KG
11366
037

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Observing Book no. 2
Scale measures.
G. H. M.

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G.F.M. 2.

* Series reductions in this book as far as page 193 made with magns. on scale of HC 170.

Underlinings entered throughout book and wherever copied. Verified, H.S.L. Dec. 31, 1914.

* Series 98, pages 106-10 was reduced with adopted magnitudes, apparently at a later time than other reductions. In any future copying, the "Red S" should be checked. H.S.L. March 19, 1915.

Genevieve F. Mathews

Record Book no. 2

Series measures.

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N.B. In this book and all others of Mt., scale measures on series and T' plates are made out of order; i.e., although the sequences are recorded generally with stars ~~designations~~ in consecutive order of designation, or in order of brightness, the measures themselves are made at random, for the sake of independent results.

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Miss Mathews Book 2

106 Series 98

~~116~~ ~~Series 152~~

~~119~~ " "

174 Series 24 ?

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2

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2.15

Thursday February 27, 1913

Series Plates

Measures of Standard Sequences

Scale m. mD 2528 Pole

	Sc.1.		Sc.2.		M.11	Mean	Resid.	Diff.
5	2.3	2.5	B.	2.50	1.7	2.10	4 4	4.29
6	3.6	3.8	B.	3.80	2.8	3.30	5 5	3.68
8	5.4	5.6	5.4	5.~~05~~ 50 & 1	4.80	5.15	35 ~~4~~ 35	2.~~8~~9 5
9	6.2	6.4	6.4	6.40 0 0	6.00	6.20	20 20	2.50
10	6.7	6.9	6.7	6.80 1 1	6.35	6.58	22 23	2.31
11	t.f.		7.4		7.10	7.25	2 1	2.17
12	"		7.8		7.5	7.65	2 1	2.08
13	"		8.3		8.1	8.20	1 1	1.97
14	"		8.7		8.3	8.50	2 2	2.02
15	"		8.7		8.7	8.70	0 0	2.24
16	"		8.9		8.9	8.90	0 0	2.36
17	"		9.3		9.2	9.25	1 0	2.24
18	"		9.7		9.8	9.75	1 0	2.17
19	"		9.8		9.9	9.85	0 1	2.~~4~~3
20	"		10.0	?	t.f.	10.0 ?	a.	2.59
23	"		t.f.					
25	"		"					
26	"		"					
27	"		"					

$\frac{145}{4}$ $\frac{145}{4}$

+.36 −.36

$\frac{92}{5}$ $\frac{73}{5}$

+.18 −.15

$\frac{0}{5}$ $\frac{1}{5}$

.00 +.02

$\frac{237}{14}$ $\frac{208}{14}$

+.17 ±.14

Bri

corrected.

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Thursday, February 27, 1913.

Series Plates Cont'd.

Measures of ~~Standard~~ ~~Sequences~~.

		Scale m. Sc. 1.		Sc. 2.	m D 2329 Sam. (second meas.)		3K. Curve	Magn.
	1	5.2	5.4	5.5	5.45	0.1	+2.75	8.20 .33
E =	2	5.7	5.9	5.9	5.90	0.0	2.58	8.48 .61
	3	t.f.		8.5			2.10	10.60 .73
	4	"		8.9			2.16	11.06 .79
Brighter than 4 on mc Plate.	5	"		8.6			2.11	10.71 .84
	6	"		9.2			2.20	11.40 .54
	7	"		9.5			2.28	11.78 .92
	8	"		9.7			2.32	12.02 .15
	9	"		9.8			2.34	12.14 .26
	10	"		m.s				
	11	"		"				
	12	"		"				
	13	"		"				
	14	"		"				
	15	"		"				
	α	3.8	~~4.0~~ ~~3.10~~	B,	3.6	3.80 02 02	3.45	7.25 .38
	β	3.7	3.9	B,			3.40	7.30 .43
	γ	3.9	~~4.1~~	B,			3.32	7.42 .55
	δ	5.7	5.9	5.9	5.90	0.0	2.58	8.48 .61

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Thursday, February 27, 1913.

Series Plates

~~Standard Regions~~ Cluster.

Scale 1m = 2330 10K

	Sc.1.		Sc.2			Curve	Magn. (alt +.21)
1	2.9	3.1	B.	3.1a		+3.79	6.89 (7.1)
2	5.5	5.7	5.6	5.65	10	2.67	8.32 (.45)
3	6.9	7.1	7.1	7.10	00	2.20	9.30 (.43)
4	7.0	7.2	7.2	7.20	00	2.18	9.38 (.51)
5	t.f.		8.3			2.10	10.40 (.53)
6	"		8.8			2.14	10.94 (11.08)
7	"		9.2			2.20	11.40 (.54)
8	"		9.4			2.25	11.65 (.79)
9	"		t.f.				
10	"		"				
11	"		"				
12	"		"				
13	n.s.		n.s.				
14	"		"				
15	"		"				

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Thursday, February 27, 1913.

Series Plates ~~Standard Regions~~ Objects

Scale m. mM 2331 . 19 Ks.

	Sc.1	Sc.2.		Curve	Magn.
				alt +.21	
1	5.2 5.4	5.3	5.35	+2.79	8.14
2	6.7 6.9	6.8	6.85	2.25	9.10
3	t.l.	8.7		2.13	10.83
4	"	9.1		2.19	11.29
5	"	9.6		2.30	11.90
6	"	9.9		2.39	12.29
7	"	t.l.			
8	"	"			
9	"	"			
10	"	"			
11	"	"			
12	"	"			
13	"	"			
14	"	"			
15	"	"			

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Thursday, February 27, 1913

Series Plates. Objective

~~Standard Regions~~

Scale 1m. = 2332. 18 Kg.

act. +22

	Sc. 1	Sc. 2		Curve	Magn.
1	2.4 2.6	B. 2.60		+4.02	6.62
2	4.4 4.6	4.5	4.55 0.1	3.12	7.67
3	6.8 7.0	7.1	7.05 0.1	2.20	9.25
4	t.f.	7.7		2.09	9.79
5	"	7.8		2.09	9.89
6	"	8.4		2.10	10.50
7	"	8.9		2.16	11.06
8	"	9.2		2.20	11.40
9	"	9.2		2.20	11.40
10	"	9.7		2.32	12.02
Defective — 11	"	10.0?		2.39?	12.39?
12	"	t.f.			
13	"	"			
14	"	"			
15	"	"			

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Thursday, February 27, 1913

Series Plates

~~Standard~~ ~~Regions~~

Scale m mD 2333 Pole

	Sc.1	Sc.2		
				See p. 6
5	1.5 1.7	B.	1.7	
6	2.6 2.8	B.	2.8	
8	4.8 5.0	4.6	4.80 2 2	
9	5.9 6.1	5.9	6.00 1 1	
10	6.1 6.3	6.4	6.35 1 0	
11	6.9 7.1	7.1	7.10 0 0	
12	t.f.	7.5		
13	"	8.1		
14	"	8.3		
15	"	8.7		
16	"	8.9		
17	"	9.2		
18	"	9.8		
19	"	9.9		
20	"	t.f		
23	"	"		
25	"	"		
26	"	"		
27	"	"		

4+50

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Wednesday March 5, 1913

2.45 Series Plates Measures.

Scale m m D 2333 Pole

	Sc.1		Sc.2	Sc.2.	m 2339	Mean	Read		Diff.
5	1.8	2.0	8.	2.00	1.9	1.95	0	1	4.44
6	2.7	2.9	8.	2.90	3.0	2.95	1	0	4.03
8	4.8	5.0	4.9	4.87	4.60	4.74	13 2	14	3.36
9	5.9	6.1	5.8	5.95 1 2	5.80	5.88	07	08	2.82
10	6.1	6.3	6.3	6.30 0 0	6.15	6.22	08	07	2.67
11	6.8	7.0	7.1	7.05 0 1	6.95	7.00	05	05	2.42
12	t.f.		7.4		7.5	7.45	0	1	2.28
13	"		7.7		8.1	7.90	2	2	2.27
14	"		8.2		8.4	8.30	1	1	2.22
15	"		8.7		8.7	8.70	0	0	2.24
16	"		8.8		9.0	8.90	1	1	2.36
17	"		9.2		8.9	9.05	2	1	2.44
18	"		9.5		9.7	9.60	1	1	2.32
19	"		9.8		9.8	9.80	0	0	2.48
20	"		t.f.		10.0	10.00	.	0	2.59
23	"		"						
25	"		"						
26	"		"						
27	"		"						

10 3.2
4 4
+.02 -.06

17 28
5 5
-.34 +.56
.03

4 1
5 5
-.08 +.02

-.47 +.06
.14
-.03 -.00
-.00

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Wednesday March 5, 1913

Series Plates Cepheids

Scale 7m 7m D 2334 α 2

	Sc. 1		Sc. 2	Sc. 2		Curve	alt. +.02 Magn.
1	2.6	2.8	B.	2.80		+4.10	6.90
2	2.9	3.1	B.	3.10		3.98	7.08
3	3.8	4.0	B.	4.00		3.60	7.60
4	3.8	4.0	B.	4.00		3.60	7.60
5	4.6	4.8	4.8	4.65	2 1	3.31	7.96
6	4.7	4.9	4.8	4.85	1 0	3.25	8.10
7	5.8	6.0	5.8	5.90	1 1	2.82	8.72
8	5.8	6.0	5.8	5.90	1 1	2.82	8.72
9	5.9	6.1	5.9	6.00	1 1	2.79	8.79
10	6.1	6.3	6.2	6.25	1 0	2.69	8.94
11	7.0	7.2	7.2	7.20	0 0	2.40	9.60
12	t.f.		7.2	7.25 7.3		2.38	9.63
13	"		7.6			2.30	9.90
14	"		7.7			2.28	9.98
15	"		8.2			2.24	10.44
16	"		8.2			2.24	10.44
17	"		8.4			2.25	10.65
18	"		8.9			2.29	11.19
19	"		9.3			2.36	11.66
20	"		9.1			2.31	11.41
21	"		9.4			2.38	11.78
22	"		9.9			2.51	12.41
(defect?)	23	"	9.7			2.46	12.18
	24	m.s.	m.s.				
	25	"	"				
	26	"	"				

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Series Plates Copied

Scale m mD 2335 49.K

	Sc.1	Sc.2		Curve	Magn.
1	6.9 7.1	7.3	7.20 1 1	+ 2.40	9.70
2	6.9 7.1	7.2	7.15 1 0	2.40	9.69
3	t.f.	7.8		2.27	10.07
4	"	8.4		2.25	10.65
5	"	8.4		2.25	10.65
6	"	8.8		2.29	11.09
7	"	8.9		2.30	11.20
8	"	9.5		2.40	11.90
9	"	9.6		2.41	12.01
10	"	9.8		2.49	12.29
11	"	t.f.			
12	"	t.f.			
13	"	"			
14	"	"			
15	"	"			

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Wednesday, March 5, 1913.

Series Plates.

Scale m m D 2339 Pole.

	Sc. 1.		Sc. 2.		Sup. 12
5	1.7	1.9	B.	1.90	
6	2.8	3.0	B.	3.00	
8	4.7	4.9	4.3	4.60	3 3
9	5.8	6.0	5.6	5.80	2 2
10	5.9	6.1	6.2	6.15	1 0
11	6.8	7.0	6.9	6.95	0 1
12	t. l		7.5		
13	"		8.1		
14	"		8.4		
15	"		8.7		
16	"		9.0		
17	"		8.9		
18	"		9.7		
19	"		9.8		
20	"		10.0		
23	n.s.		n.s		
25	"		"		
26	"		"		
27	"		"		

4.42

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Thursday, March 6, 1913

3.10

Series Plates

Scale m. mD 2383 Pole.

	Sc. 1		Sc. 2			1.20	Mean	Resid		Diff.
5	1.8	2.0	B.	2.0		1.9	1.95	0	1	4.44
6	2.9	3.1	B.	3.1		3.0	3.05	1	0	3.93
8	4.8	5.0	4.8	4.90	1 1	4.60	4.75	15 8	15	3.3 ~~2.43~~ 2.82 ~~2.22~~
9	5.9	6.1	5.9	6.00	1 1	5.75	5.88	12	13	
10	6.2	6.4	5.9	6.15	2 3	6.00	6.08	07 1	08 1	2.81
11	6.9	7.1	7.2	7.15	1 0	6.85	7.00	15 ~~2~~	15 ~~2~~	2.42
12	E. l.		7.5			7.6	7.55	1	0	2.18
13	"		8.1			7.9	8.00	1	1	2.17
14	"		8.4			8.5	8.45	0	1	2.07
15	"		8.8			8.7	8.75	0	1	2.19
16	"		8.9			8.8	8.85	1	0	2.41
17	"		9.2			8.9	9.05	2	1	2.44
18	"		9.7			9.7	9.70	0	0	2.22
19	"		9.8			9.6	9.70	1	1	2.58
(Object near 20 / Defect ? or 20?)	20	"		10.0 ?		9.9	9.95	0	1	2.64
	23	m.s.		m.s				44 / 5 / +.09	46 / 5 / -.09	
	25	"		"						
	26	"		"				15 / 5 / +.03	25 / 5 / -.05	
	27	"		"						
								4 / 5 / +.08	3 / 5 / -.06	
								99 / 15 / +.07	101 / 15 / -.07	

corrected

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Thursday March 6, 1913

Series Plates. Cluster

Scale m mD 2336 24 Ks.

	Sc.1		Sc.2			Curve	Magn. (aft. +14)
1	4.3	4.5	4.2	4.35	i ±	+3.47	7.82 (95)
2	6.2	6.4	6.3	6.45	0 1	2.57	9.02 (15)
3	6.4	6.6	6.6	6.60	0 0	2.51	9.11 (24)
4	t.f.		7.7			2.20	9.90 (10.03)
5	"		8.2			2.20	10.40 (53)
6	"		8.7			2.28	10.98 (11.12)
7	"		9.3			2.47	11.97 (12.11)
8	"		8.9			2.31	11.21 (35)
9	"		9.6			2.50	12.10 (24)
10	"		10.0			2.65	12.65 (77)
11	"		t.f.				
12	"		"				
13	"		"				
14	"		"				
15	"		"				

Remeas. by O. Aug. 9, 1914.

	sc.2	
1	9.4	
8	9.3	9.2. Star 8 is certainly fainter than 9 th image on scale.
9	9.7	" 8 is slightly brighter than 7.

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Thursday March 6, 1913

Series Plates Copied

Scale m mD 23 37 50 K.

	Sc.1	Sc.2.		Curve	Magn.
1	4.1 4.3	4.0	4.15 1 2	+3.54	7.69
2	6.0 6.2	6.4	6.30 1 1	2.63	8.93
3	7.0 7.2	7.5	7.35 2 1	2.29	9.64
4	t.f.	8.5		2.24	10.74
5	"	8.9		2.31	11.21
6	"	9.2		2.39	11.59
7	"	9.6		2.50	12.10
8	"	10.0		2.65	12.65
9	"	10.0 ~~9.7?~~		2.65	12.65
10	"	t.f.			
11	"	"			
12	"	"			
13	"	"			
14	"	"			
15	"	"			

Defect meas. first time.

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Thursday March 6, 1913

Series Plates Coffied

Scale 7m 7mD 2337. 26h.

	Sc.1		Sc.2			Curve	Magn.
1	2.7	2.9	B.	2.9		+4.03	6.93
2	3.8	4.0	B.	4.0		3.60	7.60
3	6.6	6.8	6.6	6.70	i⊥	2.48	9.18
4	t.f.		7.6			2.22	9.82
5	"		8.0			2.20	10.28
6	"		8.6			2.27	10.87
7	"		8.7			2.28	10.98
8	"		9.5			2.49	11.99
9	"		9.8			2.59	12.39
10	"		10.8			2.65	12.65
11	"		t.f.				
12	"		"				
13	"		"				
14	"		"				
15	"		"				

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Thursday, March 6, 1913

Series Plates

Scale m mD=339 Pole.

	Sc. 1	Sc. 2			
					sec p. 16
5	1.7 1.9	B.	1.9		
6	2.8 3.0	B.	3.0		
8	4.6 4.8	4.4	4.60	2	2
9	5.6 5.8	5.7	5.75	0	1
10	5.9 6.1	5.9	6.00	1	1
11	6.7 6.9	6.8	6.85	1	0
12	t.f.	7.6			
13	"	7.9			
14	"	8.5			
15	"	8.7			
16	"	8.8			
17	"	8.9			
18	"	9.7			
19	"	9.6			
20	"	9.9	?		
23	"	t.f.			
25	"	"			
26	"	"			
27	"	"			

Defect?

5.00

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1913phae.proj.1038M

Saturday, March 15, 1913

10.45 Series mD 2445 — 2456

Scale 0 3 mD 2445 Pole

	Sc. 1	Sc. 2		n. 26	mean			Diff.
5	1.0	B.		B	1.0			5.39
6	1.9	"		1.4	1.65	3	2	5.33
8	3.6	"		3.7	3.65	0	1	4.42
9	4.8	"		4.6	4.70	1	1	4.06
10	4.9	"		4.7	4.80	1	1	4.09
5.8 11	5.7	5.2	5.45	5.35	5.40	05	05	4.02
12	6.4	5.8	6.10	5.70	5.90	20	20	3.83
13	6.8	6.7	6.75	6.40	6.58	17	18	3.59
14	t.l	7.3		6.9	7.10	2	2	3.42
15	"	7.7		7.4	7.55	1	2	3.39
16	"	8.5		8.2	8.35	1	2	2.91
17	"	8.7		8.6	8.65	1	0	2.84
18	"	10.0?		9.5	9.75	2	3	2.17
19	"	9.8		9.2	9.50	3	3	2.78
20	"	9.8		9.9	9.9			2.69
22	"	"						
25	"	"						
26	"	"						
27	"	"						

$\frac{5}{4}$ $\frac{5}{4}$ $\frac{3}{.08}$
+.12 −.12

$\frac{72}{5}$ $\frac{83}{5}$
+.14 −.17

$\frac{7}{4}$ $\frac{8}{4}$
+.18 −.20

Others.

$\frac{192}{13}$ $\frac{193}{13}$
+.15 −.15

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Series Measures. Copied

Scale 0 mD 2446 4K

	Sc. 1	Sc. 3/8			Curve	Magn.
1	2.1	B			+5.16	7.26
2	3.6	B.			4.56	8.16
3	5.4	5.0	5.20	2 2	3.97	9.17
4	6.1	5.7	5.90	2 2	3.75	9.65
5	t.f.	6.9			3.44	10.34
6	"	7.6			3.20	10.80
7	"	8.6			2.93	11.53
8	"	8.9			2.87	11.77
9	"	t.f.				
10	"	"				
11	"	"				
12	"	"				
13	"	"				
14	"	"				
15	"	"				

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Serin Measures

Scale 0 mD 2447 52 K

	Sc. 1.	Sc. 2.		Curve	Magn.
					8.14
1	3.2	B		+4.71	7.91
					.33
2	3.7	"		4.50	8.20
					.22
3	5.1	"		3.99	9.09
					.40
4	6.9	6.7	6.80 i 1	3.47	10.97
					.47
5	"	6.9		3.44	10.34
					.73
6	"	7.3		3.30	10.60
					.53
7	"	8.4		2.99	11.39
					.41
8	"	9.5		2.77	12.27
					.45
9	"	9.8		2.71	12.51
					.53
10	"	10.0		2.69	10.69
11	"	n.s.			
12	"				
13	"				
14	"				
15	"				

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Saturday, March 15, 1913

Series Measures. Colpitts

Scale 0 m 9 2448 C5

	Sc. 1	Sc. 2		Curve	Magn.
1	1.8	B		+5.28	7.08
2	3.6	"		4.55	8.15
3.6 3	3.5 3.55 01	"		4.58 4.60	8.13 8.18
4	3.8	"		4.49	8.29
5	4.7	"		4.14	8.84
6	5.2	"		3.97	9.17
5.2 7	5.0 5.10 11	"		3.99 4.02	9.09 9.02
8	5.8	5.1	5.0 5.30 5 2 3	3.99	9.23
9	6.1	5.6	5.85 3 2	3.76	9.61 9.86
10	6.1	5.9	6.00 1 1	3.71	9.81
11	6.4	5.9	6.15 2 3	3.67	9.82 10.07
12	6.6	6.3	6.45 2 1	3.58	10.03 10.18
13	t. f.	7.0		3.40	10.40
14	t. f.	7.0		3.40	10.40
15	"	7.6		3.20	10.80
16	"	8		3.06	11.16
17	"	8.9		2.87	11.77
18	"	8.9		2.87	11.77
19	"	9.5		2.77	12.27
20	"	9.5		2.77	12.27
21	"	9.8		2.71	12.51
22	"	t. f.			
23	"	"			
24	"	"			
25	"	"			
26	"	"			
27	"	"			
28	"	"			

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Saturday, March 15, 1913

Series Measures. Cepheid

Scale 0 mD 2449 12 h.

	Sc. 1	Sc. 2			Cause	Magn.
1	2.8	B			+4.89	7.69
2	3.6	"			4.56	8.16
3	4.6	"			4.18	8.78
4	6.6	5.9	6.25	43	3.64	9.89
5	t.f.	7.6			3.21	10.81
6	"	7.9			3.11	11.01
7	"	t.f.				
8	"	"				
9	"	"				
10	"	"				
11	"	"				
12	"	"				
13	"	"				
14	"	"				

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Saturday March 15, 1913

Series measures.

Scale 0 mm 2450 Pole

	Sc.1	Sc.2	
			See p. 21
5	B.	B	
6	1.4	"	
8	3.7	"	
9	4.6	"	
10	4.7	"	
11	5.6	5.1	5.35 2 3
12	5.9	5.5	5.70 2 2
13	6.7	6.1	6.40 3 3
14	t.f.	6.9	
15	"	7.4	
16	"	8.2	
17	"	8.6	
18	"	9.5	
19	"	9.2	
20	"	9.9	
23	n.s	n.s	
25	"	"	
26	"	"	
27	"	"	

11.32

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Saturday, March 15, 1913

3 — Series measures

Scale 0 mD 2454 Pole.

	Sc. 1	Sc. 2		B	Mean		Diff.
5	B.	B.					
6	1.5	"		1.0	1.25	3 2	5.73
8	3.6	"		3.2	3.40	2 2	4.70
9	4.3	"		4.3	4.30	0 0	4.40
10	4.6	"		4.7	4.65	0 1	4.24
11	5.7	5.2	5.45 3 2	5.6	5.52 6.07	07 1 3 08	3.90
12	5.9	5.2	5.65 3 4	5.55	5.55	00 00	4.18
13	6.8	6.0	6.40 4 4	6.45	6.42	02 03	3.75
14	t.f.	6.9		6.75	6.82	1 1	3.70
15	"	7.8		7.4	7.60	2 2	3.34
16	"	8.2		7.6	7.90	3 3	3.36
17	"	8.5		8.5	8.50	0 0	2.99
18	"	9.6		9.2	9.40	2 2	2.52
19	"	9.7		9.6	9.65	1 0	2.63
20	"	10.0		10.0	10.00	0 0	2.59
23	m.s	m.s					
25	"	"					
26	"	"					
27	"	"					

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Series Measures. Copied

Scale 0 m D 2451 B4.

	Sc.1	Sc.2			Curve	Magn.
1	1.5	B			+5.60	7.10
2	1.9	"			5.42	7.32
3	2.3	"			5.23	7.53
4	2.7	"			5.06	7.76
5	3.0	"			4.93	7.93
6	3.1	"			4.89	7.99
7	3.7	"			4.65	8.35
8	4.2	"			4.49	8.69
9	4.2	"			4.49	8.69
10	4.7	"			4.32	9.02
11	5.2	"			4.17	9.37
12	5.8	5.1	5.45	4 3	4.09	9.54 9.89
(Brighter than 12 on m c 2451 also) 13	5.5	5.0	5.25	3 2	4.15	9.40
5.9 14	5.8	5.7	5.75	6 1	4.00	9.75
15	6.7	6.2	6.45	3 2	3.75	10.20
16	6.9	6.7	6.80	1 1	3.62	10.42
17	t.f.	7.2			3.49	10.69
18	"	6.8			3.62	10.42
19	"	7.7			3.32	11.02
20	"	8.7			2.95	11.65
21	"	7.4			3.41	10.81
22	"	8.6			2.99	11.59
23	"	9.3			2.73	12.03
24	"	9.4			2.70	12.10
25	"	9.7			2.59	12.29
26	"	10.0			2.50	12.50
27	"	t.f.				
28	"	"				

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Series Measures Copied

Scale 0 mm 2452 29K

	Sc. 1	Sc. 2			Curve	Magn.
1	2.7	B.			+5.06	7.76
2	3.8	"			4.56	8.56
3	5.4	"			4.10	9.50
4	5.9	5.4	5.65	3 2	4.01	9.86
5	t. 2.	7.1			3.57	10.61
6	"	7.7	7.7	7.70 oo	3.31	11.01
7	"	7.5			3.37	10.87
8	"	8.5			3.01	11.51
9	"	9.9			2.57	12.47
10	ms.	m.s				
11	"	"				
12	"	"				
13	"	"				
14	"	"				
15	"	"				

Defective?

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Saturday March 15, 1913

Series measures. Corrected =

Scale 0 mD 2453 101 K.

	Sc. 1	Sc. 2		Curve	Magn.
1	3.3	B.		+4.80	8.10
2	4.7	"		4.32	9.02
3	4.7	"		4.32	9.02
4	5.8	5.3	5.55 2.3	4.06	9.61
5	6.7	5.9	6.30 4.4	3.80	10.10
6	6.9	6.2	6.55 3.4	3.71	10.26
7	t.f.	7.4		3.41	10.81
8	"	9.4		2.70	12.10
9	"	9.9		2.57	12.48
10	m.s	m.s			
11	"	"			
12	"	"			
13	"	"			
14	"	"			
15	"	"			
16	"	"			

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Saturday; March 15, 1913

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Scale 0 m F 2454 78 K

	Sc. 1	Sc. 2.			Curve	Imagn.
1	4.7	B.			+4.33	9.03
2	5.8	5.2	5.50	3 3	4.07	9.57
3	6.3	5.7	6.00	3 3	3.90	9.90
4	6.5	5.8	6.15	3 4	3.86	10.01
5	F. f.	7.5			3.38	10.88
6	"	7.9			3.27	11.17
7	"	8.8			2.90	11.70
8	"	9.6			2.62	12.22
9	m.s.	m.s				
10	"	"				
11	"	"				
12	"	"				
13	"	"				
14	"	"				
15	"	"				

α	1.3	B	5.70	7.00
β	1.9	B.	5.42	7.32
γ	3.8	B.	4.57 62 42	8.37
δ	5.1	B.	4.19	9.29

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Series Treasures. Cohuel

Scale 0 M.D. 2455 541

	Sc. 1	Sc. 2		Curve	Magn.
1	2.5	B.		+5.14	7.64
2	3.1	"		4.89	7.99
3	5.1	"		4.20	9.30
4	5.2	"		4.18	9.38
5	6.7	6.2	6.45 3 2	3.75	10.45
6	6.9	6.7	6.80 1 1	3.62	10.52
7	t.p.	8.1		3.51	10.61
8	"	8.5		3.01	11.51
9	"	8.8		2.90	11.70
10	"	9.7	?	2.59	12.29?
11	n.s	2.5			
12	"	"			
13	"	"			
14	"	"			
15	"	"			
16	"	"			

Difficult

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Saturday, March 15, 1913

Series Measures

Scale 0 MD 2456 Pole

	Sc. 1	Sc. 2	Sup. 27
5	B.	B.	
6	1.0	"	
8	3.2	"	
9	4.3	"	
10	4.7	"	
11	5.6	"	
12	5.9	5.2	5.55 3 4
13	6.6	6.3	6.45 2 1
14	6.9	6.6	6.75 1 2
15	7.1	7.4	
16	"	7.6	
17	"	8.5	
18	"	9.2	
19	"	9.6	
20	"	10.0	?
23	n.s.	n.s.	
25	"	"	
26	"	"	
27	"	"	

5:15

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Thursday, March 20, 1913

R. 40 Series Measures

Scale 0 MD 2554 Pole

	Sc 1	Sc. 2	Sc 1	Sc. 3	Mean		MD 2559 p. 39	Mean	Reid		Diff.
5	tbr.	tbr.									
6	1.1	tbr	1.0		1.05	1 0	1.25	1.15	10	10	5.83
8	3.2	tbr	3.5		3.35	2 1	3.50	3.42	07	08	4.68
9	4.7	tbr	4.6		4.65	1 0	4.40	4.52	13	12	4.05
10	4.7	tbr	4.7		4.35	0 0	4.65	4.68	02	03	4.17
11	5.5	5.0			5.25	3 2	5.45	5.35	10	10	4.17
12	6.2	5.8			6.00	2 2	5.50	5.75	25	25	3.73
13	6.8	6.5			6.65	2 1	6.40	6.52	13	12	3.52
14	tbr.	7.4		7.2	7.30	1 1	6.85	7.08	22	23	3.14
15		7.6		7.6	7.60	0 0	7.30	7.45	15	15	3.18
16		7.9		7.9	7.90	0 0	7.85	7.88	02	03	3.17
17		8.7		8.5	8.60	1 1	8.00	8.30	30	30	2.58
18		9.4		9.3	9.35	0 1	8.85	9.10	25	25	2.58
19		9.6 8.9		9.5	9.55	0 1	9.55	9.55	00	00	2.67
20		10.0?		10.0	10.00	0 0		10.00	a		2.66
23											

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Thursday, March 20, 1913

Series Measures

Scale o MD 2554 (5) Neb. in Orion.

	Sc 1	Sc. 3	Sc. 1	Sc. 3			Diff.	Magn.
1	4.4	+Br	4.4		4.40	0 0	+4.37	8.77
2	5.4	+Br	5.3		5.35	0 1	4.04	9.39
3	5.4 (7)	5.1	5.4		5.~~55~~ 40	3 3 0	4.02	9.42
4	6.5	5.9	6.5	6.1	6.25	3 3 3 1	3.75	10.00
5	tf.	6.6		6.8	6.70	1 1	3.60	10.30
6		7.3		7.5	7.40	1 1	3.37	10.77
7		7.6		7.8	7.70	1 1	3.27	10.97
8		8.7		8.8	8.75	1 0	2.95	11.70
9		9.6		9.6	9.60	0 0	2.70	12.30
10	n.s	n.s.						
a		9.3		9.5	9.40	1 1	2.77	12.17
b		n.s						
c		n.s						

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Series Measures. = Copied

Scale 0 MD 2556 25K

		sc. 1	sc. 3	sc 1	sc 3		Curve	Magn.
								alt. +22
α	1	1.9		tbr 1.9		1.90 0 0	.	.
γ	2	2.6		tbr 2.6		2.60 0 0	5.04	7.60 .73
	3	4.6		tbr. 4.7		4.65 ~~1 0~~ 0 1	+ 4.28	8.93 .26
	4	7.0		6.7		6.85 2 1	3.55	10.40 .53
	5			7.7	7.6	7.65 1 0	3.28	10.93 .07
	6			7.8	7.7	7.75 0 1	3.25	11.00 .14
	7			9.0	8.8	8.90 1 1	2.90	11.80 .74
	8			9.5	~~8.8~~ 9.4	9.45 1 0	2.75	12.20 .34
	9			9.5	9.6	9.55 1 0	2.72	12.27 .41
	10			tf.	10.0	10.08 . a	2.60	12.60 .74
	11							
	12							
~~χ~~								
β		2.0		tbr. 2.1		2.05 0 1	.	.
~~χ~~								
δ		2.7		tbr. 2.7		2.70 0 0	4.97	7.67 .80
ε		3.1		tbr. 3.0		3.05 1 0	4.84	7.89 .82

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Thursday, March 20, 1913

Series Measures. Copied

Scale 0 NP2557 23 K 0

	sec 1	sec. 3	sec 1	sec. 3			Corr Magn.	
1	2.1	tbr.	1.9		2.00	1 1	..	
2	2.9	tbr.	3.1		3.00	1 1	+4.87	7.87
3	4.8 4.7	tbr.	4.6		4.70	1 0 1	4.27	8.97
4	5.8	5.2		5.9	5.47	3 3 1	4.00	9.47
5	6.6	6.1		5.9	6.20	4 1 3	3.78	9.98
6		7.3		7.4	7.35	1 0	3.39	10.74
7	tft.	7.4		7.4	7.40	0 0	3.37	10.77
8		7.6		7.9	7.75	2 1	3.26	11.01
9		8.9		~~8.9~~	8.90	0 0	2.90	11.80
10		9.2		9.3	9.25	1 0 1	2.80	12.05
11		9.7		9.9	9.80	1 1	2.64	12.44
12		9.9		10.0	9.95	1 0	2.60	12.55
13		m.s						
14		10.0?			10.0?		2.59	12.59 2

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Thursday, March 20, 1913

Series Measures. Copied

Scale 0 MD 2558 26 Ks

	sc.1	sc.2	sc.1	sc.3			Curve	Magn.
1	2.1	tbr.	2.1		2.10	0 0		.71
*	+							
2	~~4.0~~	+br.	4.1		~~3.55~~	~~4 5~~	+ ~~4.66~~	~~8.21~~
3	4.9	+br.	4.9		4.90	0 0	4.20	9.10 .93
4	6.1		5.8		~~5.95~~ ~~6.00~~	1 2	3.86	9.81 .94
5	6.8		6.7		6.75	0 1	3.59	10.34 .47
6	tft.		7.6	7.6	7.60	0 0	3.30	10.90 .44
7			8.8	8.8	8.80	0 0	2.93	11.73 .17
8			9.6	9.8	9.70	1 1	2.68	12.38 .52
9			9.8	10.0	9.90	1 1	2.60	12.50 .64
10								
11								

* Error of a unit. Remeasured by G.F.M. April 5, 1913.

M.OR.

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Thursday March 20, 1913

Series Measures.

Scale 0 MD 2559 Pole

	se. 1	se. 3	se 1	se. 3	See p. 24
5	+ br,	tbr.	tbr.		
6	1.2	tbr	1.3		1.25 0 1
8	3.6	tbr	3.4		3.50 1 1
9	4.5	tbr	4.3		4.40 1 1
10	4.8 (7)	tbr.	4.6		4.65 1 0
11	5.5	tbr	5.4		5.45 1 0
12		5.2	5.8		5.50 3 3
13		6.1	6.7		6.40 3 3
14		6.7	7.0		6.85 1 2
15	tft.	7.2	t	7.4	7.30 1 1
16		7.8 (9)		7.8	7.85 1 0
17		8.0		8.0	8.00 0 0
18		8.8		8.9	8.85 0 1
19		9.5		9.6	9.55 1 0
20		m.s.			

4.15

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Friday March 21, 1913.

10 25 Series Measure.

Scale 0 MD 2559 Pole.

	sc.1	sc.3	sc1	sc3							
5	tbr.	tbr.	tbr.					MD 2565 p.46	Mean	Rend.	Diff.
6	1.2	tbr.	1.4		1.30	1	1	1.40	1.35	05 05	5.04 5.63
8	3.3	tbr.	3.3		3.30	0	0	3.65	3.48	18 17	3.52 4.62
9	4.3	tbr.	4.4		4.35	1	0	4.60	4.48	13 12	4.22 4.35
10	4.7	tbr.	4.8		4.75	1	0	4.85	4.80	05 05	4.09 4.14
11	5.3	tbr.	5.3		5.30	0	0	5.40	5.35	05 05	4.07
12	5.8	5.1			5.45	4	3	6.10	5.78	33 32	3.95
13	6.5	6.1?			6.30	2	2	6.45	6.38	08 07	3.79
14	7.0	6.7			6.85	2	1	7.15	7.00	15 15	3.32
15	tft.	7.2		7.2	7.20	0	0	7.65	7.42	22 23	3.52
16		7.8		7.7	7.75	0	1	7.75	7.75	00 00	3.51
17		7.9		7.9	7.90	0	0	8.50	8.20	30 30	3.29
18		8.8		8.8	8.80	0	0	8.85	8.82	02 03	3.10
19		9.2		9.3	9.25	0	1	9.60	9.42	17 18	2.86
20		m.s.		m.s				9.80?	9.80	a .	2.79?

