KG
11365
987

1913phae.proj..988L

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RG 11365.98 7

Scale M. Correction to Scale 1, +0.2

Scale W. Correction to Scale 1, +0.1.

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Magnitudes from Series plates underlined from page 141 through this book. Underlining entered also in Cyg.

A few early yellow series in this book were first reduced by Ptg. magnitudes. When these have been re-reduced by means of Ptw. magnitudes, a green "Y" is put at the head of the correct column of reductions.

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Beginning with page 141, all records of measures on series Plates have been examined.

Isochromatic plates (2') have been stamped "yellow".

Magnitudes of faint stars have been readjusted according to the rule, and also in all books into which they have been copied. H. S. L. Dec. 28, 1914.

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2

KG 11365.987

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C7 = 13h + 15

Scale U

Monday August 12, 1912

11:30

MC 1023

		Sc.1 Reading from curve	Sc.2 Mags.	P.C.		Sc.1	Sc.2	P.C.
Too near edge.	1	B				28 ~~9.8~~	9.8 5.44	15.24
Stan. Seq. Too far from centre	2	B.		6.2 1.08	7.28	Polar 5		5.2 1.19
" " "	3	B.		6.3 1.05	7.35	8		7.1 1.00
	4	B.		7.0 0.96	7.96	9		7.9 0.80
	5	4.2		7.2 0.92	8.12	10	5.1+3.79	8.1 0.79
	6	4.9 4.14	9.04	7.7 0.86	8.56	11	5.0 4.42	8.6 0.82
" " "	7	4.7 4.10	8.80	7.9 0.83	8.73	12	5.3 4.43	9.2 0.53
	8	5.1 4.18	9.28	8.1 0.70	9.40	13	5.9 4.27	9.5 0.67
near edge of plate - too far from centre	9	4.3				14	6.2 4.32	
" " "	10	5.2 4.21	9.41	8.9 0.65	9.55	15	6.3 4.44	
	11	5.3 4.23	9.53	?		16	6.7 4.56	
	12	5.8 4.33	10.13	9.2 0.60	9.80	17	7.0 4.49	
	13	6.0 4.37	10.37	?		18	7.3 4.62	
	14	6.1 4.50	10.50			19	7.5 4.78	
	15	6.4 4.46	10.86			20	~~8.0~~ 4.79	
	16	6.2 4.42	10.62	?		21	~~8.1~~ 8.1 4.72	
	17	6.6 4.50	11.10			23	8.5 4.70	
	18	6.9 4.55	11.45			25	8.9 5.03	
	19	7.1 4.58	11.68			26	8.9 5.29	
	20	7.3 4.63	11.93			27	9.3 5.25	
	21	7.9 4.78	12.68			28		
	22	8.1 4.84	12.94					
	23	8.3 4.90	13.20					
	24	8.7 5.03	13.73					
	25	8.7 5.03	13.73					
	26	9.1 5.18	14.28					
	27	9.5 5.34	14.84					

MCR.

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1913phae.proj..988L

CT = 13h + 15°

Scale 4 Monday August 12, 1912.

MC 1016

	Sc.1	Sc.2 Reading for P.C.	P.C.	Sc.1	Sc.2	P.C.
Stan. Seq. 1				Polar 3		5.3 1.09
too far from centre 2	B		6.8 ~~0.99~~ 1.00	7.80	8	7.9 1.10
" " 3	B.		6.9 0.99	7.89	9	7.9 0.80
4	B		7.2 0.95	8.15	10 4.2 4.69	8.1 0.79
5	B.		7.7 0.89	8.59	11 5.1 4.32	8 4.6 0.82
6	4.2	4.25 8.45	8.1 0.83	8.93	12 5.3 4.43	8.9 0.83
" " 7	4.1	4.33 9.03	8.3 0.81	9.11	13 5.8 4.37	
8	5.1	4.28 9.50	8.7 0.79	9.49	14 6.0 4.52	
" " 9	4.9	4.37 9.27	8.7 0.79	9.49	15 6.3 4.64	
" " 10	5.3	4.43 9.73	7		16 6.3 4.76	
11	5.2	4.42 9.62			17 6.8 4.69	
12	5.3	4.43 9.73			18 7.3 4.62	
13	6.1	4.54 10.64			19 7.5 4.78	
14	6.1	4.54 10.64			20 7.8 4.79	
15	6.3	4.56 10.86			21 8 8.1 4.72	
16	6.4	4.57 10.97			23 8.5 4.70	
17	6.5	4.58 11.08			25 8.9 4.83	
18	6.9	4.64 11.54			26 9.4 4.79	
19	7.2	4.66 11.86				
20	7.5	4.69 12.19				
21	8.4	4.76 13.16				
22	~~7.2~~ 8.3	4.75 13.05				
23	8.5	4.76 13.26				
24	8.7	4.77 13.47				
25	9.2	4.80 14.00				
26	9.3	4.80 14.10				
27	9.5	4.80 14.30				

mce.

12·20

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1913phae.proj..988L

C10 = 19^h +15°

Scale 4

Tuesday, August 13, 1912

11:20

Mc 676

		sc.1	sc.2	Magn.	P.C			Polar. sc.1	sc.2	P.C
Stan. Seq.	1	B.			5.3	1.24	6.54	5		5.1 1.29
too far from centre	2	B.			6.1	1.10	7.20	8		7.2 0.90
" " "	3	B.			6.1	1.10	7.20	9		8.0 0.70
" " "	4	B.			6.7	0.99	7.69	10	4.3 4.59	8.5 0.39
" " "	5	4.0			7.7	0.76	8.46	11	4.9 4.52	8.9 0.52
double.	6	3.8?			?			12	5.0 4.43	8.9 0.83
	7	3.9			7.1	0.91	8.01	13	5.7 4.47	
	8	4.3 4.59 8.1		8.89	8.2	0.66	8.86	14	6.0 4.52	
too far from centre	9	4.3	4.59	8.89	8.7	0.53	9.23	16 ~~15~~	6.6 4.66	
	10	5.1	4.57	9.67	8.9	0.50	9.40	15 ~~16~~	6.3 4.64	
	11	5.3	4.57	9.87				17	6.8 4.69	
	12	5.8	4.58	10.38				18	7.3 4.62	
	13	6.2	4.61	10.81				19	7.3 4.98	
	14	6.3	4.62	10.92				20	7.1 4.89	
	15	6.4	4.63	11.03				21	8.0 4.82	
	16	6.7	4.65	11.35				23	8.2 4.90	
	17	7.1	4.70	11.80				25	8.8 4.93	
	18	7.5	4.75	12.25				26	9.2 4.99	
	19	7.9	4.81	12.71				27	9.7 4.85	
"	20		7.9	4.81 12.71						
	21		8.4	4.89 13.29						
	22		8.7	4.92 13.62						
	23		9.0	4.95 13.95						
	24	9.3	9.3	4.98 14.28						
	25		9.8	4.99 14.79						
	26		9.7	4.99 14.69						

Mar.

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1913phae.proj...988L

C10 = 19h +15°

Scale 2

Tuesday August 13, 1912

MC 1436

		Sc.1	Sc.2 Reading	P.C.		Magn. Curve Reading	Magn. P.C.
Stan. Seq.	1						
too far from centre	2						
" "	3	B.		6.1		1.03	7.13
" " "	4	B.		7.0		0.93	7.93
" " " "	5	4.0		7.2		0.92	8.12
double	6						
	7	4.0		7.2		0.92	8.12
	8	4.3		7.9		0.81	8.77
too far from centre	9	5.0	4.16	8.3		0.85	9.16	9.15
	10	5.2	4.22	8.7		0.83	9.42	9.53
	11	5.6	4.33	9.5			9.93	
	12	6.3	4.49				10.79	
	13	6.2	4.46				10.66	
	14	6.3	4.49				10.79	
	15	6.4	4.52				10.92	
	16	6.7	4.57				11.27	
	17	7.1	4.67				11.77	
	18	7.2	4.70				11.90	
	19	7.5	4.76				12.26	
	20	7.7	4.80				12.50	
	21	8.0	4.86				12.86	
	22	~~8.3~~	8.3	4.91			13.21	
	23		8.7	~~4.91~~ 5.00			13.67	
	24		8.7	4.91			13.67	
	25		8.7	4.91			13.67	
	26		9.1	5.04			14.14	
	27		9.7	5.12			14.82	
mar.	28		9.9	5.14			15.04	

	Polar. Sc.1	Sc.2	P.C.
	5		5.2 1.19
	8		7.2 0.90
	9		8.0 0.70
	10	4.9 3.99	8.1 0.79
	11	5.1 4.32	8.4 ~~0.42~~ 1.03
	12	5.3 4.43	9.0 0.73
	13	5.9 4.27	8.8 1.37
	14	6.1 4.42	~~9.1~~
	15	6.3 4.64	
	16	6.7 4.56	
	17	7.0 4.49	
	18	7.2 4.72	
	19	7.5 4.78	
	20	7.8 4.79	
	21	7.8 5.02	
Sc.2	23	~~8.2~~	8.3 4.90
	25		8.7 5.03
	26		9.1 5.09
	27		9.5 5.05

12:15

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~~W~~ C 2 = 3 + 15

Scale 11

Wednesday August 14 1912

11·05

MC 943

		Sc.1	Sc.2	P.C.	Reading curve.	Magn. P.C.
Stan. Seq.			Reading fr. curve	Magn.		
near Edge	1			5.1	2.01	7.11
" "	2			5.3	2.00	7.30
	3	B.		5.9	1.94	7.84
	4	B.		6.3	1.81	8.17
	5	B.				
to far from centre	6	B.		6.8	1.80	8.60
" "	7	4.1	5.25 9.35	7.2	1.71	8.91
" "	8	3.8	5.19 8.99	7.9	1.59	9.49
	9	4.3	5.29 9.59	7.3	1.69	8.99
	10	4.9	5.40 10.30	8.7	1.46	10.16
" "	11	4.2	5.26 9.46	8.3	1.52	9.82
" "	12	4.3	5.29 9.59	8.5	1.49	9.99
	13	5.1	5.44 10 9.54	8.9	1.43	10.33
	14	5.3	5.46 10.76	9.4	1.35	10.75
	15	5.4	5.48 10.88	9.8		
	16	5.2	5.45 10.65			
	17	5.9	5.53 11.43			
star superposed on 18.	18	sup.	5.56	8.6?		
	19	6.2	5.56 11.76	?		
	20	6.4	5.58 11.98			
	21	6.8	5.59 12.39			
	22	7.0	5.60 12.60			
	23	7.2	5.60 12.80			
	24	7.7	5.60 5.59 13.30			
	25	7.3	5.60 12.90			
	26		8.1 5.58 13.68			
	27		8.3 5.58 13.88			

	Sc.1	Sc.2	P.C.	Magn.
28	8.5	5.57	14.07	
29	8.7	5.56	14.26	
30	~~8.3~~ 9.1	5.54	14.64	
31	9.5	5.52	15.02	
32	9.9	5.50	15.40	
33	~~9.0~~ 10.0	5.50	15.50	
Polar 5			4.9	1.49
8			6.1	2.00
9			7.0	1.70
10	3.8	5.29	7.1	1.79
11	4.1	5.32	7.9	1.52
12	4.4	5.33	~~8.2~~ 8.2	1.53
13	4.8	5.37	8.7	1.47
14	5.1	5.42	9.0	1.52
15	5.4	5.54	?	
16	5.7	5.56		
17	6.0	5.49		
18	6.3	5.62	?	
19	6.7	5.58		
20	7.0	5.59		
21	7.3	5.52		
23	7.8	5.40		
25		8.3	5.43	
26		8.6	5.59	
27		9.0	5.55	
28		9.3	5.61	

MC2.

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C 8 = 15h + 15°

Scale 2. Wednesday August 14, 1912.

MC 1233.

		Sc. 1	Sc. 2	P.C.			
Star Seq. too near edge?	1		Reading fr. cent.				
" " "	2	B		6.1	~~0.86~~	0.50	6.60
	3	B.		7.2	~~1.16~~	0.41	7.61
" "	4						
	5			7.0	~~0.61~~	0.43	7.43
too far from centre	6	3.8		7.1	~~0.12~~	0.42	7.52
" "	7						
" "	8	4.1		8.3	~~0.00~~	0.36	8.66
	9	4.2	4.20	8.40	8.7	~~0.00~~	0.32	9.02
	10	4.7	4.28	8.98	8.9	~~0.19~~	0.32	9.22
" "	11	4.3	4.20	8.50	9.0	~~0.12~~	0.32	9.32
" "	12	5.0	4.33	9.33	9.0	~~0.13~~	0.32	9.32
	13	4.9	4.31	9.21	9.3		0.32	9.62
	14	5.0	4.33	9.33				
	15	5.3	4.38	9.68				
	16	5.3	4.38	9.68				
	17	5.1	4.34	9.44				
	18	5.3	4.38	9.68				
	19	5.1	4.43	10.13				
	20	5.7	4.43	10.13				
	21	6.3	4.52	10.82				
	22	7.0	4.60	11.60				
	23	6.9	4.59	11.49				
	24	7.1	4.61	11.71				
	25	7.2	4.62	11.82				
	26	7.7	4.68	12.38				
	27	8	8.3	4.71	13.03			

Mar.

	Sc. 1	Sc. 2	P.C.	Magn.
28	8.9	4.78	13.68	
29	8.8	4.77	13.57	
30	9.2	4.79	13.99	
31	9.7	4.81	14.51	
32	9.5	4.81	14.31	
33	9.8	4.82	14.62	
34				
Polar 5			5.9	0.49
8			7.7	0.40
9			8.5	0.20
10	4.8	4.09	8.7	0.19
11	5.0	4.42	9.0	0.42
12	5.3	4.43	9.3	0.43
13	5.7	4.41	9.8	0.37
14	5.9	4.42		
15	6.3	4.64		
16	6.5	4.76		
17	7.0	4.49		
18	7.5	4.42		
19	7.4	4.58		
20	7.9	4.69		
21		8.1	4.72	
23		8.3	4.90	
25		8.9	4.83	
26		9.4	4.79	
27		9.8	4.75	
28				

12:15

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1913phae.proj..988L

$C3 = 5^h + 15$

Scale U

Tuesday August 20, 1912.

10:55

mc994

	sc.1	sc.2	P.C.				sc.1	sc.2	P.C.	Magn.
1	B.		5.0			28	8.1	5.00	13.10	
too far from centre — 2						29	8.7	4.95	13.65	
" " " 3						30	9.2	4.92	14.12	
4	B.		5.9			31	9.5	4.90	14.40	
" " " 5					Polar	32	9.9	4.88	14.78	
6	B.		5.9.			8				
7			6.1			9				
8	B.		6.3			10	4.0	4.89	7.3	1.69
" " " 9						11	4.2	5.22	8.3	1.12
10	B.		6.9	1.65	8.55	12	4.7	5.03	8.7	1.03
11	4.0	5.01 (Corrs. Reading)	9.01 (Magn.)	7.6	1.41	9.01	13	5.1	5.01	8.9	1.21
too far from centre 12						14	5.3	5.22	9.3	1.22
too far from centre. 13						15	5.8	5.14		
14	4.9	5.12	10.02	8.7	1.16 9.86	16	6.1	5.16		
15	5.3	5.12	10.42	9.1	1.12 10.22	17	6.3	5.19		
16	5.0	5.12	10.12			18	6.9	5.02		
17	5.1	5.12	10.22			19	7.2	5.08		
18	5.2	5.12	10.32			20	7.7	4.89		
19	5.3	5.12	10.42			21	7.8	5.02		
20	6.0	5.12	11.12			24				
21	5.7	5.12	10.82			23		8.3	4.90	
22	5.8	5.12	10.92			25		8.7	5.03	
23	6.3	5.12	11.42			26		9.1	5.09	
24	6.3	5.12	11.42			27		9.7	4.65	
25	6.7	5.10	11.80							
26	6.9	5.09	11.99							
27	7.7	5.02	12.72							

mor.

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1913phae.proj..988L

C 3 = 5h + 15°

Scale 11 — Tuesday August 20, 1912.

Mc 1422

	Sc.1	Sc.2	P.C.	Curve Reading		Sc.1	Sc.2	P.C.	Magn.
1	13		4.9			28	8.0	5.16	13.16
too far from centre - 2						29	8.2	5.18	13.38
" " " 3						30	9.0	5.35	14.35
4	13.		5.9			31	8.8	5.34	14.04
" " " 5						32	9.7	5.30	15.00
6	13		6.1			33	9.9	5.30	15.20
7	13.		6.2			Polar			
		Magn.							
8	4.2	4.90	8.90	6.8		10	4.7	4.19	7.9 0.99
" " " 9						11	4.4	5.02	8.2 1.22
10	4.0	4.66	8.66	6.9		12	4.9	4.83	8.7 1.03
11	4.3	4.73	9.03	7.6	1.03 8.63	13	5.2	4.91	9.0 1.17
" " " 12						14	5.5	5.02	9.3 1.22
" " " 13						15	6.0	4.94	
14	4.9	4.83	9.73	7.8	1.06 8.86	16	6.3	4.96	
15	5.1	4.86	9.96	9.8 ?	1.29 11.09	17	6.4	5.09	
16	5.3	4.89	10.19	9.3	1.24 10.54	18	6.8	5.12	
17	5.2	4.89	10.09	9.2	1.23 10.43	19	7.2	5.08	
18	5.3	4.89	10.19			20	7.5	5.09	
19	5.7	4.94	10.64			21	7.4	5.42	
20	5.9	4.96	10.86			23	8.1	5.10	
21	5.8	4.95	10.75			25	8.5	5.23	
22	5.8	4.95	10.75			26	8.9	5.29	
23	6.5	5.03	11.53			27	9.3	5.25	
24	6.4	5.02	11.42			28	9.1	5.27	
25	6.6	5.04	11.64						
26	6.7	5.05	11.75						
27	7	25.10	12.30						

11.50

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1913phae.proj..988L

Wednesday August 21. 1912

Scale 4 C11 = 21h +15°

9h 10:57

mc 1199

		Sc.1	Sc.2	P.C.			Sc.1	Sc.2	P.C.			Sc.1	Sc.2	mags.
	1				28	28	9.8	5.17			27	8.9	5.28	13.18
	2			Star Seq.	1	13		5.3			28	8.0	5.29	13.29
	3			too far from c.	2						29	8.1	5.28	13.38
	4			too far from centre	3						30	8.8	5.25	14.05
too far from centre.	5				4	13		6.3			31	8.8	5.25	14.05
" "	6				5	B.		7.1			32	9.3	5.21	14.51
" "	7				6	B.		7.2			33	9.6	5.20	14.80
" " "	8				7	13		7.9	0.81	8.71				
" " "	9	Diff.			8	4.0	5.00	9.00	8.1	0.86	8.96			
Polar	10	3.9 +.99	8.1	0.79	9	4.1	5.00	9.10	8.7	0.80	9.50			
	11	4.2 5.02	8.5	0.92	10	4.1	5.00	9.10	8.3	0.83	9.13			
	12	4.1 5.03	8.9	0.83 " "	11									
	13	5.1 5.01	9.5	0.67	12	4.3	5.02	9.32	8.9	0.77	9.67			
	14	5.3 5.22			13	4.1	5.00	9.10	8.9	0.77	9.67			
	15	5.1 5.24			14	4.2	5.02	9.21						
	16	6.1 5.16			15	5.1	5.10	10.10						
	17	6.2 5.29			16	5.2	5.12	10.32						
	18	6.1 5.22			17	5.2	5.12	10.32						
	19	6.9 5.38			18	5.5	5.15	10.65						
	20	7.0 5.39	7.0		19	5.9	5.20	11.10						
	21	7.5 5.32	7.5		20	6.0	5.20	11.20						
	22	4.8	4.7		21	6.8	5.25	12.05						
	23		8.0 5.20		22	6.7	5.25	11.95						
	24		8.2		23	6.3	5.22	11.52						
	25		8.6 5.13		24	7.1	5.27	12.37						
	26		9.0 5.19		25	7.3	5.28	12.58						Checked L.
	27		9.3 5.25		26	7.3	5.28	12.58						

m.22.

10:26.

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1913phae.proj..988L

~~C1 = 21 4 +15°~~
C1 = 1 +15

Scale U

Wednesday August 21, 1912.

mc1474.

2:32
Stan Seq.

	sc.1	sc.2	P.C.				sc.1	sc.2	P.C.	
1	B. curve reading		magn. 5.9							
two for from centre 2										
" " 3										
" " 4				Curve	Magn.					
5	B.		7.1	1.53	8.63	Polar				
6	B.		7.0	1.55	8.55	10	4.1	4.99	7.2	1.69
7	4.0	4.78	8.78	7.2	1.51	8.71	11	4.6	4.82	8.1	1.32
8	4.1	4.80	8.90	7.9	1.42	9.32	12	4.9	4.83	8.4	1.33
9	4.2	4.80	9.00	8.0	1.41	9.41	13	5.3	4.87	8.8	1.31
Image sup.? 10				8.8?	1.33	10.13	14	5.3	5.22	9.2	1.32
11	4.9	4.86	9.76	8.6	1.35	9.95	15	6.0	4.94		
12	5.0	4.88	9.88	9.3	1.30	10.60	16	6.2	5.06		
13	5.1	4.90	10.00	8.8	1.33	10.13	17	6.3	5.19		
14	5.8	5.00	10.80	9.7			18	6.6	5.32		
15	6.0	5.04	11.04	9.9			19	7.2	5.08		
16	6.2	5.08	11.28				20	7.5	5.09		
17	6.3	5.10	11.40				21	7.7	5.12		
18	6.8	5.19	11.99				~~22~~				
19	7.1	5.26	12.36				23		8.0 5.20		
20	7.2	5.28	12.48				~~24~~				
21	7.5	5.34	12.84				25		8.4 5.33		
22	~~8.2~~		8.2 5.47 13.67				26		8.5 5.39		
23			8.1 5.45 13.55				27		8.9 5.65		
24			8.1 5.45 13.55				28		9.4 5.51		
25			8.1 5.45 13.55				29		9.9 5.62		
26			8.9 5.59 14.49								
27			8.9 5.59 14.49								

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1913phae.proj..988L

$C1 = \pi^{h} + 15^{\circ}$

Scale 4

Friday August 23, 1912.

10:40

M 10 1474

	Sc.1	Sc.2	Rc.		Sc.1	Sc.2
1	4.3	3.00	7.30	11	7.0	2.42
2	4.6	2.92	7.52	12	7.3	2.43
3	5.2	2.82	8.02	13	7.5	2.67
4	5.1	2.84	7.94	14	7.7	2.82
5	5.6	2.75	8.35	15	7.9 8.2	3.04 w.s.
6	5.9	2.70	8.60	16	7.9 8.2	3.06 w.s.
7	6.2	2.64	8.84	17	8.2	3.29
8	6.3	2.62	8.92	18	8.6	3.32
9	6.8	2.58	9.38	19	8.7	3.58
10	6.6	2.59	9.19	20	9.0	3.59
11	6.9	2.58	9.48	21	9.5	3.32
12	7.1	2.58	9.68	22		
13	7.2	2.60	9.80	23	9.5	3.70
14	7.4	2.64	10 9.04			
15		8.1	3.03 11.13			
16		8.1	3.03 11.13			
17		8.5	2 3.38 11.78			
18		8.5	3.38 11.78			
19		8.9	3.49 12.39			
20		9.1	3.57 12.69			
21		9.3	3.66 12.96			
22		9.7				

	Diff. +	
5	~~3.3~~ 3.09	
6	4.0	2.98
8	5.2	2.90
9	6.1	2.60
10	6.2	2.69

Mar.

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1913phae.proj..988L

B8 = 20h + 45°

Scale ½.

Friday August 23, 1912

MC 1421

	ec.1	ec.2	P.C.			ec.1	ec.2	P.C.	
two for from centre 1					28	?			
" 2				W.S?	29	~~8.3~~ 8.7	5.43	14.18	
3	B. Curse reading		6.2		30	9.7	5.60	15.30 20iff	
4	B		6.9		Polar	10.ff			
" " 5					8 10	50	3.89	7.8	+ 1.09
6	4.3		6.8		11	53	4.12	8.3	1.12
7	4.0		7.2		12	5.2 5	4.23	8.7	1.03
8	4.8		7.7	1.10 8.80	13	5.9	4.27	9.1	1.07
9	4.9		7.7	1.10 8.80	14	5.9	4.62	9.5 ~~dup.~~	1.02
10	4.9		7.5		15	6.1	4.84	~~8.9~~?	
11	5.0	3.88	8.88 7.9	1.10 9.00	16	6.3	4.96	~~9.3~~	
12	5.2	4.03	9.23 def.	~~1.0~~	17	6.6	4.89		
13	5.3	4.09	9.39 8.3	1.08 9.38	18	6.8	5.12		
14	5.3	4.09	9.39 8.5	1.06 9.56	19	7.2	5.08		
15	5.6	4.30	9.90 8.9	1.05 9.95	20	7.6	4.99		
16	5.3	4.09	9.39 8.9	1.05 9.95	21	7.6	5.22		
17	5.9	4.46	10.36 9.5?	1.01 10.51	23		8.0	5.20	
18	6.0	4.53	10.53		25		8.4	5.34	
19	6.2	4.65	10.85		26		8.7	5.49	
20	6.4	4.74	11.14		27		9.0	5.55	
21	6.8	4.93	11.73		28		9.4	5.51	
22	7.1	5.03	12.13		29		9.9	5.62	
23	7.3	5.09	12.39						
24	7.9	5.25	13.15						
25	7.8	5.21	13.01						
26			8.2	5.33 13.53					
27			8.1	5.30 13.40					

M.O.R.

Image poor. hazy.

10:40

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1913phae.proj..988L

$B\gamma^{8} = 20^h +45°$

Scale 1

Saturday August 24, 1912

11:52

Mc 1065

		ac.1	ac.2	P.C.		
to far from centre	1					
" " "	2					
	3	B.		5.3		
	4	B		6.4		
" " "	5					
	6	B.		6.1	Magn.	
	7	B.	Magn.	7.0	~~0.70~~ ~~7.70~~ extrap.	
	8	4.0	4.95	8.95	7.3	0.18 ~~8.08~~ extrap.
	9	3.9	4.94	8.84	7.4	0.80 ~~8.20~~
	10	3.9	4.94	8.84	7.7	0.88 ~~8.58~~
	11	4.2	4.97	9.17	7.8	~~0.90~~ ~~8.70~~
	12	4.3	4.98	9.28	7.9	~~0.92~~ ~~8.82~~
	13	4.8	4.98	9.28	8.1	~~1.13~~ 0.88 ~~9.83~~ 9.58
	14	4.3	4.98	9.28	8.1	~~1.13~~ 0.88 ~~9.83~~ 9.58
	15	4.8	5.01	9.81	8.8	~~1.16~~ 0.92 9.96 10.72
	16	5.1	5.05	10.15		
	17	5.2	5.06	10.26		
	18	5.8	5.11	10.99		
	19	6.0	5.13	11.13		
	20	6.1	5.13	11.24		
	21	6.3	5.16	11.46		
	22	6.9	5.20	12.10		
	23	7.2	5.23	12.43		
	24	7.9	5.29	13.19		
	25	8.0	5.30	13.30		
	26		8.3	5.32	13.62	
	27		8.7	5.34	14.04	

	ac.1	ac.2	P.C.		
28		8.9	5.36	14.26	
29		9.2	5.38	14.58	
30		9.7	5.40	15.10	
31	~~9.9~~	9.9	5.41	15.31	
Polar 10	4.1	4.19	*	7.4	1.49
11	4.4	5.02		8.6	0.82
12	4.7	5.03		8.9	0.83
13	5.1	5.07		9.0	1.67
14	5.4	5.12		9.2	1.32
15	5.9	5.04		9.5	1.44
16	6.2	5.06		extp.	
17	6.3	5.19			
18	6.9	5.02			
19	7.0	5.28			
20	7.6	4.99			
21	7.5	5.32			
23	8.0	5.20			
25		8.3	5.43		
26		8.9	5.29		
27		9.2	5.35		
28		9.5	5.47		

Assumed 8.4

~~Reject magnitudes for f.c.~~ No. 10 of Other Sq. for the mean. mag by a print; use only the 3 magnitudes in general.

mar.

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1913phae.proj..988L

B8 = 20h +45°.

Scale 2 Saturday August 24, 1912.

Me 1421 / 998

	mag.		mag.		mag.	Diff.
1	6.3	0.76	7.06	10	7.5	1.39
2	6.9	0.94 / 0.63	7.84	11	8.2	1.22
3	6.9	0.94	7.84	12	8.5	1.23
4	7.2	1.02	8.22	13	8.7	1.47
5	7.2	1.02	8.22	14	9.1	1.42
6	7.2	1.02	8.22	15	9.3	1.64
7	7.5	1.09	8.59	16	9.5	1.76
8	7.7	1.14	8.84	17	9.3	2.19
9	7.4	1.06	8.46	18	9.7	2.22
10	8.1	1.26	9.36	19	9.9	2.38
11	8.1	1.26	9.36	1N	6.2	+0.49
12	8.1	1.26	9.36	2N	7.2	0.53
13	8.3	1.34	9.64	3N	7.5?	1.12?
14	8.2	1.30	9.50	4N	7.9?	1.07?
15	8.5	1.42	9.92	5N	8.5	1.28
16	8.5	1.42	9.92	6N		
17	8.7	1.52	10.22			
18	9.3	1.82	11.12			
19	9.5	1.94	11.44			
20	9.9	2.28	12.18			

		Diff.
Polar 3	5.2	0.54
4	5.5	0.41
5	5.8	0.59
6	6.2	0.78
7		
8	7.8	1.00
9	7.7	1.00

12.53

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1913phae.proj..988L

B7 = 17h 20 +45°

Scale = 11.

Monday August 26, 1912.

