KG
11365
585

1907phae.proj..586w

162

2.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

KG-11365585

1907phae.proj..586w

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

KG 11365.58.5

HARVARD
UNIVERSITY
LIBRARY
MAY 8 1956

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 10 1907

Continued from R 161 Page 220

U. Y. Cygni Phot I.

20	40	+30.1	15 Obs. Hornsby Rec.
16	53		
-3	47		
8	13		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 10 1907.

Index
146.5

Clouds

An attempt made to make a run on U. Cygni. A new Comp. Star was selected. This comparison Star is +30° 4244 (9.0)
This Comp. Star will probably be hereafter used although this assumption must not be considered as certain or as prejudicing any future observations since this old Comp. Star may yet be used. It is a little brighter than the old Comp. Star (being perhaps 9.2 mag.) and so seems to be a little better fitted for use.

W's watch used for times.
Watch 37 sec Slow.

The above new Comp. Star selected to-night is +30° 4244 (9.0)

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907 (Friday)

Double Star #154 (Comstock's List) = 4 Draconis A B.

17	44	+72.2	W Obs Hornsby Rec.
15	25		
-2	19		Phot R one prism removed
9	41		

P.A. 16 Dist. 0.5'± Mags 4.0 6.0

Measts. on fol page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907.

Index R + B. A.

16.0 → Souths + brts. dis.

7 59 50

82.0	66.0	
204.8	57.0	1.13^
Clouds.	123.0^	
261.8		

1.12^

19.2		
78.3	59.1	
197.1	64.9	1.11^
262.0	124.0^	

Index L + a B.

288.0		
350.6	62.6	
110.0	58.7	1.16^
168.7	121.3^	

290.0		1.18^
348.1	58.1	
106.9	61.7	1.20^
168.6	119.8^	

8 7 5

15 66 55^

7 63 28^

5 +22

13 3 50^

Mean 1.15^

7769.5443

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907.

ζ. Draconis

Phot. I.
W Obs. Hornsby Rec.

11	46	+73.0
16	0	
4.	14	

Measts. on fol page

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907. I

Index R + a. a.

152.2 → Comp. Star dis.

8 50 20	206.6	54.4	
	342.6	34.6	+1.94^
	17.2	89.0^	
	161.6		+1.92^
8 53 20	198.4	36.8	
	332.8	53.7	+1.90^
	26.5	90.5^	

Index L + B. B.

58.9

	117.5	58.6	
8 55 20	248.4	40.2	+1.69^
	288.6	98.8^	
			+1.70^
	68.4		
8 59 30	109.0	40.6	
218 30^	241.1	57.3	+1.71^
8 54 38^	298.4	97.9^	
5 +22			
13 55 0^			

Mean +1.81^

7769.5799

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907 II

Index L+B. B.

60.0

9 3 30	117.4	57.4		
	250.7	39.8	+1.73^	
	290.5	97.2^		
				+1.74^

70.1

9 6 20	Clouds 108.6	38.5		
	340.5	57.7	+1.75^	
	298.2	96.2^		

Index R+a a.

330.8

9 11 40	27.5	56.7		
	162.9	34.1	+1.89^	
	197.0	90.8^		
				+2.05^

342.7

9 13 20	15.4	32.7		
34 50^	156.1	47.0	+2.20^	
9 8 42^	203.1	79.7^		
5 +22			Means	+1.89^
14 9 4^				

7769.5897

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907 III

Index R + a. a.

	336.2		
9 17 55	21.4	45.2	
	165.9	29.6	+2.35^
	195.5	74.8^	
	344.2		+2.30^
9 20 40	14.7	30.5	
	155.8	47.7	+2.25^
	203.5	78.2^	

Index L + B B.

	242.5		
9 24 10	294.6	52.1	
	71.6	34.9	+2.00^
	106.5	87.0^	
	14		+2.08^
	258.4		
9 28 10	285.6	32.2	+2.16^
90 55^ Cloud.	64.0	49.0	
9 22 44^	113.0	81.2^	
5 +22			Mean +2.19^
14 23 6^			

7769.5994

1907phae.proj..586w

July 12 1907. IV.

Index L+B B.

			245.5		
9	33	50	293.6	48.1	
			74.4	29.9	+2.35^
			104.3	78.0^	
			354.8		+2.32^
9	37	50	285.1	30.3	
			67.5	43.6	+2.38^
			111.1	73.9^	

Index R+a a.

			160.6		
9	41	55	200.6	40.0	+2.62^
			343.8	26.7	
			10.5	66.7^	
					+2.65^
			166.1		
9	44	50	191.6	25.5	
	158	25^	338.0	39.5	+2.68^
9	39	36^	17.5	65.0^	
5		+22			
14	39	58^			

Mean +2.48^

7769.6111

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907. V

Index R + a a.

	162.7		
9 50 0	196.5	33.8	
	347.5	23.0	+2.98^
	10.5	56.8^	
	167.7		+2.94^
9 53 35	192.4	24.7	
	340.7	34.4	+2.89^
	15.1	59.1^	

Index L. + B. B.

	70.5		
9 56 50	107.1	36.6	
	259.0	22.6	+2.89^
	281.6	59.2^	
	78.5		+2.92^
10 0 45	101.5	23.0	
37 161 10^	252.1	34.9	+2.94^
9 55 18^	287.0	57.9^	
5 +22			
14 55 40^			

Mean +2.93^

7769.6220

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907. VI.

Index L + 73.

72:1

10 6 25 104.1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907.

ST 17 - 46

NA 6 - 5

Dec 73.0

P.a 170.5 Ver 73.

Sprocket + 0.5 B

+ 1.5 C

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907.

H. Cephei

24	50	+0.1.2	9.5" cap
17	50		
-7	0		
4	60		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907

Index R + a. I.

320.0 — Comp. star dis. a.

10 33 25	38.3	78.3	
	146.4	63.4	+0.74^
	209.8	141.7^	
			+0.77^
	328.4		
10 34 50	27.9	59.5	
	140.4	79.0	+0.80^
	219.4	138.5^	

Index L. + B. B.

	222.0		
10 38 5	316.4	94.4	+0.51^
	61.8	58.9	
	120.7	153.3^	
			+0.53^
	239.6		
10 40 20	301.0	61.4	+0.54^
146 40^	42.5	90.2	
10 36 40^	132.7	151.6^	
5 +22			
15 37 2^			

Mean +0.65^

7769.6507

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907. II

Index 73 73.

220.7

10 44 20 315.5 94.8

59.0 64.8 +0.39^

123.8 159.6^

234.0 +0.37^

10 46 35 305.5 71.5

43.1 93.1 +0.29^

136.2 164.6^

Index A A.

133.8

10 49 40 223.3 89.5

325.9 65.9 +0.47^

31.8 155.4^

+0.41^

147.0

~~10 51 35~~ 216.0 69.0 +0.34^

192 10 312.4 92.9

10 48 2 45.3 161.9^

5 +22

15 48 24^ Mean +0.37^

7769.6586

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 12 1907 III

Index A A.

	132.0		
10 36 40	225.0	93.0	
	324.0	67.0	+0.38^
	31.0	160.0^	
	145.3		+0.30^
10 38 20	214.1	68.8	
	308.1	99.3	+0.22^
	47.4	168.1^	

Index B. B.

	39.4		
11 1 25	137.9	98.5	
	231.0	77.0	+0.08^
	308.0	175.5^	
	51.2		+0.05^
11 4 40	127.2	76.0	
42 121 5^	219.0	103.0	+0.02^
10 60 16^	322.0	179.0^	
5 +22			Mean +0.15^
16 0 38^			

7769.6671

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 12 1907 IV

Index 73 73.

35.1

11	9	10	141.3	106.2	
			230.0	78.4	−0.09^
			308.24	184.6^	
				175.4	
			49.0		−0.11^
11	12	30	128.6	79.6	
			215.4	107.5	−0.13^
			322.9	187.1^	
				175.9	

Index A. A.

307.4

11	15	50	51.1	103.7	
			138.9	81.3	−0.09^
			220.2	185.0^	
				175.0	
			318.24		−0.13^
11	18	30	40.5	82.1	
	56	0^	124.0	106.5	−0.16^
11	14	0^	230.5	188.6^	
				171.4	
5		+22			
18	14	22^			Mean −0.12^

7769.6767

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae..proj..586W

July 12 1907. V

Index a A.

	305.6		
11 21 5	50.0	104	
	111.0	(107.8	− 0.62^
	218.8	212.2^	
		147.8	
	318.1		− 0.43^
11 23 45	43.0	84.9	
	125.1	(107.9	− 0.24^
	233.0	192.8^	
		167.2	

Index B. B.

	213.0		
11 26 35	325.6	112.6	
	45.0	(89.4	− 0.42^
	134.4	202.0^	
		158.0	
	225.3		− 0.48^
11 29 20	314.6	89.3	
100 45^	30.5	(114.5	− 0.45^
H 25 11^	145.0	203.8^	
5 +22		156.2	
16 25 33^			Mean 0.43^

7769.6844

1907phae.proj..586w

July 12 1907

S T 19 7
H A 6 15
Dec 81.0
P. A. 195.7
Sprocket. -1.5 B
-0.5 C

W's watch used for times.
Watch 22 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907 (Saturday)

BK. Herculis

Phot. I
W Clb. Hornsby Rec.

18	16	+ 12.0
15	33	
-2	43	
9	17	

Full aperture used.

8 10 0 Clouds.

Meass. on fol page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907.

I

Index L

73.

331.1 → Var. dis.

8	32	0	24.4	53.3
			Clouds. 160.0	(39.5
			199.5	92.8^

-1.84^

-1.86^

339.9

18.4	38.5	
153.0	(52.9	-1.88^
205.9	91.4^	

Index R.

A.

241.5

297.9	56.4		
8	40	15	89.8 (39.9 -1.75^
			109.7 96.3^

-1.72^

248.8

289.5	40.7		
60.0	(57.5	-1.70^	
117.5	98.2^		

Mean -1.79^

	72	15^
8	36	8^
5		+12
13	36	20^

7770.5669

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907.

Index R. II

240.8 A

8 46 40 296.5 55.7

69.8 38.6 -1.80^

105.4 94.3^

-1.74^

248.5

287.5 39.0

58.8 60.6 -1.67^

119.4 99.6^

Index L B.

152.0

206.2 54.2

336.0 40.9 -1.78^

16.9 95.1^

-1.72^

158.7

8 54 5 201.5 42.8

328.8 57.6 -1.65^

26.4 100.4^

Mean -1.73^

100 45^

8 50 23^

5 +12

13 50 35^

7770.5768

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 13 1907

III

Index L. B.

		150.5		
9	5	10	208.0	57.5
			338.0	41.4
			19.4	98.9^

-1.68^

-1.72^

158.0		
201.2	43.2	
332.0	52.3	-1.77^
24.3	95.5^	

Index R. A.

		58.0		
		118.9	60.9	
		248.1	41.5	-1.60^
		289.6	102.4^	

-1.61^

		68.5		
9	14	5	111.8	43.3
			239.6	58.0
			297.6	101.3^

-1.62^

Mean -1.66^

	19	15^
9	9	38^
5		+12
14	9	50^

7770.5902

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907.

IV

Index R. A.

	60.0		
9 34 30	118.8	58.8	
	248.0	42.1	-1.63^
	290.1	100.9^	
			-1.64^
	68.6		
	111.0	42.4	
	240.8	57.7	-1.65^
	298.5	100.1^	

Index L. B.

	326.7		
	27.2	60.5	
	158.2	42.8	-1.58^
	201.0	103.3^	
			-1.54^
	339.0		
9 42 20	20.4	41.4	
	145.5	65.7	-1.49^
	211.2	107.1^	

Mean -1.59^

	76	50^
9	38	25^
5		+12
14	38	37^

7770.6101

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907

V

Index L. B.

		327.1		
9	54	40	29.0	61.9
			156.5	46.0
			202.5	107.9
			335.5	
			22.5	47.0
			148.4	61.8
			210.2	108.8

Index R. A.

		237.0		
		300.0	63.0	
			68.0	43.0
			111.0	106.0
			246.8	
10	2	50	292.0	45.2
			58.2	62.2
			120.4	107.4

				-1.47^
				-1.46^
				-1.45^
				-1.48^
			Mean	-1.475^

19	57	30^
9	58	45^
5		+12
14	58	57^

7770.6242

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..556w

July 13 1907.

VI

Index R. A.

239.0

10 13 10 298.4 59.4

67.4 43.1 −1.60^

110.5 103.5^

278.5 −1.59^

290.7 42.2

58.0 61.0 −1.58^

119.0 103.2^

Index L. B.

150.8

210.5 59.7

338.0 40.0 −1.66^

18.0 99.7^

158.8 −1.65^

10 22 25 200.0 41.2

328.3 59.6 −1.64^

27.9 100.8^

Mean −1.62^

35 35^

10 17 48^

5 +12

15 18 0^

7770.6975

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 13 1907.

VII

Index L. B.

		150.8		
10	29	10	208.8	58.0
			336.6	41.2	−1.68″
			17.8	99.2″	
					−1.65″
			158.0		
			201.0	43.0	
			329.0	58.0	−1.63″
			27.0	101.0″	

Index R. A.

		59.7		
		118.9	59.2	
		279.0	40.0	−1.68″
		289.0	99.2″	
		69.5		−1.68″
10	37	0	109.5	40.0	
			239.8	59.2	−1.68″
			299.0	99.2″	

Means −1.66″

	66	10″
10	33	5″
5		+12
15	33	17″

7770.6481

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 13 1907

S. T. 10 10
H A -0 8
Dec +12.0
P. a 330.5 Ver B.

Sprocket. Readings accidentally omitted but region thoroughly identified before beginning

W's watch used for times
Watch 12 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907 (Monday.)

U. Ophiuchi Phot. I.
W. Obs. Hornsby Rec.

17	9	−0.2	Tiv. cap.
15	40		
−1	29		
10	31		

Abandoned.

U. Y. Cygni Phot. I.
W. Obs. Hornsby Rec.

20	40	+30.2
16	15	
−4	25	
7	35	

Measts. on fol. pages.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae_proj..586W

July 15 1907. I

Index R + a

320.4 → Comp. Star dis. A.

