4.58
283.5	332.3	-4.14
89.8		7.21
	3h 2 + 44.0	307

1012

954

944

1004

Professor Bailey Obs.
Hinkley Recorder.

Sky with thin clouds, est low, and
moon. Very poor.

14 Page 102

Tuesday Feby 25. 1913.

Prof Bailey Obsr Hinkley Res
S Ursae Maj. Circle 50 above.

8 22.	314.9.		
	61.0.	106.1.	
	143.8.	<u>91.9.</u>	
	235.7.	198.0.	- 0.34.
	322.3.		
	59.1.	96.8.	- 0.38.
	137.1.	<u>104.9.</u>	
	242.0.	201.7.	- 0.41.

Circle 230 below.

233.9.	90.6.		
324.5.	<u>80.0.</u>		
58.9.	170.6.	+ 0.19.	
138.9.			
236.8.	81.0.		+ 0.16.
- 317.8.	<u>92.4.</u>		
53.0.	173.4.	+ 0.13.	
145.4.			
			- 0.22
			- 0.11
			8.81
			<u>8.70</u>
230.6.	94.8.		
325.4.	<u>83.0.</u>		
56.0.	177.8.	+ 0.04.	
139.0.			
237.1.			+ 0.06.
320.0.	82.9.		
51.9.	<u>93.4.</u>		
145.3.	176.3.	+ 0.07.	

Circle 50 above.

$$\begin{array}{r}
 131.2 \cdot \\
 240.5 \cdot \\
 322.0 \cdot \\
 55.8 \cdot
 \end{array}
 \begin{array}{r}
 109.3 \cdot \\
 \underline{93.8 \cdot} \\
 203.1 \cdot
 \end{array}
 \begin{array}{r}
 -0.44 \cdot
 \end{array}$$

$$\begin{array}{r}
 140.9 \cdot \\
 234.5 \cdot \\
 315.8 \cdot \\
 60.3 \cdot
 \end{array}
 \begin{array}{r}
 93.6 \cdot \\
 \underline{104.5 \cdot} \\
 198.1 \cdot
 \end{array}
 \begin{array}{r}
 -0.39 \cdot \\
 -0.34 \cdot \\
 -0.16 \cdot
 \end{array}$$

$$\begin{array}{r}
 8.85 \cdot \\
 \underline{8.65 \cdot}
 \end{array}$$

$$\begin{array}{r}
 8 \ 53. \\
 \hline
 8 \ 38
 \end{array}$$

$$\begin{array}{r}
 8 \ 30 \\
 8 \ 40
 \end{array}$$

$$R.A. \ 6 \ 47 \cdot + 61.2 \cdot$$

$$\begin{array}{r}
 8.70 \\
 8.65 \cdot
 \end{array}$$

Monday march 17. 1913

δ Urae majoris

8 30

Circle 50 above.

Prof Bailey obs
Hinkley Road

149.2

79.7

128.9

73.2

331.3

152.9 + 0.52

44.5

154.2

74.6

+ 0.53

228.8

77.0

+ 0.54

330.0

151.6

47.0

Circle 230 below

255.2

57.8

313.0

62.9

+ 1.18

67.1

120.7

130.0

246.1

63.8

+ 1.01

309.9

72.7

61.5

136.5 - + 0.84

+ 0.77

134.2

8.81

9.58

246.8

65.9

312.7

66.8

63.2

132.7 + 0.92

130.0

245.9

64.9

+ 0.85

310.8

74.7

60.4

139.6 + 0.78

135.1

114

circle 50 above.

149.1

226.4

335.4

42.0

155.0

221.9

329.3

43.2

77.7

66.6

144.3

+0.69

66.9

73.9

140.8

+0.76

+0.72

+0.78

8.81

9.59

9 02

8 46

8 38

8 54

9.58

9.59

1912phae.proj..613E

18 Page 120

April 1. 1913

Prof. Bailey Obsr
Hinkley. Rdr.

SM Draconis 113267.

Com. star disappearing.

Circle 72 above.

7 55	236.0	80.1	
	316.1	98.7	
	49.4	178.8	+ 0.02
	148.1		
	232.4	93.1	+ 0.07
	325.5	80.5	
	57.3	173.6	+ 0.12
8.02	137.8		

Circle 252 below.

	320.9	90.5	
	51.2	104.1	
	138.0	194.6	- 0.28
	242.1		
	317.9		- 0.14
	56.1	98.2	
	146.9	81.6	
808	228.5	179.8	0.00 - 0.04
			8.94
817	325.1	85.3	pmf (8.02) 8.90
	50.4	101.5	- 0.13
	136.9	186.8	
	238.4		- 0.06
	320.2	97.1	
	57.3	81.7	
	149.4	178.8	+ 0.02
825	231.1		

Circle 72 above

826

237.1

81.8

318.9

94.1

50.1

175.9

+ 0.08

144.2

232.3

92.0

+ 0.07

324.3

84.8

57.4

176.8

+ 0.06

831 ?

142.2

0.00

8.94

(8:24) - 8.94

836

236.1

77.9

314.0

90.4

54.0

144.4

168.3

+ 0.22

231.3

94.0

+ 0.18

325.3

79.0

58.2

173.0

+ 0.13

137.2

Circle 252 below

144.1

88.0

232.1

93.1

321.1

181.1

- 0.02

54.2

139.2

96.9

- 0.04

236.1

86.1

+ 0.07

324.3

183.0

- 0.06

(8:42) 9.01

846

50.4

8953 ?

141.0

92.0

233.0

87.9

325.0
52.9179.9

0.00

52.9 hat an free base

143.0	93.1	
236.1	83.3	+ 0.04
325.2	<u>176.4</u>	+ 0.07
48.5		

Circle 72 above

903

60.9	77.2	
138.1	84.9	
236.3	<u>162.1</u>	+ 0.34
321.2		
50.1	93.2	+ 0.19
143.3	84.6	+ 0.12
235.9	<u>177.8</u>	+ 0.04
320.6		(9.03) 9.0

913

921

59.7	75.6	
135.3	86.9	
235.6	<u>162.5</u>	+ 0.33
322.5		
54.4	87.5	+ 0.36
141.9	72.1	
242.1	<u>159.6</u>	+ 0.39
314.2		

Circle 252 below

321.8	88.6	
50.4	91.1	
143.0	<u>179.7</u>	+ 0.01
234.1		+ 0.10
324.2		+ 0.23
51.1		8.94
		9.1
		(9.28)

935

~~145.2~~

229.0

86.9

83.8

170.7 + 0.18

942

327.8

46.0

88.2

149.2

85.8

235.0

174.0 + 0.11

326.0

50.0

84.0

+ 0.15

144.9

86.0

230.9

170.0 + 0.19

circle 72 above.

239.4

317.1

55.3

77.7

84.2

161.9 + 0.34

139.5

236.6

323.0

58.9

135.2

86.4

76.3

162.7

+ 0.33

+ 0.34

+ 0.24

8.94

(9.49)

9.18

956

1006

~~136.8~~ 237.5

314.0

58.1

142.2

236.0

324.1

58.9

134.3

76.5

84.1

160.6 + 0.37

88.1

75.4

163.5 + 0.31

+ 0.34

Circle 252 below

149.3	76.7
228.0	88.0
322.6	<u>166.7</u> + 0.25
50.8	

146.2

233.0

323.4

46.1

86.8

82.7

169.5 + 0.20

+ 0.22

+ 0.28

8.94

9.22

(10:14)

10 21

10 27

145.8

227.4

323.0

51.2

143.1

229.9

330.1

49.3

82.0

88.2

170.2 + 0.19

86.8

79.2

166.0 + 0.27

+ 0.23

Circle 72 above

61.8

138.1

238.2

318.5

56.9

145.5

242.1

314.9

76.3

80.3

156.6 + 0.45

+ 0.40

+ 0.32

8.94

9.26

(10:34)

10 42

RA

+ 67.5

21 0 02

H 34

88.6

72.8

161.4 + 0.35

Telescope East of pier
circle 72 above

11 04

146.3
231.0
323.6
51.1
148.6

84.7
87.6
172.3 + 0.14

+ 0.08

231.9

83.3

96.3

328.2

179.6 + 0.01

48.2

circle 252 below

59.2

139.0

79.8

239.0

78.0

317.0

157.8 + 0.42

55.9

137.9

82.0

238.9

74.1

313.0

156.1 + 0.46

+ 0.44

+ 0.26
8.94
9.20

(11:12)

11 20

11 27

59.5

134.1

74.6

242.1

81.4

323.5

156.0 + 0.46

59.4

80.6

140.0

70.8

241.7

151.4 + 0.55

312.5

+ 0.50

circle 72 above

332.8

72.1

44.9

81.9

147.5

154.0

+ 0.50

+ 0.48
8.94
9.42
+ 0.46
(11:34)

11 41

~~229.4~~ had a prev. vote

323.4

89.1

52.5

68.2

152.4

157.3 + 0.43

220.6

11 49

331.5

75.3

46.8

83.4

146.1

158.7 + 0.41

229.5

330.3

79.8

+ 0.46

50.1

73.3

151.2

153.1 + 0.51

224.5

244.0

circle 252 below

316.3

72.3

57.8

79.2

137.0

151.5 + 0.55

239.6

315.3

75.7

61.2

75.3

+ 0.56

136.5

151.0

+ 0.56
(11:56)+ 0.51
8.94
9.45

1203

1213

242.1

74.4

316.5

78.7

58.3

153.1

+ 0.51

137.0

239.2

319.5

61.8

80.3

135.0

73.2

153.5

+0.51

+0.51

Circle ~~252~~ 72 above.

148.5

77.3

225.8

78.3

328.6

155.6

+0.47

46.9

+0.46

151.9

78.9

230.8

77.1

331.3

156.0

+0.46

(12:18)

+0.48

8.94

9.42

48.4

2 24

2 31

153.9

69.1

223.0

68.5

331.1

137.6

+0.82

39.6

147.4

80.6

+0.66

228.0

72.2

+0.50

332.0

153.8

44.2

Circle 252 below

61.8

76.0

137.6

74.3

241.8

150.3

+0.57

316.1

+0.54

57.4

81.1

138.5

73.0

242.1

154.1

+0.50

(12:37)

+0.60

8.94

9.54

315.1

12 23

128

12 52

241.0

313.9

59.6

141.5

239.6

318.5

64.9

135.0

72.9

81.9

154.8

+0.48

+0.54

78.9

70.1

149.0

+0.59

circle 72 above,

327.8

52.0

~~226.5~~ 147.6

329.1 228.5

331.5

49.6

150.8

224.5

84.2

80.9

165.1

+0.28

+0.42

+0.4

8.9

9.4

78.1

73.7

151.8

+0.54

(12.59)

1 06

1 08

331.5

43.5

146.8

226.3

328.5

47.5

151.2

226.0

72.0

79.5

151.5

+0.55

+0.52

79.0

74.8

153.8

+0.50

circle 252 below

241.0

315.0

61.5

138.8

74.0

77.3

151.3

+0.55

+0.52

+0.8

9

~~138.8~~ prev. page

241.8

316.8

61.1

135.5

75.0

74.4

149.4 +0.59

242.5

311.5

59.5

138.9

240.1

318.0

63.5

136.0

69.0

79.4

148.4

+0.61

+0.59

77.9

72.5

150.4

+0.57

Circle 72 above

149.5

224.2

336.6

45.5

150.4

226.5

334.5

39.0

74.7

68.9

143.6

+0.70

+0.72

76.1

65.5

141.6

+0.74

$$\begin{array}{r}
 +0.66 \\
 +8.94 \\
 \hline
 9.60
 \end{array}$$

(13.28)

35

130

Wednesday April 2, 1913.

SU Draconis 113267

7 46

65.0

circle 72 above

661

131.1

Prof. Bailey
Hinkley

733

242.2

139.4 + 0.79

315.5

0.

0.82

61.0

711

132.1

648

+ 0.86

246.0

135.9

310.8

mean = +0.64

89.4

332.5

circle 252 below.

695

9.58

42.0

827

+ 0.53

146.8

152.2

229.5

0.45

322.9

831

48.0

776

147.5

160.7 + 0.37

225.1

blends over region near
center.

7 59

) 52

20 Page 136

Monday June 2. 1913.

S Ursae Majoris Prof Bailey Obs
Circle 50. Hinkley Redr

8 49.

232.0.	45.0.	
277.0.	<u>48.0.</u>	
49.9.	93.0.	1.83.
97.9.		
229.9.		1.78.
285.1.	55.2.	
50.5.	<u>42.3.</u>	
92.8.	97.5.	1.72.

Circle 230.

131.6.	65.4.	
197.0.	<u>57.4.</u>	1.13.
314.9.	122.8.	
12.3.	57.4.	1.20.
136.4.	<u>59.2.</u>	
193.8.	116.6.	1.27.
315.1.		
-14.3.		

$$\begin{array}{r} 1.49. \\ 8.81. \\ \hline 10.30. \end{array}$$

	62.4.	
132.0.	<u>52.7.</u>	1.34.
194.4.	115.1.	1.30.
318.5.		1.37.
11.2.		
138.8.	51.0.	
189.8.	<u>60.9.</u>	
313.0.	111.9.	
13.9.		

Circle 50.

51.8.
100.0.

δ Ursae Majoris

231.1	48.2	
275.8	44.7	
57.8	92.9	1.84
95.7	43.9	
227.2	56.7	1.64
283.9	100.6	

1.74

1.54
8.81
10.35

Circle 50

44.9	57.3	
102.2	50.0	1.48
229.5	107.3	
279.5		

1.56

48.4	45.4	
93.8	55.8	1.63
226.3	101.2	

282.1

Circle 230

134.1	62.0	
196.1	53.7	1.29
317.4	115.7	
11.1	55.9	
136.2	64.0	1.19
192.1	119.9	

1.24

1.40
8.81
10.21

312.0

16.0

131.1	62.3	
193.4	56.8	1.21
315.3	119.1	
12.1		
136.0		

197.0

313.1

14.0

circle 50

226.2

277.0

52.4

95.4

232.2

280.0

45.0

99.2

56.0

60.9

116.9 1.26

1.24

50.8

43.0

93.8 1.81

47.8

54.2 1.61

102.0

$$\begin{array}{r} 1.71 \\ 1.48 \\ 8.81 \\ \hline 10.29 \end{array}$$

$$\begin{array}{r} 946 \\ 918 \\ \hline \end{array}$$

Dec 61.6 R 9 2.06 West

903

918

932

Values of Cunningham's work.

10.30 +1

10.35 +6

10.21 -8

10.29 0

11.15 ±.04

10.29

mean

June 5th. 1913

SU Dracones

935-

Circle 72

306.0

24.0

126.0

202.0

~~22.0~~

310.1

22.4

121.1

206.1

37.4

116.4

222.3

291.8

38.6

110.9

216.1

296.0

78.0

76.0

154.0

72.3

85.0

157.3

79.0

69.5

148.5

72.3

79.9

152.2

Prof Bailey obs

Hinkley Reeds

0.50

0.46

0.43

0.60

0.53

0.56

0.51

8.94

9.45-

950.

956

212.9

294.0

43.2

107.6

220.3

288.2

37.3

114.2

304.8

22.5

124.0

200.1

81.1

64.4

145.5-

67.9

76.9

144.8

77.7

76.1

153.8

0.66

0.68

0.50

0.50

0.58

8.94

9.52

Circle 72

138
140

10 10 ?

$$\begin{array}{r} 310.4 \\ 20.9 \\ 123.3 \\ 206.5 \end{array}$$

$$\begin{array}{r} 70.5 \\ 83.2 \\ \hline 153.7 \end{array} \quad 0.50$$

10 13

$$\begin{array}{r} 126.0 \\ 204.0 \\ 309.8 \\ 18.4 \\ 126.9 \\ 200.4 \\ 306.3 \end{array}$$

$$\begin{array}{r} 78.0 \\ 68.6 \\ \hline 146.6 \end{array} \quad 0.64 \quad 0.60$$

$$\begin{array}{r} 73.5 \\ 77.9 \\ \hline 151.4 \end{array} \quad 0.55$$

24.2

Circle 255

$$\begin{array}{r} 217.5 \\ 292.9 \\ 39.1 \\ 110.9 \\ 224.0 \\ 283.5 \\ 34.2 \\ 112.4 \end{array}$$

$$\begin{array}{r} 75.4 \\ 71.8 \\ \hline 147.2 \end{array} \quad 0.63 \quad 0.72$$

$$\begin{array}{r} 59.5 \\ 78.2 \\ \hline 137.7 \end{array} \quad 0.82 \quad \begin{array}{r} 0.66 \\ 8.94 \\ \hline 9.60 \end{array}$$

10 22

10 29

$$\begin{array}{r} 36.0 \\ 111.0 \\ 212.5 \\ 285.1 \\ 38.3 \\ 111.2 \\ 214.2 \\ 296.0 \end{array}$$

$$\begin{array}{r} 75.0 \\ 72.6 \\ \hline 147.6 \end{array} \quad 0.62 \quad 0.55$$

$$\begin{array}{r} 72.9 \\ 81.8 \\ \hline 154.7 \end{array} \quad 0.48$$

Circle 72

~~14.6~~~~129.1~~

123.4

204.1

306.1

23.5

132.1

200.3

300.0

29.0

80.7

77.4

158.1

68.2

89.0

157.2

0.42

0.43

0.42

0.48

~~9.60~~

8.94

9.42

1053

124.1

210.4

307.1

21.2

130.0

199.0

303.3

27.1

86.3

74.1

160.4

69.0

83.8

152.8

0.37

0.52

0.44

Circle 252

217.8

294.0

38.9

108.3

221.9

288.3

35.3

112.5

76.2

69.4

145.6

66.4

77.2

143.6

0.66

0.70

0.68

0.56

8.94

9.50

142

11 14

215.8
294.2
42.0

78.4
62.1
140.5 - 0.76

0.75-

104.1
219.6
290.0
38.8
110.2

70.4
71.4
141.8 0.74

Circle 72

302.1
27.1
138.0

85.0
65.0
150.0 0.58

0.457

203.0
301.1
25.4

84.3
78.9
163.2 0.32

0.600
0.94
8.94
9.5410

11 31

206.2

Decl +68.0

R.A. 5 12 24.5

sky poor. increasing haze + cloud

obs.	P.M. E.T.	mag
9 ^h 42 ^m	9.45	
10 3	9.52	
10 18	9.60	
10 39	9.42	
10 58	9.50	
11 22	9.54	

these obs. fail at computed min

Max. due at 16^h 22. ±
prev. " " 0 32

July 1, 1913

δ Ursae majoris

Prof Bailey obs
Hinkley Recorder

Circle 50

69.4

146.2

243.0

333.3

60.0

155.0

250.1

331.1

76.8

~~96.8~~

90.3

167.1 + 0.24

95.0

81.1

176.1 + 0.07

+ 0.16

Circle 230

150.0

242.1

322.5

64.2

149.1

246.0

325.9

68.2

157.8

243.8

327.5

66.1

140.8

250.2

335.1

62.7

92.1

101.7

193.8 - 0.26

96.9

102.3

199.2 - 0.37

- 0.32

- 0.08

8.81

8.73

92.0

98.6 - 0.20

190.6

109.4

87.6

197.0 - 0.32

- 0.26

926

Circle 50

248.0

325.8

59.9

149.1

244.5

336.8

68.6

143.9

77.8

89.2 + 0.25

167.0

+ 0.24

92.3

75.3 + 0.24

167.6

- 0.01

8.81

8.80

930

932

249.2

95.0 326.8

59.2

151.9

243.2

332.6

65.5

147.4

151.4

244.6

325.2

65.9

145.8

249.3

331.1

61.2

77.6

92.7

170.3 + 0.18

+ 0.17

89.4

81.9

171.3 + 0.16

93.2

100.7

193.9

- 0.26

- 0.26

103.5

90.1

193.6

- 0.26

- 0.01

8.81

8.80

943

R A 356

Dec + 61.5

$$\begin{array}{r} 8.73 \\ 8.40 \\ 8.77 \\ \hline 8.77 \end{array}$$

Tuesday July 8. 1913

SU Draconis

Circle 72

956

157.8

239.8

339.8

55.2

161.1

230.0

337.2

61.9

82.0

75.4

157.4

68.9

84.7
153.6Prof Bailey Obs.
Hunkley Reader.

+ 0.43

+ 0.46

+ 0.50

Circle 252

250.2

330.0

74.3

138.1

251.3

321.3

68.2

144.0

79.8

63.8

143.6

70.0

75.8

145.8

+ 0.70

+ 0.66

$$\begin{array}{r}
 + 0.68 \\
 + 0.57 \\
 + 8.94 \\
 \hline
 9.51
 \end{array}$$

#

245.9

325.8

72.8

141.5

251.2

321.1

69.4

145.1

79.9

68.7

148.6

69.9

75.7

145.6

+ 0.60

+ 0.66

+ 0.63

146

Circle 72

335.0

57.9

160.8

231.2

339.9

57.2

157.3

240.1

10 21

82.9

70.4

153.3

+0.51

+0.50

+0.56

+8.94

+9.50

72.3

82.8

155.1

+0.48

334.0

60.4

162.3

234.3

335.2

54.8

158.8

236.8

10 23

86.4

72.0

158.4

+0.41

+0.42

79.6

78.0

157.6

+0.43

Circle 252

64.1

144.7

252.1

322.9

74.6

139.4

229.8

329.0

10 34

80.6

70.8

151.4

+0.55

+0.62

+0.52

+8.94

+9.41

64.6

79.2

143.8

+0.70

#

36

69.0
143.4
252.9
324.3
73.3

142.2
246.4
325.6

leucile 72

336.3
60.3
159.0
232.9
341.3
54.9
152.0
239.9

74.4
71.4
145.8 +0.66

68.9
79.2
148.1 +0.61

84.0
73.9
157.9 +0.42

73.6
87.9
161.5 +0.35

#

+0.64

+0.38
1
+0.58
8.94
+9.56
45

46

339.9
58.1
158.8
233.9
341.1
48.8
152.2
238.0

78.2
75.1
153.3 +0.57

67.7
85.8
153.5 +0.51

+0.51

48

lucile 252

$$\begin{array}{r} 74.9 \\ 149.0 \\ 253.1 \\ 322.2 \end{array}$$

$$\begin{array}{r} 74.1 \\ 69.1 \\ \hline 143.2 \end{array}$$

+0.71

$$\begin{array}{r} 71.2 \\ 143.1 \\ 248.0 \\ 325.1 \end{array}$$

$$\begin{array}{r} 71.9 \\ 77.1 \\ \hline 149.0 \end{array}$$

+0.59

$$\begin{array}{r} +0.65 \\ +0.58 \\ 8.94 \\ \hline 9.52 \end{array}$$

11 02

#

11 06

$$\begin{array}{r} 69.1 \\ 145.3 \\ 255.3 \\ 320.7 \\ 73.0 \end{array}$$

$$\begin{array}{r} 76.2 \\ 65.4 \\ \hline 141.6 \end{array}$$

+0.74

$$\begin{array}{r} 141.1 \\ 244.9 \\ 324.4 \end{array}$$

$$\begin{array}{r} 68.1 \\ 79.5 \\ \hline 147.6 \end{array}$$

+0.62

+0.68

lucile 72

$$\begin{array}{r} 156.4 \\ 239.9 \\ 342.0 \\ 55.3 \end{array}$$

$$\begin{array}{r} 83.5 \\ 73.3 \\ \hline 156.8 \end{array}$$

+0.44

$$\begin{array}{r} 158.3 \\ 236.2 \\ 340.5 \\ 56.2 \end{array}$$

$$\begin{array}{r} 77.9 \\ 75.7 \\ \hline 153.6 \end{array}$$

+0.50

$$\begin{array}{r} +0.47 \\ +0.58 \\ 8.94 \\ \hline 9.52 \end{array}$$

11 15

R A #
7h 30m
and +68.0

DL Dracoris
July 8

P.M.	mag.	
10:00	9.51	+ 02
10:16	9.50	+ 01
10:28	9.46	- 03
10:41	9.45	- 04
10:55	9.52	+ 03
11:10	9.52	+ 03
	<u>296</u>	
mean	9.49	

22

Wednesday Sept 3. 1913

S Ursae Majoris Prof Bailey Obsr
Circle 50 Huikley Redr.