3:00 Mc991.

		sc.1	sc.2	mags.
Standard Seqs.	1	B.		
to far from centre.	2			
" " "	3			
	4			
	5			
	6			
	7	13.		
	8	3.1		
" " "	9			
" " "	10			
	11	3.9		
" " "	12			
	13	4.2	4.12	8.92
	14	4.3	4.13	9.03
	15	5.2	4.81	10.01
	16	5.0	4.19	9.19
	17	5.1	4.80	9.90
	18	5.7	4.87	10.57
	19	5.3	4.82	10.12
"	20	6.1	4.92	11.02
	21	6.3	4.95	11.25
	22	5.9	4.89	10.79
	23	6.2	4.93	11.13
	24	6.6	5.00	11.60
	25	6.7	5.01	11.71
	26	6.9	5.04	11.94
	27	7.2	5.10	12.30

	sc.1	sc.2	mags.
28	7.6	5.16	12.76
29	8.2	5.24	13.44
30	8.3	5.26	13.56
31	8.6	5.32	13.92
32	8.7	5.34	14.04
33	8.8	5.31	14.11
34	9.3	5.49	14.79
35	9.7	5.58	15.28
36	n.s.		
Polar	Diff.		
10	4.0		4.89
11	4.7		4.72
12	5.1		4.63
13	5.3		4.81
14	5.6		4.92
15	6.0		4.94
16	6.6		4.66
17	6.4		5.09
18	7.0		4.92
19	7.1		5.18
20	7.3		5.29
21	7.7		5.12
23	7.9		5.30
25 c	8.4	5.33	
26	8.9	5.29	
27	9.2	5.35	
28	9.5	5.41	
29	9.8	5.72	

M.O.R.

No photometric comparisons on plate.

3:28

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1913phae.proj..988L

$\mathfrak{C}1 = 1^h + 15°$

Scale P.

Tuesday August 27, 1912

MW 316

2:35

	Sc.1	Sc.2		Sc.1	Sc.2	
	1st exp. - r.h. image.		28	4.3	4.0 ~~4.3~~ 3.9	3.95
1			29	4.7	4.4	4.3 4.35
2			30	5.3	5.0	5.0 5.00
3			31		6.7	6.7
4			32		7.6	7.6
5			33		8.0	8.0
6						
7						
8						
9						
10						
11						
12						
Off Plate. 13						
off plate. 14						
15	1.1	D Rej.				
off plate 16						
17	1.8	1.5				
18	2.1	1.8				
19	2.1	1.8				
near edge. 20	2.7	D Rej.				
21	2.9	2.6				
22	3.6	3.3				
23	3.4	3.1				
24	3.7	3.4				
25	3.8	D Rej.				
26	3.8	3.5				
27	4.1	3.8 3.7	3.85			

Film up - number in right-hand corner. 2:55

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1913phae.proj..988L

Cl = 1^h +15°

Scale P. Tuesday August 27, 1912.

MW 316 2nd exp.

2nd expo. Images double. Reject this exposure

RC.1 SO.2

	1	B	
peculiar-shaped image-looks double.	10	2.1	
	11	1.9	
Af plate	12		
	13		
	14		
	15	2.9	
	16		
	17	3.1	
	18	3.8	
	19	3.9	
	20	4.9	
	21	5.3	4.7
	22	5.1	5.4
	23	6.7	6.3
	24	~~3.2~~ 6.7	6.5
	25	6.9	6.1
	26	6.9	6.7
	27		6.8
	28		7.7
	29		7.9
	30		8.9?
	31		9.2
	32	ns	
	33		

MOR

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1913phae.proj..988L

Cl = 1h +15°

Scale P.

Tuesday August 27, 1912

MW 316 – 3rd exp.

		sc.1	sc.2	
	10	2.1		
	11	2.0		
Too near Edge	12			
off plate	13			
" "	14			
	15	3.0		Dist
" "	16			
	17	3.1	2.8	2.8
	18	3.9	3.6	3.6
	19	4.0	3.7 3.8	3.75
	20	5.2	4.9 4.9	Dist ~~4.90~~
w.i.	21	~~5.1~~ 4.8	4.8	4.80
	22	5.9	5.6 5.6	5.60
	23	6.3	6.0 5.9	5.95
	24	6.2	5.9 6.0	6.95
	25	6.7	6.4 6.4	Dist
	26	6.9	6.6 6.7	6.65
	27	7.2	6.9 6.9	6.90
	28		7.6	7.6
	29		8.0	8.0
	30		sup.	
	31		9.0	9.0
	32		?	
	33		n.s.	

M.O.R.

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1913phae.proj..988L

$C_1 = 1^h + 15°$

Scale P. Tuesday August 27, 1912.

MW 316 - 4th exp.

		sc. 1	sc. 2	
	10	B.		
	11	B.		
too near edge	12			
" "	13			
off plate	14			
	15	1.0		Dist.
	16			
	17	1.8		1.4
	18	1.4		1.6
	19	2.1		1.8
	20	2.7		Dist.
	21	2.9		2.6
	22	3.1		2.8
	23	3.1		2.8
	24	3.2		2.9
	25	3.9		3.2.
	26	3.9		3.6
	27	4.2		3.9
	28	4.7	4.4 4.3	4.35
	29	4.9	4.6 4.7	4.65
	30	6.1	5.8 5.9	5.85
*	31	6.9?	5.6? 6.6?	6.60?
	32	7.6	7.6	7.6
	33		8.0	8.0
	34			

assumed 6.9 2. Sept 28'14

Scale images do not compare well with plate images.

M O R.

8:50

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1913phae.proj..988L

C1 = 13h + 15

Scale U

Wednesday, August 28, 1912

11:31

M 1023

		Sc. 1	Sc. 2	Magn.		Sc. 1	Sc. 2 Diff.
too far from centre	1				11	6.9	2.52
	2	4.9	2.83	7.73	12	7.2	2.53
	3	5.2	2.80	8.00	13	7.6	2.51
	4	5.1	2.81	7.91	14	7.8	2.12
	5	5.6	2.74	8.34	15	8.0	2.94
	6	6.6	2.63	9.23	16	8.3	2.96
	7	6.3	2.65 ~~2.79~~	8.95	17	8.5	2.99
	8	6.8	2.63	9.43	18	8.9	3.02
	9	7.1	2.64	9.74	19	9.3	2.98
	10	7.2	2.66	9.86	20	9.5	3.09
	11	7.2	2.66	9.86	21	9.9	2.92
	12	7.4	2.70	10.10			
	13	7.7	2.74	10.44			
	14	7.9	281	10.71			
	15		8.1 285	10.95			
	16		8.2 281	10.07			
	17		8.6 293	11.43			
	18		8.6 293	11.53			
	19		8.9 296	11.86			
	20		9.3 3.00	12.30			
	21		9.7 3.04	12.74			
	22		9.8 3.04	12.84			
Polar	5	B.					
	6	4.1	288 ~~2.58~~				
	8	5.2	2.90				
	9	6.1	2.60				
	10	6.3	2.59				

MOR.

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1913phae.proj..988L

$\Phi = 7 + 15°$

Scale N.

Wednesday August 28, 1912.

MD1493.

	sc.1	sc.2	curve reading	Magn.		sc.1	sc.2
1	3.9		2.88	6.78	11	6.7	2.72
2	4.2		2.84	7.04	12	7.1	2.63
3	4.3		2.83	7.13	13	7.3	2.81
4	5.1		2.75	7.85	14	7.6	2.92
5	5.6		2.70	8.30	15	8.0	2.94
6	~~4.0~~ 5.9		2.70	8.40	16	8.3	2.96
7	~~6.2~~ 5.9		2.70	8.60	17	8.5	2.99
8	6.0		2.70	8.80	18	8.9	3.02
9	6.2		2.70	8.90	19	8.8	3.48
10	7.2		2.80	10.00	20	9.1	3.49
11	7.1		2.78	9.88	21	~~8.9~~ 9.3	3.52
12	~~6.9~~ 7.1		2.78	9.88	22		
13	7.2		2.80	10.00	23	9.7	3.50
14	7.7		2.91	10.61			
15	7.9		2.96	10.86			
16	8.0		2.99	10.99			
17		8.3	3.01	11.31			
18	8	8.9	3.30	12.20			
19		8.8	3.25	12.05			
20		9.1	3.37	12.47			
21		9.0	3.34	12.34			
22		~~8.9~~ 9.3	3.45	12.75			
23		9.5	3.54	13.04			

Polar

	B.	Diff
5		
6	40	+ 298
8	52	390
9	61	2.60
10	62	2.69

M.OR.

12.15

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1913phae.proj..988L

b4 7+15

Sc. U

August 29, 1913

M E 1493

		Size	curve	magn.
Col.	3	5.1	+0.64	
	4	5.3	0.61	
	5	5.6	0.79	
	6	6.1	0.88	
	8	7.1	1.00	
	9	~~7.8~~ 7.8	Im super.	
	10	~~8.7~~ 7.8	1.09	
	11	8.2	1.22	
	12	8.5	1.23	
	13	8.9	1.27	
	14	9.2	1.32	
	15	9.5	1.44	
	16	9.8	1.46	
	17	10.0	1.49	
St. Seq.	1	5.3	0.69	5.99
	2	6.1	0.84	6.94
	3	6.3	0.88	7.18
	4	6.7	0.95	7.65
	5	7.3	1.06	8.36
	6	7.3	1.06	8.36
	7	7.5	1.10	8.60
	8	7.7	1.13	8.83
	9	8.0	1.17	9.17
	10	8.2	1.20	9.40
	11	8.5	1.24	9.74
	12	8.5	1.24	9.74
	13	8.7	1.27	9.97
	14	9.1	1.33	10.43
	15	9.5	1.39	10.89
	16	9.7	1.43	10.13
	17	9.9	1.46	11.36
	18	10.0	1.47	11.47

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1913phae.proj..988L

C5 = 9h + 15

Scale 11

Friday August 30, 1912

NGC 1365

2:30

	sc.1	sc.2	P.C.	Magn.			sc.1	sc.2	P.C.
too far from c.	1	B				28	9.3	5.19	14.49
	2	B	7.4			29	9.5	5.22	14.72
" " "	3					30			
" " "	4					Plate	Diff.		
	5	4.1	4.75	8.85	8.6	0.23	8.83	10 4.1	4.79	8.9 + 0.19
too far from centre	6							11 4.9	4.72	9.2 0.22
" " "	7							12 5.2	4.53	9.7 0.03
	8	4.8	4.73	9.53	8.9	0.20	9.10	13 5.5	4.61	
	9	4.8	4.73	9.53	9.3	0.15	9.45	14 5.1	4.82	
	10	5.1	4.75	9.85	9.5	0.13	9.63	15 6.1	4.84	
	11	5.1	4.75	9.85	9.8	0.10	9.90	16 6.2	5.06	
	12	5.3	4.76	10.06				17 6.6	4.89	
	13	5.3	4.76	10.06				18 7.0	4.92	
	14	5.6	4.78	10.38				19 7.5	4.78	
	15	6.3	4.84	11.14				20 7.1	4.89	
	16	6.2	4.83	11.03				21 7.9	4.92	
	17	6.3	4.84	11.14				22		
	18	6.7	4.85	11.25				23	8.7	4.80
	19	6.8	4.89	11.69				24		
	20	7.0	4.90	11.90				25	8.6	5.13
	21	7.2	4.92	12.12				26	8.9	5.29
	22	7.7	4.98	12.68				27	9.2	5.35
	23	8.0	5.00	13.00				28	9.7	5.22
	24		8.1	5.02	13.12					
	25		8.5	5.08	13.58					
	26		8.7	5.12	13.80					
	27		9.0	5.14	14.14					

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1913phae.proj..988L

C 2 = 3h + 15°

Scale "

Friday August 30, 1912

MC 1236

	sc.1	sc.2	P.C.
Cos far from centre	1		
" " "	2		
	3	B.	Magn.
	4	4.0	~~3.95~~ ~~7.95~~ extinct.
" " "	5		
" " "	6		
	7	4.3	~~3.98~~ ~~8.28~~ extinct
" " "	8		
	9	4.3	~~3.98~~ ~~8.28~~ "
	10	5.2	4.08 9.28
	11	5.1	4.06 9.16
	12	5.3	4.10 9.40
	13	5.4	4.11 9.51
	14	5.9	4.18 10.08
	15	6.2	4.21 10.41
	16	6.2	4.21 10.41
	17	6.4	4.24 10.64
	18	6.3	4.23 10.53
	19	7.1	4.36 11.46
	20	7.7	4.45 12.15
	21	7.4	4.40 11.80
	22	7.9	4.48 12.38
	23	8.1	4.50 12.60
	24	8.2	4.52 12.72
	25	8.3	4.54 12.84
	26	8.9	4.62 13.52
	27	9.3	4.69 13.97

	sc.1	sc.2	Curv.	Magn.
	28	9.9	4.75	14.65
Polar	10	4.8	+4.09	
	11	5.2	4.22	
	12	~~5.7~~ 6.1	4.03	
	13	6.1	4.01	
	14	6.3	4.22	
	15	6.1	4.24	
	16	7.0	4.06	
	17	7.0	4.49	
	18	7.4	4.52	
	19	8.0	4.38	
	20	8.1	8.1 4.49	
	21		8.3 4.52	
	22		—	
	23		8.6 4.60	
	24			
	25		9.0 4.73	
	26		9.5 4.69	
	27		9.9 4.65	
	28		n.s.	

MCR. Preceding & companion not seen on this plate. 3.25

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1913phae.proj..988L

$\delta_{1900} = 17\ 20 + 45^-$

Sc. U

Aug 31, 1913

H.D. 1281

4.30	5	38	2.59		15	7.8	2.41	10.21
	6	4.3	2.68		16	8.0	2.43	10.43
	8	6.0	2.10		17	8.4	2.48	10.88
	9	6.6	2.10		18	8.5	2.50	11.00
	10	6.7	2.19		19	8.5	2.50	11.00
	11	7.0	2.42		20	8.8	2.54	11.34
	12	7.2	2.53		21	9.1	2.68	11.68
	13	7.1	2.47		22	8.9	2.55	11.45
	14	8.2	2.32		23	9.3	2.62	11.92
	15	8.5	2.44		24	9.5	2.65	12.15
	16	8.1	2.56		25	9.7	2.68	12.38
	17	8.8	2.69					
	18	9.3	2.62					
	19	9.7	2.58					

4.45

			mag.
	1	4.7	2.47	7.17
	2	5.0	2.43	7.43
	3	5.1	2.42	7.52
Prof for f. C	4			
" " "	5			
" " "	6			
	7	5.9	2.36	8.26
	8	5.7	2.38	8.08
	9	6.2	2.35	8.55
	10	6.4	2.34	8.74
	11	6.8	2.34	9.14
	12	7.2	2.38	9.58
	13	7.3	2.38	9.68
	14	7.5	2.40	9.90

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1913phae..proj..988L

$\beta_8 = 20^h +45$

Sc U

Sept. 17, 1913

Q U E 999

	Sc 2	0.48					
3	5.6	+0.14					
4	5.8	+0.11					
5	6.3	0.09					
6	6.7	0.28					
8	7.5	0.60					
9	8.1	0.60					
10	8.2	0.69					
11	8.5	0.92					
12	8.7	1.03					
13	9.0	1.17					
14	9.2	1.32					
15	9.5	1.44					
16	9.8	1.46					
7r	9.4	1.17					
3r	7.8	0.82					
2r	7.2	0.53					
4r	8.1	0.81					
1r	6.3	0.39					
5r	8.7	1.08					

		curve.	magn.
1	6.7	0.34	6.64
2	7.0	0.40	7.40
3	6.9	0.37	7.27
4	7.2	0.47	7.67
5	7.1	0.44	7.54
6	7.3	0.50	7.80
7	7.7	0.63	8.33
8	8.0	0.76	8.76

			magn.
9	7.9	0.72	8.62
10	8.1	0.80	8.90
11	8.3	0.88	9.18
12	8.3	0.88	9.18
13	8.5	0.95	9.45
14	8.5	0.95	9.45
15	8.7	1.05	9.75
16	8.9	1.15	10.05
17	9.0	1.20	10.20
18	9.3	1.34	10.64
19	9.5	1.43	10.93
20	9.8	1.50	11.30

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1913phae.proj..988L

$C2 = 3^{4} + 15$

Scale 2

September 4, 1912.

M 0943

	1:75 sc.1	sc.2	Diff.	curve reading	Magn.	Polar.	sc.1	sc.2	Diff.
1	3.9	~~4.59~~				9			
2	4.0	~~1.94~~				10	5.7		+ 3.19
3	4.3	~~1.44~~				11	6.1		3.32
4	5.1	~~0.84~~				12	6.5		3.23
5	5.1	~~1.29~~				13	6.8		3.37
6	5.4	~~1.58~~				14	6.9		3.62
7	5.9	~~1.28~~	3.25	9.15		15	7.4		3.54
8	5.9	~~2.20~~	3.25	9.15		16	7.6		3.66
9	6.1	~~2.60~~	3.30	9.40		17	7.7		3.79
10	7.1	~~1.79~~	3.57 (2)	10.67 (2)		18	8.0		3.92
11	6.3	~~2.12~~	3.35	9.65		19	~~almost sep.~~ (2)	8.5	3.78
12	6.5	~~2.03~~	3.41	9.91		20		8.7	3.89
13	7.2	~~2.11~~	3.57	10.77		21		9.0	3.82
14	7.3	~~2.28~~	3.60	10.90		23		9.4	3.80
15	7.6	~~2.24~~	3.67	11.27		25		9.7	4.03
16	7.8	~~2.16~~	3.70	11.50					
17	8.0	~~2.19~~	3.74	11.74					
18	sups.								
19		8.0	3.74	11.74					
20		8.4	3.81	12.21					
21		8.7	3.85	12.55					
22		8.3	3.80	12.10					
23		9.0	3.88	12.88					
24		9.0	3.88	12.88					
25		9.3	3.91	13.21					
26		n.s.							

A star too close to separate

M.O.R.

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1913phae.proj..988L

C 2 = 3" + 15"

Scale U. September 4, 1912.

M D 1236

	sc.1	sc.2	Curve	Magn.			sc.1	sc.2
1	4.3	0.			6.48	16	9.2	2.06
2	4.9				6.95	17	9.3	2.19
3	5.1				7.12	18	9.8	2.12
4	5.8				7.70	19		
5	5.9				7.78	20		
6	6.2		1.89	8.09	ecliptic 7.85	21		
7	6.4		1.93	8.33	" 8.11	23		
8	7.0		2.00	9.00	8.90	9	7.0	1.70
9	6.8		1.98	8.78	8.62	8	6.3	1.80
10	6	8.3	2.13	10.43	9.93	5	4.8	2.19
11	7.2		2.03	9.53	9.13			
12	7.3	7.0	2.04	9.34	9.27			
13	8.1	8.1	2.12	10.22				
14		8.2	2.12	10.32				
15		8.3	2.13	10.43				
16		8.5	2.14	10.64				
17		8.8	2.16	10.96				
18		9.0	2.18	11.18				
19		9.3	2.19	11.49				
20		9.9	2.20	12.10				
21		9.9	2.20	12.10				

Polar

10	7.1	1.19	
11	7.3	2.12	
12	7.6	2.13	
13		8.1	2.01
14		8.5	2.02
15		8.7	2.24

M GR.

2.04

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1913phae.proj..988L

$b_{11} = 21 + 15$

Scale 11

Sept 5, 1912

1.15

M. N. 1830

Bd.	5	3.6	2.19	13	6.8	2.69	9.49
	6	4.1	2.88	14	7.2	2.99	9.99
	8	5.7	2.40	15	7.4	2.82	10.22
	9	6.2	2.50	16	7.8	2.90	10.70
	10	6.3	2.59	17	8.0	2.94	10.94
	11	6.7	2.92	18	8.1	2.97	11.07
	12	7.1	2.63	19	8.3	3.00	11.30
	13	7.3	2.87	20	8.5	3.02	11.52
	14	7.6	2.92	21	9.0	3.10	12.10
	15	8.0	2.94	22	9.1	3.11	12.22
	16	8.3	2.96	23	8.9	3.09	11.99
	17	8.5	2.99	24	9.3	3.14	12.44
	18	8.8	3.12	25	9.5	3.16	12.66
	19	9.1	3.18	26	9.8	3.19	12.99
	20	9.4	3.19 3.88				
	21	9.7	3.12				

1 30

	Curve reading.	magn.
1	4.1 260	6.70
2	4.3 256	6.86
3	4.6 251	7.11
4	5.1 247	7.57
5	5.7 246	8.16
6	5.7 246	8.16
7	6.1 253	8.63
8	6.2 254	8.74
9	6.4 259	8.99
10	6.7 266	9.36
11	7.0 272	9.72
12	7.1 276	9.86

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1913phae.proj..988L

$b_{12} = 23^{h} + 15$

Sept 9, 1912

Sc II

	Sc1	curve	magn-
1	4.1	2.43	6.53
2	4.7	2.33	7.03
3	5.0	2.28	7.28
4	5.2	2.24	7.44
5	5.4	2.20	7.60
6	6.0	2.14	8.14
7	6.2	2.13	8.38
too far from centre 8			
9	6.5	2.14	8.64
10	6.6	2.14	8.74
11	7.1	2.19	9.29
12	7.3	2.22	9.52
13	7.5	2.26	9.76
14	7.4	2.23	9.63
15	7.4	2.23	9.63
16	8.0	2.36	10.36
17	8.1	2.39	10.49
18	8.6	2.52	11.12
19	9.0	2.62	11.62
20	9.3	2.69	11.99
21	9.6	2.76	12.36
22			

	Sc1	Sc2
16	8.5	2.76
17	9 8.5	2.59
18	9.2	2.72
19	9.8	2.48

Polar

10	6.7	2.19
11	7.1	2.32
12	6.6	2.13
13	8.1	2.27
14	8.1	2.42
15	8.3	2.64

5	3.9	2.49
6	4.6	2.38
8	6.0	2.10
9	6.5	2.20

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1913phae.proj..988L

C11: 21h +15°

Scale 11.

September 9, 1912.

MD 1199

	DC.1	DC 2 cent	mag.
1	4.2	2.63	6.83
2	4.7	2.64	7.34
3	4.9	2.65	7.55
4	5.2	2.66	7.86
5	5.8	2.68	8.48
6	5.8	2.68	8.48
7	6.2	2.71	8.91
8	6.2	2.71	8.91
9	6.4	2.74	9.14
10	6.7	2.79	9.49
11	7.2	2.86	10.06
12	7.3	2.87	10.17
13	7.1	2.84	9.94
14	7.1	2.84	9.94
15	7.8	2.94	10.74
16	8.0	2.97	10.97
17	8.1	2.99	11.09
18	8.3	3.01	11.31
19	~~8.0~~ 8.3	3.01	11.31
20	8.5	3.04	11.54
21	8.9	3.11	12.01
22	9.0	3.12	12.12
23	8.1	3.01	11.11
24	9.5	~~3.20~~ 3.16	~~12.70~~ 12.46
25	9.8	3.22	13.52
Polar 5	3.9	2.49	~~6.39~~
6	4.3	2.68	~~6.98~~

	Diff.	
8	5.3	2.80
9	6.0	2.70
10	6.2	2.79
11	6.8	2.62
12	7.1	2.63
13	7.5	2.61
14	7.7	2.82
15	7.9	3.04
16	8.2	3.06
17	8.5	2.99
18	8.8	3.12
19	9.1	3.18
20	9.4	3.19
21	9.1	3.12

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1913phae.proj..988L

C9 = 17^h + 15°

Scale ·

September 12, 1912

11:26 M 10 1280

	sc.	curve reading		sc.	Diff.
1	4.3	2.62	6.92	13 15	+261
2	4.4	2.61	7.01	14 8.1	2.42
3	4.6	2.60	7.20	15 8.3	2.64
4	5.3	2.54	7.84	16 8.6	2.66
5	5.7	2.52	8.42	17 8.9	2.59
6	6.1	2.51	8.61	18 9.3	2.62
7	6.4	2.53	8.93	19 9.7	2.58
8	7.2	2.56	9.76	20 n.s	
9	7.4	2.56	9.96	21	
10	8.1	2.59	10.69		
11	7.9	2.58	10.48		
12	7.9	2.58	10.48		
13	8.2	2.60	10.80		
14	8.5	2.60	12.10		
15	8.4	2.60	11.00		
16	8.8	2.60	11.40		
17	9.0	2.60	11.60		
18	9.5	2.60	12.10		
19	9.6	2.61	12.21		
20	9.9	2.62	12.52		
		Diff.			
5	3.9	+249			
6	4.2	2.78			
8	5.8	2.30			
9	6.2	2.50			
10	6.3	2.59			
11	6.9	2.52			
12	7.2	2.58			

MCR.

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1913phae.proj..988L

$C_1 = 1^h + 15^\circ$

Scale R.

September 12, 1912.

Mc 1243 Foc.

	Exp.	sc.1	sc.2
No. 1	1	9.1	9.6
	2	5.0	.
	3	9.2	9.6
	4	6.3	.
	5	9.1	9.4
2	1	9.2	9.7
	2	5.0	.
	3	9.2	9.6
	4	6.2	.
	5	9.1	9.6
3	1	7.1	
	2	3.9	
	3	8.0	
	4	5.1	
	5	7.7	
4	1	8.9	9.3
too far from center?	2	4.9	
	3	9.2	9.4
	4	6.1	
	5	9.1	9.3
5	1	.	12.1
	2	6.2	
	3	.	12.5
	4	9.1 6.3	9.6
	5	.	12.7
6	1	10.0	10 9.3

MER

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1913phae.proj..988L

Cl = $1^h + 15^\circ$

Scale R

September 12, 1912.

Mc1243 cont.

	Exp	sc.1	sc.2
6	2	5.9	
	3	10.1	10.7
	4	7.9	
	5	10.1	10.7
7	1	9.0	9.1
	2	7.9	
	3	9.2	9.6
	4	6.1	
	5	9.1	9.4
8	1		11.1
	2	6.1	
	3		11.2
	4	7.3	
	5		11.2
9	1		12.1
	2	6.1	
	3		12.1
	4	8.2	
	5		11.9
10	1		12.2
double?	2	6.0	
	3		12.3
	4	8.9	9.2
	5		12.2
11	1		13.1
	2	7.1	
	3		13.3

MAR.

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1913phae.proj..988L

Cl - 1^h +15

Scale R

September 12, 1912.

Mc 1243 cont.

		Rc 1	Rc 2
11	4	9.7	10.1
	5	.	13.0
12	1	.	13.9
	2	7.9	
	3	.	f
	4	10.1	10.8
	5	.	14.0
13	1	.	12.7
	2	6.2	.
	3	.	12.7
	4	9.1	9.4
	5	.	
14	1	.	t.f.
	2	8.2	.
	3	.	t.f.
	4	.	11.3
	5	.	n.s.
15	1	.	.
	2	8.9	9.2
	3	.	.
	4	.	12.3
	5	.	.
16	1	.	n.s.
	2	9.0	9.3
	3	.	.
	4	12	12.2
	5	.	.

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1913phae.proj..988L

Cl = 1h + 15°

Scale R

September 12, 1912.

Mc 1243 cont.

17	1	.	.
	2	9.7	10.1 ~~9.7~~
	3	.	.
	4		13.2
	5	.	.
18	1	.	.
	2	9.7	10.1
	3	.	.
	4		13.5
	5	.	.
19	1	.	.
	2	.	11.0
	3	.	.
	4		f
	5	.	.
20	1	.	.
	2		11.8
	3	.	.
	4	.	.
	5	.	.
21	1	.	.
	2	.	12.2
	3	.	.
	4	.	.
	5	.	.
22	1	.	.

mOR.

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1913phae.proj..988L

Cl = 1^{h} + 15°

Scale R

September 12, 19 12.

Mc 1243 cont.

22	2	13.1
	3	
	4	
	5	
23	1	
	2	13.4
	3	
	4	
	5	
24	1	
	2	12.5
	3	
	4	
	5	
25	1	
	2	13.7
	3	
	4	
	5	

12:30

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1913phae.proj..988L

C4 = 7h +15°

Scale R

September 13, 1912

1 2 3 4 5

MC 1573 – 5 exposures.

1st exposure.

	rec.1	rec.2		
1	9.3	9.6	9.7	9.65 01
2	9.8	10.1	10.1	10.10 00
3	9.7	10.0	10.1	10.05 01
4	9.2	9.5	9.6	9.55 10
5			12.1	12.1 .a
6	9.9	10.2	10.20	10.20 00
7		11.1		
8		13.0		
9		11.4		
10		13.9		
11		n.s.		
12		13.0		
13		13.7		
14		I		
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

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$C4 = 7^h + 15$

Scale R. September 13, 1912.

MC 1573 cont:

2nd exposure. 64m

	20.1	20.2			
1	3.3				
2	4.1				
3	4.0				
4	4.1				
5	6.0				
6	5.0				
7	5.1				
8	6.8				
9	6.0				
10	7.2				
11	7.3				
12	6.8				
13	6.9				
14	8.2				
15	8.3				
16	9.1	9.4	9.3	9.35	01
17	8.9	9.2	9.2	9.20	00
18	9.8	10.1	10.2	10.15	10
19	9.3	9.6	9.7	9.65	01
20	9.2	9.5	9.7	9.60	11
21		11.1			
22		10.9			
23		12.7			
24		13.0			
25		13.2			
26		13.0			
27		14.0			

MCR.

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1913phae.proj..988L

C4 = 7h + 15

Scale R. September 13, 1912.

MC 1573 cont.

3rd exposure.

	RC.1	RC.2	
1	9.3	9.6 ~~10.2~~ 9.7	9.6501
2	~~9.7~~ 10.0	10.3	10.3000
3	9.9	10.2 ~~10.2~~	10.2000
4	9.3	~~9.8 10.0~~	980 ± 2
5		12.2	12.2
6	9.7	10.0	10.1 10.0501
7		11.1	
8		13.2	
9		12.0	
10		14.0	
11		n.s.	
12		13.3	
13		13.3	
14		n.s.	