8 53 20	35.6	75.2	
	156.9	46.4	+1.16 ^
	203.3	121.6 ^	

332.4 +1.18 ^

8 58 5	23.8	51.4	
	145.4	68.9	+1.19 ^
	214.3	120.3 ^	

Index L + B. B.

230.8

8 59 40	308.2	77.4	
	63.5	53.4	+0.96 ^
	116.9	130.8 ^	

240.9 +0.97 ^

9 2 20	296.7	55.8	
	52.5	74.2	+0.98 ^
	127.0	130.0 ^	

Means +1.07 ^

33 170 25 ^
8 57 36 ^
5 -9
13 57 27 ^

7772.5816

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907.

II.

Index L + B

B.

229.6

9	8	10	308.5	78.9
			60.7	58.1 +0.83^
			118.8	137.0^

241.2 +0.82^

9	11	50	299.5	58.3
			49.4	79.6 +0.82^
			129.0	137.9^

Index R + A.

A.

147.9

9	15	10	210.0	62.1
			334.6	49.0 +1.39^
			23.6	111.1^

+1.36^

157.2

9	15	15	204.1	46.9
			324.7	67.3 +1.32^
			32.0	114.2^

Mean +1.09^

	53	25^
9	13	21^
5		−9
14	13	12^

7772.5925

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 15 1907 III

Index R + A. A.

		144.9		
9	24	0	213.2	68.3
			388.7	50.2 +1.23^
			23.9	118.5^
				+1.24^
			155.0	
9	26	55	204.6	49.6
			224.2	68.0 +1.25^
			32.2	117.6^

Index L + B. B.

			48.6	
9	30	30	127.2	78.6
			243.1	85.1 +0.90^
			298.2	133.7^
				+0.90^
			61.0	
9	33	10	118.4	57.4
			231.2	76.0 +0.91^
			307.2	133.4^

Mean +1.07^

	114	35^
9	28	39^
5		-9
14	28	30^

7772.6032

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907. IV

Index L + B. B.

			50.0		
9	38	15	122.5	72.5	
			241.0	54.7	+1.04^
			295.7	127.2^	
			61.5		+1.03^
9	41	35	114.6	53.1	
			231.9	75.1	+1.02^
			307.0	128.2^	

Index R + A. A.

			325.2		
9	46	0	35.0	69.8	
			155.4	48.4	+1.23^
			203.8	118.2^	
			334.4		+1.26^
9	49	40	23.9	49.5	
			146.0	66.0	+1.29^
			212.0	115.5^	

Mean +1.15^

	175	30^
9	43	52^
5		-9
14	43	43^

7772.6137

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 15 1907 V

Index R + a. R.

		324.0		
9	53	50	30.8	66.8
			156.5	45.3 +1.37^
			201.8	112.1^
				+1.39^
			337.2	
9	56	10	23.0	45.8
			146.7	64.3 +1.42^
			211.0	110.1^

Index L + B. B.

			233.9	
10	1	0	301.5	67.6
			62.8	50.7 +1.23^
			113.5	118.3^
				+1.17^
			243.9	
10	3	50	296.6	52.7
			53.1	71.2 +1.11^
			124.3	123.9^

38	114	50^
9	58	42^
5		−9
14	58	33^

Mean +1.28^

7772.6240

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907 VI

Index L + B B.

			234.2		
10	9	5	305.1	70.9	
			63.6	51.1	+1.15^
			114.7	122.0^	
			244.4		+1.13^
10	11	20	296.5	52.1	
			52.1	71.9	+1.11^
			124.0	124.0^	

Index R + a. A.

			145.2		
10	15	30	210.8	65.6	
			936.0	46.0	+1.38^
			22.0	111.6^	
			156.0		+1.38^
10	18	20	201.3	45.3	
			326.2	66.0	+1.39^
			32.2	111.3^	

Means +1.26^

	54	15^
10	13	34^
5		-9
15	13	25^

7772.6343

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 15 1907 XII

Index R + a

R.

149.5

10	24	15	210.9	61.4
			334.5	48.1	+1.43^
			22.6	109.5^	

+1.41^

155.4

10	27	40	201.2	45.8
			326.4	65.7	+1.38^
			32.1	111.5^	

Index L + B.

B.

52.6

10	30	5	122.8	70.2
			244.4	48.6	+1.22^
			293.0	118.8^	

+1.22^

64.9

10	35	5	114.3	49.4	+1.22^
			235.4	69.3	
			304.7	118.7^	

Mean +1.32^

	117	5^
10	29	16^
5		-9
15	29	7^

7772.6452

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907.

S. T. 18 30
H.A. X -2 24
Dec. +29.8
P.A. 198.0
Sprocket -1.5 B
" -0.5 C

W's watch used for times.
Watch 9 sec. fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..566w

July 16 1907 (Tuesday.)

Double Star # 171 (Comstock's List) = 31 Aquilae A B.

19	19	+11.6	Phot. R.
15	45		W. Obs. Hornsby Rec.
-3	34		
8	26		One Quartz prism removed

P.A. 345 Dist. 1.8" ± Mags. ~~4.9~~ 5.0 ~~6.8~~ 8.5

Measts. on fol. page

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 16 1907.

Index R + a A.

	124.6 → South + brte dia.		
8 15 50	154.0	29.4	
	310.4	18.6	3.36^
	329.0	48.0^	
			3.38^
	128.7		
	148.4	19.7	
	305.1	27.3	3.41^
	332.4	47.0^	

Index L + B B.

	32.1		
	65.8	33.7	
	219.4	20.8	3.05^
	240.2	54.5^	
			3.08^
	38.8		
8 23 0	59.8	21.0	
	212.3	33.4	3.08^
	245.7	54.4^	

Mean 3.23^

	38	50^
8	19	25^
5		-16
13	19	9^

7773.5550

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

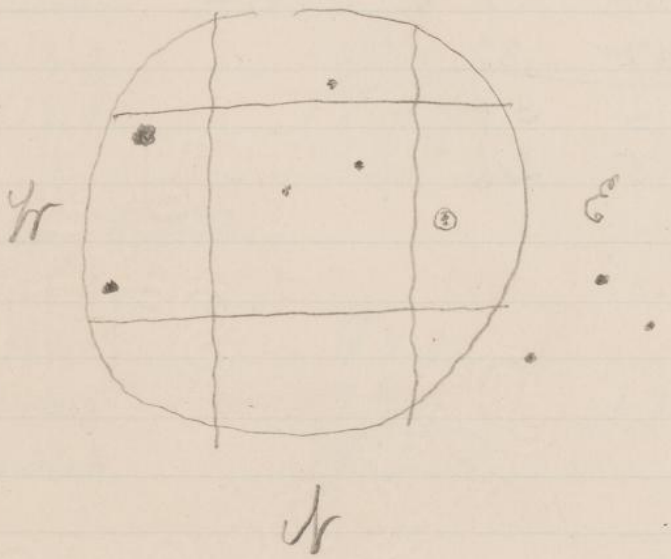
1907phae.proj..586W

July 16 1907.

R.V. Aphiuchi

Phot. I.

17	19	+7.8	W. Obs. Hornsby Rec.
16	32		
–	47		
11	13		



Too much cloud + fog for R.V. Aphiuchi which is faint even in telescope without photometer on.

U. Y. Cygni

Phot. I,
W. Obs. Hornsby Rec.

20	40	+30.2
17	3	
–3	37	
8	23	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 16 1907.

Abandoned. Sky too murky to do any thing in the way of measuring the variable. Moonlight also.

Fourth Type Star +09° 2810

24	1	+58.4
17	27	
6	34	
5	26	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 16 1907.

B

Index L+A

37.0 → Comp. Star dis.

9 50 5

139.9	102.9	
230.5	76.9	+0.00^
307.4	179.8^	

−0.04^

47.0		
128.6	81.6	
216.0	102.0	−0.07^
318.0	183.6^	
	176.4	

Index R+B.

B.

308.5		
47.5	99.0	
142.5	79.1	+0.03^
221.6	178.1^	

319.8		+0.06^
36.2	76.4	
130.9	99.1	+0.05
230.0	175.5^	

10 0 20

Mean +0.01^

19	50	25^
9	55	12^
5		−16
14	54	56^

77736214

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 16 1907.

S. T. 17 53
R. a. -6 3
Dec. +59.1
P. a. 260.2
Sprocket. - 0.5 B
" + 0.5 C.

Double Star # 201 (Somstocks list) = μ Cygni A C.

21	38	+.252
18	12	
-3	26	
8	34	

Phot. R.
W. Obs. Hornsby Rec.

P. a 254 Dist. 3.4" ± Mags. 5.0 6.8

Measts. on fol page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 16 1907.

Index R + B. d.

38.1 → South prec + brtr dis.

10 29 35	81.0	42.9	
	220.4	42.0	2.05^
	262.4	84.9^	
			2.06^
	40.5		
	82.0	41.5	
	218.5	42.7	2.07^
	261.2	84.2^	

Index L + a B.

	310.0		
	352.0	42.0	
	126.7	48.5	1.90^
	175.2	90.5^	
			1.95^
	309.6		
10 36 20	354.6	45.0	
	130.9	42.0	2.00^
	172.9	87.0^	

Mean 2.00^

	65	55^
10	32	58^
5		-16
15	32	42^

W's watch used for times.
Watch 16 sec. fast.

7773.6477

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 15 1907. (Thursday.)

Double Star = 194 (Comstock's List) = 61 Cygni A B.

21 . 0 +38.1
16 0
-5 0
7 0

P.a 125 Dist 0.4" ± Mags. 5.0 6.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 18, 1907.

Index R.A.

15.8

8 32 40 90.2

198.0

263.7

22.9

84.0

190.6

280.0

Clouds. Stars now invisible.

~~Index L.B.~~ Stopped on this double by clouds.

Double Star Σ 58 (Ewald Double Star Book) δ Cephei.

22	24	+57.8
16	46	
-5	39	
7	21	

Sky too cloudy. Abandoned.

Sky which has been pretty cloudy throughout now becoming thickly cloudy every where.

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 19 1907 (Friday)

Double Star # 178 (Comstock's List) = 17 Cygni

19	41	+33.5	Prof. R.
15	45		W. Obs. Hornsby. Rec.
-3	56		
8	4		

P.A 140° Dist. 2.5"± Magt. 5.0 9.0

Means. on fol page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 19 1907.

Index L + B. B.

307.2 → Prec. North + brtr dis.

8 9 35	327.9	20.7		
	131.0	12.5	4.18^	
	143.5	33.2^		
				4.12^
	311.3			
	324.7	13.4		
	126.0	21.7	4.06^	
	147.7	35.1^		

Index R + A. A.

216.3			
238.4	22.1		
41.9	12.6	4.09^	
54.5	34.7^		
			4.05^
221.0			
8 18 55 234.4	13.4		
36.2	22.5	4.01^	
58.7	35.9^		

	28	30^	
8	14	15^	
5		-20	
13	13	50^	Means 4.05^

7776.5513

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 19 1907.

Fourth Type +9° 4369

Prof. J
W. Obs. Hornsby Rec.

19	44	+5.5	
16	39		
-3	5		
8	55		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 19 1907

Q.

Index R + B

229.4 + 4th Type dis.

8 49 40	310.1	80.7	
	54.3	67.9	-0.60^
	122.2	148.6^	
			-0.64^
	297.1		
	301.0	63.9	
	47.6	80.8	-0.68^
	128.4	144.7^	

B.

Index L + A

	316.5	141.3		
9 0 0	39.4	220.2	82.9 78.9	
	146.2	333.5	65.5 59.3	-0.61^
	211.7	32.8	148.4^ ~~38.2~~	
		144.6		-0.54^
~~8 55 10~~		213.8	69.2	
		315.8	85.8	-0.48^
		41.6	155.0^	

Mean -0.59^

17	57	40 -
8	58	50^
5		-25
13	58	25^

See Remark on next page.

7776.5822

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 19 1907.

St	17	15
HA	-2	42
Dec	+8.8	
PA	105.0	Ver. Tb.
~~Spocket~~	-0.5	Tb.
	+0.4	C.

In measurements of 4th type Star on preceding page, sky pretty clear in first half of group but troubled somewhat by clouds in last half. As star seemed to be becoming pretty dim at beginning of 3rd set, measurements on this set were hurried a little + In 4th set stars grew some brighter observations in original 3rd set difficult. Consequently 3rd set retaken.

Double Star #194 (Comstock's List) = 61 Cygni A 73

21	0	+35.1	Phot. R.
17	35		
-3	25		W. Obs. Hornsby Rec.
8	35		

P. A 125 Dist. 0.4' ± Mags. 5.0 5.8

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 19 1907.

Index R + a

		188.5		
9	36	0	265.8	77.3
			6.0	78.8	0.46ˢ
			84.8	156.1ˢ
			189.6		0.48ˢ
			266.4	76.8
			7.8	77.0	0.50ˢ
			84.8	153.8ˢ

Index L + B. B.

			98.1	
			173.3	75.2
			280.5	73.9	0.59ˢ
			354.4	149.1ˢ
			97.6		0.53ˢ
9	41	50	175.0	77.4
			276.7	78.0	0.47ˢ
			354.7	155.4ˢ

	77	50ˢ
9	38	55ˢ
5		-25
14	38	30ˢ

Mean 0.50ˢ

W's watch used for times.
Watch 25 sec. fast.

7776.6101

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 20 1907 (Saturday.)

Double Star #194 (Comstock's List) = 61 Cygni A.B.

21 0 +38.0 Phot. R.
15 50 W. Alb. Hornsby Rec.
-5 10
6 50

Sky pretty clouded. Too cloudy for double at present.

8. 0 0 Sky thickly cloudy.

8 30 0 Cloudy every where with apparently no prospect of clearing.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 23 1907 (Tuesday.)

Fourth Lyræ Star +68° 617

10	34	+68.2
16	10	
5	36	

W. Obs. Hornsby. Rec.

Too cloudy at present for observations.

8 0 0 Sky pretty cloudy.

8 30 0 Sky still more cloudy. Scarcely any stars visible.

8 55 0 Heavy Fog. The fog which began to come in a while ago now overspreads the whole sky and is pretty solid and homogeneous. No chance for any thing further.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July ~~23~~ 25. 1907. (Thursday).

Double Star No. 194 (Comstock's List.) =
= 61 Cygni A B. H. Obs.
21 1 +34 1

Abandoned for the present.