9 23

290.9	109.2	
40.1	+84.7	-0.46
119.3	<u>203.9</u>	
214.0		-0.46
295.8	93.7	
29.0	110.6	-0.46
111.4	<u>204.3</u>	
222.0		

Circle 230

191.8	122.1	
313.9	117.3	-1.18
14.5	<u>239.4</u>	
131.8		-1.11
194.0	123.8	
317.8	109.0	-1.04
17.5	<u>232.8</u>	
126.5		

-0.78
8.81
<u>8.03</u>

941

942

201.1	109.0	
310.1	123.8	-1.04
15.2	<u>232.8</u>	
139.0		0.98
193.5	119.9	
313.4	106.6	-0.91
20.9	<u>226.5</u>	
127.5		
288.1	Circle 50 ?	
36.9		

Wednesday Sept 3. 1913²³

958

118.0

210.5

301.5

29.1

110.9

221.1

102.8

92.5

195.3

87.6

110.2

197.8

-0.29

-0.32

-0.34

0.65

881

8.16

8h

7^m

Next sec + 61.9

8.16

8.03

Light obs.

Wednesday Sept 10, 1913

S Ursae Majoris

Prof. Bailey Obs
Hunkley Rr.

735

113.3 circle 50

220.3 107.0
295.1 93.5
200.5

- 0.39

28.6

- 0.50

114.1

102.7

216.8

108.8

- 0.60

290.3

211.5

39.1

- circle 230

195.1

119.1

314.2

104.8

21.2

223.9

- 0.85

126.0

- 0.80

200.2

104.4

304.6

114.1

- 0.74

17.8

218.5

750

131.9

752

P i

195.7

116.4

- 0.89

312.1

109.3

- 0.83

19.2

225.7

128.5

- 0.77

201.5

105.4

306.9

114.6

17.1

220.0

131.7 circle 50

112.1

108.8

- 0.63

220.9

104.0

114.5

212.8

Wednesday Sept 10. 1913

25

808

218.5
296.5
33.9
113.3
221.7

97.4
108.4
205.8

- 0.49

0.56
0.70
8.81
8.11

809

109.6
222.4
295.1
28.3
118.2
216.3
290.7
37.1

112.8
93.2
206.0

- 0.50

- 0.48

37.1 *leisure* 230

194.7
315.3
23.1
126.8

120.6
103.7
224.3

- 0.86

- 0.82

199.2
306.1
18.5
132.6

106.9
114.1
221.0

- 0.79

0.65
8.81
8.16

820

7^h 16^m *break* + 61.7

8.16
8.11
8.16

Tuesday February 24. 1914

Prof. Bailey obs.
Kinckley Rev.

S Ursae Majoris

Circle 50.

Comp star disappearing

7 42

228.0
339.5
46.2

111.5

110.2

221.7 - 0.81

156.4

- 0.79

228.3

107.9

336.2

111.4

- 0.77

47.1

219.7

158.9

320.0

Circle 230

66.9

106.9

103.8

138.2

210.7

- 0.59

242.0

- 0.65

320.9

105.3

66.2

111.2

- 0.71

135.8

216.5

- 0.72

8.81

8.09

247.0

759

8 00

321.0

108.0

69.0

142.8

98.7

- 0.51

241.5

206.7

317.8

- 0.64

64.3

106.5

113.0

- 0.77

137.1

219.5

250.1

	47.0	Circle 50		
	160.4	113.4		
	228.6	107.4		
	336.0	220.8	- 0.79	
	50.2	110.0		
	160.2	109.7	- 0.78	
	227.3	219.7	- 0.77	
8 13	337.0			- 0.71 8.81 8.10
8 14	44.6	116.2		
	160.8	108.5		
	228.0	224.7	- 0.87	
	336.5	108.1	- 0.86	
	49.2	115.4		
	157.3	223.5	- 0.83	
	224.1			- 0.75 8.81 8.06
	339.5			
	138.0	Circle 238		
	247.0	109.0		
	322.6	100.6	- 0.57	
	63.2	209.6		
	141.9	106.1	- 0.64	
	248.0	110.0	- 0.70	
	318.0	216.1		
8 28	68.0	H		
		RA 7 40 6 - Dec + 61.0		

Tuesday ¹⁰ march 1914.
~~Sunday~~
 & Urso majoris.

Prof. Bailey Obs
 Hinkley Redr

8 45-

223.5

Circle 50

339.0

lamp star disappearing

47.2

115.5

157.0

109.8

231.0

225.3

-0.88

-0.85

334.4

103.4

43.1

118.7

-0.82

161.8

222.1

136.0

Circle 230

252.4

116.4

318.0

105.9

63.9

222.3

-0.82

-0.86

137.9

250.1

112.2

113.5

-0.89

315.9

225.7

8 58

69.4

-0.86
8.81

7.95

8 59

136.1

116.1

252.2

107.3

317.8

223.4

-0.84

-0.85

65.1

137.0

110.8

247.8

113.1

-0.86

316.0

223.9

69.1

=

continued

44.0 circle 50

163.1

231.1

334.0

46.6

159.8

224.2

337.9

119.1

102.9

222.0

113.2

113.7

226.9

- 0.81

- 0.86

- 0.86

8.81

7.95

- 0.91

N.A. 4 04 E

sec. + 61.1

9 11

Tuesday March 24, 1914
 S Ursae Majoris

Prof. Bailey obs
 Hinkley Recd

745

Circle 50

222.3	121.1	
343.4	114.9	
45.9	<u>236.0</u>	- 1.11
160.8		- 1.14
225.7	115.0	
340.7	<u>124.0</u>	- 1.17
39.3	239.0	
163.3		

- 1.03
 8.81
7.78

Circle 230.

68.9	113.8	
134.6	<u>112.4</u>	- 0.90
247.0	226.2	- 0.92
316.6	110.3	
66.9	<u>118.0</u>	- 0.94
134.1	228.3	

7
~~856~~
 800

252.1		
<u>313.9</u>	113.6	
67.5	<u>112.7</u>	- 0.90
136.6	226.3	
249.3		- 0.90
315.0	110.4	
65.4	<u>116.5</u>	
134.8	226.9	- 0.91
251.3		

Circle 50

37.4
 163.2
 224.5
 341.3
 43.8
 160.3
 221.0
 344.1

125.8

116.8

2342.6

116.5

123.1

239.6

-1.25

-1.18

-1.22

-1.06

881

7.75

8 10

H a 4 10 E
 decl +61.1

Tuesday April 21, 1914
 S Ursae Majoris.
 obsr. Prof. Bailey
 Accr. Hinkley.

7 55

~~299.1~~ ~~27.1~~

circle 50

~~332.4~~~~120.7~~~~186.2~~~~6.4~~~~253.1~~~~28.0~~~~276.8~~~~7.3~~~~44.2~~~~188.5~~~~253.5~~~~13.0~~~~214.5~~~~239.4~~~~221.9~~ ~~25.4~~~~182.1~~~~296.5~~~~59.1~~

reject

circle 50. 144.3

119.5

-1.75

263.8

96.2

-1.86

124.9

122.6

-1.36

247.5

$$\begin{array}{r} 156 \\ 882 \\ 119 \\ 881 \\ \hline 762 \end{array}$$

214.0

346.4

76.8

175.0

254.0

circle 230

132.4

98.2

230.6

-0.99

$$\begin{array}{r} 0.82 \\ 0.94 \\ 8.81 \\ \hline 7.57 \end{array}$$

8 33

8 34

359.3
79.1
187.2

2.2
359.8
18.1
97.8
192.0
274.0
11.7
90.2
197.1

355.3
118.8
183.6
294.1
19.1
131.0
197.8
316.8

105.3
108.1
213.4

118.3
94.2
212.5

97.7
106.9
204.6

123.5
100.5
224.0

114.9
119.0
230.9

Decl + 61.0

K Q 1 40

- 0.64

- 0.62

- 0.47

1.06

1.00

- 0.584

1.03

0.72
881
8.53

Instrument gave some
much trouble for some
reason.

Recd.

Thursday May 28. 1914

S Ursae Majoris Prof. Bailey Obs
Hunkley Rec.

11 02

245.3
301.0
66.1

55.7
64.1
119.8

Circle 50

1.20

1.10

130.2

241.1

65.2

1.00

306.3

63.7

63.5

128.9

127.2

327.0

74.8

0.80

41.8

64.1

153.1

138.9

217.2

334.0

63.5

37.5

71.2

134.7

149.6

220.8

≡

11 15

11 16

330.1

71.1

0.92

0.88

41.2

61.8

152.2

132.9

0.85

214.0

332.8

64.5

37.3

71.9

136.4

149.5

221.4

245.1 Circle 50

304.8

66.1

125.2

246.4

301.9

62.0

128.2

59.7

59.1

118.8

55.5

66.2

121.7

1.22
1.16

1.19

$$\begin{array}{r} 1.04 \\ 8.81 \\ \hline 9.85 \end{array}$$

11 27

RA 3. 25 $\frac{1}{2}$
Dec. + 61.5,

Wednesday June 24. 1914

S Ursae Majoris

10 24

213.0

Circle 50

Prof Bailey obs
Hinkley Redr.

251.1

38.1

22.8

28.1

50.9

66.2

2.64

184.9

46.3

2.42

231.2

33.2

2.21

13.9

79.5

47.1

275.9

Circle 230

319.6

43.7

90.5

49.7

1.82

140.2

93.4

1.66

87.8

57.3

145.1

42.6

274.2

99.9

316.8

1.74

2.08

8.81

10.89

10 39

10 41

91.2

137.0

269.9

323.2

86.6

139.8

274.3

317.9

Met as
incomplete

Stopped by clouds 11:15 PM

Night poor. Measures appear poor.

Wednesday Aug 26. 1914
 Ursae Majoris

Circle 50 Prof. Bailey Ober
 Hensley Recorder.

7 55

162.5

241.7

346.8

55.9

165.1

235.9

345.5

62.8

67.9

160.1

250.3

336.0

72.9

155.1

243.2

339.0

67.2

161.9

250.2

332.8

77.8

154.9

244.2

338.0

79.2

69.1

148.3

70.8

77.3

148.1

92.2

85.7

177.9

82.2

95.8

178.0

94.7

82.6

177.3

77.1

93.8

170.9

0.61

0.61

0.04

0.04

0.61

0.04

0.05

0.17

0.11

0.32

881

9.13

815

820

164.5 *circle 50*

240.1 75.6

347.5 66.7
54.2 142.3

0.73

0.68

167.1

70.5

237.6

77.4

0.62

345.8

147.9

63.2

161.7

79.1

240.8

67.5

347.9

146.6

55.4

169.5

68.6

238.1

77.2

343.9

145.8

61.1

68.8*circle 430*

157.6

89.0

251.6

80.2

532.0

169.2

76.9

76.4

153.3

90.1

247.6

166.5

337.9

0.40
881
9.21

0.65

0.66

0.44
881
9.25

0.20

0.22

0.25

A 645 24
Dec. + 61.7

Thursday Oct 15. 1914

S Ursae Majoris

9 16

325.3

Circle 50

Prof. Bailey Obsr
Hinkley Reader

81.8

152.4

253.3

332.2

74.5

149.1

257.3

9 39

55.9

Circle 2.30

Stopped by clouds.

Tuesday Nov. 10. 1914

S Urae Majoris

Prof. Bailey Obs.
Hinkley Record

8 15

98.3

100.6

Circle 50

198.9

117.3

- 0.73

266.1

217.9

23.4

- 0.78

97.5

114.8

207.3

107.9

- 0.83

277.3

222.7

20.7

Circle 230

173.6

299.4

125.6

6.3

97.8

- 0.84

223.4

103.1

- 0.96

181.1

111.4

297.5

124.0

- 0.87
8.81

354.9

235.4

- 1.09

8 27

118.9

=

8 28

174.8

121.1

295.9

113.9

- 1.08

359.2

235.0

113.1

- 1.04

182.1

110.8

292.9

120.3

- 1.00

357.0

231.1

117.3

Circle 50

Obs
dr

273.8

17.8

95.1

208.0

267.0

24.2

95.6

8 40

200.2

=

8 41

274.1

19.1

90.3

208.3

271.1

24.2

98.2

200.6

177.8

293.7

357.2

117.1

176.1

300.3

359.9

8 50

114.9

104.0

112.9

216.9

- 0.71

117.2

104.6

221.8

- 0.81

105.0

118.0

223.0

- 0.83

113.1

102.4

215.5

- 0.68

circle 230

115.9

119.9

235.8

- 1.10

124.2

115.0

239.2

- 1.17

H A 11^h 43^m

Dec. +61.5

- 0.76

- 0.90

881

7.91

- 0.76

1.14

- 0.95

881

7.86

Mean 7.90

res	+04
	+01
	-04

Var. below fol. image very low.

Tuesday Dec 22, 1914

S. Ursae majoris

803

101.5 circle 230 Prof. Bailey Obs

185.6 84.1
289.5 75.8
5.3 159.9 + 0.38

0.35

106.5 79.3
185.8 84.1
284.1 163.4 + 0.32

8.2
185.2 circle 50

285.4 100.2
9.9 94.9 - 0.29
104.8 195.1

190.7 90.5
281.2 105.5 - 0.30
4.3 196.0

- 0.30
+ 0.02
881
+ 8.83

109.8

≡

185.7 101.5
287.2 91.8
10.7 193.3

- 0.25 - 0.24

102.5
193.2 88.2
281.4 103.6 - 0.22
2.6 191.8

99.9 106.2
182.8 circle 230
189.5
285.8

Tuesday Dec 22. 1914

4.5	89.6	96.5		
105.0	78.7	100.5	+ 0.22	
184.0	168.3	196.8		+ 0.28
281.9				
4.9	97.9	79.0	+ 0.34	+ 0.02
=	9	83.0		881
101.7		162.0		+ 8.83
189.1				
287.0				
4.2				
109.9		87.4		
181.2		77.2	+ 0.29	
285.2		164.6		+ 0.40
7.1		71.3		
1.9	Circle 50.	81.9	+ 0.51	
104.9		153.2		
191.8		103.0	- 0.24	- 0.25
281.3		89.5		+ 0.08
8.1		192.5		881
96.9		88.8	- 0.25	8.89
183.6		104.2		
287.8		193.0		

8 45
f 24
f 14
f 34

Ha 9 28 E,
Dec + 61.3

Wednesday Jan. 20. 1915

S Ursae Majoris

Prof. Bailey Obs
Hinkley Riv

Circle

Seeing too poor to observe
star on account of being
8 05 PM faint.

Wed Aug. 18, 1915.

L Campbell Ab.

Set on Arcturus to learn error
in setting the circles. Found
14a circle only 4 min out &
decl circle practically correct.

Z Booris 140113

Too much haze to identify
any star on the map.

9/10

Too foggy to continue

Will need lights on circles
if work is to be carried on
without a recorder.

Clean up done

20735

Wed. Aug. 25, 1915.

R Coronae

15" E. Eg.

Moon near full, sky bright.

R Coronae 15 44 20

18 04

2 20 W + 28.8

18 25

2 37 W

+ 28.6

est f. 6

H" finder

15 45 36

18 25

2 40 + 36.9

X Coronae

18 28

2 42 W

+ 36.8

est 11.9 Var will seen

R U Oph. 17 28 09

18 30

1 02 W + 9.3

18 37

1 08 W

Star marked X seen is it

the Var? If so = 12.8

+ 9.6

51 Cygni 21 38 43

18 43

2 55 E + 43.6

18 57

2 41 E

+ 43.8

Moon too bright to continue
with advantage

20736

Thurs. Aug. 26, 1915

PC OBs

15" E. Eq.

7 30

Sky 7 parts cloudy.

S.W. Cygni

213843

3 16

18 18

18 22

3 20

E + 43.8

7 35 B

est f. 4

+ 43.8

V Delfh

200318

2003

18 28

19 00

8 32

18 56

2 15 + 19.0

142 E

1 47

0

est < 13.2

+ 18.7

T W Cygni

210129

19 04

1 52 E

1 57 E + 29.0

19 10

est 10.2

+ 28.8

X Pegasi

211614

19 12

19 15

clouds

2 04 + 14.0

1 59 E

est 9.5

+ 13.7

R T Pegasi

215934

19 19

2 40 + 34.4

clouds interfere

P 30

Too cloudy to continue with Moon.

48

20741

Tues. Aug. 31, 1915

L & O lbs.

15" E. Eq.

N^W Cygnus 213543 est A. 6

1938

200 E + 43.8

~~222~~

A 52

159 E same of identification

1936

1539

~~222~~

R Coronae 154428

1944

400 W + 28.5

Clouds

20743

Thurs. Sept. 2, 1915

15" E. Eq.

L.C. Ob.

7 29

R Coronae 154428 est 17.7

Set back S.T. clock 5^m. 4" Fender +28.7
 2.43 W
 18.27

R Herculis 160118 est 14.0 sunrise

~~1837~~
 236 W +14.6 1844
 2.43 W

7 47

+18.7

W Coronae 161138 est = 12.3

1906
~~2~~ 55 W + 38.8 + 38.3
 2 59 W
 19 10

8 14

RT Herc. 170027 est 11.1

1913
~~2~~ 07 W + 27.5 19 16
 2 11 W
 +27.4

Ry Herc. 175519 est 12.5

1918
~~1~~ 23 W + 19.5 19 22
 1 27 W
 +19.6

2074³

Sept 2, 1915

RU Oph. 172809 est 11.7
 $\frac{1924}{156} + 9.3$

+96

2:01 W

192A

star assumed as var on the
 prev. nights obs = Var.

SS Cygni 213843 est 9.2 PC
 $\frac{1930}{282} + 43.6$

1954

1 4³ E

+42.8

9.2 est by P.W. Merrill.

215934 RT Pegasi est 11.2
 $\frac{2000}{1592} + 34.6$

+34.2

not possible to separate Var 11.7

12.7* = 12.3 not brighter.

1:45 E

2014

a ft double just passed the Var 11.7

183308 X Oph. est 7.3 PC

$\frac{2016}{143} W + 8.7$

7.3 P.W.M.

+9.0

1:53 W

2020

4" finder of 15" E. Eq.

RZ Herc. 183225 est 10.2

$\frac{2122}{250} W + 26.0$

2130

+26.2

2:57 W

Dr Merrill observing with this telescope
 & also tried his hand at the 12" Polar.

Sept 2, 1915

R. Stent 184205

$$\begin{array}{r} 2144 \\ \hline 3 \text{ } 2 \text{ } 4 \text{ } - \text{ } 5 \text{ } 8 \end{array}$$

1050 Cant handle Phot. & keep telescope
in position too without help

Mon Sept. 6, 1915

LC clbs 15" E. Eq.

R Coronae 15 x 28 - 4" fowler

7 28 est var = 7.3

1 A 41

2 57 W

+ 28.7

Some clbs. but obs considered good.

for Too cloudy to continue.

Tues. Sept. 17, 1915

R Coronae
154428 L.C. 116

10.5. at 7.2 at 10:10

JD 20750

Thurs Sept 9. 1915

LB OB.

± 15" E. Eq.

R Coronae 154428 Eq.

7 30

est 7.0

R Urs Maj 123459 est < 13.0

19 14

6.40 W

6 40 W + 59.0 + 59.2

19 22

7 57

R Urs Maj 103769 est 12.2

19 27

8 50 W + 69.0 8.53 W

+ 69.3

19 32

8 07

T Urs Min 133273 est 9.1

19 35

6 12 W

6 03 + 73.9

19 42

+ 73.8

8 17

U Urs Min 141567 est 10.8

19 45

5 30 + 67.2

5 36 W

19 48

+ 67.6

8 23

Sept 9, 1915

R Cen Ven 134440 est 11.1
 1951
 6 07W + 40.0
 6 12W
 + 400
 1956

~~R Bootis 143227 -~~

S Coronae 151731 est = 12.8
 2003
 4 46W + 31.7
 4 52W
 + 31.8
 20 07

X Coronae 154536 est 11.3
 2010
 4 25W + 36.6
 4 28
 + 36.8
 20 13

V Coronae 154639 est 10.4
 2018
 4 33
 28W + 39.9
 4 30W
 + 39.9

T Herculis 180531 est 8.2
 2020
 2 15W + 31.0
 2 16
 2 16W
 + 31.2
 20 24

d 3 e 3 *
 R assumed d = 6 brighter
 than H 37 d.