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Friday, March 21, 1913

Series Measures. Covered

Scale 0 MD 2560 26 K.

	sc 1	sc. 3 sc 1	sc 3		Curve Magn.	
1	1.0	tbr. 1.1		1.05 0 1	.	.
2	1.9	tbr 2.1		2.00 1 1	+5.30	7.30
3	4.8	tbr. 4.7		4.80 0 0	4.18	8.98
4	5.6	5.1		5.35 2 3	4.00	9.35
5	6.7	6.5		6.60 1 1	3.69	10.29
6	t ft.	7.1	7.2	7.15 1 0	3.53	10.68
7	t ft.	7.8	7.7	7.75 0 1	3.36	11.11
8		9.1	9.3	9.20 1 1	2.98	12.18
9		9.3	9.5	9.40 1 1	2.92	12.32
10		n.s	n.s			

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Series Measures. Copied

Scale 0 MD 2561 B 3

	sc.1	sc.2	sc.1	sc.3		Corr	Magn.
							(det. +.22)
1	1.5		1.4		1.45 1 0	+5.59	7.04 .17
2	1.4		1.6		1.50 1 1	5.56	7.06 .19
3	1.8		1.7		1.75 0 1	4.44	7.19 .32
4	2.6		2.4		2.50 1 1	5.08	7.58 .71
5	2.7		2.6		2.65 1 0 1	5.00	7.65 .78
6	2.8		2.8		2.80 0 0	4.93	7.73 .86
7	3.1		2.9		3.00 1 1	4.86	7.86 .79
8	3.9	tbr.	3.9		3.90 0 0	4.48	8.38 .51
9	4.6	tbr.	4.7		4.65 0 1	4.21	8.86 .99
10	5.4	tbr.	5.4		5.40 0 0	3.99	9.39 .52
11	5.2	tbr.	5.2		5.20 0 0	4.02	9.24 .37
12	5.7		5.3		5.50 2 3	3.96	9.46 .57
13	5.9		5.6		5.75 1 2	3.90	9.65 .78
14	6.2		5.6		5.90 3 3	3.86	9.76 .89
15	6.7		6.2		6.45 3 2	3.71	10.16 .27
16	7.0		6.7		6.85 2 1	3.61	10.46 .57
17	6.7		6.4	6.3	6.47 2 1	3.71	10.18 .31
18	6.8		6.2	6.5	6.50 3 3 0	3.70	10.20 .33
19			6.9	6.9	6.90 0 0	3.60	10.50 .63
20			7.4	7.4	7.45 1 0	3.44	10.89
21			7.8	7.7	7.75 0 1	3.36	11.11 .25
22			8.7	8.7	8.70 0 0	3.10	11.80 .94
23			9.5	9.5	9.50 0 0	2.90	12.40 .54
24			9.9	9.8	9.85 1 0	2.80	12.65 .79
25			10.0	9.9	9.95 0 1	2.79	12.74 .88
26			m.s.	m.s.			

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Friday, March 21, 1913

Series Measures. Copied

Scale 0 MD 2562 D 4

	se. 1	se. 3	se 1	se. 3		Curve	Imagn.
1	1.9		2.1		2.00 1 1	+5.31	7.31
2	2.7		2.7		2.70 0 0	4.99	7.69
3	2.8		2.8		2.80 0 0	4.93	7.73
4	3.1		3.1		3.10 0 0	4.81	7.91
5	3.8		3.8		3.80 0 0	4.51	8.31
6	4.2		4.4		4.30 1 1	4.33	8.63
7	~~4.0~~ 4.4	tb.	4.4		4.40 0 0	4.30	8.70
8	4.7	tb.	4.6		4.65 1 0	4.21	8.86
9	4.2		4.2		4.20 0 0	4.37	8.57
10	4.7		4.7		4.70 0 0	4.20	8.90
11	5.4	tb.	5.3 4.9		5.35 0 1	4.00	9.35
12		5.1	5.8		5.45 3 4	3.97	9.42
13		5.2	5.7		5.45 2 3	3.97	9.42
14		5.8	6.3		6.05 2 3	3.81	9.86
15		6.3	6.6		6.45 1 2	3.71	10.16
16		5.8	5 6.6		5.70 1 1	3.90	9.60
17		6.3	7 6.9		6.50 2 2	3.71	10.21
18		6.7	6.8		6.75 1 0	3.64	10.39
19		6.7		6.7	6.70 0 0	3.66	10.36
20		7.5		7.4	7.45 1 0	3.44	10.89
21		7.6		7.8	7.70 1 1	3.37	11.07
22		7.5		7.9	7.70 2 2	3.37	11.07
23		7.9		8.2	8.05 1 2	3.27	11.32
24		8.4		8.6	8.50 1 1	3.16	11.66
25		9.3		9.4	9.35 1 x0	2.92	12.27
26		9.4		9.5	9.45 0 1	2.90	12.35
27		9.5		9.4	9.45 1 0	2.90	12.35
28		9.9		10.0	9.95 1 0	2.79	12.74

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Series Measures. Copied

Scale 0 ~~M 3~~ 2563 99 K

	sc 1.	sc. 3	sc 1	sc 3			Curve	Magn.
1	3.8		3.8		3.80	00	+4.51	8.31
2	5.1		5.1		5.10	00	4.07	9.17
3	4.8	tbr.	4.8		4.80	00	4.18	8.98
4	5.8	5.3			5.55	23	3.95	9.50
5	6.1	5.6	&		5.85	32	3.86	9.71
6	tft.	7.8		7.8	7.80	00	3.34	11.14
7		8.1 8.3 7.8		8.1	8.17	111	3.25	11.42
8		8.6 8.1		8.6	8.60	00	3.12	11.72
9		9.8		9.8	9.80	00	2.82	12.62
10		9.9		9.9	9.90	00	2.78	12.68
11		10.0		tft.	10.0		2.78	12.78
12		tft.						

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Friday, March 21, 1913

Series Measures Object

Scale 0 M# 2564 1 1K

	sc 1	sc 3	sc 1	sc 3			Corr	Magn.
1	1.7	tb.	1.4	1.8	1.50	1 4 2	+5.50	7.13
2	6.2	5.3			5.85	4 3	3.86	9.71
3	6.4	5.6			6.00	4 4	3.82	9.82
4	6.8	6.3			6.55	2 3	3.70	10.25
5	tft.	7.4		7.4	7.40	0 0	3.46	10.86
6		7.8		7.6	7.75	0 1	3.36	11.11
7		8.4		8.7	8.75	0 1	3.09	11.84
8		9.5		9.3	9.35	0 1	2.93	12.28
9		9.5		9.4	9.75	1 0	2.93	12.28

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Friday, March 21, 1913

Series Measures

Scale 0 MD 2565 Pole

	sc 1	sc 3	sc 1	sc 3	see p. 40
5	~~tbr.~~		tbr.		
6	1.4		1.4		1.40 0 0
8	3.7		3.6		3.65 1 0
9	4.6		4.6		4.60 0 0
10	~~5.9~~ 4		4.8		4.85 1 0
11	5.7	5.1			5.40 3 3
12	6.3	5.9			6.10 2 2
13	6.7	6.2			6.45 3 2
14	+ft.	7.1		7.2	7.15 1 0
15	+ft.	7.7		7.6	7.65 1 0
16		7.7		7.8	7.75 1 0
17		8.5		8.5	8.50 0 0
18		8.8		8.9	8.85 0 1
19		9.6		9.6	9.60 0 0
20		9.8 ms?		9.8	9.80 m.s? 0 0
23		m.s		m.s	

12. 30

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Tuesday, April 15, 1913

3.10 Series Measures. Series 2524 – 2535 MD.

Scale M MD 2524 Pole.

	Sc.1	Sc.1	Sc.2	Sc.2.		MD 2529 m.50	Mean	Resid	Diff.
	2.4 2.6 3	2.3 2.5	B	2.45	0 1	3.25	2.90	35 35	+3.44 19
	3.6 3.8 6	3.6 3.8	B.	3.80	0 0	4.10	3.98 5	15 15	3.08 3
	5.2 5.4 8	5.2 5.4	5.6	5.45	1 1	5.95	5.71	24 24	2.39
	6.1 6.3 9	6.1 6.3	6.1	6.23	1 1	6.80	6.52	29 28	2.18
	6.3 6.5 10	6.2 6.4	6.3	6.40	1 1	7.00	6.70	30 30	2.19
11	t.f.		7.2	7.1	7.15 0 1	7.65	7.40	25 25	2.02
12	"		7.5	7.5	7.50 0 0	7.80	7.70 65	15 15	2.33 08
13	"		7.9	7.9	7.90 0 0	8.40	8.15	25 25	2.02
14	"		8.3	8.4	8.35 1 0	8.75	8.55	20 20	1.97
15	"		8.7	8.7	8.70 0 0	9.00	8.85	15 15	2.09
16	"		8.9	8.8	8.85 1 0	9.55	9.20	35 35	2.06
17	"		9.2	9.2	9.20 0 0	9.60	9.40	20 20	2.09
18	"		9.5	9.5	9.50 0 0	.	9.50	00 a	2.42
19	"		9.8	9.9	9.85 0 1	10.00	9.92	07 08	2.36
20	"		9.9	9.9	9.90 0 0		9.90	00 a	2.69
23	"		t.f.						
25	"		"						
26	"		"						
27	"		"						

$\frac{133}{5}$ $\frac{132}{5}$

$-.25$ $+.26$

$\frac{85}{4}$ $\frac{85}{4}$

$-.21$ $+.21$

$\frac{77}{5}$ $\frac{78}{4}$

$-.15$ $+.20$

$-.21$ copies.

$\frac{295}{14}$ $\frac{295}{14}$

$-.21$ $+.21$

No. 12 = 7.5 - on later observations - May 1, 1913.

Probably error of unit in count.

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Tuesday, April 15, 1913

Series Measures Copied.

Scale M HD 2525 D 2 Alt. - 70

	Sc.1.	Sc.1.	Sc.2.	Sc.2.		Curve	Magn.
1	4.1	4.3	4.1		4.20 1 1	+2.90	7.10
2	4.8	5.0	5.0		5.00 0 0	2.63	7.63
3	4.8	5.0	4.9		4.95 0 1	2.65	7.60
4	5.4	5.6	5.7		5.65 0 1	2.40	8.05
5	5.4	5.6	5.5		5.55 0 1	2.43	7.98
6	6.1	6.3	6.1		6.20 1 1	2.27	8.47
6.2 6.4 7	6.4	6.6	6.2		6.40 0 2 2	2.21	8.61
6.2 6.4 8	6.1	6.3	6.1		6.28 1 0 4 2	2.26	8.53
9	6.7	6.9	6.9		6.90 0 0	2.13	9.03
10	7.0	7.2	7.4		7.30 1 1	2.09	9.39
11	t.g.		7.6	7.6	7.60 0 0	2.03	9.63
12	"		7.7	7.8	7.75 1 0	2.02	9.77
13	"		7.9	7.9	7.90 0 0	2.01	9.91
14	"		8.5	8.4	8.45 1 0	2.01	10.46
15	"		8.7	8.8 8.7	8.73 0 10	2.02	10.75
16	"		8.7	8.6	8.65 1 0	2.01	10.66
17	"		8.8	8.8	8.80 0 0	2.03	10.83
18	"		9.4	9.4	9.40 0 0	2.14	11.54
19	"		9.5	9.6	9.55 1 0	2.17	11.72
20	"		9.6	9.6	9.60 0 0	2.20	11.80
21	"		10.0	9.9	9.95 0 1	2.28	12.23
22	"		t.g.				
23	"		"				
24	"		"				
25	"		"				
26	"		"				
27	"		"				

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Tuesday, April 15, 1913

Series Measures

Comets.

Scale M Mn A 2526 C 2 Alt + iv

	Sc.1		Sc.2	Sc.2		Curve	Magn.
1	3.2	3.4	B.			+3.20	6.66
2	3.7	3.9	B.			3.01	6.91
3	4.8	5.0	4.9	4.95	0 1	2.65	7.60
4	4.9	5.1	5.2	5.15	1 0	2.58	7.73
5	5.0	5.2	5.4	5.30	1 1	2.32	7.82
6	5.9	6.1	5.9	6.00	1 1	2.30	8.30
7	6.2	6.4	6.2	6.30	1 1	2.23	8.53
8	6.5	6.7	6.6	6.65	1 0	2.18	8.83
9	6.6	6.8	6.8	6.80	0 0	2.15	8.95
10a = 10 t.p.			8.4	8.2	8.30	1 1	2.00	10.30
11	"		7.6	7.6	7.60	0 0	2.03	9.63
12	"		7.8	7.7	7.75	0 1	2.01	9.76
13	"		8.1	7.9	8.00	1 1	2.00	10.00
14	"		8.3	8.4	8.45	1 0	2.01	10.76
15	"		8.6	8.6	8.60	0 0	2.01	10.61
16	"		8.8	8.7	8.75	0 1	2.03	10.78
17	"		8.8	8.9	8.85	0 1	2.05	10.90
18	"		9.0	9.2	9.10	1 1	2.09	11.19
19	"		9.5	9.3	9.40	1 1	2.13	11.53
20	"		9.7	9.7	9.70	0 0	2.20	11.90
21	"		9.8	9.7	9.75	0 1	2.22	11.97
22	"		10.0	10.0	10.00	0 0	2.30	12.30
23	"		t.p.					
24	"		"					
25	"		"					
26	"		"	—				
27	"		"					

No. 10 Looks very faint on Mn C. 2526 also.

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Tuesday April 15, 1913

Series Measures

Scale 11 mm = 5.29 Pole.

	Sc. 1		Sc. 2		Sep. 47	
3.1 3.3	5	3.0 3.2	B.		3.25	1 0
3.9 4.1	6	3.9 4.1	B.		4.10	0 0
	8	5.9 6.1	5.8		5.95	1 2
	9	6.6 6.8	6.8		6.80	0 0
	10	6.7 6.9	7.1		7.00	1 1
	11	t.f.	7.7	7.6	7.65	1 0
	12	"	7.7	7.9	7.80	1 1
	13	"	8.4	8.4	8.40	0 0
	14	"	8.7	8.8	8.75	1 0
	15	"	9.1	8.9	9.00	1 1
	16	"	9.5	9.6	9.55	1 0
	17	"	9.6	9.6	9.60	0 0
	18	"	t.f.	t.f.		
	19	"	10.0	10.0 ?	10.00	0 0
	20	"				
	23	"				
	25	"				

19 probably defective.

5.27

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10.50

Monday, April 21, 1913

Series Measures.

Scale M mD 2524 Pole

		Sc. 1.	Sc. 1	Sc. 2	Sc. 2	mD 2529 p 54				
2.6 2.8	5	2.2	2.4	B.	2.60 2 2	3.25	Mean 2.92	Ro. 32	33	Diff. 3.47
3.6 3.8	6	3.5	3.7	B.	3.75 0 1	3.95	3.85	10	10	3.83
	8	5.2	5.4	5.6	5.50 1 1	5.90	5.70	20	20	2.40
	9	6.1	6.3	6.1	6.20 1 1	6.70	6.45	25	25	2.25
	10	6.3	6.4	6.4	6.40 0 0	6.87	6.64	24	23	2.25
	11	7.0	7.2	7.2	7.20 0 0	7.80	7.50	30	30	1.92
	12	t.f.		7.6	7.6 7.60 0 0	7.90	7.75	15	15	1.98
	13	"		8.0	8.1 8.05 0 1	8.45	8.25	20	20	1.92
	14	"		8.5	8.5 8.50 0 0	8.75	8.62	12	13	1.90
	15	"		8.7	8.6 8.65 1 0	8.90	8.78	13	12	2.16
	16	"		8.8	8.8 8.80 0 0	9.50	9.15	35	35	2.11
	17	"		9.1	9.2 9.15 1 0	9.60	9.38	23	22	2.11
	18	"		9.5	9.5 9.50 0 0	10.00	9.75	25	25	2.17
	19	"		9.7 t.b	9.8 9.75 1 0	10.00	9.88	13	12	2.40
Defect measured for 20 by mistake?	20	"		9.7 t.f						
	23	"		t.f						
	25	"		"						
	26	"		"						
	87	"		"						

$\frac{111}{5}$ $\frac{111}{5}$
$-.24$ $+.22$

$\frac{77}{54}$ $\frac{78}{54}$
$-.19$ $+.1620$

$\frac{109}{5}$ $\frac{106}{5}$
$-.22$ $+.21$

$\frac{297}{14}$ $\frac{295}{14}$
$-.21$ $+.21$

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Monday, April 21, 1913

Series Measures : Copied

Scale M MD 23 27 9 K Alt +.50

Sc.1		Sc.1	Sc.2	Sc.2		Curve	Magn.
3.2 3.4	1	3.3 3.5	B.	3.45	0 1	+3.30	6.75 (87)
	2	4.8 5.0	4.9	4.95	0 1	2.69	7.64 (77)
	3	5.5 5.7	5.7	5.70	0 0	2.40	8.10 (23)
	4	6.4 6.6	6.4	6.50	1 1	2.20	8.70 (53)
	5	t.l.	7.2	7.1	7.15 0 1	2.06	9.16 (29)
	6	"	7.3	7.4	7.35 1 0	2.01	9.36 (49)
	7	"	8.5	8.5	8.50 0 0	1.96	10.46 (59)
	8	"	8.7	8.9	8.85 0 1	2.01	10.86 11.00
	9	"	9.4	9.4	9.40 0 0	2.16	11.56 (70)
	10	"	9.8	9.9	9.85 0 1	2.29	12.14 (28)
	11	"	t.l.	t.l.			
	12	"	"	"			
	13	"	"	"			
	14	"	"	"			
	15	"	"	"			

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Monday, April 21, 1913

Series Measures

Scale M mD .2528 1915 & Alt = 24

	Sc.1.		Sc.1	Sc.2				Coarse Magn.
	5.8 6.0	1	6.1 6.3	5.9	6.07	1 2 2	+ 2.32	8.39
	6.6 6.8	2	6.5 6.7	6.8	6.77	0 1 0	2.14	8.91
		3	t.g.	7.6 7.7	7.65	0 1	1.97	9.62
		4	"	7.7 7.6	7.65	1 0	1.97	9.62
		5	"	8.4 8.2	8.30	1 1	1.92	10.22
		6	"	8.8 8.8	8.80	0 0	2.00	10.80
		7	"	8.9 8.8	8.85	1 0	2.01	10.86
		8	"	8.9 8.9	8.90	0 0	2.01	10.91
		9	"	9.5 9.6	9.55	1 0	2.19	11.74
		10	"	9.8 9.7	9.75	0 1	2.25	12.00
		11	"	9.9 10.0	9.95	1 0	2.30	12.25
		12	"	10.0 10.0 ?	10.00	0 0	2.31	12.31 ?
		13	"	m.s m.s				
		14	"	" "				
		15	"	" "				

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1913phae.proj.1038M

Monday, April 21, 1913.

Series Measures

Scale 1m 1m D. 2529 Pole.

Sc. 1.		Sc. 1	Sc. 2.		Sept. 51
3.0 3.2	5	3.1 3.3	B.		3.25 1 0
3.8 4.0	6	3.7 3.9	B.		3.95 0 1
	8	5.8 6.0	5.8		5.90 1 1
	9	6.6 6.8	6.6		6.60 1 1
	10	6.8 7.0	6.8	6.8	6.87 1 1 1
	11	t.g.	7.8	7.8	7.80 0 0
	12	"	7.9	7.9	7.90 0 0
	13	"	8.5	8.4	8.45 0 1
	14	"	8.7	8.8	8.75 1 0
	15	"	8.9	8.9	8.90 0 0
	16	"	9.4	9.6	9.50 1 1
	17	"	9.6	9.6	9.60 0 0
	18	"	10.0	10.0?	10.00 0 0
	19	"	10.0	10.0	10.00 0 0
	20	"	t.g.	t.g.	
	23	"	"	"	
	25	"	"	"	
	26	"	"	"	
	27	"	"	"	

No. 18 defective?

12.50

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1913phae.proj.1038M

2.55

Monday, April 21, 1913

Series Measures

Scale M. mD 2529 Pole

	Sc.1,	Sc.1	Sc.2	Sc.2.		mD 2535 p.59	Mean	Resid		Diff.
3.1 3.3	5	2.9 3.1	B.		3.20 1 1	3.05	3.12	08	07	3.27
3.9 4.1	6	3.9 4.1	B.		4.10 0 0	4.05	4.08	02	03	2.90
	8	5.9 6.1	5.9		6.00 1 1	6.05	6.02	02	03	2.68
	9	6.6 6.8	6.7		6.75 0 1	7.10	6.92	17	18	1.78
	10	6.8 7.0	6.9		6.95 0 1	7.20	7.08	13	12	1.81
	11	t.f.	7.6	7.7	7.65 0 1	7.80	7.72	07	08	1.70
	12	"	8.1	8.1	8.10 0 0	8.25	8.18	08	07	1.55
	13	"	8.4	8.4	8.40 0 0	8.55	8.48	08	07	1.69
	14	"	8.7	8.9	8.80 1 1	8.80	8.80	00	00	1.72
	15	"	8.9	9.1	9.00 1 1	9.25	9.12	12	13	1.82
	16	"	9.4	9.6	9.50 1 1	9.55	9.52	02	03	1.74
	17	"	9.6	9.6	9.60 0 0	9.60	9.60	00	00	1.89
Defective?	18	"	10.0	10.0	? 10.00 0 0	9.90	9.95	05	05	1.97
	19	"	10.0	10.0	10.00 0 0	10.00	10.00	00	00	2.28
	20	"	t.f	t.f.						
	23	"	"	"						
	25	"	"	"						
	26	"	"	"						
	27	"	"	"						

$\frac{22}{5}$ $\frac{23}{5}$
-.04 +.05

$\frac{23}{4}$ $\frac{32}{4}$
-.06 +.06

$\frac{09}{5}$ $\frac{11}{5}$
-.02 +.02

copied.

$\frac{54}{14}$ $\frac{56}{14}$
-.04 +.04

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1913phae.proj.1038M

Monday April 21, 1913.

Series Measures. =Cohen

Scale m m D 2530 6 K Alt -.32

		Sc.1	Sc.2	Sc.2			Curve	Magn.
1	t.f.	8.1	7.9		8.00	11	+1.65	9.65
2	t.f.	8.5	8.5		8.50	00	1.65	10.15
3	"	8.6	8.6		8.60	00	1.65	10.25
4	"	8.8	8.9		8.85	01	1.70	10.55
5	"	9.1	8.9		9.00	11	1.71	10.71
6	"	9.6	9.4		9.50	11	1.86	11.36
Defective? 7	"	9.9	10.0	9.9	9.93	010	2.01	11.94
8	"	9.8	9.9	9.9	9.87	100	2.00	11.87
9	"	t.f.	t.f.					
10	"	"	"					
11	"	"	"					
12	"	"	"					
13	"	"	"					
14	"	"	"					
15	"	"	"					

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1913phae.proj.1038M

Monday. April 21, 1913

Cepheids.

Scale m mD 2531 96 K. Alt. +.06

	Sc. 1	Sc. 1	Sc. 2.	Sc. 2.			Curve	Magn.
1	6.4	6.6	6.6	6.60	0	0	+1.88	8.48 (.61)
2	6.5	6.7	6.6	6.65	1	0	1.87	8.52 (.65)
3	6.9	7.1	7.2	7.15	1	0	1.74	8.89 (9.02)
4	t. f.		7.7	7.7	7.70	0	0	1.68	9.38 (.51)
5	"		8.1	8.1	8.10	0	0	1.65	9.75 (.88)
6	"		8.4	8.5	8.45	0	1	1.65	10.10 (.23)
7	"		8.9	8.9	8.90	0	0	1.20	10.60 (.73)
8	"		9.3	9.6	9.45	1	2	1.84	11.29 (.43)
9	"		t. f	t. f					
10	"		"	"					
11	"		"	"					
12	"		"	"					
13	"		"	"					
14	"		"	"					
15	"		"	"					
16	"		"	"					

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1913phae.proj.1038M

Monday April 21, 1913.

Comet

Scale. m m D 25 32 D3 Alt. ig

	Sc. 1	Sc. 1	Sc. 2.	Sc. 2.		Curve	Magn.
	3.3 3.5	1	3.3 3.5	B.	3.50 0 0	+3.14	6.64
	3.6 3.8	2	3.6 3.8	"	3.80 0 0	3.00	6.80
	3.4 3.6	3	3.4 3.6	"	3.60 0 0	3.09	6.69
		4	3.9 4.1	4.0	4.05 1 0	2.88	6.93
4.5	4.7	5	4.2 4.4	4.6	4.57 1 2 0	2.65	7.22
		6	4.3 4.5	4.5	4.50 0 0	2.66	7.16
		7	5.1 5.3	5.1	5.20 1 1	2.39	7.59
		8	4.8 5.0	5.1	5.05 0 1	2.45	7.50
		9	5.4 5.6	5.6	5.60 0 0	2.21	7.81
		10	5.9 6.1	5.9	6.00 1 1	2.08	8.08
		11	5.9 6.1	5.9	6.00 1 1	2.08	8.08
		12	5.9 6.1	6.1	6.10 0 0	2.03	8.13
		13	6.6 6.8	6.7	6.75 0 1	1.83	8.58
		14	t. l.	7.5 7.6	7.55 1 0	1.69	9.24
		15	"	7.7 7.7	7.70 0 0	1.67	9.37
		16	"	7.8 7.6	7.70 1 1	1.67	9.37
		17	"	8.2 8.1	8.15 0 1	1.65	9.80
		18	"	8.7 8.6	8.65 1 0	1.66	10.31
		19	"	8.6 8.6	8.60 0 0	1.65	10.25
		20	"	8.7 8.7	8.70 0 0	1.67	10.37
		21	"	9.2 8.9	9.05 2 1	1.72	10.77
9 o'Clock?		22	"	9.9 9.8	9.85 1 0	2.00	11.85
		23	"	9.4 9.4	9.40 0 0	1.81	11.21
		24	"	9.8 9.8	9.80 0 0	1.97	11.77
		25	"	10.0 10.0	10.00 0 0	2.05	12.05
		26	"	t. l.			
		27	"	"			
		28	"	"			

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Monday April 21, 1913.

Scale m. MD 2535 Pole

Sc.1	Sc.1		Sc.2	Sc.2. Sep. 55	
2.9 3.1	5	2.8 3.0	B.	3.05	1 0
3.9 4.1	6	3.8 4.0	"	4.05	1 0
	8	5.9 6.1	6.0	6.05	1 0
	9	6.9 7.1	7.1	7.10	0 0
	10	7.0 7.2	7.2	7.20	0 0
	11	t.f.	7.8	7.8 7.80	0 0
	12	"	8.3	8.2 8.25	1 0
	13	"	8.5	8.6 8.55	1 0
	14	"	8.8	8.8 8.80	0 0
	15	"	9.2	9.3 9.25	0 1
	16	"	9.6	9.5 9.55	0 1
	17	"	9.6	9.6 9.60	0 0
	18	"	9.9	9.9 9.90	0 0
	19	"	10.0	10.0 10.00	0 0
	20	"	t.f.	t.f.	
	22	"	"	"	
	25	"	"	"	
	26	"	"	"	
	27	"	"	"	

5.35

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2.50

Wednesday, April 23, 1913

Scale m mD 2529 Pole

	Sc.1	Sc.1	Sc.2	Sc.2		mD 2535 p.63	Mean	Read.		Diff.
	3.2 3.4	3.1 3.3	B.	3.35	0 1	3.05	3.20	15	15	3.19
	3.9 4.1	3.9 4.1	B.	4.10	0 0	4.15	4.12	02	03	2.86
8	5.7 5.9	5.8		5.85	1 0	5.97	5.91	06	06	2.19
9	6.5 6.7	6.8		6.75	1 0	7.07	6.91	16	16	1.79
10	6.8 7.0	6.8		6.90	1 1	7.30	7.10	20	20	1.79
11	t.f.	7.7	7.7	7.70	0 0	7.90	7.80	10	10	1.62
12	"	7.9	7.9	7.90	0 0	8.15	8.02	12	13	1.71
13	"	8.3	8.3	8.25	0 1	8.55	8.40	15	15	1.77
14	"	8.8	8.8	8.80	0 0	8.80	8.80	00	00	1.72
15	"	8.8	8.9	8.85	0 1	9.15	9.00	05	15	1.94
16	"	9.5	9.6	9.55	1 0	9.40	9.48	07	08	1.78
17	"	9.6	9.6	9.60	0 0	9.63	9.62	02	01	1.87
18	"	10.0	10.0 ?	10.00	0 0	8 9.75	92 9.88	08 12	01 13	2.04° 2.40
19	"	9.9	10.0 ?	9.95	1 0	10.00	9.98	03	02	2.30
20	"	t.f.								
23	"	"								
25	"	"								
26	"	"								
27	"	"								

Both very faint.

29 / 5 / -.06 30 / 5 / +.06

37 / 4 / -.09 38 / 4 / +.10

05 / 5 / -.01 03 / 5 / +.01

71 / 14 / +.045 71 / 14 / +.05

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Wednesday, April 23, 1913

Cloudy.

Scale m mD 2533 C3 Obs. +.16

Sc.1		Sc.1		Sc.2	Sc.2		Curve	Magn.
2.7	2.9	1 2.6	2.8	B.		2.85 1 0	+3.38	6.23
3.1	3.3	2 3.1	3.3	"		3.30 0 0	3.20	6.50
3.5	3.7	3 3.6	3.8	"		3.75 1 0	3.01	6.76
3.9	4.1	4 3.9	4.1	"		4.10 0 0	2.86	6.96
4.0	4.2	5 4.1	4.3	4.0		4.17 0 1 2	2.83	7.02
		6 4.1	4.3	4.1		4.20 1 1	2.81	7.01
		7 4.7	4.9	4.8		4.85 1 0	2.58	7.43
		8 5.2	5.4	5.4		5.40 0 0	2.35	7.75
		9 6.1	6.3	6.1		6.20 1 1	2.03	8.23
		10 5.9	6.1	5.8	5.9	5.93 2 1 0	2.15	8.08
		11 6.2	6.4	6.5		6.45 0 1	1.96	8.41
		12 6.9	7.1	6.9		7.00 1 1	1.81	8.81
		13 6.9	7.1	7.0		7.05 1 0	1.80	8.85
		14 t.f.		7.8	7.7	7.75 0 1	1.70	9.45
		15 "		7.9	8.0	7.95 1 0	1.70	9.65
		16 "		8.0	8.1	8.05 0 1	1.70	9.75
Looks a little brighter than 16 on mC. 2533		17 "		7.9	7.9	7.90 0 0	1.70	9.60
		18 "		8.4	8.1	8.25 2 1	1.71	9.96
		19 "		8.6	8.5	8.55 0 1	1.74	10.29
		20 "		8.7	8.7	8.70 0 0	1.78	10.48
		21 "		8.8	8.7	8.75 0 R 1	1.79	10.54
		22 "		8.9	8.9	8.90 0 0	1.81	10.71
Defect meas. by mistake. for 23?		23 "	9.3	9.5	8.9	9.23 1 3 3	1.89	11.12
		24 "		9.3	9.3	9.30 0 0	1.90	11.20
		25 "		9.6	9.5	9.55 0 1	1.96	11.51
		26 "		9.5	9.7	9.60 1 1	1.98	11.58
		27 "		10.0	? 9.9 ?	9.95 0 1	2.06	12.01 ?
		28 "		t.f.	t.f.			

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Scale m mD 2534 97 K. Att. +06

	Sc.1	Sc.1	Sc.2.	Sc.2	Sc.2.		Curve	Imagn.
Sc.1 2.6 2.8	1	2.8 3.0	B.		2.90 1 1		+3.36	6.26 .35
	2	6.9 7.1	6.9		7.00 1 1		1.81	8.81 .94
	3	t.f. 7.4	7.1	7.5	7.~~50~~ 33 1 1/4 ~~4~~ 2/3 8		1.75	9.08 .21
	4	"	8.2	8.1	8.15 0 1		1.71	9.86 .97
	5	"	8.8	8.7	8.75 0 1		1.79	10.54 .67
	6	"	8.9	8.9	8.90 0 0		1.81	10.71 .84
	7	"	9.2	9.2	9.20 0 0		1.89	11.09 .38
	8	"	9.5	9.7	9.60 1 1		1.99	11.59 .73
	9	"	9.8	9.9	9.85 0 1		2.03	11.88 12.02
400 Saint-	10	"	10.0	10.0	10.00 0 0		2.07	12.07 ? .21
	11	"	9.9 t.f.					
	12	"						
	13	"						
	14	"						
	15	"						

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1913phae.proj.1038M

Wednesday, April 23, 1913

	Scale m		m D 2535		Pole
Sc.1	Sc.1	Sc.2	Sc.2	Sc.2	Sep. 60
2.8 3.0 5	2.9 3.1	B.		3.05	0 1
4.0 4.2 6	3.9 4.1	B.		4.15	0 1
8	5.9 6.1	5.9	5.9	~~6.00~~ 5.97	1 1 1
9	6.9 7.1	7.1	7.0	7.07	0 0 1
10	t.f.	7.3	7.3	7.30	0 0
11	"	7.9	7.9	7.90	0 0
12	"	8.2	8.1	8.15	0 1
13	"	8.6	8.5	8.55	0 1
14	"	8.8	8.8	8.80	0 0
15	"	9.1	9.2	9.15	1 0
16	"	9.4	9.4	9.40	0 0
17	" 9.6	9.8	9.5	9.63	0 2 1
18	"	9.9	9.8	9.85	1 0
19	"	10.0	10.0 ?	10.00	0 0
20	"	t.f.	t.f.		
23	"	"	"		
25	"	"	"		
26	"	"	"		
27	"	"	"		

5.30

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2.22

Monday, May 5, 1913

Series Measures – Series HD 2614 – HD 2625

Scale m.		HD 2614		Pole				HD 2619 A.69	Mean			Diff.
Sc.1	Sc.1	Sc.1		Sc.2	Sc.2							
3.1	3.3 2.9 3.1	5 3.1	3.3	B		3.23	1 1 1	3.20	3.22	01	02	+3.17
4.2	4.4 3.9 4.1	6 4.2	4.4	B.		4.30	1 2 1	4.10	4.20	10	10	2.78
		8 5.9	6.1	5.9		6.00	1 1	6.05	6.02	02	03	2.08
		9 6.8	7.0	6.9		6.95	01	7.10	7.02	07	08	1.68
		10 7.0	7.2	7.1		7.15	01	7.13	7.14	01	01	1.75
		11 t.p.		7.8	7.9	7.85	01	7.85	7.85	00	00	1.57
		12 "		8.1	8.1	8.10	00	8.35	8.22	12	13	1.51
		13 "		8.7	8.7	8.70	00	8.70	8.70	00	00	1.47
		14 "		8.8	8.9	8.85	01	8.90	8.88	03	02	1.64
		15 "		9.3	9.2	9.25	10 01	9.45	9.35	10	10	1.59
		16 "		9.6	9.5	9.55	01	9.60	9.58	03	02	1.68
		17 "		9.8	9.8	9.80	00	9.70	9.75	05	05	1.74
		18 "		9.9	10.0	9.95	1 0	10.10	10.02	07	08	1.90
		19 "		t.p.	t.p.					02 / 4 / +.00	01 / 4 / -.00	
		20 "		"	"					14 / 5 / -.03	14 / 5 / +.03	
		23 "		"	"					15 / 4 / -.04	15 / 4 / +.04	
		25 "		"	"					all 27 / 13 / -.02	28 / 13 / +.02	
				Pris. Comp.								
		5		7.2	7.3	7.25	01	7.50	7.38	13	12	-0.99
		6		8.2	8.2	8.20	00	8.35	8.28	08	07	-1.30
		8		9.6	9.6	9.60	00	9.60	9.60	00	00	-1.50
		9		9.8	9.9	9.85	01	10.10	9.98	13	12	-1.28
		10		10.0	9.9	9.95	01	9.90	9.92	03	02	-1.03
		11 n.s		n.s								

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Monday, May 5, 1913

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Scale m. mD 2615 99K. Alt. +.64

	Sc.1	Sc.1	Sc.2	Sc.2			Corse Magn.	
1	6.2	6.4	6.2		6.30	1 1	+1.96	8.26
2	t.f.		7.4	7.3	7.35	0 1	1.66	9.01
3	7.0	7.2	7.1		7.15	0 1	1.70	8.85
4	t.f.		7.9	7.9 8.7	7.90	0 0	1.58	9.48
5	"		8.2	8.3	8.20	0 0	1.55	9.75
6	"		9.2	9.4	9.30	1 1	1.65	10.95
7	"		9.7	9.9	9.80	1 1	1.79	11.59
8	"		9.9	9.9	9.90	0 0	1.82	11.72
9	"		t.f.	t.f.				
10	"		"	"				
11	n.s.		n.s.	"				

Pris. Comb.

1	t.f.		9.7	9.8	9.75	1 0	-1.31	8.44
2	"		t.f.	t.f.			~~-1.27~~	
3	"		10.0	10.1?	10.05	0 1	-1.27	8.78 ?
4	"		t.f.	t.f.				
5	"		"	"				

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Monday, May 5, 1913

Series Measures

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Scale M. mD 2616 27K. Alt +.22

	Sc.1	Sc.1	Sc.2	Sc.2		Curve	Magn.
1	7.0	7.2	7.0	7.10	1.1	+1.73	8.83
2*	t.f.		7.9	7.8	7.85 1.0	1.58	9.43
3	"		7.6	7.5	7.55 0.1	1.62	9.17
4	"		8.4	8.4	8.40 0.0	1.52	9.92
5	"		8.8	8.8	8.80 0.0	1.57	10.37
6	"		9.2	9.2	9.20 0.0	1.62	10.82
7	"		9.5	9.5	9.50 0.0	1.70	11.20
8	"		9.8	9.8	9.80 0.0	1.79	11.59
9	"		10.0	10.0	10.00 0.0	1.85	11.85
10	"		t.f.	t.f.			
11	"		"	"			

Prin. Comp.

1	t.f.	9.9	10.0	9.95 1.0	-1.30	8.65
2	"	t.f.	t.f.			
3	"	"	"			
4	"	"	"			
5	"	"	"			

*No. 3 looks brighter than no. 2 on mC 2616 also.