MOR.

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1913phae.proj..988L

C4 = 7h + 15°

Scale 12

September 13, 1912.

MC1573 - Cont.

4th exposure 8m

		Sc.1	Sc.2	
1	6.2			
2	7.0			
3	6.1			
4	6.3			
5	9.0	9.3	9.3	9.30 00
6	6.3			
7	7.6			
8	9.3	9.6	9.8	9.70 ± 1
9	8.2	8.5	8.7	8.60 ± 1
10	10.0	10.3	10.7	10.50 ± 2
11	~~11.3~~		11.3	
12			10.1	
13	9.8	10.1	10.2	10.15 ± 0
14			12.0	
15			12.2	
16			12.3	
17			12.6	
18			13.1	
19			13.0	
20			13.2	
21			n.s.	

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1913phae.proj..988L

C4 = 7" + 15°

Scale R. September 13, 1912.

Mc 15 7/3 cont.

5th exposure.

	xc1	xc2		
1	9.3	9.6	9.8	9.70 ± 1
2	10.0	10.3	10.5	10.40 ± 1
3	10.0	10.3	10.7	10.50 ± 2
3	9.3	9.6	10.1	9.85 ± 3
4	9.8	10.1	10.1	10.10 00
5		12.4		
6	10.0	10.3	10.7	10.50 ± 2
7		11.8		
8		13.3		
9		11.9		
10	t.f.			
11		n.s.		
12		13.3		
13		13.4		
14		n.s.		
15		n.s.		

Repeat
Mistake in Record.

M.O.R.

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1913phae.proj..988L

$b_2 = 3 + 15$

Sc. W. Sept. 17, 1912

ME 943

		Diff.
3	5.2	0.54
4	5.5	0.41
5	5.9	0.49
6	~~7.5~~	
7	~~7.7~~	
8	7.3	0.80
9	7.8	0.90
10	7.9	0.99
11	8.2	1.22
12	8.5	1.23
13	8.7	1.47
14	8.8	1.72
15	9.1	1.84
16	9.3	1.96
17	9.5	1.99
18	9.9	2.02

			curve reading
1π	6.2	0.49	0.49
2.	7.1	0.63	0.68
3.	7.7	0.92	0.91
4.	7.9	1.07	
5.	8.5	1.28	
6π	8.7	1.47	
7π			
8π			

		from curve.	magn.
1	6.3	0.60	6.90
2	6.7	0.61	7.01
3	7.0	0.73	7.73
4	7.3	0.80	8.10

			magn.
5	7.4	0.81	8.21
6	8.0	1.06	9.06
7	St. suppe.		
8	8.1	1.12	9.22
9	8.2	1.19	9.31
10	8.9	1.66	10.56
11	8.5	1.36	9.86
12	8.5	1.36	9.86
13	8.7	1.53	10.23
14	9.1	1.83	10.93
15	9.2	1.86	11.06
16	9.3	1.91	11.21
17	9.5	1.98	11.48
18	9.8	2.04	11.84

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1913phae.proj..988L

C 3 = $5^h + 15$

Scale U. September 19, 1912

2:13 ME 994.

	sc 2	focuse	magn.		sc 2	Diff.
1	6.2	0.04	6.24	5	6.4	±.01
2	6.3	0.04	6.34	6		
3	~~3 4 5~~ 6.6	0.11	6.71	4		
4	7.0	0.32	7.32	8	~~7.7~~ 7.4	0.70
5	7.1	0.38	7.48	9	7.9	0.80
6	7.2	0.44	7.64	10	8.1	0.19
7	7.3	0.51	7.81	11	8.3	1.12
8	7.3	0.51	7.81	12	8.5	1.23
9	7.7	0.74	8.44	13	8.7	1.47
10	7.8	0.80	8.60	14	9.0	1.52
11	7.6	0.68	8.28	15	9.3	1.64
12	8.1	1.00	9.10	16	9.3	1.96
13	8.1	1.00	9.10	17	9.8	1.69
14	8.3	1.12	9.42			
15	8.5	1.21	9.71			
16	8.7	1.34	10.04			
17	~~8.7~~ 8.9 w. star	1.44	10.34			
18	9.2	1.57	10.77			
19	9.0	1.48	10.48			
20	9.4	1.68	11.08			
		Diff.				
1n	6.1	0.59				
2n	$					
3n	7.5	1.12				

		Diff.
3	5.3	0.44
4	5.8	0.11

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1913phae.proj..988L

C 3 = $\frac{5}{4}$ + 15

Scale 11. September 19. 1912.

M0994

	dc1	Curve.	Magn.		dc1	dc2	Magn.
1	3.3	3.22	6.52	28		9.5 3.51	13.01
2	4.0	3.17	7.15				
3	4.1	3.14	7.24	5	3.1	off. 3.29	
4	sup.			6			
5	4.3	3.13	7.43	8	5.0	3.10	
6	4.3	3.13	7.43	9	5.1	3.00	
7	4.9	3.10	8.00	10	5.9	2.99	
8	5.2	3.09	8.29	11	6.3	3.12	
9	5.9	3.10	9.00	12	6.5	3.23	
10	5.3	3.08	8.38	13	7.1	3.07	
11	5.9	3.10	9.00	14	7.3	3.22	
12	6.2	3.10	9.30	15	7.5	3.44	
13	6.3	3.10	9.40	16	7.8	3.46	
14	6.8	3.16	9.96	17	8.1	3.39	
15	7.1	3.19	10.29	18	8.6	3.32	
16	7.2	3.20	10.40	19	8.7	3.58	
17	7.2	3.20	10.40	20	9.1	3.49	
18	7.3	3.21	10.51	21	9.3	3.52	
19	7.4	3.22	10.62	22			
20	7.7	3.26	10.96	23	9.9	3.30	
21	7.6	3.24	10.84				
22	7.9	3.30	11.20				
23		8.2	3.34	11.54			
24		8.1	3.32	11.42			
25		8.2	3.34	11.54			
26		8.1	3.40	12.10			
27		9.1	3.46	12.56			

MQR.

2:48

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1913phae.proj..988L

b 8 = 15 + 15

Sept 19, 1912

June 18, 11

			Diff.
Col.	3	5.2	0.54
	4	5.5	0.41
	5	5.9	0.49
	8	7.2	0.90
	9	8.0	0.50
	10	8.1	0.79
	11	8.6	0.82
	12	8.8	0.93
	13	9.2	0.97
	14	9.5	1.02
	15	9.7	1.24
	16	9.9	1.36
	17	?	

		curve reading	Magn.
	1	6.2	0.56	6.76
	2	6.4	0.58	6.98
	3	7.1	0.65	7.75
	4	6.7?	0.60	7.30?
	5	7.1	0.65	7.75
	6	7.1	0.65	7.75
	7	7.8	0.74	8.54
	8	8.1	0.80	8.90
	9	8.3	0.82	9.12
	10	8.5	0.84	9.34
	11	8.5	0.84	9.34
	12	8.5	0.84	9.34
	13	8.9	0.92	9.82
	14	8.7	0.88	9.58
	15	9.0	0.94	9.94

		curve	magn.
	16	9.2	1.00	10.20
	17	9.3	1.04	10.34
	18	9.3	1.04	10.34
	19	9.5	1.13	10.63
	20	9.5	1.13	10.63

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1913phae.proj..988L

$C\gamma = 13^h + 15°$

R.

Scale ⅓

Friday September 20, 1912

: : ● : :
1 2 3 4 5

Mc946

		sc.1	sc.2	
too near edge. ~~Off plate~~	1			1st exposure.
Off plate	2			
" "	3			
	4	6.0		
too near edge	5			
	6	~~6.9~~	~~6.9~~	
← " "	7			
← " "	8			
←	9	9.1	10.0	
←	10	9.1	10.1	
	11	9.3	9.8	
near edge.	12	9.7	10.1	
	13		11.2 w.s.	
	14		11.0	
	15		11.9	
	16		12.0	
	17		12.9	
	18	~~89~~	13.1	
	19		12.9	
	20		13.9	

Image ~~for~~ slightly elongated.

M.C.R.

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1913phae.proj..988L

C 7 = 13h +15°

Scale R. September 20, 1912.

M0946 cont.

		cc.1	cc.2	2nd exposure.
	1			
	2			
	3			
	4	4.0		
	5			
near edge	6	4.1		
" "	7			
" "	8			
	9	7.1		
	10	6.0		
	11	6.8		
	12	6.1		
	13	7.1		
	14	7.9		
	15	7.7		
	16	8.2		
	17	9.0	9.3 9.2	
	18	8.8	~~8.8~~	
	19	9.8	10.2	
	20	10.2	10.2	
	21	10.0	10.3	
	22	~~12.~~	12.6	
	23			
	24			

M OR.

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1913phae.proj..988L

C1 = 13h + 15°

Scale R. Friday Sept. 20, 1912.

Mc 946 cont.

Mf plate.		sc. 1	sc. 2.	3rd exposure
	1			
	2			
	3			
	4	6.1		
	5			
	6	7.1		
	7			
	8			
	9	9.6	10.0	
	10	9.1	9.6	
	11	9.2	9.7	
	12		10.7	
	13		11.6	
	14	~~8.1~~	12.5	
	15		11.7	
	16		12.1	
	17		12.7	
	18		12.7	
	19		13.1	
	20		13.8	

MGR.

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1913phae.proj..988L

Scale R

Friday Sept 20, 1912.

Mc 946 cont.

	sc 1	sc 2
1		
2		
3		
4	13	
5		
6	1.8	
7		
8		
9	3.0	
10	3.2	
11	4.7	
12	4.0	
13	4.2	
14	5.1	
15	4.9	
16	5.7	
17	5.7	
18	6.0	
19	6.1	
20	6.9	
21	7.1	
22	8.1	~~8.4~~
23	8.9	9.6
24	9.7	10.2
25	9.8	10.2
26	9.9	10.6
29		11.7

4th exposure -

	sc 2 ~~sc 1~~
28	?
29	12.9
30	13.2
31	~~12.9~~ 13.7 vs.

M.O.R.

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1913phae.proj..988L

$C/ = 13^h + 15^-$

Scale R. September 20, 1912 -

Me 946 cont.

	RC.1	RC.2	Fifth exposure.
1			
2			
3			
4	~~6.9~~ 6		
5			
6	1.9		
7			
8			
9	~~7.9~~ 7	10.2	
10	9.9	10.2	
11	9.7	10.2	
12	~~10.2~~	11.1	
13		11.8	
14		12.0	
15		12.3	
16		12.3	
17		13.0	
18		13.2	
19		13.7 ~~def.~~	
20		def.	
21		13.8	

MO, R.

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1913phae.proj..988L

C4 = 7h +15°

Scale R

September 23, 1912

11.10 · m AD 1561 · 1 2 3 4 5

1st exposure.

	sec. 1	sec. 2
1	9.5	10.0
2	10.1	10.6
3	~~10.1~~	11.1
4		11.3
5		12.3
6		12.2
7		12.1
8		12.9
9		13.1
10		13.7
11		13.9
12		13.9
13		~~13.8~~ 13.7
14		t.b.

mOR.

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1913phae.proj..988L

C4=7h+15

Scale R. Sept. 23, 1912.

MD, 1561 cont.

	sc1	sc.2	2nd exposure
1	1.1		
2	3.2		
3	4.1		
4	6.1		
5	6.9		
6	7.2		
7	7.1		
8	7.7		
9	~~8~~ 9.2		
10	~~9~~ 8.3		
11	9.0	9.6	
12	9.1	9.3	
13	9.3	9.8	
14	9.7	10.1	
15		11.0	
16		10.9	
17	~~10.0~~	~~10.7~~	
18		12.0	
19		12.0	
20		12.3	
21		12.7	
22		12.7	
23		13.1	
24		13.1	
25		13.5	
26		13.8	

vr. unit

star sup. on 17.

MOR.

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1913phae.proj..988L

C4 = 1 + 15⁻

Scale R

Sept. 23, 1912.

M20 1561 cont.

3rd exposure.

	sc. 1	sc. 2
1	10.1	10.6
2		11.1
3		11.3
4		11.3
5		12.1
6		12.1
7		12.4
8		13.0
9		13.0
10		13.9 ~~+23~~
11		13.9
12		13.3
13		13.9
14		13.9
15		
16		
17		
18		
19		
20		
21		
22		

M. Ø R.

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1913phae.proj..988L

C4 = 7h +15°

Scale R. September 23, 1912

MD 1561 cont.

4th exposure.

	Real	scr.
1	7.1	
2	8.1	
3	8.1	
4	9.0	9.3
5	9.3	10.0
6	9.1	10.1
7	9.4	10.1
8	10.0	10.9
9		11.0
10		11.8
11		12.0
12		11.9
13	~~10.0~~	+
14		12.7
15		12.9
16		13.1
17		13.3
18		13.7
19		

pup.

mar.

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1913phae.proj..988L

C4=1+10-

Scale R

September 23, 1912

MD 1561 cont

	sc.1	sc.2	5th exposure
1	10.1	10.3	
2		11.2	
3		11.7	
4		11.4	
5		12.1	
6		12.2	
7		12.1	
8		12.8	
9		13.0	
10		13.1	
11		13.1	
12		13.1	
13			
14			

mar.

12:05

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1913phae.proj..988L

C4 = 7h + 15

Scale R

September 23, 1912

M10 1637

12h.05

	pc1	pc2	
12.05			1st exposure.
1	9.1	9.7	
2	9.3	9.8	
3		10.1	
4	9.7	10.7	
5		11.8	
too close to bri star. 6		11.2?	
7		11.3	
8		12.1	
Star sup. on 9 9		~~11.3~~	
10		12.5	
11		13.0	
12		13.0	
13		13.0	
14		13.9	

mO.K.

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1913phae.proj..988L

C4 = 1" + 15°

Scale R

September 23, 1912.

M20 1637 cont.

	sc.1	sc.2	2nd exposure.
1	6.0		
2	6.7		
3	6.9		
4	7.1		
5	8.1		
6	8.1		
7	8.9	9.3	
8	9.2	9.9	
9	9.2	9.9	
10	10.1	10.9	
11		10.7	
12		10.8	
13		11.0	
14		11.9	
15		12.2	
16		12.0	
17		12.3	
18		12.8	
19		12.9	
20		13.3	
21		13.7	
22			

M.O.R.

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1913phae.proj..988L

C4 = 1h + 15°

Scale R.

Sept. 23, 1912

MD 163 cont.

3rd exposure

	sec 1	sec 2
1	9.2	9.8
2	~~10.3~~	10.3
3	9.9	10.2
4	10.0	10.7
5		11.9
too close to a bit star. 6		
7		12.1
8		12.2
9		12.2
10		13.0
11		13.0
12		12.9
13		13.2
14		13.7
15		13.9

M.O.R.

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1913phae.proj..988L

C4 = 7h + 15°

Scale R. Sept. 2.3, 1912

M 20 1637 cont.

4 lt exposure.

	sc.1	sc.2		sc.1	sc.2
1	1.0		28		
2	2.7		29		
3	2.9				
4	3.9				
5	4.9				
6	~~4.9~~ 5.9				
7	~~4.8~~				
8	6.1				
9	7.1				
10	7.3				
11	7.1				
12	8.0				
13	8.1				
14	8.9				
15	9.1	9.6			
16	9.1	9.7			
17		10.1			
18	10.0	10.7			
19	10.0	10.5			
20		11.3			
21		11.3			
22		11.7			
23		12.2			
24		12.9			
25		12.8			
26		12.9			
27		13.8			

M 20.

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1913phae.proj..988L

C4 = 1^{4} + 15^{-}

Scale R. Sept. 23, 1912

MO1637 cont 5th Exposure

	rec. 1	rec. 2
1	10.6	
2	11.0	
3	11.0	
4	11.0	
5	12.1	
6	11.3	
7	12.1	
star sup on S. 8		
9	12.8	
10	13.7	
11	13.9	
12	13.9	
13	13.7	
14	7	

MOR

12.50

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1913phae.proj..988L

C4 = 7h +15.

Scale R

Sept 24, 1912

	Mε 1561		
11:08	sec. 1 2		2nd exposure.
	7.0		
1	~~9.2~~ 8.0		
2	~~9.7~~		
3	~~8~~ 8.1		
4	8.8 9.1		
5	9.2 9.7		
6	9.3 9.8		
7	9.3 10.1		
8	9.7 10.1		
9	10.0 10.8		
10	~~8~~ 11.2		
11	11.1		
12	11.2		
13	11.7		
14	12.2		
15	12.5		
16	12.7		
17	13.1		
18	13.3		
19	13.7		
20	13.9		

M 9.R.

H 10

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1913phae.proj..988L

C4 = 1^h + 15°

Scale R

September 24, 1912.

	Me 1561	4th exposure:
	R.A.	Dec.
1	10.0	
2	10.3	
3	10.6	
4	11.3	
5	12.1	
6	11.5?	
7	12.1	
8		
9	12.7	
10	13.0	
11	13.3	
12	13.9	
13	13.8	
14		

two close to another star.

M.O.R.

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1913phae.proj..988L

C4-1h+15°

Scale R. September 24, 1912

Me 1637

2 : 4

2nd exposure -

	sc.1	sc.2
1	8.8	9.0
2	9.1	10.0
3	9.3	10.3
4	10.3	10.8
5	f	11.1
6		sup
7		11.1
8		12.0
9		12.2
10		13.0
11		12.9
12		13.2
13		13.2
14		13.1
15		f.
16		13.1

6 expon 8

MR.

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1913phae.proj..988L

C4 = 7h +15°

Scale R

September 24, 1912

Me 1637 cont.

4th exposure.

	sc.1	sc.2
1		6.0
2		6.1
3		7.0
4		7.9
5		8.1
6		8.8
7	9.0	9.6
8	sup.	
9	9.9	10.3
10	~~9.3~~ 10.0	10.7 ~~9.9~~
11	10.0	10.9
12	10.1	10.7
13	10.1	10.8
14	~~11.3~~	11.9
15		12.0
16		12.2
17		12.7
18		13.0
19		13.2
20		13.5

W.S.

MCR.

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1913phae.proj..988L

C1 = 1 + 15 −

Scale R

September 24, 1912.

	M8 1551		2nd exposure.
	RC1 SC2		
1	13.0		
2	13.3		
3	12.9		
4	13.5		
5	13.9		
6	14.0		
7			
8			

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1913phae.proj..988L

Cl = 1^{h} + 15°

Scale R. Sept. 24, 1912.

	Mt 1551 cont.		4th exposure.
	sc1	sc2	
1		7.1	
2		7.2	
3		8.0	
4		8.3	
5	8.8	9.1	
6	9.1	9.3	
7	9.1	9.4	
8	9.3	9.9	
9	9.3	10.0	
10	10.0	10.1	
11	~~10.2~~ 10.4	10.9	
12		12.1	
13		12.0	
14		12.1	
15		12.8	
16		13.0	
17		13.2	
18		13.1	
19		13.9	

MOR

12:05

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1913phae.proj..988L

$C1 = 1^{4} + 15^{-}$

Scale R. Sept. 26, 1912

		Rich 2395	Exp. 4		4 exposures	Exp. 4	
2:37		sc 1	p.74	Mean 1,4	1st exposure.	p.74	Mean
	1	3.1 ~~3.4~~			sc 2		
	2				28 13.1	13.1	13.10 00
[See Remark p.72]	3				29 13.2	13.3	13.25 01
	4				30 13.8	13.9	13.85 01
	5				31 13.9	7	13.9 0.7
	6				32 7	7	7
	7				33 7		7
	8						
	9	4.3 ~~4.6~~					
	10	6.1 ~~6.4~~					
	11	6.0 ~~6.3~~					
off plate	12						
too near edge.	13						
off	14						
	15	7.0 ~~7.3~~					
near edge	16	7.2? ~~7.5~~					
	17	8.9 9.2 9.2	9.20	9.35	9.28	08.07	
	18	9.1 9.4 9.3	9.35	9.50	9.42	07.08	
	19	9.6 9.9 10.0	9.95	10.05	10.00	05.05	
off pl.	20						
	21	11.1		11.1	11.10	00	
	22	12.0		12.0	12.00	00	
	23	12.0		12.1	12.05	01	
	24	11.9		12.2	12.05	.12	
	25	~~12.3~~		~~12.9~~			
	26	12.7		12.8	12.75	.10	
mor.	27	12.9		13.2	13.05	.12	

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1913phae.proj..988L

C1 = 1^{h} + 15^{m}

Scale R

September 26, 1912.

Lick 2395 cont. 2nd exposure -

		sc1	sc2		sc2	sc2	
	1	8.		28	7.3	7.6	
	2			29	8.1	8.6	8.50
	3			30	8.2	8.5	8.8	8.65
	4			31	9.1	9.4	9.7	9.55
	5			32	10.0	10.3	10.6	10.45
Reject all measures of stars brighter than No. 17. Also, No 25, on account of Distance and brightness. H.S.L. Sept. 1914.	6			33		11.0	
	7						
	8						
	9	1.0	~~10.3~~				
	10	2.0	~~2.3~~				
	11	2.0	~~2.3~~				
off plate	12						
near edge.	13						
off pl.	14						
	15	3.0	~~3.3~~				
	16	2.8	~~3.1~~				
	17	4.2	4.5				
	18	4.3	4.6				
	19	5.1	5.4				
" " "	20						
	21	6.0	6.3				
	22	6.2	~~6.5~~				
	23	6.0	6.3				
	24	6.3	6.6				
	25	5.1	~~5.4~~				
	26	6.9	7.2				
	27	7.1	7.4				

MOR.

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1913phae.proj..988L

Cl = 1^h +15°

Scale R

September 26, 1912.

Brick 2395 cont

3rd exposure.

	sc.1	sc.2			Re.1	sc.2
1	10				28	10.9
2					29	11.1
3					30	11.9
4					31	12.3
5					32	13.1
6					33	
7						
8						
9	2.9					
10	4.1					
11	4.0					
off plate 12						
near edge 13						
off fol. 14						
15	4.2					
16	4.1					
17	6.1			6.4		
18	6.2			6.5		
19	7.2			7.5		
" " 20						
21	8.1	8.4	8.7	8.55		
22	~~8.3~~ 8.6		8.7	8.65		
23	8.3	8.6	8.7	8.65		
24	9.1	9.4	9.3	9.35		
25	9.1	9.4	9.7	~~9.55~~		
26	9.2	9.5	9.7	9.60		
27	10.0	10.3	10.3	10.30		

[See Remk page 72]

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Cl = $1^{h}+15^{\circ}$

Scale R

Sept 26, 1912

Leick 2395 cont

4 Plt exposure.

	sc 1	sc 2				sc 2	
1	3.1				28	13.1	too
2					29	13.3	
3					30	13.9	
4					31	~~7~~	
5					32	7	
6							
7							
8							
9	5.0						
10	6.0						
11	5.8						
12							
13							
14							
15	7.1						
16	7.2						
17	9.1	9.4	9.3	9.35			
18	9.1	9.4	9.6	9.50			
19	9.7	10.0	10.1	10.05			
20							
21		11.1					
22		12.0					
23		12.7[1]					
24		12.8[2]					
25		12.9					
26		12.8					
27		13.2					

[See Remark p. 72]

off pl. near edge off pl.

MOR.

3.21

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1913phae.proj..988L

C1 - 13h +15

Scale 11

October 2, 1912

10:05 MC 10 18

		sc.1	sc.2	P.C.	curve	magn.
too far from center	1					
" "	2			5.1	1.86 ~~7.56~~ ex.	
	3	B.		6.3	1.81	8.11
	4	3.0		6.1	1.87	7.91
" "	5			6.4	1.86	8.26
	6	3.1	~~5.06~~ fr curve ~~8.16~~ ex. magn	6.9	1.76	8.66
" "	7			7.3	1.65	8.95
	8	4.6	5.01 9.61	7.9	1.42	9.32
" "	9			8.2	1.33	9.53
" "	10			8.6	1.30	9.90
	11	5.0	5.00 10.00	8.7?	1.29	9.99?
	12	5.1	5.00 10.10	8.8	1.28	10.08
	13	5.2	5.00 ~~5.3~~ 10.20	9.0	1.29	10.29
	14	5.9	5.00 10.90			
	15	5.9	5.00 10.90			
	16	6.1	5.00 11.10			
	17	6.3	5.03 11.33			
	18	6.2	5.02 11.22			
	19	def. ~~5.10~~				
	20	6.9	5.10 12.00			
	21	7.6	5.19 12.79			
	22		8.1 5.30	13.40		
	23		8.0 5.28	13.28		
	24		8.3 5.33	13.63		
	25		few def.			
	26		8.6 5.38	13.98		
	27		8.9 5.43	14.33		

Polar

	sc.1	sc.2	P.C. curve	magn.
28	9.3	5.50	14.80	
29	9.8	5.57	15.37 Diff	
5			4.9	1.49
8			6.2	1.90
9			6.9	1.80
10	4.0	4.89 20%	~~4.0~~ 7.2	1.69
11	4.3	5.12	8.1	1.32
12	4.7	5.03	8.5	1.23
13	5.2	4.97	8.9	1.27
14	5.6	4.92	9.1	1.42
15	6.0	4.94		
16	6.3	4.96		
17	6.3	5.19		
18	6.8	5.12		
19	7.3	4.98		
20	7.5	5.09		
21	7.7	5.12		
23	7.9	5.30		
~~24~~				
25	~~8~~	8.4	5.33	
26		8.7	5.49	
29	~~8.9~~	9.1	5.45	
28		9.5	5.47	

Reduced by M.O.R.

Checked by H.S.L.

M.O.R.

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1913phae.proj..988L

9 h —
B8 = 22 40 +45°

Scale 11 — October 2 1912.

MC 1411

		sc.1	sc.2	Pc	curve	magn.		sc.1	sc.2		
	1		for curve magn.				27	6.4	5.26		11.66
too far from centre	2			5.2	1.66	6.86	28	6.3	5.24		11.54
" "	3			5.3	1.66	6.96	29	7.2	5.45		12.65
" "	4			5.3	1.66	6.96	30	7.3	5.47		12.77
	5	B.		5.1	1.70	7.40	31	7.5	5.52		13.02
	6	B.		5.9	1.71	7.61	32	7.9	5.59		13.49
	7	3.2	5.05 8.75 ex.	5.1	1.70	7.40	33		8.5	5.64	14.14
	8	3.1	5.05 8.15 ex.	6.2	1.72	7.92	34		9.1	5.68	15.382
" "	9			6.4	1.72	8.12	35		def.		
	10	3.2	5.05 8.25 ex	6.9 6.2	1.74 w.s.	8.64	36		9.3	5.68	14.98
star sup. on 11	11			sup	1.75						
too far from centre	12			7.3	1.75	9.05					
	13	4.3	5.05 9.35	7.8	1.76	9.56					
	14	4.1	5.05 9.15	7.4	1.76	9.16					
	15	4.3	5.05 9.35	8.0	1.76	9.76					
	16	4.3	5.05 9.35	7.9	1.76	9.66					
	17	4.6	5.05 9.65	8.0	1.76	9.76					
	18	5.2	5.08 10.28	8.3	1.75	10.05					
	19	4.9	5.06 9.96	7.9	1.76	9.66					
	20	5.2	5.08 10.28	8.8	1.73	10.53					
	21	5.3	5.09 10.39	8.9	1.73	10.63					
	22	5.4	5.10 10.50								
	23	5.9	5.15 11.05								
	24	6.2	5.21 11.41								
	25	6.6	5.30 11.90								
	26	6.3	5.24 11.54								

Reduced by M.R.
Checked by H.S.L.

Perinatis companions are slightly elongated.

M.R.

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B9 . 22 . 40 +45°

Scale X. October 2, 1912.

MC 1411 cont.

	Polar	sc.1	sc.2	P.C.	Diff.
	5			48	1.59
	8			63	1.80
	9		Diff	6.9	1.80
	10	3.9	4.99	7.8	1.09
two P.C. near bt star.	11	4.3	5.12		
	12	4.7	5.03	83	1.43
	13	5.1	5.01		
	14	5.3	5.22		
	15	5.9 ~~6.0~~	5.04		
	16	6.1	5.16		
	17	6.3	5.19		
	18	6.7	5.22		
	19	6.9	5.38		
	20	7.0	5.59		
	21	7.2	5.62		
	23	7.5	5.70		
	25		8.2 5.53		
	26		8.5 5.69		
	27		8.7 5.65		
	28		9.3 5.67		

Reduced by M.O.R.

Checked by H.S.L.

M.O.R.

11-12

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1913phae.proj..988L

Copied.

Scale 11

B9 = 22 40 + 45

October 7, 1912

11:55

MC 1196

		pc.1	pc.2	P.C.	Curve	Magn.		pc.1	pc.2	from P. 79. meas. twice by mistake	mean		fr. Curve	Magn.
Star Seq.	1			5.2	~~1.13~~	~~6.38~~ ex.		28	~~7.9~~	~~7.~~	7.9	7.90 00	4.60	12.50
	2			5.7	~~1.01~~	~~6.71~~ ex.		29	~~8.2~~	8.1	8.0	8.05 10	4.60	12.65
	3			5.7	~~1.01~~	~~6.71~~ ex.		30	~~8.4~~	8.4	8.4	8.40 00	4.60	13.00
	4	B. curve reading.	Magn.	6.2	0.88	7.08		31	~~9~~ 88	~~9.0~~	9.1	8.95 31	4.60	13.55
	5	B.		6.7	0.78	7.48		32		9.0			4.60	13.60
	6	3.0		6.9	0.74	7.64		33		9.3			4.60	13.90
	7	3.8	4.66 ~~8.46~~ ex.	7.1	0.70	7.80		34		9.7			4.62	14.32
too far from c.	8			7.3	0.66	7.96								
" "	9			7.2	0.68	7.88								
	10	4.0	~~4.66~~ ~~8.66~~ ex.	8.3	0.50	8.80								
star pulp. on P.C.	11	4.1	4.65	8.75										
	12	4.0	~~4.66~~ ~~8.66~~ ex.	7.9	0.56	8.46								
	13	4.3	4.64	8.94	8.7	0.46	9.16							
	14	4.2	4.64	8.84	9.2	0.43	9.63							
	15	5.1	4.62	9.72	9.3	0.42	9.72							
	16	5.1	4.62	9.72										
	17	5.1	4.62	9.72										
	18	5.7	4.61	10.31	~~8.9~~									
	19	5.3	4.62	9.92										
	20	5.3	4.62	9.92										
	21	6.1	4.60	10.70										
	22	6.2	4.60	10.80										
	23	6.6	4.59	11.19										
	24	6.9	4.59	11.49										
	25	7.1	4.60	11.70										
	26	7.2	4.60	11.80										
	27	7.6	4.60	12.20										

Reduced by MCR.