Sept 9, 1915 -

RV Hare 165631 est 12.0

20 39

3 43 W + 31.2

3 44 W

+ 31.6

20 43

RT Oph 175711 est < 13.0

20 47

2 56 W + 11.6

3 3 W

20 52

+ 11.3

~~RT Oph 181103~~~~20 54~~~~2 43 W + 3.7~~

RT Aquilae 193311 est 10.6

21 03

1 30 + 11.5

1 42 W

21 14

+ 11.7

RV Aquilae 193507 est 9.8

21 15

1 40 + 9.6

1 43 W

+ 9.8

21 20

Sept 9, 1915

RU Aquilae 200812 ~~ext~~ 10.7
 $\begin{array}{r} 2122 \\ \hline 114 + 12.7 \end{array}$ 1 17W
 +12.7
 2125

SS Cygni 213843 ext 11.5
 $\begin{array}{r} 2148 + 42.8 \\ \hline 010 W + 42.8 \end{array}$ 0 22W
 2158
 +43.2

1033

RT Pegasi 21593X ext Var = 13.0
 0.8W
 +34.6
 2208

Var (with 1" eyepiece) seen
 clearly as a 6th star near the
 11.4 magnitude star. Possibly the 11.7
 is also a variable = 11.3 in 1" eyepiece.
 (the 12.7) = 12.3

Fri. Sept 10, 1915

RC Obs

15" E 29.

8 20

154428 R Coronae est 7.2

19 34

Mr A. B. Bunker 7.4

3 50

W + 28.6 Mr. G. F. Nolte 7.4

14" funder

Jupiter

R Ophiuchi 170215 est 3 26

est 10.1

20 24

3 22 W - 15.5

- 15.6

20 32

SS Oph. 165202 est 8.5

20 33

3 41 W - 2.8

- 2.4

3 43 W

20 36

RS Oph. 174406 est 11.4

20 38

2 54 W - 6.7

2 57 W

20 41

- 6.6

S 7 Sagitt. 185512 est 10.1

20 44

1 49 W - 12.9

1 52 W

- 12.6

20 47

Sept 10, 1915

W Aquilae 191007 est 13.2

$$\begin{array}{r} 2048 \\ 138 - 7.3 \end{array}$$

$$\begin{array}{r} 143W \\ -6.9 \\ 2054 \end{array}$$

T Sagitt. 191017 est 11.5

$$\begin{array}{r} 2056 \\ 146W - 17.0 \end{array}$$

$$\begin{array}{r} -16.8 \\ 147W \\ 2057 \end{array}$$

R Sagitt. 191019 est f. 2

S Sagitt 191319 est 13.3

- Sagitt 191219 est 13.5 Civan

RW Sagitt 190819 est 97

RX Sagitt 190812 est 98

settling on RX Sag = 2:02W

$$\begin{array}{r} -18.7 \\ \text{at } 21:11 \end{array}$$

Ry Sagitt 191033

$$\begin{array}{r} 2114 \\ 214W - 23.7 \end{array}$$

too low

Sept 10, 1915

191321 Z. Sagittarii est 10.0
2115
 2 2w - 21.0

21-18
 2 3w
 -20.8

195308 R S Aquilae est 13.1
2121
 1 28w - 1.2

1 32w
 4-7.8
 21:25

195202 R R Aquilae est 13.3
2127
 1 35w - 2.2

1 37w
 -17
 21:29

R T Capric 201121 est 8.1

2131
 1 20w - 21.6

14" feeder

W Capric 200822

est 12.6 1 28w - 21.8
 21:35

Sept 10, 1915 -

R U Capric 202622 est $\angle 13.0$

2138

1 13 W

1 12 - 22.0

- 21.7

look up this region

2140

R Capric 200514 est 11.2

2141

1 41 W

1 36 - 14.6

- 14.4

2146

Z Aquilae 200906 est 13.1

2149

1 43 W

1 40 W - 6.4

- 6.2

2153

U Capric 204215 est $\angle 13.6$

2155

1 16 W

1 13 - 15.2

- 14.8

2158

W Aquarii 204104 ~~$\angle 13.5$~~ est 13.4

T Aquarii 204405 est 7.3 in 4"

Y Aquarii 203905 $\angle 13.5$

Section W Aquar = 1.28 W - 4.2

22:09

Sept 10, 1915

SS Cygni 21 3 + 43
10 45⁻ est 11.6

Messrs Burbuck & Nolte here
till 9 pm.

L. P. P.

20/52

Stat Sept 11, 1915
EC Ob 15" E. Sq.

10 30.

R Aquilae 190108 est 6.3
4" funder 3' 2W
+ f. 3

22 03

X Aquilae 194604 est 13.2

22 06

 $\frac{22\ 06}{2\ 20\ W + 4.0}$

2.23W

+ 4. X

22 10

Sy Aquilae 200212 est 13.0

22 12

 $\frac{22\ 12}{2\ 10W + 12.6}$

2 12W

+ 12.9

22 13

S Aquilae 200715a est 11.1

22 15

 $\frac{22\ 15}{2\ 8 + 15.6}$ 2 23
2 + f W

+ 15.8

22 31

RW Aquil. 200715t est 9.3
look up * f 94

Set on RW

~~R Aquilae~~ R Delph 2 23
est 11.2 201008 + 9.0
22 32 22 34
 $\frac{22\ 32}{2\ 22W + f.8}$

Sept 11, 1915

Z Delfh 203817 ext 9.0
 $\begin{array}{r} 22\ 36 \\ \hline 208 \end{array} +17.0$
 211 W
 +17.3
 2237

Y Delfh 203611 ext 10.7
 $\begin{array}{r} 22\ 38 \\ \hline 2\ 2 \end{array} +11.5$
 +11.7
 2107 W
 2243

S Delfh 203816 ext 11.2
 $\begin{array}{r} 22\ 44 \\ \hline 206 \end{array} +16.9$
 28 W
 2246
 +16.9

T Delfh 204016 ext 9.7
 $\begin{array}{r} 22\ 46 \\ \hline 26 \end{array} +16.2$
 28 W
 +16.3
 2248

X Delfh 205017
 $\begin{array}{r} 22\ 49 \\ \hline 159 \end{array} +17.5$

Can't identify
 sky haze somewhat clear again

20755- Tues. Sept 14, 1915 -
 R.C. Obs. 15" E. Eq.

> 33 Z Scorpi 160021 est < 12.0
 set low $\frac{19\ 14}{3\ 14} - 21.4$ 3 17 W
 19 19
 -21.4
 obs. diff & a little uncertain.

X Scorpi 160221
 too low.

R Scorpi 161122a
 S Scorpi 161122b
 both Not seen with certainty < 12.0

W Ophiuchi 161607
 can't identify $\frac{19\ 32}{3\ 16} - 7.5$

T Serp. 151714
 $\frac{19\ 40}{4\ 23} + 14.7$ 3 28 W
 19 44
 +14.8
 est 9.0

U Bootis 144491f
 $\frac{19\ 45}{4\ 56} + 18.1$

can't find region

Sept 14, 1915

R Serpentes 154615 est 11.9
 1956
 410 + 15.4 417W
 2002
 +15.6

R Coronae 154428
 2004
 420 + 282

825

41" funder est 7.0

SS Hare 162807 est 11.2
 2012
 344 + 7.0 349W
 +72
 2017

Ry Oph. 181103 est 13.3
 2018
 27W + 37 217
 +38
 2028

W Cor Bor 161138 est 12.6
 2031
 420W + 38.1 428
 +38.2
 2039

Region conforms to
 P.C. chart, Ecliptic Map wrap.

Sept 14, 1915

RS Hare 171723 est 8.8

$$\begin{array}{r}
 2049 \\
 \hline
 332 + 23.2 \\
 \hline
 355.2 \\
 + 18.3 \\
 \hline
 373.5
 \end{array}$$

SV Hare 182224 est 12.8

$$\begin{array}{r}
 2056 \\
 \hline
 334 + 24.6 \\
 \hline
 358.6 \\
 + 25.2 \\
 \hline
 383.8
 \end{array}$$

W Cor Por. 1611.38 again.

$$\begin{array}{r}
 2113 \\
 \hline
 5.27 + 38.2 \\
 \hline
 43.47
 \end{array}$$

e 5 f 396 h 4 h is old Not.
Chart A

$$\begin{array}{r}
 \text{TW Cygni} \quad 21012 \text{ est } 10.7 \quad 036W \\
 \begin{array}{r}
 2126 \\
 \hline
 025 W + 29.5 + 29.3 \\
 \hline
 2136
 \end{array}
 \end{array}$$

SS Cygni 21384.3 est 11.8

$$\begin{array}{r}
 2140 \\
 \hline
 02 + 43.2 \\
 \hline
 2150 \\
 012W \\
 + 13.2 \\
 \hline
 2163.2
 \end{array}$$

20756

Wed. Sept 15, 1915

LL Ab

15" E. Eq.

142205 R S Virgins est 10.0

+ 5.3

19 00

4 38 W + 5.2

3 47 W

19 08

U Bootis 144918 est 9.8

19 09

4 20 + 18.3

4 24 W

+ 18.3

19 14

R Bootis 143227 est 9.8

19 16

4 44 + 27.4

4 49 W

+ 27.3

19 22

R Coronee 154428 est 6.8

19 24

3 40 + 28.2

4" faster

3 43 W

+ 28.8

19 26

Z Coronee 15 ~~5229~~ ⁵²²⁹ est 13.1

19 27

3 43

3 5 W + 29.9

3 38 W

+ 29.5

19 31

Sept 15, 1915

U Serpentis 160210 est 11.5

19 32

3 30W + 10.2

3 33W

+ 10.3

* N invisible than * Ori
early seen. Is it a Var?

19 35-

RU Herc. 160625- est 12.6

19 36

3 30 + 26.0

3 37

+ 25.5

19 41

Z Oph 171401 est 10.9

19 43

2 29W + 1.8

+ 1.8

2 34W

21 49

W Coronae 161138. est Var 12.7

19 51

3 40W + 38.2

d'ne of 39 6 h 3 h order of brightness

W Herculis 163137- est 11.4

40 08

3 37W + 37.5

+ 37.7

3 38W

20:09

20756

Sept 15, 1915

$$\begin{array}{r}
 175519 \text{ Ry Here est } 13.6 \\
 20 \ 11 \\
 \hline
 2016 \text{ W} + 19.8
 \end{array}
 \begin{array}{l}
 \text{Var just seen.} \\
 222 \text{ W} \\
 + 19.6 \\
 \hline
 2015
 \end{array}$$

$$\begin{array}{r}
 \text{T Serpens } 182306 \text{ est } 12.3 \\
 20 \ 20 \\
 \hline
 157 + 6.2
 \end{array}
 \begin{array}{l}
 159 \text{ W}
 \end{array}$$

$$\begin{array}{r}
 \text{look up relative positions of } +64 \\
 \text{van & the } 1298 \text{ } 13.1 \quad 2023
 \end{array}$$

$$\begin{array}{r}
 \text{V Draconis } 175654 \text{ est } 12.3 \\
 20 \ 26 \\
 \hline
 230 + 55.2 + 55.1 \\
 2031
 \end{array}$$

$$\begin{array}{r}
 \text{W Lyrae } 181136 \text{ est } 9.3 \\
 20 \ 32 \\
 \hline
 221 \text{ W} + 36.6 \\
 224 \text{ W} \\
 + 36.7 \\
 2036
 \end{array}$$

$$\begin{array}{r}
 \text{R Z Here } 183225 \text{ est } 9.1 \\
 20 \ 37 \\
 \hline
 205 + 26.0 \\
 2040
 \end{array}
 \begin{array}{l}
 28 \text{ W} \\
 + 28.2 \\
 2040
 \end{array}$$

Sept 15, 1915

$$\begin{array}{r} \text{Ry Lyrae } 184134 \text{ est} \\ 2041 \\ \hline 20 + 34.6 \end{array}$$

$$\begin{array}{r} 203W \\ + 34A \\ \hline 2044 \end{array}$$

$$\text{Zif seen (imp. only)} = 13.6$$

$$\begin{array}{r} \text{RW Lyrae } 184243 \text{ est } 13.8 \\ 2046 \\ \hline 204W + 435 - \end{array}$$

$$\begin{array}{r} 2051 \\ 211W \\ + 437 \end{array}$$

$$\begin{array}{r} \text{R+ Lyrae } 185032 \text{ est } 13.5 \\ 2052 \\ \hline 22W + 32.7 \end{array}$$

$$\begin{array}{r} 28W \\ + 328 \\ \hline 2056 \end{array}$$

$$\begin{array}{r} \text{Z Lyrae } 185634 \text{ est } 11.2 \\ 2057 \\ \hline 21W + 34.8 \end{array}$$

$$\begin{array}{r} 27W \\ + 349 \\ \hline 2101 \end{array}$$

$$\begin{array}{r} \text{R+ Lyrae } 185737 \text{ est } 13.2 \\ 2103 \\ \hline 206 + 37.8 \end{array}$$

$$\begin{array}{r} 210W \\ + 377 \\ \hline 2104 \end{array}$$

Sept 15, 1915

SV Drae 183149 ext 12.3

2106

2 35 + 49.4

2 39

+ 49.6

21 09

RM Lyrac 190941 ext 12.2

2111

2 2 + 41.1

2 44

+ 41.3

21 13

Ref Lyrac 190933 ext < 13.8

2115

2 6 + 33.2

2 44

+ 33.3

21 17

V Lyrac 190529 ext < 13.8

2119

2 14 + 29.5

2 164

+ 29.8

21 21

S Lyrac 190925 ext < 13.6

2122

2 13 + 25.8

2 164

+ 26.2

21 25

20756

Sept 15
1915

$$\begin{array}{r}
 \text{T Z Cygni } 191350 \text{ est } 10.5 \\
 \underline{21 \text{ } 37} \\
 244 \text{ W} + 49.9 \\
 \hline
 2141
 \end{array}$$

$$\begin{array}{r}
 \text{T Y Cygni } 192928 \text{ est } 13.8 \\
 \underline{21 \text{ } 31} \\
 22 \text{ W} + 28.1 \\
 \hline
 2133
 \end{array}$$

$$\begin{array}{r}
 \text{U Lyrae } 191637 \text{ est } 10.7 \\
 \underline{21 \text{ } 34} \\
 218 \text{ W} + 37.9 \\
 \hline
 2137
 \end{array}$$

$$\begin{array}{r}
 \text{R Cygni } 193449 \text{ est } 10.3 \\
 \underline{21 \text{ } 42} \\
 200 \\
 \hline
 2144
 \end{array}$$

$$\begin{array}{r}
 \text{RT Cygni } 194048 \text{ est } 8.9 \\
 \underline{21 \text{ } 45} \\
 25 + 48.8 \\
 \hline
 2146
 \end{array}$$

Sept 15, 1915

TU Cygni 194348

Var at L.R. = 14.0

$$\begin{array}{r} 2 \text{ fW} \\ + 36 \\ 21 \text{ 87} \end{array}$$
X Cygni 194632 ~~est~~ 11.9
$$\begin{array}{r} 2051 \\ \hline 205 \end{array} \text{ W} + 32.6$$

$$\begin{array}{r} 2 \text{ 12W} \\ + 328 \\ 2156 \end{array}$$
Z Cygni 195749 ~~est~~ 12.1
$$\begin{array}{r} 2158 \\ \hline 20 \end{array} + 49.9$$

$$\begin{array}{r} 2 \text{ 2W} \\ + 498 \\ 2200 \end{array}$$

W Draconis 180565 = < 13.0

X Draconis 180666 = 10.2

$$\begin{array}{r} 2205 \\ \hline 40 \end{array} + 66.0$$

$$\begin{array}{r} 402W \\ + 66.3 \\ 2207 \\ \text{Set on} \\ \text{X Drae} \end{array}$$
U Draconis 190967 ~~est~~ 13.0⁵

$$\begin{array}{r} 2209 \\ \hline 30 \end{array} + 67.3$$

$$\begin{array}{r} 3 \text{ 3W} \\ + 67.3 \\ 2212 \end{array}$$

Sept 75/1915

SS Cygni 213 + 43. est 11.8

22 14

O 41

0 36 W + 428 + 436

22 18

1030

~~22 14~~
Plot.

(36) (123)

76

20759

Stat. Sept 18 1915
 L.C. Obs 15" E. E.

728 $\frac{210812}{1920} R \text{ Equulei est } 11.6$
 $\frac{1488}{+12.4}$ 1428
 $+12.2$
 1928

X Pegasi $\frac{211614}{1930} \text{ est } 9.8$
 $\frac{1478}{+13.8}$
 1930

R R Pegasi $\frac{214024}{1940} \text{ est } 10.0$
 $\frac{20}{+24.6}$ 1548
 $+244$
 1944

V Pegasi $\frac{2145605}{1932} = 12.5$
 $\frac{2148}{+5.3}$ 2188
 1939

RT Pegasi $\frac{215934}{1946} \text{ est } 12.8$

Sample chart rotation appear correct. $\frac{1946}{2132} \text{ Var } 11.7 \text{ easier to separate}$
 $\frac{232}{+34.4}$
 1956
 a 4 b 6 c 3 d 6 f 1 e 4 g 6 h 2 k
 u w 4 l 3 m 3 o 1 p.
 m(11.7) appears red & possibly var. = 11.2 or 11.3

8
Sept 14 1913

T Pegasi 220412 ext 13.5
 $\frac{2003}{218 + 12.0}$ 1562
 + 11.7
 2008

S S Cygn 213843 ext 11.9
 $\frac{2000}{1388 + 42.0}$ 1372
 + 42.8
 2002

8 02

U Pegasi 220613 ext 13.6
 RS Pegasi 220714 ext 12.0
 $\frac{2010}{1572 + 13.7}$ 1532
 + 13.7
 2013

A 13

RV Pegasi 222129 ext 13.5
 $\frac{2015}{26 + 29.7}$ 242
 + 29.6
 2018
 Set on RS.

Pl Lacertae 222439
 ext 8.7
 $\frac{2020}{204 + 39.5}$ 232
 + 39.4
 2022

Sept 18, 1915

$$\begin{array}{r}
 \text{R Lacertae } 223841 \text{ ext } 13.5 \\
 \underline{70 \ 23} \\
 2 \ 15 \text{ E} + 41.5 \quad 2138 \\
 \phantom{2 \ 15 \text{ E} + 41.5} + 41.5 \\
 \phantom{2 \ 15 \text{ E} + 41.5} 2025
 \end{array}$$

$$\begin{array}{r}
 \text{RW Pegasi } 22591X = 13.3 \\
 \underline{2026} \\
 2 \ 33 + 14.6 \quad 2288 \\
 + 14.6 \\
 2032
 \end{array}$$

$$\begin{array}{r}
 \text{R Pegasi } 230110 \text{ ext } 10.7 \\
 \underline{2033} \\
 2 \ 28 \text{ E} + 9.8 \quad 2238 \\
 \phantom{2 \ 28 \text{ E} + 9.8} + 9.6 \\
 \phantom{2 \ 28 \text{ E} + 9.8} 2037
 \end{array}$$

$$\begin{array}{r}
 \text{W Pegasi } 231425 \text{ ext } 9.3 \\
 \underline{2038} \\
 2 \ 36 \text{ E} + 25.5 \quad 2338 \\
 \phantom{2 \ 36 \text{ E} + 25.5} + 25.2 \\
 \phantom{2 \ 36 \text{ E} + 25.5} 2041
 \end{array}$$

$$\begin{array}{r}
 \text{S Pegasi } 231508 \text{ ext } 10.4 \\
 \underline{2042} \\
 2 \ 33 + 8.2 \quad 2288 \\
 + 8.2 \\
 2247
 \end{array}$$

Sept 18, 1915-

$$\begin{array}{r}
 \text{Z Androm} \quad 23 \ 28 \ 48 \text{ est } 10.5 \\
 \underline{20 \ 48} \qquad \qquad \qquad 2 \ 3 \ 3 \\
 2 \ 40 \ \text{E} + 48.0 \qquad \qquad + 47.9 \\
 \qquad \qquad \qquad \qquad \qquad \qquad 20 \ 55
 \end{array}$$

$$\begin{array}{r}
 \text{S 7 And } 23 \ 33 \ 35 \text{ est } 8.8 \\
 \underline{20 \ 53} \qquad \qquad \qquad 2 \ 3 \ 28 \\
 2 \ 40 \ \text{E} + 35.0 \qquad \qquad + 34.8 \\
 \qquad \qquad \qquad \qquad \qquad \qquad 21 \ 02
 \end{array}$$

$$\begin{array}{r}
 \text{Z Cassio } 23 \ 39 \ 56 \text{ est } < 13.6 \\
 \underline{21 \ 03} \qquad \qquad \qquad 2 \ 3 \ 3 \ \text{E} \\
 2 \ 36 \ \text{E} + 5.6 \text{ of } \qquad \qquad + 5.56 \\
 \qquad \qquad \qquad \qquad \qquad \qquad 21 \ 06
 \end{array}$$

$$\begin{array}{r}
 \text{P 2 Can } 23 \ 50 \ 53 \text{ est } 11.2 \\
 \underline{21 \ 08} \qquad \qquad \qquad 2 \ 40 \ \text{E} \\
 2 \ 42 + 52.9 \qquad \qquad + 52.8 \\
 \qquad \qquad \qquad \qquad \qquad \qquad 21 \ 10
 \end{array}$$

$$\begin{array}{r}
 \text{P 2 Cass } 23 \ 53 \ 50 \text{ est } 10.7 \\
 \underline{21 \ 11} \qquad \qquad \qquad 2 \ 41 \ \text{E} \\
 2 \ 42 \text{E} + 50.6 \qquad \qquad + 50.6 \\
 \qquad \qquad \qquad \qquad \qquad \qquad 21 \ 13
 \end{array}$$

Sept 18, 1915

$$\begin{array}{r}
 \gamma \text{ Can } 235855 \text{ est } 13.3 \\
 \underline{2115} \\
 243 + 54.8 \\
 + 54.7 \\
 2118
 \end{array}$$

$$\begin{array}{r}
 \delta \text{ V Androm } 235939 \text{ est } 10.0 \\
 \underline{2122} \\
 237 + 38.8 \\
 2362 \\
 + 38.8 \\
 2124
 \end{array}$$

$$\begin{array}{r}
 \zeta \text{ Regan } 235525 \text{ est } 11.4 \\
 \underline{2125} \\
 230 + 25.2 \\
 + 25.1 \\
 2129
 \end{array}$$

$$\begin{array}{r}
 \tau \text{ Androm } 001726 \text{ est } 9.7 \\
 \underline{2131} \\
 246 + 26.2 \\
 + 26.2 \\
 2134
 \end{array}$$

$$\begin{array}{r}
 \rho \text{ Androm } 001838 \text{ est } 11.1 \\
 \underline{2135} \\
 243 + 38.0 \\
 + 37.8 \\
 2140
 \end{array}$$

* is certainly
- looks > 11.6

Sept. 1915 -

X Androm 50 1046 est 13.3
 $\begin{array}{r} 2142 \\ \hline 228 \end{array}$ 2222
 228 2746.0 + 46.2
 2148

U Cass. 004067 est 10.1
 $\begin{array}{r} 2150 \\ \hline 250 \end{array}$ 2482
 250 2+47.5 + 47.3
 2151

1000 T60 hazy & cloudy to continue
 with advantage.

(28) (151)

Plotted
 Legend

82

20762

Thurs. Sept 21, 1915

RC Op 15" = EEg.