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1913phae.proj.1038M

Monday May 5, 1913

Series Measures Capids

Scale. In. mm 2617 124 K. Alt -18

	Sc.1	Sc.1	Sc.2	Sc.2			Curve Magn.
1	7.2?	7.4	7.3	7.1	7.27	+1.68	8.95?
2	t.f.		8.7	8.6	8.65	1.54	10.19
3	"		8.8	8.9	8.85	1.58	10.43
4	"		7.8	7.8	7.80	1.60	9.40
5	"		9.6	9.7	9.65	1.72	11.37
6	"		9.6	9.7	9.65	1.72	11.37
7	"		9.9	9.9	9.90	1.81	11.71
8	"		t.f.	t.f.			
9	"		"	"			
10	"		"	"			

Prin. Comp.

1	t.f.	10.1?	10.1?	10.10?	-1.25	8.85?
2	"	t.f.	t.f.			
3	"	"	"			
4	"	"	"			

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Monday, May 5, 1913

Series Measures cfried

Scale m mD 2618 28 K. Alt +23

	Sc.1		Sc.2			Curve	Magn.
1	6.5	6.7	6.7	6.70	00	+1.83	8.53
2	t.f.		8.2	8.1	8.15 01	1.56	9.71
3	"		8.2	8.1	8.15 01	1.56	9.71
4	"		8.7	8.6	8.65 10	1.54	10.19
5	"		8.8	8.8	8.80 00	1.57	10.37
6	"		9.3	9.3	9.25 01	1.63	10.88
7	"		9.2	9.1	9.15 01	1.61	10.76
8	"		9.4	9.6	9.50 11	1.70	11.20
9	"		9.8	9.8	9.80 00	1.79	11.59
10	"		t.f.	t.f.			
11	"		"	"			

Prin. Comp.

1	t.f.		9.8	9.8	9.80 00	-1.31	8.49
2	"		t.f.	t.f.			
3	"		"	"			
4	"		"	"			
5	"		"	"			

No 7 brighter than no. 6 on mc 2618 ?

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Monday, May 5, 1913

Series Measures.

Scale m, mD 2619. Pole,

	Sc.1	Sc.1	Sc.2	Sc.2	sep.	p.	Sc.
2.9 3.1	3.1	3.3	B.		3.20	1	1
3.9 4.1	3.9	4.1	B.		4.10	0	0
8	5.9	6.1	6.0		6.05	1	0
9	6.9	7.1	7.1		7.10	0	0
10	7.0	7.2	7.1	7.1	7.13	1	00
11	t.f.		7.9	7.8	7.85	1	0
12	"		8.4	8.3	8.35	0	1
13	"		8.7	8.7	8.70	0	0
14	"		8.9	8.9	8.90	0	0
15	"		9.4	9.3	9.45	0	1
16	"		9.6	9.6	9.60	0	0
17	"		9.8	9.6	9.70	1	1
18	"		10.1 ?	10.1 ?	10.10	0	0
19	"		t.f.	t.f.			
20	"		"	"			
21	"		"	"			

Prio. Comp.

5	t.f.	7.6	7.4	7.50	1	1
6	"	8.2	8.5	8.35	2	1
8	"	9.6	9.6	9.60	0	0
9	"	10.2 ?	10.0	10.10	1	1
10	"	9.9	9.9	9.90	0	0
11	"	t.f.	t.f.			

5.16

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2.45

Tuesday May 6, 1913

Series Measures.

Scale m. mD 2619 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2		mD 2625 h73	Mean			Diff.
5	3.0 3.2	3.1 3.3		B.		3.25 0 1	3.15	3.20	05	05	+3.19
6	3.8 4.0	3.9 4.1		B.		4.05 0 1	3.95	4.00	05	05	2.98
8	5.9 6.1	5.9 6.1		5.9		6.09 1 1	5.85	5.92	08	09	2.18
9	6.8 7.0	6.9 7.1		6.9		7.00 0 1 1	6.70	6.85	15	15	1.85
10	7.1 7.3			7.2	7.1	7.20 1 0 1	6.85	7.02	18	17	1.87
11	t.l.			7.8	7.8	7.80 0 0	7.65	7.72	08	07	1.78
12	"			8.2	8.2	8.20 0 0	8.20	8.20	00	00	1.53
13	"			8.7	8.7	8.70 0 0	8.75 (20)	8.45	25	25	1.72
14	"			8.9	8.9	8.90 0 0	9.30 (8.75)	8.82	08	07	1.70
15	"			9.4	9.4	9.40 0 0	9.55 (30)	9.35	05	05	1.59
16	"	9.6		9.7	9.6	9.95 (9.63) 0 1 0	9.75 (5)	9.59	04	04	1.67
17	"	9.7		9.6	9.5	9.60 1 0 1	10.05 (9.75)	9.68	08	07	1.81
18	"			10.1?	10.2?	10.15 1 0	10.05	10.10	05	05	1.82
19	"			t.l.	t.l.			34 4 +.08			
20	"			t.l.	"						
23	"			"	"						
05	"			"							

Pris. comp.

5			7.3	7.4	7.35 1 0	7.37	7.36	01	01	-0.97
6			8.2	8.3	8.25 1 0 1	8.15	8.20	05	05	-1.22
8			9.5	9.6	9.55 1 0	9.45	9.50	05	05	-1.40
9			9.9	9.9	9.90 0 0	9.75	9.82	08	07	-1.12
10	"		9.9	10.0	9.95 1 0	10.2 (1)	10.08 (2)	13	12	-1.19
11	"		t.l.	t.l.						

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Scale m MD 2620 C 5 Alt. +17

	Sc.1	Sc.1	Sc.2	Sc.2			Curve Magn.
1	3.7 3.9	3.6 3.8	B.		3.85 1 0	+3.00	6.85
2	4.7	4.9	4.8		4.85 1 0	2.61	7.46
3	4.8	5.0	5.0		5.00 0 0	2.55	7.55
4	5.2	5.4	5.1		5.25 2 1	2.46	7.71
5	5.9	6.1	5.9		6.00 1 1	2.19	8.19
6	6.2	6.4	6.2		6.30 1 1	2.09	8.39
7	6.1	6.3	6.2		6.25 1 0	2.10	8.35
8	6.8	7.0	6.9		6.95 0 1/2	1.89	8.84
9	7.0	7.2	7.2		7.20 0 0	1.82	9.02
10	t.f.		7.6	7.6	7.60 0 0	1.72	9.32
11	"		7.5	7.4	7.45 1 0	1.76	9.21
12	"		7.9	8.2	8.05 1 2	1.66	9.71
13	"		8.2	8.2	8.20 0 0	1.64	9.84
14	"		8.3	8.4	8.35 1 0	1.64	9.99
15	"		9.4	9.3	9.35 0 1	1.70	11.05
16	"		9.3	9.4	9.35 1 0	1.70	11.05
17	"		9.7	9.8	9.75 1 0	1.77	11.52
18	"		9.9	9.8	9.85 1 0	1.79	11.64
19	"		t.f. Prin. Comp.				
20	"						
1			7.8	7.8	7.80 0 0	-1.10	6.70
2			8.9	8.8	8.85 1 0	-1.30	7.55
3			8.8	8.7	8.75 0 1	-1.30	7.45
4			9.2	8.8	9.00 2 2	-1.30	7.70
5			9.7	9.7	9.70 0 0	-1.27	8.43
6			9.9	9.9	9.90 0 0	-1.24	8.66
7			9.8	9.8	9.80 0 0	-1.26	8.54
8			t.f.	t.f.	. . .	~~-1.19~~	
9			10.3?	10.3?	10.15? 1 0	-1.19	8.96?

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Series Measures

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Scale 7m

mD 2621 125 P

Dec -18

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2		Curve	Magn.
1	7.1? 7.3		7.2	7.2	7.23 7.35	100	+1.81	9.04
2			7.9	8.1	8.00	1 1	1.67	9.67
3			8.4	8.3	8.35	0 1	1.64	9.99
4		8.7	8.9	8.9	8.83	1 1 1	1.65	10.48
5		8.8	8.8	8.8	8.80	0 0 0	1.65	10.45
6			9.1	9.0	9.05	1 0	1.66	10.71
7			9.3	9.6	9.45	1 2	1.71	11.16
8			9.7	9.6	9.65	1 0	1.74	11.39
9			9.9	9.9	9.90	0 0	1.79	11.69
10	"		t.f.	t.f.				
11	"		"	"				

Prin. Comp.

1	t.f.	10.1?	10.2?	10.15	1 0	-1.19	8.96?
2	"	t.f.	t.f.				
3	"	"	"				
4	"	"	"				
5	"	"	"				
6	"	"	"				

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Tuesday, May 6, 1913

Series Measures

Scale m m D 2625 Pole

	Sc. 1	Sc. 1	Sc. 2	Sc. 2	sep. 70
2.9 3.1	5	3.0 3.2	B.		3.15 ± 1.0
3.8 4.0	6	3.7 3.9	B.		3.95 0.1
	8	5.7 5.9	5.8		5.85 1.0
	9	6.5 6.7	6.7		6.70 0.0
	10	6.7 6.9	6.8		6.85 1.0
	11	t.f.	7.7	7.6	7.65 1.0
	12	"	8.2	8.2	8.20 0.0
	13	"	8.2	8.2	8.20 0.0
	14	"	8.7	8.8	8.75 ± 0.0
	15	"	9.4	9.2	9.30 1.1
	16	"	9.6	9.5	9.55 0.1
	17	"	9.7	9.8	9.75 ± 0.0
	18	"	10.0	10.1?	10.05 0.1
	19	"	t.f.		
	20	"	"		
	23	"	"		
	25	"	"		

Pris. Comp.

7.3	5	7.1?	7.4	7.4	7.37 ± 1.0 0
	6	t.f.	8.1	8.2	8.15 ± 1.0
	8	"	9.4	9.5	9.45 0.1
	9	"	9.7	9.8	9.75 ± 1.0
	10	"	10.2?	t.f.	10.2
	11	"	t.f.	"	
	12	"	"	"	

5.30

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3—

Wednesday, May 7, 1913

Series Measures.

Scale m mD 2619 Pole.

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.21		mD 2625 F.78	Mean		Diff.
3.2 3.4	5	2.9 3.1		B.		3.25 2 1	3.15	3.20	05 05	+3.19
3.9 4.1	6	3.9 4.1		B.		4.10 0 0	4.10	4.10	00 00	2.88
	8	5.9 6.1		5.9		6.00 1 1	5.60	5.80	20 20	2.30
	9	6.9 7.1		6.9		7.00 1 1	6.60	6.80	20 20	1.90
	10	6.9 7.1		7.3	7.2	7.20 1 1 0	6.80	7.00	20 20	1.89
	11	t.f.		7.7	7.8	7.75 1 0	7.60	7.68	07 08	1.74
	12	"		8.2	8.2	8.20 0 0	7.85	8.02	18 17	1.71
	13	"		8.6	8.5	8.55 0 1	8.15	8.35	20 20	1.82
	14	"		8.8	8.9	8.85 0 1	8.60	8.75	10 10	1.77
	15	"	9.2	9.3	8.9	9.13 1 2 2	9.10	9.12	01 02	1.82
	16	"		9.6	9.5	9.55 0 1	9.45	9.50	05 05	1.76
	17	"		9.6	9.7	9.65 0 1	9.75	9.70	05 05	1.79
	18	"		10.0	10.0	10.00 0 0	10.15	10.08	08 07	1.84
	19	"		t.f.	t.f.					
	20	"		"	"					
	23	"		"	"					
	25	"		"						

Prio. Comp.

	5	t.f.		7.3	7.4	7.35 1 0 5	7.27	7.31	04 04	-0.92
	6	"		8.3	8.2	8.25 1 0 6	8.00	8.12	13 12	-1.14
	8	"		9.4	9.4	9.40 0 0 8	9.30	9.35	05 05	-1.25
	9	"	9.9	9.8	10.0	9.90 0 1 1	9.80	9.85	05 05	-1.15
	10	"	9.9	9.8	9.9	9.87 0 1 0	10.2?	10.04	17 16	-1.15
	11	"		t.f.	t.f.					

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Wednesday, May 7, 1913

Series Measures. Cepheid

Scale m m D 2622 B4 alt. +.23

Sc.1	Sc.1	Sc.1	Sc.2	Sc.2	Curve	Magn.	Prin.	Comp.	Sc.1	Sc.2	Sc.2	Curve	Magn.
3.6 3.8	3.4 3.6 1	3.8 4.0	B.		3.80	0 2 2	+2.95	6.75	Sc. 1	Sc. 2			
	3.9 4.1 2	3.9 4.1	B.		4.10	0 0	2.84	6.94	1 t.p.	7.2	8.1	8.15 0 1	-1.13 7.02
	4.2 4.4 3	4.7 4.9	4.3	4.4	4.50	1 4 2 1	2.70	7.20	2 "	8.3	8.1	8.20 1 1	-1.14 7.06
	4	4.8 5.0	4.9		4.95	0 1	2.56	7.51	3 "	8.4	8.4	8.40 0 0	-1.19 7.21
	5	5.2 5.4	5.4		5.40	0 0	2.40	7.80	4 "	8.8	8.7	8.75 0 1	-1.21 7.54
	6	5.4 5.6	5.5		5.55	0 1	2.34	7.89	5 "	8.9	9.2	9.05 1 2	-1.22 7.83
	7	5.8 6.0	5.8		5.90	1 1	2.22	8.12	6 "	8.8	8.8	8.80 0 0	-1.21 7.59
	8	6.1 6.3	6.3		6.30	0 0	2.10	8.40	7 "	9.6	9.5	9.55 0 1	-1.20 8.35
	9	6.5 6.7	6.6		6.65	1 0	1.98	8.63	8 "	9.7	9.7	9.70 0 0	-1.20 8.50
	10	6.9 7.1	7.2		7.35	1 0	1.85	9.08	9 "	9.7	9.8	9.75 1 0	-1.19 8.56
	11	t.p.	7.6	7.7	7.65	0 1	1.77	9.42	10 "	10.1?	10.1?	10.10 0 0	-1.13 8.97?
	12	"	7.7	7.8	7.75	1 0 0	1.76	9.51	11 "	t.p.	t.p.		
	13	"	7.6	7.4	7.50	1 1	1.80	9.30					
	14	"	7.9	8.1	8.00	1 1	1.75	9.75					
	15	"	8.4	8.2	8.30	1 1	1.75	10.05					
	16	"	8.6	8.7	8.65	0 1	1.76	10.41					
	17	"	9.2	8.9	9.05	2 1	1.77	10.82					
	18	"	8.9	8.9	8.90	0 0	1.76	10.66					
	19	"	9.2	9.2	9.20	0 0	1.78	10.98					
	20	"	9.8	9.7	9.75	0 1	1.82	11.57					
	21	"	9.4	9.2	9.30	1 1	1.79	11.09					
	22	"	9.8	9.7	9.75	0 1	1.82	11.57					
	23	"	t.p.	t.p.									

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Wednesday, May 7, 1913

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Scale m mD 2623 101 K Alt. +0.6

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2			Curve Imagn.
1	5.5	5.7	5.5		5.60	1	1	+2.31 7.91
2	6.2	6.4	6.3		6.35	0	1	2.09 8.44
3	6.1	6.3	6.3		6.30	0	0	2.10 8.40
4	t.f.		7.7	7.5	7.60	1	1	2.79 9.39
5	"	7.9	8.3	7.9	8.05	3 1	3 1	1.75 9.80
6	"		8.2	8.2	8.20	0	0	1.75 9.95
7	"		9.6	9.4	9.50	1	1	1.80 11.30
8	"		9.9	10.0	9.95	1	0	1.84 11.79
9	"		9.9	9.9	9.90	0	0	1.84 11.74
10	"		t.f.	t.f.				
11	"		"	"				
12	"		"	"				

Prin Comp.

1	"	9.3	9.3	9.30	0	0	-1.22 8.08
2	"	9.9	9.9	9.90	0	0	-1.13 8.77
3	"	10.0	10.0	10.00	0	0	-1.15 8.85
4	"	t.f. +0.2	? t.f.				
5	"	"	"				
6	"	"					

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Wednesday, Friday 7, 1913

Series Measures. Copids.

Scale 7m 7mD 2624 78 K. Alt. +17

	Sc.1	Sc.1	Sc.2	Sc.2		Curve	Imagn.
β = 1	6.8	7.0	6.9		6.95	0 1	+1.90	8.85
2	t.f.		7.8 7.7 (8.1)	7.7	7.75	0 1	1.77	9.52
3	"		7.4	8.2	8.15	1 0	1.75	9.90
4	"		8.2	8.2	8.20	0 0	1.75	9.95
5	"		8.9	8.9	8.90	0 0	1.76	10.66
6	"		9.3	9.6	9.45	1 2	1.80	11.25
7	"		9.8	9.9	9.85	0 1	1.83	11.68
8	"		9.8	9.9	9.85	0 1	1.83	11.68
9	"		t.f	t.f				
10	"		t.f (t.f)	t.f				
(Defect in position of no. 11?) 11	"		9.9	10.2?				
12	"		t.f	t.f				
α	4.4	4.4	4.6		4.60	0 0	2.68	7.28
γ	3.8	4.0	4.1		4.05	0 1	2.86	6.91
6.1 (6.3) δ	5.9	6.1	6.3	6.2	6.25	1 2 1 1	2.60	8.85
2	7.2	(7.4?)	7.4 8.1	7.6	7.47	1 1 1	1.80	9.27

Pris. Comp.

α	t.f.	8.6	8.7	8.65	0 1	−1.20	7.45
γ	"	7.7	7.9	7.80	1 1	−1.05	6.75
δ	"	9.7	9.6	9.65	1 0	−1.20	8.45
ε	"	9.8 t.f	9.9	9.85	0 1	−1.17	8.68
β = 1	"	9.9	10.1?	10.05	1 1	−1.15	8.85?
2	"	t.f	t.f.				
3	"	t.f 9.8	"				
4	"	t.f	"				

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Wednesday, May 7, 1913

Series Measures.

Scale m	mD 2625		Pole.		
Sc.1	Sc.1	Sc.2	Sc.2.		
3.0 3.2	5 2.9 3.1	B.	3.15 0 1		
3.9 4.1	6 3.9 4.1	B.	4.10 0 0		
	8 5.4 5.6	5.6	5.60 0 0		
	9 6.4 6.6	6.6	6.60 0 0		
	10 6.7 6.9	6.7	6.80 1 1		
	11 t.f.	7.6	7.6	7.60 0 0	
	12 "	7.8	7.9	7.85 0 1	
	13 "	8.1	8.2	8.15 1 0	
	14 "	8.7	8.6	8.65 1 0	
	15 "	9.1	9.1	9.10 0 0	
	16 "	9.6	9.3	9.45 2 1	
	17 "	9.7	9.8	9.75 1 0	
	18 "	10.2 ?	10.1 ?	10.15 0 1	
	19 "	t.f.	t.f.		
	20 "	"	"		
	23 "	"	"		
	25 "	"	"		

Pais Comp.

5 7.1 ? 7.3	7.3	7.2	7.27 0 1	
6 t.f.	7.9	8.1	8.00 1 1	
8 "	9.2	9.4	9.30 1 1	
9 "	9.8	9.8	9.80 0 0	
10 "	t.f.	10.2 ?	10.22 a=	
11 "	"	t.f.		
12 "	"	"		

5.35

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1913phae.proj.1038M

12.09

Tuesday. October 7, 1913

Series measures by artificial light.

Scale C 14147 C. 14146

Image	1	2	3	4
i	7.	1.0	2.5	7.8
e	6.7	B	B	4.6
a	2.7	B	B	B
b	2.2	B	B	B
j	~~4.9~~ 7	4.9	5.9	9.9 ?
a'	3.6	B	B	B
b'	4.7	B	B	2.8
h	9.2	1.8	2.7	6.2
l	7	7.8	8.1	7.
g	7.9	B	1.6	5.8
k	7	5.7	6.7	7
j.	7	~~4.9~~ ~~1.0~~ 3.3	4.6	7.9

12.33

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Tuesday, October 14, 1913

11.45 Series measures. Pole only

Scale ?

MD 2389 Pole

	Sc. 1	Sc. 1	Sc. 2	Sc. 2	Sc. 2
3.6	5	3.4		13	
	6	4.4		4.0	
	8	5.8		5.8	
	9	6.2		6.6	
	10	6.8		6.9	
	11	t.l.	7.4	7.3	7.6
	12	"		7.7	7.7
	13	"		7.8	7.9
	14	"	8.7	8.6	8.3
	15	"		8.7	8.8
	16	"		8.9	8.9
	17	"		9.2	9.1
	18	"		9.7	9.7
	19	"		9.7	9.9
	20	"		9.8	10.0
	23	"		t.l	t.l.
	25	"		"	"

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Tuesday October 14, 1913

Series Measures

Poles only

Scale ?

MD 2394

Pole

		Sc. 1	Sc. 1	Sc. 2	Sc. 2	Sc. 2
3.2	5	3.1		B.		
	6	4.0		B.		
5.9	8	6.1		5.9		
6.7	9	6.4		6.9		
	10	7.0		7.2		
	11	t.f.		7.5	7.6	
	12	"		7.9	7.9	
	13	"		8.5	8.6	
	14	"		8.6	8.6	
	15	"		8.8	8.8	
	16	"	8.9	8.7	8.8	
	17	"		9.6	9.4	
	18	"		9.8	9.7	
	19	"		10.0	? 9.9	
	20	"		t.f.	t.f.	
	23	"		"	"	
	25	"		"	"	

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Tuesday, October 14, 1913

Series Measures Poles only

Scale ?

	HD 2400		Pole	
Sc.1	Sc.1	Sc.2	Sc.2	Sc.2
3.7 5	3.6		B.	
4.1 6	4.4		4.1	
8	6.1		6.2	
9	6.9		6.9	
10	7.0		7.1	
11	t.f.		7.7	7.7
12	"	7.7	7.7	7.6
13	"		8.0	7.9
14	"	8.6	8.6	8.3
15	"		8.8	8.7
16	"		8.9	8.8
17	"	9.2	9.5	9.1
18	"		9.8	9.8
19	"	9.8	9.8	9.7
20	"		9.9	9.9
23	"		t.f.	t.f.
25	"		"	

1.15

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1913phae.proj.1038M

12.05

Wednesday, October 15, 1913

Series Measures by Artificial Light.

Scale C14147 C14146

Image	1	2	3	4
i	7.	1.5	2.7	7.8
e	6.7	B	B.	4.9
a	2.1	B	B	B
f	2.4	B	B.	B
j'	7.	4.9	5.8	7.
a'	3.8	B.	B.	B.
b'	4.8	B	B	2.6
h	8.9	2.0	2.6	6.5
l	7.	7.5	7.9	7.
g	7.9	B	1.8	5.8
k	7	6.2	6.5	7.
j	7.	3.4	4.2	7.8

12.25

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1913phae.proj.1038M

11:12

Thursday, October 16, 1913

Series Measures

Scale Tm Tm D 2306 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Mc 2311 V.86	Mean			Diff.
5	2.829	2.829	B.		2.900 00	2.80	2.875	15	15	+3.64
6	3.941	3.941	B.		4.00 00	3.85	3.921	08	01	3.06
8	5.859	5.859	5.7		5.90 00	5.55	5.721	18	17	2.38
9	6.869	6.869	6.8		6.86 10	6.45	6.65	20	20	2.05
10	6.971	6.971	6.8	7.0	6.93 11	6.85	6.89	04	04	2.00
11	7.	"	7.6	7.6	7.60 00	7.60	7.60	00	00	1.82
12	"	"	7.9	7.9	7.90 00	7.85	7.88	02	03	1.85
13	"	"	8.4	8.3	8.35 01	8.50	8.42	01	08	1.75
14	"	"	8.7	8.8	8.75 10	8.80	8.78	03	02	1.74
15	"	"	9.1	8.9	9.00 11	9.00	9.00	00	00	+1.94
16	"	"	9.4	9.5	9.45 01	9.40	9.42	03	02	+1.84
17	"	"	9.8	9.7	9.75 01	9.70	9.72	03	02	+1.77
18	"	"	9.9	9.9	9.90 00	9.90	9.90	00	00	+2.02
19	"	"	10.2?	10.3?	10.25? 01	9.95	10.10	15	15	+2.18
20	"	"	7.	7.						
23	"	"	"	"						
25	"	"	"	"						

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Thursday October 16, 1913

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Series Measures

Scale Tn Tn D 2308 C 12 Att. +.16

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2				
	2.7	2.91	2.7	2.9	B.	2.90	00	3.49	6.39
	3.6	3.82	3.6	3.8	B.	3.80	00	3.09	6.89
	3.9	4.13	3.8	4.0	B.	4.05	10	2.98	7.03
		4	4.2	4.4	4.4	4.40	00	2.82	7.22
		5	4.8	5.0	4.8	4.90	11	2.62	7.52
		6	5.2	5.4	5.2	5.30	11	2.48	7.78
	5.4	5.64	5.1	5.3	5.5	5.47	12	2.43	7.90
		8	5.7	5.9	5.7	5.80	11	2.32	8.12
		9	6.4	6.6	6.6	6.60	00	2.02	8.62
	6.4	6.61	6.4	6.6	6.3	6.42	22	2.09	8.51
	6.7	6.91	6.9	7.1	6.8	6.93	21	1.97	8.90
		12	7.0	7.2	7.2	7.20	00	1.90	9.10
		13	7.		7.2	7.15	7.7	7.65	01	1.83	9.48
		14	"		7.1	7.1	7.7	7.70	00	1.83	9.53
		15	"		7.7	7.7	7.7	7.70	00	1.83	9.53
		16	"		8.1	8.2	8.15	10	1.80	8.95
		17	"		8.4	8.4	8.40	00	1.80	10.20
		18	"		9.3	9.1	9.20	11	1.84	11.04
		19	"		9.8	9.8	9.80	00	1.95	11.75
		20	"		9.9	9.9	9.90	00	1.97	11.87
		21	"		9.9	9.9	9.90	00	1.97	11.87
		22	"		10.2?	10.3?	10.25	01	2.05	12.302
		23	"		7.	7.				
		24	"		"	"				
		25	"		"	"				
		26	"		"	"				
		27	"		"	"				
		28	"		"	"				

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Thursday, October 16, 1913

Series Measures

Scale 7m 7m D 2311 Pole

See P. 84

	Sc.1	Sc.1	Sc.2	Sc.2		
2.4	2.5	2.6	2.7	B.	2.60	11
3.8	3.9	3.7	3.8	B.	3.85	10
	8	5.5	5.6	5.5	5.55	11
	9	6.4	6.5	6.4	6.45	10
	10	6.8	6.9	6.8	6.85	10
	11	7.		7.6	7.60	00
	12	"		7.8	7.85	01
	13	"		8.6	8.50	11
	14	"		8.8	8.80	00
	15	"		9.1	9.00	11
	16	"		9.4	9.40	00
	17	"		9.7	9.70	00
	18	"		9.9	9.90	00
	19	"		10.0	9.95	01
	20	"		7.	7.	
	23	"		"	"	
	25	"		"	"	

1.04

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1913phae.proj.1038M

Friday, October 17, 1913

2.50

Series Measures. - Series 20

Scale V In D 2410 Pole

	Sc. A	Sc. B	Sc. C.	Sc. c	Sc. c Means.		
5	2.6 2.7	1.8 1.9 B.			1.9	a	+4.49
6	3.8 3.9	3.1 3.2 B.			3.2	a	3.78
8	5.6	4.9 5.0	4.9		4.95	0 1	3.15
9	7.	6.1 6.2	5.9		6.05	2 1	2.65
10	"	6.6 6.7	6.7		6.70	0 0	2.19
11	"	7.	7.7	7.2	7.3 7.40	3 2 1	2.02
12	"	"	7.7	7.7	7.70	0 0	2.03
13	"	"	8.1	8.1	8.10	0 0	2.07
14	"	"	8.8	8.7	8.75	0 1	1.77
15	"	"	9.2	9.2	9.20	0 0	1.74
16	"	"	9.6	9.4	9.50	1 1	1.76
17	"	"	9.5	9.7	9.60	1 1	1.89
18	"	"	9.9	9.9	9.90	0 0	2.02
19	"	"	10.4?	10.4?	10.40?	0 0	1.88
20	"	"	7.	7.			
23	"	"	"	"			
25	"	"	"	"			

Reject above measures made on Scale A. Scales B and C ordinarily used, Scale A only for very bright stars.
Per. H.S.S. Oct. 21, 1913.

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Series 20

Scale V HD 2412 C4 Alt. +.14

	Sc.A	Sc.B	Sc.C		curv	Magn.
1	3.9	3.3 3.4	B.	3.4 ±	3.69	7.09
2	4.8	4.1 4.2		4.15 0.1	3.40	7.55
3	5.1	4.4 4.5	4.2	4.35 1.2	3.33	7.68
4	6.0	5.2 5.3	5.2	5.25 1.0	2.93	8.18
5	7.	6.2 6.3	6.4	6.35 1.0	2.49	8.84
6	"	6.1 6.2	6.1	6.15 0.1	2.56	8.71
7	"	6.7 6.8	6.7	6.75 0.1	2.28	9.03
8	"	7.0 7.1	7.1	7.10 0.0	2.16	9.26
9	"		7.3 7.6	7.45 1.2	2.09	9.54
10	"		8.2 8.3	8.20 0.0	1.95	10.15
11	"		8.4 8.2	8.30 1.1	1.93	10.23
12	"		8.2 8.3	8.25 0.1	1.94	10.19
13	"		8.5 8.3	8.40 1.1	1.91	10.31
14	"		9.1 9.2	9.15 1.0	1.88	11.03
15	"		9.4 9.6	9.50 1.1	1.87	11.37
16	"		9.6 9.7	9.65 0.1	1.87	11.52
17	"		9.8 9.6	9.70 1.1	1.86	11.56
18	"		10.0 10.1	10.05 0.1	186	11.91
19	"		10.4 10.4?	10.40? 0.0	1.88	12.28?
20	"		7. 7.			
21	"		"			
22	"		"			
23	"		"			
24	"		"			
25	"		"			
26	"		"			
27	"		"			
28	"		"			

Measures made with Scale V on Sc. A may be rejected. Pen. S. L. Oct 21, 1913.

4.20

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Saturday October 18, 1913

10.30

Series 99

Scale m mD 3574 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2			
5	4.1	4.3	4.1		4.20	11	+2.19	
6	5.1	5.3	5.4		5.35	10	1.63	
8	6.8	7.0	7.1		7.05	01	1.05	
9	7.		7.7	7.7	7.70	00	1.00	
10	"		7.9	8.0	7.95	01	0.94	
11	"		8.7	8.7	8.70	00	0.72	
12	"		8.8	8.8	8.80	00	0.93	
13	"	9.2	*9.7	9.3	9.25	01	0.92	
14	"		9.7	9.7	9.70	00	0.82	
15	"		9.9	9.9	9.90	00	1.04	
16	"		10.3	10.3?	10.30 25	01	1.01	
17	"		7.	7.				
18	"		"	"				
19	"		"	"				
20	"		"	"				
23	"		"	"				
25	"		"	"				

N.B. For Prismatic Companions see page 96

* Wrong for measured?

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Saturday October 18, 1913

Series 99 Copied

Scale 7m MD 3596 C 10 Alt. 17

	Sc.1	Sc.1	Sc.2	Sc.2		Curve	Magn.
1	4.5	4.7	4.4	4.45	12	2.00	6.55
2	5.4	5.6	5.7	5.65	01	1.50	7.15
3	5.1	5.3	5.4	5.35	10	1.62	6.97
4	6.1	6.3	6.2	6.25	10	1.28	7.53
5	7.		7.3	7.2	7.25 10	1.00	8.25
6	6.8	7.0	7.2	7.10	11	1.03	8.13
7	6.7	6.9	6.8	6.85	10	1.11	7.96
8	7.		7.9	7.8	7.85 10	0.90	8.75
9	"		8.3	8.1	8.20 11	0.89	9.09
10	"		8.7	8.7	8.70 00	0.88	9.58
11	"		8.8	8.8	8.80 00	0.89	9.69
* 12	"		9.9	9.8	9.85 10	0.97	10.82
13			9.7	9.7	9.70 00	0.95	10.65
14			9.9	9.8	9.85 10	0.97	10.82
15			9.8	9.8	9.80 06	0.97	10.77
16			10.53	10.62	10.55 10		
11.30 17			7.	7.			
18			"				
19			"				
20			"				
21			"				
22			"				
23			"				
24			"				
25			"				

N.B. For Prismatic Companions see page 97

* No. 12 defective on this plate?

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2·15

Monday, October 20, 1913

Series 102

Scale m mB 3595 Pole

Sc.1	Sc.1	Sc.2	Sc.2			
3.8405	3.840	B.		4.00	00	+2.39
6	4.955.1	4.9		5.00	1 1	1.98
8	6.977.1	7.3		7.20	1 1	0.90
9	7.	7.9	7.9	7.90	00	0.80
10	"	8.1	7.9	8.00	1 1	0.89
11	"	8.7	8.7	8.70	00	0.72
12	"	8.8	8.8	8.80	00	0.93
13	"	9.4	9.3	9.35	0 1	0.82
14		9.7	9.6	9.65	1 0	0.87
15		9.7	9.9	9.80	1 1	1.14
16		9.8	10.0	9.90	1 1	1.36
17		10.0	10.1	10.05	0 1	1.44
18		7.	7.			
19		10.3?	7.	(10.3? a		1.98?)
20		7.	"			
23		"	"			
25		"	"			

N.B. For Prismatic Companions see page 98

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Monday October 20, 1913

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Series 102

Scale m mD 3597 D 10 Abb. -.18

E.	Sc. 1	Sc. 2	Sc. 2	Sc. 2				
1	5.9	6.1	5.9		6.00	1	1.50	7.50
5.9	6.1	2 5.8 6.0	5.9		6.00	1	0.1 1.50	7.50
6.3	6.5	3 6.3 6.5	6.6		6.53	0	0 1 1.29	7.82
6.4	6.6	4 6.6 6.8	6.8		6.67 (73)	0	1 1 1.24 (19)	7.88 (92)
6.8	6.9	5 6.7 6.9	6.8	6.8	6.88	1	0 1 1 1.12	8.00
6.8	7.0	6 7.1 ? 7.3 ?	7.2	7.3	7.20	2	1 0 1 1.00	8.20 ?
7.0	7.2	7 7	7.2	7.2	7.20	0	0 0 1.00	8.20
		8	7.8	7.7	7.75	0	1 0.87 (7)	8.56 (62)
		9 8.1	8.2	7.8	8.03	12	2 0.83	8.86
		10	7.1	7.1	7.10	0	0 1.03	8.13
		11	7.8	7.8	7.80	0	0 0.86	8.66
		12	8.2	8.2	8.20	0	0 0.81	9.01
		13	8.1	7.9	8.00	1	1 0.83	8.83
		14	8.5	8.4	8.45	1	0 0.80	9.25
		15	10.0	9.9	9.95	0	1 1.16	11.11
		16	8.7	8.7	8.70	0	0 0.81	9.51
		17	9.8	9.7	9.75	0	1 1.08	10.83
		18	9.1	9.2	9.15	1	0 0.89	10.04
		19	9.8	10.0	9.90	1	1 1.14	11.04
		20	7.	7.				
		21						
		22	N. B. For Prismatic Comparisons see page 99					
		23						
		24						
		25						
		26						
		27						
		28						

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1913phae.proj.1038M

Monday October 20, 1913.

Series 102

Scale m mD 3598 C 10 Alt. +.16

	Sc.1	Sc.1	Sc.2	Sc.2				
1	4.3	4.5	4.4		4.45	10	2.21	6.66
2	5.6	5.8	5.7		5.75	01	1.61	7.36
3	5.4	5.6	5.4		5.50	11	1.72	7.22
4	5.8	6.0	5.8		5.90	11	1.55	7.45
5	7.2	7.4	7.2		7.30	11	0.96	8.26
6	7.0	7.2	7.1		7.15	01	1.01 (8)	8.16
7	6.9	7.1	6.8		6.95	12	1.09	8.04
8	7.		8.1	8.1	8.10	00	0.82	8.92
9	"		8.3	8.3	8.30	00	0.80	9.10
10	"		8.7	8.7	8.70	00	0.81	9.51
11	"		8.9	9.2	9.05	12	0.87	9.92
12	"		9.7	9.6	9.65	10	1.03	10.68
13	"		9.7	9.7	9.70	00	1.06	10.76
14			9.9	9.9	9.90	00	1.14	11.04
15			10.0	10.1	10.05	01	1.22	11.27
16			10.3?	10.3?	10.30?	00	1.36	11.66 ?
8.46	17		7.					
	18		"					
	19		N. B. For Prismatic Companions see page 100					
	20							
	21							

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2.07

Tuesday October 21, 1913

Series III

Scale m	M 3692		Pole	Poles only
Sc.1	Sc.1	Sc.2	Sc.2	
3.6 5	3.5	B.		
6	4.7	4.8		
8	6.3	6.4		
9	7.1?	7.4	7.2	
10	7.	7.7	7.6	
11	"	8.3	8.2	
12	"	8.7	8.7	
13	"	9.2	9.2	
14	"	9.3	9.3	
15	"	9.8	9.8	
16	"	9.9	10.0	
17	"	10.3?	7.	
18	"	7.	"	
19	"	"	"	
20	"	"		
83	"			
25	"			

Prismatic Companions.