Fourth Type Star 68° 617

Phot. J.
10 35 +68.2 W. Obs. Hornsby Exc.
16 ~~85~~
6 0

Measts. on folgeage

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 25 1907.

A.

Index R + B.

249.0 ~ 4th type dis.

8 25 20 289.6 40.6

74.5 (28.5 −2.54^

103.0 69.1^

254.0 −2.46^

285.9 31.9

66.9 (41.9 −2.38^

108.8 73.8^

Index L + a.

B.

159.9

198.2 38.3

344.1 (26.5 −2.68^

10.6 64.8^

−2.66^

165.0

8 34 20 193.8 28.8

339.0 (37.4 −2.64^

16.4 66.2^

Mean −2.56^

59 40^

8 29 50^

5 +22

13 30 12^

7782.56625

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 25 1907.

S. T. 17 10
H. a +6 27
P. a. 60.0 Ver B.
Dec. +68.2
Sprocket - 2.5 B.
- 1.5 C.

Fourth Type Star +34° 56
Phot. J.

24	29	+32.9	W Obs. Hornsby Rec.
17	29		
-7	0		
5	0		

Abandoned.

Fourth Type Star +38° 2389
Phot.

12	49	+39.1	W Obs Hornsby Rec.
17	32		
+4	43		

Fog too thick at this altitude
Abandoned.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 25 1907.

Double Star 4194 (Comstock's list) = 61 Cygni A.B.

21	0	+38.0	Phot. R.
17	40		W. Obs. Hornsby Geo.
3	20		
8	40		

P. A. 125 Dist. 0.4'± Mags 5.0 5.6

Meast. on fol. pages.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 25 1907.

Index L + B. B.

279.5 → Nuth. perc + btr. dis.

9	16	40	355.0	75.5
			98.0	76.6 0.53^
			174.6	152.1^
				0.45^
			279.0	
			360.2	81.2
			98.5	76.7 0.42^
			175.2	157.9^

Index A.

			192.4	
			265.4	73.0 0.57^
			7.8	77.3
			80.1	150.3^ 0.60^
			191.2	
9	23	25	264.6	73.4
			10.2	73.8 0.63^
			84.0	147.2^

Mean 0.54^

	40	5^
9	20	2^
5		+22.
14	20	24^

7782.5975

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 25 1907

9 32 0 Clouds and fog coming every where. No chance for any thing further.

W's watch used for times.
Watch 22 sec. slow

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 26 1907 (Friday)

Fourth Lyfer Star +9° 3576

18	1	+9.5	Phot. T.
16	35		W. Obs. Hornsby. Rec.
1	26		
10	34		

Meas. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 26 1907.

Index R. A.

	229.4	Comp. Star dis.	
8 31 0	310.2	80.8	
	38.9	58.0	+0.80^
	116.9	138.8^	
			+0.76^
	238.0		
	302.4	64.4	
	48.5	78.9	+0.71^
	127.4	143.3^	

Index L. B.

	149.4		
	211.7	62.3	
	318.8	80.6	+0.72^
	39.4	142.9^	
			+0.72^
	138.9		
8 39 0	217.9	79.0	
	326.3	63.1	+0.73^
	29.4	142.1^	
			Mean +0.74^

	70	0^
8	35	0^
5		+18
13	35	18^

7783.5662

S. T. 17 20
St. A. - 0 46
Dec. + 9.5
T. A. 152.5 Ver. B.
Sprocket — 4.5 A
" — 3.5 B
" — 2.5 C.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 26 1907.

Region thoroughly identified both before and after putting photometer on.

Fourth Type Star. +53° 66.

~~α~~ 24	29	+53.1	Phot. I.
17	40		W Obs. Hornsby Rec.
-6	49		
5	11		

Meas. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 26 1907.

Index L. B.

47.2 → Comp. Star dis.

9 21 30	127.6	80.4	
	239.5	60.0	+0.77^
	299.5	140.4^	

+0.80^

	60.8		
	117.9	57.1	
	227.5	79.9	+0.83^
	307.4	137.0^	

Index R. A.

	318.2		
	39.2	81.0	
	150.3	59.7	+0.76^
	210.0	140.7^	

+0.79^

	330.2		
9 29 0	27.5	57.3	
	139.6	80.3	+0.82^
	219.9	137.6^	

Mean +0.80^

	50	30^
9	25	15^
5		+18
14	25	33^

7753.6011

S. T. 18 10
Sf. A. −6 17
Dec. +61.8
P.A. 320.8 Ver. B.
Sprocket − 0.5 B.
" + 0.5 C.

As near as can be estimated the color is about 2. The moon however (which is nearly full) is a little

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 26 1907.

way above the horizon and the star is rather faint in the photometer so that color estimate is somewhat difficult.

Fourth Type Star + 34° 56

24	29	+32.9	Phot. V.
18	20		W. Ob. Hornsby Rec.
-6	9		
5	51		

Measts. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 26 1907.

Index R + A

A.

320.2 → 4th type dis.

10 6 0	35.4	75.2	
	147.5	64.2	−0.79^
	211.7	139.4^	
			−0.75^
	327.2		
	30.0	62.8	
	138.9	80.5	−0.71^
	219.4	143.3^	

Index L + B.

B.

	226.5		
	311.7	85.2	
	57.2	63.5	−0.59^
	121.0	149.0^	
	236.1		−0.57^
10 13 50	304.9	68.8	
	47.8	82.5	−0.55^
	130.3	151.3^	

Mean −0.66^

	19	50^
10	9	55^
5		+18
15	10	13^

7783.6320

L. T. 18 55
R. A. −5 30
Dec. +34.2
P. A. 155.8 Ver. B.
Sprocket. − 3.5 A
" − 2.5 B
" − 2.0 C.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 26 1906.

Color 5. Critical estimate of color a little difficult in bright moonlight.

W's watch used for times
Watch 18 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 27 1907 (Saturday.)

Double Star = 205 (Comstock's List) = 15 Cephei AC?

21	59	+59.2	Phot. R.
16	45		W. Obs. Hornsby. Rec.
-5	14		
6	46		

P.A. 40° Dist. 15" ± Mags. 5.9 9.3

Measts. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 27 1907.

Index A A.

		121.0		
8	29	10	151.5	30.5
			305.9	21.5
			327.4	52.0^
				3.15^
			122.0	
			150.3	28.3
			302.6	28.4
			331.0	56.7^
				2.99^

Index B B.

			33.7	
			62.9	29.2
			216.8	21.8
			238.6	51.0^
				3.23^
			35.4	
8	37	20	60.0	24.6
			213.5	29.0
			242.5	53.6^
				3.11^

	66	30^
8	33	15^
5		+20
13	33	35^

Mean 3.12^

7784.5650

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae..proj..586w

July 27 1907.

Double Star = 215 (Somoloeki's List) = 16 Lacaitae A.C.

22	50	+ 40.9	Phot. R.
17	32		W. Obs. Hornsby Rec.
- 5	18		
6	42		

	P.A.	Dist.	Mags.
22	44	+ 41.1	
17	39		
- 5	5		
6	55		

Abandoned for

W. Sephei

Phot. I.

~~22~~	50	+ 51.2	W. Obs. Hornsby Rec.
17	48		9.5" Cap.
- 7	2		
4	58		

Mcats. on fol. pages.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 27 1907. I

Index K + A. A.

319.0 → Comp. Star dis.

9	32	35	38.5	79.5	
			149.4	60.0	+0.78^
			209.4	139.5^	
					+0.71^
			328.0		
9	34	10	30.6	62.6	
			135.0	83.9	+0.64^
			218.9	146.5^	

Index L + B. B.

			226.0		
9	37	45	311.9	85.9	
			55.6	64.8	+0.56^
			120.4	150.7^	
					+0.48^
			236.0		
9	40	30	304.0	68.0	+0.41^
			41.6	90.5	
			132.1	158.5^	

Mean +0.59^

	145	0^
9	36	15^
5		+20
14	36	35^

7784.6087

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 27 1907. II.

Index L + 73. B.

			227.5		
9	42	30	314.4	86.9	
			56.6	66.3	+ 0.51^
			122.9	153.2^	
			234.1		+ 0.42^
9	45	50	306.2	72.1	
			42.8	91.3	+ 0.32^
			134.1	163.4^	

Index R + a. R.

			135.3		
9	50	40	223.1	87.8	
			324.2	67.2	+ 0.48^
			31.4	155.0^	
			145.9		+ 1.41^
9	52	20	214.2	68.3	
			311.4	93.6	+ 0.34^
			45.0	161.9^	

Mean +0.42^

	191	20^
9	47	50 u
5		+20
14	48	10^

7784 6168

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 27 1907. III.

Index R + a

R.

			133.0		
9	56	0	226.0	93.0	
			321.7	75.3	+ 0.22^
			37.0	168.3^	
			144.8		+ 0.24^
9	59	5	216.0	71.2	
			310.3	95.8	+ 0.25^
			46.1	167.0^	

Index L + B.

B.

			36.7		
10	2	20	138.9	102.2	
			230.6	77.6	+ 0.00^
			308.2	179.8^	
			48.9		− 0.01^
10	4	50	128.0	79.1	
			218.4	101.9	− 0.02^
			320.3	181.0^	
				179.0	+ 0.11^

Mean ~~+ 0.12~~

38	122	15^
9	60	34^
5		+20
14	60	54^
15	0	54^

7784 6256

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586w

July 27 1907. IV.

Index L + B. B.

		33.5		
10	10	0	139.5	106.0
			225.2	81.4 — 0.14^
			309.6	187.4^
				192.6 — 0.16^
			48.3	
10	12	35	129.9	81.6
			213.9	108.4 — 0.19^
			322.3	190.0^
				190.0

Index R + A. A.

		304.2		
10	16	5	51.7	107.5
			138.2	81.6 — 0.17^
			219.8	189.1^
				190.9
			315.0	— 0.23^
10	20	30	42.5	87.5
			124.6	107.8 — 0.29^
			232.4	195.3^
				194.5

Means — 0.20^

	59	10 ~
10	14	47^
5		+20
15	15	7^

7784.6355

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

July 27 1907 V

Index R + Ω. A.

			122.6		
10	22	40	232.0	109.4	
			314.0	86.8	−0.31^
			40.8	196.2^	
				163.8	
					−0.33^
			135.0		
10	26	10	223.0	88.0	
			303.2	110.5	−0.35^
			53.7	198.5^	
				161.5	

Index L + B. B.

			~~311~~ 41.2		
~~10~~	30	30	~~176~~ 135.0	93.8	
10	31	15	211.3	117.2	−0.59^
			328.5	211.0^	
				149.0	
			29.4		−0.58^
10	35	5	146.5	117.1	
			223.0	93.3	−0.58^
			316.3	210.4^	
				149.6	

	115	10^
10	28	47^
5		+20
15	29	7^

Means −0.46^

7784.6452

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 27 1907.

S. T. 19 15
St. A -5 40
Dec. +81.0
P. A. 195.6 Ver. B.
Sprocket. -1.5 B.
-0.5 C

W's watch used for times.
Watch 20 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 29. 1907. (Monday).

Double Star No. 208 (Comstock's List) =
= 1Y Ceph. AC 2 Phot. R. A. obs. N. sec.
Index B. B. A. h. 4m. Dist. 1.Y ±

	33.0		Comp. Y. A	9.2
A Co 10	62.0	29.0		
	217.Y	22.1	3.23^	
	2396	51.1^		
				3.18^
	3Y.1			
	Y9.Y	24.4		
	21K.2	29.0	3.12^	
	2K3.2	53.4^		
Index st. 4.				
	121.Y			
	1Y1.0	29.5		
	306.2	20.8	3.26^	
	327.0	50.3^		
				3.13^
	121.Y			
A YY 1	150.0	28.5		
	30K.0	28.0	3.00^	
	332.0	56.5^		

Mean 3.16^

	95	11^
8	47	~~35~~^
~~5~~		+15
13	47	~~50~~^

7786.5749

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 29. 1907.

Double Star No. 194 (Comstock's List) =
= 61 Cygni AB. Phot. R. A. obs. & rec.
R.A. 12s. Dist. 0.4 ± Mags 5.1 5.9.
Index Z + B. B.

9 18 10

	90.0		
	174.5	76.5	
	240.0	73.1	0.58"
	353.1	149.6"	
			0.55"
	97.5		
	173.0	75.5	
	276.9	77.2	0.52"
	354.1	152.7"	

Index R + A, A.

	184.0		
	264.9	76.9	
	5.5	80.6	0.43"
	86.1	157.5"	
			0.48"
	189.5		
9 30 6	266.2	76.7	
	7.0	76.0	0.52"
	83.0	152.7"	

Mean 0.52"

	48	16"
9	24	8"
5		15
14	24	23"

7786.6003

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 29. 1907.

Double Star No. 201 (Comstock's List) =
μ Cygni A. C. Phot. R. A. to Wires.
P.A. 55°. Dist. 3'.4 ±
Index 2 Ft. A. Mags. V.1 6.9

		309.0			
9	46	V0	3V5.0	+6.0	
			131.3	+2.9	1.94^
			174.2	88.9^	
					1.91^
			310.V		
			3V3.4	+2.9	
			127.7	+8.5	1.88^
			176.2	91.4^	
		Index R + B. A.			
			37.9		
			80.V	42.6	
			220.9	42.6	2.05^
			263.V	85.2^	
					2.08^
			41.7		
10	4	7	83.9	42.2	
			219.6	44.3	2.01^
			263.9	86.5^	
					Mean 1.97^

19	52	57^
9	56	28^
5		+15
14	56	43^

W's watch used four times.
Watch 1V reco. slow.

7786.6227

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 30 1907 (Tuesday.)

W. Ophiuchi

Phot. I.

17	9	+14	W. Ob. Hornsby Rec.
16	38		
	31		7" Cap used.
11	29		

Measts. on fol. pages.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

July 30 1907. I

Index R + a R.

47.9 → Var. dis.

8 16 15	127.5	79.6	
	235.3	59.4	−0.79^
	297.7	139.0^	
			−0.78^

	59.0		
	118.1	59.1	
	227.6	81.3	−0.77^
	308.9	140.4^	

Index L + B. B.