R. S. auto 184205

Phot T

18 42

21 50

21 20

218 W - 5.8

2 38 W

Comp with - 6° 49' 22" = 6.22 = * h 707

L = 613

H₂ 37-172

Sid Time R.A.

205°

9 47

233.2

Vandis-

9 34

300.6

67.4

52.2

69.0

121.2

136.4

- 0.87

236.6

302.8

66.2

- 0.88

56.8

68.1

124.9

134.3

- 0.89

RTB 25°

Mean = - 1.113

C.S. = 6.22

208.6

326.9

60.3

Mag = 5.02

27.2

54.4

150.8

114.7

- 1.31

205.2

331.8

57.8

- 1.34

29.6

54.1

151.2

111.9

- 1.37

205.3

9 56

9 43

9 38.5

14 38.5

20762.610

Sept 21/1915 T.

Pre. obs. diff. on account of irregular
running of the clock & poor seeing caused
by high winds.

Obs. Pa. of Phot = $2 \times 5^\circ$ Ver A.
Sprocket wheel =

Moon nearly at the full.

10:00 AM T. = 10:13 by Sid clock

Battery for reading light.

Wheel for turning Pos Angle Circle.

20763

Wed. Sept 22, 1915 —
 L. Ob. 15^h Equidistant.

R. Scuti Phot T.

184205

P.A.A. 25°

Comp* = * $\frac{h}{h}$

Cs Wined

7 32

146.8 < Var dir

208.8

62.0 ✓

330.3

59.5 ✓

29.8

121.5 ✓

- 1.16 ✓

152.2

- 1.32 ✓

203.3

53.1 ✓

330.8

54.0 ✓

24.8

107.1 ✓

- 1.49 ✓

P.A.A. = 205°

mean = - 1.24 ✓

235.8

63.4 ✓

299.2

52.8 ✓

62.2

116.2 ✓

- 1.28 ✓

115.6

237.8

- 1.16 ✓

299.6

61.8 ✓

55.8

65.0 ✓

120.8

126.8 ✓

- 1.05 ✓

7 39

7 35.5

20763.524

Sept 22, 1915

11

W: Pa. of A = 205°

7 40 2339
 303.3
 57.8
 121.6

694 ✓
 63.8 ✓
 133.2 - 0.97 ✓

231.7

- 0.96 ✓

301.6

69.9 ✓

59.6

590 ✓
 128.5 - 1.00 ✓

118.6

mean =

- 1.21 ✓

Revised

Pa. of A = 25°

3336
 26.2

52.6 ✓

151.8

565 ✓
 109.1 - 1.44 ✓

208.3

3328

- 1.46 ✓

24.6

51.8 ✓

1522

556 ✓
 107.2 - 1.48 ✓

207.6

7 40
 44.0

63.531

Sept 22 1915

25⁰11

f 01

3316	
248	53.2 ✓
1486	590 ✓
207.6	<u>112.2</u> ✓ - 1.37 ✓

3319	
217	49.8 ✓ - 1.50 ✓
1572.6	518 ✓
2044	<u>101.6</u> ✓ - 1.62 ✓

Revised 205⁰

mean = - 1.34 ✓

59.4	
118.2	58.8 ✓
235.3	65.3 ✓
300.6	<u>124.1</u> ✓ - 1.10 ✓

f 07

f 04.0

20763.544

59.1	
114.8	55.2 ✓ - 1.12 ✓
235.6	62.6 ✓
298.2	<u>117.8</u> ✓ - 1.24 ✓

Sept 22, 1915

IV

205°

p 09

55.3

120.4

240.6

302.2

65.1 ✓

61.6 ✓

126.7 ✓

1.05 ✓

55.5

115.2

239.2

300.6

59.7 ✓

61.4 ✓

121.1 ✓

1.17 ✓

25°

149.2 ✓

240.6

327.7

30.6

~~42~~ ✓

61.4 ✓

62.9 ✓

124.3 ✓

1.10 ✓

Mean = 1.13 ✓

p 17

150.2

212.7

329.6

26.9

62.5 ✓

57.3 ✓

119.8 ✓

1.20 ✓

✓ - 1.15 ✓

p 130

20763.551

Sept 22, 1915

$$\begin{array}{r}
 250 \\
 \hline
 150.2 \\
 210.6 \\
 329.6 \\
 25.9
 \end{array}$$

$$\begin{array}{r}
 60.4 \\
 56.3 \\
 \hline
 116.7 - 1.27
 \end{array}$$

$$\begin{array}{r}
 150.2 \\
 206.9 \\
 332.1 \\
 23.0
 \end{array}$$

$$\begin{array}{r}
 56.7 \\
 50.9 \\
 \hline
 107.6 - 1.47
 \end{array}$$

Revised 205th

Mean - 1.30

$$\begin{array}{r}
 239.6 \\
 297.3 \\
 59.6 \\
 \hline
 117.2
 \end{array}$$

$$\begin{array}{r}
 57.7 \\
 57.6 \\
 \hline
 115.3 - 1.30
 \end{array}$$

$$\begin{array}{r}
 234.4 \\
 300.9 \\
 63.3 \\
 \hline
 118.2
 \end{array}$$

$$\begin{array}{r}
 66.5 \\
 54.9 \\
 \hline
 121.4 - 1.16
 \end{array}$$

$$\begin{array}{r}
 f 29 \\
 \hline
 f 26.0 \\
 20763.560
 \end{array}$$

Sept 22, 1915

205°

VI

p 31

23.9.8

29.8.8

59.0 ✓

59.6

59.6 ✓

118.6 ✓ - 1.22 ✓

119.2

239.6

302.2

62.6 ✓

1.18 ✓

59.6

59.6 ✓

122.2 ✓ - 1.14 ✓

119.2

Revised 25°

Mean - 1.37 ✓

333.2

22.4

49.2 ✓

154.8

52.1 ✓

1.24

206.9

101.3 ✓ - 1.62 ✓

1.21

1.31

1.13

1.30

1.37

15.6

~~20~~

333.3

1.56 ✓

24.6

51.3 ✓

p 38

+ 34.5

150.2

55.1 ✓Final Mean = 1.26
Map for Sept 20 = 6.13
Final Map = 4.87

20763.566

205.3

106.4 ✓

- 1.50

Var quite red, comp ~~th~~ decidedly the
in color.

Sept 22, 1915

VII

f 57

250

329.6

24.8

154.9

203.3

55.2 ✓

48.4 ✓

103.6 - 157

328.7

29.6

149.4 f

209.8

2050

59.8

115.6

200.7

299.6

60.9 ✓ - 1.37

60.0

120.9 ✓ - 1.17

Mean - 1.22

55.8 ✓

58.9 ✓

114.7 - 1.31

57.7

119.6

237.2

302.3

61.9 ✓ - 1.18

65.1 ✓

127.0 ✓ - 1.04

9 03

9 00.0

20763.5 f 3

Sept 22, 1905

205°

VIII

9 05 59 f

115.7

23.56

297.2

+

56 f

116.3

241.2

299.2

55.9 ✓

61.6 ✓

117.5 ✓

- 1.25

59.5 ✓

- 1.25

58.0 ✓

117.5 ✓

- 1.25

Revised 25°

mean - 1.42

151.2

204.2

332.7

23.8

53.0 ✓

51.1 ✓

104.1 ✓

- 1.56

154.8

- 1.60

204.4

331.3

22.9

49.6 ✓

51.6 ✓

101.2 ✓

- 1.63

9 12

9 08.5

20763.590

Sept 22, 1915

PA 25⁰TX

9 19

155.7

204.2

331.7

22.8

48.5 ✓

51.1 ✓

99.6 ✓

- 1.67

152.4

201.8

334.3

21.4

49.4 ✓

47.1 ✓

96.5 ✓

- 1.70

- 1.74

205⁰

Mean = -1.33

237.4

303.3

-58.3

120.6

65.9 ✓

62.3 ✓

128.2 ✓

- 1.02

234.3

302.7

56.7

122.7

68.4 ✓

66.0 ✓

134.4 ✓

- 0.96

- 0.89

9 26

9 22.5

20763.599

Sept 22, 1915

205⁰X

9 27 236.3
 300.6
 57.6
 124.2

64.3 ✓
 66.6 ✓
 130.9 ✓ - 0.96

534
 123.2
 231.9
 298 ✓

69.8 ✓ - 0.90
 66.5 ✓
 136.3 ✓ - 0.85

Reversed 25⁰

mean = -1.20

154.8
 207.9
 330.7
 24.9

53.1 ✓
 56.2 ✓
 107.3 ✓ - 1.48

151.7
 204.3
 332.7
 25.6

52.6 ✓ - 1.50
 52.9 ✓
 105.5 ✓ - 1.52

9 34
 9 30.5
 20763.604

Levy. Plot.

Final Mean of all - 1.28

6.13
 Final Mean of all = 4.85

20766

Stat. Sept 25, 1915
 P.C. Ob 15" E Eq.

R. Santa Cruz

Phot 77

~~25~~⁰
 30°

S. T.

P 16

7 #9

198.8 / Vardis

250.9

52.1 ✓

21.2

52.0 ✓

73.2

104.1 ✓

- 1.56

192.6

- 1.42

255.9

63.3 ✓

18.8

52.3 ✓

71.1

115.6 ✓ - 1.29

210°

Mean - 1.25

250.8

349.2

104.8

165.5

68.4 ✓

60.7 ✓

129.1 ✓ - 1.00

7 54

214.7

P 21

348.2

7 52

109.2

63.5 ✓

- 1.08

20766.536

166.8

57.6 ✓

121.1 ✓ 1.17

Sept 25, 1915

PA 210
 S.T. 282.7
 8 23 341.7
 7 56 105.1
 168.0

590✓
 629✓
 1219✓ — 1.15

283.6
 349.3
 106.3
 165.9

657✓
 596✓
 1253✓ — 1.12
 1.08

PA 30°

15.3
 71.2
 203.3
 255.5

Mean = 1.28
 1.257
 1.26
 6.13
 Magn Var = 4.87
 559✓
 522✓
 1081✓ — 1.46

03
 ST. 8 30

8 00
 13 00

20766.542

196
 76.9
 199.1
 251.6

57.3✓ — 1.44
 525✓
 109.8✓ — 1.42

R.P.

Sept 25, 1915

R Coronae

154428

Pa. 330

20 39

Comp with * 7 = 7.18

48 55W

100 f

< Var dis

71.5

f 54

172.3

f 27

280.3

69.5

141.0 - 0.75

349.8

104.0

65.6

- 0.80

169.6

71.2

27 f.)

136.8 - 0.84

349.9

Mean = -0.93

Pa. 150°

194.2

255.3

61.1

12.8

65.1

77.9

126.2 - 1.06

192.3

63.2 - 1.08

255.5

61.5

16.2

124.5 - 1.10

9 00

f 33

f 30

20766.562

77.7

Sept 25, 195 -

 $\rho_a - 150^\circ$

193.3

9:02 25-7.7

s 35

14.3

77.4

196.2

64.4

63.1

127.5 - 1.03

- 1.10

254.8

14.8

76.8

5 A. 6

62.0

120.6 - 1.1 A

 $\rho_a - 330^\circ$

273.7

354.5

98.3

175.6

280.9

354.6

97.3

173.7

A 0.8

77.3

158.1

Mean = - 0.80

0.93

- 0.86

7.14

Var = 8.32

- 0.42

9:07

s 40

s 38

20766.562

73.7

- 0.50

76.4

150.1

- 0.57

9:00 pm = 9:27 S. T. es

Sept 25, 1915

Phot R.

Reap Jap IV

R. Richardson Rec.
Comp with Jap I

Ball 103 9 00⁷ 0.0
 Prod 3424 9 07 15.7

~~Ball~~
 Prod 3424

9	27	53	118.3
	28	16	133.2
	28	35	113.4
	28	49	135.3

} LV.

9	44	11	seen
		17	294.6
		29	316.3
		46	294.8
		57	321.4
45	15	29	291.2
		27	320.7
		42	291.3
		59	324.0
46	11		285.7
		29	328.8
		50	283.7
47	07		320.6
		24	287.5

Means of Sat. close to
 limit of Jap prop Sat II
 with Sat I as Comp Sat.

Sept 25, 1915

~~94~~

9	51 50	321.2
	52 02	285.5
	52 13	330.6
	52 28	284.4
	52 39	328.8
	52 50	288.7
	53 02	326.6
	53 11	277.4
	53 23	329.3
	53 35	278.7
	53 45	328.8
	53 56	277.0
	54 9	330.1
	54 20	281.3
	54 32	334.4
	54 44	283.3
	55 02	327.1
	55 16	279.3
	55 23	blonds
	55 39	327.7
	55 46	clds
	56 00	276.7
	56 14	331.2

mean
of
Sat IV
with I
as comp
Sat!

Impossible to continue
on acct of clds.

Ball 103 10 08 10.0
Fwd 3424 10 08 26.0

Mon Sept 27, 1915

LCCB

15" Right Equat.

R Coronae 15-4428

$$\begin{array}{r} 19\ 46 \\ 402 + 28.2 \end{array}$$

102.3 < Van der.

7 32

1576

55.3

2888

529

341.7

108.2

- 1.46

108.2

- 1.46

161.1

529

287.7

559

343.6

108.8

- 1.45

Pa 321°

190.8

254.8

660

17.7

625

80.2

126.5

- 1.05

191.2

- 0.92

7 44

2533

62.1

12.8

679

20.7

130.0

- 0.98

I

$$\frac{Not}{P\ Cor.}$$

Means - 1.19

2.18

5.99

Sept 27, 1955

P.A. 32°

746

1977

257.2

13.3

77.4

59.5

641

123.6

- 1.11

II

1942

253.3

16.4

80.4

59.1

640

123.1

- 1.12

- 1.13

Not

R. CorP.A. 141°

2896

340.6

109.8

163.6

52.4

53.8

106.2

Mean

1.25

7.18

5.93

5.99

5.96

- 1.51

752

2896

347.7

104.6

163.3

58.1

58.7

116.8

- 1.38

- 1.26

On exam of field I found I
had not been measuring R with
star F, but f with another star
see pp 102 - 103.

Sept 27, 1913

R Corona

P.A. 150°

I

8 14

103.6

167.6

280.8

353.9

96.8

101.8

168.9

283.3

347.7

P.A. 330

190.2

260.6

6.3

87.2

187.8

259.9

7.2

26.0

640 ✓

731 ✓

137.1 ✓

67.1 ✓

644 ✓

1315 ✓

70.4 ✓

76.5 ✓

146.9 ✓

72.1 ✓

78.8 ✓

150.9 ✓

- 0.83 ✓

- 0.89 ✓

- 0.95 ✓

Mean = -0.74

7.18
644 ✓

- 0.64 ✓

- 0.60 ✓

- 0.56 ✓

8 20

8 17

20768.553

Sept 27, 1915

2 Coronae

P 330

δ 22 188.3
 261.2
 δ .6
 δ 4.6

72.9 ✓
 76.0 ✓
 148.9 ✓ - 0.60 ✓

11

189.3
 265.8
 78
 δ 3.6

76.5 ✓ - 0.56 ✓
 75.8 ✓
 152.3 ✓ - 0.53 ✓

P 9.150

284.8
 350.6
 1105.1
 16.66

65.8 ✓
 61.5 ✓
 127.3 ✓ - 1.04 ✓

Mean = 0.78 ✓
 7.18 ✓
 6.40 ✓
 6.44 ✓
 Mean = 6.42 ✓
 11.42

δ 27 283.4
 349.9
 δ 24 101.0
 164.6
 20768.558

66.5 ✓ - 1.01 ✓
 63.6 ✓
 130.1 ✓ - 0.98 ✓

Sept 27, 1915

R. S. S. 124205

$$\begin{array}{r} 2112 \\ \hline 2300 \end{array}$$

I

$$\begin{array}{r} 210^0 \\ \hline \end{array}$$

f 47

190.3	Van der	
259.3	690	✓
16.8	59.9	✓
76.7	128.9	- 1.00 ✓

190.6	71.1	- 0.92 ✓
261.7	65.2	✓
14.4	136.3	- 0.5 ✓
79.6		

$$\begin{array}{r} 230^0 \\ \hline \end{array}$$

mean - 1.03 ✓

284.6	59.2	✓
343.8	60.1	✓
104.6	119.3	- 1.21 ✓
164.7		
282.6		- 1.18 ✓

f 54

8 50

20768.576

342.6	600	✓
103.7	65.5	✓
169.2	125.5	- 1.07 ✓

Sept 27, 1915

30°11

p 56

28⁶ 6

345.2

105.5

165.5

58.6 ✓

600 ✓

118.6 ✓ - 1.22 ✓

285.8

344.4

108.8

167.4

210°

12.2

75.3

194.3

255.8

58.6 ✓

58.6 ✓

117.2 ✓ - 1.25 ✓

mean = - 1.12 ✓

- 1.03

- 1.08

- 6.13

63.1 ✓

61.5 ✓

124.6 ✓

- 110

mean
Major 5.05 ✓

192.4

254.6

8.8

79.4

62.2 ✓

70.6 ✓

132.8 ✓

- 0.92 ✓

- 101 ✓

9 02

p 59

20762 583

20768

Sept 27, 1915

9 19

W Aquilae $\frac{191007}{2153}$ est 13.6
 $243W - 7.0$ -6.9
 2157 $2:47W$

T Sagittarii $\frac{191017}{2158}$ est 11.4
 $248 - 17.2$ $231W$
 -16.8
 2200

R Sagitt - $\frac{191019}{2158}$ = 7.7 in 4"

S Sagitt $\frac{191019}{2158}$ = < 13.6

W Sagitt $\frac{191219}{2158}$ = 13.2

RW Sagitt $\frac{190819}{2158}$ = 9.2

R Sagitt $\frac{190818}{2158}$ = 9.7

Z Sagitt $\frac{191321}{2213}$ est 9.3
 $300 - 21.1$ 307
 -208
 2221

RR Aquilae $\frac{195202}{2222}$ est 13.7 if seen
 $230W - 2.2$ $2:33$
 -1.8
 2227

Sept 27, 1915 -

R₂ Aquilae 195308 est 11.7
 22 29
 2 36 W - 8.0 22 30
 23) 6
 - 7.8

R Capric 200514 est 11.7
 22 32
 2 27 - 14.4 22 33
 2 28
 - 14.2

Z Aquilae 200906 est 13.1
 22 35
 2 26 W - 6.3 22 37
 - 6.3
 2 28 W

R T Capric 201121 est 8.1
 22 38
 2 27 - 21.4

XW Capric 200822 est 11.7

R U Capric 202622 est < 13.0
 22 44
 2 18 - 22.5

Sept 27, 1915 -

4 Pegasi 22061 3 = 13.8

$\alpha + 3$ as marked on cross sect. Plot
13.6 & 13.4 suspect. are correct

1 Pegasi 22041 2

Leave till another time

SS Cygni 213443 est 11.9

22 54

1 16 W + 430

L.P.P.

(17)(168)

Tues. Sept 28, 1915

RColl

15" E. Eq.

R Coronae

154420

Phot T!