5	7.	7.9	8.0
6	"	8.8	8.7
8	"	10.2?	10.3?
9	"	7.	
10	"	"	
11	"	"	
12	"	"	

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1913phae.proj.1038M

Tuesday, October 21, 1913

Series III

Scale Mm	Mm D 3697		Pola	Poles only
Sc.1	Sc.1	Sc.2	Sc.2	Sc.2
3.2 5	3.3		B.	
6	4.7		4.5	
8	6.8		6.8	
9	7		7.6	7.6
10	"		7.8	7.8
11	"		8.6	8.6
12			8.7	8.6
13		9.3	9.8	9.6
14			9.6	9.4
15			9.8	9.8
16			10.2?	10.2
17			10.2?	10.1?
18			7.	7.
19			"	"
20			"	"
23			"	
25			"	

Prismatic Companions

5	7.	8.1	8.2
6	"	9.1	9.3
8	"	10.3?	10.1?
9	"	7.	7.
10		"	
11		"	
12			

2.59

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1913phae.proj.1038M

12.10

Wednesday, October 22, 1913

Series 99 Prismatic Companions

Scale 7m	7m B 3574		Pole		
Sc.1	Sc.1	Sc.2	Sc.2		
5	7.	8.4	8.3	8.35 ± 0.1	-1.96
6	"	8.9	8.9	8.90 ± 0.0	-1.92
8	"	10.0	9.9	9.95 ± 0.1	-1.85
9	"	10.3?	10.4?	10.35 ± 0.0?	-1.65?
10	"	7.	7.		
11	"	"	"		
12	"	"	"		
13	"	"	"		
14	"	"	"		
15	"	"	"		

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1913phae.proj.1038M

Wednesday, October 22, 1913

V. Perfect

Series 99 Prismatic Companions

Scale 7m 7h 3576 C10 alt +.17

	Sc.1	Sc.1	Sc.2	Sc.2			Curve	Magn.
1	7.		8.8	8.7	8.75	01	-1.95	6.80
2	"		9.2	9.3	9.25	01	-1.89	7.36
3	"		8.9	8.9	8.90	00	-1.93	6.97
4	"		9.8	9.8	9.80	00	-1.81	7.99
5	"		10.2?	10.2?	10.2??	00	-1.75?	8.45?
6	"		7.	7.				7
7	"		9.8	10.0	9.90	11	-1.80	8.10
8	"		7.	7.				7
9	"							
10	"							

12.40

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1913phae.proj.1038M

2.15

Thursday, October 23, 1913

Series 102 Prismatic Companions.

Scale m	mD 3595		Pole		
Sc.1	Sc.1	Sc.2	Sc.2		
5	7.1	8.3	8.2	8.25	10 -1.86
6		9.1	9.2	9.15	10 -2.17
8		10.4?	10.4?	10.40	00 -2.30
9		7.2	7.		
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
23					
25					

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1913phae.proj.1038M

Thursday, October 23, 1913

Series 102 Prismatic Companions

Scale m mD 3597 D10 Att. 18

	Sc.1	Sc.1	Sc.2	Sc.2			Curve	Magn.
1	7.		9.6	9.5	9.55	01	-2.23	7.32
2			9.6	9.6	9.60	00	-2.24	7.36
3			9.9	10.0	9.95	10	-2.28	7.67
4			9.9	10.0	9.95	10	-2.28	7.67
5			10.5?	10.5?	10.50?	00	-2.37	8.13?
6			7.	7.				
7								
8								
9								
10								
11								

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1913phae.proj.1038M

Thursday, October 23, 1913

Series 102. Prismatic Companions

Scale 7m 7m D 3598 C 10 Att +.16

	Sc.1	Sc.1	Sc.2	Sc.2			Curve	Magn.
1	7.		8.8	8.9	8.85	01	-2.06	6.79
2	"		9.4	9.4	9.40	00	-2.19	7.21
3	"		9.2	9.3	9.25	01	-2.15	7.10
4	"		9.8	9.8	9.80	00	-2.27	7.53
5			7.	7.				F
6								
7								
8								
9								
10								
11	2.40							

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1913phae.proj.1038M

Thursday, October 23, 1913

3.07

Series 114

Scale tn tnD 3723 Pole

Sc.1	Sc.1	Sc.2	Sc.2	Meaw	
2.830 5	2.9 3.1	B.		3.05 01	+3.34
4.143 6	4.1 4.3	B.		4.30 00	2.68
6.163 8	6.1 6.3	6.1		6.23 11 1	1.81
6.971 9	6.9 7.1	7.2		7.13 001	1.51
10	7.	7.4	7.3	7.35 01	1.54
11		8.1	8.0	8.05 10	1.37
12		8.4	8.4	8.40 00	1.33
13		8.7	8.8	8.75 10	1.42
14		8.8	8.9	8.85 01	1.67
15		9.4	9.6	9.50 11	1.44
16		9.7	9.7	9.70 00	1.56
17		9.8	9.8	9.80 00	1.69
18		9.9	10.1	10.00 11	1.92
19		7.	7.		5
20		"			=
23		"			
25					

Prismatic Companions

5	7.	7.7	7.8	7.75 10	-1.36
6	"	8.4	8.4	8.40 00	-1.42
8	"	9.8	9.8	9.80 00	-1.70
9	"	7.	10.0	10.00 a	-1.30
10	"	"	7.		5
11	"	"			=

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1913phae.proj.1038M

Thursday, October 23, 1913

Series 114

Scale Tn TnD 3728 Pole

Sc.1	Sc.1	Sc.2	Sc.2		~~Curve Mayr~~
3.2345	3.2 3.4	B.		3.40	00
6	4.1	4.0		4.05	10
8	6.3	6.2		6.25	10
9	7.2?	7.3	7.4	7.30	1 01
10	7.	7.8	7.6	7.70	11
11	"	8.1	8.0	8.05	10
12	"	8.4	8.4	8.40	00
13	"	8.8	8.8	8.80	00
14		9.2	9.1	9.15	01
15		9.6	9.6	9.60	00
16		9.8	9.7	9.75	01
17		9.7	9.8	9.75	10
18		10.2	10.1?	10.15	01
19		7.	7.		
20					
23					
25					

Prismatic Companions

5	7.	7.8	7.8	7.80 00
6		8.6	8.6	8.60 00
8		9.8	9.8	9.80 00
9		7.	7.	1.
10				
11				

4.00

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1913phae.proj.1038M

Friday, October 24, 1913

3.03

Series 104

Scale 7m 7mD 3622 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Sc.2			P.105	Mean			Diff.
	3.0325	3.133		B.		3.25	10	3.35	3.30	05	05	3.09
6		4.244		4.0		4.20	22	4.25	4.22	02	03	2.76
8		6.163	6.0	5.9		6.07	212	5.95	6.01	06	06	2.09
9		7		7.2	7.2	7.20	00	6.90	7.05	15	15	1.65
10				7.5	7.4	7.45	10	7.13	7.29	16	16	1.60
11				7.8	7.9	7.85	01	7.75	7.80	05	05	1.62
12				8.4	8.3	8.35	01	8.05	8.20	15	15	1.53
13				8.8	8.8	8.80	00	8.50	8.65	15	15	1.52
14				8.8	8.8	8.80	00	8.80	8.80	00	00	1.721
15				9.4	9.4	9.40	00	9.40	9.40	00	00	1.54
16				9.6	9.6	9.60	00	9.70	9.65	05	05	1.61
17				9.7	9.7	9.70	00	9.75	9.72	02	03	1.77
18				10.2?	10.1?	10.15?	01	10.3?	10.22?	07	08	1.70
19				10.3?	7.	10.3?	.		10.3?	a	.	1.98?
20					7.							
23												
85												

Prismatic Companions

5	7.	7.6		7.7	7.4	7.57	012	7.65	7.61	04	04	−1.221
6				8.4	8.4	8.40	00	8.35	8.38	02	03	−1.40
8				9.7	9.7	9.70	00	9.60	9.65	05	05	−1.55
9				9.9	9.9	9.90	00	.	9.90	a	.	−1.20
10				7.	7.							

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Friday October 24, 1913

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Series 104

Scale 4m mD 3624 B7 Wt. +.221 Prismatic Companions

Sc.1	Sc.1	Sc.2	Sc.2	Curve	Magn.	Sc.1	Sc.2	Sc.2	Curve	Magn.
3.335 1	3.436	B.		3.55 ±0	3.08 6.63	7.	7.9	8.0	7.95 ±0	-1.32 6.63
3.941 2	4.143	B.		4.20 ±1	2.77 6.97	"	8.2	8.3	8.25 0 1	-1.36 6.89
3	4.143	4.5		4.40 ±1	2.19 6.59	"	8.2	8.3	8.25 0 1	-1.36 6.89
5.264 4	4.951	5.4		5.30 ±2 1	2.30 7.60		9.2	8.9	9.05 2 1	-1.43 7.62
5	5.1 5.3	5.2		5.25 ±0	2.32 7.57		8.9	8.9	8.90 0 0	-1.42 7.48
6	5.5 5.7	5.6		5.55 ±0	2.15 7.80		9.5	9.3	9.40 1 1	. .
7	5.4 5.6	5.7		5.55 ±0.1	2.15 7.80		9.2	9.2	9.20 0 0	-1.43 7.77
8	5.3 5.5	5.3		5.30 ±1 1	2.26 7.66		8.8	8.9	8.85 0 1	-1.42 7.43
9	5.8 6.0	5.9		5.85 0 1	2.05 8.00		9.7	9.7	9.70 0 0	. .
10	5.9 6.1	5.9		~~5.90~~ 6.00 ~~0 0~~ 1 1	2.04 8.04		9.8	9.9	9.85 0 1	, .
11	6.8 7.0	6.7		6.85 2 1	1.79 8.64		10.0	10.1?	10.05? 0 1	. .
12	7.	7.2	7.3	7.25 0 1	1.69 8.94		7.	7.		
13	6.9 7.1	7.2	7.2	7.15 ±0	1.70 8.85					
14	7.	7.7	7.8	7.75 ±0	1.60 9.35					
15	"	8.2	8.2	8.25 0 0	1.57 9.77					
16	"	8.2	8.3	8.25 0 1	1.57 9.82					
17	"	8.7	8.7	8.70 0 0	1.59 10.29					
18		9.2	9.1	9.15 0 ±1	1.62 10.77					
19		8.8	8.8	8.80 0 0	1.60 10.40					
20		9.2	9.2	9.20 0 0	1.63 10.83					
21		9.7	9.7	9.70 0 0	1.68 11.38					
22		9.2	9.2	9.20 0 0	1.63 10.83					
23		9.8	9.8	9.80 0 0	1.70 11.50					
24		9.9	9.8	9.85 1 0	1.70 11.55					
25		7.								

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1913phae.proj.1038M

Friday October 24, 1913

Series 104

Scale 7n 7nD 3627 Pole

Magn.		Sc.1	Sc.1	Sc.2	Sc.2		
6.63	5	3.2 3.4	3.1 3.3	B.		3.35	0 1
6.89	6		4.2 4.4	4.1		4.25	2 1
6.89	8		5.8 6.0	5.9		5.95	0 1
7.62	9		6.8 7.0	6.9	6.8	6.90	1 0 1
7.48	10		7.0 7.21	7.1	7.1	7.13	1 0 0
	11		7.	7.7	7.8	7.75	1 0
7.77	12		"	7.9	8.2	8.05	1 2
7.43	13			8.6	8.4	8.50	1 1
	14			8.9	8.7	8.80	1 1
	15			9.5	9.3	9.40	1 1
	16			9.7	9.7	9.70	0 0
	17			9.8	9.7	9.75	0 1
	18			10.3	? 7.	10.3?	?
	19			7.	7.		
	20			"	"		
	23						
	25						

Prismatic Companions.

5	7.	7.7	7.6	7.65 1 0
6		8.4	8.3	8.35 0 1
8		9.6	9.6	9.60 0 0
9		7.		
10				

H.43

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1913phae.proj.1038M

Tuesday, October 28, 1913

3.00

Series 98

Scale M MD 3560 Pole

Reduce Series in usual manner. See Remark page 181.

	Sc.1	Sc.1	Sc.2	Sc.2	Mean		MD 3565 / N 109		Mean	Diff, Rev. Wedge	
	3.5 3.7										
5	3.4 3.6		B.		3.65	1 0	2.84	3.35	3.50	15 15	2.99
6	4.2 4.4		4.1		4.25	2 1	2.86	4.20	4.22	03 02	2.89
8	5.9 6.1		6.1		6.10	0 0	2.13	6.00	6.05	05 05	2.18
9	6.9 7.1		7.2		7.15	1 0	1.68	6.95	7.05	10 10	1.78
10	7.		7.3	7.2	7.25	1 0	1.77	7.23	7.24	01 01	1.78
11			7.8	7.8	7.80	0 0	1.75	7.75	7.78	02 03	1.77
12			8.2	8.2	8.20	0 0	1.66	7.90	8.05	15 15	1.81
13			8.8	8.7	8.75	0 1	1.55	8.65	8.70	05 05	1.60
14			9.3	9.1	9.20	1 1	1.45	8.85	9.02	18 17	1.63
15			9.4	9.5	9.45	0 1	1.63	9.25	9.35	10 10	1.73
16			9.7	9.7	9.70	0 0	1.70	9.70	9.70	00 00	1.70
17			9.8	9.7	9.75	0 1	1.88	9.70	9.72	03 02	1.91
18			7.	7.		,		9.95	9.95	. a	2.11
19			7.			.		~~9.90~~ 10.00	9.90	. a	2.52
20											
23											
25											

Prismatic Companions

5	7.		7.8	7.9	7.85	0 1	+1.36	7.55	7.70	15 15	−1.21
6			8.6	8.7	8.65	0 1	−1.54	8.40	8.52	13 12	−1.41
8			9.8	9.8	9.80	0 0	−1.57	9.75	9.78	02 03	−1.55
9			10.3?	10.4?	10.35?	1 0	+1.52	10.00	10.18	17 18	−1.35
10			7.	7.							

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1913phae.proj.1038M

Tuesday, October 28, 1913

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Series 98

Scale m MD 3561 D12 Att -18 Prismatic Companions

Sc.1	Sc.1	Sc.2	Sc.2	Curve	Magn	Sc.1	Sc.2	Sc.2	Curve	Magn
1	5.9 6.1	5.6	5.85	2.25	8.10	7.	9.7	9.7	9.70 - 1.52	8.18
2	5.4 5.6	5.6	5.60	2.32	7.92		9.1	8.9	9.00 - 1.48	7.52
3	6.2 6.4	6.1	6.25	2.10	8.35		9.7	9.8	9.75 - 1.52	8.23
4	6.4 6.6	6.8	6.70	1.94	8.64		10.4?	10.3?	10.35 - 1.40	8.95?
5	6.2 6.4	6.2	6.30	2.07	8.37		9.8	9.9	9.85 - 1.51	8.34
6	6.8 7.0	6.8	6.90	1.88	8.78		10.1?	10.2?	10.15 - 1.45	8.70?
7	7.2 7.4	7.2	7.2 7.27	1.79	8.99 9.06					
8		7.3	7.4 7.35	1.76	9.11					
9		7.7	7.7 7.70	1.71	9.41					
10		7.8	7.8 7.80	1.69	9.49					
11		7.9	7.9 7.90	1.69	9.59					
12		8.2	8.0 8.10	1.67	9.77					
13		7.9	7.9 7.90	1.69	9.59					
14		8.7	8.8 8.75	1.63	10.38					
15		8.4	8.4 8.40	1.66	10.06					
16		8.7	8.8 8.75	1.63	10.38					
17		9.5	9.6 9.55	1.79	11.34					
18		9.7	9.7 9.70	1.86	11.56					
19		9.8	9.9 9.85	2.01	11.86					
20		9.8	9.9 9.85	2.01	11.86					
21		10.0	10.1 10.05	2.37?	12.42					
22		7.	7.							
23										
24										
25										
26										
27										
28										

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1913phae.proj.1038M

Tuesday October 28, 1913

Series 98

Scale 7m HD 3562 C 12 Alt + 17 Prismatic Companions

	Sc.1	Sc.1	Sc.2	Sc.2	Curve	Wgt	Sc.1	Sc.2	Sc.2	Curve	Wgt
	3 43 8.1	31									
1	2.9		B.				7.	7.9	7.8	7.85 10	-1.28 6.57
2	43 4.1		4.0	4.15 12		2.88 7.03		8.2	8.1	8.15 01	-1.36 6.79
3	44 4.2		4.2	4.30 11		2.83 7.13		8.7	8.8	8.75 10	-1.46 7.29
4	58 5.1		5.1	5.20 11		2.48 7.68		8.8	8.5	8.65 21	-1.44 7.21
5	60 5.8		5.8	5.90 11		2.23 8.13		9.1	9.1	9.10 00	-1.50 7.60
6	61 5.9		5.8	5.95 12		2.19 8.14		9.6	9.7	9.65 01	-1.52 8.13
7	64 6.2		6.2	6.1	6.23 201	2.09 8.32		9.7	9.8	9.75 10	-1.51 8.24
8	64 6.2		6.4	6.3	6.37 001	2.03 8.42		9.9	9.9	9.90 00	-1.50 8.40
9			7.1	7.2	7.15 10	1.80 8.95		10.0	10.0	10.00 00	-1.48 8.52
10			7.2	7.2	7.20 00	1.79 8.99		7.	7.		
11			7.8	7.5	7.65 21	1.72 9.37					
12			7.7	7.8	7.75 10	1.69 9.44					
13			8.3	8.2	8.25 10	1.67 9.92					
14			8.2	8.2	8.20 00	1.67 9.87					
15			7.9	8.2	8.05 12	1.68 9.73					
16			8.3	8.4	8.35 10	1.66 10.01					
17			8.8	8.7	8.75 01	1.63 10.38					
18			9.4	9.6	9.50 11	1.75 11.25					
19		9.8 10.0	9.9		9.85 01	2.00 11.85					
20			9.9	9.9	9.90 00	2.07 11.97					
21			10.1?	10.3?	10.20 11						
22			7.	7.							
23											

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1913phae.proj.1038M

Tuesday, October 28, 1913.

Series 98

Scale 7m 7mD 3565 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean		Curve	Magn
5	3.1 3.3	3.2 3.4	B.		3.35	1 0	3.13	6.48
6	4.1 4.3	4.2 4.4	4.0	4.1	4.20	1 2 2 1	2.87	7.07
8		5.9 6.1	5.9		6.00	1 1	2.18	8.18
9		6.8 7.0	6.9		6.95	0 1	1.86	8.81
10		7.1 7.3	7.2	7.2	7.23	1 0 0	1.79	9.02
11		7.	7.7	7.8	7.75	1 0	1.70	9.45
12		"	7.9	7.9	7.90	0 0	1.69	9.59
13		"	8.7	8.6	8.65	1 0	1.64	10.39
14		"	8.8	8.9	8.85	0 1	1.63	10.48
15		"	9.3	9.2	9.25	1 0	1.67	10.92
16		"	9.7	9.7	9.70	0 0	1.86	11.56
17		"	9.8	9.6	9.70	1 1	1.86	11.56
18		"	10.0	9.9	9.95	0 1	2.18	12.13
19		10.2	9.9	9.9	~~9.90~~ 10.00	~~0 0~~ 2 1 1	2.30	12.30
20		"	7.	7.				
23		"	"	"				
25		"	"	"				

Prismatic Companions

5	7.	7.5	7.6	7.55	1 0	-1.21	6.34
6		8.4	8.4	8.40	0 0	-1.39	7.01
7		9.7	9.8	9.75	1 0	-1.61	8.24
9		9.9	10.1	10.00	1 1	-1.79	8.51
10		7.	7.				

5.35
(about 10m out)

See p 106

N.B. This plate was measured by artificial light

See page 181

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1913phae.proj.1038M

Wednesday, November 5, 1913

2.20 Series 137 Poles only

Scale m.		m D 3935		Pole	
	Sc.1	Sc.1		Sc.2	Sc. 2
	3.7	5	3.6	B.	
	4.8	6	4.8	4.9	
	6.8	8	6.9	6.8	
		9	7.	7.7	7.7
		10	"	7.8	7.8
		11	"	8.4	8.3
		12	"	8.8	8.8
		13	"	8.9	9.2
		14	"	9.3	9.4
		15	"	9.6	9.7
		16	"	9.7	9.8
		17	"	10.1?	10.2?
		18	"	7.	
		19	"	7.	
		20	"	"	
		23	"	"	
		25	"	"	

Prismatic Companions

5	7.	8.1	7.9
6		8.7	8.8
8		9.9	10.0
9		7.	7.
10		"	"
11		"	"

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1913phae.proj.1038M

Wednesday, November 5, 1913

Series 137

Pole only

Scale m.	MD 3990		Pole	
	Sc.1	Sc.1 Sc.2	Sc.2	Sc.2
3.9	5	3.9	B.	
	6	4.9	4.9	
	8	6.2	6.3	
	9	7.2?	7.2	7.1
	10	7.	7.8	7.8
	11	"	8.2	8.3
	12	"	8.7	8.6
	13	"	9.1	9.2
	14	"	9.6	9.4
	15	" 9.9	10.1?	9.9
	16	" 10.0	9.9	10.0
	17	"	10.2?	10.3?
	18	"	7	7.
	19	"	"	
	20	"	"	
	23	"	"	
	25			

Prismatic Comparisons

5	8.2	7.9
6	8.8	8.7
8	10.2?	10.2?
9	7.	
10	"	
11	"	

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1913phae.proj.1038M

Wednesday, November 5, 1913

Series 137

Polis only

Scale 7m.		7m 3996		Pole
Sc.1		Sc.1	Sc.2	Sc.2
3.3	5	3.4	B.	
	6	4.6	4.6	
6.4	8	6.3	6.2	6.3
	9	7.3?	7.4	7.3
	10	7.	7.8	7.8
	11		8.3	8.3
	12		8.7	8.8
	13		9.2	9.3
	14		9.4	9.4
	15		9.7	9.7
	16		10.1?	10.2?
	17		7.	7.
	18			
	19			
	20			
	23			
	25			

Prismatic Companions

	5	7.	7.8	7.9
	6		8.7	8.8
	8		9.8	9.9
	9			7.
	10			
	11			

3:42

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1913phae.proj.1038M

Tuesday, November 11, 1913

3.31 Series 132

Scale m mD 39 37 Pole Poles only

	Sc.1	Sc.1	Sc.2	Sc.2
2.6	5	2.4	B.	
3.8	6	3.8	B.	
	8	5.5	5.7	
	9	6.4	6.7	
	10	6.7	6.8	
	11	7.	7.7	7.6
	12		7.9	7.8
	13		8.4	8.5
	14		8.7	8.7
	15		9.0	8.9
	16	9.5	9.6	9.6
	17		9.7	9.6
	18		10.3?	10.2?
	19		7.	7.
	20			
	23			
	25			

Prismatic Companions

5	6.9	7.2	
6	7.	8.1	8 7.1
8		9.2	9.2
9		9.9	9.8
10		10.1?	9.9
11		7.	

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1913phae.proj.1038M

Tuesday, November 11, 1913

Series 132 Poles only

Scale m	MD 3942		Pole	
	Sc.1	Sc.1	Sc.2	Sc.2
2.9	5	2.8	B.	
4.1	6	3.9	4.0	
	8	6.1	6.1	
	9	7.1?	7.2	7.2
	10	7.	7.5	7.4
	11		8.1	8.2
	12		8.3	8.3
	13		8.7	8.8
	14		9.4	9.3
	15		9.5	9.4
	16		9.7	9.8
	17		9.9	9.9
	18		7.	7.
	19		"	"
	20			
	23			
	25			

	Prismatic		Companions	
5		7.6	7.6	
6		8.3	8.3	
8		9.8	9.8	
9		10.3?	10.3?	
10		7.	7.	
11				

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1913phae.proj.1038M

Tuesday, November 11, 1913

Series 132

Scale m.	HD 3948		Pole		Poles only
	Sc. 1	Sc. 1	Sc. 2	Sc. 2	
2.4	5	2.5	B.		
3.4	6	3.7	B.		
	8	5.8	5.7		
	9	6.3	6.6		
	10	6.9	6.9	6.9	
	11		7.6	7.7	
	12		7.9	7.8	
	13		8.5	8.4	
	14		8.8	8.8	
	15		9.2	9.2	
	16		9.4	9.5	
	17		9.8	9.9	
	18		10.3?	10.4?	
	19		7.	7.	
	20				
	23				
	25				

Prismatic Companions

5	7.0	7.3	
6		7.9	7.9
8		9.3	9.2
9		9.9	10.1?
10		10.2?	10.2?
11		7.	

4.37

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1913phae.proj.1038M

Friday, November 14, 1913

1.35 Series 152

Scale m. MD 4154 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean.	MD 4159	Mean		Diff.
2.8 3.0 5	2.7 2.9		B.		2.95	0 1	3.10	3.02	07 08 3.37
3.8 4.0 6	3.8 4.0		B		4.00	0 0	4.36	4.18	18 17 4.80
5.9 6.1 8	6.1 6.3		5.8	5.9	6.08	2 2 1 3	6.20	6.11	09 09 1.99
9	6.9 7.1		7.1		7.10	0 0	6.95	7.02	08 07 1.68
10	7.		7.4	7.3	7.35	0 1	7.30	7.32	03 02 1.57
11	"		7.9	7.8	7.85	1 0	7.80	7.82	03 02 1.60
12	"		8.2	8.2	8.20	0 0	8.00	8.10	10 10 1.63
13	"		8.8	8.8	8.80	0 0	8.70	8.75	05 05 1.42
14			8.9	9.2	9.05	1 2	8.80	8.92	13 12 1.60
15			9.2	9.3	9.25	0 1	8.95	9.10	15 15 1.84
16			9.7	9.7	9.70	0 0	9.55	9.62	08 07 1.64
17			9.8	9.8	9.80	0 0	9.70	9.75	05 05 1.64
18			7.	7.			9.86	9.85	a 2.07
19			"	"					
20			"	"					
23									
25									

Prismatic Companions

5			7.6	7.4	7.50	1 1	7.75	7.62	12 13 — 1.23
6			8.3	8.2	8.25	1 0	8.25	8.25	00 00 — 1.27
8			9.5	9.7	9.60	1 1	9.40	9.50	10 10 — 1.40
9			9.9	9.9	9.90	0 0	9.85	9.88	02 03 — 1.18
10			7.	7.			10.25?	10.25?	— 1.36
11			7.	"					

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1913phae.proj.1038M

Friday, November 14, 1913

Series 152 Lopsided

Scale m. mD 4155 B9 Att +.212 Prismatic Companions

Sc.1	Sc.1	Sc.2	Sc.2	Curve Magn.		Sc.1	Sc.2	Sc.2		
3.1 1	3.1	B.	3.30	3.25	6.55	7.	7.6	7.8	- 1.23	6.47
3.8 2	3.7	B.	3.95	2.91	6.86		7.9	7.9	- 1.26	6.64
3.8 3	3.8	B.	4.00	2.89	6.89		8.1	8.1	- 1.27	6.83
4.1 4	4.0	B.	4.25	2.80	7.05		8.3	8.3	- 1.29	7.01
5	4.8	4.7	4.85	2.50	7.35		8.6	8.5	- 1.30	7.25
6	4.8	5.3	5.15	2.34	7.49		8.7	8.7	- 1.30	7.40
7	5.7	5.6	5.75	2.10	7.85		8.9	8.8	- 1.30	7.55
8	5.8	5.9	5.95	2.02	7.97		9.4	9.3	- 1.30	8.05
9	5.9	5.9	6.00	2.01	8.01		9.2	9.3	- 1.30	7.95
10	6.3	6.7	6.60	1.80	8.40		9.9	9.8	- 1.31	8.54
Defective? 11	6.8	7.3	7.10	1.69	8.79		10.2?	10.2?	- 1.32	8.88?
12	6.7	6.8	7.1	1.70	8.63		9.9	9.9	- 1.31	8.59
13	7.	7.4	7.6	1.64	9.14			7.		F
14		7.6	7.4	1.64	9.14					
15		7.9	7.8	1.60	9.45					
16		7.8	7.9	1.60	9.45					
17		8.2	8.2	1.60	9.80					
18		8.7	8.4	1.60	10.15					
19		8.6	8.3	1.60	10.05					
20	8.6	8.7	8.3	1.60	10.13					
21		8.9	8.9	1.61	10.51					
22	8.9	9.3	9.9	1.63	10.66					
23		9.6	9.4	1.76	11.46					
24		9.9	9.9	1.81	11.66					
25		9.9	9.8	1.81	11.66					
26		9.9	10.0	1.81	11.66					
27		10.2?	10.2?	1.90	12.10?					
28		9.9	10.2?	1.86	11.91?					

Ch. F.C.

N.B. 29 is too faint

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1913phae.proj.1038M

Friday, November 14, 1913

Series 152

Scale m. mR 4159 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean
	3.1	3.1			
5	2.9	2.9	B.		3.10 0.0
	4.4	4.3			
6	4.2	4.1	B.		4.35 0.1
		6.3			
8		6.1	6.1		6.20 1.1
		7.0			
9		6.8	6.9		6.95 0.1
10		7.	7.4	7.2	7.30 1.1
11			7.8	7.8	7.80 0.0
12			7.9	8.1	8.00 1.1
13			8.7	8.7	8.70 0.0
14			8.8	8.8	8.80 0.0
15			8.8	9.1	8.95 2.1
16			9.5	9.6	9.55 1.0
17			9.7	9.7	9.70 0.0
18			9.8	9.9	9.85 0.1
19			7.	7	
20					
23					
25					

Prismatic Companions

5	7.8	7.7	7.75	0.1
6	8.2	8.3	8.25	0.1
8	9.3	9.5	9.40	1.1
9	9.8	9.9	9.85	0.1
10	9.7	10.2?	10.25?	1.0
11	7.	7.		

3.55

See page 116

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1913phae.proj.1038M

Friday, November 21, 1913

1:40 Series 152

Scale m. MD 4159 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	MD 4165	Mean.			Diff.
5	3.0 3.2	2.9 3.1	B		3.15	0 1	3.55	3.35	20	20 3.04
6	4.1 4.3		4.0		4.15	1 2	4.85	4.50	35	35 2.48
8	6.1 6.3		5.9	6.2	6.13	2 2 1	6.50	6.32	19	18 1.78
9	6.8 7.0		6.9		6.95	0 1	7.50	7.22	27	28 1.48
10	7.		7.2	7.3	7.25	0 1	7.65	7.45	20	20 1.44
11	"		7.7	7.7	7.70	0 0	8.15	7.92	22	23 1.50
12	"		8.3	8.2	8.25	1 0	8.35	8.30	05	05 1.43
13	"		8.7	8.8	8.75	1 0	8.75	8.75	00	00 1.42
14			8.8	8.8	8.80	0 0	9.00	8.90	10	10 1.62
15			9.3	9.1	9.20	1 1	9.40	9.30	10	10 1.64
16			9.4	9.6	9.50	1 1	9.80	9.65	15	15 1.61
17			9.7	9.7	9.70	0 0	9.85	9.78	08	07 1.71
18			9.9	9.9	9.90	0 0	10.25	10.08	18	17 1.84
19			10.1?	10.0	10.05	1 0		10.05	a	. 2.23
20			7.	7.						
22										
25										

Prismatic Companions

5			7.6	7.6	7.60	0 0	7.80	7.70	10	10 − 1.31
6			8.2	8.2	8.20	0 0	8.70	8.45	25	25 − 1.47
8			9.4	9.3	9.35	0 1	9.70	9.52	17	18 − 1.42
9			9.8	9.8	9.80	0 0	9.95	9.88	08	07 − 1.18
10			10.3? 7.	10.2?	10.25	1 0	.	10.25	a	. −1.36
11				7.						

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1913phae.proj.1038M

Friday, November 21, 1913

Series 152 Lapsed

Scale 7m 7M 4163 D1 Alt. 18 Prismatic Companions

	Sc.1	Sc.1		Sc.2	Sc.2	Mean	Sigma	Magn	Sc.1	Sc2	Sc.2	
1	5.6	5.8		5.4	5.7	5.63	2.22	7.85	7.	9.3	9.3	9.30 − 1.40 7.90
2	5.8	6.0		5.8		5.90	1.92	7.82		9.3	9.3	9.30 − 1.40 7.90
3	5.8	6.0		5.9		5.95	1.90	7.85		9.7	9.7	9.70 − 1.34 8.36
4	6.2	6.4		6.2		6.30	1.78	8.08		9.8	9.8	9.80 − 1.33 8.47
5	6.2	6.4		6.2		6.30	1.78	8.08		9.9	9.8	9.85 − 1.32 8.53
6	6.8	7.0		6.8		6.90	1.61	8.51		10.2?	7.	10.2 − 1.27 8.93
7	6.6	6.8	6.7	6.8	6.8	6.82	1.62	8.44		7.		
8	7.			7.2	7.2	7.20	1.57	8.77				
9				7.3	7.3	7.30	1.53	8.83				
10			7.3	7.2	7.3	7.27	1.53	8.80				
11				7.9	7.9	7.90	1.50	9.40				
12				8.2	8.2	8.20	1.49	9.69				
13				8.2	8.1	8.15	1.49	9.64				
14				8.3	8.4	8.35	1.49	9.84				
15				8.7	8.7	8.70	1.50	10.20				
16				8.8	8.8	8.80	1.52	10.32				
17				9.3	9.3	9.30	1.61	10.91				
18				9.9	9.8	9.85	1.75	11.60				
19				9.7	9.8	9.75	1.72	11.47				
20				9.8 10.2?	9.9	9.85	1.75	11.60				
21				9.9	9.9	9.90	1.79	11.69				
22				9.9	9.9	9.90	1.79	11.69				
23				9.8	9.9	9.85	1.75	11.60				
24				10.2?	10.2	10.20	1.94	12.14?				
25												
26												
27												
28												

Correct ident.?

Correct ident.?

Ch. F. b.

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1913phae.proj.1038M

Friday, November 21, 1913

Series 152 Isolated

Scale 7m. 7mD 4164 C1 Alt +.17 Prismatic Companions

	Sc.1	Sc.1	Sc.2	Sc.2				Sc.1	Sc.2	Sc.2	
1	4.6	4.8	4.8	4.80	2.35 ~~3.65~~	7.15		8.3	8.4	8.35 - 1.40	6.95
2	4.8	5.0	4.9	4.95	2.29 ~~3.71~~	7.24		8.8	8.7	8.75 - 1.41	7.34
3	5.3	5.5	5.2	5.35	2.11 ~~3.88~~	7.46		8.8	8.8	8.80 - 1.40	7.40
4	5.8	6.0	5.9	5.95	1.90	7.85		8.9	9.0	8.95 - 1.40	7.55
6.2 6.4 5	6.3	6.5	6.3 ~~6.5~~	6.40	1.74	8.14		9.7	9.7	9.70 - 1.35	8.35
6	6.2	6.4	6.3	6.35	1.78	8.13		9.8	9.6	9.70 - 1.35	8.35
7	6.8	7.0	6.7	6.85	1.61	8.46		9.8	9.9	9.85 - 1.32	8.53
8	7.		7.6	7.4 7.50	1.51	9.01		7	7.		
9			7.8	7.6 7.70	1.50	9.20					
10			7.8	7.7 7.75	1.50	9.25					
11			7.9	7.9 7.90	1.49	9.39					
12			8.3	8.2 8.25	1.48	9.73					
13			8.3	8.3 8.30	1.49	9.79					
14			8.8	8.8 8.80	1.51	10.31					
15			9.3	9.2 9.25	1.60	10.85					
16			9.6	9.4 9.50	1.65	11.15					
17			9.7	9.8 9.75	1.71	11.46					
18			10.0	9.8 9.90	1.78	11.68					
19			10.3 ~~10.4~~	10.3 10.30	1.98	12.28	??				
20			7.	7.							
21											
22											
23											
24											
25											
26											
27											
28											

Ch. F.6.