	~~330.9~~	332.5			
	23.4		52.5	50.9	
	~~170.4~~	143.0	76.4	73.8	~~1.00~~
	216.8		128.9	124.7^	−1.09^

−1.05^
~~1.02~~

	~~318.5~~	320.4			
8 24 52	35.0		76.5	74.6	−1.07^
	152.9		51.1	51.1	~~1.03~~
	204.0		127.6	125.7^	

Mean −0.93^

	41	7^
8	20	34^
5	+ 2	44
13	23	18^

7787.5578

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 30 1907 II

Index L + B. B.

329.2

8 42 20 23.9 54.7

141.4 75.9 -0.97^

217.3 130.6^

-0.94^

320.0

35.2 75.2

151.6 57.6 -0.92^

209.2 132.8^

Index R + a. A.

239.9

298.7 58.8

49.9 76.5 -0.87^

126.4 135.3^

-0.~~75~~.80^

226.0

8 49 5 311.9 85.9 ~~85.9~~

58.5 55.7 ~~58.6~~ -0.~~68~~ 0.74^

114.2 141.6^ 144.~~5~~

Mean -0.87^

91 28^

8 45 44^

5 +2 44

13 48 28^

7787.5754

1907phae.proj..586W

July 30 1907. III

Index R+a. A.

		238.0		
9	1	50	301.9	63.9
			46.8	79.6 -0.70^
			126.7	143.5^
				-0.73^
			227.9	
			310.4	82.5
			58.8	58.2 -0.76^
			117.0	140.7^

Index L+B. B.

			152.9	
			210.5	57.9
			316.4	83.6 -0.74^
			40.0	141.5^
				-0.74^
			135.9	
9	9	35	220.9	82.0
			327.0	59.0 -0.75^
			26.0	141.0^

Means -0.74^

	11	25^
9	5	42^
5	+2	44
14	8	26^

7787.5892

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 30 1907. II

Index L+B. B.

152.2

9 18 20 211.1 58.9

312.0 58.5 −0.63^

40.5 147.4^

−0.69^

135.8

221.7 82.9

328.2 58.4 −0.75^

26.6 141.3^

Index R+a. a.

56.7

122.1 65.4

224.5 81.3 −0.64^

305.8 146.7^

−0.64^

45.4

9 26 30 128.0 82.6 −0.65^

238.0 63.7

301.7 146.3^

Means −0.66^

44 50^

9 22 25^

5 +2 44

14 25 9^

7787.6008

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 30 1907. V.

Index R + a. a.

		54.8		
9	40	30	119.5	64.7
			222.0	91.6 -0.45^
			313.6	156.3^
				-0.56^
			47.2	
			129.2	82.0
			237.9	63.5 -0.66^
			301.4	145.5^

Index L + B. B.

		310.5		
			40.1	89.6
			151.2	60.8 -0.57^
			212.0	150.4^
				-0.60^
			327.0	
9	45	20	28.6	61.6
			136.6	85.6 -0.63^
			222.2	147.2^

Mean -0.58^

	88	50^
9	44	25^
5	+2	44
14	47	9^

7787.6161

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 30 1907. VI

Index ~~311~~ Lat. B.

311.1
42.5 91.4
153.5 57.7 -0.59^
211.2 149.1^

-0.56^

327.7
27.1 62.4
133.8 90.0 -0.53^
223.8 152.4^

Index R.A. a.

223.0
317.5 94.5
55.1 62.9 -0.43^
118.0 157.4^

-0.44^
~~0.34~~

237.1
307.7 73.6 73.6
40.2 44.5 ~~82.6~~ 82.5 ~~0.37~~ -0.46^
~~282.8~~ 127.0 ~~156.2~~ 156.1^ -0.50^
~~404~~ Mean ~~0.45~~

10 6 35

19 64 50^
9 62 25^
5 +2 44
14 65 9^

7787.6286

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 30. 1907. VII.

Index R + a. a.

		43.4		
10	24	21	133.5	90.1
			234.4	71.0
			305.4	161.1
				-0.36^
				-0.37^
			56.4	
			123.4	67.0
			221.1	92.9
			314.0	159.9^
				-0.38^

Index L + B. B.

		325.2		
		30.8	65.6	
		133.0	87.8	
		220.8	153.4^	
				-0.51^
				-0.48^
		312.2		
10	33	0	43.4	91.2
			147.6	65.2
			212.8	156.4^
				-0.45^

Means -0.42^

	57	20^
10	28	40^
5	+2	44
15	31	24^

7787.6468

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 30. 1907.

S. T. 19 33
R. A. + 2 19
Dec. + 1.9
P. A. 33.8 Dec. B.
Sprocket. - 8.5 B.
" - 7.5 C.

W's watch used for times.
Watch 2m 44s fast. Slow.

Somewhat troubled by clouds in last group also somewhat troubled by variable seeing throughout evening

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 31 1907 (Wednesday)

Double Star # 167 (Somstöcks List) = γ Lyrae

18	32	+37.8
16	45	
-1	+7	
10	13	

Phot. R.

W. Obs. Hornsby. Rec.

Too high Abandoned.

Double Star # 186 (Somstöcks List) = ω³ Cygni

20	26	+48.7
16	50	
-3	36	
8	24	

P.A. 320 Dist. 1.0' ± Mags. 5.0, 9.0

Light Clouds.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 31, 1907

Index L + B. B.

	222.6		
8 10 55	231.5	8.9	
	39.0	16.8	4.74^
	55.8	25.7^	
			4.70^
	219.3		
	234.8	15.5	
	39.6	11.2	4.66^
	50.4	26.7^	

Index R + A. A.

	133.0		
	142.8	9.8	
	309.8	15.2	4.50^
	325.0	25.0^	
			4.74^
	129.2		
8 20 0	146.5	17.3	
	313.0	9.1	4.68^
	322.1	26.4^	
		Mean	4.72^

	30	55^
8	15	28^
5 + 4		42
13	20	10^

7788.5557

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 31 1907

ζ Draconis

11	46	+ 73.0
17	28	
5	42	

Phot. O.
W. Ch. Hornsby. Rec.

Measts. on fol. pages.

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

July 31 1907. I.

Index A. A.

8 59 35

332.7 → Comp. Star dis.		
24.2	51.5	
158.1	38.4	+1.92^
196.5	89.9^	
		+1.95^
341.3		
18.8	37.5	
154.0	49.9	+1.98^
203.9	87.4^	

Index ~~B~~ B.

238.8		
295.8	57.0	
66.8	40.8	+1.71^
107.6	97.8^	
		+1.72^
247.2		
288.3	41.1	
60.6	55.4	+1.74^
116.0	96.5^	

9 8 0

Mean +1.84^

17	67	35
8	63	47
5		-16
13	63	32

7758.5858

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 31 1907. II

Index B. B.

238.6

9	12	20	296.2	57.6
			69.4	37.6 +1.78^
			107.0	95.2^

+1.84^

251.2

9	15	20	288.0	36.8
			61.2	54.2 +1.89^
			115.4	91.0^

Index A. A.

151.9

9	19	15	202.3	50.4
			339.5	35.1 +2.07^
			14.6	85.5^

+2.11^

162.4

9	22	40	195.5	33.1
			338.7	47.0 +2.19^
			20.7	80.1^

Mean +1.98^

	69	38^
9	17	24^
5		-15
14	17	9^

7788.5952

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 31 1907 ~~XII.~~

III.

Sarder A
154.9
9 31 20 2020
344.0

S. T. 18 25
Sh. A. + 6 42
Dec. + 73.0
P. A. 351.0 Ver B.
Sprocket − 1.0 B
+ 0.5 C

Stopped by clouds. Reject above single set in attempted 3rd. group. Last two settings in second group a little uncertain on account of faintness of star and ~~cloud~~ increasing haze and cloud. Somewhat troubled (and progressively so) by increasing haze and cloud.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

July 31 1907.

Double Star # 208 (Comstock's List) = 33 Pegasi A. C

22	16	+20.1
15	55	Phot R.
-3	21	
8	39	

Abandoned.

Clouds too thick and becoming thick every where. No chance for any thing further.

W's watch used for times on double star
Watch 4m 42 sec. ~~fast~~ slow.

Stomsby's watch used for times on γ Draconis.
Watch 15 sec. fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug 6 1907 (Tuesday)

Double Star #208 (Comstock's lists) = 33 Pegasi R. C.

22	17	+ 20.1
16	5.3	
-5	19	
6	+1	

Abandoned. Shutter gives trouble.

Double Star #191 (Comstock's list) = λ Cygni

20	+1	+ 36.0
17	5	
-3	36	
8	24	

Clouds.

Abandoned for ν Cephei.

ν Cephei

Full aperture used

Phot J. Wells. Howdy Rec.

24	50	+ 81.1
17	40	
-7	10	
4	50	

24	30	+ 81.7
17	40	
-6	50	
5	10	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 6, 1907.

I

Index A

A.

319.6 → Comp. Star dis.

8	50	50	35.2	75.6	
			150.3	57.5	+0.91^
			207.8	133.1^	
					+0.84^
			140.3 ~~327.8~~		
8	55	30	218.8 ~~29.8~~	78.5	
			327.2	62.4	+0.76^
			29.6	140.9^	

Index B.

B.

			43.4		
8	58	0	135.1	91.7	
			232.2	72.1	+0.37^
			304.3	163.8^	
					+0.27^
			51.2		
9	0	30	125.5	74.3	+0.24^
			223.1	93.1	
			316.2	167.4^	

Mean +0.55^

93	164	50^
8	56	12^
5	+2	5
13	58	17^

7794.5521

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Aug 6 1907.

II.

Index B.

B.

			42.4		
9	3	15	134.1	91.7	
			232.2	76.1	+0.23^
			308.3	167.8^	
			50.6		+0.21^
9	5	45	124.6	74.0	
			222.4	96.2	+0.19^
			318.6	170.2^	

Index A.

A.

			311.9		
9	9	10	41.6	89.7	
			145.0	66.7	+0.45^
			211.7	156.4^	
					+0.39^
			323.4		
9	11	55	33.8	70.4	
			131.5	92.6	+0.32^
			224.1	163.0^	

Mean +0.30^

	30	5^
9	7	31^
5	+2	5
14	9	36^

7794.5900

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 6 1907.

III.

Index A.

A.

311.2

9	14	30	43.3	92.1
			143.0	70.5 + 0.33^
			313.5	162.6^

+0.28^

321.1

9	17	5	34.3	73.2
			131.0	94.0 + 0.34^
			225.0	167.2^

Index B.

B.

213.8

9	19	55	319.4	105.6
			45.5	77.5 - 0.06^
			126.0	183.1^
				176.9

229.3 -0.10^

9	22	40	308.5	79.2
			32.0	108.9 - 0.15^
			140.9	188.1^
				171.9

Mean +0.09^

	74	10	^
9	18	32	^
5	+2	5	
14	20	37	^

7794.5976

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Aug 6 1907

IV.

Index B. B.

		212.8		
9	28	0	322.0	109.2
			47.1	53.5
			130.6	192.7^
				167.3
				-0.24^
				-0.29^
			227.0	
9	30	20	311.6	84.6
			31.6	113.2
			144.8	197.8^
				162.2
				-0.34^

Index A. A.

			124.8	
9	34	10	231.1	106.3
			317.5	81.3
			38.8	187.6^
				172.4.
				-0.14^
			138.8	
9	36	30	218.9	80.1
			324.0	107.1
			51.1	157.2^
				172.5
				-0.14^

	129	0^	
9	32	15^	Mean -0.22^
5	+2	5	
14	34	20^	

7794.6071

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 6 1907.

V.

Index A

		122.0		
9	41	30	233.4	111.4
			316.2	83.8 -0.29^
			40.0	195.2^
				164.8
				-0,30^
			139.4	
9	44	40	221.5	82.1
			300.4	114.5 -0.32^
			54.9	196.6^
				163.4

Index B.

			28.8	
9	47	15	147.8	119.0
			221.0	94.0 -0.63^
			315.0	213.0^
				147.0
				-0.64^
			43.2	
9	50	10	134.9	91.7
			209.0	121.4 -0.64^
			330.4	213.1^
				146.9

	183	35	^
9	45	54	^
5	42	5	
14	47	59	^

Mean -0.47^

7794.6167

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586w

Aug. 6 1907.

S. J. 19 20
H. A. −5 36
Dec. +81.0
P. A. 195.7 Ver B.
Sprocket − 1.5 B
" − 0.5 C
Full aperture used.
W's watch used for times.
Watch 2 m. 5 sec. slow.

Nights somewhat poor. ~~Sky~~ Some fog although ~~not~~ thick. A little tendency to light cloud at time.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug 7 1907. (Wednesday.)

Double Star #130 (Comstock's list) = 5 Serpentis

Phot. R.
W Ob. Hornsby Rec.

15	12	+2.3
17	22	
2	10	

~~Sky~~

Companion evidently faint and not certainly seen. ~~Sky~~ somewhat foggy and faint companion. pretty hard primary.

=

Double Star #128 (Comstock's list) = σ Bootis A. C.

Phot. R.
W Ob Hornsby Rec.

14	28	+30.4
17	35	
3	7	

P.A. 95 Dist. 4.0'± Mags. 5.0 - 10.9

Hearts. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Aug 7 1907.

Index R + a A.

132.9 → Prec & btr. dis.

8	20	0	143.0	10.1
			314.0	6.6 — 5.68^
			320.6	16.7^
				5.80^
			135.0	
			141.4	6.4
			313.4	8.6 — 5.92^
			322.0	15.0^

Index L + B. B.

			43.9	
			51.7	7.8
			227.3	5.7 — 6.15^
			230.0	13.5^
				5.97^
			44.4	
8	27	5	51.4	7.0
			229.8	8.9 — 5.79^
			231.7	15.9^
				Mean 5.88^

	47	5^
8	23	16^
5		-13
13	23	3^

77955576

Atmospheric conditions poor. Much fog and haze. Altitude rather high. Emergent pencils give some trouble. Observations difficult but general results considered good.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 7 1907.

Double Star ± 133 (Comstock's List) = γ Serpentis.

15	50	+16.2	Phot. R.
17	58		& Obs. Hornsby Rec.
2	8		

P.A. 315 Dist. 3.4 ± Hogs.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586w

Aug. 7th 1907.

Index A.
225.2
8 46 45 230.4

Abandoned. Sky too hazy and foggy to see companions.

Double Star #208 (Comstock's list) = 33 Pegasi A. C.