Pa 150

7 15 — 106.8 < Vardis
170.2

250.0

343.8

106.5

171.2

279.2

344.6

634 ✓

638 ✓

127.2 ✓ — 1.04

647 ✓ — 1.01

654 ✓

130.1 ✓ — 0.98

PA. 330°

Ag

78.9

188.8

261.1

700 ✓

723 ✓

142.3 ✓ — 0.73

Mean — — 0.84

712

Magn — 6.34

7 21 11.2
82.9

71.7 ✓ — 0.62

75.2 ✓

146.9 ✓ — 0.64

7 18 187.2

262.4

20769.512

Sept 28, 1915

Re 330

II

87 23 5.9
81.1
183.8
262.6

752 ✓
78.8 ✓
1540 ✓ - 0.50

5.1
771
183.0
262.2

720 ✓ - 0.52
792 ✓
151.2 ✓ - 0.55

Re 150

mean - 0.93

286.6
342.2
108.8
166.9

556 ✓
58.1 ✓
113.7 ✓ - 1.33

Magu 625
634
Mean Magu - 6.30

285.1
342.2
109.8
165.5

57.1 ✓ - 1.34
55.7 ✓
112.8 ✓ - 1.35

28
726
20769.518

Sept 28, 1915

R. S. W. 184205 Phot T.

$$\begin{array}{r} 20 \ 15 \\ \hline 1 \ 33 \end{array}$$

Pa. 30°

I

7 46

107 7	< Vanders	✓
163 1	55.4	✓
288.6	53.6	✓
342.2	109.0	✓ - 1.44

109.6	61.2	✓ - 1.41
170.8	56.6	✓
286.6	117.8	✓ - 1.38

343.2

Pa 210°

mean -

$$\begin{array}{r} -1.02 \\ 6.13 \\ \hline 5.11 \end{array}$$

2.4

80.3	71.9	✓
189.2	75.9	✓
265.1	147.8	✓ - 0.62

9.2

7 52

80.4	71.2	✓ - 0.64
190.6	74.1	✓
265.2	145.8	✓ - 0.66

20769.534

Sept 28, 1915

P. Q. 210°

IT

87 54

11.7

25.3

190.5

$$\begin{array}{r} 736 \\ 720 \\ \hline 1456 \end{array} \begin{array}{l} \checkmark \\ \checkmark \\ \checkmark \end{array} - 0.66$$

262.5

- 0.71

2.1

74.2

189.8

260.4

$$\begin{array}{r} 701 \\ 706 \\ \hline 1407 \end{array} \begin{array}{l} \checkmark \\ \checkmark \\ \checkmark \end{array} - 0.76$$

P. Q. 30°

Mean = - 0.98

6.13

285.6

343.8

105.2

162.9

582

57.7

115.9

Magm = 5.15

Mean Magm = 5.13

- 1.28

289.5

342.2

100.2

166.7

527

66.5

119.2

- 1.24

- 1.21

758

756

20769.539

20769

Sept 28, 1915-

~~to~~ W Corona 16 11 38

$$\begin{array}{r} 2111 \\ \hline 50 + 38.2 \end{array}$$

8 35-

est 12.0

W Here 16 31 37 est 11.6

$$\begin{array}{r} 2118 \\ \hline 447 W + 37.0 \end{array}$$

RV Here 16 56 31 = 133

$$\begin{array}{r} 2120 \\ \hline 424 W + 31.2 \end{array}$$

RT Here 17 06 27 est 11.9

$$\begin{array}{r} 2124 \\ \hline 418 + 27.2 \end{array}$$

RS Here 17 17 23 est 11.5

$$\begin{array}{r} 2127 \\ \hline 410 W + 23.0 \end{array}$$

Sept 28, 1915 -

$$\begin{array}{r} \text{Ry Her. } 175519 \text{ est } 14.0 \\ 2130 \\ \hline 335 \text{ W} + 19.5 \end{array}$$

$$\text{T Aquarii } 204405 = \text{d. } 2 \text{ in } 4$$

$$\text{Y Aquarii } 203905 = 13.5$$

$$\text{W Aquarii } 204104 = 13.0$$

$$\begin{array}{r} \text{U Capri. } 204215 \text{ est } 13.7 \\ 2152 \\ \hline 110 - 15.3 \end{array}$$

$$\begin{array}{r} \text{V Capri } 210124 = 11.4 \\ 2156 \\ \hline 055 - 24.5 \end{array}$$

$$\begin{array}{r} \text{X Capri } 210221 \\ 2202 \\ \hline 10 - 21.9 \end{array} \quad m 3. \underline{\underline{N}} < 13 \underline{\underline{th}}$$

$$\begin{array}{r} \text{Z Capri } 210516 \\ 2205 \\ \hline 10 - 16.8 \text{ est } 9 \text{ d} \end{array}$$

Sept 28, 1915

$$\begin{array}{r}
 \text{R Saguari} \quad 2105041 \quad < 13.5 \\
 \hline
 2220 \\
 \hline
 115 - 4.2
 \end{array}$$

$$\begin{array}{r}
 \text{RR Aquarii} \quad 210903 \quad \text{est } 10.2 \\
 \hline
 2224 \\
 \hline
 115 - 3.0
 \end{array}$$

$$\begin{array}{r}
 \text{T Capric} \quad 211615 = 13.6 \\
 \hline
 2227 \\
 \hline
 111 - 15.4
 \end{array}$$

$$\begin{array}{r}
 \gamma \text{ Capric} \quad 212814 = 13.5 \\
 \hline
 2230 \\
 \hline
 12 - 14.2
 \end{array}$$

$$\begin{array}{r}
 \text{U Aquarii} \quad 215717 \quad \text{est } 11.7 \\
 \hline
 2232 \\
 \hline
 035 - 17.0
 \end{array}$$

Sept 28, 1915 -

$$\begin{array}{r} \text{X Aquarii } 221321 = 13.7 \\ \underline{2236} \\ 023 - 21.2 \end{array}$$

$$\begin{array}{r} \text{RT Aquarii } 221722 \text{ est } 10.3 \\ \underline{2237} \\ 020 - 22.4 \end{array}$$

$$\begin{array}{r} \text{S Aquarii } 225120 \text{ est } 11.3 \\ \underline{2241} \\ 010 \text{ E} - 20.7 \end{array}$$

$$\begin{array}{r} \text{R Aquarii } 233815 \text{ est } 7.9 \\ \underline{2244} \\ 054 \text{ E} - 15.6 \end{array}$$

look up Magnis on 2 charts.

$$\begin{array}{r} \text{V Ceti } 235209 \text{ a few} = 13.4 \\ \underline{2252} \\ 10 \text{ E} - 9.3 \end{array}$$

Sept 28, 1915 -

$$\begin{array}{r}
 W \text{ Ceti } 2357.15 \\
 \underline{2300} \\
 057 - 15.2
 \end{array}$$

abandoned

$$\begin{array}{r}
 S \text{ Cygni } 2134.43 = 12.0 \\
 \underline{2308} \\
 1306 + 42.8
 \end{array}$$

10 30

(24) (192)
L.P.P.

$\Delta \alpha = 1494$
 $\Delta \mu = 6.2$
 After reduction

$$\begin{array}{r}
 130.5 \\
 66.6 \\
 \hline
 64.3 \\
 - 1.04 \\
 \hline
 65.3
 \end{array}$$

$$\begin{array}{r}
 123.6 \\
 58.7 \\
 \hline
 64.9 \\
 - 1.11 \\
 \hline
 63.8 \\
 63.5 \\
 \hline
 63.3 \\
 \hline
 63.2
 \end{array}$$

Mean May = 6.32

$$\begin{array}{r}
 149.2 \\
 75.6 \\
 \hline
 73.6 \\
 - 0.62 \\
 \hline
 73.0
 \end{array}$$

$$\begin{array}{r}
 146.9 \\
 73.5 \\
 \hline
 73.4 \\
 - 0.64 \\
 \hline
 72.8
 \end{array}$$

11

$\Delta \alpha 330^\circ$

Net 29.1915

$$\begin{array}{r}
 20770.524 \\
 35.5 \\
 \hline
 112.2 \\
 356.3 \\
 \hline
 292.6
 \end{array}$$

$$\begin{array}{r}
 175.3 \\
 126.6 \\
 \hline
 352.6 \\
 287.7 \\
 \hline
 84.150
 \end{array}$$

$$\begin{array}{r}
 265.9 \\
 190.3 \\
 \hline
 83.3 \\
 9.7 \\
 \hline
 93.0
 \end{array}$$

$$\begin{array}{r}
 263.3 \\
 189.8 \\
 \hline
 82.0 \\
 8.6 \\
 \hline
 90.6
 \end{array}$$

7 33

207 0.519

7 31
7 28

266.2
194.3
77.4
6.9

146.4
5.5
20.5
- 0.65
- 0.66

2 59 2

188.9
82.9
7.4

145.8
5.03
25.5
- 0.66

6.30
7.18
- 0.88

Pa 330

349.2
258.2
168.3
101.9
6.64
- 1.10
127.4
6.10
- 1.03

347.8
285.6
166.2
106.9
62.2
59.3
121.5
- 1.16

7 25

Pa 150

15.3 29

(Wed) 29/1915

R. Cassini 1544 28
Plot 7

I

Sept 29, 1915 -

Route 184205 - Phot T.

$$\begin{array}{r} 2028 \\ 146 \\ \hline \end{array} W - 5.8$$

P.A. 30

$$\begin{array}{r} 288.4 \\ 359.8 \\ 108.2 \\ 182.2 \\ \hline \end{array}$$

$$\begin{array}{r} 71.4 \\ 74.0 \\ \hline 145.4 - 0.67 \end{array}$$

I

288.6

6.6

112.8

184.6

$$780 - 0.62$$

718

$$\begin{array}{r} 718 \\ \hline 149.8 - 0.58 \end{array}$$

P.A. 280

200.0

276.7

21.5

96.0

$$\begin{array}{r} \text{Mean} = -0.60 \\ 613 \\ \hline 5.56 \end{array}$$

745

$$151.2 - 0.55$$

201.2

278.0

26.0

96.2

$$76.8 - 0.59$$

702

$$\begin{array}{r} 702 \\ \hline 147.0 - 0.63 \end{array}$$

$$\begin{array}{r} 759 \\ 756.0 \\ \hline \end{array}$$

20770.539

affected by cld or haze?
see next two groups.

Sept 29, 1915

Pa 210

H

8 01

206.1

279.8

27.6

98.6

73.7

71.0

144.7

- 0.68

204.9

280.0

28.3

99.2

75.1

70.9

146.0

- 0.66

- 0.65

Pa. 30

Mean =

0.81

613

5.32

~~120.5~~

304.6

14.3

124.4

183.8

69.7

59.4

129.1

- 1.00

8 08

303.1

10.2

8 04.5

125.2

20770.544

191.2

67.1

66.0

133.1

- 0.96

- 0.91

Sept 29, 1915

PA 30

III

8 15

305.8

144

126.2

192.0

686

65.8

1344 - 0.89

308.4

12.6

128.3

193.1

642

648

1290 - 1.00

PA 210°

Mean = -0.83

220.2

293.6

28.4

-102.3

736

73.9

147.3 - 0.63

61.3
5.30

8 21

221.6

290.5

39.8

109.8

689

200

138.9 - 0.80

-0.72

20770.534

PA = 26.7

Sprocket = 3.3

* amplified

20770

Sept 29, 1915

$$\begin{array}{r} \text{RW And. } 24 \\ 204132 \text{ est } 12.0 \\ \underline{2121} \\ 3202 + 32.1 \end{array}$$

$$\begin{array}{r} \text{V Androm } 004435 \text{ est } 12.1 \\ \underline{2132} \\ 3122 + 35.0 \end{array}$$

$$\begin{array}{r} \text{RR Androm } 804553 \text{ est } 99 \\ \underline{2139} \\ 306 + 33.6 \end{array}$$

$$\begin{array}{r} \text{RX And. } 005740 \text{ est } 12.8 \\ \underline{2145} \\ 3713 + 40.6 \end{array}$$

$$\begin{array}{r} \text{u Androm } 010940 \text{ est } 13.8 \\ \underline{2149} \\ 3202 + 40.0 \end{array}$$

diff to see

Sept 29, 1915 -

uZ - Androm 011041 - est 13.7

$$\begin{array}{r} 2150 \\ \hline 320 \end{array} + 41.2$$
 seen surely

RV Cass 004746 - est 13.3

$$\begin{array}{r} 2155 \\ \hline 242 \end{array} + 46.9$$

W Cass 004958 - est

$$\begin{array}{r} 2203 \\ \hline 2946 \end{array} + 58.8$$

 abandoned

Z Ceti 010102

$$\begin{array}{r} 2215 \\ \hline 246 \end{array} - 2.0$$

 abandoned

S Risc 011208 - est < 13.3

$$\begin{array}{r} 2225 \\ \hline 247 \end{array} + 8.4$$

$$\begin{array}{r} + 8.2 \\ 2468 \\ 2232 \end{array}$$

Sept 29, 1915 -

U Rise 011712 est < 13.0

$$\begin{array}{r} 2234 \\ \hline 2432 + 12.0 \end{array}$$

Moon & haze make obs. very diff

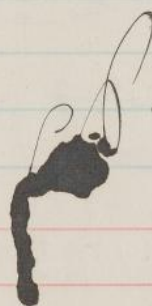
5'5" Cygni 213843 est 12.0

$$\begin{array}{r} 2274 \\ \hline 100 + 42.0 \end{array}$$

957 Measured all off. Var ft.

10

202



Thurs. Sept 30, 1915

L.C. Alb. 15" E. Eg.

R Coronae 15442

Photo T.

1944

4.00

Pa. 150

132.2 < Varian

194 2 61.4 ✓

I

316.3

64.5 ✓

20.2

125.9 - 1.07

134.4

192.3

63.9 ✓ - 1.04

317.3

64.7 ✓

220

128.6 - 1.01

Pa. 330

~~46.0~~~~109.2~~

249.8

317.3

67.5 ✓

68.6 ✓

66.2 ✓

136.1 ✓ - 0.85

134.8

252.4

317.4

65.0 ✓

- 0.86

65.4

135.4

7.00 ✓

135.0 ✓

- 0.88

7 14

7 10.0

207 11.507

5.0 15.25

Sept 30, 1915

P.A. 330

11

7 16 2504
 313.8 634 ✓
 64.7 69.5 ✓
 1342 1329 - 0.92

2492 ✓ - 0.88
 315.4 662 ✓
 66.8 701 ✓
 1369 1363 - 0.85

P.A. 150

~~2341.3~~
~~2342.5~~
 2358.3
 2322.2

611 ✓
 639 ✓
 1250 - 1.08

mean - 0.96 - 0.96
~~6.23~~ 7.18
~~5.17~~ 6.22
~~5.17~~ 6.23
~~5.17~~ 6.22

337.3 - 1.04
 7 21 46.3 690 ✓
 18.5 159.6 60.6 ✓
 220.2 129.6 - 0.99

20771.512

Ha. H. 31 W
 Dec. + 288
 P.A. 1496
 Sprocket. 6.2
 S.T. = 20.15

Sept 30, 1915

R. N. S. 184205 Phot. T.

$$\begin{array}{r} 201A \\ \hline 136W- \end{array}$$

Dec. 30

$$\begin{array}{r} 3436 \\ 40.6 \\ 162.3 \\ 220.8 \end{array} \quad \begin{array}{l} \text{Vandis} \\ 570 \\ 58.5 \\ 115.5 - 1.29 \end{array}$$

$$\begin{array}{r} 341.3 \\ 40.3 \\ 162.3 \\ 220.0 \end{array} \quad \begin{array}{l} 590 \\ 577 \\ 116.7 - 1.27 \end{array}$$

0.8.18 Pa. 210

$$\begin{array}{r} 240.7 \\ 316.8 \\ 65.0 \\ 135.6 \end{array}$$

$$\begin{array}{r} 761 \\ 70.6 \\ 146.7 \end{array}$$

$$\begin{array}{r} \text{mean} = -0.95 \\ 613 \\ \hline 5.18 \end{array}$$

$$- 0.64$$

$$\begin{array}{r} 2433 \\ 316.8 \\ 61.4 \\ 137.3 \end{array}$$

$$\begin{array}{r} 735 \\ 75.9 \\ 149.4 \end{array}$$

$$- 0.62$$

$$- 0.59$$

$$20771.526$$

Sept 30 1915

Pa. 210

II

742
244.4
319.2
64.7
139.2

748 ✓
765 ✓

149.3 ✓

0.59

245.3
322.0
61.9
136.8

767 ✓
749 ✓

151.6 ✓

0.56

0.54

Pa. 30

156.6
218.3
343.7
394

617 ✓
557 ✓

1174

mean = -0.90

6.13

5.23
5.18

Mean Mag. 5.20
1.25

161.4
747 218.8

7445 346.4
17.9 *

574 ✓
61.5 ✓

118.9 ✓

1.24

1.22

20771.531 read over, found
error in reading
as made at first.

149. 1:54 W
Dec - 5.7
S.T. 20 36
P.A. 26.6
Apoch 3.3

Sept 30. 1915.

RT Lacerta

215743

2047

1102 + 43.0

8 10

Too high now.

Mon Oct. 4, 1915 -

R.C. Ob 15" E. Sq. Phot T.

R Corona 154428

Pa 150

19.58
4 14 W

343.9 < Van dia

7 08

38.6

54.7 ✓

167.7

51.6 ✓

219.3

106.3 ✓ - 1.50

343.8

39.7

55.9 ✓ - 1.46

165.4

53.8 ✓

219.2

109.7 ✓ - 1.42

Pa 330

Mean = -1.16

248.8

7.18

316.6

67.8 ✓

65.2

70.5 ✓

135.7

138.3 ✓ - 0.81

249.2

7 14

68.6 ✓ - 0.86

317.8

65.2 ✓

7 11

70.4

133.8 ✓ - 0.90

135.6

20775.508

should have been
reduced on p 132.

Pa 149.5

149.5 1.46 W

Dec 728.8

S.T. 20.2 A

Shoet 6.2

Oct 4, 1915

Pa 330

II

7 16

247.6

317.9

64.4

136.8

$$\begin{array}{r} 203 \checkmark \\ 72.4 \checkmark \\ \hline 142.7 \checkmark \end{array}$$

- 0.72

247.4

320.8

65.5

134.8

$$\begin{array}{r} 734 \checkmark \\ 69.3 \checkmark \\ \hline 142.7 \checkmark \end{array}$$

- 0.72

- 0.72

Pa 150

Mean - 1.18

166.3

218.8

346.2

36.3

525

50.1

$$\begin{array}{r} 1042.6 \checkmark \end{array}$$

- 1.59

718

6.00

6.02

6.01

7 21

167.3

214.8

347.7

38.8

475

57.1

$$\begin{array}{r} 98.6 \checkmark \end{array}$$

- 1.64

- 1.69

7 18.5

20775.572

see previous page

Oct 4, 1915

R Nauti 184205 est

20 32

150 - 5.2

Pa. 27

7 35

158.6

226.4

334.2

45.8

Van der ✓

67.8

51.6 ✓

139.4 - 0.79

160.3

227.1

335.2

44.3

582.207

241.7

521.6

62.0

141.8

66.8

731 ✓

1399 - 0.78

79.9 ✓

79.8 ✓

159.7 ✓

- 0.39

mean - 0.58
6.43
5.557.07

6.49

7 40

242.1

325.2

62.4

375 140.8

431 ✓

- 0.37

58.4 ✓

161.5 - 0.35

20775.526

Oct 4, 1915

P.A. 207

II

7 42

245.6

324.7

60.3

141.6

791

81.3

160.4

- 0.37

239.2

316.4

62.2

146.2

772

860

1612

- 0.36

- 0.36

P.A. 27

338.2

48.4

154.4

227.4

70.4

730

143.4

mean

- 0.53

0.57

6.13

2.07

5.10

6.52

5.55

6.49

5.58

6.52

- 0.71

335.4

48.2

152.7

223.7

728

710

1438

- 0.70

- 0.70

L.P.P.

7 47

7 44.5

20775.531

Variably bright, than
comp. x, just south, about
1/2 a mag.

H.A. = 2 16 W

Dec = - 5.8

N.T. = 201.55

P.A. = 27.5

Spochet = 3.3

JD 20777

Wed. Oct. 6, 1915

LC Obs.

15" E. Eq.

R Androm 00 18 38 est 11.2

$$\begin{array}{r} 21.45 \\ \hline 233 \text{ E} + 38.0 \end{array}$$

J 40

RZ Per. 01 23 50 est 11.7

$$\begin{array}{r} 21.53 \\ \hline 330 + 50.3 \end{array}$$

RU And. 01 32 38 = 10.3

Y And. 01 33 38 = 9.2

$$\begin{array}{r} 21.58 \\ \hline 335 \end{array}$$

U Persei 01 53 54 est J. K

$$\begin{array}{r} 22.08 \\ \hline 345 \text{ E} + 54.3 \end{array}$$

W Androm 02 11 43 est 13.2

$$\begin{array}{r} 22.11 \\ \hline 400 \text{ E} + 43.2 \end{array}$$

20777

Oct 6, 1915

$$\begin{array}{r} \text{RR Persei} \quad 022150 = 9.9 \\ 22 \ 16 \\ \hline 4 \ 05 + 50.4 \end{array}$$

$$\begin{array}{r} \text{RT Crang} \quad 023133 \text{ est } 9.6 \\ 22 \ 19 \\ \hline 4 \ 12 + 33.8 \end{array}$$

$$\begin{array}{r} \text{U Pisc} \quad 011712 < 13.6 \\ 22 \ 23 \\ \hline 2 \ 54 \text{ E} + 12.3 \end{array}$$

$$\begin{array}{r} \text{R Pisc} \quad 012502 \text{ est } 10.5 \\ 22 \ 27 \\ \hline 2 \ 58 + 2.3 \end{array}$$

$$\begin{array}{r} \text{S Arietis} \quad 015912 \text{ est } < 13.8 \\ 22 \ 31 \\ \hline 3 \ 28 \text{ E} + 12.0 \end{array}$$

Oct 6, 1915

$$\begin{array}{r} \text{R Ainetis } 021024 = \delta 5 \\ 22 \ 34 \\ \hline 3 \ 36 \ \Sigma + 246 \end{array}$$

$$\begin{array}{r} \text{Nova Per No 2. } 032443 = H493,3 H56 \\ 22 \ 39 \\ \hline 4 \ 45 + 43.4 \end{array}$$

Haf. Not. used Var about 12.8 ±

$$\gamma \text{ Persei } 032443 = \delta.3$$

$$\begin{array}{r} \text{R Persei } 032335 = \delta 9.3 \\ 22 \ 47 \\ \hline 4 \ 36 \ \Sigma + 35.3 \end{array}$$

$$\begin{array}{r} \text{U Ainetis } 030514 < 13.3 \\ 22 \ 51 \\ \hline 4 \ 14 \ \Sigma + 14.2 \end{array}$$

$$\begin{array}{r} \text{O Ceti } 021403 \text{ Var } 0.5 \delta \\ 22 \ 52 \\ \hline 3 \ 16 \ \Sigma - 3.6 \text{ Var. ucl.} \\ 23 \ 03 \\ \hline 3 \ 11 \end{array}$$

" 4 funder

Oct 6, 1915 -

$$R \text{ Ceti } \underline{022000} = < 13.0$$

$$\begin{array}{r} 23.08 \\ 3.12 - 0.6 \end{array}$$

1600

$$U \text{ Ceti } \underline{022813} \text{ est } > 6$$

$$\begin{array}{r} 23.14 \\ 3.14 - 13.6 \end{array} \quad 4''$$

$$X \text{ Ceti } \underline{031401} \text{ est } 10.1$$

$$\begin{array}{r} 23.19 \\ 3.55 - 1.4 \end{array}$$

$$R \text{ Tauri } 042209 \text{ est } 12.7$$

$$S \text{ Tauri } 042309 < 13.3$$

$$\begin{array}{r} 23.23 \\ 5.02 + 9.9 \end{array} \quad S = \text{Var not surely seen}$$

$$W \text{ Tauri } 042215 \text{ est } 12.1$$

$$\begin{array}{r} 23.27 \\ 4.55 + 15.8 \end{array}$$

$$R X \text{ Tauri } 043208 \text{ est } 12.0$$

$$\begin{array}{r} 23.30 \\ 5.2 + 8.0 \end{array}$$

Oct 6, 1915

$$\begin{array}{r} \text{V Tauri } 044617 = \angle 13.3 \\ 23 \ 33 \\ \hline 5 \ 13 \ 2 + 17.4 \end{array}$$

$$\begin{array}{r} \text{T Tauri } 041619 = 9.5 \\ 23 \ 3A \\ \hline 4 \ 38 \ 2 + 19.3 \end{array}$$

$$\begin{array}{r} \text{R Orionis } 045307 \\ 23 \ 41 \\ \hline 5 \ 12 \ 2 + 17.9 \end{array}$$

Abandoned.

$$\begin{array}{r} \text{V Camelopardalis } 054974 \text{ est } \angle 13.1 \\ 23 \ 52 \\ \hline 5 \ 57 \ 2 + 74.5 \end{array}$$

10 45

$$\begin{array}{r} \text{S Camelopardalis } 053068 \text{ est } 7.5 \\ 23 \ 58 \\ \hline 5 \ 32 \ 2 + 68.8 \end{array}$$

$$\begin{array}{r} \text{Z Aurigae } 055353 \text{ est } 11.5 \\ 0 \ 0 \ 1 \\ \hline 5 \ 52 \ 2 + 53.3 \end{array}$$

Oct 6. 1915

$$\begin{array}{r} \text{SS Aurigae } 0606547 = 13.0 \\ 005 \\ \hline 60 + 47.5 \end{array}$$

$$\begin{array}{r} \text{R Aurigae } 050953 = 11.3 \\ 009 \\ \hline 50 + 53.5 \end{array}$$

$$\begin{array}{r} \text{W Aurigae } 052036 \text{ est } 11.7 \\ 011 \\ \hline 59 + 36.8 \end{array}$$

$$\begin{array}{r} \text{J Aurigae } 052034 = 9.7 \\ 015 \\ \hline 55 + 34.0 \end{array}$$

$$\begin{array}{r} \text{U Aurigae } 053531 = 11.4 \\ 017 \\ \hline 518 + 31.9 \end{array}$$

$$\begin{array}{r} \text{RR Tauri } 053326 = 12.2 \\ 020 \\ \hline 513 + 26.0 \end{array}$$

$$\begin{array}{r} \text{SU Tauri } 054319 \text{ est } 9.4 \\ 023 \\ \hline 520 + 19.0 \end{array}$$

Oct 6, 1915

U Orionis 054920 est 9.9
0 2 6
5 23 + 20.2

(37) (37) L P.