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1913phae.proj.1038M

Friday, November 21, 1913

Series 152

Scale 7m 7nD 4165 Pole

	Sc.1	Sc.1	Sc.2	Sc.2	Mean
3.4 5	3.6 3.3	3.5	B.		3.55 0 1
6	4.8	5.0	4.7		4.85 2 1
8	6.4	6.6	6.4		6.50 1 1
9	7.		7.4	7.6	7.50 1 1
10	"		7.7	7.6	7.65 1 0
11	"		8.1	8.2	8.15 1 0
12	"		8.4	8.3	8.35 0 1
13			8.7	8.8	8.75 1 0
14			9.1	8.9	9.00 1 1
15			9.5	9.3	9.40 1 1
16			9.8	9.8	9.80 0 0
17			9.8	9.9	9.85 0 1
18			10.2?	10.3?	10.25 0 1
Defect meas. first. 19			~~10.1~~ 7.		
20			7. "		
23					
25					

Prismatic Companions

5	7.8	7.8	7.80	0 0
6	8.7	8.7	8.70	0 0
8	9.7	9.7	9.70	0 0
9	9.9	10.0	9.95	1 0
10	7.	7.		
11	See page 119			
12				

4:15

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1913phae.proj.1038M

Tuesday. November 25, 1913

11:25 Measures for Color Index

Scale V

		mC 4189			Pole		Prismatic		Companions	
		Sc.A	Sc.B	Sc.C	Sc.C Diff.	Sc.C	Sc.A	Sc.B	Sc.C	Diff.
	5	0.4	0.2		6.28		4.8	4.6		1.88
	6	1.4	1.2		5.88		5.1	4.9		2.18
	7	1.7	1.5		5.89		5.9	5.7		1.69
	8	2.8	2.6				7.		6.9	
	9	3.3	3.1		5.51				6.9	1.71
3.4 3.2	10	3 4.2	3.10 3.0		5.84				7.1	1.84
	11	3 4.8	3.6		5.70				7.9	1.40
	12	4.1	3.9		5.64				8.2	1.34
	13	4.8	4.6	4.1 4.2 4.33 3.12	4.2 5.92				8.7	1.55
	14	5.1	4.9	4.8 4.9 4.87 3.02	5.2 5.57				9.2	1.24
	15	5.6	5.4	5.1 5.2 5.27 3.12	5.2 5.51				9.7	1.08
	16	5.9	5.7	5.8 5.9 5.80 3.10	5.8 5.27				7.	
	17	7.		5.9 6.0 5.95 3.02	5.9 5.23					
	18				6.4 5.53					
	19				6.9 5.32					
	20				7.3 5.35					
	21				7.6					
	22				7.8					
	23				7.8 5.54					
	24				7.9					
	25				8.2					
	26				8.7					
+ 87°	15	2.8	2.6		5.24		7.		6.3	1.54
+ 88°	80	3.7	3.5		5.42				7.4	1.52
+ 88°	86	3.1	2.9		5.88	No.			7.2	1.68
+ 88°	115	3.8	3.6		5.28	29- 9.8			7.4	1.48
	27				9.4 9.2	30- 7.				
	28				9.3	31-				

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1913phae.proj.1038M

Tuesday, November 25, 1913

Color Index

Scale V Inc 4189 · Pole Prismatic Companions

		Sc.A	Sc.B	Sc.C	Sc.B	Sc.C	Curve	magn.		Sc.A	Sc.B	Sc.C	Curve	magn.	
	2n	2.7	2.5				5.62	8.12	157	5.9	5.7	5.8	1.80	7.55	100
	3n	2.9	2.7				5.59	8.29	165	7.		7.1	1.54	8.64	100
	4n	3.6	3.4				5.52	8.92	71			7.7	1.44	9.14	93
	5n	4.1	3.9				5.50	9.40	73			8.3	1.36	9.66	99
	6n	4.7	4.5	3.6	3.7	4.1	(3.9	4.0)				8.7			
(4.8)	7n	5.8	5.6	4.2	4.3	5.7	(4.7	4.7)				8.9			
(5.9)	8n	5.9	5.8	5.0	5.1	5.9	(5.1	5.2	....)			9.5			
	9n	7.		6.1	6.2	6.2						7.			
	10n					6.8									
	11n					7.2									
	12n					7.9									
+87°	12	3.4	3.2				5.54	8.74	56						
+88°	2	2.9	2.7				5.59	8.29	19						
+88°	90	3.8	3.6				5.51	9.11	14						
+88°	105	3.3	3.1				5.55	8.65	45						

8) 5800.
+75 62

omitting 3n, 87°12, 88°90

5) 365
+73.

4) 392
+98

omitting 3n

3) 292
+97.

6n, 7n, and 8n remeasured on Scale B. Nov. 26, 1913 - G. F. M.

C

7n on Sc. A and Sc. C wrong unit.

8n - Sc. C wrong star.

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Tuesday, November 25, 1913

Color Index

Scale V

	mc 4189			Pole		
	Sc. A	Sc. B	Sc. C		Prismatic Sc. A Sc. B	Sc. C. Companions
			5.75 5.2			
a'	6.0	5.8	5.7			8.8
a²	7.		6.8			7.
b			6.8			
d			6.8			
e			7.2			
f			7.4			
g			7.8			
h			8.6			
k			7.8			
l			7.9			
m			7.9			
o			8.9			
q			8.7			
r			9.5			
t			9.5			
w						
y			9.9			

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1913phae.proj.1038M

Tuesday, November 25, 1913

Color Index

Scale V MC 4189 Pole

	Sc. A	Sc. B	Sc. C		Prismatic	Companions
4S	4.6	4.4	3.8	3.9 4.1523 B		8.4
5S	5.5	5.3	4.8	4.9 5.17		9.3
6S	5.8	5.6	5.5	5.6 5.60		?.
9S	?.			8.7		
10S				9.2		
11S				9.5		
12S				9.8		
13S				9.7		
14S				10.0?		
15S				?.		
16S				9.8?		
17S				?.		
18S						
19S						
20S						
21S						
22S						
23S						
24S						

1.12

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Wednesday, November 26, 1913

2.00

Measures for Color Index

Scale V	mc 4270			Pole	Prismatic		Companions	
	Sc. A	Sc. A	Sc. B	Sc. C Diff.	Sc. A	Sc. B	Sc. C	Diff.
5	2.9	2.7		3.78	7.		8.9	-2.42
6	2.9	2.7		4.38			8.8	-1.72
7	3.4	3.2		B. 4.19			7.	
8	4.5	4.3	3.9	4.0 4.20 ±21 4.3				
5.9 5.7	5.5	5.3	5.6	5.7 5.9 B 2.96				
10	7.			5.6 3.04				
11				6.9 2.40				
12				7.7 1.84				
13				8.3 1.95				
14				8.4 2.04				
15				9.5 1.28				
16				9.8 1.27				
17				9.8 1.38				
18				7.				
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
+87°15	4.6	4.6		3.24			7.	
+88°80	5.8	5.6		3.32			7.	
+88°86	5.9	5.7		3.08			7.	
+88°155	6.2	6.0		2.88			7.	

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Wednesday, November 26, 1913

Color Index

Scale V	7m C 4240			Pole	(cont.) Prismatic		Companions
Sc. A.	Sc. A.	Sc. B.	Sc. C	Sc. C curve	magn.	Sc. A	Sc. B	Sc. C curve
2n	3.6	3.4		3.90	7.30 .75	7.		8.6
3n	3.8	3.6		3.82	7.42 .22			9.9
4n	4.8	4.6	4.2 4.53 4.3 .12 .2	3.49	8.02 .19			10.2?
5.3 5.1 5n	5.1	5.5	4.9 5.20 5.0 .32 .11	5.3 3.21	8.41 .16			7.
6n	7.		6.5					
7n			7.7					
8n			8.3					
9n			9.4					
10n			7.					
11n			7.					
12n								
+87°12	4.4	4.2	3.8 3.9 4.03 .10	4.0	3.57	7.7 8.60 .48		
+88° 2	4.7	4.5	3.9 4.0 4.27 .23	4.3	3.58	7.85 .25		
+88°90	7.		5.7 5.8 5.85 .01	5.9	2.91	8.76 .21		
+88°105	4.8	4.6	4.2 4.3 4.57 .24	4.8	3.48	8.05 .15		

+117 +.75
−128 −.176
8) −.11 8) −.101
−.01 −.13

omitting 3n, 87°12, 88°90

+.75 8) −.10
−.85
5) −.10 −.01
−.02

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Wednesday November 26, 1913

Color Index

Scale V

MC 4270 Pole

	Sc. A	Sc. B	Sc. C
a'	7.		8.3
a²			10.3?
f			9.8
d			7.

(cont.) Prismatic Comparison

	Sc. A	Sc. B	Sc. C
	7.		7.

e
f
g
h
k
l
m
o
q
r
t
w
y

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1913phae.proj.1038M

Wednesday, November 26, 1913

Color Index

Scale V

	mC4270 Sc.A	mC4270 Sc.B	mC4270 Sc.C	Pole (cont.)	Prismatic Comparisons Sc.A	Sc.B	Sc.C
4S	7.		7.3		7.		7.
5S			7.5				
6S			7.9				
9S			7.				
10S							
11S							
12S							
13S							
14S							
15S							
16S			7.				
17S							
18S							
19S							

3.05

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1913phae.proj.1038M

Friday, November 28, 1913

1.149

Measures for Color Index

Scale W	m C 4278		Pole		Prismatic	Companions
	Sc. 1	Sc. 2		Diff.	Sc. 1	Sc. 2
5	3.3 3.4			3.08	7.	9.5
6	4.1 4.2			2.88		7.
7	4.9 5.0			2.39		
8	5.2 5.3			.		
9	6.7 6.8	6.75 °.1	6.7	1.86		
10	6.7 6.8	6.80 °°	6.8	2.14		
11	7.7 7.8	7.80 °°	7.8	1.50		
12	7.8 7.9	7.85 °.	7.8	1.69		
13	7.		8.7	1.55		
14			8.8	1.64		
15			9.6	1.18		
16			9.8	1.27		
17			9.9	1.28		
18			7.			
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						7.
+87° 15	5.8 5.9	6.00 °.1	6.1	1.84		
+88° 80	6.9 7.0	7.10 °.1	7.2	1.82		
+88° 86	6.8 6.9	6.90 °°	6.9	1.88		
+88° 115	6.9 7.0	7.05 °.1	7.1	1.83		

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Friday, November 28, 1913

Color Index

Scale W	Mc 4278		Pole			Prismatic	Companions
	Sc. 1	Sc. 2	Curve	Magn.		Sc. 1	Sc. 2
2m	3.3 3.4		3.19	6.59	.04	7.	9.7 .
3m	4.9 5.0		2.40	7.40	.24		9.8 .
4m	5.7 5.8		2.12	7.92	.29		7
5m	6.2 ~~5.7~~ 6.3	6.25 .10	6.2	1.98	8.23	.44	
6m	7.2 7.3	7.20 .12	7.1				
7m	7.7 7.8	7.85 .01	7.9				
8m	7.		8.6				
9m			9.3				
10m			7.				
11m							
12m							
+87° 12	5.2 5.3	5.20 .12	5.1	2.33	7.53	.65	7. 7.
+88° 2	5.2 5.3	5.20 .12	5.1	2.33	7.53	.57	
+88° 90	6.9 7.0	7.10 .21	7.2	1.75	8.85	.12	
5.9 +88° 105	6.1 6.2	6.05 .21	5.9	2.03	8.08	.12	

+4.
−24 3.
8 | −239.
−30.

omitting 3m, 87° 12, 88° 90

5 | −138.
−28

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Friday, November 28, 1913

Color Index

Scale W	MC 4278		Pole	Prismatic Companions	
	Sc. 1	Sc. 2	Sc 2	Sc 1	Sc. 2
a'	7.	8.7		7.	7.
a²		9.7			
b		9.6	9.8		
d		10.2³			
e		7.			
f					
g					
h					
k					
l					
m					
o					
q					
r					
t					
w					
y					

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Friday, November 28, 1913

Color Index

Scale W	mc 4248 Sc. 1	Sc. 1	Sc. 2	Pole	Prismatic Sc. 1	Companions Sc. 2
4S	7.8	7.9	7.90 7.9		7.	7.
5S	7.8	7.9	7.9 8.03 8.0 8.2			
6S	8.8	8.9	8.90 8.9			
9S	7.		7.			
10S						
11S						
12S						
13S						
14S						
15S						
16S						
17S						
18S						
19S						

2:41

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Saturday, November 29, 1913

11:04 Measures for Color Index

Scale V

		mC 4198 Pole				Prismatic Companions			
		Sc. A	Sc. B	Sc. C	Diff.	Sc. C.	Sc. A	Sc. B	Sc. C Diff.
	5	0.7	0.5		5.98		4.4 4.2	3.8 3.9	4.1 4.07 2.41
	6	1.1	0.9		6.18		4.9 4.7	4.6 4.7	4.9 4.77 2.31
	7	1.6	1.4		5.99		5.4 5.2	5.1 5.2	4.9 5.10 2.29
	8	2.6	2.4		.		7.		6.1 .
2.9 2.7	9	3.1	2.9	2.80 ±1	5.81				6.8 1.81
	10	2.9	2.7		6.24				7.1 1.84
	11	3.5	3.3		6.80				7.8 1.50
	12	3.6	3.4		6.14				7.9 1.64
	13	4.7	4.5	B	5.75				8.6 1.65
	14	4.6	4.4	4.2 4.3 4.30 ±1	6.14				8.8 1.64
5.0 4.8	15	5.5	5.3	4.8 4.9 4.95 ±1	5.83				9.3 1.48
5.5 5.3	16	5.7	5.5	4.9 5.0 5.38	5.71				9.7 1.37
	17	7.	5.7	5.8 5.8 5.80 ±0	5.38				9.8 1.38
	18			6.8	5.13				7.
	19			6.8	5.42				
	20			7.2	5.45				
	21			7.6					
	22			7.7					
	23			7.9	5.44				
	24			7.8					
	25			7.9	8.2				
	26			8.7					
	27			8.8					
	28			9.3					
+87°	15	2.3	2.1	B	5.74	29. 9.5	+87° 15		6.7 1.14
+88°	80.	3.2	3.0		5.92	30. 9.9	+88° 80		7.2 1.72
+88°	86	2.8	2.6		6.18	31. 7.	+88° 86		6.9 1.88
+88°	115	3.0	2.8		6.08	32.	+88° 115		7.2 1.68

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Saturday, November 29, 1913

Color Index

Scale V	Tn C 4198 Sc. A	Sc. B	Sc. C	Pole Curve	Magn.		Prismatic Sc. A	Sc. B	Companions Sc. C	Curve	Magn.	
							5.9	5.7	5.7 5.8	5.8	2.04	7.81	126
2r	1.9	1.7		6.08	7.80	125							
3r	2.8	2.6		6.09	8.69	105				6.8	1.80	8.60	96
4r	2.8	2.6		6.09	8.69	49				7.3	1.69	8.99	78
5r	3.8	3.6		6.00	9.60	93				7.8	1.61	9.41	74
6r	3.8	3.6	B.	6.00	9.60					8.7	1.54	10.24	
7r	4.5	4.3	4.2, 4.3 4.1							9.2	1.50	10.70	
8r	5.1	4.9	4.7 4.8 4.8							9.5	1.47	10.97	
9r	6.0	5.8	5.7 5.8 5.6										
10r	7.		6.7										
11r			7.2										
12r			7.7										
+87°12	2.7	2.5	B.	6.10	8.60	42		7.		6.9	1.77	8.67	49
+88° 2	2.6	2.4	B	6.10	8.50	40		7.		6.9	1.77	8.67	57
+88°90	3.2	3.0	B.	6.06	9.06	09		7.		7.8	1.61	9.41	44
+88°105	2.8	2.6	B	6.09	8.69	49		7.		6.9	1.77	8.67	47

8) 512
+64

omitting 3r, 87°12, 88°90

5) 3565
+71

8) 571
+71

omitting 3r etc

5) 382
+76

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Saturday, November 29, 1913

Color Index.

Scale V		Inc 4198			Pole	Prismatic		Companions
Sc.B		Sc.A	Sc.B	Sc.C		Sc.A	Sc.B	Sc.C
5.1	a'	5.7 (5)	5.3	4.9 5.0 (5.07 ±.20) 5.7 (2)		7.		9.7
	a^2	7.		6.6				7.
	b			6.6				
	d			6.7				
	e			6.8				
	f			7.3				
	g			8.4 7.7				
	h			8.8				
	k			7.7				
	l			7.8 6.4				
	m			8.2				
	o			8.7				
	q			9.4				
	r			9.3				
	t			9.4				
	w			10.0				
	y			9.4				

N.B. a' wrong star measured first?

q wrong star measured at first. Dec 7.7m, Nov 29

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Saturday, November 29, 1913

Color Index

Scale V		Inc 4198			Pole	Prismatic		Companions
		Sc. A	Sc. B	Sc. C		Sc. A	Sc. B	Sc. C
	4s	3.9	3.7	B.		f.		8.5
	5s	4.9	4.7	4.5 4.6 4.8 4.70±1				9.3
	6s	5.1	4.9	4.8 4.9 4.8 4.84±02				9.5
	9s	f.		8.8				f.
	10s			9.6				
	11s			9.2				
	12s			9.3				
	13s			9.1				
	14s			f.				
	15s							
–	16s			10.5?				
	17s							
	18s							
	19s							
	20s							
12.47								

N.B. 10s defective?

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Saturday, November 29, 1913

2·12 Measures for Color Index

Scale V mc 4251 Pole Prismatic Companions

Sc. B.		Sc. A	Sc. B	Sc. C	Diff.	Curve	magn.	Sc. A	Sc. C	Sc. A	Sc. B	Sc. C	Diff.	Curve	magn.
	5	0.6	0.4		6.08	6.16	6.56	08		4.7	4.5	4.1	4.2	4.4	
	6	1.2	1.0		6.08	6.08	7.08	00		5.8	5.6	5.3	5.4	5.4	1.61	1.74	7.21	13
	7	1.4	1.2		6.19	6.03	7.23	16		7.				5.9	1.49	1.66	7.56	17
	8	2.7	2.5		·	5.82	8.32							6.6	·	1.52	8.12	
	9	2.8	2.6		6.01	5.80	8.40	21						7.1	1.51	1.44	8.54	07
	10	3.3	3.1		5.84									7.3	1.64			
	11	3.9	3.7		5.60									8.0	1.30			
	12	4.2	4.0	B	5.54									8.2	1.34			
	13	4.6	4.4	4.1	4.2	4.0	6.05							8.8	1.45			
	14	4.9	4.7	4.7	4.8	4.6	5.74							9.6	0.84			
5.2	5.3	15	5.8	5.6	4.9	5.0	5.2	5.4							9.8	0.98		
		16	7.			5.7	5.37								10.1	0.97?		
		17				5.8	5.38								10.2	0.98?		
		18				6.7	5.23								7.			
		19				6.8	5.42											
		20				7.2	5.45											
		21				7.4												
		22				7.6												
		23				7.7	5.64											
		24				8.1												
		25				8.4												
		26				8.8												
		27				9.1												
		28				9.6												
		29				9.9												
		30.				7.												
		31																
		32																

+33·
−94·
8)−61
−.08

+85
−43
8)+42
+05

		Sc. A.	Diff.	Sc. C.	Curve	magn.						
	+87°15	2.3	2.1	5.84	B. 5.89	7. 7.99	15	6.7	1.14	1.50	8.20	36
	+88°80	3.2	3.0	5.92	B. 5.73	7. 8.73	19	7.8	1.12	1.31	9.11	19
	+88°96	2.8	2.6	6.18	B. 5.80	7. 8.40	38	7.1	1.68	1.44	8.54	24
	+88°115	3.5	3.3	5.58	B. 5.68	7. 8.98	10	7.5	1.38	1.37	8.87	01

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Saturday, November 29, 1913

Color Index

Scale V

	Inc 4251 Pole						(cont) Prismatic Companions					
	Sc. A	Sc. B	Sc. C	Curve	Magn.		Sc. A	Sc B	Sc. C	Curve	Magn.	
2n	2.2	2.0		5.91	7.91	1.36	7.		5.9	1.66	7.56	101
3n	2.8	2.6		5.80	8.40	x76			7.3	1.41	8.71	107
4n	2.9	2.7		5.78	8.48	x27			7.6	1.35	8.95	74
5n	3.9	3.7	7 4.13 30 2	5.61	9.31	x64			8.7	1.17	9.87	120
6n	4.4	4.2	3.9 4.0 4.3 4.47 22	5.50	9.67				8.8	1.15	9.95	
7n	4.9	4.7	4.2 4.3 4.4						9.4	1.06	10.46	
8n	5.7	6.5	4.9 5.0 5.27 30 5.3						9.8	1.80	10.80	
9n	7.		5.9						7.			
10n			6.8									
11n			7.2									
12n			7.9									
+87°12	2.9	2.7		B.	5.78	8.48 .30	7.		7.4	1.39	8.79	61
+88°2	2.8	2.6		B.	5.80	8.40 .30	7.		7.5	1.37	8.87	77
+88°90	3.7	3.5		B.	5.65	9.15 18	7.		8.2	1.25	9.45	48
+88°105	3.1	2.9		B.	5.75	8.65 45	7.		7.6	1.35	8.95	75

8)426
+53

omitting 3n, 87°12, 88°90

5)302
+60

8)663
+83

omitting 3n etc.

5)447
+89

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Saturday, November 29, 1913

Color Index.

Scale V	mC 4251			Pole	(cont.)	Prismatic		Companions
	Sc. A	Sc. B	Sc. C			Sc. A	Sc. B	Sc. C
a'	5.8 5.6	5.4	5.60 ± 5.5 5.7			7.		9.9
a²	7.		6.7					7.
b			6.9					
d			6.8					
e			6.9					
f			7.2					
g			7.8					
h			8.4					
k			7.7					
l			7.9					
m			8.1					
o			8.3					
q			8.8					
r			9.6					
t			9.2					
w			9.8					
y			9.8					

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Saturday, November 29, 1913

Color Index

Scale V	InC 4251			Pole	(cont) Prismatic		Companions
	Sc. A	Sc. B	Sc. C		Sc. A	Sc. B	Sc. C
4S	4.4	4.2	3.9 4.0 4.13		4.		8.8
5S	5.2	5.1	4.8 4.9 5.03				9.4
6S	5.6	5.4	5.1 5.2 5.33				9.5
9S	4.		8.8				4.
10S			9.3				
11S			9.4				
12S			9.4				
13S			9.4				
14S			4.				
15S							
16S			10.1?				
17S							
18S							
19S							

3.35

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Tuesday, December 2, 1913

10.24 Measures for Color Index

Scale V	mc 4257				Pole	Prismatic				Companions	
	Sc.A	Sc.B	Sc.C		Diff.	Sc.A	Sc.C	Sc.A	Sc.B	Sc.C	Diff.
5	4.6	0.4			6.08			4.4	4.2	3.8 3.9 4.3	2.35
6	1.2	1.0			6.08			4.9	4.7	4.8 4.9 4.9	2.25
7	1.2	1.0			6.39			5.9	5.7	5.2 5.3 5.6	1.86
8	1.9	1.7			.			7.		6.4	.
9	2.8	2.6			6.01					7.2	1.41
10	3.1	2.9			6.04					7.3	1.64
11	3.3	3.1			6.20					7.8	1.50
12	3.7	3.5			6.04					8.4	1.14
13	4.2	4.0		B.	6.25					8.9	1.35
14	4.8	4.6	4.2	4.3 4.40 2.11 4.3	6.04					9.4	1.04
15	5.0	4.8	4.7	4.8 4.80 0.00 4.8	5.98					9.7	1.08
16	5.8	5.6	5.2	5.3 5.40 2.11 5.3	5.67					7.	
17	6.0	5.8	5.6	5.7 5.70 0.00 5.6	5.48						
18	7.			6.2	5.73						
19				6.8	5.42						
20				6.9	5.75						
21				7.3							
22				7.7							
23				7.7	5.64						
24				7.9							
25				8.3							
26				8.7							
27				8.9		Sc.A	Sc.C.				
28				9.5				Diff.			
29				9.9	+87°15	2.3	2.1	5.73	7.	6.4	1.44
30				10.3?	+88°80	2.6	2.4	6.52		7.3	1.62
31				7.	+88°86	2.5	2.3	6.48		7.3	1.48
32					+88°115	2.8	2.6	6.28		7.6	1.28

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Tuesday, December 2, 1913

Color Index

Scale V	Mc 4257 Sc. A	Sc. B	Sc. C			Pole			(cont.) Prismatic Companions Sc. A	Sc. B	Sc. C		
2n	2.1	1.9				6.19	8.09	154	6.0 5.8	5.6 5.7	5.8	1.80	7.57 102
3n	2.8	2.6				6.30	8.80	116	7.		7.3	1.42	8.72 108
4n	3.3	3.0				6.18	9.18	97			7.3	1.42	8.72 41
5n	3.7	3.5				6.13	9.63	96			8.8	1.20	10.00 133
6n	4.2	4.0		B.		6.07	10.07				9.4	1.12	10.52
7n	4.4	4.2	3.9	4.10 4.0 .483	4.1 33°						9.8	1.07	10.87
8n	5.3	5.1	4.5	4.6	4.8						9.3	1.14	10.44
9n	7.				5.7						9.7	1.08	10.78
10n					6.3						7.		
11n					7.2								
12n					7.8								
+87°12	2.8	2.6		B		6.30	8.80	62	7.		7.4	1.40	8.80 62
+88° 2	2.9	2.7				6.30	8.90	80			7.2	1.44	8.64 54
+88°90	3.4	3.2				6.16	9.36	39			7.8	1.34	9.14 17
+88°105	3.1	2.9				6.18	9.08	88			7.2	1.44	8.64 44

8) 7.32
+.921
omitting 3n etc.
5) 5.15
+1.03

8) 5.71
+.781
omitting 3 n etc.
5) 3.84
+.767

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Tuesday, December 2, 1913

Color Index

Scale V	m c 4257			Pole	(cont.) Prismatic	
Sc. B	Sc. A	Sc. B	Sc. C	Sc. C		Sc. A Sc. B Sc. C
a'	5.7	5.5 ~~4.8~~ 5.3	5.4 5.40.02	5.3		4. 10.3?
a²	4.		6.3			4.
f			6.8			
d			6.8			
e			6.6			
f			7.4			
g			7.6			
h			8.7 8.7000	8.7		
k			8.3			
l			7.8 7.7502	7.7		
m			8.4			
o			9.2			
q			9.3			
r			9.4			
t			9.4			
w			10.1?			
y			9.9			

h diffuse?

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Tuesday, December 2, 1913

Color Index

Scale V	MC 4257 Sc.A	Sc.B	Sc.C	Pole (cont.)	Prismatic Companions Sc.A	Sc.B	Sc.C
4S	4.1	3.9	3.8 3.9 4.00 4.2			7.	8.9
5S	4.9	4.7	4.4 4.5 4.63 4.7				9.8
6S	5.2	5.0	4.7 4.8 4.83 4.7				9.7
9S	7.		8.8				7.
10S			9.5				
11S			9.3				
12S			9.6				
13S			9.7				
14S			9.9				
15S							
16S			10.3?				
17S							

12.19
(About 10 = out)

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Monday, December 8, 1913

11:41 Measures for Color Index

Scale V	MC 4245 Sc.A	Sc.B	Sc.C	Pole	Prismatic Sc.A	Sc.B	Companions Sc.e	Sc.C
5	B				2.9		B.	
6	0.1				3.7		B.	
7	0.3				3.9		B.	
8	1.2				4.8	4.4 45	4.3	
9	1.6				5.8	5.3 54	5.7	5.5
10	1.7				5.9	5.6 57	5.5	
11	2.3				7.		5.8	
12	2.5						6.8	
13	2.9						6.8	
14	3.3						7.4	
15	3.2						7.8	
16	3.8						7.9	
17	4.1		B.				8.7	
18	4.7	4.3 44	4.3				8.9	
19	5.2	4.8 49	4.8				9.5	
20	5.7	5.2 53	5.3				9.7	
21	6.0	5.8 59	5.7	n.P.S.			9.8	
22	~~6.0~~ 7		5.8					
23	"		6.2		33.		9.7	
24	"		6.7		34.		9.7	
25	"		6.6		35.		10.0?	
26			7.2					
27			7.4	Sc.A	Sc.e			
28			7.8					
29			8.3	+87°15	1.1	4.8	4.7 48	4.8
30			8.8	+88° 80	2.1	6.0	5.6 5.7	5.8
31			8.8	86	1.9	5.8	5.3 5.4	5.3
32			9.2	115	2.1	5 4.9	5.6 5.1	5.6

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Monday, December 8, 1913

Measures for Color Index:

Scale V	M C 4245			Pole (cont.)	Prismatic		Companions	
	Sc. A	Sc. B.	Sc. C		Sc. A	Sc. B	Sc. C	Sc. C
2r	1.1				4.1		B.	
3r	1.7				5.7	4.8[49]	4.7	5.2
4r	1.9				7.		5.7	
5r	2.4						6.7	
6r	2.9						7.4	
7r	3.1						7.6	
8r	3.8						7.8	
9r	4.2		B.				8.7	
10r	5.1	4.7[48]	4.8				9.7	
11r	5.8	5.3[54]	5.4				9.9	
12r	7.		6.2				7.	
+27°12	1.9		7.		5.8	5.4[55]	5.8[5]	
+28° 2	2.0		7.		5.7	4.8[49]	5.8[4]	
90	2.5		7.		7.		6.4	
105	1.9		7.		5.8	5.3[59]	5.6	

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Monday, December 8, 1913

Measures for Color Index.

Scale V	M C 4245			Pole.	(cont) Prismatic		Companion
	Sc. A	Sc. B	Sc. C		Sc. A	Sc. B	Sc. C
a'	3.7		B.		7.		7.8
a^2	4.8		4.6				8.8
b	4.8		4.7				9.8 9.5
c	5.3	4.8 49	4.9				9.7
d	4.7	4.7 48	4.7				9.5
e	4.9	4.7 48	4.9				
f	5.7	5.1 52	5.3				
g	7.		5.8				
h	7.		6.8				
k	7		5.8				
l			5.8				
m			5.9				
o			6.8				
q			7.2				
r			7.9				
t			7.4	7.7			
w			8.8				
y			8.2				

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Monday, December 8, 1913

Measures for Color Index

Scale V

	Mc 4245 Pole			(cont.) Prismatic		Companions
	Sc. A	Sc. B	Sc. C	Sc. A	Sc. B	Sc. C
4S	2.7			7.		6.8
5S	2.9					7.5
6S	3.6	3.2 3.3	B.			7.9
9S	~~6.8~~ 7	6.8 6.9	6.8			
10S			7.8			
11S			7.8			
12S			~~7.8~~ 7.8			
13S			8.2			
14S			8.3			
15S			9.3			
16S			8.9			
17S			9.8			
18S			7.			

1:40

(12 = out)

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Tuesday, December 9, 1913

11:02 Measures for Color Index.

Scale V	M c 4319			Pole	Prismatic		Companions
	Sc. A	Sc. B	Sc. C		Sc. A	Sc. B	Sc. C
5	0.2				3.9		B.
6	0.5				4.7	4.3 4.4	4.3
7	0.7				5.3	4.6 4.7	4.8
8	1.9				6.0	5.4 5.5	5.7
9	2.4				7.		6.3
10	2.2						6.4
11	2.9						6.9
12	3.1						7.7
13	3.6						7.8
14	3.9		B.				8.3
15	4.7	3.9 4.0	4.1				8.6
16	4.8	4.5 4.6	4.4				8.8
17	5.2	4.9 5.0	5.1				8.9
18	5.9	5.7 5.8	5.7				9.7
19	7.		6.2				9.7
20			6.4				9.8
21			6.6				
22			6.6 9				
23			7.1		N.P.S.		
24			7.2		33.		
25			7.3		34.		
26			8.1		35.		
27			8.2		S.A	Sc. C	Sc. A Sc. B Sc. C
28			8.8				
29			9.6	+87° 15	1.8	B.	6.0 5.5 5.6
30			9.8	+88° 80	2.7		7. 6.6
31			9.7	86	2.6		7. 5.9
32			10.1?	115	2.9		7 6.7

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Tuesday, December 9, 1913

Color Index

Scale V	M 31			Pole	(cont.)	P. C.		
	Sc. A	Sc. B	Sc. C			Sc. A	Sc. B	Sc. C
2r	1.2					5.4	4.8 5.9	4.9
3r	1.7					?		5.9
4r	2.2							6.7
5r	2.9							7.4
6r	3.4							7.8
7r	3.9		B.					8.2
8r	4.6	3.9 4.0	4.2					8.8
9r	5.2	4.8 4.9	4.8					8.9
10r	?		5.8					9.8
11r			6.6					9.9
12r			6.9					?
+87° 12	2.3		B.			?		6.6
+88° 2	1.9					"		6.3
90	2.9					"		6.8
105	2.2					"		6.4

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Tuesday, December 9, 1913

Color Index.

Scale	M C 4319			Pole (cont.)	P.C.		
	Sc. A	Sc. B.	Sc. C		Sc. A	Sc. B.	Sc. C.
a'	4.6	4.4	4.5		7		8.9
a^2	6.0	5.6	5.8				9.8
b	7		5.9				9.9
c			6.2				7
d			5.9				
e			5.9				
f			6.6				
g			7.2				
h			7.7				
k			6.9				
l			7.2				
m			7.7				
o			7.8				
q			7.8				
n			8.9				
t			8.4				
w			9.8				
y			9.2				

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Tuesday, December 9, 1913

Color Index.

Scale V	M.C. 4319			Pole	(cont.) P. C.		
	Sc. A.	Sc. B	Sc. C	Sc. C	Sc. A	Sc. B	Sc. C
4S	3.3		B.		4.		7.8
5S	4.4	4.1 4.3	4.2				8.3
6S	4.5	4.2 4.4	4.4				8.6
9S	7.		7.9				7.
10S			8.8				
11S			8.9				
12S			9.7	9.4			
13S			9.4				
14S			7				
15S							
16S			10.3?				
17S							
18S							
12:47 19S							
20S							

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Thursday, December 11, 1913

1.58 Series 116

Scale 7m, 7mD 37+43 Pole P. C.

	Sc.1	Sc.1	Sc.2	Sc.2		Sc.1	Sc.2	Sc.2
	3.4 3.6 5	3.7	3.9	B.		7.	7.9	7.9
	4.6 4.8 6	4.7	4.9	4.6			8.9	8.9
	8	6.4	6.6	6.6			9.8	9.9
	9	7.		7.4	7.3		7.	7.
	10			7.7	7.7			
	11			8.3	8.4			
	12			8.6	8.7			
	13			8.9	8.8			
	14			9.3	9.4			
	15		9.7	9.8	9.9			
	16		9.9	9.8	9.8			
	17			10.3?	10.4?			
	18			7.				
	19			7. +10.4?				
	20							
	23							
	25							
	26							
	27							

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1913phae.proj.1038M

Thursday, December 11, 1913

Series 116

Scale m.	mD 3748		Pole	P.	C.	
	Sc.1	Sc.1	Sc.2	Sc.1	Sc.2	Sc.2
4.1	4.3 5	3.9 4.1	4.0	7.	8.3	8.5
	6	5.3 5.5	5.5		9.3	9.3
	8	7.1 7.3	7.2 ~~7.8~~ 7.2		10.2?	10.1?
	9	7.	7.9 7.9		7.	7.
	10		8.2 8.2			
	11		8.7 8.7			
	12		8.9 8.8			
	13		9.4 9.3			
	14		9.6 9.7			
	15		9.8 9.7			
	16		9.9 10.2			
	17		10.2? 10.1			
2.58	18		7.			
	19					
	20					
	23					
	25					

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1913phae.proj.1038M

Saturday, December 13, 1913

11.37 Series 124

Scale m. m D 3850 Pole P. C.

Sc.1	Sc.1	Sc.2	Sc.2	Sc.2	Mean	m D 3850	Mean		Diff.	Sc.1	Sc.2	Sc.2 Mean.
3.3	3.5 3.2	3.4	B.		3.45	1	0	2.95	3.20	25	25	3.19	7.0 7.2	7.3		7.25	0	1
5	4.1	4.3	4.2		4.25	1	0	3.90	4.08	17	18	2.90	7.	7.7	7.8	7.75	1	0
8	5.8	6.0	5.9		5.95	0	1	5.80	5.88	07	08	2.22		8.8	8.7	8.75	0	1
9	6.4	6.6	6.6		6.60	0	0	6.60	6.60	00	00	2.10		9.6	9.7	9.65	0	1
10	6.8	7.0	6.9		6.95	0	1	6.90	6.92	03	02	1.97		9.9	9.8	9.85	1	0
11	7.	7.4	7.8	7.4	7.53	1	3	1 7.50	7.52	01	02	1.90		9.8	9.9	9.85	0	1
12			7.7	7.7	7.70	0	0	7.75	7.72	02	03	2.01				see below		
13			8.2	8.1	8.15	0	1	8.15	8.15	00	00	2.02						
14			8.4	8.3	8.35	0	1	8.40	8.38	03	02	2.14						
15			8.7	8.6	8.65	1	0	8.70	8.68	03	02	2.26						
16			8.8	8.8	8.80	0	0	8.80	8.80	00	00	2.46						
17			8.9	8.9	8.90	0	0	9.20	9.05	15	15	2.44						
18			9.8	9.6	9.70	1	1	9.55	9.62	08	07	2.30						
19			9.7	9.8	9.75	1	0	9.75	9.75	00	00	2.53						
20			9.9	9.9	9.90	0	0	9.95	9.92	02	03	2.67						
23			10.0?	10.0?	10.00?	0	0	.	10.00	a	.	3.20						
25			7.															