Checked H.S.L.

MCR

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B9. 22 40 +45°

Scale U

October 7, 1912.

Mc1196 cont.

	sc.1	sc.2	P.C.	
28	7.9			
29	8.0			} see prec. page.
30		8.4		
31		9.1		

Polar. on edge

			edge	Diff.
5				
6			6.0	
8			edge	0.98
9				

	Diff.			
10	4.2	4.69	8.4	0.49
11	4.9	4.53	9.2	0.22
12	5.1	4.63	9.5	0.23
13	5.4	4.71		
14	6.0	4.52		
15	6.3	4.64		
16	6.3	4.96		
17	6.8	4.69		
18	7.1	4.82		
19	7.4	4.88		
20	8.2	4.39		
21	8.3	4.52		
23		8.6	4.60	
25		9.1	4.63	
26		9.5	4.69	
27		9.9	4.65	

M.O.R.

12:20

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$C1 = 1^{4} + 15^{\circ}$

Scale 11.

October 7, 1912.

Mc 842

	sc 1	sc 2	Pl.	curve	Magn.
1	3.0		6.1	0.54	6.64
too far from center 2	curve.	Magn.	6.3	0.51	6.81
3	3.7 ~~4.33 8.03 ex.~~		6.3	0.51	6.81
" " " 4			7.1	0.44	7.54
5	4.2 ~~4.36 8.46 ex.~~		7.7	0.40	8.10
6	4.3 ~~4.35 8.55 ex.~~		7.6	0.40	8.00
7	4.6 ~~4.22 8.82 ex.~~		7.9	0.38	8.28
8	5.0	4.17 9.17	8.5	0.37	8.87
9	4.8	4.20 9.00	8.4	0.37	8.77
double 10	5.1	4.16 9.26	8.8	0.38	9.18
11	5.4	4.14 9.54	8.9	0.39	9.29
12	5.8	4.10 9.90	9.3	0.42	9.72
13	5.8	4.10 9.90			
14	6.3	4.07 10.37	~~9.0~~		
15	6.6	4.07 10.67			
16	6.7	4.07 10.77			
17	7.1	4.08 11.18			
18	7.3	4.11 11.41			
19	7.5	4.13 ~~4.5~~ 11.63			
20	8	8.2 ~~4.22~~ 12.42			
21		8.2 4.22 12.42			
22		8.1			
23		8.1			
24		8.1			
25		9.2			
26		9.3			
27		9.4			

For remaining magnitudes see page 81. 82

Reduced MOR

Checked H. S. L.

MOR.

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1913phae.proj..988L

Cl = 1 + 15°

Scale 2 October 7, 1912

mc 842 cont.

	pc.1	pc.2	P.C.	
28		9.5		
29		9.7		
Polar too far from c 5			5.8	0.59
" " 8			7.1	0.40
" " 9			8.3	0.40
10	4.7	Diff. 4.19	8.7	0.19
11	5.2	4.22	9.0	0.42
12	5.1	4.03	9.3	0.43
13	6.2	3.91	9.1	0.41
14	6.3	4.22		
15	6.8	4.14		
16	7.1	4.16		
17	7.2	4.29		
18	7.7	4.52		
19	"	8.2 4.08		
20		8.5 4.09		
Wk. ident 21		9.1 3.72	8.8	
23		8.9 4.30	9.3	
25		9.1 ~~4.40~~ 4.63	9.1	
26		9.5 ~~8.28~~ 4.69	F	

Re-x Oct. 9, 1912

Reject Nos. 21–26. See Page 82. H.D.L. Oct. 15, 1912.

Reduced M.O.R.
Checked H. D. L.

M.O.R.:

1.00

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copied

Scale 1:10

C1 = $1^h + 1.5^-$

Tuesday October 8. 1912

Mc 842

Measures repeated (See prec. page)

		sc.1	sc.2	Curve.	Magn.
Stan. Seq.	22	8.6		4.18	12.78
	23	8.1		4.18	12.88
	24	8.8		4.18	12.98
	25	9.1		4.19	13.29
	26	9.2		4.20	13.40
	27	9.5		4.21	13.71
	28	9.7		4.23	13.93
	29				

		Diff.	
Polar Seq.	21	86	+4.22
	~~22~~		
	23	9.1	4.10
	~~24~~	~~9.5~~	~~4.23~~
	25	9.5	4.23
	26	9.9	4.29

Reduced M.C.R.

Checked W.S.L.

M.C.R.

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Copied.

C6 = 11 + 15

Scale 2.

Tuesday, October 8, 1912.

Mc992

		sc.1	sc.2	P.C.
too far from centre				
" " "	1		Curve	Magn.
" "	2			
" "	3			
	4	3.1		
" "	5			
	tr. 6	3.9?	~~4.76~~	~~8.66~~ e/
" " "	7			
" "	8			
tr.	9	4.1	4.74	8.84
too fr. centre? tr.	10	4.2	4.73	8.93
"	11	4.9	4.65	9.55
"	12	~~5.2~~ 4.9	4.65	9.55
"	13	5.1	4.64	9.74
	14	5.3	4.63	9.93
tr.	15	5.2	4.63	9.83
	16	5.1	4.61	10.31
"	17	5.9	4.60	10.50
	18	6.3	4.60	10.90
"	19	6.2	4.60	10.80
	20	6.2	4.60	10.80
	21	6.3	4.60	10.90
	22	6.7	4.60	11.30
	23	7.2	4.64	11.84
	24	7.3	4.65	11.95
	25	7.5	4.68	12.18
	26	8.1	4.82	12.92
	27	8.2	4.84	13.04

Reduced m.&R.
Checked L.

M&R

(over)

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1913phae.proj..988L

$C\overset{6}{H} = 11^{h} + 15^{m}$

Scale ℵ

October 8, 1912.

mc992 cont.

	sc1	sc2	curve	Magn.
28		8.3	4.86	13.16
29		8.4	4.89	13.29
30		8.8	5.00	13.80
31		9.2	5.08	14.28
32		9.5	5.14	14.64

Diff.
+4.6900
Diff

Cl.

10	4.2		
11	4.7		4.72
12	5.1		4.63
13	5.7		4.47
14	5.9		4.62
15	6.3		4.64
16	6.4		4.86
17	7.0		4.49
18	7.5		4.42
19	7.6		4.68
20	7.9		4.69
21	8.1 4.9		4.72
23		8.3	4.90
25		8.7	5.03
26		9.1	5.09
27		9.4	5.15
28		9.8	5.17

Reduced m@R.
Checked L.

mcR

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1913phae.proj..988L

C4 = 7h +15°

Copied.

Scale U

1:30

October 9, 1912

Mc847

	sc.1	sc.2	P.C.	Curve Magn.		sc.1	sc.2	P.C.	Magn.
Too far from c. Star Seq. 1	B.					28	9.7	4.82	14.52
2	B.		5.8	1.01	6.81	29	10.0	4.79	14.79
3						30			
4	B. curve magn		6.2	0.96	7.16	Polar			
Very close to star 2 which is bit. 5	4.0	4.62	8.62	7.6	0.76	8.36	5	Diff.	5.3	Diff. +1.09
6	4.0	4.62	8.62	7.1	0.82	7.92	6 6.0		6.0	0.98
7	4.2	4.58	8.78	7.8	0.74	8.54	8		7.3	+ ~~0.13~~ 0.80
8	4.9	4.44	9.34	7.9	0.73	8.63	9		8.1	0.60
9	4.8	4.46	9.26	8.2	0.70	8.90	10	4.3	4.59	8.9 bit 1.59 star pair on P.C.?
10	5.3	4.39	9.69	8 5.9	0.64	9.34	11	5.0	4.42	9.42 8.8 0.62
11	5.3	4.39	9.69	8.8	0.63	9.43	12	5.4	4.33	9.73 9.1 0.63
12	5.2	4.40	9.60	8.9 ~~7.6~~	0.62	9.52	13	5.9	4.27	
13	5.3	4.39	9.69				14	6.1	4.22	
14	6.2	4.36	10.56				15	6.1	4.24	
15	6.3	4.37	10.67				16	6.8	4.46	
16	6.2	4.36	10.56				17	6.9	4.59	
17	6.6	4.44	11.04				18	7.3	4.62	
18	6.9	4.50	11.40				19	7.7	4.58	
19	7.1	4.54	11.64				20	7.9	4.69	
20	7.3	4.59	11.89				21	8.0	4.82	
21	7.6	4.67	12.27				23	8.3	4.90	
22	7.5	4.64	12.14				25	8.9	4.83	
23	8.2	4.81	13.01				26	9.3	4.89	
24	8.3	4.83	13.13				27	9.8	4.75	
25	8.7	4.87	13.57				28			
26	9.0	4.88	13.88							
27		9.7	4.86	14.06						

MCR.

Reduced MCR.

Checked L.

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$B^4_8 = 9\ 20 + 45$

Scale 11.

October 9. 1912

Mc 1364

	Sc. 1	Sc. 2	P.C.
too far from centre. New Seq.	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8	4.0 ~~4.96 4.00~~	8.96
	9	3.9 ~~4.96 3.80~~	8.86
	10	4.3 ~~4.96 4.09~~	9.26
	11	4.3 ~~4.96 5.12~~	9.26
	12	4.1 ~~4.98 5.03~~	9.68
	13	4.3 ~~4.96 5.81~~	9.26
	14	5.0	5.00 10.00
	15	5.2	5.00 10.20
	16	5.2	5.00 10.20
	17	5.1	5.01 10.31
	18	5.3	5.01 10.31
	19	6.1	5.10 11.20
	20	6.1	5.20 11.90
	21	5.4	5.02 10.42
	22	6.6	5.18 11.78
	23	7.1	5.26 12.36
	24	7.2	5.29 12.49
	25	7.0	5.24 12.24
	26	7.6	5.36 12.96

Curve reading

	~~Diff.~~	Magn.
8	8.1	
9	7.8	
10	8.7	
11	8.8	8.0 9.07
12	8.6	8.5
13	8.8	7.8
14		7.5

P.C.

	~~Diff~~	curve	Magn
8	~~0.00~~	0.94	9.04
9	~~0.90~~	0.99	8.79
10	~~0.09~~	0.82	9.52
11	~~0.02~~	0.80	9.60
12	~~0.70~~	0.76	9.76
13	~~1.37~~	0.80	9.60

	Sc. 1	Sc. 2	P.C. curve	P.C. magn.
27		7.9	5.43	13.33
28		8.1	5.47	13.57
29		8.3	5.52	13.82
30		8.3	5.52	13.82
31		8.7	5.62	14.32
32		9.3	5.75	15.05
33		9.9	5.88	15.78

Polar Diff

	Sc. 1	Sc. 2	P.C. curve	P.C. magn.
5 B.			5.1	7.29
8			6.9	1.20
9			7.8	0.90
10	4.0	4.89	7.8	1.09
11	4.3	5.12	8.6	0.82
12	4.8	4.98	9.0	0.73
13	5.1	5.07	9.4	0.77
14	5.6	4.92		
15	5.9	5.04		
16	6.2	5.06		
17	6.1	5.39		
18	6.5	5.42		
19	7.1	5.18		
20	7.2	5.39		
21	7.3	5.52		
23	7.9	5.30		
25	8.3		5.43	
26	8.5		5.69	
27	8.9		5.65	

Polar cont.

	Sc. 2	Diff.
28	9.2	5.77
29	9.1	5.82

Reduced M.R.

Checked L.

Images are slightly elongated.

No 21 brighter than 20

2:45

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Cl = 1^h + 15°

Scale U

October 14, 1912

10:10

Mc 832

		Ac. 1	Ac. 2	Magn.
Stan Seq.	1	B.	Curve	Magn.
10 too far from centre	2			
	3	3.3		
	4			
	5	3.7	~~4.60~~	~~8.30~~ cut.
	6	3.9	~~4.59~~	~~8.49~~ cut.
	7	4.2	4.58	8.78
	8	4.4	4.57	8.97
	9	4.7	4.56	9.26
	10	4.9	4.54	9.44
	11	5.2	4.54	9.74
	12	5.2	4.54	9.74
	13	5.3	4.55	9.85
	14	6.1	4.57	10.67
	15	6.3	4.59	10.89
	16	6.5	4.60	11.10
	17	6.4	4.60	11.00
	18	7.1	4.66	11.76
	19	7.3	4.69	11.99
	20	7.9	4.78	12.68
	21	8.1	4.82	12.92
	22	8.7	4.91	13.61
	23	8.6	4.89	13.49
	24	8.5	4.87	13.37
	25	8.8	4.93	13.73
	26	9.0	4.97	13.97
	27	9.5	5.06	14.56
	28	9.4	5.04	14.44

	Ac. 1	Ac. 2	Magn.
29	9.5	5.06	14.56
30	10.0	5.18	15.18

	Polar	Diff.
		4.59
10	43	~~4.64~~
11	4.8	4.62
12	5.2	4.53
13	5.7	4.47
14	6.0	4.52
15	6.3	4.64
16	6.4	4.86
17	6.8	4.69
18	7.2	4.72
19	7.5	4.78
20	7.7	4.89
21	8.0	4.82
23	8.5	4.70
25	8.8	4.98
26	9.1	5.09
27	9.5	5.05
28	9.8	5.17
29		

For first-meas. of this plate see Ed 37, 42.

Reduced. MOR.
Checked L.

MOR.

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$C\,\delta\,10 = 19 + 15^{\circ}$

Scale 2

October 14, 1912.

MC 1831

	sc. 1	sc. 2	P.C.	Curve reading	Magn.
1	B.		5.1		
2	2.9		5.7		
3 too far from centre			5.8		
4 " "			6.1		
5 " "			7.2	1.08	8.28
6 min. sup. on P.C.	3.9	4.63	~~8.53~~ sup.		
7	3.9	4.63	~~8.53~~ 7.2	1.08	8.28
8	4.2	4.61	8.81	7.1 1.03	8.13
9	4.3	4.61	8.91	8.0 1.00	9.00
10	5.0	4.60	9.60	~~9.2~~ 8.7? 0.9 1.04	9.64
11	5.1	4.60	9.70	8.9 0.93	9.83
12	5.5	4.61	10.11	9.3 0.90	10.20
13	5.9	4.62	10.52	9.8	
14	6.1	4.63	10.73		
15	6.3	4.64	10.94		
16	6.5	4.66	11.16		
17	7.1	4.70	11.80		
18	7.2	4.71	11.91		
19	7.6	4.73	12.33		
20	7.8	4.75	12.55		
21	8.2	4.79	12.99		
22	8.6	4.85	13.45		
23	8.9	4.91	13.81		
24	9.1	4.97	14.07		
25	9.2	5.00	14.20		
26	9.5	5.08	14.58		

	sc. 1	sc. 2	P.C.	Magn.
27	10.0		5.26?	15.26?
Polar				
5				
8			6.9	1.20
9 Diff.			7.1	1.00
10	4.2	4.69	7.9	0.99
11	4.8	4.62	8.6	0.82
12	5.2	4.58	~~8.7~~ 7.3	1.03
13	5.7	4.47	9.2	0.97
14	5.9	4.62	?	
15	6.2	4.74		
16	6.4	4.86		
17	6.7	4.79		
18	7.2	4.72		
19	7.6	4.68		
20	7.9	4.69		
21	8.0	4.82		
23	8.4	4.80		
25	8.8	4.93		
26	9.3	4.89		
27	9.5	~~4.65~~ 5.05		
28	9.6	5.37		

Reduced M.OR.

Checked L.

M.OR.

10:55

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$\alpha_3 = 20^h + 75°$

Scale 1".

October 17, 1912

mc 1410

	sc.1	P.C.		sc.1	sc.2	P.C.		sc.2	Diff.
1						Curve			
2				28	7.5	5.55	13.05	24	
too far from cntr 3				29	7.8	5.60	13.40	25	8.1 5.63
too far from c 4				30	8.2	5.68	13.88	26	8.5 5.69
5	B. Curve Magn. 6.0	Curve 1.38	7.38	31	8.5	5.74	14.24	27	8.7 5.85
6	3.2 5.30 8.40	6.8 Rejected 1.37	7.67	32	8.7	5.79	14.49	28	9.1 5.87
7	3.7 5.21 8.91	6.8 1.33	8.13	33	8.8	5.80	14.60	29	9.5 6.02
8	3.9 5.22 9.12	7.6 1.34	8.94	34	9.8	5.90	15.00	30	9.8 6.10
9	3.9 5.22 9.12	7.7 1.35	9.05	35	9.3	5.95	15.25		
too far from cntr 10		~~6.7 star outside?~~		36	9.4	5.97	15.37		
11	4.1 5.23 9.33	7.5 1.33	8.83	37	9.8	6.09	15.89		
12	4.3 5.24 9.54	8.1 1.40	9.50	38	10.0	6.13	16.13 ? diff.		
13	4.2 5.24 9.44	8.1 1.40	9.50	18		5.49 * 5.71	1.49 1.20		
14	4.7 5.27 9.97	8.3 1.42	9.72	9			7.0 1.70		
15	4.9 5.28 10.18	8.7 1.51	10.21	10	3.7 5.17		7.4 1.49		
16	5.3 5.32 10.62	9.1 1.62	10.72	11	4.2 5.22		8.1 1.32		
17	5.3 5.32 10.62			12	4.3 5.43		8.3 1.43		
close to star 20 → 18	6.0 5.37 11.37			13	5.0 5.47		8.7 1.47		
Polar seq. - diff to measure	5.8 5.35 11.15			14	5.2 5.32		9.0 1.52		
20	6.1 5.38 11.48			15	5.7 5.24		9.2 1.74		
21	6.2 5.39 11.59			16	5.9 5.36		9.5 1.76		
22	6.3 5.40 11.70			17	6.1 5.39				
23	6.4 5.41 11.81			18	6.4 5.52				
24	7.1 5.49 12.59			19	6.9 5.38				
25	6.9 5.47 12.37			20	too close to bright star				
26	7.1 5.50 12.60			21	7.2 5.62				
27	7.6 5.57 13.17			~~22~~					
				23	7.1 5.50				

Copied.
Reduced M.C.
Checked L.

assume reading of No. 8 [illegible]
a mistake of 2 mit of time. see p. 90

* Plate examined May 5, 1913 by J.P.H. using single reseau here. See p. 197

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B1=1 20+45°

Scale 11

October 17, 1912.

mc 961

	Rc.1	Rc.2			Rc.1	Rc.2	P.C. curve.	P.C. magn.	
1	B.		5.3						
2	too far from centre.								
3									
4									
5	Curve.	Magn.	Curve	magn.					
6	3.2.		6.7						
7	4.0		12	~~0.72 7.92 ex~~					
8	3.9		12	~~0.72 7.92 ex~~					
9	4.1	4.62	8.72	7.3	~~0.73 8.03 ex~~				
10	too close to a bit star.								
11	4.1	4.62	8.72	7.9	~~0.76 8.46 ex~~				
12	4.2	4.66	8.86	8.6	0.88	9.48			
13	4.1	4.85	9.55	9.3	0.99	10.29			
14	4.9	4.93	9.83	9.2	?0.96	10.16			
15	5.1	4.99	10.09	8.9	0.92	9.82			
16	5.3	5.06	10.36						
17	5.3	5.06	10.36						
18	5.3	5.06	10.36						
19	5.4	5.09	10.49						
20	6.1	5.20	11.30						
x1	5.6	5.14	10.74						
x2	6.2	5.20	11.40						
x3	6.3	5.19	11.49						
x4	7.2	5.01	12.21						
x5	7.3	5.00	12.30						
x6	7.3	5.00	12.30						
27		8.3	4.87	13.17					

	Rc.1	Rc.2	P.C. curve.	P.C. magn.	
28		8.1	4.88	12.98	
29		8.9	4.88	13.78	
30		8.89	4.88	13.78	
31		9.3	4.90 4.80	14.20	
32		9.7	4.92	14.62	
5					
8				too far away	
9		Diff.		Diff.	
10	4.2	4.69	8.1	0.79	
11	4.6	4.82	~~9.0~~ 8.5	0.92	
12	4.9	4.83	8.9	0.83	
13	5.3	4.87	9.2	0.97	
14	5.4	5.12	9.5	1.02	
15	5.8	5.14	?		
16	6.0	5.26			
17	6.2	5.29	?		star almost sup. on 17.
18	6.9	5.12			
19	7.2	5.08			
20	7.8	4.79			
21	8.0	4.92			
23	8.3	4.90			
25	8.9	4.83			
26	9.2	4.99			
27	9.7	4.85			
28					

Right p.c.

Reduced mag.

Checked L.

MGR

2:25

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1919phae.proj..988L

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$a_3 = 20^h + 75°$

Scale U.

October 18, 1912

MC 1054

2:20		Dc.1	Dc.2	P.C.			Dc.1	Dc.2	~~Dc.2~~	P.C.
b	1					28	7.7	5.30		13.00
too far from center	2					29	8.4	5.34		13.74
" "	3					30	8.2	5.33		13.53
" "	4					31	8.7	5.34		14.04
	5	3.6		6.0 ~~1.10~~	~~7.10~~	32	8.7	5.34		14.04
	6	4.0		7.2 1.10	8.30	33	8.6	5.34		13.94
	7	4.1		7.2 1.10	8.30	34	9.0	5.32		14.32
	8	4.1		7.6 1.18	8.78	35	9.3	5.31		14.61
	9	4.0		7.4 1.14	8.54	36	9.1	5.30		14.41
	10					Polar 8	Diff.			7.0 1.10
						10	4.2	4.69		7.8 1.09
	11	4.1		7.7 1.22	8.92	11	4.1	4.72		7.9 1.52
	12	4.3	4.66	8.96	def.	12	4.9	4.83		8.3 1.43
	13	4.7	4.75	9.45	8.3 1.34	9.64	13	5.3	4.87	8.8 1.31
	14	5.0	4.83	9.83	8.6 1.40	10.00	14	5.8	5.02	9.0 1.52
	15	4.9	4.81	9.71	8.7 1.43	10.13	15	5.9	5.04	
	16	5.3	4.92	10.22	8.9 1.47	10.37	16	6.0	5.26	
	17	5.3	4.92	10.22			17	6.3	5.19	
	18	5.7	5.02	10.72			18	6.8	5.12	
	19	5.9	5.05	10.95			19	7.0	5.28	
	20	6.2	5.11	11.31			20	7.3	5.29	
	21	6.3	5.12	11.42			21	7.5	5.32	
	22	6.1	5.09	11.19			23	7.9	5.30	
	23	6.4	5.13	11.57			25	8.3	5.43	
	24	6.7	5.18	11.88			26	8.8	5.29	
	25	6.9	5.21	12.11			27	9.3	5.25	
	26	7.2	5.25	12.45			28	9.1	~~5.07~~ 5.27	
	27	7.7	5.30	13.07			29			

Reduced mOR.

Checked L.

mOR.

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copied.

Scale U.

B 2 = 4 + 45

Oct 18, 1912

3:28

HHC 2039

	SC 1	SC 2	P.C.		SC 1	SC 2	P.C.	
1				28		8.3	3.52	11.82
2				29		8.7	3.62	12.32
3				30		9.1	3.71	12.81
too far from centre 4				31		9.5	3.78	13.28
5								
6				5				6.8 -0.41
7			Magn.	8				~~8.4~~ star run on P.C.
8	5.2		8.6 -0.40	8.20 9			Diff	9.1 -0.40
9				10	6.0		2.89	9.3 -0.41
10				11	6.4	~~6.4~~	3.02	9.8 -0.38
11	5.2		8.6 -0.40	8.20 12	6.7	~~6.7~~	3.03	
12	5.4		9.2 -0.40	8.80 13		7.1	3.07	
13	5.8		9.0 -0.40	8.60 14		7.3	3.22	
14	6.1	2.90	9.00	9.3 -0.40	8.90 15		7.6	3.34
15	6.0	2.87	8.87	9.9 -0.40	9.50 16		7.8	3.46
16	6.1	2.90	9.00		17		8.1	3.39
17	6.3	2.96	9.26		18		8.4	3.52
18	6.3	2.96	9.26		19		8.6	3.68
19	6.9	3.14	10.04		20		8.9	3.69
20	7.1	3.18	10.28		21		9.1	3.72
21	7.3	3.25	10.55		23		9.5	3.70
22	7.3	3.25	10.55		25		9.9	3.83
23	7.1	3.18	10.28 ~~Reject~~		26			
24	7.7	3.36	11.06	Reject	27			
25	7.8	3.39	11.19					
26	8.1	3.487	11.57					
27	8.1	3.47	11.57					

Reduced m.dr.

Checked L.

No. 24 measured much too ft. Probably because of very black ink mark on glass. N.S.L. Sept. 17, 1913

mdr.

3:43

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1919phae.proj..988L

Scale 11.

October 22, 1912

MC 1410.

Pneumatic Comp. Polar Seq.

5	4.9
8	6.7
9	7.1

Above stars remeasured. See page 89 for first-measures. Scale read wrongly for No 8.

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1913phae.proj..988L

copied

C4 = 1^h +15°

Scale 11.

October 22, 1912.

Mc 188.

	sc 1 ~~P.C.~~	P.C.	sc 1	sc. 2	P.C.	Diff.
1	B cure magn.	6.3 0.16 6.46	27			
2	3.0	6.8 0.18 6.98	28	~~9.5~~ 10.0	4.21 ~~4.27~~	
too far from centre 3		6.8 0.18 6.98	29	~~99~~ 9.		
4			5		6.2	0.19
5	4.2	7.8 0.30 8.10	8		7.8	0.30
6	4.3	7.7 0.28 7.98	9	Diff.	8.4	0.30
7	4.6 4.15 8.75	8.1 0.34 8.44	10	4.7 4.19	8.5	0.39
8	4.9 4.21 9.11	8.1 0.34 8.44	11	5.1 4.32	8.9	0.52
9	5.1 4.24 9.34	8.7 0.45 9.15	12	5.4 4.33	9.2	0.53
10	5.3 4.28 9.57	9.3 0.59 9.89	13	5.9 4.27	9.5	0.61
11	5.3 4.28 9.57	9.3 0.59 9.89	14	6.2 4.32	9.8	0.72
12	5.4 4.29 9.69	9.5 0.64 10.14	15	6.4 4.54		
13	5.3 4.27 9.57	9.4 0.61 10.01	16	6.5 4.76		
14	6.1 4.40 10.50	9.6 0.68 10.28	17	6.9 4.59		
15	6.3 4.43 10.73		18	7.4 4.52		
16	6.2 4.42 10.62		19	7.7 4.58		
17	6.8 4.49 11.29		20	pl. broken. star 20 on crack.		
18	7.0 4.50 11.50		21	8.6 4.22		
19	7.6 4.51 12.11		23	8.9 4.30		
20	7.9 4.50 12.40		25	9.3 4.43		
21.	8.1 4.49 12.59		26	9.8 4.39		
22	8.1 4.49 12.59					
23	8.2 4.48 12.68					
ver. star marks. 24	8.~~7~~ 8.9 4.42	13.32				
25	9.0 4.40	13.42				
~~26 is much brighter than 25~~ 26	~~8.3~~ 9.9 4.28	14.18				

Reduced. M.OR.

Checked L.

MOR

Stars 24, 26 and 29 marked wrong on plate.

10:50

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copied.

C10 = 19^{h} + 15.

Scale 2.

October 24, 1912.

M D 1831.

2:23

	sc. 1	sc 2 curse	sc 2 magn.
1	3.9	2.99	6.89
2	4.3	2.91	7.21
3	4.1	2.96	7.06
4	4.7	2.83	7.53
5	5.3	2.72	8.02
6	5.2	2.73	7.93
7	5.3	2.72	8.02
8	6.3	2.61	8.91
9	6.5	2.60	9.10
10	7.1	2.60	9.70
11	7.3	2.62	9.92
12	7.9	2.67	10.57
13	8.0	2.68	10.68
14	8.1	2.70	10.80
15	8.4	2.74	11.14
16	8.5	2.76	11.26
17	8.8	2.82	11.62
18	9.1	2.87	11.97
19	9.5	2.94	12.44
20	9.8	2.99	12.79

	sc 2
14	8.0 2.52
15	8.2 2.74
16	8.3 2.96
17	8.5 2.99
18	9.0 2.92
19	9.4 2.88
20	9.7 2.89
21	
22	
23	
24	
25	
26	

Polar

	sc 1	Diff sc 2
5	3.3	3.09
8	5.3	2.80
9	6.2	2.50
10	6.3	2.59
11	6.8	2.62
12	7.1	2.63
13	7.5	2.67

Reduced M.O.R.

Checked L.

mO

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1913phae.proj..988L

Copied

$C\,10 = 19^{h} + 15$

Scale 11

October 24, 1912.