20781

Sum Oct 10, 1915
 PC Abs. 15" E. eq.

N^W Cygni 213843

2338

20 W

est 11.8

10 18

X Cephei 210382 est 10.8

2347

244 + 82.7

S Cephei 213678 est 10.7

2353

217 + 78.2

Y Cephei 0031798 est 13.4

00

+ 79.5

St Cass. 011272 est 12.8

0003

192 + 72.1

Oct. 10, 1915

$$\begin{array}{r} \text{Z Cephei } 021281 < 13.8 \\ 0012 \\ \hline 20 \end{array}$$

$$\begin{array}{r} \text{RR Cephei } 023080 \text{ if seen} = 14.0 \\ 020 \\ \hline 2102 + 80.7 \end{array}$$

$$\begin{array}{r} \text{T Camelopardalis } 043274 \\ 043065 \\ 025 \\ \hline 43 + 65.9 \end{array} \quad \begin{array}{r} 043274 \\ 024 \\ \hline 408 + 7 \end{array} \quad \begin{array}{l} \text{if correctly} \\ \text{identified} = \\ 13.3 \end{array}$$

Look up Hagen

$$\text{X Camelopardalis } 043274 \text{ est } 14''$$

$$\begin{array}{r} \text{U Lynx } 063159 \text{ est } 11.8 \\ 0041 \\ \hline 5502 + 59.8 \end{array}$$

$$\begin{array}{r} \text{S Lynx } 063558 \text{ est } 13.8 \\ 0043 \\ \hline 552 + 58.0 \end{array} \quad \text{so far both seen}$$

$$\begin{array}{r} \text{R Lynx } 065355 \text{ est } 13.7 \\ 0046 \\ \hline 607 + 55.5 \end{array}$$

Oct 10, 1915

$$\begin{array}{r}
 \times \text{ Aurigae } 060450 - \text{ ext } 12.6 \\
 \quad 0050 \\
 \hline
 5,142 + 500
 \end{array}$$

$$\begin{array}{r}
 \text{SS Aurigae } 060540 + 47.4 \\
 \times 2 \text{ m} = 135
 \end{array}$$

$$\begin{array}{r}
 061647 \quad \checkmark \text{ Aurigae } = 9.6 \\
 0058 \\
 \hline
 5,182 + 47.8
 \end{array}$$

Varied seeing poor

Alt. region too low without waiting too long.

$$(15)(52) \text{ p. P.}$$

Mon. Oct. 11, 1915
 L.C. Obs. 15¹⁴ E. Eg.

R Coronae 154428 est
 $\begin{array}{r} 20\ 08 \\ \hline 4\ 24 \end{array}$

6 42 55 Cygni 213843 est 11.8

R Coronae Phot T.
 Pa. 150 I

6 55 34.3 2 < Vardun
 34.6 41.4

164.6 $\times 7.2$
 211.8 $\frac{98.6}{-}$ 169

347.8
 36.4 486 - 1.70

165.0 $\frac{494}{-}$
 213.4 98.0 - 1.71

Pa. 336
 248.4 Mean = - 1.31

313.4 65.0

68.1 691

137.2 1341 - 0.89

248.1

7 02 313.6 65.5 - 0.92

6 58.5 68.6 663

134.9 131.8 - 0.94

499

Oct. 11, 1915

P.Q. 330

II

> 03

249.8

315.6

66.6

134.6

658

680

1338

- 090

249.6

315.5

66.9

132.9

659

680

1319

- 092

- 094

P.A. 150

mean - 10.2

165.9

214.4

348.6

37.5

485

489

974

- 1.72

132

7.18

5.86

> 08

> 05.5

504

166.5

214.6

348.8

37.6

481

488

969

- 1.72

- 1.73

HA. = 5.02

Decl. = +28.6

S.T. = 20:43

P.A. = 150.0

Sprocket = 6.3

Oct 11, 1915

R. Sturti 184205 - Phot T.

P. a. 27°

I

$$\begin{array}{r}
 146.6 \text{ (Van dia.)} \\
 7 \ 22 \quad 235.6 \\
 \quad 332.4 \\
 \quad 54.8 \\
 \hline
 \quad 171.4 \quad - 0.16
 \end{array}$$

$$\begin{array}{r}
 149.5 \\
 237.6 \\
 328.7 \\
 56.3 \\
 \hline
 175.7 \quad - 0.12 \\
 \quad - 0.08
 \end{array}$$

$$\begin{array}{r}
 \text{P. a. } 207 \\
 157.5 \\
 235.4 \\
 336.3 \\
 57.7 \\
 \hline
 159.3 \quad - 0.39
 \end{array}$$

Mean - 0.24

$$\begin{array}{r}
 7.07 \\
 \hline
 6.83
 \end{array}$$

$$\begin{array}{r}
 7 \ 28 \\
 \hline
 7 \ 25 \\
 \quad 517
 \end{array}$$

$$\begin{array}{r}
 153.4 \\
 229.3 \\
 329.7 \\
 56.4 \\
 \hline
 162.6 \quad - 0.36 \\
 \quad - 0.33
 \end{array}$$

Oct 11, 1915

17

7 29

153.6

233.6

332.8

56.0

80.0

832

163.2

- 0.32

149.2

237.2

329.9

57.7

880

0.20

878

1075.8

- 0.08

P.A.

145.4

236.8

327.7

50.0

914

823

173.7

Mean = - 0.16

7.07

6.91

6.83

6.87

- 0.12

7 36

7 32.5

522

147.4

235.3

326.7

52.5

879

858

173.7

- 0.12

- 0.12

P.A. 28°

Spectet 3.2

S.T. = 2112

1.4a = 2:32W

Dec = - 5.8

20782

Oct. 11, 1915

S Serpente 15¹⁷~~16~~14 Too low
 $\frac{2117}{60} + 14.8$

S Cor. Pro 151731 < 12.0
 $\frac{2125}{60.8} + 31.6$

200

Too low to observe well

X Coronae 154536 ext 9.6
 $\frac{2132}{547} + 36.4$

✓ Coronae 154639 ext 9.5
 21 Var quite red

R Herc. 160118 if seen = 13.0
 $\frac{2138}{537} + 18.4$

U Serpente 160210 ext
 Too low

Oct. 11, 1915

RM Herc 160625 est 12.2

2148

540 + 25.0

RV Herc 165631 est 13.4

2148

458 + 31.2

T Dracon 175458

2154

40 + 58.0

Nathan comp = T = 100

Southern Comp = - Dec = 11.5

V Draconis 175654 est 10.1

2156

40 + 58.0

W Dracon 180565 = 13.0

X Dracon 180666 = 11.6

2203

357 + 65.8

Oct 11/1915

$$\begin{array}{r}
 \text{Ry Lyrae} \quad 184134 \\
 \underline{2216} \\
 335 + 34.4
 \end{array}$$

$$\text{surp} = \text{yreen} = 138$$

$$\begin{array}{r}
 \text{Z Lyrae} \quad 185634 \quad \text{est } 12.8 \\
 \underline{2221} \\
 325 + 34.6
 \end{array}$$

$$\text{RT Lyrae} \quad 185737 \quad \text{Est} = 13.7$$

$$\begin{array}{r}
 \text{RX Lyrae} \quad 185032 = \text{Est } 13.8 \\
 \underline{2226} \\
 336 + 32.8
 \end{array}$$

$$\begin{array}{r}
 \text{RW Lyrae} \quad 184243 \quad \text{est } 13.0 \\
 \underline{2229} \\
 347 + 43.5
 \end{array}$$

$$\begin{array}{r}
 \text{SV Draconis} \quad 183149 \quad \text{est } 12.8 \\
 \underline{2232} \\
 41 + 49.2
 \end{array}$$

$$\begin{array}{r}
 \text{RU Lyrae} \quad 190941 \quad \text{est } 10.4 \\
 \underline{2236} \\
 327 + 41.0
 \end{array}$$

$$\text{RS Lyrae} \quad 190933 + 33.0$$

$$\text{Var surp} = 14.0$$

Oct 11, 1915

S Lyrae 190925 ~~est~~ ~~73~~ 73 72

V Lyrae 190529 = < 13.8
 $\frac{2244}{3 \ 39} + 29.8$

($3.37 + 30.2$ at 22.47 which is not center = 6779 NGC.)

T γ Cygni 192928 < 13.5
 $\frac{2252}{3 \ 23} + 28.0$

χ Cygni 194632 ~~est~~ 10.7
 $\frac{2256}{3 \ 10} + 32.7$
 ✓ on red

τ_{II} Cygni 194348 ~~est~~ 12.3
 $\frac{2303}{3 \ 20} + 48.8$

π₁ Z Cygni 191350 ~~est~~ 10.1
 $\frac{2307}{3 \ 54} + 50.0$

υ Draconis 190967 ~~est~~ 12.7
 $\frac{2312}{4 \ 3} + 67.5$

Oct. 11, 1915

$$\begin{array}{r} \text{25 Cygni } 200357 \text{ ext } 13.2 \\ 2318 \\ \hline 315 + 57.7 \end{array}$$

$$\begin{array}{r} \text{SX Cygni } 201130 \text{ } \overline{13.5} \\ 2322 \\ \hline 311 + 30.8 \end{array}$$

$$\begin{array}{r} \text{WX Cygni } 201437 \text{ ext } 9.6 \\ 2328 \\ \hline 314 + 37.2 \end{array}$$

10 00 Varied

$$\begin{array}{r} \text{SS Cygni } 213843 \\ 2332 \\ \hline 154 + 436 \end{array}$$

10 03 - ext 11.7 still faint.

(31)(83) P.R.

2078³

(Tues.) Oct. 12, 1915

Columbus Day

L.C. Alb. 2 15" E. Eq.

S.S. Cygni 21 38 43 est 11.7

2038

1 0 2 + 43.6

7 08

S.T. Sagitt. 185512 est 10.4

2045

1 50 W - 12.8

W Aquilae 191007 est 13)

2053

1 43 - 7.0

T Sagitt 191017 est 11.1

R Sagitt 191019 est 7.0

4"

R.V. Sagitt 190819 est 9.5

R + Sagitt 190816 est 10.1

J Sagitt 191319 est 12.8

- Sagitt 191219 est 12.5

Z Sagitt 191321 est 10.0

R.V. Aquilae 193509 est 9.8

2109

1 34 W + 9.5

Oct 12, 1915 —

RT Aquilae 193311 est 12.7
 $\frac{2114}{141W + 11.5}$

X Aquilae 194604 est 13.6
 $\frac{2118}{132W + 4.0}$

RU Aquilae 200812 est 9.6
 $\frac{2126}{118W + 12.7}$

P Delph 201008 est 12.1
 $\frac{2128}{118 + 8.8}$

Z Delph 202817 est 10.4
 $\frac{2130}{102 + 7.0}$

Y Delph 203611 est 11.8
 $\frac{2133}{0.57 + 11.2}$

S Delph 203816 est 11.4
 $\frac{2136}{0.58 + 16.7}$

T Delph 204016 est 11.4

Oct 12, 1915-

$$\begin{array}{r} \sqrt{\text{Depth}} \quad 20431 \pm \text{est } 10.9 \\ \hline 2140 \\ 0.57 + 18.9 \end{array}$$

Var has lightened considerably

$$\begin{array}{r} \times \text{Depth} \quad 205017 \text{ est} = 11.2 \\ \hline 2143 \\ 0.53 + 17.3 \end{array}$$

f 15

$$- \text{Depth. Var? } sp \times = 12.6$$

(22) (105) L.P.

20784

Wed. Oct. 13, 1915

P.C. Ob.

15" E. 29.

S S Cygni 21 3443 est 11.8

$$\begin{array}{r} 20 \quad 50 \\ \hline 0 \quad 48 \quad 2 \end{array}$$

27 16

Z Coronae 155229 est 13.3

$$\begin{array}{r} 20 \quad 59 \\ \hline 5 \quad 07 \quad W + 29.8 \end{array}$$
~~W Serpens 160210~~

W Coronae 161138 = 11.1

$$\begin{array}{r} 21 \quad 06 \\ \hline 4 \quad 55 \quad + 38.5 \end{array}$$

W Herc 163137 est = 12.9

$$\begin{array}{r} 21 \quad 11 \\ \hline 4 \quad 40 \quad W + 37.5 \end{array}$$

RT Herc. 170627 est 12.4

$$\begin{array}{r} 21 \quad 14 \\ \hline 4 \quad 08 \quad + 27.2 \end{array}$$

RS Herc 171723 est 12.5

$$\begin{array}{r} 21 \quad 17 \\ \hline 4 \quad 0 \quad + 23.0 \end{array}$$

20784

Oct 13, 1915

$$\begin{array}{r} \text{R u Oph } 20172009 \text{ est } 9.4 \\ \hline 2123 \\ \hline 2355 \text{ W} + 9.6 \end{array}$$

$$\begin{array}{r} \text{Z Oph } 171401 \text{ est } 11.5 \\ \hline 2126 \\ \hline 412 + 1.6 \end{array}$$

$$\begin{array}{r} \text{R.T Oph } 175111 \text{ est } < 13.5 \\ \hline 2132 \\ \hline 341 \text{ W} + 11.0 \end{array}$$

$$\begin{array}{r} \text{My Oph } 175519 \text{ est } 13.8 \\ \hline 2135 \\ \hline 340 + 19.5 \end{array} \quad \text{surf only}$$

$$\begin{array}{r} \text{X Androm } 501046 \text{ est } < 13.6 \\ \hline 2140 \\ \hline 230 \text{ E} + 46.4 \end{array}$$

$$\begin{array}{r} \text{T Androm } 001726 \text{ est } 8.8 \\ \hline 2152 \\ \hline 225 \text{ E} + 26.4 \end{array}$$

$$\begin{array}{r} \text{R Androm } 001838 \text{ est } 11.5 \\ \hline 2204 \\ \hline 414 \text{ E} + 38.0 \end{array}$$

$$\begin{array}{r} \text{u Cass } 504047 \text{ est } 8.9 \\ \hline 2208 \\ \hline 232 \text{ E} + 47.7 \end{array}$$

Oct 10, 1915

$$\begin{array}{r}
 ? \quad + 46.8 \quad 2:34 \text{ E} \quad 22:14 \\
 = \text{NGC } 278
 \end{array}$$

$$\text{If Androm } 013338 = 9.6$$

$$\begin{array}{r}
 \text{RM Androm } 013238 = 10.6 \\
 22:41 \\
 \hline
 25:12 + 38.0
 \end{array}$$

$$\begin{array}{r}
 \text{X Cygni } 194632 \text{ Est} = 10.3 \\
 22:55 \\
 \hline
 3:09 + 32 \\
 \text{Comp } * = \alpha 10.5
 \end{array}$$

Pa 100

Too diff to measure.

$$\begin{array}{r}
 \text{O Ceti } 021403 \quad H^+ \text{ filter} \\
 2342 \\
 \hline
 21322 - 3.6
 \end{array}$$

est 7.8

$$\begin{array}{r}
 (1.8) (1.23) \\
 R.P.
 \end{array}$$

Oct 13, 1915

O Ceto Phot R

comp with 9.18 stars

10 22 278.6 < Vander
 333.6
 99.2 550 ✓
 152.7 535 ✓
 108.5 ✓ - 1.45

279.2
 331.3 521 ✓ - 1.51
 100.4 573 ✓
 151.7 1004 ✓ - 1.57

Reversed
Below

Mean = 1.46
 9.19
 7.73

188.6 516 ✓
 240.2 527 ✓
 8.9 1063 ✓ - 1.55
 61.6

10 24 183.3 6.29 ✓ - 1.42
 246.2 52.8 ✓
 8.8 115.7 ✓ - 1.29
 61.6
 10 25
 2084.642

Oct. 13, 1915

$$\begin{array}{r}
 10 \ 30 \\
 185.3 \\
 243.8 \\
 74 \\
 \hline
 66.6
 \end{array}
 \quad
 \begin{array}{r}
 585 \\
 592 \\
 \hline
 1177 - 1.24
 \end{array}$$

$$\begin{array}{r}
 183.8 \\
 241.9 \\
 10.4 \\
 63.9 \\
 \hline
 99.6
 \end{array}
 \quad
 \begin{array}{r}
 581 \\
 53.5 \\
 \hline
 1116 - 1.38
 \end{array}$$

Above

$$\begin{array}{r}
 99.6 \\
 151.4 \\
 277.2 \\
 327.7 \\
 \hline
 1023
 \end{array}
 \quad
 \begin{array}{r}
 518 \\
 50.5 \\
 \hline
 1023 - 1.60
 \end{array}$$

$$\begin{array}{r}
 919 \\
 1.44 \\
 \hline
 1.46 \\
 145 \\
 918.9 \\
 \hline
 7.784
 \end{array}$$

$$\begin{array}{r}
 10 \ 36 \\
 10 \ 33 \\
 \hline
 20784648
 \end{array}
 \quad
 \begin{array}{r}
 150.9 \\
 150.6 \\
 277.2 \\
 331.9 \\
 \hline
 1000
 \end{array}
 \quad
 \begin{array}{r}
 497 \\
 587 \\
 \hline
 1084 - 1.55
 \end{array}$$

Sat. Oct. 16, 1915
 L.C. Dr. J.D. 20787.
 15" East Equat.

R Coronae 15.4 x 2.8 Phot T.
 21 09
 5 25 W + 2 P. f

P.A. 150

164.2 < Vardis

7 29

214.2

500

345.6

473

32.9

97.3

-1.72

+6

168.4

-1.83

213.6

452

349.8

440

33.8

89.2

-1.94

P.A. 330

mean = -1.36

~~135.8~~

7.18

247.4

5.82

316.4

690

68.2

692

137.4

138.2

-0.81

7 37

253.3

-0.88

317.7

644

7 33

66.4

675

133.9

131.8

-0.94

.52³

H.A. 5.47W
 N.T. 21.32
 Dec 2.1
 Spr. = 62
 P.A. = 330

Oct 16, 1915

R Scuti ~~154428~~ 184205

Phot T.

$$\begin{array}{r} 2133 \\ 251W-58 \end{array}$$

Pa 28°

740.8 < Van der

7 ST

49.6 68.8

158.4 68.7

227.1 137.5 - 0.82

336.4

45.9

69.5

- 0.76

154.8

74.9

229.7

144.4

- 0.69

Pa. 208

62.2

145.3

831

240.8

779

318.7

161.0

- 0.36

Means - 0.56

7.07

6.51

62.0

141.2

792

- 0.36

242.2

818

324.0

161.0

- 0.36

Ha = 3.11W

S.T. = 21.52

Decl = 5.8

Pa. = 208°

Spec = 3.6

Oct 16, 1915

R Cygni 193449 Phot R

21 55

221 W + 49

Comp with Hagen 14 m f R 9.90

Above

92.6 ← comp & dis

8 12

155.3

627

273.8

178

341.6

130.5 + 0.97

94.4

+ 0.96

162.6

682

274.3

625

336.8

1307

+ 0.96 Mean = +1.08

Below

1.3

980

10.88

66.2

649

187.4

59.2

246.6

128.1 + 1.10

6.0

+ 1.19

8 12

63.8

578

190.2

580

8 15

248.2

115.8

+ 1.28

59.2

Oct 16, 1915—

Ref Cygni 2009 38 Phot R

$$\begin{array}{r} 2217 \\ \hline 2 \end{array} \div + 38.4$$

Comp with * 7.2⁶ C just N of Var
 Below

8 31 $\begin{array}{r} 182.5 \\ 253.6 \\ 3.8 \\ \hline 73.2 \end{array}$ \leftarrow comp \times obs
 $\begin{array}{r} 711 \\ 694 \\ \hline 140.5 \end{array} + 0.76$

$\begin{array}{r} 182.5 \\ 253.1 \\ 3.4 \\ \hline 73.1 \end{array}$ $\begin{array}{r} 706 \\ 69.7 \\ \hline 140.3 \end{array} + 0.77$

Above

Mean = $\begin{array}{r} +0.56 \\ 7.25 \\ \hline 7.81 \end{array}$

$\begin{array}{r} 89.6 \\ 166.2 \\ 262.4 \\ 347.2 \end{array}$ $\begin{array}{r} 766 \\ 85.4 \\ \hline 162.0 \end{array} + 0.34$

8 38 $\begin{array}{r} 85.9 \\ 163.2 \\ 265.5 \\ 344.2 \end{array}$ $\begin{array}{r} 779 \\ 82.7 \\ \hline 160.6 \end{array} + 0.37$
 566

est in 4" finder e 2, 2 f

Oct 16, 1915

St Cephei 21367 + Phot T
 at 10.5

$$\begin{array}{r} 2236 \\ 100 \\ \hline \end{array} + 78.2$$

comp with $\times h = 10.22$

PA 270

1529 \leftarrow comp \times dis

9 06

231.2

338.4

50.6

78.3

72.2

150.5

+ 0.57

154.4

227.9

334.7

50.6

73.5

75.9

149.4

+ 0.59

PA 90

~~221.2~~

332.9

51.7

147.2

225.2

78.8

78.0

156.8

+ 0.44

330.7

54.4

151.5

234.6

83.7

83.1

166.8

+ 0.25

$$\begin{array}{r} \text{Mean} = + 0.46 \\ 10.22 \\ \hline 10.68 \end{array}$$

+ 0.34

Ob. very diff. due to faintness

Oct 16, 1915

S S Cygni 213843 et 11.6

9 30

$$\begin{array}{r} 2312 \\ 140W + 436 \end{array}$$

O Ceti Phot R 021403 et 7.5

above

2324

$$\begin{array}{r} 2324 \\ 250 \end{array} \quad -3.6$$

9 45

281.4 / Van der

330.