P. C.

	m D 3850	m D 3850	Mean			
5	7.25	6.80	7.02	23	23	-0.63
6	7.75	7.60	7.68	07	08	-0.70
8	8.75	8.80 (5)	8.78 (80)	03 (5)	02 (5)	-0.68 (70)
9	9.65	8.90	9.28	37	38	-0.58
10	9.85	9.70	9.78	07	08	-0.89
11	9.85	9.70	9.78	07	08	-0.36
12	.	9.85	9.85	.	a	-0.12

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1913phae.proj.1038M

Saturday, December 13, 1913

Series 124

Scale 7m 7m D 3851 D 10 Att. .23 P C

Sc.1	Sc.1	Sc.2	Sc.2	Mean	Res.		Curve	Magn.	Sc.1	Sc.1	Sc.2	Sc.2	Mean		Curve	Magn.
1	4.6 4.8	5.0	4.8	4.87	1	1	2.56	7.43			8.2	7.9	8.05	2	-.070	7.35
2	4.7 4.9	4.8		4.85	1	0	2.56	7.41			8.2	8.2	8.20	0	-0.69	7.51
3	5.4 5.6	5.3		5.45	2	1	2.36	7.81			8.4	8.3	8.35	0	-.069	7.66
4	5.3 5.5	5.6		5.55	1	0	2.33	7.88			8.7	8.3	8.50	2	-.068	7.82
5	5.7 5.9	5.7		5.80	1	1	2.24	8.04			8.7	8.8	8.75	1	0 -.067	8.08
6	5.8 6.0	5.8		5.90	1	1	2.22	8.12			8.7	8.4	8.55	1	2 -.068	7.87
5.7 5.9 7	6.1 6.3	5.8	6.0	6.00	1	3	2.19	8.19			9.1	8.9	9.00	1	1 -.064	8.36
8	6.3 6.5	6.3		6.40	1	1	2.09	8.49			8.9	8.9	8.90	0	0 -.065	8.25
9	6.5 6.7	6.8		6.75	1	0	2.03	8.78			9.3	9.3	9.30	0	0 -.058	8.72
10	5.7 5.9	5.9		5.90	0	0	2.22	8.12			8.8	8.9	8.85	0	1 -.066	8.19
11	6.6 6.8	6.8		6.80	0	0	2.02	8.82			9.4	9.6	9.50	1	1 -.054	8.96
12	6.8 7.0	7.2		7.10	1	1	1.99	9.09			9.4	9.6	9.50	1	1 -.054	8.96
13	6.7 6.9	6.9		6.90	0	0	2.01	8.99								
14	6.8 7.0	6.9		6.95	0	1	2.00	8.95								
15	7.	8.7	8.4	8.55		1	2.19	10.14								
16		7.6	7.6	7.60		0	2.01	9.61								
17		8.3	8.4	8.35		1	2.14	10.49	29		9.9	9.8	9.85	1	0 2.55	12.40
18		7.7	7.9	7.80		1	2.03	9.83	30		9.8	9.7	9.75	0	1 2.52	12.27
19		8.6 7.9	8.4	8.50		1	2.18	10.68	31		10.1?	10.1?	10.10	0	0 2.62	12.72
20		8.8	8.7	8.75		0	2.24	10.99	32							
21		8.4	8.3	8.35		0	2.14	10.49								
22		8.8	8.8	8.80		0	2.25	11.05								
23		8.4	8.7	8.55		2	2.19	10.74								
24		8.9	8.9	8.85		0	2.26	11.11								
25		9.6	9.6	9.60		0	2.47	12.07								
26		8.8	8.9	8.85		0	2.26	11.11								
27		9.1	9.2	9.15		1	2.36	11.51								
28		9.6	9.7	9.65		0	2.49	12.14								

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Saturday, December 13, 1913

Leopied

Series 124

Scale m, mD 3852 C10 Att + is P. C.

	Sc.1 Mags	Sc.1	Sc.2	Sc.2	Sc.2 Mean	Sc.2 Curve	Sc.2 Mags	Sc.1	Sc.1	Sc.2	Sc.2 Mean
-0.70	7.35	1	3.7	3.9	B. 3.80	1.	3.40	7.20	7.	7.4	7.3 7.35 0.1
-0.69	7.51	2	4.5	4.7	4.8 4.75	1 0	2.59	7.34		7.9	8.2 8.05 1.2
-0.69	7.66	3	4.1	4.3	4.2 4.25	1 0	2.78	7.03		7.8	7.8 7.80 0.0
-0.68											
0	7.82	4	4.9	5.1	5.3 5.20	1 1	2.45	7.65		8.2	8.3 8.25 0.1
-0.67	8.08	5	5.9	6.1	5.9 6.03 6.1	1 1	2.19	8.22		8.8	8.8 8.80 0.0
-0.68	7.89	6	5.8	6.0	6.1 6.05	0 1	2.18	8.23		8.7	8.9 8.80 1.1
-0.64	8.36	7	5.6	5.8	5.8 5.80	0 0	2.24	8.04		8.8	8.7 8.75 0.1
-0.65	8.25	8	6.6	6.8	6.9 6.85	0 1	2.02	8.87		9.3	9.6 9.45 1.2
-0.58	8.72	9	7.0	7.2	7.2 7.20	0 0	2.00	9.20		9.9	9.8 9.85 1.0
-0.66	8.19	10	7.	7.6	7.7 7.55(3) 7.3	0 1 2	2.02	9.58 4		9.9	9.8 9.85 1.0
-0.54	8.96	11			7.8 7.85 7.9	0 1	2.04	9.89		10.0	10.0 10.00 0.0
-0.54	8.96	12			8.2 8.25 8.3	0 1	2.11	10.36		7.	
		13			8.7 8.65 8.6	1 0	2.21	10.86			
		14			8.6 8.65 8.7	0 1	2.21	10.86			
		15			8.8 8.80 8.8	0 0	2.25	11.05			
		16			8.9 9.05 9.2	1 2	2.34	11.39			
2.55	Mags 12.40	17			9.3 9.35 9.4	1 0	2.42	11.77			
2.52	12.27	18			9.7 9.65 9.6	1 0	2.49	12.14			
2.62	12.72 2	19			9.8 9.85 9.9	0 1	2.55	12.40			
		20			9.8 9.75 9.4	0 1	2.52	12.27			
		21			9.2 10.10 10.0	1 1	2.62	12.72 2			
		22			7.						
		23									
		24									
		25									
		26									
		27									

	BC Curve	Mags
1	-0.69	6.66
2	-0.70	7.35
3	-0.70	7.10
4	-0.69	7.56
5	-0.66	8.14
6	-0.66	8.14
7	-0.67	8.08
8	-0.55	8.90
9	-0.51 45 40	9.34
10	-0.51 45 40	9.34
11	-0.42	9.68

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Saturday, December 13, 1913. Confused

Swiss 124

Scale Tm. MD 3853 B8 Alt. +2.2 P. C.

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Rej.	Cumb.	Mag.	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Rej.	Cumb.	Mag.
1	4.2	4.4	4.1		4.25	2 1	2.77	7.02		7.	7.4	7.6	7.50	1 1	-0.70	6.80
2	5.0	5.2	5.3		5.25	0 1	2.44	7.69			7.9	7.8	7.85	1 0	-0.70	7.15
3	4.4	4.6	4.4		4.50	1 1	2.68	7.18			7.9	7.9	7.90	0 0	-0.70	7.20
4	5.3	5.5	5.4	5.4	5.43	1 00	2.36	7.79			8.4	8.4	8.40	0 0	-0.68	7.72
5	5.2	5.4	5.2	5.4	5.45	0 0	2.36	7.81			8.3	8.3	8.30	0 0	-0.69	7.61
6	5.2	5.4	5.4		5.40	0 0	2.37	7.77			8.3	8.4	8.35	1 0	-0.68	7.67
7	5.7	5.9	5.7		5.80	1 1	2.24	8.04			8.9	8.9	8.90	0 0	-0.65	8.25
8	6.1	6.3	6.2		6.25	1 0	2.14	8.39	8		8.9	8.8	8.87	0 1	-0.66	8.21
9	5.7	5.9	5.9		5.90	0 0	2.23	8.13			8.9	8.9	8.90	0 0	-0.65	8.25
10	6.2	6.4	6.6		6.50	1 1	2.07	8.57	10		8.8	8.8	8.83	0 0	-0.66	8.17
11	6.8	7.0	7.1		7.05	0 1	1.99	9.04			8.9	9.1	9.00	1 1	-0.64	8.36
12	6.9	7.1	7.2		7.15	1 0	2.00	9.15			9.4	9.6	9.50	1 1	-0.54	8.96
13	7.		7.3	7.5	7.40	1 1	2.00	9.40			9.9	9.9	9.90	0 0	-0.46	9.45
14			7.5	7.3	7.40	1 1	2.00	9.40			9.9	9.9	9.90	0 0	-0.44	9.46
15			7.7	7.7	7.70	0 0	2.03	9.73			10.0	10.1	10.05	0 1	-0.40	9.65
16			7.8	7.7	7.75	0 1	2.03	9.78								
17			8.1	7.8	7.95	1 2	2.05	10.00								
18		8.3	*8.7	8.2	8.25	1 0	2.12	10.37								
19			8.3	8.3	8.30	0 0	2.13	10.43								
20			8.9	8.8	8.85	1 0	2.27	11.12								
21			9.3	9.3	9.30	0 0	2.39	11.69								
22			9.5	9.7	9.60	1 1	2.47	12.07								
23			9.9	9.8	9.85	1 0	2.55	12.40								
24			10.0	9.8	9.90	1 1	2.56	12.46								
25			7.													
26																
27																
28																

*Reject.

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Saturday, December 13, 1913

Series 124

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Scale Fn. MD 3854 Q 3 alt. +.14 P. C.

	Sc.1	Sc.1	Sc.2	Mean	Ref.	Curve	Mag.	Sc.1	Sc.2	Sc.2	Mean		
	mean												
1	6.80	3.9 4.1	4.1	4.10	00	2.84	6.94		7.8	7.8	7.80	00 -.070	7.10
2	7.15	4.2 4.4	4.2	4.30	1	2.75	7.05		7.9	7.9	7.90	00 -.070	7.20
3	7.20	4.7 4.9	4.8	4.85	1	2.57	7.42		8.1	7.8	7.95	1 -.070	7.25
4	7.12	4.6 4.8	4.9	4.85	0	2.57	7.42		8.2	8.2	8.20	00 -.069	7.51
5	7.61	5.1 5.3	5.1	5.20	1	2.45	7.65		8.1	8.3	8.20	1 -.069	7.51
6	7.67	5.8 6.0	6.2	6.10	1	2.17	8.27		9.1	9.2	9.15	1 -.062	8.53
7	8.25	5.9 6.1	6.2	6.15	1	2.16	8.31		8.9	8.8	8.85	1 -.066	8.19
8	8.21	6.7 6.9	6.7	6.80	1	2.03	8.83		9.3	9.4	9.47	2 -.054	8.93
9	8.25	6.7 6.9	6.9	6.90	00	2.01	8.91		9.2	9.3	9.25	01 -.059	8.66
10	8.17	6.8 7.0	6.8	6.90	1	2.01	8.91		9.3	9.3	9.30	00 -.058	8.72
11	8.36	6.9 7.1	6.9	7.00	1	2.00	9.00		9.3	9.2	9.25	1 -.059	8.66
12	8.96	7.1	7.3	7.2	1.25	1.99	9.24		9.7	9.8	9.75	1 -.053	9.22
13	9.45	7.5	7.8	7.4	1.60	2.02	9.62		9.8	9.6	9.70	1 -.054	9.16
14	9.46		7.8	7.7	1.75	2.03	9.78		9.8	9.8	9.80	00 -.051	9.29
15	9.65?		8.2	8.2	8.20	2.11	10.31		9.9	9.9	9.90	00 -.049	9.41
16			8.3	8.2	8.25	2.12	10.37						
17			8.3	8.4	8.35	2.14	10.49						
18			8.6	8.3	8.45	2.16	10.61						
19			8.8	8.7	8.78	2.25	11.00						
20			8.9	8.8	8.86	2.27	11.12						
21			8.9	8.9	8.90	2.28	11.18						
22			9.2	9.3	9.25	2.38	11.63						
23			9.6	9.6	9.60	2.46	12.08						
24			9.8	9.6	9.70	2.50	12.20						
25			9.7	9.6	9.65	2.49	12.14						
26			10.1?	10.0	10.05	2.59	12.64?						
27													
28													

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1913phae.proj.1038M

Saturday, December 13, 1913

Series 124

Scale m. MN 3855 Pole, P. C.

	Sc.1	Sc.1	Sc.2	Sc.2		Sc.1	Sc.2	Sc.2	Mean
	2.7 2.9					6.6 6.8		6.8	6.80 0.0
5		2.8 3.0	B.	2.95	1.0				
	3.6 3.8					7.		7.7 7.5	7.60 1.1
6		3.8 4.0	B.	3.90	1.1				
8		5.7 5.9	5.7	5.80	1.1			8.9 8.8	8.85 1.0
		6.4 6.6							
9			6.6	6.60	0.0			8.9 8.9	8.90 0.0
		6.8 7.0							
10			6.8	6.90	1.1			9.7 9.7	9.70 0.0
11		7.	7.4 7.6	7.50	1.1			9.6 9.7	9.70 1.0.1
12			7.7 7.8	7.75	1.0			9.8 9.9	9.85 0.1
13			8.1 8.2	8.15	1.0			7.	
14			8.4 8.4	8.40	0.0				
15			8.7 8.7	8.70	0.0				
16			8.8 8.8	8.80	0.0				
17			9.2 9.2	9.20	0.0				
18			9.6 9.5	9.55	0.1				
19			9.9 9.6	9.75	1.2				
20	3:57		9.9 10.0	9.95	1.0				
23	(22m out)		7.						
25									

See page 157

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1913phae.proj.1038M

Tuesday December 16, 1913

Confirmed.

11:16 Series 151

Scale V MD 414 Dio Att. .21 P. C

	Se. B		Se. C	Sc. C	Mean	Rej.	Curve	Magn.	Sc. C	Sc. C	Sc. C	Curve	Magn.
1	4.2	4.3	4.3		4.30	0 0	2.93	7.33		7.9	7.9	7.90 0 0	7.82
2	3.9	4.0	4.3		4.15	2 1	2.98	7.13		8.1	8.0	8.00 1 1	7.08
3	4.7	4.8	4.8		4.80	0 0	2.69	7.49		8.4	8.4	8.40 0 0	7.39
4	4.8	4.9	5.2		5.05	1 2	2.59	7.64		8.6	8.4	8.50 1 1	7.46
5	4.8	4.9	4.8		4.85	1 0	2.68	7.53		9.2	8.9	9.05 2 1	7.88
6	4.9	5.0	5.1		5.05	0 1	2.59	7.64		8.8	8.9	8.85 0 1	7.72
7	5.6	5.7	5.7		5.70	0 0	2.35	8.05		8.8	8.9	8.85 0 1	7.72
8	5.8	5.9	5.9		5.90	0 0	2.28	8.18	9.2	8.9	9.3	9.10 1 2	7.92
9	6.3	6.4	6.4		6.40	0 0	2.13	8.53		9.7	9.6	9.65 1 0	8.32
10	4.7	4.8	5.3		5.05	2 3	2.59	7.64		9.3	9.3	9.30 0 0	8.06
11	5.9	6.0	5.9		5.95	0 1	2.26	8.21		9.6	9.7	9.65 0 1	8.32
12	6.6	6.7	6.6		6.65	1 0	2.06	8.71		9.7	9.7	9.70 0 0	8.36
13	6.2	6.3	6.3		6.30	0 0	2.16	8.46		9.7	9.4	9.55 1 2	8.25
14	6.8	6.9	6.8		6.85	1 0	2.02	8.87		10.1?	10.1	10.10 0 0	8.65
15	7.8		8.7	8.7	8.70	0 0	1.84	10.54		7.	7		
16	7.2		7.4	7.6	7.50	1 1	1.89	9.39		9.8	10.2?	10.05 2 2	8.57
17	7.6		8.2	8.2	8.20	0 0	1.85	10.05		7.	7		
18	7.3		7.8	7.6	7.70	1 1	1.87	9.57					
19	7.8		8.3	8.3	8.30	0 0	1.84	10.14	28. 8.9	9.8	9.7	9.75 0 1	11.60
20	8.6		9.3	9.2	9.25	1 0	1.84	11.09	29. 8.9	9.8	9.8	9.80 0 0	11.65
21	7.8		8.7	8.3	8.53	2 1	1.84	10.37	30. 9.2	9.9	9.9	9.90 0 0	11.76
22	8.2		8.8	8.8	8.80	0 0	1.84	10.64	31.	7.			
23	8.3		8.9	8.7	8.85	1 0	1.84	10.69	32.				
24	8.3		8.9	8.9	8.90	0 0	1.84	10.74					
25	9.0		10.0	9.8	9.90	1 1	1.85	11.75					
26	8.3		9.2	8.9	9.05	2 1	1.84	10.89					
27	8.4		9.3	9.2	9.25	1 0	1.84	11.09					

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1913phae.proj.1038M

Tuesday, December 16, 1913 Cloudless.

Sirius 151

Scale V mD 4144 By Alt. +.10 P. C.

	Sc. B		Sc. C		Sc. B Mean	Rev	Curve	Mag	Sc. B	Sc. C	Sc. B Mean	Rev	Curve	Mag
1	3,1 3.2				3.25	1 0	3.42	6.67		7.7	7.6	7.65	1 0	-.083
2	3,8 3.9				3.85	0 1	3.14	6.99		7.9	7.8	7.85	1 0	-.087
3	3,3 3.4		B.		3.40	0 0	3.32	6.72		7.7	7.8	7.75	1 0	-.084
4	4,8 4.9		4.9		4.90	0 0	2.66	7.56		8.6	8.4	8.50	1 1	-.104
5	4.1 4.2		4.8	4.4	4.47	3 3 1	2.88	7.35 30		8.8	8.8	8.80	0 0	-.111
6	4.8 4.9		5.2		5.05	1 2	2.59	7.64		8.8	8.8	8.80	0 0	-.111
7	4.9 5.0		5.3		5.15	2 1	2.54	7.69	9.1	9.2	8.8	9.03	1 2	-.118
8	4.7 4.8		4.8		4.80	0 0	2.69	7.49		8.8	8.7	8.75	0 1	-.110
9	5.2 5.3		5.6		5.45	1 2	2.44	7.89		9.3	9.2	9.25	1 0	-.123
10	5.7 5.8		5.8		5.80	0 0	2.31	8.11		9.4	9.3	9.35	0 1	-.125
11	6.2 6.3		6.2		6.25	1 0	2.17	8.42		9.8	9.8	9.80	0 0	-.137
12	6.8 6.9		6.9		6.90	0 0	2.00	8.90		10.2?	10.3?	10.25	0 1	-.146
13	6.8 6.9		6.8		6.85	1 0	2.01	8.86						
14	7.		7.3	7.2	7.25	1 0	1.93	9.18						
15			7.5	7.7	7.60	1 1	1.88	9.48						
16			7.8	7.8	7.80	0 0	1.86	9.66						
17			8.2	8.2	8.25	0 1	1.84	10.09						
18			8.8	8.8	8.80	0 0	1.84	10.64						
19			8.8	8.8	8.80	0 0	1.84	10.64	28.					
20			8.8	8.9	8.85	0 1	1.83	10.68	29.					
21			9.3	9.4	9.35	1 0	1.83	11.18	30.					
22			8.9	9.2	9.05	1 2	1.84	10.89	31					
23			9.6	9.3	9.45	2 1	1.84	11.29						
24			9.8	9.8	9.80	0 0	1.85	11.65						
25			9.8	9.8	9.80	0 0	1.85	11.65						
26			7.	7.										
27														

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Tuesday, December 16, 1913

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Series 151

	Scale V			mD 4146		C10			Alt +.07		P.C.			
	Curve	Magn.		Sc. B	Sc. C	Sc. C Mean	Res	Curve	Magn.	Sc. B	Sc. C	Sc. C Mean	Res	Curve	Magn.
1	-.083	6.82	3.3 3.4	3.3 3.4	B.	3.40	.00	.335	6.75		7.6	7.7	7.65	.01	.083
2	-.087	6.98		4.6 4.7	4.6		4.65	.10	.276	7.41		8.2	8.3	8.25	.01	.097
3	-.084	6.91		4.3 4.4	4.3		4.35	.01	.289	7.24		7.9	8.1	8.00	.11	.091
4	-.104	7.46		5.3 5.4	5.5		5.45	.01	.244	7.89		8.9	8.9	8.90	.00	.114
5	-.111	7.69		6.2 6.3	6.1		6.20	.11	.219	8.39		9.5	9.5	9.50	.00	.128
6	-.111	7.69		5.8 5.9	5.9		5.90	.00	.227	8.17		9.7	9.7	9.70	.00	.135
7	-.118	7.85		5.7 5.8	5.7		5.75	.01	.233	8.08		10.2?	10.1?	10.15	.01	.146
8	-.110	7.65		6.8 6.9	6.7		6.80	.11	.203	8.83						
9	-.123	8.02		7.	7.4	7.2	7.30	.11	.192	9.22						
10	-.125	8.10			7.7	7.7	7.70	.00	.187	9.57						
11	-.137	8.43			8.1	8.2	8.15	.10	.185	10.00						
12	-.146	8.77?			8.7	8.7	8.70	.00	.184	10.54						
13					9.2	9.1	9.15	.01	.184	10.99						
14					9.3	9.2	9.25	.10	.184	11.09						
15					9.4	9.4	9.40	.00	.183	11.23						
16					9.6	9.7	9.65	.01	.184	11.49						
17					10.0	9.9	9.95	.01	.185	11.80						
18				10.1?	10.2?	9.7	10.00	.123	.186	11.86?						
19					7.											
20																
21																
22																
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25																
26																
27																

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Tuesday, December 16, 1913

Series 151

Scale V

	Sc.B.	Sc.B	Sc.C	Sc.e	Mean	MD 4153	Mean	Diff		Sc.B	Sc.C	Sc.e.
	2.6 2.7											
5	2.7	2.8	B.		2.75	1 0	2.84 2.78	03 02	3.61	6.9 7.0	6.9 7.0	6.95
6	3.6	3.7	3.8		3.75	1 0	3.94 3.82	07 08	3.08 16		7.7 7.8	7.8
8	5.7	5.8	5.8		5.80	0 0	5.75 5.78	02 03	2.32		9.2 9.3	9.1
9	6.7	6.8	6.8		6.80	0 0	6.65 6.72	08 07	1.98		10.2? 10.2?	
10	6.9	7.0	6.9	6.9	6.93	07 03 (1 0 0)	6.85 6.89	04 04	2.00		7 7	
11	7.		7.6	7.6	7.60	0 0	7.50 7.55	05 05	1.87		See below.	
12	7.		7.9	7.9	7.90	0 0	7.85 7.88	02 03	1.85			
13			8.2	8.3	8.25	0 1	8.20 8.22	03 02	1.85			
14			8.8	8.8	8.80	0 0	8.65 8.72	08 07	1.80			
15			9.2	9.2	9.20	0 0	9.15 9.18	02 03	1.76			
16		9.5	9.4	9.7	9.50	0 1 2	9.35 9.42	08 07	1.82			
17			9.8	9.5	9.65	2 1	9.50 9.58	07 08	1.91			
18			10.1?	10.1?	10.10?	0 0 7	10.10? a .		1.82			
19												
20												
23												
25												

00 00
4 4
.00 .00

22 21
5 5
+.04 +.04

Applied.

18 20
3 3
+.06 -.07

40 41
12 12
+.03 -.03

	P.C. MD 4148		MD 4163	Mean	Diff.	
5	6.95	0	1 7.17	7.06	11	11 -0.67
6	7.75	1	0 8.00	7.88	13	12 -0.90
8	9.15	0	1 9.30	9.22	07	08 -1.12
9	10.20?	0	0 10.20	10.20	00	00 -1.50
10	7					

31 31
4 4
-.08 +.08

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Series 151

Scale V | HD 4150 | B8 | alt. +.19 | P.C.

	Sc.B	Sc.B	Sc.C	Sc.C	Mean	Res.	Comm.	Magn.	Sc.B	Sc.C	Sc.C	Mean	Res.	Comm.	Magn.
	1	3.9	4.0	4.1	4.05	01	3.03	7.08	7.	7.9	7.8	7.85	10	-2.88	6.97
	2	4.8	4.9	4.6	4.75	12	2.90	7.45		8.4	8.5	8.45	01	-1.03	7.42
4.43	3	3.9	4.0	4.3	4.15	21	2.98	7.13		8.6	8.4	8.50	11	-1.04	7.46
	4	5.2	5.3	5.2	5.25	10	2.52	7.77		9.2	9.2	9.20	00	-1.32	7.88
	5	4.9	5.0	5.1	5.05	01	2.59	7.64		9.1	9.1	9.10	00	-1.19	7.91
	6	4.9	5.0	5.2	5.10	11	2.56	7.66		9.3	9.2	9.25	10	-1.24	8.01
	7	6.2	6.3	5.8	6.05	32	2.23	8.28		9.8	9.8	9.80	00	-1.37	8.43
	8	6.2	6.3	6.4	6.35	10	2.14	8.49							8.54
	9	6.1	6.2	5.9	6.05	21	2.23	8.28		10.0	9.9	9.95	10	-1.46	
	10	6.4	6.5	6.4	6.45	10	2.12	8.57							
	11	6.9	7.0	7.2	7.10	11	1.95	9.05							
	12	7.1	7.2	7.2	7.20	00	1.94	9.14							
	13	7.		7.6	7.4	7.50	11	1.89	9.39						
	14			7.8	7.8	7.80	00	1.86	9.66						
	15			7.8	7.7	7.75	01	1.87	9.62						
	16			8.1	8.2	8.15	10	1.84	9.99						
	17			8.3	8.4	8.35	10	1.84	10.19						
	18			9.2	9.3	9.25	01	1.84	11.09						
	19			9.4	9.3	9.35	01	1.84	11.19						
	20			9.7	9.6	9.65	10	1.84	11.49						
	21			9.8	9.8	9.80	00	1.85	11.65						
	22			7.	7.										
	23														
	24														
	25														
	26														
	27														

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Tuesday, December 16, 1913

Series 151

Scale 1mD4151 Q3 Att. +.12 P. C.

	Sc.B.	Sc.B	Sc.C	Sc.C	Mean	Res.	Curve.	Magn.	Sc.B	Sc.C	Sc.C	Mean	Res.	Curve.
1	4.1	4.2	4.1		4.15	0	1	2.98	7.13	8.3	8.3	8.30	0	0	-.99
2	4.2	4.3	4.2		4.25	1	0	2.95	7.20	8.2	8.3	8.25	0	1	-.97
3	4.7	4.8	4.8		4.80	0	0	2.69	7.49	8.7	8.4	8.55	1	2	-.106
4	4.4	4.5	4.7		4.60	1	1	2.76	7.36	8.4	8.5	8.45	0	1	-.103
4.2	4.3 5	3.9	4.0	4.4	4.23	1	2	2.97	7.20	8.4	8.5	8.45	0	1	-.103
6	5.9	6.0	5.9		5.95	0	1	2.25	8.20	9.7	9.8	9.75	1	0	-.137
7	5.4	5.5	5.7		5.60	1	1	2.38	7.98	9.3	9.3	9.30	0	0	-.124
8	6.7	6.8	6.8		6.80	0	0	2.03	8.83	9.8	9.8	9.80	0	0	-.188
9	6.7	6.8	6.7		6.75	0	1	2.04	8.79						
10	6.6	6.7	6.8		6.75	1	0	2.04	8.79						
11	6.7	6.8	6.8		6.80	0	0	2.03	8.83						
12	7.3	7.3	7.4	7.3	7.35	0	1	1.91	9.26						
13			7.4	7.3	7.35	0	1	1.91	9.26						
14			7.8	7.7	7.75	0	1	1.87	9.62						
15			7.9	7.9	7.90	0	0	1.86	9.76						
16			8.8	8.3	8.55	2	3	1.84	10.39						
17			8.4	8.7	8.55	2	1	1.84	10.39						
18			8.9	8.8	8.85	1	0	1.84	10.69						
19			9.2	9.1	9.15	0	1	1.84	10.99						
20			9.3	9.3	9.30	0	0	1.83	11.13						
21			~~9.7~~ 9.2	9.8	9.75	1	0	1.85	11.60						
22			9.7	9.8	9.78	1	0	1.85	11.60						
23			10.2?	10.1?	10.15	0	1	1.86	12.01?						
24															
25															
26															
27															

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Tuesday, December 16, 1913

Series 15

Scale			Mr 4153		Pole			P. C.		
Screw	Microm.		Sc. B	Sc. C	Sc. C			Sc. B	Sc. C	Sc. C
							Mean			
-0.99	7.31	5	2.7 2.8	B.	28[illegible] a.			7.1 7.2	7.2	7.1 7.17 ·0 0 1
-0.97	7.28	6	3.8 3.9	B.	3.9[illegible] a.				7.9	8.1 8.00 1 1
-1.06	7.49	8	5.7 5.8	5.7	5.75 0 1				9.3	9.3 9.30 0 0
-1.03	7.42	9	6.4 6.5	6.8	6.65 1 2				10.2?	10.2? 10.20? 0 0
-1.03	7.42	10	6.8 6.9	6.8	6.85 1 0				7.	7.
-1.37	8.38	11	7.	7.4	7.6	7.50 1 1				
-1.24	8.06	12		7.8	7.9	7.85 0 1				
-1.85	8.42	13		8.2	8.2	8.20 0 0				
		14		8.6	8.7	8.65 0 1				
		15		9.1	9.2	9.15 1 0				
		16		9.3	9.4	9.35 1 0				
		17		9.3	9.7	9.50 2 2				
		18		7.	7.					
3.50		19								
(20 m out)		20								
		23								
		25								

See page 166

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Wednesday, December 17, 1913

11.46 Series 151

Scale V MD 4148 Pole P. C.

	Sc.B.	Sc.B.	Sc.C	Sc.C	Mean.	MD 4153		Mean.	Diff.	Sc.B.	Sc.C	Sc.C
	2.7	2.4								7.0		
2.6	5 2.3				2.55	1	2	2.80	2.68	13 12	3.71	6.9	7.1	
3.4														
3.3	6 3.6	3.7	B.		3.55	2	1	3.75	3.65	10 10	3.33		7.9	7.8
	8 5.7	5.8	5.8		5.80	0	0	5.70	5.75	05 05	2.35 +.43		9.2	9.4
	9 6.7	6.8	6.8		6.80	0	0	6.75	6.78	02 03	1.92		10.2?	10.2?
	10 6.8	6.9	7.1		7.00	1	1	6.90	6.95	05 05	1.94		See below.	
	11 7.		7.8	7.8	7.80	0	0	7.60	7.70	10 10	1.72			
	12		8.1	7.9	8.00	1	1	7.85	7.92	08 07	1.81			
	13		8.3	8.3	8.30	0	0	8.35	8.32	02 03	1.85			
	14		8.8	8.8	8.80	0	0	8.80	8.80	00 00	1.72			
	15		9.1	9.3	9.20	1	1	9.25	9.22	02 03	1.72			
	16		9.6	9.5	9.55	0	1	9.45	9.50	05 05	1.76			
	17		9.8	9.7	9.75	0	1	9.85	9.80	05 05	1.69			
	18		9.8	10.2?	10.00	2	2	7	10.00	a.	1.92			
	19		10.2?	7	10.20?	a.		10.30?	10.25?	05 05	2.03			
	20			7.7										
	22													
	25													

16/4 14/4
±.04 ±.04

21/5 19/5
±.04 ±.04 cohere.

07/4 08/4
−.02 +.02

02/13 03/13
±.00 .00

P.C.	MD 4148		MD 4153		Mean.			Diff.
5.	7.05	0	1	7.15	7.10	05	05	−0.79
6	7.85	1	0	7.90	7.88	03	02	−0.90
8	9.30	1	1	9.50	9.40	10	10	−1.30
9	10.25?	0	1		10.25	a.		−1.55
10								

18/3 17/3
−.06 +.06

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Wednesday December 17, 1913

Series 151

corrected

Scale V MD 4 1 42 C 11 Alt. +.14 P. C.

	Sc. B	Sc. B	Sc. C	Sc. C	Mean	Rad.	Curve	Magn.	Sc. B	Sc. C	Sc. C
	3.1 3.2	1 3.1 3.2			3.20	0 0	3.46	6.66		7.8	7.8 7.80 0 0 -0.90 6.90
	3.7 3.8	2 3.7 3.8		13.	3.80	0 0	3.18	6.98		7.9	7.9 7.90 0 0 -0.91 6.99
		3 4.4 4.5		4.3	4.40	1 1	2.93	7.33		8.8	9.1 8.95 2 1 -1.19 7.76
		4 4.9 5.0		4.9	4.95	0 1	2.68	7.63		9.1	8.9 9.00 1 1 -1.21 7.79
	5.7 5.8	5 5.4 5.6		5.6	5.65	1 2	2.39	8.04		9.7	9.7 9.70 0 0 -1.38 8.32
		6 5.9 6.0		5.7	5.85	2 1	2.31	8.16		10.4	9.6 9.50 1 1 -1.34 8.16
		7 6.5 6.6		6.7	6.65	0 1	2.02	8.67		10.1	10.2 ?10.15 1 0 -1.49 8.66 2
		8 6.6 6.7		6.9	6.80	1 1	1.98	8.78		7.	
		9 7.		7.3 7.4	7.35	1 0	1.84	9.19			
		10		7.6 7.7	7.65	0 1	1.81	9.46			
		11		7.9 7.9	7.90	0 0	1.79	9.69			
		12		7.8 7.8	7.80	0 0	1.80	9.60			
		13		7.8 7.8	7.80	0 0	1.80	9.60			
		14		7.8 7.8	7.80	0 0	1.80	9.60			
		15		8.9 8.9	8.90	0 0	1.79	10.68			
		16		9.2 9.2	9.20	0 0	1.77	10.97			
		17		9.3 9.2	9.25	1 0	1.77	11.02			
		18		9.3 9.2	9.25	1 0	1.77	11.02			
		19		9.8 9.7	9.75	0 1	1.82	11.57			
		20		9.8 9.9	9.85	0 1	1.84	11.69			
		21		10.1? 10.2?	?10.15	1 0	1.89	12.04?			
		22		10.2? 10.3?	?10.25	0 1	1.91	12.16?			
		23		7.							
		24									
		25									
		26									
		27									
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Series 151

	Scale V		mD 4153		Pole		P. C.		
	Sc. B		Sc. B	Sc. C	Sc. C	Mean.	Sc. B.	Sc. C	Sc. C Mean.
	2.7 2.8	5	2.7 2.8			2.80 0 0	7.0 7.1	7.2	7.15 ± 0
	3.6 3.7	6	3.7 3.8	B.		3.75 ± 0		7.9 7.9	7.90 0 0
		8	5.7 5.8	5.6		5.70 1 ±		9.6 9.4	9.50 1 ±
		9	6.6 6.7	6.8		6.75 ± 0		7. 7.	
		10	6.8 6.9	6.9		6.90 0 0			
		11	7.	7.6	7.6	7.60 0 0			
		12		7.8	7.9	7.85 0 1			
		13		8.3	8.4	8.35 ± 0			
		14		8.8	8.8	8.80 0 0			
		15		9.2	9.3	9.25 0 1			
		16		9.5	9.4	9.45 1 0			
		17		9.8	9.9	9.85 0 1			
		18		7.	7.	7			
		19		10.3?	7.	10.30? a.			
1:05		20							
		21							
		25							

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Friday, December 19, 1913

11.01

Series 24

Scale m. mD 2468 Pole P. C

	Sc.1	Sc.2	Sc.2					
				MC 2474 p. 175	Mean	Res.	Diff.	
2.2 2.4 5	2.2 2.4			2.40	4.00	3.20	80 80	3.19
3.3 3.5 6	3 3.4 3.6	B.		3.55	4.90	4.22	67, 68	2.76
8	5.3 5.5	5.4		5.45	6.85	6.15	70, 70	1.95
9	6.1 6.3	6.1		6.20	7.50	6.85	65, 65	1.85
10	6.4 6.6	6.7		6.65	7.70	7.18	53, 52	1.71
11	7.	7.4	7.3	7.35	8.25	7.80	45, 45	1.62
12		7.8	7.7	7.75	8.75	8.25	50, 50	1.48
13		7.9	7.9	7.90	8.90	8.40	50, 50	1.77
14		8.3	8.4	8.35	9.30	8.82	47, 48	1.70
15		8.7	8.7	8.70	9.53	9.12	42, 41	1.82
16		8.9	8.9	8.90	9.85	9.38	48, 47	1.88
17		9.2	9.2	9.20	9.90	9.55	35, 35	1.94
18		9.8	9.8	9.80	10.30	10.05	25, 25	1.87
19		9.8	9.9	9.85	10.20	10.02	17, 18	2.26
20		10.2	10.1	10.15		10.15 00		2.44
23		7						
25								

The prismatic companions

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1913phae.proj.1038M

Friday, December 19, 1913

Series 24

Scale 7m MD 2470 C6 Alt. +.17 P. C

Reduction delayed — see Remarks on 47 8 curves. no fiduciatic comparison

Rejected.