ME 1831

	sc 1 sc 2	sc 2 curve	magn.
1	5.9	+1.02	6.92
2	6.2	1.09	7.29
3	6.1	1.06	7.16
4	6.7	1.21	7.91
5	7.1	1.30	8.40
6	7.2	1.32	8.52
7	6.9	1.25	8.15
8	7.8	1.43	9.23
9	8.0 9.0	1.41	9.47
10	8.1	1.50	9.60
11	8.5	1.59	10.09
12	8.7	1.63	10.33
13	9.1	1.70	10.80
14	9.1	1.70	10.80
15	~~9.3~~ 9.2	1.72	10.92
16	9.5	1.76	11.26
Polar 35	5.1	~~1.24~~ Diff. 0.64	
48	5.2	0.71	
5	5.3	1.09	
6			
~~7~~			
8	6.8	1.30	
9	7.4	1.30	
10	7.5	1.39	
11	8.0	1.42	
12	8.3	1.43	
13	8.7	1.47	

	sc. 2	Diff.	curve	magn.
14	8.8	1.72		
15	9.1	1.84		
16	9.5	1.76		
17	9.7	1.79		
18				
1N	6.2	0.49	1.09	7.29
2N	5.3	2.43		
3N	7.1	1.52	1.30	8.40
4N	7.8	1.17	1.43	9.23
5N	8.5	1.28	1.59	10.09
6N	8.8	1.31	1.64	10.44
7N				

Remeasured sc. 1

2N 6.2

Reduced M.C.R.

Checked L.

M.C.R.

3.00

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1913phec.proj.1886

October 28, 1912

Scale m. Measures of Seq. for New Var. — 192441.

9:21 I 23192.

Reject. wrong scale used.

	pc.1	pc.2
a	3.1	
b	3.2	
c	5.0	
d	5.1	
e	5.7	
f		9.1
g		8.9
h		9.1
k		9.2
l		9.5
α	5.9	
β	6.2	
γ		9.7
δ		10.1
ε		10.5

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1913phae.proj..988L

Measures of Seq. for New Var. 1924+41 cont.

Scale m. October 28, 1912.

I 23375 cont. from P. 99.

		sc.1	sc.2	P.C. sc.2
	a	3.0	3.2	8.5
	b	3.2	3.4	8.4
	c	4.9	5.1	
	d	5.0	5.2	
	e	5.1	5.3	
	f	6.8	7.0	
	g	6.7	6.9	
	h	7.0	7.2	~~7.0~~
	k			7.2
var. star.	l	~~6.9~~		7.7
	α	5.8	6.0	
	β	6.2	6.4	
	γ			8.0
	δ			8.2
	ε			8.7

M.O.R.

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1913phae.proj..988L

Measures of Seq. for New Var. – 192441 cont.

Scale m. October 28, 1912.

I 23375

		Pc. 1	Pc. Pc. sc. 1	Pc. sc. 2	
double	1	13.	3.2 3.4		3.4
	2	13.	7.3	5.9	6.1
Image near edge — distorted	3	~~6.~~ 6.0 6.8 (2)	.	.	
" "	4	~~7.~~ 5.2 5.4	.	.	
	5	1.1 1.3	~~9.2~~ 9.0	7.0	1.2
	6	13.	7.5	6.0	6.2
	7	1.6 1.8	9.1	6.2	6.4
	8	2.0 2.2	9.2	7.3	
	9	4.3 4.5	~~9.7 9.~~	9.4	
	10	6.9 7.1	.	.	
	11	2.6 2.8	9.7	8.2	
	12	2.0 2.2	9.1	7.1	
	13	1.2 1.4	9.0	1.2	
	14	3.2 3.4	~~10.1~~ 9.0	8.3	
	15	2.1 2.3	9.5	7.8	
	16	6.1 6.3	.	.	
	17	2.9 3.1	10.0	8.2	
	18	4.3 4.5	.	.	
	19	~~6.0 4.~~ 6.1 6.3	.		
	20	3.1 3.3	9.5 (2)	8.1	
	21	1.9 2.1	9.1	7.1	
	22	3.0 3.2	9.9	8.2	

see P. 98 for continuation.

MOR. Images crossed off were made on wrong scale

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1913phae.proj..988L

Measures of Seq for New Var. — 192441 cont.

Scale m. October 28, 1912.

		I 23192.	
			P.C.
		Rc.1 Rc.2.	Rc.1 Rc.2.
a		3.0 3.2	8.5
b		3.1 3.3	
c		5.0 5.2	
d		5.0 5.2	
e		5.1 5.3	
f		7.2	
g		~~7.8~~ 7.2	
h		7.3	
k		7.4	
l		8.0	
α		6.0 6.2	
β		6.4 6.6	
γ		~~8.~~ 8.2	
δ		8.7	
ε		8.9	
near edge of fd.	1	B.	2.9 3.1
	2	B.	5.9 6.1
Image near edge - moves distorted.	3	6.9 7.1	7.
" " "	4	6.1 6.3	7.
	5	1.2 1.4	7.0 7.2
	6	B.	6.1 6.3
	7	1.2 1.4	7.3
	8	2.1 2.3	7.7
	9	4.2 & 4.4	9.0

M.W.R.

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1913phae.proj..988L

Measures of Seq. for New Var. - 192441 cont.

Scale m. October 28. 1912.

	⊥ 23192		P.C.
	sc.1	sc.2	sc.2
10	7.1		7.
11	2.3	2.5	8.2
12	1.9	2.1	8.1
13	1.6	1.8	7.6
14	3.0	3.2	9.0
15	2.2	2.4	8.0
16	6.3	6.5	n.s.
17	2.9	3.1	8.3
18	4.1	4.3	9.5
19	6.1	6.3	n.s.
20	2.9	3.1	8.3
21	2.0	2.2	7.3
22	3.3	3.5	8.2

Images on this plate slightly elongated.

MOR.

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1913phae.proj..988L

102

Measures of Seg. for New Var. 19241

Scale m.

October 28. 1912.

I 23355

		P.C. Sec. 1	P.C. Sec. 2
1	B.	3.2	3.4
2	B	5.3	5.5
3	6.2 6.4	.	
4	5.9 6.1	.	
5	1.0 1.2	6.2	6.4
6	B.	5.4	5.6
7	1.2 1.4	6.7	6.9
8	1.9 2.1	7.2	
9	4.2 4.4	9.0	
10	7.2	.	
11	3.1 3.3	8.1	
12	2.0 2.2	6.9	
13	1.2 1.4	7.1	
14	3.1 3.3	8.1	
15	2.1 2.3	7.2	
16	6.2 6.4	.	
17	3.0 3.2	8.4	
18	4.9 5.1	10.0	
19	6.3 6.5	.	
20	2.9 3.1	8.1	
21	2.0 2.2	7.3	
22	3.0 3.2	8.2	

Frm. near edge.

Images near edge frm.

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1913phae.proj..988L

Measures of Seq. for New Var. 19244 1.

Scale m. October 28, 1912.

I 23355 cont.

	sc.1	sc.2	P.C. sc.2
a	2.9	3.1	8.9
b	3.2	3.4	9.1
c	4.9	5.1	
d	5.0	5.2	
e	5.1	5.3	
f	~~5.7~~ (var. star)	7.1	
g	sc.1 7.0	7.2	
h	7.0	7.2	
k	7.3		
l	7.7		
α	5.9	6.1	
β	6.2	6.4	
γ	8.1		
δ	8.5		
ε	9.0		

Images slightly elongated.

M.OR

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1913phae.proj..988L

Measures of Seg. for New Var. 192441. cont.

Scale m. October 28, 1912.

I 23414

	sc.1	sc.2	P.C. sc.1	sc 2.	
1	B.		3.1	3.3	
2	B.		5.2	5.4	
Poor image - near edge. 3	6.7	6.9			
" " 4	6.0	6.2			
5	B.		6.8	7.0	
6	B.		5.9	6.1	
7	1.0	1.2		7.1	
8	1.1	1.3		7.5	
9	4.3	4.5		9.1	
10		7.3			
11	2.3	2.5		8.2	
12	1.1	1.3		8.1	
13	1.0?	1.2?		7.2	
14	2.2	2.4		9.0?	
15	2.0	2.2		8.1	
16	5.1	5.3			
17	2.2	2.4		8.4	
18	4.0	4.2		7	
19	6.3	6.5			
20	2.0	2.2		8.5	
21	1.2	1.4		7.3	
22	3.0	3.2		8.3	

MR.

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1913phae.proj..988L

Measures of Neg. for New Var. 192441.

Scale m.

October 28, 1912.

I 23414 cont.

		sc.1	sc.2	P.C. sc.2
Assumed to be 3.0	a	2.0	2.2	8.7
" " " 3.3 M.H.	b	2.3	2.5	9.1
	c	4.9	5.1	
	d	4.7	4.9	
	e	5.0	5.2	
	f		7.5	
	g		7.3	
	h		7.7	
	k		7.8	
	l		8.2	
	α	6.0	6.2	
	β	6.3	6.5	
	γ		8.3	
	δ		8.8	
	ε		9.0	

Images elongated. not very good.

M.O.R.

11:25

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1913phae.proj..988L

106

copied

Cb = 11h +15.

Scale 2.

October 29. 1912.

2:10

M 31 1562

		sc.1	sc.2 corr	magn.		sc.2	Diff.
Star Seq.	1	5.8	+0.76	6.56	10	7.7	1.19
	2	5.7	0.64	6.34	11	8.1	1.32
	3	6.4	0.88	7.28	12	8.3	1.43
	4	6.3	0.86	7.16	13	8.5	1.61
	5	6.6	0.93	7.53	14	8.7	1.82
	6	6.9	0.99	7.89	15	9.0	1.94
	7	7.3	1.09	8.39	16	9.4	1.86
	8	7.2	1.06	8.26	17	9.9	1.59
	9	7.3	1.09	8.39			curve magn.
	10	7.5	1.15	8.65	1R	5.9	+0.78 6.68
	11	7.7	1.22	8.92	2R	6.8	0.91 7.71
	12	7.9	1.27	9.17	3R	7.3	1.10 8.40
	13	8.0	1.31	~~1.11~~ 9.31	4R	7.7	1.22 8.92
	14	8.5	1.45	9.75	5R	8.4	1.51 9.91
	15	8.1	1.34	9.44	6R	8.7	1.67 10.37
	16	8.9	1.77	10.67	7R	9.0	1.81 10.81
	17	8.9	1.77	10.67	8R	9.3	1.86 11.16
	18	9.5	1.86	11.36			
	19						

			Diff.
Polar	3	5.1	0.64
	4	5.3	0.61
	5	5.6	0.79
	6		
	7		
	8	7.1	1.00
	9	7.7	1.00

Reduced M.OR.

M.OR.

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1913phae.proj..988L

Copied.

$C\frac{2}{5} = 3 + 15^{\circ}$

Scale 11.

October 29, 1912.

Ac 10791.

	scale			curve		Magn.	
1	7.0	−0.31	6.63		−0.31	16	6.69
2	7.1	+0.35	6.95	7.45	−0.28	17	6.82
3	7.3	0.31	6.99	7.61	−0.24	1r	7.06
4	8.0	0.20	7.80	8.10	0.00	2r	8.00
5	7.79	0.21	7.69	8.11	−0.04	3r	7.86
6	8.1	0.20	7.90	8.30	+0.04	4r	8.14
7	8.2	0.20	8.00	8.40	0.10		8.30
8	8.3	0.22	8.08	8.52	0.14		8.44
9	8.5	0.26	8.24	8.76	0.25		8.75
10	9.2	0.63	8.57	9.83	0.65		9.85
11	8.7	0.85	8.35	9.05	0.36		9.06
12	8.8	0.39	8.41	9.19	0.43		9.23
13	9.5	0.83	8.67	10.33	0.84		10.34
14	9.3	0.69	8.61	9.99	0.72		10.02
15	9.7	0.96	8.74	10.66	0.94		10.64

		Diff.
Polar	3	6.1 −0.36
	4	6.3 −0.39 −0.41
	5	6.8 −0.41 −0.59
	6	8.0 +0.10
	9	8.6 +0.10
	10	8.6 +0.29
	11	8.9 +0.52
	12	9.1 +0.63
	13	9.3 +0.81
	14	9.6 +0.92
	15	9.9 +1.04

Polar images elongated - not comp. with plain images.

Reduced. M.O.R.

Checked L.

M.O.R.

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T T Lyrae

Scale M

October 31, 1912.

9:30 AC 3787

	cc.1	cc.2
1	1.0	1.2
2	3.1	3.3
3	~~8~~	8.9
4		7.7
5	3.8	4.0
6	3.2	3.4
7	4.2	4.4
8	4.3	4.5
9	6.7	6.9
10		9.0
11	5.3	5.4
12	5.2	5.4
13	8.4	4.4
14	5.5	5.1
15	4.6	4.8
16		8.2
17	5.3	5.5
18	6.9	7.1
19		8.2
20	5.3	5.5
21	4.1	4.3
22	5.0	5.2
a	5.9	6.1
b	6.2	6.4
c	7.0	7.2

mca.

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17 Lyrae.

Scale m.

October 31, 1912.

Ac 3781 cont.

		sc.1	sc.2
	d		7.2
	e		7.1
	f		8.5
	g		8.3
	h		8.6
	k		8.8
	l		9.0
	α		7.5
m. unit.	β		8 7.2
	γ		9.4
	δ		9.8
	ε		f.

MOR.

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11 Lyrae -

Salem

October 31, 1912 -

Ac 4116

	sc.1	sc.2
1	1.0	1.2
2	2.3	2.5
3	~~8.7~~	8.7
4	~~8.1~~	8.1
5	3.2	3.4
6	~~2.6~~	2.8
7	3.8	4.0
8	4.0	4.2
9		7.2
10		9.0
11	5.1	5.3
12	4.2	4.4
13	3.8	4.0
14	5.7	5.9
15	4.2	4.4
16		8.7
17	5.2	5.4
18		7.1
19		8.5
20	5.1	5.3
21	3.6	3.8
22	4.8	5.0
a	6.0	6.2
b	6.3	6.5
c		8.8 ~~7.4~~ 7.5
d		~~7.7~~ 8.0

	sc.1	sc.2
e	~~6.3~~	~~6.3~~ ~~8.2~~ 7.9
f	8.5	
g	8.5	
h	8.7	
k	8.8	
l	9.0	
x	~~7.3~~	8.0
B	9	8.5
y	9.3	
δ	9.1	
ε		

Remeasured

Ac 4116.

	sc.1	sc.2
12	~~4.4~~ 4.4	4.7

Images on this plate are slightly elongated - not good

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SS Lyrae.

Scale m. October 31, 1912.

AC 1974

	AC 1	AC 2
1	B.	
2	2.1	2.3
3		8.1
4		8.0
5	3.1	3.3
6	2.3	2.5
7	3.1	3.3
8	3.2	3.4
9	6.7	6.9 ~~6.7~~
10		8.8
11	4.3	4.5
12	4.1	4.3
13	3.3	3.5
14	5.2	5.4
15	4.0	4.2
16		8.3
17	4.9	5.1
18	6.8	7.0 8
19		8.2
20	4.9	5.1
21	3.2	3.4
22	4.6	4.8
a	5 4.8	6.0
b	6.0	6.2
c		7.3
d		7.3

	AC 1	AC 2
e		7.6
f		8.4
g		8.5
h		8.7
k		8.7
l		9.0
α		7.7
β		8.1
γ		9.3
δ		9.7
ε		9.9

MCR. Images are slightly elongated.

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1913phae.proj..988L

11 Lyrae -

Scale m.

October 31, 1912.

Ac 8 7 26.

	sc.1	sc.2
1	1.2	1.4
2	3.0	3.2
3		8.9
4		8.2
5	4.1	4.3
6	3.2	3.4
7	4.1	4.3
8	4.3	4.5
9		7.1
10		9.0
11	5.0	5.2
12	5.1	5.3
13	4.8	5.0
14	5.1	5.9
15	4.4	4.6
16	c	8.3
17	5.3	5.5
18	4	7.2
19		8.6
20	5.3	5.5
21	4.2	4.4
22	5.3	5.5

a	6.0	6.2
b	6.3	6.5
c		7.5
d	x	7.6

	sc.1	sc.2
e		7.7
f		8.9
g		8.9
h		8.9
k		9.3
l		9.5
α		8.1
β		8.6
γ		9.7
δ		7
ε		

mor.

10:45

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1913phae.proj..988L

Wednesday ~~October~~ November 6, 1912.

Scale P

$7^h + 15°$

10:50 MW 361

	~~Dist~~ Distances.	sc.1	sc.2	Prelim. Magn.	Diff.	Diff.
20	~~22~~ 14 mm.	3.2	2.9	12.~~63~~ 48	9.73	9.58
21	16	3.3	3.0	12.~~88~~ 46	9.88	9.46
22	~~14½~~ 14.5	3.2	2.9	~~12.55~~ 12.75	10.65	9.85
23	10	3.1	3.4	13.~~55~~ 04	10.15	9.64
24	3	4.0	3.7	13.~~58~~ 7	9.88	9.87
25	6	4.1	4.4	13.~~76~~ 90	9.36	9.50
26	5	4.9	4.6	14.~~17~~ 11	9.57	9.51
27	0		5.6	~~14.38~~ ..	8.78	..
28	5		5.3	14.~~56~~ 88	9.26	9.58
29	2		6.1	~~14.74~~ 15.40	8.64	9.30
30	8		6.3	15.~~04~~ 82	8.74	9.52
31	7		6.8	~~15.36~~	8.56	
32	4.5		7.1			
33	4.5		7.7			
34	6		7.8			
35	6		8.9			
36	5		9.1			

MOR.

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1913phae.proj..988L

Wednesday November 6, 1912.

Scale P

C = 7" + 15°.

MW 323

"Reject plate". Too few.

First exposure.

		sc.1 Distances			sc.1	sc.2
20	6	1	7	mm 7	6	3.1
21		2	14.5	14.5		2.8 2.8
22	6	3	6	6	6	3.2
23		4	29	29		2.8 2.9
24		5	21	21		3.3 ~~3~~
25		6	27.	27		3.8
26		7	22	22		4.0
27		8	20	20		4.1
28		9	26	26		4.9
29		10	20	20		5.9
30		1	24	24		6.8
31			28	28		7.6
32			25	25		7.7
33			24	24		8.1
34			26	26		9.0
35			25	25		7.
36						

MOR

11.55

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November 6, 1912

Scale P. 7" + 15°

MW 323 Cont.

	Distance.	sc 2	2nd exposure.
20		5.0	
21		4.1	
22		5.1	
23		5.0	
24		6.1	
25		6.8	
26		6.9	
27		7.1	
28		7.6	
29		8.1	
30		9.0	
31		4.	

MOR

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$7^{4}+15^{\circ}$

Scale P. November 6, 1912.

MW 323 Cont. Third Exposure.

Star very close to element sup.	20	~~5.3~~ 5.0
	21	4.8
	22	5.2
	23	4.9
	24	6.1
	25	6.1
	26	7.1
	27	7.3
	28	7.5
	29	8.1
	30	9.1
	31	

MW.

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7h+15°

Scale P

November 6, 1912

MW 323 cont

Fourth Exposure.

	sc.1	sc.2
20	3.3	
21	3.0	
22	3.3	
23	3.1	
24		3.8
25		4.1
26		4.8
Star very close to 27		5.0
28		5.2
29		6.1
30		6.1
Star disp. on 31. 31		susp.
32		7.7
33		9.0
34		

MOR.

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1913phae.proj..988L

7h + 15

Scale P.

November 7, 1912

10:55

MW656

		Distances		1st exposure							Diff.
						p.120 Exp.3	p.122 Exp.5	Mean	Resid.		
	19	10	6.0 5.7 6.0	5.85 ± 2	5.85	6.15	6.15	6.05	20 10 10		6.06
	20	3	6.3 6.0 6.3	6.15 ± 1	6.15	6.15	6.35	6.22	07 07 13		6.26
	21	10	5.7 5.4	5.4	5.4	5.90	6.00	5.77	37 13 23		6.69
	22	7	6.4 6.1 6.3	6.20 ± 1	6.20	6.35	6.30	6.28	08 07 02		6.47
R	23	27	6.2 5.9 6.1	6.00 ± 1	6.00	6.50	6.55	6.35	35 15 20		6.69
R	24	17	7.1		7.1	7.0	7.1	7.07	0 1 0		6.50
R	25	26	7.8		7.8	7.8	7.8	7.80	0 0 0		6.10
R	26	15	8.1		8.1	7.8	7.8	7.90	2 1 1		6.21
R	27	15	Reject 7.3 7.3 see R in margin		R 7.30	8.1	8.2	~~7.87~~ 8.05	R 05 ~~37 23 33~~		.
R	28	23	9.9		8.9	8.8	8.7	8.80	1 0 1		6.08
R	29	16	9.1		9.1	9.2	9.1	9.13	0 1 0		6.27
R	30	22	tf.		q	F.					F.
R	31	24	tf.		q	F.					F.

3

Imm. superposed on 27

No correction need be applied for order of exposure The first exposure is systematically a little brighter and the last a little fainter than the mean.

Measures on this plate cannot be used, as there are only 4 stars near centre. Supplementary stars not measured.

W.S.A. Nov. 3, 1914.

Images are slightly elongated.

MR.

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$1^h + 15^\circ$

Scale P.

November 7, 1912.

MW 656 cont. 64.

Distances. ✓ Grid Exposure. Full ap.

	Dist 1	Dist 2	Grid pc.1	Grid pc.2		Exposure	Diff.
19			3.2 3.29			2.9	9.21
20			4.0 4.0	3.85 1 2		3.85	8.63
21	~~33~~		3.3 3.3	3.15 2 1		3.15	9.31
22			4.0 3.7			3.7	9.05
R 23			2.8	3.1		2.8	10.24
R 24			3.7	4.0		3.7	9.87
R 25			3.8	4.1		3.8	10.10
R 26			4.0	4.3		4.0	10.11
R 27			4.6	4.9		4.6	.
R 28			4.6	4.9		4.6	10.28
R 29			6.0 5.7	5.7	5.7000	6.70	9.70
R 30			6.6 6.3	6.2	6.2510	6.25	9.57
R 31			6.8 6.5	6.9	6.7022	6.70	.
R 32				7.0		7.0	.
R 33				7.6		7.6	.
R 34				8.1		8.1	.
R 35				8.7		8.7	.
R 36				9.1		9.1	.
R 37							

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$7^h +15°$

Scale P.

November 7. 1912.

MW656 Cont.

3rd exposure.

	sc.1	sc.2		
19	~~6.2~~ 5.9	6.4	6.15 ± 2	
20	~~6.4~~ 6.1	6.2	6.15 ± 0	
21	6.1	5.8	6.0	5.9 ± 1
22	6.7	6.4	6.3	6.35 ± 1
23	6.6	6.3	6.7	6.50 ± 2
24			7.0	
25			7.8	
26			7.8	
27			8.1	
28			8.8	
29			9.2	
30			7.	
31			7.	

Im. from 23 not comparable.

Images elongated and hazy.

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7h +15°

Scale P. November 7, 1912.

MW 656 cont.

4th exposure Ap. 14 inches

	sec. 1	sec. 2		Diff.
19	5.6 5.3	5.3	5.80 00	6.81
20	6.0 5.7	6.0	5.85 ⊥2	6.63
21	5.7 5.4	5.3	5.35 01	7.11
22	6.2 5.9	6.1	6.00 ⊥1	6.75
R 23	6.0 5.7	5 5.9	5.80 ⊥1	7.24
R 24	6.7 6.4	6.9	6.65 ⊥3	6.92
R 25		7.2		6.70
R 26		7.4		6.71
R 27		7.8		.
R 28		8.1		6.78
R 29		8.9		6.50
R 30		1		.
R 31		1		.

m02.

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$7^h + 15°$

Scale P. November 7, 1912.

MW656 Cont.

5 Hr exposure.

	pc 1	pc 2		
19	6.4	6.1	6.2	6.15±.10
20	6.5	6.2	6.5	6.35±.21
21	6.2	5.9	6.1	6.00±.11
22	6.5	6.2	6.4	6.30±.11
Image very bad. 23	6.7	6.4	6.7	6.55±.21
24			7.1	
25			7.8	
26			7.8	
27			8.2	
28			8.7	
29			9.1	
30				

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Prismatic Companions of Pol. Seq.

Sc. W

Nov 9, 1912

	HC 1201 Sec 2
5	5.3
6	6.1
8	7.3
9	8.0
10	8.2
11	8.6
12	9.1
13	9.5
14	9.9

Sc U

	HC 1425 Sec 2
5	4.7
6	5.4
8	6.7
9	7.3
10	7.7
11	7.9
12	8.4
13	8.9
14	9.1
15	9.4
16	9.7

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Prismatic Companions of Cal. Dec

Nov 11, 1912

Sc. II

NC 1475

Sc. 2

5	5.3
10	8.0
12	8.7
14	9.6
6	5.9
9	7.9
8	7.2
13	9.1
11	8.3
15	9.9

NC 1150

16	9.9
12	8.3
8	6.7
5	4.9
13	8.7
9	7.3
15	9.6
10	7.4
14	9.2
6	5.4

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Prismatic Companions of Pol. Seq

Nov 11, 1918

Sc. U

	NC 996
10	Sm. dufr. comp.
5	4.7
15	9.5
8	6.5
11	7.9
9	7.1
12	8.3
6	5.3
14	9.1
13	8.6
	NC 1231
15	9.9
6	5.8
11	8.3
9	7.7
14	9.5
10	7.9
8	7.1
12	8.7
5	5.1
13	9.1

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Prismatic Companions of Col. Sep

April 11, 1912

Sec. U

MC 954

pc	
11	7.6
6	5.2
8	6.3
5	4.7
14	8.9
9	6.9
12	8.1
15	9.2
10	7.1
16	9.6
13	8.4

MC 955

pc	
8	6.3
10	7.0
6	5.3
12	8.1
16	9.7
13	8.6
9	6.9
15	9.3
5	4.7
14	9.0
11	7.5

Diff

Col. St. im

27	8.7	+5.85
28	9.1	+5.87
29	9.4	+6.12
30	9.9	+6.00

Alstad L.

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Obs of Pol. seq - also ff- stars in Polar and B6 seq

Nov 11, 1912

Sell

MC 955 cont-

B6 seq	33	9.0	5.93	14.93
	34	9.3	5.97	15.27
	35	9.3	5.97	15.27
	36	9.5	6.00	15.50
	37	f. Br at very near		
	38	f		

MC 944

P.C

	16	9.7	
	10	7.1	
	13	8.3	
	5	4.8	
	11	7.5	
	8	6.3	
	14	8.7	
	9	6.9	
	15	9.2	
	12	7.9	
	6	5.3	
Pol. ff- im.	29	9.7	+ 5.82 (0.48)
	27	8.9	5.65
	28	9.2	5.77
ff im. of seq	34	9.9	5.83 15.73
	30	8.9	5.68 14.58
	33	9.7	5.80 15.50
	32	9.5	5.77 15.27
	31	9.1	5.71 14.81

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Prismatic Companions of Polar Seq + ff- stars

Nov 14, 1912

Sc 11

MC 1202

		P.C
12	9.7	
8	7.7	
11	9.3	
9	8.5	
5	5.9	
10	8.8	
6	6.5	

			Diff.
Ff. Pol. stars	23	8.1	+5.10
	25	8.6	5.13
	28	9.7	5.27
	26	9.0	5.19
	27	9.4	5.15

Ff- images in Seq

		Curve	Magn.
26	8.2	5.11	13.31
30	2.5		
28	8.9	5.17	14.07
31	9.9	5.24	15.14
29	9.3	5.20	14.50
27	8.7	5.15	13.85

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Prismatic Companions.

Sc U

Nov 14

NGC 1364

		pc	Copied to
Polar	8	6.7	
	10	7.7	
	12	8.8	
	9	7.4	see note on p 134 concerning these measures.
	11	8.2	
	6	5.3	
	5	4.8	

		pc	Copied from P. 137
Seq.	1	5.8	
	3	6.2	
	7	7.5	
Near edge pl.	5	6.7	
	4	6.7	
	9	7.9	
	8	7.9	
	2	6.1	
Very near edge.	6	?	
	10	8.3	

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C4 = 13

Scale P.

November 16, 1912.

9:55 MW 389

5
1st exposure

		Distances	sc.1	sc.2		5th Exp.	p.132 3d Exp.	p.132 1st Exp.	Mean.	Resid.			Diff.
R	21	~~13~~	6.4	6.1 6.6	6.35	32 6.35	6.15	6.30 15	6.27	2	13	07 07	6.65
~~R~~	27	~~10~~		8.1	8.1	8.1	8.1	8.2	8.13	0	0	1	6.56
not comparable with scale.	28						.	8.2	8.2	.	.	0	6.86
"	"	29					8.9	9.0	8.95	.	1	0	6.42
"	"	30					9.0	9.1	9.05	.	0	1	6.84
R	18	~~14~~	5.3	5.0 5.1	5.05	01 5.05	4.95	~~5.10~~ 4.95	~~5.08~~ 4.98	~~02~~ 07	~~08~~ 03	~~07~~ 02	6.76

First exposure slightly fainter than the others, but no correction need be applied for order of exposure.

MR.

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1913phae.proj..988L

C 7 = 13h + 15

Scale P.

November 16, 1912.

MW 389 Cont.

4 2nd exposure. Full light.

		Distances	sc.1	sc.2	Mean.	Diff.
R	21	13	3.2	2.9	2.90	9.97
R	27	18°	5.2	4.9	5.05 ⊥ 2	9.64
	28	9	5.4	5.1	5.6 5.25 ± 2	9.71
	29	13	6.1	5.8	6.0 5.90 ⊥ 1	9.47
	30	12	6.2	5.9	6.2 6.05 ⊥ 2	9.84
	31	21	6.4	6.1	6.5 6.30 ± 2	9.92
	32	14	6.4	6.1	6.5 6.30 ± 2	.
	33	18.5	6.9	6.6	6.8 6.70 ⊥ 1	.
	34	21	7.0	6.7	7.1 6.90 ± 2	.
	35	10			7.3 7.3	.
	36	13			7.5 7.5	.
	37	16°			8.1 8.1	.
	38	18			9.0 9.0	.
	19	22	3.0	2.7	2.7	9.33
R	18	24	3.1	2.8	2.8	8.94
	~~23~~		~~2.4~~			
	22	24	4.0	3.7	3.7	9.56
	25	21	4.9	4.6	4.6 4.600	9.49
	39	13			9.2 9.2	.