22	17	+ 20.1
18	20	
-3	57	
8	3	

Phot. R.
(Iyepiece prism removed)
W. Obs. Kornsky Sec.

P.A. 320 Dist. 1.14 Mags. 5.5, 7.6

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 7 1907.

Index. R. + B. A.

		118.6 → ~~Layfol~~		fol. and brk. dis.
9	8	50	161.6	43.0
			302.8	32.2 2.34^
			335.0	75.2^
				2.25^
			121.7	
			156.0	34.3
			295.0	46.8 2.16^
			341.8	81.1^

Index L + R. B.

			26.6	
			69.0	42.4
			212.7	33.1 2.33^
			245.8	75.5^
				2.25^
			31.1	
9	15	5	66.8	35.7
			207.0	45.4 2.16^
			252.4	81.1^

Mean 2.25^

	23	55
9	11	58
5		-13
14	11	45

W's watch used for times.
Watch 13 sec. fast.

7795.5915

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Aug. 9 1907. (Friday.)

Double Star # 215 (Comstock's List) - 16 Lacertae A. C.

22	50	+40.9
17	15	
-5	35	
6	25	

Phot. R.
W. Obs. Hornsby Rec.
One prism removed.

P.A. 45° Dist. 1.1'± Mags. 5.5 - 9.0

Trasto. on fob. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 9 1907.

Index A A.

309.5 → South prec. & brts. dis.

7	53	50	327.4	17.9
			127.0	24.7 3.63^
			151.7	42.6^
				3.55^
			306.1	
			332.7	26.6
			129.3	18.9 3.48^
			148.2	45.5^

Index B. B.

			219.9	
			237.7	17.8
			36.4	24.0 3.67^
			60.4	41.8^
				3.54^
			216.0	
8	0	20	243.5	27.5
			39.0	19.3 3.42^
			58.3	46.8^

Mean 3.54^

15	54	10^
7	57	5^
5		-20
12	56	45^

7797.5394

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae..proj..586w

Aug. 9 1907.

Double Star #175 (Comstock's List) = Σ2532

19	23	+ 2.6	Phot. R.
17	40		W. Obs. Hornsby R.G.C.
-1	43		
10	17		

P.A. Dist. Mags.

Abandoned. Companion too faint in image.

Double Star #208 (Comstock's List) 33 Pegasi A.G.

22	17	+ 20.1	Phot. R,
17	58		W. Obs. Hornsby R.G.C.
-4	19		one prism removed.
7	41		

P.A. 325 Dist. 1.2'± Mags. 6.5 8.6

Measd. on Job. page

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Aug. 9, 1907.

Index L & B. B.

207. & South fol & brt. dis.

8 36 50	249.6	41.8		
	30.3	36.1	2.26^	
	66.4	77.9^		
	210.3			2.15^
	247.5	37.2		
	23.0	48.3	2.04^	
	71.3	85.5^		

Index R & A. A.

	116.2		
	160.9	44.7	
	301.9	34.1	2.23^
	336.0	78.8^	
	122.0		2.17^
8 43 50	156.9	34.9	
	295.3	47.6	2.12^
	342.9	82.5^	

Mean 2.16^

	80	40^
8	40	20^
5		-20
13	40	0^

7797.5694

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 9 1907.

Fourth Type Star +49° 41

24	13	+48.1	Phot. I.
18	20		W. Obs. Hornsby Rec.
-5	48		
6	12		

Negats. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 9 1907.

Index R + B. S.

130.0 → Comp. Star dis.

9	18	50	227.8	97.8
			318.0	81.0 +0.02^
			39.0	178.8^

-0.02^.

137.5		
220.1	82.6	
308.3	100.4	-0.06^
48.7	183.0^	
	177.0	

Index L + A. B.

39.4		
138.0	98.6	
230.8	72.2	+0.17^
308.0	170.8^	

			50.4	+0.16^
9	26	40	126.4	76.0
			220.0	96.2 +0.15^
			316.2	172.2^

Mean +0.07^

	45	30^
9	22	45^
5		-20
14	22	25^

7797.5989

S. T. 19 3
St. a. -5 10
Dec. +49.2
P. A. 77.6 Ver B.
Sprocket - 0.5 B.
+0.5 b.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 9 1907.

Double Star #225 (Comstock's list) = 75 Pegasi.

23	55	+26.4
19	15	
-4	+40	
7	20	

Phot. R.
W. Obs. Hornsby Rec.
one prism removed.

P.A. 340 Dist. 0.7' ± Mags. 7.2, 9.1

Measts. on fob. page.

John C. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Aug. 9 1907

Index A + B. 4..

310.6 → South fol. & brts. dis

9	55	30	326.8	16.2	
			127.6	21.0	3.93^
			148.6	37.2^	
					3.97^
			308.2		
			327.9	19.7	
			129.5	16.2	4.01^
			145.7	35.9^	

Index L + A. B.

			220.8		
			236.6	15.8	
			37.6	21.4	3.93^
			59.0	37.2^	
					3.90^
			217.0		
10	6	5	239.4	22.4	
			40.9	15.6	3.88^
			56.5	38.0^	

19	61	35^	Mean 3.93^
9	60	48^	
5		-20	W's watch used for times.
14	60	28^	Watch 20 sec. fast.

7797.6254

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 4 1907. (Wednesday)

7 . 30 Sky very cloudy.

7 45 Sky decidedly more cloudy.

7 55 Heavy under stratus has now overspread whole sky. Air is very moist per centage of moisture is 93 and still increasing Evidently no chance for any work.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 6 1907 (Friday)

Eros (433)

25 X	3	+30.7
18	47	
17	44	Abandoned for present.
6	16	
5	44	

Double Star ℓ Capricorni = −19° 5831 (measured for Revised H. P.).

20	21	−18.3
18	55	
1	26	Abandoned as lower shutters stick and cannot be moved.
10	34	

Double Star 12 Aquarii = L.D −6° 5664 (measured for Revised H.P.)

Phot. R.

20	56	−6.4 W. Obs. Hornsby Rgc.
19	15	
1	41	
10	19	

P.A. 190° Disb. 2".7 Mags

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 6 1907

Index R + A.

		14.0		
8	18	40	74.2	60.2
			196.0	58.1	1.23^
			254.1	118.3^	
					1.15^
			17.8		
			73.0	55.2	
			195.0	70.6	1.07^
			265.6	125.8^	

Index L + R.

		285.7		
		349.0	63.3	
		114.3	48.9	1.37^
		163.2	112.2^	
		293.1		1.36^
8	30	20	342.8	49.7
			102.2	63.8	1.34^
			166.0	113.5^	

	49	0 ^
8	24	30 ^
5	+ 1	44
13	26	14^

Mean 1.25^

Observations very difficult on accounts of closeness of components, the separation being very slight with this power and said separation not being distinctly seen all the time.

7825.5598

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 6, 1907.

Eros again

25		
X	9	+31.0
20	0	
5	9	
6	51	

A 10.4 mags. star precedes +30° 207 (6.9) by about 2 m 58 sec. and is 10.0' south of it. Call this star a

A 12 th mag. star follows star a by 40 sec. and is 1.5' north of it. Call this star b

An 11.5 mag. star follows star b by 8.5 sec. and is 3.5' north of it. Call this star c

A 12 th mag star follows star c by 17 sec. and is 0.8' south of it. Call this star d

b and c

		- 8.0
		- 8.1
		- 8.0
9	29	- 8.2
		- 8.2
		7.9
		8.0
		8.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 6. 1907.

		c and d
		16.8
		16.9
		16.7
9	37	16.8
		16.9
		16.56
		16.6
		16.7

star a is about 9.5 mag. B 10.0 mag. follows star a by 17 sec. and is 2.3' south of it. Call this star e

a 16.3 mag. follows star e by 10.5 sec. and is 1.3' south of it. Call this star f.

		k and f
		13.0
		13.0
		13.3
		12.9
9	48	12.7
		12.8
		12.7
		12.6
		12.7

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 6, 1907.

b and c

8.0
8.0
8.0
10 25 8.0
8.0
8.0

c and d

16.0
16.0
16.0
10 35 16.0
16.0
15.9
16.0

Star d is undoubtedly Eros. ~~The~~ It seems to have not only moved in R.A. but also in Dec. Assuming the places of the D.M. stars as accurate, Eros would agree with the Ephemeris quite closely in R.A. but would be about 4' north of its theoretical place in Dec.

Eros follows Comp. Star by 1m 37 secs.
10 51 and is 10.6' south of it.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 6, 1907.

Comp. Star precedes +30° 207 (8.9) by 3 m 30 sec. and is 5.8' north of it.
Mag. of comp star is 9.8 ±.
∴ Comp. Star = R.A. 1h 9m 17.9 and Dec. +30° 17.2 (1855).
Mag. 9.8 ±. Star not in Dm.

Index R — Comp. Star dis. — O.

	142.2		
11 13 40	220.0	77.8 v	
	328.9	55.1	+0.92 ^
	24.0	132.9 ^	
			+0.94 ^
	153.5		
	207.0	53.5	
	316.5	77.0	+0.97 ^
	33.5	130.5 ^	

Index L — B.

	43.4		
	130.1	86.7	
	239.3	64.7	+0.55 ^
	304.0	151.4 ^	
			+0.50 ^
	53.0		
11 23 40	121.6	68.6	
11 37 20 ^	222.8	87.7	+0.45 ^
11 18 40 ^	310.5	156.3 ^	
5 +1 44			
16 20 24 ^			Mean +0.72 ^

7825.6809

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 6, 1907

			Index L		B.
			49.0		
11	29	20	129.0	80.0	
			234.0	62.6	+0.72^
			296.6	142.6^	
					+0.66^
			54.1		
			121.4	67.3	
			227.8	81.7	+0.59^
			309.5	149.0^	
			Index R.		A.
			318.6		
			35.4	76.8	
			150.0	58.9	+0.86^
			208.9	135.7^	
					+0.62^
			329.2		
11	39	15	21.8	52.6	
			112.4	107.6	+0.38^
			220.0	160.2^	
					Mean +0.64^
	68	35^			
11	34	18^			
5	+1	44			
16	36	02^			

S.T. 23 1
H.A. -2 13
Dec. +30.0
P.A. 301.2
Sprocket - 4.5 A - 3.5 B - 2.8 C

7825.6917

W's watch used for times tonight.
Watch 1m 44 sec. slow

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 6. 1907.

Observations rather dif. on acct of faintness of Eros.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 7, 1907 (Saturday)

8 15 0 Cloudy first of evening but some clearer now.

Eros.

25		
1	3	+30.6
19	45	
5	18	
6	42	

25	14
20	38
4	40
7	20

Sky cloudy

Sky somewhat now clearer

9 21 Eros now follows Comp. Star of last night by 1m 16 sec. and is 7.0' North of it.

9 26 Sky becoming thickly cloudy again.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phaeproj..586W

Sept. 7 1907.

9 33 Eros precedes star by 2 m 4 sec and is about 11.1' south of it.

In an approximate way and as far as can be determined with the eye in a sky fairly clear at times, Eros seems of about the same brightness of last night.

The object assumed and measured as Eros last night, was Eros. It has gone from its position of last night and is in its theoretical position to-night.

10 2 Tried all through the evening practically up to the present time to measure Eros but it is impossible to do it to-night on account of clouds. Once in a while the sky is fairly clear but right away it will become cloudy again and now it becoming thickly cloudy.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 12 1907 (Thursday)

Phot I.
W. Abs. Hornsby Rec.

Error.

25
X 3 +30.7
19 10
5 53
6 7

a and b

4.1
4.0
4.0
4.5
4.5
4.5
4.4
7 55 4.5
4.2
4.3
4.4
4.2
4.4
4.3
4.3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 12 1907.

	b and c.	b and c
	14.4	16.0
~~8 55~~	14.4	16.0
	14.6	16.0
	14.7	
8 1	15.0	
	14.6	
	14.7	
	14.5	
	14.7	
	15.0	

	c and d
	37.5
	37.4
8 7	37.3
	37.4
	37.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 12 1907.

b and c

16.0

8 55 16.0

16.0

therefore star c is Eros

9 1 Eros now precedes +31° 217 (9.1) by 21 sec. and is 11.1' north of it.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 12 1907.

I Cs.

Index R

328.8 → Comp. star dis.

9 12 10	26.1	57.3	
	156.6	46.2	+1.57^
	202.8	103.5^	
	335.0		+1.52^
	21.2	46.2	
	147.6	61.9	+1.46^
	209.5	108.1^	

Index L R.

	237.0		
	303.5	66.5	
	62.3	50.5	+1.26^
	112.8	117.0^	
	242.0		+1.19^
9 20 35	294.8	52.8	
	50.8	70.6	+1.12^
	121.4	123.4^	

Mean +1.36^

	32	45^
9	16	22^
5		-10
14	16	12^

7831.5945

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 12 1907.

II

Index L. Br.

	234.0			
9 26 40	300.0	66.0^		
	63.0			
	113.3	+0.3^		
		116.3^	+1.27^	
	240.7			
	295.6	+4.9		+1.16^
	52.2			
	124.3	72.1		
		127.0^	+1.04^	

Index R. Cs.

	149.0			
	210.0	61.0		
	335.1	43.4		
	18.5	104.4^	+1.55^	
	155.0			+1.51^
9 39 50	202.1	47.1		
	327.8	60.6		
	28.4	107.7^	+1.47^	

	66	30	^
9	33	15	^
5		-10	
14	33	5	^

+1.34^

7831.6063

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae..proj..586w

Sept 12 1907

III

Index A. C.

147.4
210.2
336.5
22.4 — 62.8 — 104.7^ — +1.45^

9 45 35

157.7
200.2
325.6
29.0 — 42.5 — 63.4 — 105.9^ — +1.41^ — +1.51^

Index L. B.

53.9
120.5
244.2
294.0 — 66.6 — 49.2 — 116.4^ — +1.27^

62.0
112.3
233.0
303.1 — 50.3 — 70.1 — 120.4^ — +1.18^

9 54 50

+1.22^

100 25^
9 50 12^
5 -10
14 50 2^

+1.35^

7831.6181

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 12 1907

IV.

Index L

	55.5		
10 0 5	121.4	65.9	
	244.7		
	292.1	47.4 / 113.3^	+1.34^
	64.5		
	113.1	48.6	+1.28^
	294.8		
	304.5	69.7 / 118.3^	+1.23^

Index R.