	Sc. 1	Sc. 1	Sc. 2	Sc. 2	Mean	Res.
2.8 3.0	1	2.8 3.0		B.	3.00	0 0
3.2 3.4	2	3.2 3.4		B	3.40	0 0
	3	4.1 4.3		4.1	4.20	1 1
	4	4.1 4.3		4.2	4.25	1 0
	5	4.2 4.4		4.3	4.35	0 1
	6	4.9 5.1		5.2	5.15	1 0
	7	5.7 5.9		5.8	5.85	1 0
	8	5.4 5.6		5.7	5.65	0 1
	9	5.6 5.8		5.8	5.80	0 0
	10	5.8 6.0		6.1	6.05	0 1
	11	6.8 7.0		7.2	7.10	1 1
	12	6.9 7.1		6.8	6.95	1 2
	13	7.		7.5 7.3	7.40	1 1
	14			7.7 7.8	7.75	1 0
	15			7.7 7.7	7.70	0 0
	16			8.4 8.3	8.35	0 1
17.	17		8.4	8.7 8.3	8.57	1 2 2
	18			8.9 8.9	8.90	0 0
	19			8.8 8.7	8.75	0 1
	20			8.8 8.8	8.80	0 0
	21			8.8 8.9	8.85	0 1
	22			9.4 9.2	9.30	1 1
	23			9.6 9.6	9.60	0 0
	24			9.6 9.6	9.60	0 0
	25			9.9 9.8	9.85	1 0
	26			10.2? 10.2?	10.20	0 0
	27			10.2? 10.3?	10.20	0 1

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1913phae.proj.1038M

Friday, December 19, 1913

Series 24

Scale m	m D 2474		Pole		P. C.
Sc. 1	Sc. 1	Sc. 2	Sc. 2	Sc. 2	No prismatic companions.
3.8 4.0 5	3.8 4.0		B	4.00 0 0	
6	4.8 5.0		4.8	4.90 1 1	
8	6.7 6.9		6.8	6.85 1 0	
9	7.		7.6	7.4 7.50 1 1	
10			7.7	7.7 7.70 0 0	
11			8.3	8.2 8.25 1 0	
12			8.8	8.7 8.75 0 1	
13			8.9	8.9 8.90 0 0	
14			9.3	9.3 9.30 0 0	
15		9.6	9.3	9.7 9.53 1 2 2	
16			9.8	9.9 9.85 0 1	
17			9.8	10.0 9.90 1 1	
18			10.3?	10.3? 10.30 0 0	
19			10.2?	7. 10.20 0 0	
12.28 20			7.	7.	
23					
25					

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Saturday, December 20, 1913

12.00 Series 118

Scale m mD 3770 Pole P. C.

Sc.1	Sc.1	Sc.2	Sc.2	mP 3775 P.178	mP 3781 P.180	Mean	Rd.	Dif.	Sc.1	Sc.2	Sc.2	mP 3775	mP 3781	Mean	Rd.	Dif.
2.3 2.5 5	2.2 2.4			2.45	2.50	2.70	2.55	2 1 1	3.84	6.8 7.0	6.8	6.90	6.95	6.95	6.93	0 1 1	-0.5
3.3 3.5 6	3.3 3.5	B.		3.50	3.90	3.45	3.72	2 2 1	3.26		7.8	7.80	7.70	7.85	7.78	0 1 0	-0.80
8	5.2 5.4	5.4		5.40	5.45	5.35	5.40	0 0 0	2.70	9.3	9.3	9.30	9.05	9.00	9.12	2 1 1	-1.0
9	6.2 6.4	6.4		6.40	6.40	6.35	6.38	0 0 0	2.32	10.0	9.8	9.90	9.80	9.80	9.83	1 0 0	-1.13 -1.09
10	6.5 6.7	6.7		6.70	6.95	6.65	6.77	1 2 2	2.12	10.2?	10.0	10.10	9.90	9.85	9.95	1 1 2	-1.06
11	7.	7.3	7.6	7.45	7.35	7.30	7.37	0 0 1	2.05			10.18					(-0.68)
12		7.9	7.9	7.90	7.75	7.80	7.82	1 0 0	1.91								
13		8.4	8.4	8.40	8.20	8.05	8.22	2 0 2	1.95								
14		8.8	8.8	8.80	8.70	8.65	8.72	1 0 1	1.80								
15		9.2	9.2	9.20	8.90	8.80	8.97	2 1 2	1.97								
16		9.7	9.5	9.60	9.35	9.25	9.40	2 0 2	1.86								
17		9.7	9.8	9.75	9.30	9.55	9.53	3 2 1	1.96								
18		10.1?	9.9	10.00	9.95	9.85	9.93	1 1 1	1.99								
19		10.3?	10.3?	10?30													
20		10.3?	10.3?	10?30													
23																	
25																	

$\frac{3}{4}$ $\frac{1}{4}$ $\frac{0}{4}$
+.08 -.02 .00

$\frac{1}{1}$ $\frac{1}{1}$ $\frac{2}{1}$
+.10 -.10 -.20

$\frac{4}{5}$ $\frac{2}{5}$ $\frac{2}{5}$
All +.08 -.04 -.04

$\frac{4}{4}$ $\frac{1}{4}$ $\frac{2}{4}$
-.10 +.02 +.05

$\frac{3}{5}$ $\frac{2}{5}$ $\frac{6}{5}$
+.06 +.04 -.12

$\frac{8}{4}$ $\frac{2}{4}$ $\frac{4}{4}$
+.20 -.05 -.10

$\frac{7}{13}$ $\frac{1}{13}$ $\frac{8}{13}$
+.05 +.01 -.06

Applied

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Saturday, December 20, 1913

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Series 118

Scale m. mD 3771 τ Cephei alt. +.10 P. C.

	Sc.1		Sc.1		Sc.2	Sc.2 Mean	Red	Curve	Magn.	Sc.1		Sc.2	Sc.2 Mean	Red	Curve	Magn.
-0.54	1.2	1.4 α	1.2	1.4	B	1.40	0	0		5.7	5.9	5.7	5.80			
-0.80		β	1.1	1.3	B.	1.3		0		5.8	6.0	5.7	5.85			
-1.04																
-1.13 -1.09	3.1	3.3 a	3.1	3.3		3.30	0	0	3.46	6.76	7.	7.6	7.4	7.50	1	1 -0.75	6.75
-1.06	2.6	2.8 b	2.7	2.9		2.85	0	1	3.68	6.53	7.0	7.2	7.2	6.9	7.10	1 1 -0.64	6.46
(-0.68)	3.9	4.1 c	3.8	4.0	B	4.05	1	0	3.15	7.20	7.	8.2	8.3	8.25	0	1 -0.88	7.37
		d	4.4	5.6	5.7	5.65	0	1	2.55	8.20	9.2	9.1		9.15	0	1 -1.04	8.11
		e	4.4	4.6	4.4	4.50	1	1	2.97	7.47	8.7	8.4		8.55	1	2 -0.96	7.59
		f	6.2	6.4	6.3	6.35	0	1	2.30	8.65	9.7	9.8		9.75	1	0 -1.10	8.65
		g	6.3	6.5	6.3	6.40	1	1	2.29	8.69	9.7	9.6		9.65	1	0 -1.09	8.56
		h	7.0	7.2	7.2	7.20	0	0	2.06	9.26	10.0	10.2		10.10	1	1 -1.12	8.98
		k	6.6	6.8		6.80	0	0	2.17	8.97	9.8	9.8		9.80	0	0 -1.09	8.71
		l	7.		8.3	8.30	0	0	1.88	10.18	10.2	7.		10.2	2	1 -1.11	
		m			7.8	7.80	0	0	1.94	9.74							
		n			8.3	8.25	1	0	1.98	10.23							
		o			8.7	8.55	1	2	1.88	10.43							
		p			8.6	8.50	1	1	1.88	10.38							
		q			8.9	8.90	0	0	1.87	10.77							
		r			9.2	9.15	0	1	1.90	11.05							
		s			9.4	9.35	0	1	1.92	11.27							
		t			9.7	9.60	2	2	1.95	11.55							
	3.2	3.4 β'	3.3	3.5		3.45	0	1	3.41	6.86							
	3.8	4.0 c'	3.9	4.1		4.05	0	1	3.15	7.20							
		d'			5.4	5.4	0	.	2.63	8.03	9.1	8.9		9.00	1	1 -1.03	7.97
		h'			7.2	7.2	0	.	2.06	9.26	9.8	9.8		9.80	0	0 -1.11	8.69
		m'			7.8	7.8	0	.	1.94	9.74	7.	7.					

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Saturday, December 20, 1913

Series 118

Scale m.

	m D 3775		Pole			P. C.		
	Sc. 1	Sc. 1	Sc. 2	Sc. 2		Sc. 1	Sc. 2	Sc. 2
5	2.4 2.6	2.2 2.4		2.50 1 1	384	6.8 7.0	8.9	6.95
6	3.7 3.9	3.7 3.9	B	3.90 0 0	322		7.7	7.7 7.70
8	5 3 5.5		5.4	5.45 1 0	262		8.9	9.3 9.05
9	6.2 6.4		6.4	6.40 0 0	229		9.8	9.8 9.80
10	6.8 7.0		6.9	6.95 0 1	214		9.9	9.9 9.90
11	7.		7.4	7.3 7.35 0 1	204		7.	7.
12			7.8	7.7 7.75 0 1	194			
13			8.2	8.2 8.20 0 0	188			
14			8.7	8.7 8.70 0 0	187			
15			8.9	8.9 8.90 0 0	187			
16			9.3	9.4 9.35 1 0	192			
17			9.3	9.3 9.30 0 0	191			
18			10.0	9.9 9.95 0 1	200			
19			7.	7.				
20								
23								
25								

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Saturday, December 20, 1913

Series 118

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Scale m. m 3776 Bi. Alt. +.221 P. C.

Sc.1	Sc.1	Sc.2	Sc.2	Mean	Res.	Curve	Magn.	Sc.1	Sc.2	Sc.2	Mean	Res.	Curve	Magn.
3.4 3.6 1	3.2 3.4			3.50	1 1	3.38	6.88		7.8	7.8	7.80	0 0	-0.81	6.99
3.7 3.9 2	3.7 3.9			3.90	0 0	3.23	7.13		7.9	7.9	7.90	0 0	-0.83	7.07
3.5 3.7 3	3.3 3.5		B.	3.60	1 1	3.35	6.95		7.8	7.5	7.65	2 1	-0.77	6.88
4	4.1 4.3		4.7	4.3 4.43	1 3 1	3.00	7.43		8.4	8.3	8.35	0 1	-0.91	7.44
5	4.8 5.0		4.6	4.9 4.83	2 2 1	2.84	7.67		8.7	8.7	8.70	0 0	-0.98	7.72
6	5.1 5.3		5.2	5.25	1 0	2.69	7.94		8.9	8.9	8.90	0 0	-1.00	7.90
7	5.9 6.1		5.9	6.00	1 1	2.43	8.43		9.5	9.7	9.60	1 1	-1.09	8.51
8	5.8 6.0		5.7	5.85	2 1	2.48	8.33		9.4	9.4	9.40	0 0	-1.07	8.33
9	6.2 6.4		6.6	6.50	1 1	2.25	8.75		9.8	9.8	9.80	0 0	-1.10	8.70
10	6.8 7.0		7.1	7.05	0 1	2.12	9.17		9.7	9.7	9.70	0 0	-1.09	8.61
11	6.2 6.4		6.3	6.35	0 1	2.33	8.68		9.7	9.8	9.75	1 0	-1.10	8.65
12	6.8 7.0		6.8	6.90	1 1	2.14	9.04		9.9	9.9	9.90	0 0	-1.11	8.79
13	6.9 7.1		7.1	7.10	0 0	2.10	9.20							
14	?		7.7	7.7 7.70	0 0	1.96	9.66							
15			8.1	8.2 8.15	1 0	1.89	10.04							
16			8.8	8.8 8.80	0 0	1.87	10.67							
17			8.7	8.4 8.55	1 2	1.88	10.43							
18			8.4	8.4 8.40	0 0	1.88	10.28							
19			8.9	8.9 8.90	0 0	1.87	10.77							
20			9.2	9.2 9.20	0 0	1.90	11.10							
21			8.9	8.8 8.85	1 0	1.87	10.72							
22			9.4	9.3 9.35	0 1	1.92	11.27							
23			9.3	9.4 9.35	1 0	1.92	11.27	23a	?	9.7	9.5	9.60	-1.10	8.50
24			10.2?	10.2? 10.20	0 0			26a		9.8	9.8	9.80	-1.11	8.69
25			10.4?	10.2? 10.30	1 1			26b		?	?			
26			10.2?	9.9 10.05	2 1									
27														
28														

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1913phae.proj.1038M

Saturday, December 20, 1913

Series 118

Scale m.		m Θ 3781		Pole		P. C.		
	Sc. 1	Sc. 1	Sc. 2	Sc. 2		Sc. 1	Sc. 2	Sc. 2
	2.4 2.6	5 2.6 2.8		2.70		6.8 7.0	6.9	6.95
	3.7 3.9	6 3.4 3.6	B.	3.75			7.8	7.9 7.85
		8 5.2 5.4	5.3	5.35			8.9	9.0 9.00
		9 6.3 6.5	6.2	6.35			9.9	9.7 9.80
		10 6.4 6.6	6.7	6.65			9.9	9.8 9.85
		11 7.1 7.3	7.2	7.4 7.30			10.1?	10.1? 10.10
		12 7.	7.8	7.8 7.80			7.	7.
		13	8.1	8.0 8.05				
		14	8.7	8.6 8.65				
		15	8.8	8.8 8.80				
		16	9.3	9.2 9.25				
		17	9.6	9.5 9.55				
		18	9.8	9.9 9.85				
3:06		19	7.	7. —				
(17 m out)		20						
		23						
		25						

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1913phae.proj.1038M

Monday, December 22, 1913

12:40 Series 98 (See page 106 + 109)

Scale m. MD 3560 Pole (Remeasured) P. C.

	Sc.1	Sc.1	Sc.2	Sc.2	p.106	Diff.		Sc.1	Sc.2	Sc.2	p.106		
3.2	3.4	3.3	3.5	B.	3.5	3.65	[-15]	7.	7.9	7.9	7.90	7.85	+05
8	5.9	6.1	6.2	6.1	6.13	6.10	+03		9.8	9.8	9.80	9.80	00
10	7.1	7.3	7.4	7.2	7.30	7.25	+05		10.3?	10.3?	10.30	? 7	
13	7.		8.8	8.8	8.80	8.75	+05		7.	7.			
16			9.8	9.8	9.80	9.70	+10						
17			9.8	9.9	9.85	9.75	+10						
							+33						05
							5						2
							+007						+0.02

	Mean	p. 182	Diff.	Diff. pp. 106, 109	Diff. pc. 181-182	106-109
5	3.5	3.1	[0.4]	(+0.3)	+15 (20)	+30
8	6.13	5.95	+.18	+.10	−05	+05
10	7.30	7.23	+07	+.02		
13	8.80	8.65	+.15	+.10		
16	9.80	9.70	+.10	00		
17	9.85	9.70	+.15	+.05		
			65	27	15	35
			5	5	2	2
			+0.15	+0.05	+0.08	+0.18
		Include p.c.	+0.11	+0.09		

When Series 98 was first measured, the second plate on the Pole was observed by artificial light. On this account certain stars were remeasured on this page and page 182 in order to see if systematic errors were introduced. The difference found by subtracting magn. on MD 3565 from those on MD 3560 was, on the average +0.11 magn. for the measures on Oct. 28, and +0.09 for those on Dec. 22. There is, therefore, no evidence of serious systematic error in the measurement of MD 3565, and Series 98, pages 106-109 may be reduced in the usual way.

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1913phae.proj.1038M

Monday, December 22, 1913

Series 98

Scale m														
	M 3565		Pole			(Remeasured)		P. C.						
	Sc. 1	Sc. 1	Sc. 2	Sc. 2	p.109	Diff.		Sc. 1	Sc. 2	Sc. 2			Diff.	
3.1	5	2.9	3.1	B.	3.1	3.35	[-.25]	7.	7.7	7.7	7.70	7.55	+.15	
	8	5.8	6.0	5.9	5.95	6.00	-.05		9.9	9.8	9.85	9.75	+.10	
	10	7.1	7.3	7.3	7.1 7.23	7.23	00		7.	7.				
	13	7.		8.6	8.7 8.65	8.65	00							
	16			9.5	9.7 9.60	9.70	-.10							
	17			9.6	9.7 9.65	9.70	-.05							
							-.20							+25
							5							2
1.07							-0.04							+0.12

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1913phae.proj.1038M

Saturday, December 27, 1913

12:43 Series 115

Scale m. m* 3731 Pole P. E.

Sc. 1	Sc. 1	Sc. 2	Sc. 2	MB 3736	Mean	Res.	Diff.	Sc. 1	Sc. 2	Sc. 2	MB 3736	Mean	Diff.
3.6 3.8 5	3.3 3.5	B.		3.65 3.95	3.80	± 2	2.59	7.	8.1	8.2	8.15 8.20	8.18	-1.81
6	4.8 5.0	4.9		4.95 5.35	5.15	± 2	1.83		9.2	8.9	9.05 9.15	9.10	-2.12
8	6.8 7.0	6.9		6.95 7.20	7.08	± 1	1.02		10.2?	10.2?	10?0		
9	7	7.7	7.8	7.75 7.90	~~8.07~~ 7.82	0	0.88						
10		7.9	7.9	7.90 8.15	8.02	± 2	0.84						
11		8.7	8.6	8.65 8.80	8.72	± 1	0.90						
12		8.8	8.8	8.80 8.85	8.82	0	0.91						
13		9.2	9.2	9.20 9.45	9.32	± 1	0.85						
14		9.6	9.7	9.65 9.80	9.72	± 1	0.80						
15		9.8	9.9	9.80 9.90	9.85	0	1.09						
16		9.8	10.1?	9.95 10.35	10.15	± 2	1.11						
17		9.9	10.0	9.95									
18		7.	7.	—									
19													
20													
23													
25													

(Time out)

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Saturday, December 27, 1913

Series 115

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Scale m. mD 3732 46/75 Abb. +.02 P. C

	Sc.1	Sc.1	Sc.2	Sc.2			Curve	Magn.	Sc.1	Sc.2
1		7.	7.4	7.4	7.40	0.0	~~7.78~~	8.40	7.	7
2			7.6	7.5	7.55	0.1	0.93	8.48		
3			8.9	8.9	8.90	0.0	0.83	9.73		
* 4			8.9	9.3	9.10	2.2	0.84	9.94		
5			9.8	9.8	9.80	0.0	0.78	10.78		
6			9.9	10.1?	10.00	1.1	1.06	11.06?		
7		10.2?	9.7	10.1?	~~10.00~~ 9.90	2.3	1.06	11.06?		
8			7.	10.2?	10.2	0.0	1.13	11.23?		
9										
10										
11										
12										
13										
14										
15										
16										

Right Measure of Star 4. Apparently some mistake. H. S. L. July 30, 1918.

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Saturday, December 27, 1913

Series 115

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Scale m	m D 3734	87 IV	alt. + .16	P.	ε
Sc.1	Sc.1	Sc.1 Sc.2	Curve Magn.	Sc.1. Sc.2	Sc.2.
1	4.8 5.0	5.2	5.10 ⊥ .1 1.85 6.95 7.90	7. 9.0	8.9 8.95 0 ⊥ -2.03 6.92 6.87
2	6.2 6.4	6.2	6.30 1 ⊥ 1.34 7.64 7.59	9.8	9.8 9.80 0 0 -2.09 7.71 7.66
3	6.8 7.0	6.9	6.95 0 ⊥ 1.12 8.07 8.02	10.1?	9.9 10.00 1 ⊥ -2.10 7.90 7.85
4	7.1	7.2 7.1	7.15 . 0 ⊥ 1.03 8.18 8.13	7.	7.
5		8.9 8.9	8.90 0 0 .83 9.73 9.68		
6		9.4 9.3	9.35 0 ⊥ .87 10.22 10.17		
7		9.6 9.7	9.65 0 1 0.95 10.60 10.55		
8		9.8 9.8	9.80 0 0 .99 10.79 10.74		
9		7. 7.			
10					
11					
12					
13					
14					
15					

Eph. $9^m\ 30^s$. Correct the above magnitudes by -0.05 magn.

N.S.L. March 17, 1914.

(N.B $9^m\ 30^s$ eph. Apply correction.)

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1913phae.proj.1038M

Saturday, December 27, 1913

Series 115

leopard

Scale m. mD 3735 B8 Alt. +.221 P. C.

	Sc.1	Sc.1	Sc.2	Sc.2				Sc.1	Sc.2	Sc.2	Sc.2	
1	4.8	5.0	4.7		4.85	2.1	1.99	6.84	8.9	8.9	8.90	0.0	-2.01
2	5.7	5.9	5.6		5.75	1.2	1.54	7.29	9.7	9.4	9.3 9.47	2.2	-2.07
3	4.9	5.1	5.1		5.10	0.0	1.85	6.95	9.2	9.3	9.25	0.1	-2.0
4	6.4	6.6	6.6		6.60	0.0	1.23	7.83	10.1?	9.9	10.05	1.1	2.1
5	6.1	6.3	5.9	6.1	6.10	2.2	1.42	7.52	9.9	9.9	9.90	0.0	2.1
6	6.1	6.3	6.2		6.25	1.0	1.36	7.61	10.0	9.9	9.95	0.1	2.1
7	7.		7.3	7.4	7.35	1.0	0.98	8.33	7.	7.			
8			7.7	7.8	7.75	1.0	0.89	8.64					
9			7.4	7.4	7.40	0.0	0.97	8.37					
10			7.7	7.7	7.70	0.0	0.91	8.61					
11			8.3	8.2 7.7	8.25	1.0	0.83	9.08					
12			8.4	8.4	8.40	0.0	0.82	9.22					
13			8.8	8.7	8.75	0.1	0.83	9.58					
14			8.8	8.8	8.80	0.0	0.83	9.63					
15			8.9	8.8	8.85	1.0	0.83	9.68					
16			9.1	8.9	9.00	1.1	0.84	9.84					
17			9.5 9.8	9.4	9.45	1.0	0.89	10.34					
18			9.9 +0.2?	9.9	9.90	0.0	1.02	10.92					
19			9.9	9.9 9.9	9.90	0.0	1.02	10.92					
20			9.9	7.	9.90	0.0	1.02	10.92					
21			7.	7.									
22													
23													
24													
25													
26													
27													
28													

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Saturday, December 27, 1913

Series 115

Scale m.			MD 3736 Pole			P. E		
	Sc.1		Sc.1	Sc.2	Sc.2	Sc.1 - Sc.2	Sc.2	
	2.01	6.89	3.7 39 5 3.8 4.0	B.	3.95	8.2	8.2	8.20
-	2.07	7.40	6 5.1 5.3	5.4	5.35	9.1	9.2	9.15
-	2.05	7.20	8 6.9 7.1	7.3	7.20	7.	7.	
	2.11	7.89?	9 7.	7.9	7.9 7.90			
	2.10	7.80	10	8.1	8.2 8.15			
	2.11	7.84	11	8.7	8.9 8.80			
			12	8.9	8.8 8.85			
			13	9.6	9.3 9.45			
			14	9.8	9.8 9.80			
			15 9.9	*~~10.2?~~	9.9 9.90			
			16 10.3?	*~~9.9~~	10.4? 10.35			
			17					
			18					
			19					
			20					
			23					
			25					

3.29
(30 m out)

*Discard.

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Monday, December 29, 1913

11:11 Series 115

Scale m. HD 3736 Pole P. E

	Sc.1	Sc.1	Sc.2	Sc.2					Sc.1	Sc.2	Sc.2
	3.8 4.0				mn 3742 P.198	Mean	Res.	O. C.			
5	3.8 4.0		B.		4.00	4.40	4.20	2 2	2.19	8.4	8.4 8.40 8.85 8.62 -2.23
6	5.2 5.4		5.3		5.35	5.90	5.62	2 3	1.36	8.9	9.2 9.05 9.40 9.38 -2.40
8	6.9 7.1		7.2		7.15	7.65	7.40	2 2	0.40		
9	7.		7.8	7.9	7.85	8.20	8.02	2 2	0.68		22 23
10			8.2	8.2	8.20	8.40	8.30	1 1	0.59		33 32
11			8.8	8.7	8.75	8.90	8.82	0 1	0.60		55 55
12			8.9	8.9	8.90	9.20	9.05	1 2	0.68		2 2
13			9.5	9.3	9.40	9.70	9.55	2 1	0.62		-.28 +.28
14			9.7	9.8	9.75	9.80	9.78	0 0	0.74		
15			9.9	10.0	9.95	10.30	10.12	1 2	0.82		
16			9.9	10.1 ?	10.00				(1.76)		
17			7.								
18									8 9 4 4 -.20 +.22		
19									4 5 5 5 -.08 +.10		
20											
23									1 2 1 1 -.10 +.20		
25									13 16 10 10 -.0 -.13 +.16		

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Monday, December 29, 1913

Series 115

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Scale m mD 3738 C11 Att. + .16 P. C

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Rep.	Curve	Magn.	Sc.1	Sc.2	Sc.2	curve?	
1	4.8	5.0	5.2		5.10	± .1	.157	6.67	7.	9.3	9.2	9.25	± .0 - 7.81 6.44
2	5.4	5.6	5.4		5.50	± .1	.140	6.90		9.6	9.4	9.50	± .1 . /
3	6.5	6.7	6.8		6.75	± .0	.093	7.68		10.2	10.1?	10.15?	0 ± . ✓
4	6.7	6.9	6.7		6.80	± .1	.092	7.72		10.2	10.2?	10.20?	0 0 .
5	7.		7.6	7.4	7.50	± .1	.072	8.22					
6			7.5	7.4	7.45	± .0	.073	8.18					
7			7.9	7.9	7.90	0 0	.064	8.54					
8			8.4	8.3	8.35	0 ± .1	.059	8.94					
9			8.4	8.5	8.45	0 ± .1	.059	9.04					
10			8.8	8.7	8.75	0 ± .1	.059	9.34					
11			9.2	9.2	9.20	0 0	.064	9.84					
12			8.8	8.9	8.85	0 ± .1	.061	9.46					
13			8.8	8.9	8.85	0 ± .1	.060	9.45					
14			8.9	8.9	8.90	0 0	.061	9.51					
15			9.5	9.7	9.60	± .1	.070	10.30					
16			9.9	9.8	9.85	± .0	.074	10.59					
17			10.2?	10.2?	10.20?	0 0	.080	11.00?					
18			10.1?	10.2?	10.15?	± .0	.079	10.94?					
19			7.										
20													
21													
22													
23													
24													
25													
26													
27													
28													

Reject for five points on curve

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Monday December 29, 1913

Series 115

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Scale m MD 3439 6614 Alt. +72 P. C

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Dec.		Sc.1	Sc.2	Sc.2
1	7.	8.7	8.8	8.75	±	0.060	9.35	7.	7. +0.3?	7.
2		9.7	9.7	9.70		0.072	10.42		7.	7
3		9.8	9.8	9.80		0.074	10.54			
4		10.2?	10.3?	10.25		0.081	11.06			
5		10.3?	10.3?	10.30		0.083	11.13			
6		10.2?	10.0?	10.10	±	0.077	10.87			
7		7	7.							
8										
9										
10										
11										
12										
13										
14										
15										

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Monday, December 29, 1913

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Series 115

Scale m. MD 3740 90K Alt +.17 P. C

	Sc.1	Sc.1	Sc.2	Sc.2	Mean.	Res.	Curve.	Magn.	Sc.1	Sc.2	Sc.2
1	7.		7.6	7.7	7.65	0	1	0.69	8.34	7.	7.	7
2	6.8	7.0	6.8		6.90	1	1	0.90	7.80			
3	7.		8.3	8.3	8.30	0	0	0.59	8.89			
4			8.9	8.9	8.90	0	0	0.61	9.51			
5			10.1?	9.8	9.95	1	2	0.75	10.70?			
6			10.3?	10.3?	10.30	0	0	0.83	11.13?			
7			7.	7.								
8			7.									
9												
10												
11												
12												
13												
14												
15												

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1913phae.proj.1038M

Monday, December 29, 1913

Series 115

leopied.

Scale No. MD 3741 42K Alt. +.23 P. E.

	Sc.1	Sc.1	Sc.2	Sc.2	Mean	Res.	Curve.	Magn.	Sc.1	Sc.2	Sc.4
1	7.	7.9	7.9	7.90	0.0	0.68	8.58	3	7.	7.	
2		9.2	9.1	9.15	0.1	0.64	9.79				
3		9.7	9.4	9.55	1.2	0.60	10.35				
4		9.9	9.9	9.90	0.0	0.75	10.65				
5		7.	7.								
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

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Monday, December 29, 1913

Series 115

Scale m.	mΘ 3742		Pole			P.C.		
	Sc.1	Sc.1	Sc.2	Sc.2	Mean Res.	Sc.1	Sc.2	Sc.2
5	4.3	4.5	4.3		4.40 ±	7.	8.8	8.9 8.85 01
6	5.8	6.0	5.8		5.90 ±		9.7	9.7 9.70 00
8	7.		7.6	7.7	7.65 01		7.	7.
9			8.2	8.2	8.20 00			
10			8.4	8.4	8.40 00			
11			8.9	8.9	8.90 00			
12			9.2	9.2	9.20 00			
13			9.8	9.6	9.70 ±			
14			9.8	9.8	9.80 00			
15			10.3?	10.3?	10.30? 00			
1105 16				7.				
17								
18								
19								
20								
23								
25								

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Beginning here, reductions made using Revised Magnitudes.

Thursday, January 8, 1914

11.12

Series 142

Scale R. mc 4042 Pole

	Sc.1	Sc.2	mc 4042 p.198	Means	Res.	D.
5	.					
6	.					
8	.					
9	.					
10	5.2	5.5	5.5	6.2	5.85	35 45 3.17
11	5.8	6.1	6.1	7.1	6.60	50 50 2.95
12	5.9	6.2	6.2	7.5	6.85	65 75 3.01
13	6.6	6.9	6.9	8.1	7.50	60 60 2.80
14	6.9	7.2	7.2	8.20	7.70	50 50 2.95
15	7.7	8.0	B. 8.0	9.00	8.50	50 50 2.58
16	8.1	8.4	8.1	8.75	9.25	8.75 50 50 2.65
17	8.3	8.6	8.7	8.65	9.45	9.05 40 40 2.58
18	9.3	9.6	9.4	9.50	10.4	9.95 45 45 2.11
19	9.3	9.6	9.9	9.75	10.6	10.18 43 42 2.24
20	7.		10.6	10.6	11.3	10.95 35 35 1.78
23			11.4	11.4	11.9	11.65 25 25 1.69
25			12.3	12.3	12.3	12.30 00 00 1.57
26			12.4	12.4	13.3	12.85 05 05 1.98
27			13.9	13.9	12.8	13.35 55 55 1.34

applied

	Sc.1	Sc.2		Means	Res.	D.
	7.7	8.0	B.	8.0	8.10	8.05 05 05 -1.56
	8.2	8.5	8.3	8.40	9.15	8.78 38 37 -1.67
	7.		9.9	9.9	10.3	10.10 2 2 -1.87
			11.1	11.1	11.3	11.20 1 1 -2.37
			11.2	11.2	11.3	11.25 0 1 -2.23
			11.8	11.8	12.2	12.00 2 2 -2.45
			12.4	12.4	12.4	12.40 0 0 -2.54
			13.2	13.2	13.3	13.25 0 1 -2.95
			13.7	13.7	13.6	13.65 1 0 -3.00
			7.		13.8	13.8 a (-2.72)
					13.7	13.7 a (-2.30)

$\frac{73}{4}$ $\frac{72}{4}$ $-.18$ $+.18$

$\frac{1}{5}$ $\frac{4}{5}$ $-.02$ $+.08$

$\frac{83}{9}$ $\frac{112}{9}$ $-.09$ $+.12$

10-14 $\frac{25}{5}$ $\frac{27}{5}$ $-.50$ $+.54$

New values of N.P. sequence used in reduction.

Jan 19, 1914

263	262
6	6
$-.44$	$+.44$
228	227
6	6
$-.38$	$+.38$
$-.15$	$+.15$
4	4
$-.04$	$+.04$
528	547
15	15
$-.35$	$+.36$

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Thursday, January 8, 1914 Copied Card.

Series 142

Scale R. mc 4043 B1. Alt. +.17 P.C.

	Sc.1	Sc.1	Sc.2	Mean			Sc.1	Sc.2	Mean		Curve	Magn.
	1	2.8		3.1			8.5 88	8.7	8.75	2.32	-1.68	7.07
Out of focus. E.	2	1.1		1.4			9.1 94	9.2	9.30	2.25	-1.75	7.55
" " "	3	B.		.			8.6 89	8.7	8.80	2.32	-1.69	7.11
Out of focus. E.	4	1.9		2.2			9.3 96	9.6	9.60	2.20	-1.80	7.80
	5	4.6		4.9			7.	9.6	10.3	2.04	-1.96	8.34
	6	5.1		5.4	Mean	Curve	Magn.		10.2	2.07	-1.93	8.27
5.4	7	5.6		5.80	3.12	8.92			10.8	1.92	-2.08	8.72
5.2	8	5.4		5.60	3.15	8.75			10.7	1.96	-2.04	8.86
	9	5.8		6.1	3.08	9.18			10.8	1.92	-2.08	10.72
Double Brime.	10	6.4		6.7	2.99	9.69			11.2	1.82	-2.18	9.02
	11	5.8		6.1	3.08	9.18			11.3	1.80	-2.20	9.10
	12	5.9		6.2	3.06	9.26			11.4	1.78	-2.23	9.17
	13	6.6		6.9	2.95	9.85			11.3	1.80	-2.20	9.10
	14	6.8		7.1	2.92	10.02			12.4	1.41	-2.59	9.81
	15	7.2	B.	7.5	2.83	10.38			13.1	1.15	-2.85	10.25
8.1	16	7.9	8.6	8.40	2.62	11.02			13.3	1.33	-2.95	10.35
	17	7.8	B.	8.1	2.70	10.80						
	18	7.8	8.0	8.05	2.71	10.76						
	19	8.1	8.7	8.50	2.61	11.11						
	20	8.4	8.7	8.70	2.55	11.25						
	21	8.2	8.6	8.55	2.59	11.14						
	22	8.9	9.2	9.20	2.41	11.61						
	23	8.9	9.2	9.20	2.41	11.61						
	24	7	10.1	10.1	2.15	12.25						
	25		10.7	10.7	1.96	12.66						
	26		10.7	10.7	1.96	12.66						
	27		11.4	11.4	1.75	13.15						
	28		11.8	11.8	1.63	13.43						

	Sc.1	Sc.2	Mean			Curve	Magn.
	11.9	16.1	13.51				
	11.9	16.2	13.52				
	13.2	13.5	14.55				
	13.4	13.3	14.63				
	13.7	12.5	15.05				
	14.2?						
	14.2?						
				2.32			
	9.5	14.4	11.82	2.00			
	10.6	15.2	12.60				

17.	12.8	-2.73	10.07
18.	12.8	-2.73	10.07
19.	13.3	-2.94	10.36
20.	13.2	-2.89	10.31
21.	14.1		
22.	13.2	-2.89	10.31
23.	14.2?		
24.	?		
23a.	14.3?		
26a.	?		

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Thursday, January 8, 1914

Series 142

Scale R Inc. 40 45 Pleiades Alt. +20 * P.C.

		Sc. 1	Sc. 2			Sc. 1	Sc. 2	Sc. 2	
	α	B.				5.1	5.4		5.4
	β	B.				5.7	6.0		6.0
3.2	γ	3.4	3.60			8.8	9.1		9.1 − 1.71 7.39
	δ	5.4	5.7	3.16	8.86	7.	10.9		10.9 − 2.09 8.81
	ε	5.3	5.6	3.15	8.45	7.	10.8		10.8 − 2.08 8.72
	ζ	3.3	3.6			8.4	8.7		8.7 − 1.67 7.03
	a	B.				3.9	4.2		4.2
	a′	B.				4.4	4.7		4.7
	f	B.				5.3	5.6		5.6
	f′	B.				5.9	6.2		6.2
	f2	B.				4.7	5.0		5.0
	c	B.				6.5	6.8		6.8
	d	B.				6.7	7.0		7.0
	d′	1.4	1.7			7.7	8.0	B.	8.0 − 1.59 6.41
	e	2.2	2.5			7.9	8.2	8.1	8.15 − 1.60 6.55
	e′	2.7	3.0			8.3	8.6	8.7	8.65 − 1.66 6.99
	f	3.7	4.0			8.9	9.2	8.9	9.05 − 1.71 7.34 P.C.
	g	3.7	4.0			8.9	9.2	9.2	9.05 − 1.71 7.34 Sc. 2
	h	4.7	5.0						h. 7. 10.1 −1.91
	h′	4.8	5.1			k.	7.7	B.	2.85 10.65 h′ 10.4 −1.99
	i	4.9	5.2			k′	8.2 8.4	8.5 8.2	2.61 11.08 i 10.8 −2.0
	i′	5.1	5.4	3.10		l	7.		2.24 11.24 i′ 11.2 −2.1
	j	5.7	6.0	3.10	9.10	l′	7.		2.24 12.04 j 11.3 −2.7
	j1	7.4	7.7	2.79	10.49	m		10.8	1.92 12.72 j′ 12.6 −2.6
	j2	6.3	6.6	3.00	9.60	m′		11.7	1.69 13.39 j2 11.7 −2.3
	j3	6.7	7.0	2.92	9.92	n		12.3	1.52 13.82 j3 11.8 −2.3
	j4	6.8	7.1	2.91	10.01	o		12.7	1.44 14.14 j4 12.3 −2.5
	j5	7.3	7.6	2.81	10.41	p		7.	j5 13.2 −2.8

* The P.C.'s were omitted when plate was measured, but were measured immediately after series was finished at same sitting.