Distances measured from 2nd exposure

M.O.R.

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C7 = 13h + 15°.

Scale P. November 16, 1912.

MW 389 cont.

		3rd Exposure.		Diff.
		Sc. 1	Sc. 2	
R	21	6.3 6.0	6.3	6.15 ± 1 6.72
R	18	5.2 4.9	5.0	4.95 ± 0 6.79
...	27	8.1		8.1 6.59
not comparable	28			
	29	8.9		8.9 6.47
	30	9.0		9.0 6.89

2 th exposure - Mic Gauge

R	21	6.3 6.0	6.3	~~6.3000~~ 6.15 ± 1	6.72
R	18	5.1 ~~4.8~~	5.1	~~5.7000~~ 4.95 ± 1	6.79
...	27	8.1	8.1		6.59
	28	~~8.0~~ 8.2	8.2		6.86
	29	9.0	9.0		6.37
	30	9.1	9.1		6.79

1st
~~2~~ th exposure —

R	18	5.2 4.9	5.0	4.95 ± 0 ~~5.7 ± 1~~	6.79
R	21	6.3 6.0	6.3	6.15 ± 1 ~~6.30~~	6.72
...	27	8.2		8.2	6.49
	28	8.2		8.2	6.86
	29	9.0		9.0	6.37
	30	9.1		9.1	6.79

M.O.R.

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C 7 = 13^h + 15°

Scale P. November 16, 1912.

MW 3 768

		Distances	pc. 1	pc. 2
see below ←	21	13	3.9	
	22	~~13~~ 15	4.0	
far from center	23		~~3.7~~	
" "	24			
	25	14	4.3	4.1
	26	15	5.0	4.7
	27	10	5.3	5.0
	28	5	5.6	5.2
	29	6	5.9	5.4
	30	7	6.2	6.1
	31	17	6.7	6.6 6.3
	32	10	6.5	6.3
	33	8	6.6	6.5
	34	13	7.0	7.1
	35	6		7.3
	36	7		7.7
	37	4		8.1
	38	13		8.9
	39	6		9.0
	40	5		9.2
	18	19	3.1	
	19	~~21~~ 14	3.1	

elongated double ~~20~~

MOR.

11:05

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1913phae.proj..988L

Prismatic Companions

Sc II.

Nov 19, 1912

NGC 1364

	Sec. Dist.	curve	magn.	
				P. 139
1	6.0	+1.29	7.29	5.8
5	6.9	1.20	8.10	6.7
7	7.6	1.13	8.73	7.5
2	6.1	1.27	7.31	61
4	6.8	1.21	8.01	6.7
3	6.2	1.26	7.46	6.2
9	8.1	1.09	9.19	
11	9.0	1.04	10.04	
10	8.7	1.05	9.75	8.3
12	9.3	1.04	10.34	
13	9.2	1.04	10.24	
14	9.7	1.06	10.76	Reject. Extrapolated L. Sept. 26, 1913
	Diff.	copied from P. 129.		
Polar. 10	7.8	1.09	7.7	
6	5.7	1.28	5.3	
8	6.9	1.20	6.7	
5	4.9	1.49	4.8	
13	9.1	1.07		
11	8.3	1.12	8.2	
9	7.5	1.20	7.4	
12	8.8	0.93	8.8	
15	f			
14	9.5 ?	1.02 ?		

Reject measures copied from P. 129. Per Miss Leavitt. Nov. 25, 1912.

Polar images slightly elongated.

Plotted on D.R. Checked L

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Prismatic Companions

Nov 19, 1912

Sc U

GC 1202

Sz.	Pc	curve.	magn.
1	6.8	+0.31	7.11
5	8.3	0.16	8.47
3	6.9	0.30	7.20
2	6.7	0.32	7.02
4	6.9	0.30	7.20
6	8.3	0.16	8.46
7	8.3	0.16	8.46
8	8.4	0.15	8.55
9	8.5	0.14	8.64
10	9.1	0.04	9.44
11	9.3	0.01	9.31
12	9.7	+0.10 −0.04	9.65

Diff.

Polar

5	6.0	+0.39 −0.01	
10	8.9	0.44	
8	7.8	0.30	
11	9.2	0.22	
6	6.7	0.28	
13	7		
9	8.6	0.10 +0.13	
12	9.6	0.06	

Plates m OR. Chubbuck.

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Prismatic Companions

Nov 19, 1913

Scu.

NGC 944

	Scu, pc	curve	magn.
1	Too close to br. star.		
6	6.9	1.86	8.76
11	8.0	1.89	9.89
7	7.4	1.88	9.28
3	6.3	1.80	8.10
2	5.3	1.78	7.08
4	6.7	1.85	8.55
5	6.9	1.86	8.76
8	7.3	1.88	9.18
10	8.2	1.88	10.08
9	7.8	1.90	9.70
12	8.7	1.83	10.53
13	8.9	1.81	10.71
14	9.3	1.76	11.06
15	9.1	1.78	10.88
16	9.2	1.78	10.98
17	9.5	1.74	11.24
		Diff.	
Polar 16	9.7	1.56	
13	8.2	1.97	
9	6.9	1.80	
5	4.9	1.49	
		1.83	
12	7.9	~~1.99~~	
10	7.2	1.89	
8	6.3	1.80	
14	8.7	1.82	
6	5.2	1.78	
11	7.4	2.02	
15	9.1	1.84	

Plotted N. OR. Cleaned L.

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B6 Prismatic Companions

Scale R.

B6 Nov. 19, 1912.

MC 955-

		Sec.2	curve	Magn.		Sec.2	Diff.
Stan Seq.	1	4.7	+1.66	6.36	15	9.3	1.64
	2	4.8	1.64	6.44	16	9.7	1.56
	3	4.8	1.64	6.44			
	4	5.3	1.73	7.03			
	5	5.3	1.73	7.03			
	6	5.7	1.77	7.47			
	7	6.1	1.81	7.91			
	8	6.3	1.83	8.13			
	9	7.0	1.86	8.86			
	10	7.2	186	9.06			
	11	7.8	1.80	9.60			
	12	8.2	1.73	8.93			
	13	8.3	1.71	10.01			
	14	9.0	1.63	10.63			
	15	9.3	1.62	10.92			
	16	9.3	1.61	10.91			
too near a bri star	17						
	18	f.					

		Diff.
Polar.	5	4.7	1.69
	6	5.3	1.68
	8	6.3	1.80
	9	6.8	1.90
	10	7.0	1.89
	11	7.4	2.02
	12	8.1	1.62
	13	8.5	1.67
	14	9.0	1.52

MOR.

Plotted MOR.
Checked L.

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1913phae.proj..988L

$a_1 = 4^h + 15°$ Prismatic Comps.

Sc. 11. November 19, 1912.

MC 954

		sc 2	curve reading	Magn. 6.
Stan. Seq.	1	5.2	+1.66	7.86
	2	5.3	1.68	6.98
	3	5.4	1.70	7.10
	4	5.6	1.72	7.32
	5	6.5	1.82	8.32
	6	6.7	1.86	8.53
	7	6.8	1.84	8.64
	8	6.7	1.83	8.53
	9	6.9	1.84	8.74
	10	8.0	1.81	9.81
	11	7.9	1.82	9.72
	12	8.2	1.80	10.00
	13	8.3	1.79	10.09
	14	8.9	1.74	10.64
W. Star.	15	~~8.9~~ 9.0	1.73	10.73
	16	9.0	1.73	10.73
	17			
	18			

		sc 2	Diff. 10.	
Polar	5	4.8	1.59	
	6	5.3	1.58	
	8	6.2	1.90	
	9	6.9	1.80	
	10	7.0	1.89	
	11	7.6	1.82	
	12	8.2	1.53	
	13	8.5	1.67	
	14	8.7	1.82	

	sc 2	
15	9.2	1.74
16	9.1	1.56

Plotted M.O.R.

Checked L.

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Prismatic Companions

Sc U

Nov 19, 1912

M C 996

Sep	pc	~~diff~~	Curve	magn.
17	9.7	~~1.53~~	1.53	11.23
15	9.0	~~0.94~~	1.50	10.50
12	8.3	~~0.94~~	1.52	9.82
10	7.7	~~0.95~~	1.58	9.28
13	8.7	~~0.96~~	1.51	10.21
8	6.8	~~1.02~~	1.68	8.48
14	9.0?	~~0.98~~	1.50	10.50?
9	7.0	~~1.00~~	1.65	8.65
11	7.9	~~0.94~~	1.56	9.46
6	5.9	~~1.11~~	1.69	7.59
Near edge 1	5.1		1.65	6.75
" " 3	5.3		1.67	6.97
5	5.7		1.69	7.39
" " 2	5.2		1.66	6.86
4	5.8		1.69	7.49
" " 7	6.1		1.70	7.80
16	9.3		1.51	10.81

Polar

No	Im. sep.	Diff.
16	9.7	+ 1.56
5	4.8	+ 1.59
14	9.0	1.52
8	6.3	1.80 ~~0.88~~
11	8.0	1.42
15	9.3	1.64
12	8.3	1.43
6	5.3	1.67
9	7.0	1.70
13	8.7	1.47
16		

Placed M.O.R
Checked L.

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1913phae.proj..988L

Prismatic Companions

Nov 19, 1912

Sc U

MC 1231

		curve	magn.
17	9.5	+ 1.00	10.50
2	6.3	1.10	7.40
16	9.3	0.99	10.29
1	5.8	1.20	7.00
15	9.1	0.97	10.07
14	Too near another im.		
11	8.3	0.94	9.24
3	6.7	1.04	7.74
12	8.7	0.95	9.65
10	8.3	0.94	9.24
4	7.0	1.00	8.00
9	8.0	0.94	8.94
7	7.7	0.94	8.64
5	7.2	0.98	8.18
8	7.9	0.94	8.84
6	7.7	0.94	8.64
13	8.8	0.96	9.76

Polar

		Diff.
5	5.1	+1.29
13	9.2	0.97
10	8.0	0.89
8	7.1	1.00
12	8.8	0.93
9	7.8	0.90
6	5.7	1.28
11	8.4	1.02
14	9.5	1.02
15	9.9	1.04

Plotted M.O.R. Checked L.

10
61
10
10
10
61 (m
61
61
61
61
2
61
61
61
61
61
61
61
61
61
61
51
10

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Scale U — November 21, 1912

11:36 — Mc 2119

			Diff from Phtg.
		sc 2	
10m	5 red	8.3	-1.91
61	5	5.7	+0.69
10	8 red	9.7	-1.60
10	4r	9.4	
10	2r	6.4	
61 (marked in bl. ink)	4r	7.3	
61 (black ")	2r	4.9	
61	8	7.7	+0.40
61	9	9.1	-0.40
61	10	8.7	+0.19
61 (black)	6r	8.5	
2 assumed to be No. 6 of 10m app.	6r	8.4	-1.42
61	6	6.4	0.58
61	4r	9.4.	
61	11	9.1	0.32
61	6r	9.9	
61	5r	9.3	
61 (black)	7r	9.2	
61 (blackish)	8r	9.9	
61	13	10.0	0.17
61	9r	?	
61	12	9.5	0.23
51 (black)	5r	7.7	
10 (red)	5r	9.2	

Stars designated "r", are marked in red ink on plate, except where black is written

MOR.

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Scale K. S November 21, 1912 S YELLOW

	Mc 2120			Pole	Mc 2122. Iso.			
	sc 1	sc 2	Diff.		sc 1	Diff.	from curve	
10	5.3		+3.59		9 7.1	+1.60	1.70	
14	6.1	6.1	3.82		8 6.2	1.90	1.73	
15	7.1	7.1	3.84		5 4.7	+1.69	1.68	
16	7.4		3.86		4r 6.1		1.73	
19		8.5	3.78		2r 4.9		1.70	
25		9.3	4.43		10 7.2	1.69	1.68	
20		8.6	3.99		14 9.0	1.52	1.44	
23		9.1	4.10		5r 7.3		1.67	
26		9.7	4.49		7r 8.1		1.58	
11	5.7		3.72		8r 8.7		1.49	
12	6.1		3.63		13 8.7	1.47	1.49	
13	6.5		3.67		9r 9.7		1.29	
17	7.1		3.79		6r 9.3		1.37	
18	8.1		3.82		12 8.2	1.53	1.56	
					11 7.1	1.72	1.63	
					15 9.7	1.24	1.29	
					6r 7.3		1.67	
					6 5.3	1.68	1.71	
					5r 6.8		1.71	
					3r 4.9		1.70	
					16 F.			

Reduced M.O.R.

M.O.R.

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Scale 11. November 21, 1912.

	Mc 2121 S			Pole	Mc 2121 S					S
	sc.1	sc.2	Diff.	1 – 2			Diff.	Mean.	Time 2:15	Diff.
10	4.7		+4.19	0	10	4.7	+4.19	4.70	00	+4.19
14	6.2		4.32	1	14	6.3	4.22	6.25	01	4.27
15	6.5		4.44	2	11	5.3	4.12	6.60	11	4.34
17	7.3		4.19	1	19	8.2	4.08	7.75	10	4.34
18	7.7		4.22	0	25	9.3	4.43	7.76	00	4.22
20	8.4	8.4	4.19	0	12	5.6	4.13	8.40	00	4.19
23		8.9	4.30	0	20	8.4	4.19	8.90	00	4.30
19		8.1	4.18	1	13	5.9	4.27	8.15	10	4.13
25		9.3	4.43	0	15	6.7	4.24	9.30	00	4.43
26		9.7	4.49	0	23	8.9	4.30	9.70	00	4.49
11	5.1		4.32	2	26	9.7	4.49	5.30	11	4.22
13	5.9		4.27	0	18	7.7	4.22	5.90	00	4.27
12	5.5		4.23	1	17	7.2	4.29	5.55	10	4.18

Reduced by M.O.R.

M.O.R. 12:18

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1913phae.proj..988L

$1^h + 15°$

Sc. 2. copied S November 21, 1912. Copied S

Mc 2123 Disc (1+15)			Mc 2124 (1+15) alt. +15 YELLOW			Mc 2125 Pole Pl.	
	Sc. 1	curve	Magn.		Sc. 1 curve	Magn.		Sc. 1	Diff.
3	4.6			6	4.1	+4.46 8.56	10	4.8	+4.09
6	5.1	3.64	8.34	8	4.8	4.30 9.10	14	6.3	4.22
14	8.3	1.64	9.94	5	4.2	4.44 8.64	26	9.4	4.19
8	6.9	3.05	8.95	14	6.3	4.28 10.58	15	6.7	4.24
5	6.0	2.52	8.52	20	8.0	4.31 12.31	17	7.3	4.19
7	4.9	..		12	5.6	4.27 9.87	25	9.1	4.63
17	7.			22	8.8	4.41 13.21	18	7.1	4.22
12	7.9	1.79	9.69	18	7.4	4.34 11.74	19	8.0	4.28
15	9.0	1.39	10.39	15	6.9	4.30 11.20	23	8.9	4.30
1	4.9	2.44	..	26	9.5	4.51 14.01	20	8.5	4.09
10	6.2	2.44	8.64	24	8.6	4.45 13.05	11	5.2	4.22
11	7.1	2.07	9.17	17	7.2	4.32 11.52	13	6.0	4.17
9	6.2	2.45	8.65	19	7.9	4.36 12.26	12	5.6	4.13
16	9.5	1.21	10.71	21	8.3	4.41 12.71	16		
13	6.7	2.24	8.94	23	8.7	4.46 13.16			
				10	5.2	4.27 9.47			
				25	6.1	4.28 10.38	Pr for 1 meas.		
				1	3.0	..			
				11	5.3	4.27 9.57			
				9	4.8	4.30 9.10			
				16	6.8	4.30 11.10			
				13	5.7	4.27 9.97			
				7	4.3	4.40 8.70			
	copied.				copied.			Reduced MOR.	

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Scale R. S November 21, 1912 S S

	Mc2126 L' Pole Pl. sc 1	Diff. from Eq.	Diff. from curve.		Mc2127 (1+7.5) sc 1	curve	magn.		Mc2128 (1+7.5) sc 1	sc 2	curve	magn.
12	7.9	+1.83	1.95	12	8.2	+4.39	12.59	10	n.s.			
9R	9.2		1.69	4	7.1	4.32	11.42	3	5.8	+4.28	10.08	
13	8.2	1.97	1.89	3	6.6	4.29	10.89	5	7.1	4.31	11.41	
8R	8.6		1.82	2	5.1	4.27	9.37	6	8.2	4.40	12.60	
6R	9.0		1.73	11	7.1	4.32	11.42	4	6.1	4.27	10.37	
11	7.3	2.12	2.02	5	7.7	4.35	12.05	12	7.9	4.36	12.26	
7R	8.1		1.91	6	8.5	4.44	12.94	11	6.7	4.30	11.00	
5R	8.0		1.93	7	7.0	4.30	11.30	8	7.2	4.32	11.52	
16	9.9	1.36	1.41	10	9.9	4.64	14.54	7	6.0	4.27	10.27	
14	8.8	1.72	1.78	8	8.0	4.37	12.37	9	8.6	4.45	13.05	
15	9.1	1.84	1.76	9	9.0	4.50	13.50	2	4.9	4.29	9.19	
10	6.9	1.99	2.08	1	4.7	4.31	9.01	1	4.2	4.44	8.64	
6R	7.1		2.04									
4R	7.7		1.98									

Reduced M.O.R.

Images on this plate are elongated - diff. to measure -

M.O.R.

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Scale 1 S November 21, 1912. Copied S

	MC 2129 Pole Pl.			MC 2130 L' Pole Pl.				MC 2131 1h 1+ 15°			
	Sc.	Diff.		Sc.	Diff. from Pl.	Diff. from curve.		Sc.	curve reading	Magn.	
10	4.8	+4.89	10	6.3	+2.59	2.51	8	4.7	4.31	9.07	
20	8.2	4.39	* 13	9.2?		1.23	5	4.1	4.46	8.56	
19	7.8	4.48	6r	7.0		2.22	7	4.3	4.41	8.71	
14	6.2	4.32	15	9.9	1.04	1.01	6	4.2	4.44	8.64	
15	6.5	4.44	4r	8.0		1.72	14	5.9	4.27	10.17	
11	5.2	4.22	5s 2r	8.6		0.96	20	7.7	4.36	12.06	
17	7.1	4.39	7r	8.3		1.51	~~21~~ 12	5.2	4.27	9.41	
12	5.1	4.03	8r	9.0		1.30	15	6.2	4.27	10.47	
18	7.5	4.42	13	8.8	1.37	1.38	25	5.9	4.27	10.17	Poor Image
13	6.1	4.07	9r	?		~~1.11~~	1	3.0	...		
23	8.5	4.70	12	7.9	1.83	1.76	10	5.0	4.28	9.28	
25	9.0	4.73	11	7.4	2.02	2.01	11	5.2	4.27	9.47	
26	9.5	4.69					23	8.8	4.48	13.28	
							26	9.2	4.53	13.73	
			* assumed to be no. 14 Dec. 7, 1912.				21	8.1	4.38	12.48	
							24	8.6	4.45	13.05	
							17	6.9	4.30	11.20	
							19	7.4	4.33	11.73	
							22	8.9	4.48	13.38	
							18	7.1	4.31	11.41	
							13	5.3	4.27	9.57	
							9	4.8	4.30	9.10	
							16	6.3	4.28	10.58	

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Reduced m.o.r.

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Scale u. Copied November 21, 1912

Mc 2132 L' (1+15°) alt. +15°

2c.1 curve. Magn.

8	6.9	2.15	9.05
5	6.1	2.48	8.58
7	5.2	..	
6	5.8	2.60	8.40
14	8.1	1.50	10.20
12	8.1	1.73	9.83
15	9.2	1.31	10.51
1	5.0	..	
double st. 10	6.2	2.44	8.64
11	7.2	2.04	9.24
17	9.9	1.07	10.97
18	t.f.		
19	t.f.		
13	6.9	2.15	9.05
9	6.3	2.41	8.71
16	9.1	1.35	10.45

copied.

Mc 2133 Pole.

1st eff. 1m.

10	6.9	+1.99
14	8.3	2.22
15	8.1	2.24
17	9.1	2.39
19	f.	
12	7.3	2.43
11	7.1	2.32
13	7.2	2.97

2nd eff. 2m.

10	6.1	+2.19
14	7.1	2.82
17	8.4?	3.09?
13	7.2	2.97
12	6.9	2.83
11	6.4	3.02
15	8.1	2.84
7		

3rd eff. 4m.

10	5.2	3.69
14	7.0	3.52
13	6.2	3.97
12	6.0	3.73
15	7.3	3.64
11	5.8	3.62
17	8.1	3.39

Reduced M.O.R.

MOR

3:23

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Scale u

November 22, 1912 S

~~11:25~~	Mc 2133 Pole		Mc 2133 Pole.	
	1st exposure.	11:58	1st exposure. 1m.	
10	6.4	10	6.4	+2.49
6	4.8	15	8.8	2.64
22	5.1	18	9.5	2.42
15	8.5	14	8.3	2.22
13	8.0	12	7.3	2.43
11	7.2	17	8.7	2.79
12	7.5	13	7.+8.0	2.17
14	8.3	11	7.0	2.42
17		~~16~~		
reject. - Remeasure.			2nd exposure. 2m.	
		10	6.0	+2.89
		18	8.8	3.12
		17	8.3	3.19
		13	7.3	2.87
		15	7.9	3.04
		11	6.2	3.22
		14	7.6	2.92
		12	6.7	3.03
		19		
			3rd exposure 4m.	
		10	5.3	+3.64
		15	7.2	3.74
		11	5.6	3.82
		13	6.7	3.47
		12	6.1	3.63
		* 17	7.2	3.29
		14	7.0	3.52
		18	8.4	3.52

Reduced M.O.R.

M.O.R.

Average No. 17, 8.2

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Scale R. November 22, 1912. Copied

Mc2134 L Pole.			Mc2135 L' Pole.				Mc2136 (1+15") L		
		Diff.			Diff. from Pg.			curve	Magn.
10	4.3	4.59	10	6.7	+2.19	2.34	8	4.1	4.32	9.01
18	7.4	4.52	12	7.7	2.03	1.94	5	4.0	4.78	8.78
13	5.9	4.21	5R	8.1		1.78	7	4.3	4.40	8.43
17	7.0	4.49	7R	7.9	~~2.29~~	1.86	6	4.1	4.46	8.56
12	5.4	4.33	11	7.2	2.22	2.03	14	5.9	4.27	10.17
19	7.9	4.38	13	8.7	2.47	1.56	20	8.0	4.31	12.37
11	4.9	4.52	8R	8.9		1.51	12	5.2	4.27	9.47
20	8.2	4.39	9R	10.0		1.78	15	6.2	4.28	10.48
23	8.7	4.50	6R	6.9		2.24	25	9.1	4.51	13.61
26	9.7	4.49	4R	8.1		1.77	1	3.0	,	
25	9.7	4.53	14	9.1	1.42	1.46	10	4.9	4.29 double	9.19
14	6.1	4.42	15	9.5	1.44	1.40	11	5.1	4.27	9.37
15	6.4	4.54					21	8.3	4.42	12.72
							19	7.7	4.35	12.05
							17	7.0	4.30	11.30
							24	9.0	4.50	13.50
							22	9.0	8.95 8.9 4.49	13.44
							26	9.9	4.63	14.53
							23	8.7	4.46	13.16
							9	4.8	4.38	9.10
							16	6.4	4.28	10.68
							13	5.3	4.27	9.57
							18	7.2	4.32	11.52

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Reduced M.C.R.

M.C.R.

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Scale 2. copied S November 22, 1912. S S

Mc 2137 ℓ' (1+15)			Mc 2138 ℓ' Polar			Mc 2139 ℓ Pole.	
				Diff. from Curve			Diff.
8	6.4	2.35 8.75	10	6.3 +2.59	2.60	10 48	+4.09
5	6.0	2.52 8.52	6r	6.7	2.40	13 58	4.37
7	4.9	"	4r	7.6	2.00	19 7.9	4.38
6	5.3	"	15	9.8 1.14	1.08	20 8.3	4.29
14	8.2	1.68 9.88	14	9.3 1.22	1.28	12 5.3	4.43
12	7.7	1.86 9.56	11	7.3 2.12	2.14	23 8.5	4.70
15	8.8	1.46 10.26	5S	8.3	1.68	26 9.7	4.49
1	5.1	"	7r	8.1	1.76	25 9.2	4.53
double 10	6.1	1.97 8.07	13	8.5 1.67	1.61	14 6.3	4.22
11	7.1	2.08 9.18	9r	9.6	1.15	11 5.0	4.42
17	~~8.~~ 10.0	1.04 11.04	12	7.9 1.83	1.84	15 6.7	4.24
18	~~8.~~		8r	8.7	1.54	18 7.6	4.32
19	~~8.~~					17 9.2	4.29
9	6.2	2.44 8.64					
16	8.7	1.49 10.19					
13	6.8	1.70 8.50					

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12:47

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Sc. 2. S November 22, 1912.

2:40	Mc 2139 L Pole		Mc 2140 L Pole.		Mc 2141 L' Pole.		
		Diff		Diff.		Diff. from Curve from Obs.	
10	48	+4.09	10 46	+ 4.29	10 6.2	+ 2.69	2.69
13	58	4.31	12 53	~~4.62~~ 4.43	6R 6.9		2.21
19	8.0	~~4.28~~	11 48	~~4.62~~	4R 8.2		1.54
11	5.2	4.22	14 61	4.42 ~~4.44~~	11 7.3	+ 2.12	2.04
20	8.3	4.29	17 7.2	4.29	14 9.1	0.82	0.82
12	5.6	4.13	13 5.7	4.41	5R 8.6		1.33
23	8.6	4.60	18 7.7	4.22	7R 8.2		1.54
25	9.0	4.13	20 8.2	4.39	13 9.1	1.01	1.10
15	~~14.62~~ 6.6	4.34	19 7.9	4.38	12 8.1	1.63	1.60
17	7.1	4.39	23 8.7	4.50	8R 9.3		1.01
14	6.0	4.52	25 9.1	4.63	9R 10.0		0.72
18	7.5	4.42	15 6.4	4.54			
26	9.5	4.69	26 9.1	4.49			

Reduced M.O.R.

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Scale K. S November 22, 1912. S S

MC2142 L Pole			MC 2143 L Pole.			MC2144 L' Pole.			
		Diff.			Diff.			Off from Pg	fr. curve.
17	6.0	+ 5.49	10	4.7	+ 4.19	10	8.2	0.69	0.87
10	3.3	+ 5.59	19	7.9	4.38	6R	8.1		0.90
20	7.1	5.49	23	8.7	4.50	4A	9.1		0.63
19	6.9	5.38	20	8.2	4.39	11	8.7	0.72	0.73
15	5.7	5.24	11	5.3	4.12	5A	9.2		0.60
11	4.0	5.42	13	6.1	4.07	7R	9.1		0.63
18	6.5	5.42	25	9.1	4.63	13	9.7	0.47	0.46
12	4.6	5.13	12	5.7	4.03	12	8.7	1.03	0.72
26	8.3	5.89	15	6.7	4.24	8R	9.9		0.42
25	8.0	5.73	18	7.2	4.72				
27	8.7	5.85	14	6.3	4.22				
13	5.0	5.17	* 17	7.9	4/8.59				
14	5.3	5.22	26	9.8	4.39				
23	7.7	5.50							
28	9.1	5.87							
29	9.5	6.02							
30	9.9	6.00							

Assume No. 17, 6.9

YELLOW

Reduced M.O.R.

M.O.R.

3.16

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B7 -

Scale 11. December 2, 1912.

Mc 2078

	Sc.	curve	Magn.	Prec.	Comp. curve	magn.	
1	B.			5.3	+1.18	6.48	
2	B.	..		5.8	1.16	6.96	
3	3.0			5.8	1.16	6.46	
4							
5							
6							
7	3.2			6.6	1.11	7.11	
8	3.8	+4.04	7.84	6.4	1.17	7.57	
9	4.0	4.10	8.10	6.8	1.17	7.97	
10	3.9	4.06	7.96	~~6.7.2~~	1.16	8.36	
11	4.2	4.16	8.36	7.9	1.14	9.04	
12	4.7	4.28	8.98	8.2	1.13	9.33	
Inv. 3 m. 13 deflection Reject.	13	4.3	4.18	~~8.48~~	8.1	7.1	1.16 1.12 ~~8.26~~ 9.22
14	4.8	4.31	9.11		8.3	1.13	9.43
15	5.0	4.35	9.35		8.9	1.11	10.01
16	5.3	4.42	9.72		8.7	1.12	9 8.82
17	5.7	4.49	10.19		9.0	1.11	10.11
18	6.1	4.56	10.66		9.1	1.09	10.19
19	6.0	4.54	10.54		9.5	1.10	10.60
20	6.1	4.56	10.66				
21	6.7	4.64	11.34		J.		
22	6.3	4.59	10.89				
23	6.7	4.64	11.34				
24	7.0	4.68	11.68				
25	7.2	4.71	11.91				
26	7.4	4.74	12.14				
27	7.9	4.80	12.70				

Assumed 8.1 H.S.S. Jan. 4 '13

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B 1

Scale 2. December 2, 1912.