101.4

150.4

280.6

332.2

98.4

151.5

Below

192.2

240.8

9.3

60.1

477

490

967

-1.74

576

-1.64

531

104.7

-1.54

Mean =

-1.65

486

50.8

994

-1.67

919

7.54

9 49

191.7

246.3

11.3

56.9

547

45.6

100.3

1.66

-

1.65

616

Oct 16, 1915

Scoti 001909 est 8.92346

6 15 E -9.9

4" funder

10/0

Chair & dome oil
 string for clock
 eye piece on funder

Sett. 5 - 128

Sett. 256 to here

Thurs. Oct 22, 1915 -

LC Obs. ϕ 20793 15" E. Eq.

SU Dracon 113267 Phot T

2105

9 33 W +68.0

comp with $\times b = 8.94$

Moon at full.

Pa. 250

~~51.3~~

7
16

154.4 < Vardis.

234.8

80.0

331.9

269

48.8

156.9

- 0.44

I

149.9

233.6

837

- - 0.38

329.2

801

49.3

1638

- 0.31

~~151.2~~

Pa 70

49.6

153.6

1040

229.2

1072

336.4

211.2

148.8

+ 0.60

47.8

7 23

154.2

1064

+ 0.60

230.3

105.3

7 19.5

335.6

2117

148.3

+ 0.61

20793514

93.382

0.132

0.144

Oct. 22, 1915

Pa-70

II

7 31

49.1
155.3
227.7
332.4

1062
100.7
2069
153.1

+0.51

49.2
156.1
228.6
335.7

1069
1071
2130
147.0

+0.57

+0.63

Pa. 250

mean = +0.22

328.2

53.3

149.2

235.7

851

859

171.0

-0.17

894
894
9.16

-0.12

7 37

7 34.0

20793.528
93.342
8.182
0.154

328.8

54.4

145.2

236.3

856

91.1

176.7

-0.06

Oct. 22, 1915

Pa. 250

III

7	39	325.0		
		53.8	888	
		147.4	<u>854</u>	
		232.8	174.2	- 0 11

		324.4		
		54.6	902	- 0.06
		146.7	<u>892</u>	
		235.9	179.4	- 0 01

Pa. 70

Mean = +0.31

894
<u>9.25</u>

		226.8		
		336.4	1096	
		47.8	<u>1046</u>	
		152.4	2142	
			<u>145.8</u>	+ 0.66

		226.3		
7	45	340.6	1043	+ 0.68
		45.2	<u>1122</u>	
7	42.0	157.4	2165	
			<u>143.5</u>	+ 0.70
20793.529				
91.782				
8.147				
0.159				

Oct, 22, 1915

Pa 70

IV

7 55-
 229.8
 337.4
 45.5
 157.4

1076
 1119
 2195
140.5

+0.76

228.2

337.9

44.4

158.3

1097
 1139
 223.6
136.4

+0.80

+0.85

Pa-250

mean = +0.41

8.94

9.35

145.6

235.6

327.4

62.9

900
 955
 185.5
174.5

+0.10

147.2

231.7

324.9

56.6

845
 91.7
 176.2

+0.02

-0.07

8 02

7 58.5

20793.540

9238.0

0.158

0.170

Oct 24 1915

PA 250

V

δ 64
 148.4
 232.5
 327.4
 55.6
 $\delta 41$
 $\delta 82$
172.3 - 0.14

142.9
 232.4
 326.7
 55.6
 $\delta 95$
 $\delta 89$
178.4 - 0.08
 - 0.03

PA 70

Mean = + 0.30

45.9
 154.4
 227.5
 336.8
 108.5
 109.3
217.8
142.2 + 0.73

δ 10
 δ 07.0
 20793.547
 50.2
 156.2
 227.4
 334.2
 106.0
 106.8
212.8
147.2 + 0.68
 + 0.63

93.382

0.165

0.177

Oct 22, 1915

Pa 70

VI

A 19

156.5

226.2

343.3

46.1

Leomp & dis.

Reject

uncomplicated

158.2

222.2

ddr

Spr. = 3.2

Pa. = 68.3

Pa 250

Stopped by clouds.

9 00

Too cloudy to continue on this day

Shutter & light cord

needs attention

128

Jebb

80

- 336

Oct 22, 1915 -

PG 250

VII

PG 70

Sun Oct. 24, 1915

P.C. Ob

SU Dracon

15^h 25^m

P.A. 70

113267

Phot T.

6 x 7

151.2 < comp * dir

231.3

80.1

334.7

741

48.8

1542

+0.49

149.7

234.9

852

+0.46

338.0

724

50.4

157.6

+0.43

P.A. 250

Mean = +0.02

2.94

52.2

8.26

150.6

984

232.2

1019

334.1

200.3

1597

-0.39

50.7

151.6

1009

231.7

1030

-0.42

334.7

2039

1561

-0.46

20795.493

95.363

0.130

0.129

0.141

Oct. 24, 1910

Pa 258

II

50.6

6 55

149.1

985

231.4

996

331.0

198.1

151.9

- 0.54

52.7

150.4

977

- 0.52

231.6

988

330.4

196.5
153.5

- 0.51

Pa. 70

330.8

52.8

153.9

227.6

20

737

1557

Mean = $\frac{-0.02}{294}$
f. 92

+ 0.46

335.4

51.2

151.2

230.2

758

+ 0.47

790

1548

+ 0.48

7 01

6 58

20795.499

95.3680.1385

0.147

Oct 24, 1915

Pa 70

1157 4
0.5334.8
49.8
154.0
228.8750
748
1498

+ 0.58

334.6
49.4
154.7
231.7748
770
1518

+ 0.56

+ 0.54

Pa 250

mean = + 0.05

894
8.99

227.2

330.8
53.01036
968

149.8

200.4

1576

* - 0.39

229.8

336.7

1069

53.3

101.4

- 0.46

154.7

208.3

151.7

- 0.54

7 12
0.2

7 08

20795.506

95.364

0.152

0.154

Oct 24, 1915-

Par 50

IV

7 13

229.3

337.4

55.0

151.2

108.1

96.2

204.3155.7

- 0.46

225.3

333.8

52.2

148.8

Pa 70

151.3

227.2

333.3

50.4

151.1

108.5

96.6

205.1154.9

- 0.48

Mean 500

8.94

894

75.9

77.1

153.0

+ 0.52

232.2

81.1

332.4

50.5

78.1159.2

+ 0.46

+ 0.40

7 19

7 16

20795.511

95.3640.147

0.159

Oct 24, 1915

7 20

Pa 70

157.4

231.2

335.5

58.0

79.8

745

154.3

+ 0.49

V

157.2

233.4

332.5

50.8

762

+ 0.49

783

154.5

+ 0.49

Pa 250

Mean + 0.02

53.2

136.1

230.4

333.2

56.1

1029

1028

205.7

154.3

- 0.49

152.9

228.4

332.2

968

1038

200.6

159.4

- 0.44

- 0.39

7 26

23

20795.516

~~95.364~~

0.152

0.164

Oct 24, 1915

VI

738. Pa 250

49.6

150.2

229.6

335.9

1006

1063

2069

153.1

- 0.51

52.2

151.2

233.3

329.8

990

96.5

195.5

164.5

- 0.29

Pa 70

330.8

50.2

155.8

232.8

794

770

156.4

+ 0.45

330.4

49.2

149.4

231.2

78.8

81.8

160.6

+ 0.41

+ 0.37

745

745

20795.528

95.364

8164

0.176

Mean = 0.00
894
8.94

Oct 24, 1915

7 45 Pa 70

V. 11

335.5

47.6

152.7

229.9

721

772

149.3

+ 0.59

329.6

+ 0.51

51.2

81.6

152.8

75.9

228.7

157.5 + 0.43

Pa 250

Mean - 000

~~894~~~~894~~2
329.6

332.4

102.8

51.2

102.1

153.3

204.9

155.1

- 0.48

224.2

339.7

106.5

48.7

100.5

- 0.50

149.2

207.0

- 0.52

153.07 53
7 49

20795.534

~~95364~~~~0.170~~

0.182

Oct 24, 1915

$$\begin{array}{r}
 754 \quad Pa 250 \\
 230.5 \\
 328.7 \\
 51.2 \\
 148.7 \\
 234.8 \\
 333.5 \\
 56.1 \\
 152.4
 \end{array}$$

$$\begin{array}{r}
 982 \\
 975 \\
 \hline
 1957 \\
 1643 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 -0.30 \\
 -0.30 \\
 -0.29
 \end{array}$$

$$\begin{array}{r}
 Pa 70 \\
 148.4 \\
 228.2 \\
 332.2 \\
 47.8
 \end{array}$$

$$\begin{array}{r}
 98 \\
 56 \\
 \hline
 155.4
 \end{array}$$

$$\begin{array}{r}
 +0.08 \\
 8.98 \\
 \hline
 9.02
 \end{array}$$

$$\begin{array}{r}
 +0.47
 \end{array}$$

$$\begin{array}{r}
 152.2 \\
 231.2 \\
 332.2 \\
 49.2
 \end{array}$$

$$\begin{array}{r}
 790 \\
 770 \\
 \hline
 1560
 \end{array}$$

$$\begin{array}{r}
 +0.46 \\
 +0.46
 \end{array}$$

$$\begin{array}{r}
 850 \\
 757 \\
 20795.540 \\
 \hline
 95364 \\
 \hline
 0.176 \\
 0.188
 \end{array}$$

Oct 24/915

8 08 PA 70
 153.3
 228.5
 336.0
 51.6

752
 756
 1508

+ 0.58

TX

154.6
 232.2
 335.6
 46.0

776
 704
 1480

+ 0.58

+ 0.61

PA 250

Mean = +0.19
 294
 9.13

52.6
 145.2
 231.9
 328.2

926
 96.3
 148.9
 171.1

* - 0.17

54.4
 151.1
 234.4
 329.6

967
 952
 191.9
 168.1

- 0.20

* - 0.22

P 15

8 11.5

20795.550

95.764

8186

0.198

Oct 24, 1915

Pa 250

8 15

50.4

152.8

229.6

332.4

1024

1028

2052

1548

- 0.48

54.2

150.8

232.6

331.6

966

990

1956

1644

- 0.39

- 0.30

Pa 70

Mean = + 0.10

0.24

0.94

334.6

52.2

153.6

230.9

776

773

158.9

+ 0.48

338.8

48.2

152.2

227.8

69.4

756

145.0

+ 0.58

+ 0.67

8 22

8 18.5

20795.554

25.364

0.190

0.202

Oct 24 1915

Pa. 20

3 33 2

48.8

156.6

228.6

756

720

147.6 + 062

~~XI~~

336.2

49.2

150.4

224.2

730

73.8

146.8 + 064

+ 0.63

Pa. 250

Mean = + 0.23

8.94

9.17

231.6

329.2

55.7

149.6

976

93.9

191.5

168.5

- 0.22

238.4

332.8

54.3

146.2

94.4

91.9

186.3

173.7

- 0.12

P 56

A 52.5

20 95.578

95.764

0.214

0.226

128

176 512

Pa = 248.5

Spr. 3.3

Ha 11:47 W

Dec + 680

M E = 23.22

Tues. Oct 26, 1915

Leclh. 15" & 87.

SSB Rec.

Ballon 103 & 06 0.0
Prod 3424 & 06⁵ 12.5

Phot R.

Reap Jup. III Comp with.

Sat I. nearest
on same side.

Prod 3424

8		8 ^h		24 6		Seem							
24	53.4	8	24	52.0	107.2								
25	39.9	8	25	11	145.4	38.2	78.3	2.25	2.30				
25	58.4	26	25	35.0	105.3	40.1	820	2.14	2.2				
26	22.4	26	26	46.5	147.2	41.9	870	2.00	2.1				
	33.9	34.6	26	00.1	102.1	45.1	974	1.72	1.9				
	47.4	47.1		12.5	154.4	52.3	1134	1.34	1.5				
	59.9	27		35.5	93.3	61.1	1242	1.10	1.1				
27	22.9	18.7		46.0	156.4	63.1	1274	1.03	1.0				
	33.4	34.4		59.5	92.1	64.3	1298	0.98	1.0				
	46.9	45.9		10.0	157.7	65.6	1323	0.93	0.9				
	57.4	58.7	27	24.5	91.0	66.7	1358	0.86	0.8				
28	11.9	28		43.0	160.1	69.1	1448	0.68	0.5				
	30.4	28.6		56.0	84.4	75.7	1550	0.48	0.4				
	43.4	43.2		8.5	163.7	79.3	1616	0.35	0.3				
	55.9	56.9	28	24	81.4	82.3	1637	0.31	0.3				
29	11.4	29		34	162.8	81.4	1582	0.42	0.5				
	21.4	22.1		46	86.0	86.8	1569	0.44	0.4				
	33.4	33.2		57.5	166.1	90.1	1640	0.30	0.2				
30	84.9	48.6		20	82.2	93.9	1701	0.19	0.1				
30	07.4	30	29	31	168.4	96.2	1716	0.16	0.2				
	18.4	18.1				95.4							

Oct 26. 1915

8 29	44	83.0	854	
	56	168.4	862	
238.5	30 5.0	82.2	855	26427
29 59.6	13.5	167.7	856	171.4
30 47.2	24.0	82.1	909	1709 →
				+ 0.2 ✓
161.0	34.0	173.0	926	23625
30 40.2	44.5	80.4	894	181.2
31 27.6	58.5	169.8	896	1798
	31 12.5	80.2	910	1803 ✓
				1797 - 0.08 ✓
1182	25.2	171.2	980	23708
31 29.6	34.5	78.2	922	185.4
32 17.0	46.0	170.4	946	1746
	58.5	75.8	980	1832
	32 12.0	173.8	981	23954
69.0	23.5	75.7	995	1977
32 17.2	35.0	175.2	998	162.3
33 04.6	46.5	75.4	999	1975 ✓
	56.0	175.3	999	23924
2445	33 6.5	78.2	962	196.2
33 1.1	15.5	174.4	992	168.8
33 48.4	25.0	75.2	946	1961
	34.0	169.8	998	23816
	44.0	80.0	952	1908
159.5	56.5	175.2	1020	169.2
33 39.9	34 7.0	73.2	1023	1898
34 27.3	16.5	175.5	978	4046
	26.0	77.7	995	2023
	39.5	177.2	1050	1577
89.0				2018 - 0.44 ✓
34 22.2				158.3
35 09.6				

Oct 26, 1915 -

8	35	8.0	72.2	1025	
		18.0	174.7	1049	
P 35		26.5	69.8	1082	2464
P 36		37.5	178.0	1008	2083
		48.0	77.2	1088	1818
	36	12.5	176.0	1057	210.7
		25.5	70.1	1043	149.3
		37.5	174.4	2464	0.59
					- 0.6

90.0
 22.5
 09.9

123.5
 36 309
 37 183

L. V.

	37	19.5	284.2	
		31.5	325.3	411
		46.0	284.1	317
	38	2.5	325.4	79.4

159.5
 37 329
 38 273

Considerable cloud about but images
 will seem after the first two or three
 settings were secured.

Ball 103 8 46 50
 Rod 3424 8 45 12.2

Flood 3424 = 47.4 slow

— 122 sets
 60 572 sets.

Wed Oct 27 1915

LC Obs.

15" E. Eq.

R Coronae 154428

21 14

530 W + 28.8

Phot T.

RA 330

6 53
6

25.8 < Vardis

92.2

66.4

205.1

677

272.8

134.1

- 0.89

27.2

92.7

655

- 0.85

202.2

72.6

274.8

138.1

- 0.81

P.A. 150

Mean = - 0.94

298.4

364.8

664

7.18

116.8

62.8

Magn. 6.24

179.6

129.2

- 1.00

299.6

361.8

622

- 1.03

113.8

638

6 59

177.6

126.0

- 1.06

6 56

Region low

Images not very good

H.A. 5.44 W

ST T. 21:36

Decl + 28.8

ST 6.4

P.A. 149.5

Oct 27, 1905

R. S. auto 184205 - Plot T.

Pa 208 $\frac{2142}{300} - 5.8$ Pa.

7 11

37.2	(Vand)	
248		476
214.8		514
266.2		<u>990</u> - 1.68

35.7		
277	520	- 1.62
215.7	520	
267.7	<u>1040</u>	- 1.56

Pa 28		mean = - 1.40
		<u>7.07</u>
		5.27

307.9		
352.8	449	
128.4	438	
172.2	<u>887</u>	- 1.95

308.4		
352.2	438	- 1.98
128.2	42.6	
170.8	<u>864</u>	- 2.01

7 17
<u>7 14</u>

Pa.	245
Apr.	3.8
HR.	3.13
Decl	-5.8
Plot	21.55

20798

Oct 27, 1915.

$$\begin{array}{r} \text{Ry Uph. } 18110.3 \text{ est } 9.9 \\ 2206 \\ \hline 355 + 3.6 \end{array}$$

$$\begin{array}{r} \text{T Serp } 182306 \text{ est } 13.5 \\ 2214 \\ \hline 351 + 6.2 \end{array}$$

star u 131 = 3 < 12 the 12.5
see c's chart X for not.

$$\begin{array}{r} \text{R Z Herc } 183225 \text{ est } 9.7 \\ 2224 \\ \hline 352 + 26.0 \end{array}$$

$$\begin{array}{r} \text{SV Herc } 182224 \text{ est } 9.8 \\ 2232 \\ \hline 410 + 24.8 \end{array}$$

$$\begin{array}{r} \text{X Cygni } 194632 \text{ est } 9.8 \\ 2306 \\ \hline 320 w + 32.6 \end{array}$$

$$\begin{array}{r} \text{Z Cygni } 195849 \text{ est } 132 \\ 2311 \\ \hline 313 + 49.9 \end{array}$$

Oct 27, 1915.

$$\begin{array}{r} \delta \gamma \text{ Aquilae } \underline{200212} \text{ est } 12.2 \\ 2312 \\ \hline 310 \text{ W } + 12.6 \end{array}$$

new chart

$$\begin{array}{r} \delta \text{ Cygni } \underline{200357} \text{ est } 13.0 \\ 2327 \\ \underline{315} \\ 324 + 5.77 \end{array}$$

$$\begin{array}{r} \delta \text{ T Cygni } \underline{202954} \text{ est } 10.2 \\ 2332 \\ \hline 33 + 5.45 \end{array}$$

$$\begin{array}{r} \text{V Cygni } \underline{203847} \text{ est } 8.7 \text{ 4''} \\ 2335 \\ \hline 217 + 4.75 \end{array}$$

Var very red

$$\begin{array}{r} \text{RZ Cygni } \underline{204846} \text{ est } 10.8 \\ 2338 \\ \hline 250 + 46.9 \end{array}$$

Sunf Var ? = 11.0

look up on photo

Oct 27, 1915 —

$$\begin{array}{r}
 \text{N X Cygni} \cdot 205030 \text{ est } 11.7 \\
 \underline{2343} \\
 253 + 30.0
 \end{array}$$

$$\begin{array}{r}
 \text{RVulpec } 205923 \text{ est } 11.0 \\
 \underline{2347} \\
 248 + 23.4
 \end{array}$$

$$\begin{array}{r}
 \text{SS Cygni } 213443 \text{ est } 11.9 \\
 \underline{2353} \\
 215 + 43.6
 \end{array}$$

Oct 27 1915

R Cygni 193449 Phot R.

2358

42 CW + 49.9

~~Below~~~~239.6~~

9 28 8.4 comp + dia.

62.6

582

189.9

523

relates

252.2106.5 + 1.27

7.9

66.8

589

+ 1.26

188.0

586

246.6

117.5

+ 1.25

Above

mean + 1.28

277.8

9.90

336.0

582

11.18

97.8

59.4

157.2

117.6 + 1.25

278.4

+ 1.29

336.2

578

99.0

560

9 36

155.0

113.8 + 1.33

9 32

Oct 27, 1915

R¹⁵ Cygni - 200938

Phot 73

2416

407W + 38.4

Above

9 47

344.6

Vardis

77.8

93.2

167.7

91.1

258.8

184.3

175.7 + 0.08

352.6

76.8

84.2

- 40.06

176.4

84.8

261.2

169.0

- 0.21

Below

Mean = + 0.20

257.6

348.8

91.2

72.7

102.1

174.8

193.3156.7

+ 0.44

258.8

353.3

94.5

75.2

99.6

+ 0.45

174.8

194.1155.9

+ 0.46

9 53

9 50

Oct 27, 1915

II

9 54

Below

253.0

352.8

77.7

171.2

998

935

193.3

1567

+ 0.44

250.0

349.8

72.6

174.8

998

1022

202.0

158.0

+ 0.43

+ 0.42

Above

173.2

266.2

348.8

82.0

930

932

1862

1738

Mean = + 0.26

0.20

0.23

7.25

7.48

+ 0.12

170.6

265.0

348.2

78.8

944

90.6

183.0

175.0

+ 0.10

+ 0.09

10 50

Oct. 27, 1915

O Coto 021403 Phot R

00 37

1 37 E - 3.5

Below

10 16 191.8 < Var dis

236.6

44.8

13.8

42.8

56.6

87.6 - 1.95

191.4

238.4

47.0

- 1.95

12.6

42.8

55.4

89.8

- 1.92

above

Mean = - 2.00

105.8

146.8

41.0

284.8

43.3

328.1

84.3

- 2.07

100.6

144.4

43.8

- 2.04

285.6

42.4

328.0

86.2

- 2.02

10 23

10 19.5

16 - 144

96 668

L.P.

20799

Thurs Oct 28, 1915

L.C. Ob. 15" E. Eq.

154536 X Corona est 9.3
 2135
 7 02 5 57W + 36.6

V Corona 154639 est 9.4
 2141
5 55 + 39.9

Z Corona 155229 est < 13.5
 2145
5 53 + 29.8

R Here 160118 est 12.8
 2152
5 51 + 18.6 diff to est
 at this alt

R Here 160625 est 13.0±
 2156
5 50 + 25.0 for diff at
 this alt.