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Thursday, January 8, 1914

Leopard

Series 142

Scale R. Inc 40 to 46 47 F Att. +.30 P. C.

	Sc.1	Sc.2				Sc.1	Sc.2			
1	2.7 3.0		3.0			8.3 8.6	8.7	8.65	.01 - 1.66	6.99
2	2.9 3.2		3.2			8.8 9.1	8.9	9.00	.11 - 1.71	7.29
3	6.8 7.1		7.1	2.92	10.02	7.	12.3	12.3	- 2.52	9.78
4	7.7 8.0	B.	8.0	2.72	10.72		12.9	12.9	- 2.77	10.13
5	7.8 8.1	8.1	8.10 .00	2.71	10.81		13.4	13.4	- 2.99	10.41
6	8.8 9.1	9.1	9.10 .00	2.45	11.55		13.9	13.9	- 3.16	10.74
7	7.	9.6	9.6	2.29	11.89		13.4	13.4	- 2.99 Defective.	10.41
8		10.2	10.2	2.11	12.13		7.			
9		11.2	11.2	1.81	13.01					
10		11.5	11.5	1.72	13.22					
11		11.8	11.8	1.66	13.46					
12		12.4	12.4	1.50	13.90					
13		13.2	13.2	1.35	14.55					
14		13.3	13.3	1.33	14.63					
15		14.1?	14.1	1.21	15.31?					

0.1	-1.91	8.19
0.4	-1.99	8.41
0.8	-2.07	8.73
11.2	-2.19	9.01
11.3	-2.20	9.10
12.6	-2.66	9.94
11.7	-2.33	9.37
11.8	-2.38	9.42
12.3	-2.52	9.78
13.2	-2.89	10.31
13.2	-2.89	10.31

(Time out)

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Thursday, January 8, 1914

Series 142

Scale R.	Mc 4047 Sc.1	Sc.2	Pole	R. C. Sc.1	Sc.2
5				7.9 8.2	8.0 8.10
6				8.8 9.1	9.2 9.15
8				7	10.3 10.3
9					11.3 11.3
10	5.9 6.2		6.2		11.3 11.3
11	6.8 7.1		7.1		12.2 12.2
12	7.2 7.5	B.	7.5		12.4 12.4
13	7.8 8.1	B.	8.1		13.3 13.3
14	7.9 8.2	8.2	8.20		13.6 13.6
15	8.8 9.1	8.9	9.00		13.8 13.8
16	8.9 9.2	9.3	9.25		13.7 13.7
17	9.2 9.5	9.4	9.45		7.
18	7.	10.4	10.4		
19		10.6	10.6		
20		11.3	11.3		
23		11.9	11.9		
25		12.3	12.3		
26		13.3	13.3		
27		12.8	12.8		

235
(45m out)

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Tuesday, February 10, 1914

1.54 Series 73

Scale 2 mc 3171 Pole

	Sc.1	Sc.2		mc 3176 @ 203	Mean	Res.	Diff
5							
6							
8							
9							
10	5.1	B.	5.1	5.2	5.15	1, 0	3.87
11	5.8		5.65	5.80	5.72	07, 08	3.83
12	6.1		6.00	6.25	6.12	12, 13	3.74
13	6.5		6.35	6.70	6.52	17, 18	3.78
14			6.6	6.85	6.72	12, 13	3.93
15			7.1	7.1	7.10	0, 0	3.98
16			7.3	7.4	7.35	1, 0	4.05
17			7.5	7.7	7.60	1, 1	4.03
18			7.9	8.1	8.00	1, 1	4.06
19			8.3 (8.35) 8.4	8.35	8.35	00, 00	4.07
20			8.4 (8.40) 8.4	8.70	8.55	15, 15	4.18
23			8.8 (8.70) 8.6	9.20	8.95	25, 25	4.39
25			9.6 (9.70) 9.8	9.35	9.52	18, 17	4.35
26			9.9 (9.85) 9.7	9.85	9.85	00, 00	4.48
27			10.1? (10.10) 10.1?	10.00	10.05	05, 05	4.69 4

58/5 = −.12 ; 52/5 = +.10

45/6 = −.08 ; 35/6 = +.06

−02/4 = −.00 ; 03/4 = +.01

105/15 = −.07 ; 90/15 = +.06

P.C.

Sc.1	Sc.2					
5.7	5.8	5.75	5.85	5.80	05 (0.69)	08 (0.58)
6.1	6.2	6.15	6.40	6.28	13 (0.83)	12 (0.79)
7.8	7.7 7.7	7.73	7.75	7.74	01, 01	
8.3	8.5	8.40	8.50	8.45	05, 05	(0.36)
8.7	8.7	8.70	8.63	8.66	04, 03	(0.23)
9.3		9.3	9.35	9.32	02, 03	(0.14)
8.9		9.9	10.1	10.00	10, 10	
10.2?		10.2				
7.					24/4 = −.06	23/4 = +.06
					08/3 = −.03	10/3 = +.03
					32/7 = −.05	33/7 = +.05

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Tuesday, February 10, 1914

Series 73

Scale 4 | mc 3173 | 107 | Alt. +.06 | P. C.

	Sc.1	Sc.2					Sc.1	Sc.2	Sc.2	Mean	Curve	Magn.
1	3.2		3.2	3.21			6.3	6.2		6.25	0.78	7.03 6.98
2	3.9		3.9	2.92			7.4	7.2		7.30	0.61	7.91
3	4.9		4.9	2.41	3.81	8.71	7.	8.3	8.4	8.35	0.41	8.86 7
4	5.3	B.	5.3	2.30	3.81	9.11		8.7	8.7	8.70	0.35	9.05
Elongated Double? 5	5.3		5.2	2.31	3.81	9.06 R		9.3	9.2	9.25	0.21	9.46
6	5.9		5.8	2.10	3.81	9.66		9.9		9.9	0.07	9.97
6.5 7	6.7		6.4	1.89	3.85	10.40 .38		10.1?		10.1	-0.03	10.07 ~ 10.0
8	6.6		6.6	1.87	3.85	10.45		7				
9			6.8	1.80	3.89	10.69						
10			6.9	1.79	3.90	10.80						
11			7.2	1.71	3.95	11.15						
12			7.9	8.1	1.61	4.09	12.09					
13			8.2	8.3	1.62	4.11	12.36					
14			8.4	8.4	1.65	4.15	12.55					
15			8.9	8.9	1.72	4.25	13.15					
16			9.2	9.3	1.81	4.33	13.58					

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Series 73

Scale 12 mc 3174 6.15 Alt. +.22 P.C.

	Sc.1	Sc.2		Mean	Curve	Mag.	Sc.1	Sc.2				
1	4.1			4.7	3.81	8.51	7.4	7.3		7.35	0.60	7.95
2	4.7	B.		4.7	3.81	8.51	8.1	7.8		7.95	0.50	8.45
3	5.1	5.0		5.05	3.81	8.86	7.	8.7	8.8	8.75	0.32	9.07
4	5.9	5.6		5.75	3.81	9.56		9.7	9.7	9.70	0.09	9.79
5	6.1	5.9		6.00	3.82	9.82		10.1?	9.9	10.00	0.00	10.00
6	6.7	6.4		6.55	3.85	10.40		7.				
7	6.3	6.2		6.25	3.82	10.07						
8		6.9		6.9	3.89	10.79						
9		7.4		7.4	3.99	11.39						
10		7.8		7.8	4.06	11.86						
11		7.9		7.9	4.07	11.97						
12		8.3	8.2	8.25	4.11	12.36						
13		8.8	8.8	8.80	4.24	13.04						
14		8.7	8.8	8.75	4.21	12.96						
15		9.1	9.2	9.15	4.31	13.46						
16		9.6	9.5	9.55	4.43	13.98						

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Tuesday February 10, 1914

Series 73

Scale 2" | mC 3175 | 1487 | Alt. +72 | P. C.

	Sc.1	Sc.2			Sc.1	Sc.2		Mean	Curve	Magn.
a	Not on plate			2						2
b	" " "			2						2
c	" " "			2						2
d	" " "			2						2
e	" " "			2						2
f					6.8	6.8		6.80	0.70	7.50
f'	-				7.8	7.7		7.75	0.52	8.27 elongated
h	4.4		4.4		7.8	7.7		7.75	0.52	8.27
g	4.9	B.	4.9	3.81 8.71 2	7.	8.2	8.3	8.25	0.45	8.70
R	5.1	5.0	5.05 10	3.81 8.86 2		8.7	8.7	8.70	0.35	9.05
l	5.2	5.1	5.15 01	3.81 8.96 2		8.9	8.8	8.85	0.31 3	9.16 8
m	5.4	5.4 3	5.35 01	3.81 9.16 2		8.7		8.9	0.30	9.20
n	5.6	5.6	5.60 00	3.82 9.42 2		9.3		9.3	0.21	9.51
p		6.3	6.3	3.83 10.13		9.8		9.8	0.05	9.85
q		6.3	6.3	3.83 10.13		10.3?		10.3	-0.10	10.20 2
o		6.7	6.7	3.86 10.56 2		7.				
r		6.8	6.8	3.89 10.69						
s		7.3	7.3	3.98 11.28						
t		7.9	7.9	4.06 11.96						
u		7.9	7.9	4.06 11.96						
w		8.2	8.2	4.11 12.31						
x		8.3	8.3	4.13 12.43						
v		8.6	8.7 8.66 01	4.20 12.85						
z		9.1	9.1 9.10 00	4.31 13.41						
α		9.2	9.3 9.25 01	4.34 13.59						
β		9.8	9.8 9.80 00	4.51 14.31						
γ		9.9	9.9 9.90 00	4.54 14.44						

too near edge.

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Tuesday February 10, 1914

Series 43

Scale 1 mc 3176 Pole

	Sc.1	Sc.2		Sc.1	Sc.2	Sc.2	
5	.	.		7.9	5.8		5.85
6	.	.		6.4	6.4		6.40
8	.	.		7.8	7.7		7.75
9	.	.		7.	8.4	8.6	8.50
10	5.2	B. 5.2			8.4	8.8	8.7 8.63
11	5.9	5.7	5.80 ii		9.3	9.4	9.35 ?
12	6.4	6.1	6.25 21		10.1		10.1
13	6.7	6.7	6.70 00		7.		
14	6.9	6.8	6.85 10				
15	.	7.1	7.1				
16		7.4	7.4				
17		7.7	7.7				
18		8.1	8.1				
19		8.4	8.35 8.3 01				
20		8.8	8.70 8.6 11				
23		9.2	9.20 9.2 00				
25		9.4	9.85 9.3 01				
26		9.8	9.85 9.9 01				
27		9.9	10.00 10.1 ? 11				

3.35

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1913phae.proj.1038M

Wednesday, February 11, 1914

11.30

Series 73

Scale 4

M C 3176 Pole All

	Sc.1	Sc.2	MC 3182 p. 210	Mean	Res.	Diff
5						
6						
8						
9		1				
10	5.2	5.0	5.10	5.4	5.25 15, 15	3.77
11	5.8	5.7	5.75	5.60	5.68 07, 08	3.87
12	6.4	6.1	6.25	6.05	6.15 10, 10	3.71
13	6.6	6.4	6.50	6.50	6.50 00, 00	3.80
14		6.9	6.9	6.75	6.82 08, 07	3.83
15		6.9	6.9	7.2	7.05 15, 20	4.03
16		7.3	7.3	7.3	7.30 00	4.10
17		7.7	7.7	7.7	7.70 00	3.93
18		8.1	8.1	7.9	8.00 10, 10	4.06
19		8.4	8.4	8.3	8.35 25, 10	4.07
20		8.8	8.80 8.8	8.60	8.70 10, 10	4.03
23		9.2	9.15 9.1	8.90	9.02 13, 12	4.32
25		9.5	9.55 9.6	9.25	9.40 15, 15	4.47
26		9.9	9.85 9.8	9.85	9.85 00, 00	4.48
27		10.0	10.05 10.1?	9.95	10.00 05, 05	4.69

	Sc.1	Sc.2	MC 3182 p. 210	Mean	Res.	Diff
	5.7	5.8	5.75	6.05	5.90 15, 15	0.57
	6.3	6.4	6.35	6.45	6.40 05, 05	0.71
	7.8	7.7	7.75	7.75	7.75 00, 00	0.48
	7.	8.6	8.6	8.42	8.51 09, 09	0.32
		8.7	8.70	8.50	8.60 10, 10	0.42
		9.3	9.3	8.8	9.05 25, 25	0.50
		10.0	10.0	9.8	9.90 10, 10	−0.04
		7.		9.9	9.9	0.40

10/4 10/4
−.021 −.02

50/3 40/3
+.17 −.13

40 30
7 7
+.06 −.04

10/5 10/5
+.021 −.021

10/6 10/6
+.02 −.02 copied

33/4 32/4
+.08 −.08

53/15 52/15
+.04 −.03

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Wednesday February 11, 1914

Series 73

Scale 4 mc 3177 Q1 Alt. -.33

corrected

P.E.

Res.	Diff.		Sc.1	Sc.2	Mean	Res.	Curve	Magn.	Sc.1	Sc.2	Mean	Curve	Magn.
15 15	0.59	1	3.9		3.9				7.1	6.9	7.00 11	0.57	7.57
05 05	0.71	2	4.2		4.2				7.4	7.3	7.35 01	0.52	7.87
00 00	0.48	3	4.1		4.1				7.1	6.9	7.00 11	0.57	7.57
10 10 09 09	3 0.32	4	4.3		4.3				7.5	7.4	7.45 10	0.51	7.96
10 10	0.42	5	4.4		4.4				7.	8.2 8.4	8.30 11	0.41	8.71
3 2	0.50	6	5.2		5.2		3.79	8.99		8.6	8.6	0.36	8.96
1 1	-.004	7	5.2		5.2		3.79	8.99		8.4	8.4	0.40	8.80
0 =	0.40	5.1 8	5.1	B.	5.10		3.79	8.89		8.4	8.4	0.40	8.80
10 4		9	5.3	5.1	5.20	1 1	3.80	9.00		8.7	8.7	0.35	9.05
-.02		10	5.2	5.2	5.20	0 0	3.80	9.00		9.6	9.6	0.14	9.74
40 3		11	5.9	5.7	5.80	1 1	3.80	9.60		9.7	9.7	0.12	9.82
-.13		6.5 12	6.8	6.3	6.53	0 2	3.83	10.36		9.8	9.8	0.10	9.96
30 7		13	6.2	6.1	6.15	0 1	3.81	9.96		9.9	9.9	0.09	9.99
-.04		14	6.9	6.8	6.85	1 0	3.85	10.70		7.			
		15		6.7	6.7		3.83	10.53					
		16		6.9	6.9		3.85	10.75					
		17		7.3	7.3		3.91	11.21					
		18		7.6	7.6		3.96	11.56					
		19		7.4	7.4	7.40 0 0	3.92	11.32					
		20		8.1	8.1	8.10 0 0	4.06	12.16					
		21		7.9	7.9	7.90 0 0	4.02	11.92					
		22		8.3	8.3		4.09	12.39					
		23		8.4	8.4		4.11	12.51					
		24		9.0 9.2	8.9	8.95 1 0	4.26	13.21					
		25		9.2	9.2	9.20 0 0	4.34	13.54					
		26		9.3	9.3	9.30 0 0	4.38	13.68					
		27a		9.7	9.8	9.75 1 0	4.56	14.31					
		28		9.8	9.9	9.85 0 1	4.59	14.44					

(over)

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Wednesday February 11, 1914

Series 73

Scale 2" me 3177 Q. Alt. -33 (cont.) P.C

	Sc.1	Sc.2	Mean	Curve	Magn.	Sc.1	Sc.2	Curve	Magn.
29		10.3?		4.78	15.08?	7	7.		
30		7.							
31									
32									
33									
27b		9.7	9.8	9.75	4.56	14.31			
4a		4.4	4.3	4.35			7.8	0.48	8.28
4b		4.2	4.2	4.20			7.9	0.47	8.37
9a		4.9	4.9	4.90	3.79	8.69	8.9	0.30	9.20
9b		5.6	5.6	5.60	3.80	9.40	9.2	0.22	9.42

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Series 73

Scale 2 mc 3178 108 15 Alt. +.06

	Sc.1	Sc.2				Sc.1	Sc.2		P.C. Mean	Curve	Magn.
1	4.8		4.8			7.9	7.9		7.90	0.48	8.38
2	4.8		4.8			7.	7.8	8.1	7.95	0.47	8.37
3	4.9	B.	4.9		3.79		8.6	8.6	8.60	0.36	8.96
4	5.2	5.0	5.10	1	3.80		8.8	8.9	8.85	0.31	9.16
5	5.6	5.5	5.55	0	3.80		9.6	9.5	9.55	0.14	9.69
6	6.2	6.1	6.15	0	3.79		9.9		9.9	0.09	9.99
7	6.7	6.6	6.65	1	3.82		10.1?		10.1	0.03	10.13?
8		6.9	6.9		3.85		7.				
9		7.3	7.3		3.91						
10		7.3	7.3		3.91						
11		7.8	7.8		4.00						
12		8.1	8.1		4.05						
13		8.5	8.4	8.45	1	4.11					
14		8.7	8.4	8.55	2	4.16					
15		8.9	8.9	8.90	0	4.14					
16		9.7	9.7	9.70	0	4.52					
17		9.9	9.8	9.85	1	4.59					

Time out

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Wednesday, February 11, 1914

Series 73

Scale 4

mc 3179 3615 Alt. +.73 P. C.

	Sc.1	Sc.2		Mean	Res.	Curve.	Magn.	Sc.1	Sc.2	Sc.2	Sc.2		
1	4.9	B.		4.9		3.79	8.69	7	8.3	8.4	8.35	1 0 (0.40)	8.75
2	5.1	5.2	5.5	5.47	2 3 0	3.80	9.27		9.2	9.1	9.15	0 1 (0.73)	9.38
3	5.9	5.8		5.85	1 0	3.80	9.65	9.4	9.3	9.8	9.50	1 2 3 (0.17)	9.67
4	6.6	6.5		6.55	0 1	3.82	10.37		10.3?	7.	10.3?	-0.01	10.29
5	6.8	6.8		6.80	0 0	3.85	10.65		10.1?	10.0?	10.05?	0.03	10.08
6		7.1		7.1		3.89	10.99		10.3?				
7		7.3		7.3		3.91	11.21		7.				
8		7.4		7.4		3.92	11.32						
9		7.8		7.8		4.00	11.80						
10		8.3	8.3	8.30	0 0	4.09	12.39						
11		8.8	8.8	8.80	0 0	4.21	13.01						
12		9.0	9.0	9.00	0 0	4.28	13.28						
13		9.3	9.3	9.30	0 0	4.39	13.69						
14		9.6	9.7	9.65	0 1	4.50	14.15						
15		9.7	9.7	9.70	0 0	4.52	14.22						
16													

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Wednesday, February 11, 1914

Series 73

Scale 2" = mc 3180 6/1 Alt. + 22 P.C.

	Sc.1	Sc.2		Mean	Res.	Curve	Magn.	Sc.1	Sc.2	Sc.2	Sc.2	Mean	Res.	Curve	Magn.
1	4.8			4.8				7.9	7.9			7.90	0 0	0.47	837
2	4.9		B.	4.9		3.79	8.69	7.	8.2	8.3		8.25	0 1	0.41	866
3	5.7			5.4	5.55	1 2	3.80	9.35		9.4	9.8	9.4	9.53	1 3	1 0.15	968
4	6.1			6.1	6.10	0 0	3.80	9.90		9.9	9.9	9.90	0 0	0.08	998
5	6.7			6.8	6.75	1 0	3.83	10.58		10.3?	7.	10.3	0.	-0.01	10.31
6	6.5			6.4	6.45	1 0	3.81	10.26		10.1?		10.1		0.02	10.12
7	.			6.8	6.8		3.85	10.65		7.					
8				7.1	7.1		3.89	10.99							
9				7.3	7.3		3.91	11.21							
10				7.9	7.9		4.01	11.91							
11				7.9	7.9	0.0	4.01	11.91							
12				8.3	8.2	1 0	4.08	12.33							
13				8.9	9.1	1 1	8.95	4.28	13.28	4.26	13.21				
14			*	7.8	7.7		9.55			4.48	14.03				
15				9.8	9.9	0 1	9.88	4.59	14.44	4.50	14.88				

see below.

13.	8.9	8.9	0 0	10	9.00	8.95	05	05
14.	9.6	9.5	0 1					
15.	9.8	10.0	1 1	05		9.85	9.88	02 03

05 / 2 / +.02

Take means of 13 and 15 (first mean and later measures)

Per W.S.L. March 9, 1914.

* Wrong star meas. Remeasured Feb. 12, 1914 G.F.M.

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1913phae.proj.1038M

Wednesday, February 11, 1914

Series 73

Scale 12 mc 3182 Pole

	Sc.1	Sc.2		P.E. Sc.1	P.E. Sc.2	P.E.
5				6.2	5.9	6.05
6				6.5	6.4	6.45
8				7.8	7.7	7.75
9				7.	8.5	8.3 8.42
10	5.4	B.	5.4		8.6	8.4 8.50
11	5.7	5.5	5.60		8.8	8.8
12	6.2	5.9	6.05		9.8	9.8
13	6.4	6.6	6.50		9.9	9.9
14	6.7	6.8	6.75		7.	
15		7.2	7.2			
16		7.3	7.3			
17		7.7	7.7			
18		7.9	7.9			
19		8.3	8.3			
20		8.7	8.5 8.60			
23		8.9	8.9 8.90			
25		9.2	9.3 9.25			
26		9.9	9.8 9.85			
27		9.9	10.0 9.95			

2.39
(35 m out)

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Thursday February 12, 1914

2.19 Series 94

Scale 4 mc 3454 Pole P. C.

	Sc.1	Sc.2		MC 3459 p 216	Mean	Res.	Diff.	Sc.1	Sc.1	Sc.2		MC 3459 p 216	Mean
5								6.0	6.4	5.9		6.10	6.95
6								7.2		7.2		7.20	7.65
8								7.		8.3	8.3	8.30	8.30
9										8.9	8.8	8.85	9.20
10	5.4	5.2	5.30	6.00	5.65	35, 35	3.37			9.8?	9.7 ?	9.75	9.80
11	5.7	5.7	5.70	6.40	6.05	35, 35	3.50			9.9		9.9	9.8
12	6.2	6.1	6.15	6.30	6.22	07, 08	3.64			9.9		9.9	9.7
13	6.7	6.4	6.55	6.85	6.70	15, 15	3.60			7.			10.2
14		6.9	6.9	7.2	7.05	1, 2	3.60					81/4	84/4
15		7.2	7.2	7.80	7.50	3, 3	3.58					-.20	+.21
16		7.4	7.4	7.4	7.40	0, 0	4.00					43	32/3
17		7.8	7.8	7.8	7.80	0, 0	3.83					+.14	-.11
18		8.2	8.2	8.2	8.20	0, 0	3.86					-.38	.53
19		8.4	8.40 8.4	8.40	8.40	00, 00	4.02					1 -.05	1 +.08
20		8.9	8.90 8.9	8.80	8.85	05, 05	3.88						
23		9.4	9.40 9.4	9.20	9.30	10, 10	4.04						
25		9.9	9.85 9.8	9.55	9.70	15, 15	4.17						
26		10.2?	10.15 10.1?	9.95	10.05	10, 10	4.28						
27			7. 7.										

102/3 = 34 113/4 = 28

102/5 = 20 113/5 = 23

25/6 = 04 25/6 = 04

35/3 = 12 35/3 = 12

92/14 = 07 103/14 = 08

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Thursday, February 12, 1914

Series 94

Confused

Scale 2 | Inc 3455 | 64 K | Alt. +.71 | P. C

	Sc.1	Sc.2	Sc.2	Sc.2				Sc.1	Sc.2		
1	4.6		B.		4.6 Mean			8.0	7.8	7.90	11 -.022 7.68
2	5.3		5.0		5.15 12	Curve 3.46	Magn. 8.68	7.	9.1	9.1	9.10 00 -.021 889
3	5.4		5.4		5.40 00	3.48	8.88		9.5	9.3	9.40 11 -.020 9.20
4	6.7		6.3	6.4	6.50 122 1	3.59	10.09		10.1?	10.1?	10.10 00 -.016 994 ??
5	7.2		7.2		7.20 00	3.68	10.88		7.	7.	
6			7.7		7.7	3.75	11.45				
7			8.3		8.3	3.87	12.13				
8			8.9	8.9	8.90 00	4.00	12.90				
9			9.3	9.3	9.30 00	4.08	13.38				
10		9.5	9.7	9.3	9.50 022	4.13	13.63				
11			10.1?	9.9	10.00 11	4.26	14.26 ?				
12			10.0	10.1?	10.05 01	4.28	14.33 ?				
13			7	7.							
14											
15											

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1913phae.proj.1038M

Thursday, February 12, 1914

Eclipsed.

Series 94

Scale 4 m e 3456 3917 alt. +.72 P. E.

		Sc.1	Sc.2					Sc.1	Sc.2	Sc.2		
					Mean	Res.	Curv.	Magn.					
7.68	1	4.9	R.	4.9				7.	8.7	8.8	8.75	1 0 -0.22 8.53
8.89	2	5.8	5.4	5.63	1	2	3.50	9.13	9.7	9.8	9.75	1 0 -0.20 9.55
9.20	3	6.6	6.2	6.40	0	2	3.59	9.99	7.	7.		
9.94 ?	4	7.1	7.1	7.10	0	0	3.69	10.79				
	5	7.4	7.3	7.35	0	1	3.71	11.06				
	6		7.9	7.9			3.79	11.69				
Surrounded by defect.	7		8.2	8.2	8.20	0	0	3.85	12.05			
	8		8.5	8.7	8.60	1	1	3.94	12.54			
	9		9.1	9.2	9.15	1	0	4.05	13.20			
	10		9.9	9.8	9.85	1	0	4.20	14.05			
	11		10.3?	10.3?	10.30	0	0	4.33	14.63?			
	12		10.3?	10.4?	10.35	1	0	4.36	14.71?			
	13		7.	7.								
	14											
	15											

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Thursday February 12, 1914

Series 94

Scale 2"

mc 3457

8 Ks

Alt. +.22

P. C

	Sc.1	Sc.2	Mean	Res.	Curve.	Magn.	Sc.1	Sc.2			
1	5.7	5.4	5.35	12	3.50	9.05	7.	9.1	9.1	9.10	00 -0.21 889
2	6.2	6.1	6.15	01	3.56	9.71		10.2?	10.0	10.10	11 -0.17 993
3	7.1	6.9	7.00	11	3.66	10.66		7	7.		
4	7.4	7.4	7.40	00	3.71	11.11					
5		7.9	7.9		3.79	11.69					
6		8.4	8.4		3.89	12.29					
7		8.7	8.7		3.96	12.66					
8		8.9	8.90	00	4.00	12.90					
9		8.9	8.90	00	4.00	12.90					
10		9.9	9.90	00	4.22	14.12					
11		10.1?	10.05	10	4.26	14.31 ?					
12		10.3?	10.30	00	4.34	14.64 ?					
13		10.3?	10.35	10	4.36	14.71 ?					
14		7.									
15		7.									

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Series 94

Scales mc 3458 5 Ks. Att. +.15

	Sc.1	Sc.2		Mean	Res.	Curve	Magn.	Sc.1	Sc.2		
1	4.7		4.7					8.0	7.9		7.95 .01 -.22 7.73
2	5.2	B.		5.7		3.46	8.66	7.	8.6	8.7	8.65 .01 -.22 8.43
3	6.7	6.4		6.55	.12	3.60	10.15		10.2?	9.9	10.05 .21 -.18 9.87?
4	6.7	6.7		6.70	.00	3.61	10.31		10.2?	10.2?	10.20 .00 -.17 10.03?
5	7.4	7.3		7.35	.01	3.71	11.06		7	7	
6	7.9	7.9		7.90	.00	3.79	11.69				
7		8.3		8.3	.00	3.88	12.18				
8		8.3		8.3	.00	3.88	12.18				
9		8.7	8.7	8.70	.00	3.96	12.66				
10		9.1	8.9	9.00	.11	4.02	13.02				
11		9.7	9.7	9.70	.00	4.18	13.88				
12		9.7	9.7	9.70	.00	4.18	13.88				
13		10.2?	10.1?	10.15?	.01	4.30	14.45?				
14		10.2?	10.3?	10.25?	.01	4.31	14.56?				
~~15~~		~~7.~~	~~7.~~	Reject; see cover of MC 4210							

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Thursday, February 12, 1914

Series 94

Scale 2		m c 3459 Sc.1	m c 3459 Sc.2	m c 3459 Pole	P C. Sc.1	P C. Sc.2	P C.
	5				7.0	6.9	6.95
	6				7.6	7.7	7.65
	8				?	8.3	8.3 8.30
	9					9.2	9.2 9.20
	10	6.1	5.9	6.00	9.3	9.3	9.30
6.4	11	6.6	6.2	6.40	9.8		9.8
	12	6.4	6.2	6.30	9.7		9.7
	13	6.9	6.8	6.85	10.2?		? 10.2
	14		7.2	7.2	?		
Defective?	15		7.8	7.80 7.8			
	16		7.4	7.4			
	17		7.8	7.8			
	18		8.2	8.2			
	19		8.4	8.40 8.4			
	20		8.9	8.80 8.7			
	23		9.2	9.20 9.2			
	25		9.5	9.55 9.6			
	26		9.9	9.95 10.0			
4.16	27		?	?			

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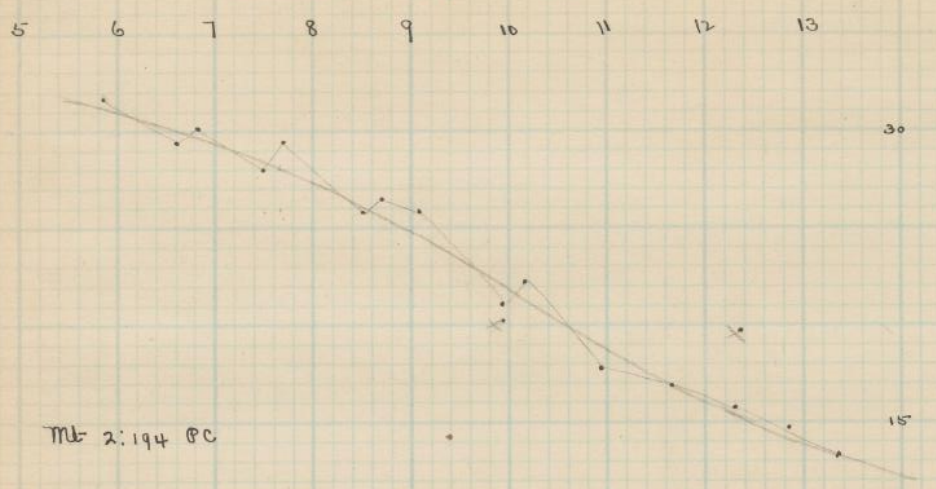
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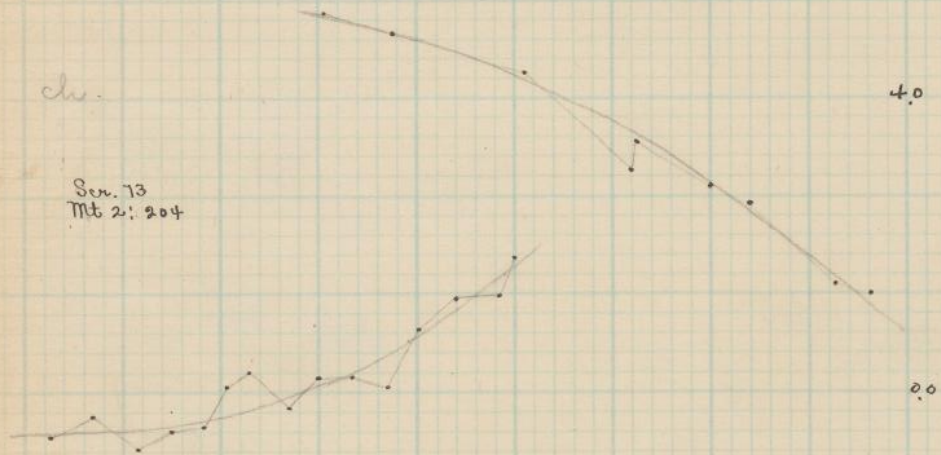
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Series 142
Mt 2: 194 Reduced using new magnitudes.

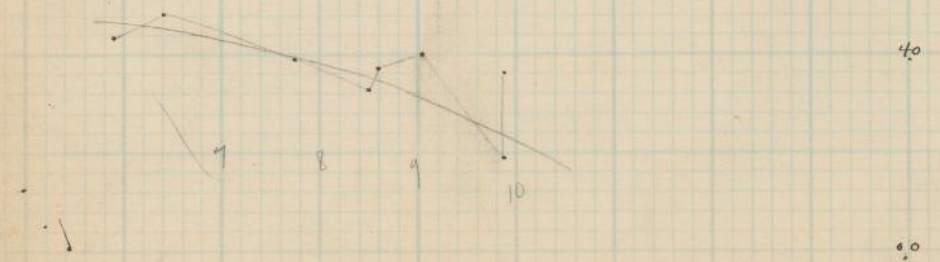


Mt 2: 194 BC

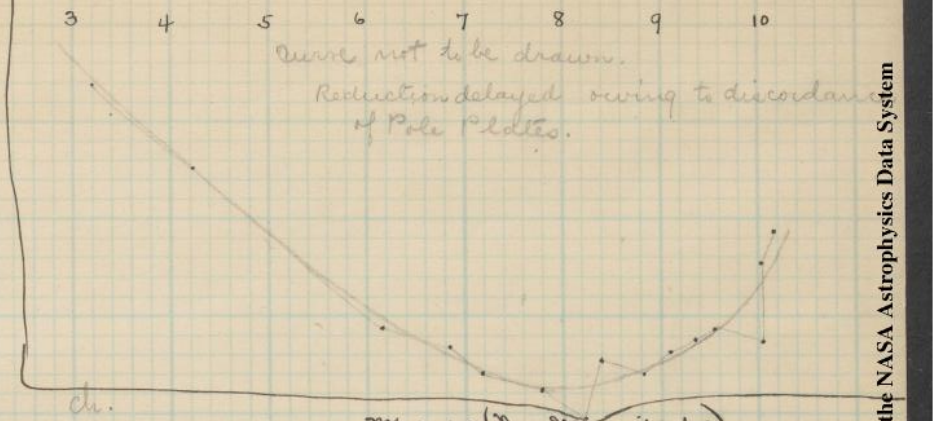


Ser. 73
Mt 2: 204

Mt 2: 204 BC

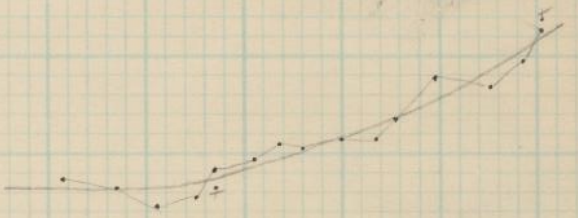


Series 24
Mt 2: 173 Reduced using old magnitudes

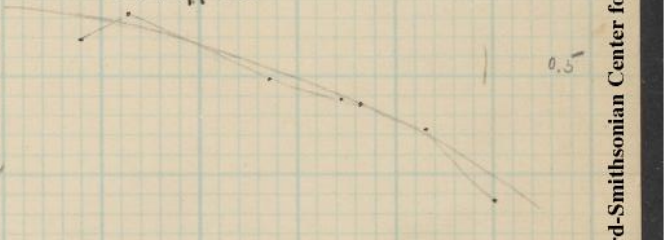


Curve not to be drawn.
Reduction delayed owing to discordance of Pole Epochs.

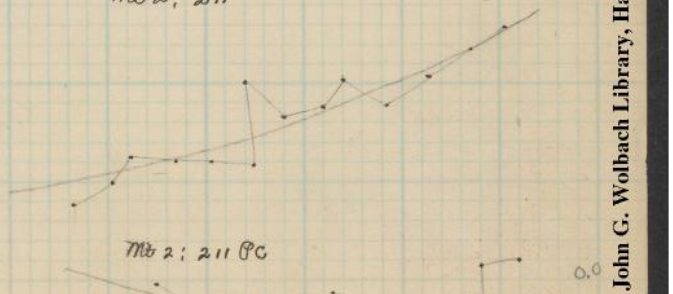
Mt 2: 198 (New Magnitudes)



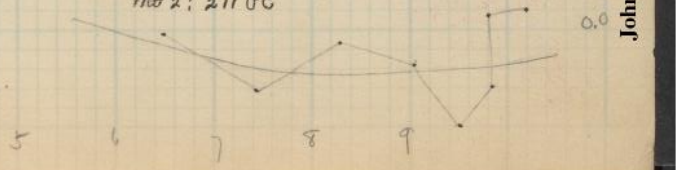
Mt 2: 199 BC



Ser. 94
Mt 2: 211



Mt 2: 211 BC



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