MC 2078 cont.

	sc 2			Prin Comp.		
		Curve	Magn.	sc 1	sc 2	
28	8.1	4.83	12.93			28
29	8.7	4.88	13.58			
30	8.7	4.88	13.58			
31	8.9	4.90	13.80			
32	9.2	4.93	14.13			
33	9.5	4.96	14.46			
34	9.7	4.97	14.67			
		Diff.			Diff.	
Polar 5	13.			5.2	+1.19	
8	4.0	+4.10		7.1	1.00	
9	4.6	+4.10		7.5	1.20	
10	4.6	4.29		7.7	1.19	
11	4.9	4.52		8.5	0.92	
12	5.3	4.43		8.9	0.83	
13	5.7	4.47		9.0	1.11	
14	5.9	4.62		9.2	1.32	
15	6.3	4.64		9.9	1.04	
16	6.3	4.96				
17	6.9	4.59				
18	7.3	4.62				
19	7.5	4.78				
20	7.8	4.79				
21	8.2	4.62				
23	8.3	4.90				
25	8.8	4.93				
26	9.2	4.99				
27	9.7	4.85				

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$l_1 = 1^h + 15^\circ$

Sc. U

Dec. 5, 1913

11:20 HD 209900

Stan. Seq.		cc - curse reading		Magn.		Diff.
Peculiar shape.	1				13	7.4 + 2.77
	2	4.3	2.12	7.02	14	7.6 2.92
	3	4.7	2.14	7.44	15	8.1 2.84
	4	5.2	2.14	7.94	16	8.3 2.96
	5	5.3	2.14	8.04	17	8.5 2.99
	6	5.4	2.14	8.14	18	9.0 2.92
	7	5.4	2.14	8.14	19	9.2 3.08
	8	6.2	2.11	8.97	20	9.5 3.09
	9	~~6.2~~ 6.3	2.11	9.07	21	9.9 2.92
	10	6.2	2.11	8.97		
	11	6.5	2.80	9.30		
	12	7.2	2.85	10.05		
	13	7.0	2.84	9.84		
	14	7.9	2.93	10.83		
	15	8.1	2.94	11.04		
	16	8.1	2.94	11.04		
	17	8.3	2.96	11.26		
	18	8.8	2.98	11.78		
	19	8.9	8.9 8.7 3.00	11.90		
	20	9.8	9.7 9.15 3.06	12.81		
			Diff.			
Polar	5	3.7	+ 2.69			
	6	4.3	2.68			
	8	5.3	2.80			
	9	5.9	2.80			
	10	6.0	2.89			
	11	6.7	2.72			
	12	7.0	2.73			

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B1 Prismatic Comparisons.

Scale N. December 5, 1912.

Mc 961

		sc.1	Diff.	
Polar.	5	5.4	0.99	
	6	5.9	1.08	
	8	7.0	1.10	
	9	7.7	1.00	
	10	7.9	0.99	
	11	8.3	1.12	
	12	8.8	0.93	
	13	9.2	0.97	
	14	9.7	0.82	
		curve reading		Mags.
Stan Seq.	1	5.3	1.00	6.30
	2	6.1	1.08	7.18
	3			
	4	6.3	1.09	7.39
	5	6.7	1.10	7.80
	6	~~6.8~~	1.10	7.90
	7	7.2	1.10	8.30
	8	7.0?	1.10	8.10
	9	7.7	1.07	8.77
	10	8.3	1.04	9.34
	11	8.7	1.00	9.70
	12	8.7	1.00	9.70
	13	9.1	0.96	10.06
	14	9.3	0.95	10.25
	15	?		

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B1 Preliminaire Comparisons.

Scale 2. December 5, 1912.

MC 1201

		Rel.	Diff.	Magn.
Star Seq.	1	5.9	+ 1.04	6.94
	2	6.1	1.01	7.11
	3			
	4	6.5	0.94	7.44
	5	7.1	0.83	7.93
	6	7.2	0.82	8.02
	7	7.7	0.75	8.45
	8	7.9	0.74	8.64
	9	8.1	0.73	8.83
	10	8.1	0.73	8.83
	11	8.0	0.73	8.73
	12	8.3	0.72	9.02
	13	8.5	0.72	9.22
	14	9.0	0.74	9.74
	15	9.3	0.77	10.07
	16	9.7	0.81	10.51
Polar	5	5.2	Diff. + 1.99	
	6	5.9	1.08	
	8	7.2	0.90	
	9	8.0	0.70	
	10	8.2	0.69	
	11	8.7	0.72	
	12	9.0	0.73	
	13	9.4	0.77	
	14	9.7	0.82	

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B4

Prismatic Comparisons.

Scale 2.

December 5, 1912

Mc 1475

		Dec	Diff.	
Polars.	5	5.3	1.09	
	6	5.9	1.08	
	8	7.1	1.00	
	9	8.0	0.70	
	10	8.1	0.99	
	11	8.3	1.12	
	12	8.7	1.03	
	13	9.1	1.07	
	14	9.5	1.02	
	15	9.9	1.04	
8 Tau. Seq.	1	6.0	1.04	Magn. 7.04
	2	6.1	1.01	7.11
	3	6.2	1.00	7.20
	4	6.9	~~0.86~~ 1.02	7.92
	5	6.7	~~0.90~~ 1.02	7.72
on edge of film.	6	7.0	~~0.84~~ 1.02	8.02
	7	~~6.9~~ 7.2	~~0.81~~ 1.01	8.21
Star superposed no. 8 :	8	~~6.8~~ 7.9	~~0.74~~ 1.02	8.92 ?
	9	7.7	~~0.75~~ 1.01	8.71
	10	8.1	~~0.73~~ 1.03	9.13
	11	8.7	1.04	9.74
	12	9.0	1.06	10.06
	13	9.0	1.06	10.06
	14	9.3	1.08	10.38
	15	9.3	1.08	10.38 Reduced O.
	16	9.8	1.10	10.90 Copied O.

MAR

12.15

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CP 3

Prismatic Companions

Dec. 6, 1913

Scale 11

DM C 994

			Diff.	
Polar	5	4.9	+ 1.49	
	10	7.3	1.69	
	8	6.7	1.40	
	11	7.9	1.52	
	9	7.1	1.60	
	12	8.7	1.33	
	13	8.8	1.37	
	14	9.1	1.42	
	15	9.6	1.34	
			curve — magn.	
St. Seq.	2	5.1	1.54	6.64
	13	7.9	1.41	9.31
	5	5.7	1.54	7.24
	14	8.3	1.46	9.76
	12	7.7	1.48	9.18
	7	6.1	1.54	7.64
	10	6.8	1.52	8.32
	6	5.9	1.54	7.44
	8	6.3	1.54	7.84
	15	~~9.5~~ 8.7	1.43	10.13
	3	5.3	1.54	6.84
	9	7.2	1.50	8.70
	11	7.3	1.50	8.80
	1	4.9	1.54	6.44
	16	9.1	1.38	10.48
	17	9.5	1.36	10.86

Reduced O.

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1913phae.proj..988L

C1 Prismatic Companions.

Sc. U

Dec 9, 1913

HC 1474

			Diff.	
Polar.	5	5.1	1.29	
	10	7.6	1.29	
	8 10	7.1	1.00	
			1.32	
	11	8.1	0.60	
	9	7.6	1.10	
	13	9.0	1.17	
	15	9.7	1.24	
	12	8.6	1.13	
	14	9.4	1.12	
			curve.	magn.
St. S.	2	6.1	1.16	7.26
	4	6.9	1.13	8.03
	7	7.8	1.12	8.42
	3	6.1	1.16	7.26
	8	8.0	1.13	9.13
	5	7.1	1.12	8.22
	13	9.0	1.17	10.17
	9	8.1	1.14	9.24
	14	9.4	1.18	10.58
	12	9.0	1.16	10.16
	15	9.7	1.20	10.90
	11	8.3	1.14	9.44
	10	8.6	1.14	9.74
	6	7.2	1.12	8.32

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B6. Prismatic Companions

Sc. U

Dec 9, 1912

			H.C. 1150		
			Diff.		
Col.	5	4.9	1.49		
	8	7.3	0.80		
	6	5.4	1.58		
	10	7.7	1.19		
	11	8.2	1.22		
	9	7.5	1.20		
	13	9.0	1.17		
	12	8.6	1.13		
	14	9.4	1.12		
	15	9.8	1.14		
			Curve	magn.	
St. S.	4	5.3	1.48	6.78	
	6	6.1	1.34	7.44	
	10	8.0	1.17	9.17	
Near edge	5	6.0	1.36	7.36	
" "	2	5.3	1.48	6.78	
" "	3	5.3	1.48	6.78	
	7	6.4	1.31	7.71	
	1	4.9	1.54	6.44	
	12	8.9	1.14	10.04	
	9	7.8	1.16	8.96	
	8	7.0	1.23	8.23	
	11	8.9	1.14	10.04	
	13	9.1	1.14	10.24	
	14	9.4	1.14	10.54	
	16	9.8	1.14	10.94	Reduced O.
	15	9.5	1.14	10.64	Copied O.

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B1. Prismatic Companions

Sc. W.

Dec 9, 1913

			HRC 1425		
			Diff.		
Pol.	5	4.9	1.49		
	10	7.9	0.99		
	8	6.9	1.20		
	11	8.2	1.22		
	9	7.7	1.00		
	12	8.7	1.03		
	14	9.3	1.22		
	13	9.0	1.17		
	15	9.7	1.24		
	6	5.4	1.58		
			Curve	magn.	
Sl. S.	2	6.2	+1.32	7.52	
	3	Diffuse.			
	8	7.2	1.14	8.34	
	7	6.9	1.17	8.07	
	12	7.9	1.09	8.99	
	13	8.3	1.09	9.39	
	16	9.5	1.20	10.75	
	1	5.2	1.57	6.77	
	5	6.8	1.20	8.00	
	9	7.6	1.10	8.70	
W.S	10	~~7.7~~ 7.7	1.10	8.80	
	11	7.8	1.10	8.90	
	14	8.8	1.11	9.91	
	6	7.0	1.16	8.16	
	15	9.1	1.14	10.24	

Reduced O.

Copied O.

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Mc Plates taken Nov. 18, 1912.

Reduced 1914 with Revised Magns.

Scale U.

December 10, 1912 Copied.

9.48

Mc 2148 Pole. L 10m

	sc 1	Diff. Table	2152	2156	2162	Mean of 3	sc 1	curve	Magn.
10	5.3	1	5	2	3	47	1	3.9	
11	5.7	5	4	1	5	33	2		
12	6.0	6	6	3	4	50	3		
13	6.4	5	6	2	5	43	4		
14	6.4	2	4	1	5	23	5	4.7	
15	6.9	3	4	1	6	27	6	5.2 5.0	3.81 8.91
16	7.2	1	2	2	7	17	7	4.9	
17	7.3	1	4	1	4	20	8	5.8	3.82 9.02
18	8.1	5	4	2	4	37	9	5.4	3.86 9.26
19	8.3	4	1	5	1	33	10	5.9	3.94 9.84
20	8.3	1	1	4	2	20	11	6.0	3.96 9.96
23	9.1	4	0	2	3	20	12	6.3	4.00 10.30
25	9.3	1	0	0	1	03	13	5.8 6.0	3.94 9.84
26	9.5	1	.	1	2	00	14	6.7	4.06 10.76
27	9.9	0	.	.	.	0	15	7.0	4.10 11.10
							16	7.1	4.11 11.21
		-45					17	7.4	4.16 11.56
		+1					18	7.9	4.26 12.16
		15					19	8.0	4.29 12.29
		-0.29	-0.32	-0.20	+0.34		20	8.3	4.34 12.64
							21	8.7	4.44 13.14
							22	9.1	4.56 13.66
							23	9.0	4.52 13.52
							24	9.3	4.41 13.41
							25	7.0	4.10 11.10
							26	9.9	4.85 14.75

Mc 2150 1+15° L.

Mc 2148 / Mc 2152

	Diff.	
5.3 5.1	5.20	3.82 1.1
5.7 5.6	5.65	3.90 1.0
6.0 6.0	6.00	3.86 0.0
6.4 6.5	6.45	3.85 0.1
6.4 6.6	6.50	4.05 1.1
6.9 7.0	6.95	4.13 1.0
7.1 7.2	7.15	4.25 1.0
7.3 7.6	7.46	4.18 1.2
8.1 8.0	8.05	4.01 1.0
8.3 8.0	8.15	4.27 1.2
8.3 8.3	8.30	4.43 0.0
9.1 8.7	8.90	4.44 2.2
9.3 9.2	9.25	4.62 1.0
9.5 Def.	9.5	4.83 ±
9.9 N.S.	9.9	4.79 ±

Film defective certainly brighter than 24.

M.O.R.

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Mc. Plates taken Nov. 18, 1912.

Reduced 1914, with Revised Magn.

Scale U.

December 10, 1912.

Mc 2152 Pole L 10m.

	Sc.1	Diff.	2150 Diff.	Mean
10	5.1	5	1	65
11	5.6	4	5	45
12	6.0	6	6	60
13	6.5	6	5	55
14	6.6	4	2	30
15	7.0	4	3	35
16	7.2	2	1	15
17	7.6	4	1	25
18	8.0	4	5	45
19	8.0	1	4	25
20	8.3	1	1	10
23	8.7	0	4	20
25	9.2	0	1	05
26	Def.	.	1	0
27	n.s.	.	0	0

-41

13

-0.32

Mc 2156 Pole L 10m.

	Sc.1	
10	4.8	2
11	5.3	1
12	5.7	3
13	6.1	2
14	6.3	1
15	6.7	1
16	7.2	2
17	7.3	1
18	7.8	2
19	8.4	5
20	8.6	4
23	8.9	2
25	9.2	0
26	9.7	1
27	?	

-27

14

-0.20

2156	2162			Diff.
4.8	4.3	4.55	2 3	4.47
5.3	4.7	5.00	3 3	4.55
5.7	5.0	5.35	3 4	4.51
6.1	5.4	5.75	3 4	4.55
6.3	5.7	6.00	3 3	4.65
6.7	6.0	6.35	3 4	4.73
7.2	6.3	6.75	4 5	4.65
7.3	6.8	7.05	3 2	4.58
7.8	7.2	7.50	3 3	4.56
8.4	7.8	8.10	3 3	4.32
8.6	8.0	8.30	3 3	4.43
8.9	8.4	8.65	3 2	4.69
9.2	9.10	9.15	05 05	4.72
9.7	9.8	9.75	1 0	4.58
∫	.	∫		∫

MOR

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Cont.

Scale 11.

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December 10, 1912.

Mc 2158 l + 15° L.

alt. +.12

		Curve	Magn.
1	3.2	.	.
5	4.6	H.60	9.10
6	4.3 4.3	.	.
7	4.6	H.60	9.10
8	5.0	H.64	9.54
9	4.9	H.63	9.43
10	5.1	H.65	9.65
11	5.3	H.66	9.86
12	6.0	H.60	10.60
13	5.9	H.60	10.50
14	6.8	H.62	11.42
15	6.9	H.63	11.53
16	7.2	H.64	11.84
17	7.6	H.66	12.26
18	7.9	H.67	12.57
19	8.2	H.68	12.88
20	8.7	H.68	13.38
21	9.1	H.67	13.77
22	9.3	H.67	13.97
23	9.7 9.10	H.66	14.36
24	9.1 9.1	H.67	13.77
25	~~5.8~~ ?	H.62	11.42
26	~~7~~	.	.

double

Mc 2162 Pole L 10m.

		sc.		2156 2158	Mean
10	4.3	3	2		05
11	4.7	5	1		20
12	5.0	4	3		05
13	5.4	5	2		15
14	5.7	5	1		20
15	6.0	6	1		25
16	6.3	7	2		25
17	6.8	4	1		15
18	7.2	4	2		10
19	7.8	1	5		20
20	8.0	2	4		10
23	8.4	3	2		05
25	9.0 9.10 9.2.	1	0		05
26	9.8	2	1		30
27					

+50
−2
14
+0.34

from plate - film def.

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Mc Plates taken Nov. 18, 1912.

Scale 11.

December 12, 1912

9:20	Mc 21622 remeas. & Prel.		Prin. Comps.
15			5.6
6			5.9 6.2 w.s.
8			7.3
9			8.0
10	4.3	3	8.1
11	4.8	4	8.7
12	5.0	4	9.1
13	5.4	5	
14	5.6	6	
15	5.9	7	
16	6.2	8	
19	6.8	4	
18	7.1	5	
19	7.9	0	
20	8.3	1	
23	8.7	0	
25	9.2	0	
26	9.9	3	
		+42	
		14	
		+0.30	

M.O.R.

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Mc Plates taken Nov. 28, 1912.

Scale

December 12, 1912.

Mc 2190 L Pole S

	Bt		a- Mc 2195 P. 170	Bt Mc 2201 P. 171	Mean	Diff.
5						
6						
8						
9						
10	5.1	5	5.2	5.3	5.20 1 0 1	+ 3.89
11	5.7	5	5.7	5.9	5.77 1 1 1	3.65
12	6.0	6	6.0	6.2	6.07 1 1 1	3.66
13	6.4	5	6.3	6.9	6.53 1 2 4	3.64
14	6.8	6	6.7	6.9	6.80 0 1 1	3.72
15	7.1	5	7.1	7.1	7.10 0 0 0	3.84
16	7.5	5	7.3	7.3	7.37 1 1 1	3.89
17	7.6	4	7.7	7.7	7.67 1 0 0	3.82
18	8.1	5	7.9	8.2	8.07 0 2 1	3.85
19	8.3	4	8.2	8.3	8.27 0 1 0	4.01
20	8.9	7	8.3	8.5	8.57 3 3 1	4.02
23	9.3	6	8.7	9.0	9.00 3 3 0	4.20 ~~3.82~~
25	9.7	5	9.2	9.5	9.47 2 3 0	4.26
26	F.		9.7	9.9	9.80 1 1	4.39

-68
13
-0.55

4 4 7
4 4 4
-0.10 -0.0 +0.18

Lin. 146 143 142

0 5 1
6 6 6
+0.00 -0.08 +0.02

8 10 0
3 4 4
+0.27 -0.25 0.00

9-4 -19 9-2
13 14 14
+.038 -.136 ~~+.006~~ +.050

M.OR

S

Pris. Comp.

		Mean.		Diff.
5.9	6.0	6.1	6.00 1 0 1	+ 0.39
6.7	6.5	6.3	6.50 2 0 2	0.48
7.9	7.9	7.9	7.90 0 0 0	0.20
8.7	8.5	8.4	8.53 2 0 1	80.17
9.1	8.7	8.9	8.90 2 2 0	− 0.01
9.3	8.8	9.2	9.10 2 3 1	+ 0.32
9.9	9.8	9.5	9.73 2 1 2	0.00
		9.9	9.4 a	+ 0.27

3 0 2
4 4 4
+0.08 0.00 -0.05

6 4 1
3 3 3
+0.20 -0.13 -0.03

10-1 1-5 2-5
7 7 7
+.129 -.071 -.043

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Plates Taken Nov. 28, 1912 cont.

Scale

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Mc 2191 4+75° L. S S

alt. +.12

		curve	Magn.	Prec. Comp. curve	magn.		curve	Magn.
1	3.2			6.7 + 8.36	7.06	27	9.3 4.25	13.55
2	3.7			6.9 8.34	7.24	28	9.7 4.35	14.05
3	3.7			6.9 8.34	7.24	27a	9.3 4.25	13.55
4	4.0			7.1 0.32	7.42			
5	4.2			8.2 0.22	8.42			
6	5.0	+ 3.62	8.62	8.4 0.20	8.60			
7	4.9	3.61	8.51	8.60 00 8.6 8.6 +0.18	8.78			
8	4.7	3.61	8.31	8.1 0.22	8.32			
9	4.8	3.62	8.42	8.7 0.18	8.88			
10	4.1	.		7.3 0.30	7.60			
11	5.3	3.63	8.93	9.2 0.15	9.35			
12	5.9	3.66	9.56	9.8 0.13	9.93			
13	5.9	3.66	9.56	9.8 0.13	9.83			
14	6.3	3.68	9.98					
15	6.6	3.72	10.32					
16	6.3	3.68	9.98					
17	6.9	3.74	10.64					
18	7.1	3.77	10.87					
19	7.1	3.77	10.87					
20	7.9	3.94	11.84					
21	7.8	3.92	11.72					
22	8.0	3.96	11.96					
23	8.2	4.00	12.20					
24	8.5	4.06	12.56					
25	8.9	4.16	13.06					
26	9.1	4.20	13.30					

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Cont. Nov. 28, 12.

Scale 11. copied B2 December 12, 1912.

MC 2192. 4 + 45° L.

alt. + .17

		curve	Magn.	Phis.	Comp.	curve	Magn.		cont.			Magn.
1	3.1			6.4	0.40		6.80	27	8.5	4.06		12.56
2	4.0			7.1	0.32		7.42	28	8.7	4.11		12.81
3	4.1			7.1	0.32		7.42	29	9.0	4.17		13.17
4	4.1			7.8	0.25		8.05	30	9.3	4.25		13.55
5	4.2			7.9	0.24		8.14	31	9.7	4.35		14.05
6	4.6	+3.60	8.20	8.3	0.21		8.51	32	‡			
7	4.6	3.60	8.20	8.1	0.22		8.32					
8	4.9	3.61	8.54	8.6	0.18		8.78					
9	5.0	3.62	8.62	8.6	0.18		8.78					
10	5.1	3.62	8.72	8.6	0.18		8.78					
11	5.3	3.63	8.93	8.9	0.17		9.07					
12	5.4	3.63	9.03	8.9	0.17		9.07					
13	5.2	3.63	8.83	8.8	0.17		8.97					
14	5.9	3.66	9.56	9.7	0.18		~~8.88~~ 9.84					
15	6.0	3.66	9.66	9.9	0.12		10.02					
16	6.1	3.66	9.76	9.9	0.12		10.02					
17	6.2	3.67	9.87									
18	6.4	3.69	10.09	‡								
19	6.9	3.75	10.75									
20	7.2	3.79	10.99									
21	7.3	3.81	11.11									
22	7.2	3.79	10.99									
23	7.3	3.81	11.11									
24	7.3	3.81	11.11									
25	8.1	3.98	12.08									
26	8.3	4.03	12.33									

No. 14 is 9.7 - Error of a unit. Remeasured on January 22, 1913.

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Cont - Taken Nov. 28, 12

Scale 4 — December 12, 1912. — Copied. — S — S

Mc 2195 Pole L.

					curve	magn.
5						
6						
8					curve	Magn.
9						
10	5.2	6	3.62	8.82		
11	5.7	5	3.64	9.34		
12	6.0	6	3.66	9.66		
13	6.3	4	3.68	9.98		
14	6.7	5	3.72	10.42		
15	7.1	5	3.77	10.87		
16	7.3	3	3.81	11.11		
17	7.7	5	3.89	11.59		
18	7.9	3	3.94	11.84		
19	8.2	3	4.00	12.20		
20	8.3	1	4.03	12.33		
23	8.7	0	4.11	12.81		
25	9.2	0	4.24	13.44		
26	9.7	1	4.35	14.05		

-47
12
-0.39

Lim. 14.3

Pris Cont

	curve	magn.
6.0	+0.45	6.45
6.5	0.39	6.89
7.9	0.24	8.14
8.5	0.19	8.69
8.7	0.18	8.88
8.8	0.17	8.97
9.8	0.13	9.93

Mc 2197 (25K - 5.6 + 44.8°)

aes. +19

P.C.

			curve	magn.
1	3.9			
2	4.3			
3	5.3	+ 3.63		8.93
4	6.3	3.68		9.98
5	7.3	3.81		11.11
6	7.7	3.83		11.23
7	8.1	3.97		12.07
8	8.4	4.04		12.44
9	8.4	4.04		12.44
10	8.7	4.11		12.81
11	~~8.8~~ 9.1	4.20		13.30
12	~~8.9~~ 9.7	4.35		14.05
13	9.~~8~~	4.32		13.92
14	~~10.0~~	4.45		14.45
15	n.s.			

P.C.

		Magn.
7.0	+0.33	7.33
7.7	0.26	7.96
8.7	0.18	8.88

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Nov. 28, 1912.

Scale U

December 12, 1912.

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MC 2201 Pole 2. see P. 164 for reduction.

			P.C.
5	~~6.1~~		6.1
6			6.3
8	~~7.9~~		7.9
9			8.4
10	5.3	7	8.9
11	5.9	7	9.2
12	6.2	8	9.5
13	6.9	10	9.9
14	6.9	7	
15	7.1	5	
16	7.3	3	
17	7.7	5	
18	8.2	6	
19	8.3	4	
20	8.5	3	
23	9.0	3	
25	9.5	3	
26	9.9	3	

-74
14
-053

Diff. 14.4

* MC 2198 h 10 m 34 +45.1 (30K).

alt. +		curve	magn.		
5	6.9	+3.74	10.64		
2	5.8	3.65	9.45	9.3	+0.15
6	7.1	3.77	10.87		
11	8.8	4.13	12.93		
4	7.2	3.79	10.99		
3	6.1	3.66	9.76	9.3	+0.15
7	6.6	3.72	10.32		
10	8.3	4.03	12.33		
14	9.5	4.30	14.80		
9	8.2	4.00	12.20		
12	9.1	4.21	13.31		
8	7.7	3.89	11.59		
13	9.2	4.24	13.44		
1	5.0	3.62	8.62	8.1	0.22 / 0.58 / 8.68 / 8.32

* MC 2198 was found after the rest of the Series had been meas. so does not come in order.

M.O.R. 10:40

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Plates taken Nov. 29, 1912 -

Series 6

. Scale m.

YELLOW

December 13, 1912.

9.45

Mc 2202 L' Pole

	sc.1	sc.2	curve	Magn.	Curve
10		6.3	~~+1.86~~	~~8.16~~	.
11		7.2	1.89	8.99	.
12		7.3	1.78	9.08	.
13		8.1	1.70	9.80	.
14		8.5	1.66	10.16	.
15		9.1	1.61	10.71	.
16		tf.			.
17					+1.83
					1.76
4a		7.3	1.78	9.08	.
6a		6 8.7	1.83	8.53	1.57
9a		9.0	1.62	10 9.62	1.40
5a		7.7	1.74	9.44	1.42
7a		7.5	1.76	9.26	.
8a		8.3	1.68	9.98	

Mc 2204 L' 1h +15° C1

		sc.1	sc.2	curve	Magn.	
	1		3.3			.
5	5		5.2			.
8	6		~~4.9~~ 5.0			.
9	7		~~3.8~~ 3.8			.
10	8		6.0			.
11	9		5.7			.
12	10		6.0			.
13	11		6.9	1.82	8.72	8.73
14	12		7.2	1.79	8.99	8.96
15	13		6.1			.
16	14		8.1	1.70	9.80	9.67
17	15		9.0	1.62	10.62	10.40
18	16		8.9	1.64	10.54	10.32
	17		9.5	1.57	11.07	.

Mc 2205 L' B1

		sc.1	sc.2	curve	Magn.	
	1		4.2			
	2	two far away.				
	3					
	4					
	5		5.1			
	6		5.0			
	7		5.3			
	8		5.9			
	9		6.1			
	10		7.4	1.59	9.15	
	11		5.3			
	12		6.9	1.82	8.72	
	13		6.0			
	14		6.2			
	15		7.2	1.78	8.98	
	16		8.8	1.64	10.44	
	17		8.1	1.70	9.80	
	18					

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Taken Nov. 29, 1912 cont.

Series 6

Scale m. copied. December 13, 1912

Mc 2206 Σ' 3+ 15° C2 — Mc 2207 Σ' Pole — YELLOW

	Curve Magn. Yellow Abt. Corr. +11		sc 1	sc 2	Curve Magn. Yellow Abt. Corr. +10				Curve	sc 1	sc 2	Mc 2202 P. 172 mean.		Diff from Dtg	Diff. Mag.
		1							10 +1.78	7.9	6.3	7.10	5 5	+1.79	+1.78 8.88
too far away -		2		curve	magn.				11 1.64	8.3	7.2	7.75	5 6	1.67	1.61 9.39
		3	2.1	2.3					12 1.59	8.7	7.3	8.00	4 7 1	1.73	1.58 9.59
		4	~~4.3~~	4.3					13 1.48	9.1	8.1	8.60	5 5	1.57	1.48 10.08
		5							14 1.40	9.5	8.5	9.00	5 5	1.52	1.24 10.40
		6		4.3					15 1.38	n.s.	9.1	9.1	a	1.84	1.~~80~~ 84 10.48
		7		5.7					16						ch W
		8		5.9					17						
		9		4.0										Curve Magn.	
+1.71	9.11	* 10	~~8.0~~ 10a	8.0	1.72	9.72	+1.59	9.59	4N +1.56	8.9	7.3	8.10	8 8	+1.71	9.81 9.66
		11		5.2					5N 1.55	8.7	7.7 8.7	8.20	5 5	1.69	9.89 9.75
1.83	8.73	12		7.6	1.75	9.35	1.67	9.27	6N 1.74	7.8	~~7.0~~ 6.7	7.25	6 5	1.78	9.03 8.99
		13	~~7.2~~	7.2	1.78 9	8.98 9	1.76	8.96	7N 1.53	9.0	7.5	8.25	8 8 7	1.68	9.93 9.78
		14	~~9.1~~	9.1	1.60	10.10	1.38	10.48	8N 1.44	9.3	8.3	8.80	8 5 5	1.64	10.44 10.24
1.76	8.96	15		7.					9N 1.40	n.s.	9.0	9.0	a	1.62	10.62 10.40
1.43	10.23	16							Limiting mags.	11.3	11.1		18-53	19 3 +0.63	63-72 19 3 -0.63
1.57	9.67	17													
		18	~~8.9~~	8.9	1.63	10.53	1.42	10.32					8.7-9.0	28 4 +0.70	73-77 27 4 -0.68
													9.1-9.5	15 3 +0.50	83-85 15 3 -0.50

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* wrong star measured. Star measured is 10a as marked on Mc 3959.
O. Dec. 17, 1915.

MOR.

10:20

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Nov. 30, 1912.

9.55

Scale m

Series 8

YELLOW December 14, 1912 - YELLOW

Mc 2210 L' Pole.