	326.0		
	27.3	61.3	
	156.7		
	199.0	42.3 / 103.6^	+1.57^
	337.0		+1.54^
10 12 25	20.0	43.0	
	148.5		
	211.2	62.7 / 105.7^	+1.52^

	12	30^	
10	6	15^	+1.41^
5		-10	
15	6	5^	

7831.6293

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..566w

Sept 12 1907.

V

Index R.

325.8
26.8 — 61.0

10 17 50 — 157.3 — 42.1
199.4 — 103.1^ — +1.7A^

337.0
19.9 — 42.9 — +1.7K^

147.2
210.7 — 63.7 — 106.K^ — +1.7O^

Index L.

235.0
301.2 — 66.2

63.0
111.8 — 48.8 — 114.0^ — +1.30^

243.2
294.4 — 51.2 — +1.23^

10 28 40

52.5
129.0 — 77.7 — 121.7^ — +1.16^

46 30 ^
10 23 15 ^ — +1.34^
5 -10
15 23 5 ^

7831.6421

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 12 1907

VI

Indep L. Ch.

230.9
301.6 70.7

10 35 25

61.6
112.2 50.6
121.3 +1.16

244.0 48.5 +1.22
292.5

53.5 67.9
121.4 116.4 +1.27

Indep R. Ch.

148.2 61.6
209.8

335.4 43.6
19.0 105.2 +1.53

157.7 43.3 +1.50
201.0

10 50 40

325.6 64.4
30.0 107.7 +1.47

86 5'
10 43 2"
5 -10
15 42 52"

+1.36

7831.6548

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 12 1907

VII

Index R. 8.

149.0
211.5 62.5

11 2 50

334.7
18.8 K4.1
106.6^ +1.50^

156.7 K3.3 +1.55^
200.0

327.8
27.0 59.2
102.5^ +1.60^

Index L R.

52.0
125.0 73.0

240.2
292.2 52.0
125.0^ +1.08^

61.1 51.9 +1.12^
113.0

11 13 40

235.2
304.3 69.1
121.0^ +1.17^

16 30^
11. 8 15^ +1.34^
5 -10
16 8 5^

7831.6723

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 12 1907

VIII.

Indep L

50.9

11	20	10	123.2	72.3
			242.6	50.4 +1.13^
			293.0	122.7^

62.9 +1.15^

113.0 50.1

232.7 70.8 +1.17^

303.5 120.9^

Index R. G.

328.5

27.7 59.2

153.5 48.2 +1.48^

201.7 107.4^

333.3 +1.42^

11	28	25	19.8	46.5
			146.0	65.7 +1.37^
			211.7	112.2^

	48	35^	H.A	-1 57 Mean +1.28^
11	24	18^	S.T.	23 15
5		-10	Dec	+31 6
16	24	8^	P.S.	299.0

Sprocket — 3.5 B

— 2.5 6

7831.6834

Comp. star = +32° 217 (9.5)

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 12 1907.

W's watch used for times
Watch 10 sec. fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13, 1907 (Friday)

Eros.

Phot I.
D. Obs. Hornsby Roc.

25
X 8 +32.3
18 58
6 10
5 50

a and b

14.6
14.7
14.7
7 35 14.7
14.6
14.6
14.7
14.5

b and c

7.1
7.0
7.1
7.0
7 40 6.8
6.9
7.0
6.9
6.9

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 13, 1907.

a and b

13.6
14.0
8 4 14.0
13.6
13.6

b and c

7.5
7.5
7.8
7.7
7.9

Star b is evidently Eros. It has gone a little to preceding as it should and is about 0.4' north of its place about one half hour ago.

Eros now follows comp. star of last night
8 12 by 52 sec. and is 7.1' north by it.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907

Same Comparison Star used as last night. I
Index L + S (C.S. = + 32° 217 (9.5)). B.

63.0 + b comp. star dis.

8	25	20	118.5	55.5	
			236.9	65.3	+1.18^
			302.2	120.8^	
					+1.13^
			54.5		
8	29	15	125.7	71.2	
			240.3	53.8	+1.08^
			294.1	125.0^	

Index R + B. C.S.

			334.7		
8	34	15	21.8	47.1	
			142.4	69.7	+1.26^
			212.1	116.8^	
			328.2		+1.40^
8	38	10	29.4	61.2	
			158.4	43.6	+1.54^
			202.0	104.8^	

Mean +1.27^

	127	0^
8	31	45^
5		+8
13	31	48^

7832.5638

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907.

II

Index A + B.

C8

	336.8		
8 47 30	19.6	+2.8	
	144.0	67.3	
	211.3	110.1^	+1.4^
	328.0		+1.40^
8 52 0	30.2	62.2	
	155.2	+9.5	
	204.7	111.7^	+1.32^

Index L + A.

B.

	243.8		
8 57 15	293.0	49.2	
	53.4	70.2	
	123.6	119.4^	+1.21^
	233.1		+1.19^
9 1 5	302.7	69.6	
	61.5	51.5	
	183.0	121.1^	+1.17^

33	157	50^
8	54	27^
5		+3
13	54	30^

Mean +1.30^

7832.5796

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907.

Indep L + A III B.

			244.6		
9	11	30	293.6	49.0	
			52.8	72.1	
			124.9	121.1	+1.17
			235.4		
9	15	15	301.7	66.3	+1.22
			63.5		
			113.4	49.9	
				116.2	+1.24

Indep R + B. C8

			156.7	44.3	
9	19	50	201.0		
			326.8	59.3	
			26.1	103.6	+1.57
			145.7	63.5	+1.54
9	23	10	209.2		
			336.6	43.0	
			19.6	106.51	+1.50

	69	45	
9	17	26	+1.32
5		43	
14	17	29	

7832.5955

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 13 1907

IV

Indep R+B.

		156.5		
			46.9	
9	29	40	203.4	
			325.0	
			65.0	
			30.0	
			111.9^	+1.37^
			146.5	
			63.4	+1.43^
9	32	40	209.9	
			335.4	
			43.6	
			19.0	
			107.0^	+1.49^

Indep L+S.

		63.8		
			48.2	
9	38	30	112.0	
			236.1	
			64.9	
			301.0	
			113.1^	+1.35^
			56.0	
			66.3	+1.34^
9	41	50	122.3	
			245.0	
			47.2	
			292.2	
			113.5^	+1.34^

	142	40^	
9	35	40^	+1.39^
5		+3	
14	35	43^	

7832.6081

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907

V

Index L + S

63.0

9 50 40	112.6	49.6		
	237.6	65.5	+1.30^	
	303.1	115.1^		
				+1.33^
	56.1			
9 53 20	121.0	64.9		
	243.8	47.7	+1.36^	
	291.5	112.6^		

Index R + B.

S

336.7

9 59 20	19.8	43.1		
	146.0	60.4	+1.57^	
	206.4	103.5^		
				+1.53^
	326.0			
10 3 45	29.8	63.8		
	156.8	43.2	+1.49^	
	200.0	107.0^		
			Means	+1.43^

37	167	5^
9	56	46^
5		+3
14	56	49^

7832.6228

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 13 1907.

VI

8

Index R + B.

		335.5		
		20.5	55.0	
10	10	15		
		147.4	63.1	
		210.5	108.1	+1.46
		326.8	62.0	
		28.8		+1.50
10	13	00		
		156.8	43.4	
		200.2	105.4	+1.53

Index L + A.

B.

		274.0		
		292.8	44.8	
10	18	40		
		55.0	67.0	
		122.0	111.8	+1.29
		234.9	65.1	+1.34
		300.0		
		65.8	46.2	
10	22	20		
		112.0	111.3	+1.39

	65	5
10	16	16
5		+3
15	16	19

Mean +1.42

7832.6363

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907 VII

Indep L+S. B.

			245.2	46.8	
10	31	50	292.0		
			52.4	71.5	
			123.9	114.3^	+1.23^
			236.3		
10	35	25	301.4	65.1	+1.31^
			65.5	46.3	
			111.8	111.4^	+1.39^

Indep R+B G.

			156.0	45.0	
10	40	25	201.0		
			326.8	63.8	
			30.6	104.8^	+1.45^
			145.3		
10	43	55	212.5	67.2	+1.41^
			336.1	44.9	
			21.0	112.1^	+1.37^

	151	35^	
10	37	54^	Mean +1.36^
6		43	
15	37	57^	

7832.6513

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 13 1907

VIII

Index R + R.

		156.0		
		201.5	45.5	
10	50	20		
		325.9		
		31.0	65.1	
			110.6^	+1.40^
		145.1		
		211.0	65.9	+1.41^
10	52	15		
		336.8	44.2	
		21.0	110.1^	+1.42^

Index L + A

		63.8		
		112.8	49.0	
10	56	50		
		235.2	67.1	
		302.3	116.1^	+1.24^
		55.6		
		125.8	70.2	+1.26^
11	0	40		
		244.0	46.3	
		292.3	114.5^	+1.23^

41	160	5^
10	55	1^
5		43
15	55	4^

Mean +1.34^

7832.6633

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907.

IX

Index L+A. B.

65.8

11	9	10	113.5	47.7
			234.8	66.8 +1.31^
			301.6	114.5^

+1.32^

57.1

11	13	15	121.2	64.1
			243.0	50.0 +1.32^
			293.0	114.1^

Index R+B. 8.

335.1

11	18	20	22.8	47.7
			146.1	65.9 +1.34^
			212.0	113.6^

325.8 +1.35^

11	21	0	29.0	63.2
			156.0	47.0 +1.41^
			203.0	110.2^

Means +1.35^

	61	45^
11	15	26.^
5		+3
16	15	29^

7832.6775

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 13 1907

S. T. 23 12
Sid. R. -1 58
Dec. +32.0
P. R. 231.4
Sprocket -1.5 A
-0.5 B
0.0 C

W's watch used for times.
Watch 3 sec. slow.

At end of series Eros found to have moved considerably during the series of obs. and in the right direction both in R.A. and Dec.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 14 1907 (Saturday)

Phot. T.
W. Obs. Hornsby Rec.

Eros

25
X 8 +32.4
19 0
6 8
5 52

a and k

14.5
14.5
7 37 14.4
14.6
14.5

Eros follows +32° 21' (AS) by 14.5 sec and is 6.2' north of it.

a and k

14.1
14.3
14.2
14.0
14.0
14.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907.

Same Comp. Star used as last night. C.

Index R + S

239.5 → Comp. star dis.

8 17 30	294.0	54.5		
	51.5	76.6	+0.96^	
	128.1	131.1^		
	231.8		+0.96^	
8 23 20	303.6	71.8		
	60.3	59.1	+0.96^	
	119.4	130.9^		

Index L + R. S.

	155.5			
	202.1	46.6		
8 34 20	326.9	61.1	+1.47^	
	28.0	107.7^		
	146.8		+1.47^	
8 39 55	209.5	62.7		
	335.4	45.2	+1.47^	
	20.6	107.9^		

Means +1.22^

	115	5^
8	28	46^
5		+12
13	28	58^

S.T. 21 47

N.S -4 23

Dec +32.0

R.A 158.8 Use B

Sprocket

7833.5618

9 10 Eros now follows +32° 215 (5.8) by about 11.5 sec. and is about 7.2' north of it.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 14 1907.

Owing to some fog and rather bright moonlight the beginning of meas. was necessarily delayed. We had doubts about attempting any meas. owing to the difficulty. One group however was measured but it had to be taken with great slowness and the greatest care, resting the eye between, owing to the dif. atmospheric conditions. It was impossible to measure the group any faster but with extreme care exercised the group is considered pretty good.

Double Star σ Capricorni (measured for revised N.P.)

Phot R.
W. Obs. Hornsby Rec.

20	21	-15.3
21	35	
-1	14	

P.A. 250° Dist. 25" Mags. 6.5-7.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907

Index L+B

281.1 → North pol and bkw. dis.

10 0 45	353.1	72.0	
	95.4	84.6	+0.45^
	180.0	156.6^	
			+0.42^
	276.8		
	357.2	80.4	
	96.4	79.1	+0.39^
	175.5	159.5^	

Index R+B.

	190.0		
	268.0	78.0	
	4.6	81.9	+0.35^
	86.5	159.9^	
	187.4		+0.45^
10 9 25	267.0	79.6	
	11.6	70.4	+0.55^
	82.0	150.0^	

Means +0.45^

	10	10^
10	5	5^
5		+12
15	5	17^

7833.62.87

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907.

Delta Star 53 Aquarii (measured for revised HP.)

Phot. W.

22 19 — 17.5 W. Obs. Hornsby Rec.
22 10
— 9

South fol. component assumed to be slightly the brighter.

Measts on fol. page

P. A 315° Dist 15" ± Mags. 6.2. 6.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907.

Index L + S

180.2 South fol + brt dis.

10	43	0	266.4	86.2
			359.0	87.6 +0.12^
			86.6	173.8^
				+0.14^
			179.2	
			264.3	85.1
			359.0	86.9 +0.15^
			85.9	172.0^

Index R + B.

			89.0	
			175.0	86.0
			269.5	85.5 +0.16^
			355.0	171.5^
				+0.16^
			89.8	
10	51	5	174.3	84.5
			268.8	86.7 +0.17^
			355.5	171.2^

Mean +0.15^

	94	5^
10	47	2^
5		+12
15	47	14^

7833.6577

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907.

Double Star 12 Aquarii (measured for Revised N.P.

Phot R
W Obs. Hornsby Rec.

20	56	-6.4
22	45	
+1	49	

P.A 190° Dist. 2.7 · Mags.

Measts. on fol pages.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 14 1907.

Index L + A.

		125.5 → North	fol +	btr dis.
11	8	20	172.0	46.5
			311.8	47.2 +1.82^
			359.0	93.7^

+1.82^

130.8		
175.3	44.5	
309.5	48.5	+1.83^
358.0	93.0^	

Index R + B.

315.0			
353.0	38.0		
136.5	33.0	+2.47^	
169.5	71.0^		

+2.31^

318.0				
11.	19	20	354.0	36.0
			128.8	45.6 +2.15^
			174.4	81.6^

Means +2.06^

11	27	40^
11	13	50^
5		+12
16	14	2^

7833.6764

Measurement of above last double very dif. on accd. of closeness of components and rather poor seeing. Images somewhat blurry and components not as well separated as on night of previous measurements.