W Corona 161138 est 11.0
 2201
5 50 + 32.5

W Corona 163137 est 13.0
 2203
5 32W + 37.2

Oct 28, 1915

$$\begin{array}{r} \text{U Hare } 162169 \text{ est } 11.5 \\ 2206 \\ \hline 545 + 69.1 \end{array}$$

$$\begin{array}{r} \text{S Hare } 164715 \text{ est } 12.4 \\ 2211 \\ \hline 524 W + 15.1 \end{array}$$

$$\begin{array}{r} \text{RV Hare } 165631 \text{ est } 13.5 \\ 2213 \\ \hline 517 W + 31.4 \end{array}$$

$$\begin{array}{r} \text{T Hare } 180531 \text{ est } 10.7 \\ 2217 \\ \hline 412 + 31.0 \end{array}$$

$$\begin{array}{r} \text{W Lyrae } 181136 \text{ est } 12.2 \\ 2222 \\ \hline 411 + 36.6 \end{array}$$

$$\begin{array}{r} \text{R R Aquilae } 195202 \text{ est } 10.1 \\ 2228 \\ \hline 236 W - 2.2 \end{array}$$

$$\begin{array}{r} \text{RS Aquilae } 195308 \text{ est } 10.2 \\ 2232 \\ \hline 239 S. 0 \end{array}$$

Oct 28, 1915

$$\begin{array}{r} \text{R Capric} \quad \underline{200514} \quad \text{est } 121 \\ \underline{2235} \\ 230 - 14.6 \end{array}$$

$$\begin{array}{r} \text{W Capric} \quad \underline{200822} \quad \text{est } 124 \\ \underline{2238} \\ 230 - 22.3 \end{array}$$

$$\left(\begin{array}{l} 11 \\ 4 \text{ fainter} \end{array} \right) \text{RT Capric} \quad \underline{201121} \quad \text{est } 7.8$$

$$\begin{array}{r} \text{Z Aquilae} \quad \underline{200906} \quad \text{est } 11.4 \\ \underline{2244} \\ 235 W - 6.2 \end{array}$$

$$\begin{array}{r} \text{RU Capric} \quad \underline{202622} \quad \text{est } 10.8 \\ \underline{2246} \\ \text{June} \quad 220 W - 22.0 \end{array}$$

$$\text{T Aquarii} \quad \underline{204405} \quad \text{est} = 9.1$$

$$\text{W Aquarii} \quad \underline{204104} \quad \text{est} = 13.2$$

$$\text{Y Aquarii} \quad \underline{203905} \quad \text{est} = 9.15 \quad \underline{\underline{N}}$$

$$\text{— Aquarii near } \gamma = 11.7$$

$$\begin{array}{r} \text{U Capric} \quad \underline{204215} = 13.2 \\ \underline{2302} \\ 220 W - 15.2 \end{array}$$

Oct 28, 1915

V Capric 210124 est 10.0

$$\begin{array}{r} 2306 \\ \hline 25 - 243 \end{array}$$

X Capric 210221 13.5 11< 13.5thZ Capric 210516 est 11.7

$$\begin{array}{r} 2317 \\ \hline 212 - 16.5 \end{array}$$

T Capric 211615 est 20 Var

$$\begin{array}{r} 2319 \\ \hline 23 - 15.5 \end{array}$$

13.5thY Capric 212814 est 12.7

$$\begin{array}{r} 2323 \\ \hline 155 - 144 \end{array}$$

R S Aquarii 210504 = 13.4

$$\begin{array}{r} 2328 \\ \hline 225 - 44 \end{array}$$

RR Aquarii 210903 est 11.2

$$\begin{array}{r} 2332 \\ \hline 223 - 30 \end{array}$$

~~U Aquarii~~
Oct 28, 1915

$$\begin{array}{r} \text{U Aquarii } 215717 \text{ est } 11.4 \\ \underline{2335} \\ 138W-17.0 \end{array}$$

$$\begin{array}{r} \text{X Aquarii } 221321 = 10.9 \\ \underline{2347} \\ 124W-21.4 \end{array}$$

$$\begin{array}{r} \text{RT Aquarii } 221722 = 11.4 \\ \underline{2342} \\ 125-22.6 \end{array}$$

$$\begin{array}{r} \text{St Aquarii } 225120 \text{ est } 9.1 \\ \underline{2344} \\ 053-20.9 \end{array}$$

$$\begin{array}{r} \text{R Aquarii } 233815 \text{ est } 8.4 \\ \underline{2349} \\ 011-15.6 \end{array} \quad \text{H}''$$

$$\text{VCeti } 235209 \text{ est } 12.6$$

$$\text{WCeti } 235715 \text{ est } 12.5$$

$$\text{SP Cygni } 253843 \text{ est } 9.0$$

Oct 28, 1915 —

O Ceti 021403 - Phot R.

Below

$$\begin{array}{r}
 9 \ 28 \quad 197.5 \\
 237.7 \\
 17.6 \\
 56.2 \\
 \hline
 40.2 \\
 38.6 \\
 \hline
 78.8 - 2.23
 \end{array}$$

$$\begin{array}{r}
 194.8 \\
 237.7 \\
 13.6 \\
 53.6 \\
 \hline
 42.9 - 2.14 \\
 42.0 \\
 \hline
 84.9 - 2.05
 \end{array}$$

$$\begin{array}{r}
 \text{above} \\
 103.6 \\
 146.6 \\
 286.6 \\
 328.1 \\
 \hline
 43.0 \\
 41.5 \\
 \hline
 84.5 - 2.06
 \end{array}$$

$$\begin{array}{r}
 \text{mean} = -2.14 \\
 9.19 \\
 \hline
 7.05
 \end{array}$$

$$\begin{array}{r}
 105.1 \\
 146.2 \\
 285.5 \\
 324.2 \\
 \hline
 41.1 - 2.13 \\
 38.7 \\
 \hline
 79.8 - 2.20
 \end{array}$$

$$\begin{array}{r}
 9 \ 34 \\
 \hline
 9 \ 31
 \end{array}$$

$$\begin{array}{r}
 39 - 183 \\
 16 - 684
 \end{array}$$

20802Sun Oct 31, 1915LC Ob. 15" E. eq.R Leporis 045514 est 7.811 25
02 22
2 33 - 14.9V Orionis 050003 est 12.202 28
2 32 E + 3.8S Orionis 052404 est 8.202 34
2 50 - 4.8T Orionis 053005 est 9.902 34
2 56 E - 5.6T Leporis 050022 est 10.102 35
2 25 E - 22.6V Monoc 061702 est 11.302 45
3 32 E - 2.2R Monoc 063308 est 11.602 48
3 45 + 8.8W Monoc 064707 est 10.702 52
3 55 - 6.8

Oct 31, 1915

X Monoc 0652080258

3 54 - 8.9

1215 - Sky all cloudy
Impossible to continue

8-191

P.

2 of 0⁴

Tues Nov. 2, 1915

R.C. Alb.

15" E 29

09 3178 Y Dracon. est

22 35

13 04

10 56 E

Will wait till later.

12 3160

12 3459

12 3961

22 36

10 2 + 59.5

Tues Maj est

R S Ur

S Ur

Maj est

Maj est

8.3 in 4"

12.4

10.2

12 34

22 46

10 12

Tues Min

13 3273

22 56

9 24 + 73.8

est 10.5

800

U Ur Min 14 1567 est 9.3

4 "

23 00

8 45 + 67.5

S Bootis 14 1954 est 9.1 in 4"

23 02

8 43 + 54.2

W Dracon 14 0565 est 11.8

X Draconis 14 0666 est 11.9

23 06

50 + 66.0

S V Droc 14 3149 est 13.5

23 12

44 + 49.3

Nov. 2, 1915

$$\begin{array}{r} \text{U Draconis } 190967 \text{ est } 11.6 \\ 23 \text{ 18} \\ \hline 49 + 67.2 \end{array}$$

$$\begin{array}{r} \text{RW Lyrae } 184243 \text{ est } 12.1 \\ 23 \text{ 22} \\ \hline 440 + 43.5 \end{array}$$

$$\begin{array}{r} \text{Ry Lyrae } 184134 \\ 23 \text{ 25} \text{ est } 13.7 \\ \hline 446 \end{array}$$

$$\begin{array}{r} \text{RX Lyrae } 185032 \\ 23 \text{ 24} \\ \hline 438 + 32.7 \\ < 14.0 \end{array}$$

$$\begin{array}{r} \text{Z Lyrae } 185634 = 13.6 \\ 23 \text{ 34} \\ \hline 438 + 34.6 \end{array}$$

$$\text{RT Lyrae } 185737 \text{ est } 13.8 \text{ diff.}$$

$$\begin{array}{r} \text{TZ Cyg. } 191350 \text{ est } 10.2 \\ 23 \text{ 43} \\ \hline 430 + 49.8 \end{array}$$

$$\begin{array}{r} \text{TU Cygni } 191358 \text{ est } 9.2 \\ 23 \text{ 47} \\ \hline 438 + 48.7 \end{array}$$

Nov. 2, 1915 —

RM Lyrae 190941 est 9.4
 $\begin{array}{r} 2351 \\ \hline 442 + 41.0 \end{array}$

U Lyrae 191637 est 11.2
 $\begin{array}{r} 2356 \\ \hline 440 + 37.7 \end{array}$

RS Lyrae 190933 est 13.9
 $\begin{array}{r} 2359 \\ \hline 450 + 33.2 \end{array}$

Frod. 3424
 9 1245.5

Ball. 103
 9 130.0

L.

Nov. 2, 1915

Phot R
15" E. E. g.Dis Jup III Comp. with Jup I
Prod 3224 Readings

P.C. dt

Olson Rec

$$\begin{array}{r} 924 \ 37 \\ \underline{15} \\ 924 \ 52 \end{array}$$

$$\begin{array}{r} 25 \ 39 \\ \underline{15} \\ 9 \ 25 \ 54 \end{array}$$

$$\begin{array}{r} 926 \ 41 \\ \underline{15} \\ 926 \ 56 \end{array}$$

$$\begin{array}{r} 927 \ 33 \\ \underline{15} \\ 927 \ 48 \end{array}$$

$$\begin{array}{r} 928 \ 32 \\ \underline{15} \\ 928 \ 47 \end{array}$$

$$\begin{array}{r} 929 \ 32 \\ \underline{15} \\ 929 \ 47 \end{array}$$

9 24 04

~~24~~ 28

24 51

25 06

22

32

45

56

26 06

~~27~~ 42

53

287 02

14

24

35

59

29 11

26

39

53

29 11

21

39

55

30 06

172.2

~~172.4~~

260.8 886

170.2 91.4

261.6 180.0 0.00

172.6

262.0 894

172.1 926

264.7 182.0 0.03

170.4

264.8 944

170.2 906

260.8 185.0 0.09

169.8

266.8 970

169.8 928

262.6 189.8 0.19

168.6

268.4 998

169.2 982

267.4 198.0 0.34

165.5

272.7 1072

170.4 1002

270.6 2074 0.52

169.8

Nov. 2, 1915

9 30 29 15 <u>9 30 44</u>	30 19 38 <u>53</u>	270.0 169.8 <u>268.9</u>	100.2 99.1 <u>199.3</u>	
9 31 24 15 <u>9 31 39</u>	31 08 17 29 <u>41</u>	167.3 265.9 166.8 <u>269.8</u>	160.7 98.6 103.0 <u>201.6</u>	-0.37
9 32 12 15 <u>9 32 27</u>	32 07 19 30 <u>41</u>	170.1 273.1 169.8 <u>267.7</u>	103.0 98.9 201.9 <u>158.1</u>	
9 33 10 15 <u>9 33 25</u>	33 00 09 21 32 <u>43</u>	170.1 267.4 172.2 263.2 <u>171.5</u>	97.3 91.0 158.3 171.7	-0.42
9 34 27 15 <u>9 34 42</u>	34 09 23 37 46 <u>53</u>	264.4 169.2 269.4 167.9 <u>263.6</u>	97.3 91.0 158.3 171.7 <u>171.4</u>	-0.16
9 35 10 15 <u>9 35 25</u>	35 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.16
9 36 13 15 <u>9 36 28</u>	36 04 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 37 10 15 <u>9 37 25</u>	37 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 38 10 15 <u>9 38 25</u>	38 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 39 10 15 <u>9 39 25</u>	39 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 40 10 15 <u>9 40 25</u>	40 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 41 10 15 <u>9 41 25</u>	41 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 42 10 15 <u>9 42 25</u>	42 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 43 10 15 <u>9 43 25</u>	43 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 44 10 15 <u>9 44 25</u>	44 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 45 10 15 <u>9 45 25</u>	45 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 46 10 15 <u>9 46 25</u>	46 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 47 10 15 <u>9 47 25</u>	47 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 48 10 15 <u>9 48 25</u>	48 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 49 10 15 <u>9 49 25</u>	49 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 50 10 15 <u>9 50 25</u>	50 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 51 10 15 <u>9 51 25</u>	51 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 52 10 15 <u>9 52 25</u>	52 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 53 10 15 <u>9 53 25</u>	53 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 54 10 15 <u>9 54 25</u>	54 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 55 10 15 <u>9 55 25</u>	55 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 56 10 15 <u>9 56 25</u>	56 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 57 10 15 <u>9 57 25</u>	57 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 58 10 15 <u>9 58 25</u>	58 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 59 10 15 <u>9 59 25</u>	59 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30
9 60 10 15 <u>9 60 25</u>	60 02 18 26 <u>37</u>	172.7 263.2 172.7 260.1 <u>171.6</u>	100.2 95.9 156.1 163.9	-0.30

Nov. 2, 1915

	36	18	265.0	
		32	177.1	
		46	260.4	833
		55	175.0	878
9 36 50		06	262.8	171.1 + 0.17
9 37 05	37	17	173.3	
		28	259.4	861
77 34		40	177.7	817
9 37 49		49	259.4	167.8 + 0.23
	38	01	178.4	29.3 0.41
25		10	257.7	77.5 0.48
34		19	180.2	76.4 0.52
42		27	256.6	75.8 0.54
51		36	180.8	63.8 1.03
39 09		54	244.6	59.3 1.22
21	39	06	185.3	64.7 0.99
36		21	250.0	63.4 1.05
48		33	186.6	57.5 1.30
57		42	244.1	55.5 1.39
40 05		50	188.6	56.7 1.34
15	40	00	245.3	56.1 1.37
23		08	189.2	52.0 1.56
35		20	241.2	50.4 1.64
45		30	190.8	51.5 1.58
58		43	242.3	52.9 1.52
41 06		51	189.4	47.9 1.76
18	41	03	237.3	42.8 2.03
26		11	194.5	42.4 2.06
38		23	236.9	38.3 2.30

Nov. 2, 1915-

9 41 45	30	1 9 8.6	324	255
56	41	2 31.0	290	294
42 09	54	2 0 21.0	276	305
	82			
9 42 30 42	15	2 29.6	274	307
40	25	2 0 2.2	255	323
47	32	2 2 7.7	235	341
56	41	2 0 4.2	198	379
43 0.6	51	2 2 4.0	172	+ 410
16 43	01	2 0 6.8		
23	08	gone		

		P.V.		
9 47 28	9 47 06	29.6		
15	23	44.2	146	
9 47 43	35	28.2	126	
	9 47 50	40.8	27.2	+ 4.62

Prod 3424
9 52 45.5

Ball 103
9 53 00

Ball = 0.2 slow

9 53 0.2
9 52 45.5
Prod = 14.7 slow

Nov. 2, 1915

$$\begin{array}{r}
 R \text{ Equulei } 210812 \text{ est } 9.5 \\
 \underline{2459} \\
 351 + 12.4
 \end{array}$$

1005

$$\begin{array}{r}
 T \text{ Pegasi } 220412 \text{ est } + 5 \text{ Var} \\
 \underline{2505} \\
 301 + 12.0
 \end{array}$$

$$13.0^{\circ} = 0.14$$

$$R \delta \text{ Pegasi. } 220714 = 11.2$$

$$\begin{array}{r}
 \gamma \text{ Pegasi. } 220613 = < 13.9 \\
 \underline{2512} \\
 36 + 13.9
 \end{array}$$

$$\begin{array}{r}
 RV \text{ Pegasi } 222129 \text{ est } < 13.5 \\
 \underline{2519} \\
 258 + 300
 \end{array}$$

$$\begin{array}{r}
 \delta' \text{ Lacertae } 222439 \text{ est } 10.3 \\
 \underline{2524} \\
 30 + 39.8
 \end{array}$$

$$\begin{array}{r}
 R \text{ Lacertae } 223441 \text{ est } 9.0 \\
 \underline{2526} \\
 248 + 41.8
 \end{array}$$

$$\begin{array}{r}
 \delta \delta \text{ Cygni } 213843 \text{ est } 11.4 \\
 \underline{2528} \\
 350
 \end{array}$$

Nov. 2, 1915

RV Pegasi 225914 est 13.5
2531
 232 +14d

R Pegasi 230110 est 9.2
2534
 233 +1.00

VR Pegasi 231425 est 11.4
2542
 228 +25.8

S Pegasi 231508 est 123
2552
 237 +8.4

0 Ceti 021403 Phot RR
0200
 0142 - 3.6
 Olsen Rec
 LCObs.

Index above

11^h 07 104.6 < Varies
 146.2 416
 288.3 372
 325.5 788 - 223

104.8
 147.9 431 - 2.12
 283.9 436
 327.5 867 - 200

Nov. 2, 1915

Index Below

16.4		Mean = 2.17
53.2	368	9.19
192.8	427	7.02
235.5	795	221

17.4		2.22
54.2	368	-
193.3	419	223
235.2	787	-

11	12
11	09.5

Index Below Same again.

11	15	15.9	
		54.1	382
		193.6	41.3
		234.9	79.5 - 2.21

	15.2	
	56.8	416 - 2.18
	195.1	402
	235.3	818 - 2.14

Index Above

Mean = 2.21

287.2		9.19
325.2	380	6.98
104.8	371	7.02
141.9	751	234

Final. Mean 7.00

285.6		
324.4	388	2.24
107.9	435	
175.1	823	2.13

11	20/11	17.5	151.4
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Nov. 2, 1915

Prod. 3424 Ball 103

12 14 45.8

12 15 0.0

Reap Jap III

LCCB Olsen Rec
Phot R. 15" E. Eq
Comp. with Stat I.Corrected
9 m. l.

			12^h	2	37	195.6			
17	26	51	12	2	6	36	232.6	370	+ 230
	27	01				46	195.6	41.2	2.12
	15			27	60	236.8	450	1.91	
	25				10	191.8	44.4	1.95	
	36				21	236.2	420	2.00	
	45				30	194.2	460	1.06	
	55				40	240.2	50.0	1.66	
28	05				50	190.2	54.2	1.45	
	15			28	00	244.4	52.2	1.55	
	25				10	192.2	54.9	1.42	
	36				21	247.1	60.3	1.10	
	46				31	186.8	60.3	1.10	
	57				42	247.1	58.3	1.27	
29	09				54	188.8	58.4	1.26	
	20			29	09	247.2	660	0.92	
	37				22	181.2	67.2	0.89	
	46				31	248.4	65.5	0.96	
	58				43	182.9	70.2	0.77	
30	07				52	253.1	74.5	0.59	
	18			30	03	178.6	766	1.51	
	29				14	255.2	770	0.50	
	38				23	178.2			

Nov. 2, 1915

$$\begin{array}{r} 17 \quad 30 \quad 48.2 \\ 17 \quad 31 \quad 02.8 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \quad 24.0 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \quad 38.6 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 0.5 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 15.1 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 40.0 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 32 \quad 54.6 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \quad 24.5 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \quad 39.1 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 08.2 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 22.8 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 44.8 \\ 14.6 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \quad 59.4 \\ \hline \end{array}$$

$$33$$

$$44$$

$$54$$

$$31 \quad 02$$

$$11$$

$$20$$

$$28$$

$$37$$

$$47$$

$$54$$

$$32 \quad 05$$

$$14$$

$$24$$

$$34$$

$$46$$

$$56$$

$$33 \quad 06$$

$$14$$

$$33$$

$$45$$

$$54$$

$$34 \quad 03$$

$$13$$

$$23$$

$$32$$

$$39$$

$$49$$

$$59$$

$$31 \quad 08$$

$$24$$

$$2 \quad 57.7$$

$$1 \quad 75.3 \quad 22.4$$

$$2 \quad 55.2 \quad 67.2$$

$$1 \quad 85.0 \quad 74.8$$

$$2 \quad 53.8$$

$$1 \quad 80.2 \quad 73.6$$

$$2 \quad 54.4 \quad 80.0$$

$$1 \quad 73.4 \quad 154.6$$

$$2 \quad 54.4 \quad 77.3$$

$$1 \quad 74.2 \quad 80.2$$

$$2 \quad 57.8 \quad 83.0$$

$$1 \quad 74.8 \quad 161.2$$

$$2 \quad 58.8 \quad 81.6$$

$$1 \quad 75.2 \quad 83.6$$

$$2 \quad 60.8 \quad 85.3$$

$$1 \quad 75.5 \quad 168.9$$

$$2 \quad 60.4 \quad 84.4$$

$$1 \quad 76.8 \quad 83.6$$

$$2 \quad 56.2 \quad 79.1$$

$$1 \quad 77.1 \quad 162.7$$

$$2 \quad 60.1 \quad 81.4$$

$$1 \quad 75.2 \quad 84.9$$

$$2 \quad 64.8 \quad 88.7$$

$$1 \quad 75.1 \quad 174.6$$

$$2 \quad 60.9 \quad 87.3$$

$$1 \quad 71.7 \quad 89.2$$

$$2 \quad 62.2 \quad 88.5$$

$$1 \quad 73.7 \quad 177.7 + 0.4$$

$$2 \quad 61.8 \quad 88.8$$

$$1 \quad 70.7$$

0.58

0.49

0.32

0.21

0.33

0.10

Nov. 2, 1915

1) 35 28.5 14.6	34	260.8	911 899	
1) 35 43.1	48	170.9	181.0 90.5	-0.02
	59	261.2		
36 12.2 14.6	10	171.9	893 892	
36 26.8	16	263.1	179.2 89.6	+0.02
	254	173.2		
	33	262.7		
36 45.2 14.6	41	173.8	88.9 88.7	
36 59.8	49	260.9	177.6 88.8	+0.05
	58	172.2		
	37 08	262.7		
37 29.5 14.6	20	172.4	903 920	
37 44.1	40	263.0	182.3 91.2	-0.04
	50	171.0		
	L.V.			
38 35.0 14.6	38 20	204.6		
1) 38 49.6	31	225.4	20.8 186	3.80
12 38	39	206.2	39.4	5.32
	50	224.8	19.7	

Prod 3x24

12 48 45.6

Prod = 0^m 14.6 slow
32

Ball 103

12 49 0.0²

243

all vis. etc. lodged

1912phae.proj..613B