W's. watch used for times
Watch 12 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 16 1907 (Monday.)

Double Star ρ Capricorni (Obs. for Rev. S.P.)

Phot R.

20	21	-18.3	W Obs. Hornsby Rec.
19	15		
1	6		
10	54		

P. A 250° Dist 25" Mags.

Measts. on pp. 161.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 16 1907.

Indep R+B

295.0 ~ North fol. + brtr. dis.

7 32 20	12.0	77.0	
	116.5	71.5	0.60^
	188.0	148.5^	

0.64^

	295.8		
	8.8	73.0	
	115.2	71.5	0.68^
	186.7	144.5^	

Indep

	202.2		
	279.8	77.6	
	26.5	70.0	0.62^
	96.5	147.6^	

	206.2		0.62^
7 41 45	279.6	73.4	
	25.0	73.6	0.63^
	98.6	147.0^	

Means 0.63^

	74	5^
7	37	2^
5		-15
12	36	47^

7595 5256

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 16 1907.

Same Again with Phot W.

Index R + A

5.7 → North fol and brts. dist.

8	0	40	76.8	71.1
			189.8	65.6	0.84^
			255.4	136.7^

0.80^

			7.2	
			76.5	69.3
			184.9	71.9	0.75^
			256.8	141.2^

Index L + R.

			276.4	
			345.5	69.1
			97.2	69.6	0.80^
			166.8	138.7^

0.82^

			276.9	
8	9	45	344.0	67.1
			96.7	69.3	0.55^
			166.0	136.4^

Mean 0.81^

	10	25	^
8	5	12	^
5		-15	
13	4	57	^

7835.5451

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 16 1907.

South Star 53 Aquarii (Meas. for Rev. S.P.)

22	19	-17.5
20	15	
2	4	
9	56	

Phot W.
W. Obs. Hornsby Rec.

P.A. 315° Dist 10" ± Mags

Next page

South fol. component assumed to be slightly the brighter

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 16 1907.

Index R + B.

88.0 → Sculls fol and bits dis.

8	24	55	174.2	86.2
			267.0	88.1 0.11^
			355.1	174.3^
				0.08^
			84.1	
			174.5	90.4
			267.6	86.4 0.06^
			354.0	176.8^

Index L + S.

			359.9	
			84.0	84.1 0.18^
			176.8	86.2
			263.0	170.3^
				0.18^
			357.5	
8	38	45	84.1	86.6
			179.8	84.3 0.17^
			264.1	170.9^

Means 0.13^

	63	40^
8	31	50^
5		-15
13	31	35^

7835.5636

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 16 1907

Double Star = 2308 = 40, 41 Draconis.

15	9	+ 80.0
20	55	
2	46	

Cloudiness increasing during evening. Measurements made throughout evening with considerable difficulty but setting made very slowly and as carefully as possible. Atmospheric conditions now becoming so bad that it is impossible to get anything further.

W's watch used for times.
Watch 15. sec. fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 17 1907 (Tuesday)

12 Aquarii (Meas. for Rev. M.P.)

20	56	-6.4	Phot R.
19	15		W Ob. Hornsby Rec.
1	41		
10	19		

P.A. 190° Dist 2.7" Mags

The measurements will evidently be very difficult and somewhat uncertain due to the closeness of components and the fact that the seeing is a little blurry

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept 17 1907

Index L

		276.9 → North + brts dis.		
7	34	10	338.5	61.6
			289.9	33.4 1.78^
			323.3	95.0^
			107.0	1.84^
			143.0	36.0
			278.0	55.0 1.89^
			333.0	91.0^

Index R.

			13.0	
			61.8	48.8
			194.8	43.2 1.86^
			238.0	92.0^
			16.8	1.86^
7	48	5	57.5	40.7
			191.4	51.7 1.85^
			243.1	92.4^

Means 1.85^

	82	15^
7	41	8^
5		-18
12	40	50^

7936.5284

Means as on previous nights extremely dif. on accd. of closeness of components and the fact that seeing is a little blurry. The means with this photometer must necessarily be somewhat uncertain as the images much of the time are almost

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 17 1907.

super imposed and all the time the companion is very difficult to be distinctly seen. A different phot. with a higher power ought to be used in order to separate the components.

Double Star = 152 (Comstocks List) = 72 Herculis

17	12	+ 33.2
20	12	
	0	

Abandoned Clouds

Double Star = 220 (Comstocks List) - (Arg 540

23	6	+ 56.3
20	16	
2	50	
9	10	Abandoned ~~Clouds~~

Abandoned on acct. of clouds. Companion has disappeared in same.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept 17 1907.

Double Star #26 (Comstock's List). Σ 296

26		
2	35	+48.6
20	55	
5	40	
6	20	

Phot R
Wdbs. Hornsby Rec.

P.A. 300 Dist. 17" Mags.

For Measts see fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 17 1907

Indep R+S A.

		310.6	Fob + bkts. dis.	
9	1	20	319.2	8.6
			130.5	10.9 5.35^
			141.4	19.5^
				5.42^
			309.8	
			320.2	10.4
			131.4	7.9 5.48^
			139.3	18.3^

Indep L+R. B.

			219.9	
			229.4	9.5
			40.3	9.4 5.41^
			49.7	18.9^
				5.43^
			219.8	
9	7	45	230.1	10.3
			40.6	8.3 5.45^
			48.9	18.6^

Mean 5.42^

	9	5^
9	4	32^
5		-18
14	4	14^

7836.5932

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept. 17 1907.

Double Star 4 153 (Comstock's List) 72 Herculis.

Phot. R

17	15	+32.6	W. Obs. Hornsby. Red.
21	20		
4	5		

P.A. 335 Dist. 3.5± Mags 6.0 - 9.0

For mags. see next page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 17 1907.

Index A

219.2 South + bto. dis.

9	35	0	232.2	13.0
			41.1	9.3 5.05^
			50.4	22.3^

5.06^

220.4
230.0 9.6
40.3 12.5 5.07^
52.8 22.1^

Index B.

129.4
141.9 12.5
310.2 10.2 5.01^
320.4 22.7^

4.99^

130.0
9 42 20 140.7 10.7
309.2 12.5 4.97^
321.7 23.2^

Mean 5.02^

	77	20^
9	38	40^
5		-18
14	38	22^

7836.6100

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept. 17. 1907

Double Star #151 (Comstocks List): δ Herculis

17	9	+25.0
21	55	
4	46	

10 0

Abandoned. Too cloudy
Companion invisible.

W's watch used for times tonight.
Watch 15 sec fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept. 19 1907 (Thursday)

Fourth Typo Star +09° 2510

h	m	
24	1	+58.3
19	40	
4	21	
7	39	

Phot I
W. Obs. Hornsby Rec.

Color 6 in photometer.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept 19 1907

Index L. B.

313.1 > 4th type dis.

7 54 20	39.4	86.3	
	139.5	78.7	-0.29^
	218.5	165.0^	

-0.30^

	318.0		
	38.8	80.8	
	138.0	82.1	-0.32^
	220.1	162.9^	

Index R O.

	228.2		
	307.9	79.7	
	45.0	84.8	-0.29^
	129.8	164.5^	

	228.0		-0.30^
8 3 55	310.4	82.4	
	46.8	81.0	-0.32^
	127.8	163.4^	

Means -0.30^

15	58	15^
7	59	7^
5		+5
12	59	12^

7838.5411

S. J. 20 15
S. A 3 35
Dec -59.2
P. A 255.2
Sprocket. -0.5 B
+0.5 C

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 19 1907.

Double Star = 307 η Persei 1

h		
26	42	+55.4
20	40	
6	2	
5	58	Abandoned.

Double Star = 141 (Comstock's List) = 23 Herculis

16	17	+34.0 Phot R
20	47	W. Obs. Bonsky. Rec.
4	30	

P.A. 20 Dist. 0.6' ± Mags. 7 - 10

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 19 1907

Index R + B A.

114.7 → South + brtr. dis

8 51 30	15-R.6	37.9	
	300.5	26.8	2.69^
	327.3	64.7^	
	120.8		2.84^
	150.4	29.6	
	301.4	27.4	2.98^
	325.8	57.0^	

Index L + B B.

	26.7		
	59.6	32.9	
	211.5	27.7	2.84^
	239.2	60.6^	
			2.91^
	31.9		
8 58 50	57.2	25.3	
	209.2	31.5	2.98^
	240.7	56.8^	

Mean 2.85^

	110	20^
8	55	10^
5		+5
13	55	15^

7838.5800

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 19 1907

Double star # 149 (Comstock's List) = Σ 2120

16	58	+ 28.2
21	20	
4	22	
7	38	

Phot R.

U. Obs. Hornsby Rec.

P.S. 241 Dist. 8" ± Mags 6.5 - 5.7

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept. 19 1907.

Index L 3.

296.0 → Fol North + bto dis.

9 24 30	333.5	37.5		
	108.8	50.0	1.95^	
	158.8	87.5^		
				1.90^
	292.9			
	342.0	49.1		
	112.2	44.3	1.82^	
	156.5	93.4^		

Index R. 4.

205.5			
246.6	41.1		
23.0	43.6	2.06^	
66.6	84.7^		
			2.02^
200.5			
9 33 50 247.8	47.3		
25.9	39.8	1.99^	
65.7	87.1^	Mean	1.96^

	58	20^
9	29	10^
5		+5
14	29	15^

7838.6036

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 19 1907.

Fourth Type Star +36° 3243

18	40	+37.4	Phot I.
21	50		
3	10		W. Obs. Hornsby. Reg.

Color 4

10

10

10
5
15

78

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 19 1907.

Index R

327.6 > 4th type dis.

10	3	40	28.2	60.6
			140.5	77.0 — 0.82^
			217.5	137.6^

-0.82^

			319.4	
			37.5	78.1
			148.9	58.9 — 0.83^
			207.8	137.0^

Index L.

			233.0	
			302.1	69.1
			61.0	56.2 — 1.08^
			117.2	125.3^

			236.4	-0.95^
10	10	55	299.0	62.6
			50.2	75.3 — 0.82^
			125.5	137.9^

Mean -0.88^

	14	35^
10	7	18^
5		+5
15	7	23^

7838.6302

L. J. 22 20
H. A. +3 45
Dec. +32.0
P. A 56.0
Sprocket +0.5 B +1.5 C

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept. 19 1907.

Somewhat troubled by clouds in early part of evening but clear later.

W.S. watch used for times
Watch 5 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phaer.proj..586M

Sept. 25 1907 (Wednesday)

Fourth Type Star +2° 4709

23	39	+2.7
19	47	
3	52	
8	8	

Phot J
W. Obs. Hornsby Rec.
9.5" Cap.

Color 5 in ordinary eye piece

P.S.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 25. 1907

Indrp L + B. B.

246.6 + th type dis.

7 31 40	286.2	39.6	
	73.2	29.1	− 2.55^
	1023	68.7^	
	252.7		− 2.51^
	282.2	29.5	
	68.4	41.6	− 2.47^
	110.0	71.1^	

Indrp R + S S

	162.0		
	194.2	32.2	
	346.2	23.4	− 3.03^
	9.6	55.6^	
			− 3.02^
	165.2		
7 40 10	191.8	26.6	
	342.8	29.7	− 3.00^
	12.5	56.3^	

Mean − 2.76^

	71	50^
7	35	55^
5		+22
12	36	17^

S.T. 20 19
H.S − 3 23
Dec. + 2.1
P.S 346.2 Sec B.
Sprocket − 9.5 S
− 8.5 B
− 8.0 C

78H45252

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Sept 25 1907

Double Star #148 (Comstock's List) = 19 Ophiuchi

16	40	+ 2.3
20	40	
4	0	

Phot R
W. Obs. Hornby. Rec.

P.A 90° Dist 0.4" ± . Mags. 6.5 - 10.0

1907phaa.proj..5866

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 25 1907.

Index R + A.

			131.3 → Dec + brtr. dis.		
8	19	55	152.8	21.5	
			310.6	25.2	3.42^
			335.8	46.7^	
					3.28^
			126.7		
			157.9	31.2	
			313.0	21.5	3.15^
			334.5	52.7^	

Index L + R.

			42.0		
			60.3	18.3	
			215.2	32.7	3.23^
			247.9	51.0^	
			35.1		3.13^
8	26	50	67.8	32.7	
			219.5	23.0	3.03^
			242.5	55.7^	

	46	45^
8	23	22^
5		22
13	23	44^

Means 3.20^

7844.5581

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept. 25 1907

R.R. Lyrae

19	19	+43.1
21	10	
1	51	

Phot I

W. Obs. Hornsby. Asc.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 25 1907.

I

Index L + S

149.7 → Var. dis

R.

9	6	5	205.6	55.9	
			334.8	43.5	-1.67^
			18.3	99.4^	
					-1.67^
			156.3		
9	8	40	198.4	42.1	
			329.0	57.3	-1.67^
			26.3	99.4^	

Index R + B.

S

			58.1		
9	12	0	116.9	58.8	
			247.0	45.2	-1.56^
			292.2	104.0^	
			64.9		-1.51^
9	14	5	110.9	46.0	
			236.7	61.6	-1.47^
			298.3	107.6^	

Mean -1.59^

	40	50^
9	10	12^
5		+22
14	10	34^

7844 5907

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept 25 1907

II

Index R + B

8

56.6
9 16 45 118.1 61.5
247.2 42.6
289.8 104.1^ −1.6^

66.1 44.4 −1.6^
9 19 25 110.9
238.9 59.5
298.4 103.3^ −1.5^

Index L + A

B.

329.8
9 22 15 25.0 55.2
156.5 41.1
197.6 96.3^ −1.7^

337.2 43.2 −1.7^
9 24 30 20.4
151.4 54.6
206.0 97.2^ −1.7^

82 55^
9 20 44^
5 +22
14 21 6^

Mean −1.6^

7844.5980

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 25 1907

III

Index R+B. L+8 B.

330.6

9 28 50 27.6 ∨7.0

156.5

198.5 ∨2.0

99.0^ −1.6∨^

337.0

9 32 25 18.2 41.2 −1.7∨^

151.1 ∨∨.1

206.2 96.3^ −1.7∨^

Index L+R. R+B 8

237.9

9 34 40 300.5 62.6

65.0

110.8 ∨5.8

104.∨^ −1.45^

245.2

9 36 50 298.0 ∨∨.8 −1.4∨^

56.4

117.8 61.∨

106.∨^ −1.∨1^

132 45^

9 33 11^

5 +22

14 33 33^

Mean −1.60^

7844 6066

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586

Sept 25 1907

IV

Indx ~~L+A~~ R+B

237.5
9. 42 45 299.6 62.1
65.7
109.4 43.7 / 105.8 -1.52

247.8 41.6 -1.56
9 45 20 289.4
57.1 61.1 / 102.7 -1.59
118.2

Indx ~~R+B~~ L+A

9 50 25 337.6 ~~148.8~~ 39.9
~~8 48 40~~ 17.5 ~~205.4~~
150.2 56.7 / 96.6 -1.74
206.9

330.6 55.6 -1.73
9 53 0 26.2
157.6 41.8 / 97.4 -1.72
199.4

Mean -1.64

191 30
9 47 52
5 +22
14 48 14

7844.6168

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 25 1907.

V

			Index R+B.	L+S		B.
			337.8			
9	58	20	18.0	40.2		
			151.9	54.4	-1.79^	
			206.3	94.6^		
			329.0		-1.74^	
10	0	15	24.7	55.7		
			156.8	42.7	-1.70^	
			199.5	98.4^		
			R+B			S
			Index 237.8			
10	4	20	297.1	59.3		
			67.9	44.2	-1.57^	
			109.1	103.5^		
					-1.52^	
			245.2			
10	6	50	290.7	45.5		
			56.0	61.8	-1.48^	
			117.8	107.3^		
					Mean -1.63^	

39	69	~~45~~^
9	62	26^
5		+22
14	62	48^

7844.6270

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586

Sept. 25 1907.

VI

Index R + B.

			235.5		
				63.9	
10	17	20	299.4		
			65.6		
				44.0	
			109.6	107.9	−1.47
			245.6	44.3	−1.42
10	16	50	289.9		
			55.0	63.0	
			118.0	107.3	−1.42

Index L + S

			149.8		
				57.5	
10	20	10	207.3		
			337.0		
				40.3	
			17.3	97.4	−1.71
			157.2	42.3	
10	22	30	199.5		−1.64
			329.2		
				57.2	
			27.0	100.1	−1.65

	73	50	
10	18	27	
5		+22	
15	18	49	

Mean −1.52

7844.6381

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 25 1907

VII.

Index L + S

			148.8		
10	38	30	207.2	+4.4	
			337.2		
			18.8	41.6 / 100.0	−1.66
			157.0		
10	41	10	199.0	+2.0	−1.67
			329.2		
			26.2	+7.2 / 99.2	−1.62

Index B + B.

			55.4		
10	45	0	118.3	62.9	
			244.4		
			291.0	+6.6 / 109.5	−1.43
			65.4		
10	47	30	111.0	+5.6	−1.46
			236.6		
			295.3	61.7 / 107.3	−1.42

	172	10	
10	43	2	
5		+22	
15	43	24	

Mean −1.56

7844.6552

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept. 25 1907.

VIII Oϑ

Index R + B.

58.3

11	0	10	115.0	56.7	
			243.0	49.8	
			292.8	106.5^	−1.50^
			62.3		−1.51^
11	2	20	112.0	49.7	
			239.6	56.0	
			295.6	105.7^	−1.52^

Index L + ϑ

B.

330.9

11	4	50	22.9	52.0	
			155.0	45.2	
			200.2	97.2^	−1.73^
			336.7		−1.71^
11	7	5	19.7	43.0	
			148.9	55.8	
			204.7	98.8^	−1.69^

Mean −1.61^

	14	25^
11	3	36^
5		+22
16	3	58^

7844.6694

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 25 1907.

IX

Index L + S.

329.8

11	13	50	23.0	53.2
			157.1	41.9
			199.0	95.1

-1.78

-1.75

337.0

11	16	0	18.0	41.0
			149.0	56.4
			205.4	97.4

-1.72

Index R + B.

238.0

11	19	5	297.2	59.2
			63.1	46.6
			109.7	105.8

-1.52

246.0

-1.55

11	21	30	289.7	43.7
			57.4	59.9
			117.3	103.6

-1.57

Mean -1.65

	70	25
11	17	36
5		+22
16	17	58

7844.6792

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 25 1907

I

Index A + B

08

241.4

11 28 50 — 295.8 — 54.4

63.6 — 46.7 — -1.63^

110.3 — 101.1^

-1.64^

244.6

11 31 15 — 288.9 — 44.3

59.7 — 55.7 — -1.66^

115.4 — 100.0^

Index L + B.

B.

152.7

11 34 15 — 204.6 — 51.9

338.0 — 40.6 — -1.85^

18.6 — 92.5^

-1.88^

159.0

11 36 30 — 198.5 — 39.5

332.4 — 50.1 — -1.92^

22.5 — 89.6^

Mean -1.76^

130 50^

11 32 42^

5 422

16 33 4^

7844 8897

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 25 1907

XI

Index L + S

			152.6		
11	44	20	202.1	49.5	
			339.5		
			15.4	35.9 / 24.5^	−2.04^
			159.5		
11	45	5	197.0	37.5	−2.05^
			334.9	47.0 / 24.5^	−2.06^
			21.9		

Index R + B

			68.0		
11	47	40	109.0	41.0	
			241.5		
			294.0	52.5 / 93.5^	−1.02^
			62.7		
11	49	50	112.9	50.2	−1.90^
			249.2		
			286.3	37.1 / 47.3^	−1.99^

	186	55^
11	46	44^
5		+22
16	47	6^

Means −1.98^

7844.6994

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 25 1907

XII

Indry A + B

68.4

11	52	40	107.5	39.1
			242.0	52.3
			294.3	91.4^

-1.88^

63.8

-1.94^

11	55	15	113.9	50.1
			249.2	37.0
			286.2	87.1^

-1.99^

Indry L + B

B.

332.6

11	57	35	19.5	44.9
			159.5	34.5
			194.0	79.4^

-2.21^

341.5

-2.24^

11	59	30	14.2	32.7
			155.9	45.1
			201.0	77.8^

-2.26^

Mean -2.09^

	225	0^
11	56	15^
5		+22
16	56	37^

7844.7060

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 25 1906

XIII

Index L + S

			337.0		
12	7	40	19.2	42.2	
			160.7	33.3	
			194.0	7 5.5^	-2.33^
			342.0		-2.34^
12	9	50	14.0	32.0	
			155.2	43.3	
			198.5	7 5.3^	-2.34^

Index R + R

			242.7		
12	13	40	290.6	47.9	
			70.5	33.7	
			104.2	Δ 1.6^	-2.15^
			250.8		-2.16^
12	15	0	284.6	33.8	
			63.5	46.9	
			110.4	Δ 0.7^	-2.17^
	46	10^			
12	11	32^		Mean	-2.25^
5		722			
17	11	54^			

784. 716

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586M

Sept 25 1907

XIV

Index R + B

8

245.6

12 18 40	289.4	43.8		
	72.5	31.5	-2.37^	
	104.0	75.3^		
				-2.36^
	251.6			
12 20 50	284.4	32.8		
	67.5	40.7	-2.39^	
	108.2	73.5^		

Index L + S

B.

156.0

12 24 40	196.8	40.8		
	342.8	29.2	-2.51^	
	12.0	70.0^		
	163.8			-2.52^
12 25 55	192.5	29.2		
	337.6	39.7	-2.54^	
	17.3	68.9^		

Mean -2.44^

	90	5^
12	22	31^
5		+22
17	22	53^

78 44 72 42

S.T. 25 X 5

S.S + 5 42

Dec. + 43.0

P.S 36.7 Ver B

Sprocket - 3.5 S - 2.5 B - 2.4 C

W's watch used for times

Watch 22 sec. slow.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept 26 1907 (Thursday)

Fourth Type Star +25° 205

25 X	6	+ 23.8	Phot. F. Wldbs. Hornsby Rec.
20	5		
5	1		
6	59		

Color 6 in ordinary eye-piece.

7

7

7
5
12

78

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phaa.proj..586

Sept 26 1907

Index S

S

66.8 + 4 lts typ. dis.

7	45	25	109.2	42.4
			250.9	33.3 -2.32^
			284.2	75.7^
				-2.31^
			72.8	
			105.1	32.3
			244.6	44.2 -2.30^
			288.8	76.5^

Index R.

R.

			335.9	
			17.0	41.1
			164.2	30.2 -2.46^
			194.4	71.3^
				-2.53^
			343.4	
7	52	15	10.7	27.3
			158.3	40.0 -2.60^
			198.3	67.3^

Mean -2.42^

	97	40^
7	48	50^
5		-10
12	48	40^

7840.5337

S. J. 20 33
N. S. -4 39
Dec. +25.0
C. N. 215.2 Ver. R
Sprocket - 3.5 S.
- 2.5 R.
- 2.0 b.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 26 1907.

Double Star # 222 (Comstock's List) & Androm.

23	31	+45.7
20	45	
2	46	
9	14	

Phot. R.

W. Obs. Hornsby Rec.

P.S. 89 Dist. 3.6' ± Stage.

Meast. on fol. page.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phas.proj..586

Sept. 26 1907.

Index R A.

	230.3 → Prec. and bits. dis.		
8 15 20	235.0	4.7	
	51.0	3.2	7.31^
	54.2	7.9^	
	230.6		7.30^
	234.4	3.8	
	50.6	4.2	7.28^
	54.8	8.0^	

Index R. B.

	~~1~~9.8		
	143.7	3.9	
	320.4	3.4	7.48^
	323.8	7.3^	
			7.30^
	140.1		
8 24 50	144.4	4.3	
	319.8	4.3	7.13^
	324.1	8.6^	

Mean 7.30^

	40	10
8	20	5
5		-10
13	19	55

Measurements dif. but made with extreme care. The primary star is so bright that it just barely disappears in Phot.

7845.5555

8 20

Apparently faint, low auroral arch in north beneath the pole, the summit of the arch

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 26 1907.

being about one seventh the altitude of the pole star.

Z. Draconis

Phot. I.

11	47	+73.0
21	20	
9	33	
~~2~~	~~27~~	

W. Obs Hornsby Rod.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phaa.proj. .586

Sept. 26 1907.

I

Index L + S.

B.

152.2 + Var. dis Comp. star

9	9	55	203.6	51.4	
			337.0	40.9	+1.85^
			17.9	92.3^	
			160.5		+1.86^
9	12	20	199.7	39.2	
			331.7	52.9	+1.86^
			24.6	92.1^	

Index R + R.

S.

			60.5		
9	15	30	113.2	52.7	
			248.3	36.7	+1.93^
			285.0	89.4^	
			68.9		+1.94^
9	18	40	108.1	39.2	
			243.5	49.9	+1.94^
			293.4	89.1^	

Mean +1.90^

	56	25^
9	14	6^
5		-10
14	13	56^

7845.5930

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 26 1907.

II

Index R + B.

59.4

9	20	40	113.2	53.8	
			250.6	37.1	+1.89^
			287.7	90.9^	
					+1.88^
			66.7		
9	23	0	108.3	41.6	
			242.0	50.1	+1.87^
			292.1	91.7^	

Index L + N.

332.6

9	26	45	21.0	48.4	
			159.0	37.8	+2.02^
			196.8	86.2^	
					+2.07^
			339.6		
9	29	20	15.6	36.0	
			155.4	46.6	+2.12^
			202.0	82.6^	

Mean +1.98^

	99	45	^
9	24	56	^
5		-10	
14	24	46	^

7845.6006

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

Sept. 26 1907.

III

Index L + S

B

331.8

9	32	20	19.9	48.1	
			159.2	38.0	+2.02^
			197.2	86.1^	
					+2.01^
			340.0		
9	34	35	17.0	37.0	
			153.4	50.0	+2.00^
			203.4	87.0^	

Index R + R.

S.

245.4

9	38	0	291.3	45.9	
			68.9	39.4	+2.04^
			108.3	85.3^	
			250.5		+2.04^
9	41	25	286.0	35.5	
			63.3	50.0	+2.04^
			113.3	85.5^	

Mean +2.02^

	146	20^
9	36	35^
5		-10
14	36	25^

7845.6086

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

Sept 26 1907.

IV

Index R + B.

			243.6		
9	44	40	290.2	46.6	9
			69.2	36.6	+2.10^
			105.8	83.2^	
					+2.12^
			250.8		
9	47	50	282.6	31.8	10
			64.0	49.6	+2.15^
			113.6	81.4^	

Index L + A.

			157.4		
9	51	48	199.5	42.1	10
			342.7	30.7	+2.42^
			13.4	72.8^	
			162.0		+2.38^
9	54	55	194.1	32.1	10
			335.2	43.4	+2.33^
			18.6	75.5^	

	199	5^	Mean +2.25^	39
9	49	46~		9
5		-10		5
14	49	36~		14

78456178

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj...586

Sept. 26 1907.

V.

Index L + A

A.

155.9

9	59	0	196.3	40.4	
			344.7	26.6	+2.61^
			11.3	67.0^	

+2.58^

162.9

10	2	0	194.0	31.1	
			339.1	37.9	+2.54^
			17.0	69.0^	

Index A + B.

H.

66.6

10	4	50	106.6	40.0	
			255.0	27.4	+2.59^
			282.4	67.4^	

75.6

+2.64^

10	8	20	102.9	27.3	
			248.5	37.0	+2.70^
			205.5	64.3^	

39	74	10	^
9	63	32	^
5		-10	
14	63	22	^

Mean +2.61^

7845.6274

S.J. 22 49

H.S +11 6

Dec. 73.0

O.S 173.3 Vel B

Sprocket +0.5 B

+1.5 G.

Observations rather dif throughout and

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

Sept. 26 1907.

more so as the series progressed, ~~The~~ on account of increasing faintness of Variable, and rather low altitude and moonlight. The Moon rose at 5.37, being a little more than half full, the hour angle at ending was a little over 11 hours The greatest care was exercised throughout but owing to faintness of var. and somewhat unfavorable conditions, it would not be surprising if the observations were a little less accurate than usual.

W's watch used for times
Watch 10 sec. fast.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phad.proj..586w

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586w

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1907phae.proj..586W

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System