Mc 2211 22h 40+45 L'

Mc 2212

Diff.	Diff from Pfg.	Curve		sc.1	sc.2	Mc2215	Mc2222	Meaw.			sc.1	sc.2	Curve Magn.	
+2.68	+2.68	+2.62	10	8.82	6.2	6.1	6.3	6.20	0 1 1	1	3.0		.	.
2.13	2.19	2.20	11	9.43	7.5	7.1	7.1	7.23	3 1 1	2	3.2	sc.1	.	.
2.11	2.16	2.12	12	9.59	7.5	7.4	7.5	7.47	0 1 0	3	2.8		.	.
2.01	2.10	1.91	13	9.98	8.2	8.0	8.0	8.07	1 1 1	4	3.8		.	.
1.91	1.91	1.84	14	10.17	8.7	8.1	8.2	8.33	4 2 1	5	3.8	3.7	.	.
1.67	1.97	1.66	15	10.63	9.0	9.2	8.7	8.97	0 2 3	6	4.1	4.0	.	.
1.54	1.86	1.54	16	10.94	9.8	.	9.0	9.40	4 4	7	2.9		.	.
			17							8	5.0	5.0	4.8 5.00	2.96? 7.96? . .
			18							9	3.1		.	.

Curve	Magn.																		
+2.12	9.59	4R	8.0	7.2	7.2	7.47	5 3 3	2.24	9.71	10	6.0	2.66	8.66	+2.71	8.71
2.11	9.61	5R	7.7	7.3	7.5	7.50	2 2 0	2.23	9.73	11	6.1 sup?	2.64	8.74	2.66	8.76
2.50	8.97	6R	6.9	6.2	6.3	6.47	4 3 2	2.61	8.98	12	5.9	2.69	8.59	.	.
2.16	9.53	7R	7.5	7.3	7.3	7.37	1 1 1	2.27	9.64	13	7.2	2.31	9.51	2.21	9.41
1.90	10.03	8R	8.7	8.1	8.1	8.13	1 0 0	2.09	10.22	14	5.3 5.5	5.3 5.4	2.85	8.25	.	.
1.67	10.60	9R	8.9	8.9	9.0	8.93	0 0 1	1.97	10.90	15	7.3	2.88	9.58	2.17	9.47
										16	7.4	2.25	9.65	2.14	9.54
										17	7.3	2.28	9.58	2.17	9.47
										18	7.9	2.14	10.04	1.97	9.87
										19	7.0	2.36	9.36	2.29	9.29
										20	7.9	2.14	10.04	1.97	9.87
										21	9.2	1.94	11.14	1.60	10.80
										22	7.9	2.14	10.04	1.97	9.87
										23	5.10.0			.	.

Lower magn.

6.2-7.5: 7 / 4 / 4 / +0.18 | 6.1-7.2: 6 / 4 / -0.15 | 6.3-7.2: 2 / 4 / -0.05

7.5-8.2: 10 / 5 / +0.20 | 7.3-8.1: 7 / 5 / -0.14 | 5 / 5 / -0.10

8.1-9.2: 8 / 4 / 3 / +0.20 | 8.2-9.0: 1 / 4 / +0.03 | -0.18

8.1 98

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Taken Nov. 30, 1912

Series 8

Scale m.

YELLOW Copied. D1 December 14, 1912. Copied. YELLOW Copied. B1

Mc 22 12 1 −15° L' S — Mc 2213 C1 1 +15° L' S — Mc 2214 1 20+45 L'

Y Yellow alt. corr. −.10 — Y Yellow alt. corr. +.09 — Y Yellow alt. corr. +.13

	Sc. 1	Sc. 2	Curve Magn.	Sc. 1	Sc. 2	Curve Magn.	Sc. 1	Sc. 2	Curve Magn.
	too far from C.			too far away.			too far from C.		
1				4.3	4.0		4.0	3.8	
2									
3	3.6			2.1					
4				too far away.					
5	3.7				5.2	7.91	8.11	4.9	
6				4.2	4.0			4.9	
7			Curve magn.		3.9	Magn.			
8	5.3	5.3	+2.88 8.18 +2.66	8.76	6.1	2.64	8.74	5.8	2.72 8.52
9		5.0	2.96? 7.96?		5.9	2.69	8.59	+2.71 8.71	6.0 2.65 8.65
10		4.9	2.71	8.71	6.0	2.66	8.66	2.22 9.42	7.2 2.81 10.01
11	+2.33 9.23	6.9	2.38 9.28 2.33	9.23	6.9	2.38	9.28		5.3 2.87 8.17
12	2.25 9.35	7.1	2.33 9.43 2.01	9.81	7.8	2.65	10.45 9.95	2.57 8.87	6.3 2.56 8.86
13	2.37 9.17	6.8	2.42 9.22 2.63	8.83	6.2	2.60	8.80		5.9 2.69 8.59
14	2.21 9.41	7.2	2.31 9.51 1.88	10.08	8.2	2.07	10.27	2.63 8.83	6.2 2.60 8.80
15	2.25 9.35	7.1	2.33 9.43 1.74	10.44	8.7	2.00	10.70	2.26 9.36	7.1 2.33 9.43
16	1.91 10.01	8.1	2.10 10.20 1.71	10.51	8.8	2.00	10.80	1.74 10.44	8.7 2.00 10.70
17	1.65 10.65	9.0	1.96 10.96 1.56	10.86	9.3	1.94	11.54	2.11 9.61	7.5 2.28 9.73
18					9.7	1.86	11.56	1.66 10.66	9.0 1.96 10.96
19								1.63 10.13	9.1 1.96 11.06 +0.90
20								1.60 10.80	9.2 1.94 11.14
21								2.04 9.74	7.7 2.17 9.87
22									10.0
23									

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Nov. 30, 1912.

Series 8

Scale m. YELLOW December 14, 1912. Copied. YELLOW

Mc 2215 L' Pole. Y Mc 2216 12+75° L' P

Yellow Act. Corr. -14

	sc 1	sc 2	Curve Magn.			sc 1	sc 2	Curve Magn.		
10	~~6+~~	6.1	~~2.64~~	.	.	1	8.0			curve magn.
11		7.1	~~2.33~~	.	.	2	8.1			
12		7.4	~~2.26~~	.	.	3				two far from c.
13		8.0	~~2.12~~	.	.	4				" "
14		8.1	~~2.10~~	.	.	5				" "
15		9.2	~~1.94~~	.	.	6				" "
				.	.	7a	4.1	4.0		Doubt as to which star
16		~~9.4~~ ?		.	.	7b	~~5.7~~	5.9	2.69	8.59 is correct no 7 - both measured.
17				+2.57	8.87	8		6.3	2.56	8.86
18				2.71	8.71	9		6.0	2.65	8.65
19				2.63	8.83	10		6.2	2.60	8.80
4				.	.	11				two from from center
4R		7.2	~~2.31~~	1.94	9.94	12		8.0	2.11	10.11
5R		7.3	~~2.28~~	2.33	9.23	13		6.9	2.39	9.29
6R		6.2	~~2.60~~	1.91	10.01	14		8.1	2.10	10.20
7R		7.3	~~2.28~~	1.74	10.44	15		8.1	2.00	10.10
8R		8.1	~~2.10~~	1.86	10.16	16		8.3	2.06	10.36
9R		8.9	~~1.97~~	1.91	10.01	17		8.1	2.10	10.20
				.	.	18		9.9	.	.

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Series 8

Scale m YELLOW December 14, 1912 Copied

Mc 2219 3.7 + 23.9 L' Pleiades ~~alt. corr.~~ Y

yellow alt. corr. +.11

Curve	Magn.		sc.1	sc.2	Curve Magn.
			+		
.	.	f = 15	4.1		
+1.73	10.43	k' = 30	8.7	2.00	10.70
.	.	i' = 22	5.9	2.69	8.59
2.71	8.71	i = 19	6.0	2.66	8.66
1.91	10.01	j⁵ = 28	8.1	2.40 (1)	10.50 (2)
.	.	e' = 12. 30			
.	.	g = 16	4.1		
2.66	8.76	j = 23	6.1	2.63	8.73
2.29	9.29	k = 29	7.0	2.36	9.36
.	.	h = 17	4.9		
.	.	a = 1 1.0	1.5		
.	.	f = 5 2.1	2.3		
2.62	8.82	j² = 24	6.2	2.60	8.80
1.97	9.87	j¹ = 27	7.9	2.14	10.04
2.45	9.05	j³ = 25	6.6	~~1.96~~ 2.47	~~8.56~~ 9.07
		e = 11 3.8	4.0		

YELLOW Q.

Mc 2220 L' 4 + 75° ~~alt. +.14~~ Y →

yellow alt. corr. +.08

Curve	Magn.		sc.1	sc.2	Curve Magn.
.	.	1	4.0	4.2	
.	.	2	3.9	4.1	
.	.	3 too far from c			
.	.	4	3.2	3.4	
.	.	5 too far from c.			
.	.	6	5.7	+2.74	8.44
.	.	7	5.9	2.69	8.59
.	.	8	5.3	2.88	8.18
.	.	9	5.9	2.69	8.59
+2.26	9.36	10	7.1	2.33	9.43
2.33	9.23	11	6.9	2.38	9.28
1.97	9.87	12	7.9	2.14	10.04
2.41	9.11	13	6.7	2.44	9.14
1.88	10.08	14	8.2	2.08	10.28
1.91	10.01	15	8.1	2.10	10.20
2.29	9.29	16	7.0	2.36	9.36
1.70	10.50	17	8.8	2.00	10.80
1.65	10.65	18	9.0	1.96	10.96
1.65	10.65	19	9.0	1.96	10.96
		20	f.		

Mc 2221 Pole L'

	sc.1	sc.2
10	6.3	+ ~~2.56~~
11	7.1	2.33
12	7.5	2.23
13	8.0	~~2.12~~
14	8.2	2.08
15	8.7	~~2.03~~
16	9.0	~~1.96~~
17	f.	
18		
4 p	7.2	
5 p	7.5	
6 p	6.3	
7 p	7.3	
8 p	8.1	
9 p	9.0	

M.O.R.

11.08

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11:05

Mc 2222 Pole L see P.181 for reduction

Mc 2223 A½ L.

		sc.1	P.C. sc.1	sc.1	Magn.	P.C.	sc.2 Cont.		
				1 B.	7.11	6.0 1.11	28	9.1	4.84 13.94
	5		5.3	2 3.0	7.20	6.1 1.10	29	9.5	4.95 14.45
m edge	6		5.5	3 3.2	7.38	6.3 1.08	30	n.s.	
	8		6.9	4 3.2	7.30	6.2 1.10			
	9		1.8 6.9 w.s.	.5 ; curve magn.	7.3 0.98	too far from center			
	10	4.7	8.1	6 4.2 4.20 8.40	7.6 0.95	8.55			
	11	5.0	8.7	7 4.0 4.19 8.19	7.2 1.00	8.20			
	12	5.6	9.0	8 4.1 4.20 8.29	7.2 1.00	8.20			
	13	6.0	9.3	9 4.3 4.20 8.50	7.8 0.92	8.72			
	14	6.3	9.7	10 .	8.7 0.88	too far from center 9.58?			
	15	6.6		11 5.2 4.22 9.42	8.4 0.88	9.28			
	16	6.9		12 5.3 4.23 9.53	9.0 0.89	9.89			
	17	7.2		13 5.2 4.22 9.42	8.9 0.89	9.79			
	18	8.3		14 5.7 4.21 9.97	9.3 0.91	10.21			
	19	7.8		15 6.1 4.30 10.40	9.3 0.91	10.21			
	20	8.0		16 6.0 4.30 10.30	9.7 0.96	10.66			
	23	8.5		17 6.3 4.32 10.62	D.S.				
	25	8.9		18 7.0 4.43 11.43					
	26	9.3		19 6.7 4.38 11.08					
	27	9.9		20 7.3 4.48 11.78					
				21 7.2 4.47 11.67					
				22 7.5 4.53 12.03					
				23 7.8 4.59 12.39					
				24 8.3 4.67 12.97					
				25 8.6 4.73 13.33					
				26 8.7 4.76 13.46					
				27 9.2 4.86 14.08					
				27a 8.9 4.80 13.70					

cont. above →

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cont.

Scale x. S December 17, 1912. Copied

Mc 2224 & B2. S

alt. +.17

	B.	Curve	Magn.
1			
too far from c. 2			
" " 3			
4	3.9		
5	3.8		
6	4.1	+ 4.20	8.30
P.C. sup? 7	4.1	4.20	8.30
8	4.2	4.20	8.40
9	4.3	4.20	8.50
10	4.9	4.21	9.11
11	4.8	4.21	9.01
12	4.9	4.21	9.11
13	4.8	4.21	9.01
14	5.2	4.23	9.43
15	5.2	4.23	9.43
16	5.3	4.23	9.53
17	5.6	4.26	9.86
18	5.7	4.26	9.96
19	6.1	4.30	10.40
20	6.2	4.31	10.51
21	6.5	4.35	10.85
22	6.4	4.34	10.74
23	6.3	4.32	10.62
24	6.4	4.33	10.73
25	7.5	4.52	12.02
26	7.4	4.50	11.90

P.C.

	Curve	Magn.
5.9	+ 1.12	7.02
6.4	1.07	7.47
6.6	1.05	7.65
6.8	1.04	9.84
6.8	1.04	7.84
7.3	0.98	8.28
6.9?	1.03	7.93?
7.3	0.98	8.28
7.8	0.92	8.72
8.2	0.90	9.10
8.2	0.90	9.10
8.7 8.70 00	0.88	9.58
8.28 8.20 00	0.90	9.10
8.8	0.88	9.68
8.9	0.88	9.78
8.9	0.88	9.78
9.3	0.91	10.21
9.9	0.97	10.87

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see below for Mc 2226. S

cont. sc. 2

P.C.

		Curve	Magn.
27	7.9	4.60	12.50
28	8.0	4.63	12.63
29	8.4	4.69	13.09
30	8.9	4.80	13.70
31	9.3	4.89	14.19
32	9.9	5.06	14.96

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Mc 2226. & 5 + 15° C3

alt. +.12

	B.	Curve			
1			5.2	1.19	6.39
too far 2.			5.8	1.13	6.93
3	B.		5.8	1.13	6.93
3	3.0		6.1	1.11	7.21
too far 5			6.2	1.10	7.30
6	3.1		6.2	1.10	7.30
7	3.7		6.9	1.03	7.93
8	3.9	Curve Magn.	7.0	1.02	8.02
9	4.2	4.23 8.40	7.9	0.92	8.82
10	4.1 4.10	4.1 4.20 8.30	7.1	0.94	8.64
11	4.3	4.20 8.50	7.9	0.92	8.82
12	4.1	4.20 8.30	8.3	0.88	9.18
13	4.1	4.20 8.30	8.6	0.88	9.48
14	5.0	4.22 9.22	8.9	0.88	9.78
15	5.2	4.23 9.43	9.2	0.90	10.10
16	5.2	4.23 9.43	9.2	0.90	10.10
17	5.3	4.23 9.53	9.3	0.91	10.21
18	5.7	4.26 9.96	9.1	0.96	10.66
19	5.8	4.28 10.08			

cont.

		Curve	Magn.
20	6.1	4.30	10.40
21	6.2	4.31	10.51
22	6.0	4.30	10.30
23	6.9	4.41	11.31
24	6.9	4.41	11.31
25	7.3	4.49	11.79
26	7.2	4.47	11.67
27	8.2	4.66	12.86
28	8.5	4.70	13.20
29	8.9 8.95 9.0	4.81	13.76
30	9.1 9.10 9.7	5.00	14.70

M.O.R.

comparisons hazy -

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Plates taken Nov. 30, 1912.

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Scale 2. December 17, 1912 S S

	Mc 2227 L Pole see P. 181 for reduction. P.C.		Mc 2229. L (5h.6 + 44°.8) 25K. Alt. +2.0 P.C.				
					curve	Magn.	curve Magn.
5		5.2	1	2.9			
6		5.7	2	3.6			
8		7.1	3	4.3	4.20	8.50 (.63)	8.9 0.91 (9.04) 8.91
9		7.8	4	5.2	4.22	9.42 (.55)	9.7 0.96 10.66 (.79)
10	4.7	7.8	5	6.2	4.31	10.51 (.64)	
11	5.1	8.6	6	6.4	4.33	10.73 (.86)	
12	5.5	8.8	7	7.1	4.45	11.55 (.69)	
13	5.9	9.1	8	7.3	4.49	11.79 (.93)	
14	6.2	9.8	9	7.4	4.50	11.90 (12.04)	
15	6.5		10	7.9	4.61	12.51 (.65)	
16	6.8		11	8.3	4.68	12.98 (13.12)	
17	7.0		12	8.5	4.71	13.21 (.35)	
18	7.5		13	9.0	4.82	13.82 (.96)	
19	8.0		14	9.3	4.89	14.19 (14.33)	
20	8.2		15	9.9	5.06	14.96 (15.10)	
23	8.6		16				
25	9.0		17				
26	9.3		18				
27	9.7		19				
			20				

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Plates taken November 30, 1912.

Scale U. December 17, 1912.

	mc 2233 L			Pole. P.C.			Mean S.		Mean P.C. S	
	a	a	a					Diff.		Diff.
5				5.3	5.3	5.2	5.27		5.27 0 0 1	+ 1.12
6				6.1	5.5	5.7			5.77 3 3 1	1.21
7										
8				7.1	6.9	7.1			7.03 1 1 1	1.07
9		mc 2222	mc 2227	7.7	7.8	7.8			7.77 1 0 0	0.93
10	4.7	4.7	4.7	6.980	8.1	7.8	4.70 0 0 0	+.419	7.91 0 1 2/3	0.92
11	5.1	5.0	5.1	8.6	8.7	8.6	5.07 0 1 0	4.35	8.63 0 1 0	0.79
12	5.4	5.6	5.5	8.9	9.0	8.8	5.50 1 1 0	4.23	8.90 0 1 1	0.83
13	5.9	6.0	5.9	9.2	9.3	9.1	5.93 0 1 0	4.34	9.20 0 1 1	0.97
14	6.2	6.3	6.2	9.5	9.7	9.8	6.23 0 1 0	4.29	9.97 2 0 1	0.85
15	6.4	6.6	6.5	9.9	.	.	6.50 1 1 0	4.44	9.9 a	1.04
16	6.7	6.9	6.8				6.80 1 1 0	4.46	4/3 4/3 1/3	
17	7.0	7.2	7.0				7.07 1 1 1	4.42	+0.13 -0.13 -0.03	
18	7.4	7.3	7.5				7.40 0 1 1	4.52	1/3 2/3 3/3	
19	7.9	7.8	8.0				7.90 0 1 1	4.38	-0.03 +0.07 -0.10	
20	8.1	8.0	8.2				8.10 0 1 1	4.49	2/3 2/3 1/3	
23	8.4	8.5	8.6				8.50 1 0 1	4.70	-0.07 +0.07 -0.03	
25	8.8	8.9	9.0				8.90 1 0 1	4.83	+3 0 -4	
26	9.2°	9.3	9.3				9.20 2 1 1	4.99	9 7 7	
27	9.25	9.9	9.7				9.70 2 2 0	4.85	+0.03 0.00 -0.04	
28	9.9	.					9.9 a	5.07		
							1/5 2/5 0/5			
							-0.02 +0.04 0.00			
							3/5 1/5 1/5			
							-0.06 +0.02 +0.02			
							6/5 3/5 3/5			
							-0.12 +0.08 +0.06			
							-10/15 +6/15 +5/15			
							-0.07 +0.04 +0.05			

12:40
MOR.

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182

Plates taken Nov. 18, 1912.

Scale W. YELLOW December 19, 1912

10:09 S

mc 2149 L' Pole.

Diff from Mean		2c.1	2c.2	Mean.	1 − 2		Mean	P.183 mc 2157	Fr. P.183 mc 2153	Mean	mc 2149 Res.	mc 2153	mc 2157
+ 1.91	10	6.5	6.6 6.9	~~6.70~~	~~2~~ 2	4	6.75	2 1	7.10	7.10	6.98	23	12 12
1.80	12 ~~11~~	7.1	7.8 7.9	~~(11) 7.55~~	~~1 0~~	2 (12)	7.85	0 1	~~7.80~~ 8.10	7.85	7.93	08	08 17
+ 1.69	11 ~~12~~	7.5	7.6 7.6	~~(12) 7.80~~	~~1 1~~	1 (11)	7.60	0 0	7.80	7.80	7.73	13	07 07
1.74	13	8.3					8.3		8.7	8.3	8.43	81	81 43
1.89	14	8.7					8.7		8.7	8.5	8.63	81	81 1
2.01	15	8.9					8.9		9.3	8.6	8.93	0	3 4
1.96	16	9.3					9.3		.	9.3	9.30	0	0 .
1.79	17	9.7					9.7		.	9.7	9.70	0	0 .
	18	~~7.~~								.			
	4N	8.1					8.1		8.1	7.90	8.03	1	1 1

Burn Magn. 1.86 9.89

	5R	8.3					8.3		8.3	7.95	8.18	1	3 1

1.86 10.04

	6R	7.3 7.4	7.2	~~7.25~~	~~1 0~~	1	7.30	1 1	7.35	7.10	7.25	05	10 15

1.84 9.09

	7R	7.5 7.6	8.0	~~7.75~~	~~3 2~~	5	7.80	2 2	8.1	7.75	7.88	08	13 22

1.86 9.74

	8R	8.5					8.5		8.6	8.4	8.50	0	1 1

1.86 10.36

	9R	9.0					9.0		9.3	9.0	9.10	1	1 2

1.86 10.96

	10N	10.0					10.0		.		10.0	a	

1.86 11.86

11/5

−0.22

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Nov. 18, 1912 - cont.

Scale W YELLOW copied December 19, 1912 - YELLOW

	Mc 2151 L'			1+15° S	Mc 2153 L' Pole. see P. 182 YELLOW			Mc 2157 L' Pole See P. 182		
	sc 1	sc 2	1-2	Mean	sc 1	sc 2	1-2		sc 1	sc 2	1-2
			Alb. + in	curve Magn.							Mean
1	5.0 5.1	4.9	1	5.00 ± 1	10 6.9	7.0 7.2	3	7.10 ± 1	10 7.0	7.1 7.1	1 7.10 ± 0
2					11 7.8	7.9 7.7	1	7.80 ± 1	11 7.7	7.8 7.8	1 7.80 ± 0
3	3.8 3.9	13.		3.9 a	12 7.7	7.8 7.9	2	7.85 ± 1	12 7.9	8.0 8.2	3 8.10 ± 1
4					13	8.3			13	8.7	
5	6.2 6.3	6.3	1	6.30 ± 0 1.82 8.12	14	8.5			14	8.7	
6	5.9 6.0	6.0	1	6.00 ± 0 1.82 7.82	15	8.6			15	9.3	
7	4.9 5.0	4.9	0	4.95 ± 1	16	9.3			16	~~7.~~ n.s.	
8	6.8 6.9	7.0	1	6.95 ± 0 1.84 8.79	17	9.7			17		
9	6.7 6.8	6.7	0	6.75 ± 1 1.83 8.58	18	n.s.			18		
10	6.7 6.6	7.2	5	7.00 ± 2 1.84 8.84							
11	7.4 7.5	7.4	0	7.45 ± 0 1.84 9.29	4r	7.7 7.8	8.0 3	7.90 ± 1	4r	8.1	
12	7.8 7.9	7.8	0	7.85 ± 0 1.86 9.71	5r	7.8 7.9	8.0 2	7.95 ± 0	5r	8.3	
13	6.9 7.0	7.1	2	7.05 ± 1 1.84 8.89	6r	6.9 7.0	7.2 3	7.10 ± 1	6r	7.3 7.4	7.3 0 7.35 ± 10
14		8.2		1.86 10.06	7r	7.7 7.8	7.7 0	7.75 ± 1	7r	8.1	
15		8.7		1.86 10.56	8r	8.4			8r	8.6	
16		8.7		1.86 10.56	9r	9.0			9r	9.3	
17		9.5		1.86 11.36							
18											
19											
20											
			10/10				12/7				5/4
			-0.10				-0.17				-0.12

double. diff to measure.

copied.

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Sale W YELLOW Copies December 19, 1912.

Mc 2159 L' 1+15° S

Alt. +.11

	ac 1	sc 2	1-2		Curve	Magn.
1	4.0 5.0	4.7	3			
3	4.0	4.1	B.	Mean.		
5	6.2	6.3	6.2	0	6.25 10	1.82 8.07
6	5.9	6.0	6.0	1	6.00 0 0	1.80 7.80
7	5.1	5.2	4.8	3	5.00 2 1	
8	5.6	5.7	5 6.1	3	5.80 1 1	
9	6.5	6.6	6.3	2	6.45 2 1	1.83 8.28
10	6.9	7.0	6.7	2	6.85 2 1	1.84 8.69
11	7.2	7.3	7.4	2	7.35 1 0	1.84 9.19
12	7.9	8.0	7.9	0	7.95 0 1	1.85 9.80
13	6.7	6.8	6.7	0	6.75 0 1	1.84 8.59
14	7.	8.1				1.86 9.96
15		8.9				1.85 10.75
16		8.7				1.85 10.55
17		9.2				1.86 11.06
18		N.S.				

+4
10
+0.04

Mar. 11.03

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Plates taken Dec. 1, 1912.

Scale 11

December 23, 1912.

10:15

Mc 2237. L Pole.

	a- sc.1	a sc.		a			S Diff.	P.C. sc.1	sc 2	Mc 2242 remeas.	Mc 2248	Mean (see below for Diff.)		
		Meas. Dec. 23, '12. Mc 2242	re meas. Dec. 27, '12. Mc 2242	meas. Dec. 21, '12. Mc 2248										
5								5.9	5.3	5.35 5.4	5.3	5.52	4	2 2
6								6.1	6.0	6.00 6.0	6.1	6.21	4	3 2
8								7.9	7.6	7.60 7.6	7.2	7.51	3	0 4
9			Mean		Mean			8.3	8.1	8.15 8.2	7.9	8.12	2	0 2
10	5.2	5.0 4.95	4.9	4.3	4.82	4	1 5	8.5	8.3	8.30 8.3	8.2	8.33	2	0 1
11	5.1	5.3 5.30	5.3	5.1	5.43	3	1 3	9.3	9.0	8.95 8.9	8.9	9.05	3	1 1
12	6.2	5.6 5.65	5.7	5.4	5.75	5	1 3	9.9	9.3	9.35 9.4	9.2	9.48	4	1 3
13	6.6	6.1 6.10	6.1	5.9	6.20	4	1 3		9.1	9.50 9.9	9.7	9.75		0 1
14	7.0	6.4 6.30	6.2	6.1	6.47	5	1 4							
15	7.2	6.9 6.90	6.5	6.3	6.80	4	1 3							
16	7.5	7.1 7.05	7.0	6.9	7.15	3	1 3							
17	7.7	7.3 7.30	7.3	7.1	7.37	3	1 3							
18	8.1	7.8 7.85	7.9	7.6	7.85	3	0 2							
19	8.5	8.3 8.20	8.1	8.0	8.43	3	0 2							
20	8.8	8.1 8.60	8.5	8.2	8.33	3	1 3							
23	9.3	8.9 8.95	9.0	8.4	8.88	4	1 5							
25	9.7	9.3 9.35	9.4	9.1	9.38	3	0 3							
26	?	9.1 9.15	9.8	9.4	9.58		2 2							
27				9.8	9.8		0							

21	4	6
5	5	5
+0.42	-0.08	-0.12
13	4	11
4	4	4
+0.32	-0.10	-0.28
11	6	15
4	5	5
+0.28	+0.12	-0.30

	13	5	10
	4	4	4
	+0.32	-0.12	-0.25
	9	2	6
	3	4	4
	+0.30	-0.05	-0.15

P.C.

No.	Diff.
5	+0.87
6	+0.71
8	0.53
9	0.58
10	0.56
11	0.37
12	0.25
13	0.42

more

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Plates taken Dec. 1, 1912. cont.

Scale R. copied S December 23, 1912. S copied S

mc 2238 4+75° L a. S

alt. +.12

	sc.	curve		
1	3.2			
2	3.8			
too far from centre 3	.			
4	3.9			
too far from centre 5	.			
6	4.3			
7	4.9	3.96	8.86	
8	4.7	3.99	8.66	
9	4.9	3.996	8.86	
10	5.0	3.96	8.96	
11	5.3	3.97	9.27	
12	5.9	4.00	9.90	
13	5.1	3.99	9.69	
14	6.3	4.01	10.31	
15	6.3	4.01	10.31	
16	6.3	4.01	10.31	
17	6.7	4.04	10.74	
18	7.0	4.06	11.06	
19	7.1	4.06	11.16	
20	7.5	4.10	11.60	
21	7.2	4.08	11.28	
22	8.2	4.17	12.37	
23	8.1	4.16	12.26	
24	8.5	4.22	12.72	
25	8.9	4.29	13.19	
26	9.0	4.33	13.33	
27	9.7	4.63	14.33	
28				

	P.C. curve	mag.
6.3	~~0.75 3.62~~	~~7.05 9.92~~
6.7	0.70 ~~3.60~~	7.40 ~~10.30~~
6.7	0.70 ~~3.60~~	7.40 ~~10.30~~
6.9	0.68 ~~3.58~~	7.58 ~~10.18~~
8.0	0.54 ~~3.53~~	8.54 ~~11.53~~
8.1	0.54 ~~3.52~~	8.64 ~~11.62~~
8.3	0.52 ~~3.51~~	8.82 ~~11.81~~
8.3	0.52 ~~3.51~~	8.82 ~~11.81~~
8.4	0.51 ~~3.51~~	8.91 ~~11.91~~
9.3	0.42 ~~3.60~~	9.72 ~~12.92~~
9.2	0.43 ~~3.59~~	9.63 ~~12.79~~
9.5	0.37 ~~3.65~~	9.87 ~~13.15~~
9.3	0.42 ~~3.62~~	9.72 ~~12.92~~

mc 2239 S 4+45° B2

alt. +.18

	sc.		
3.0			
too far	.		
4.2			
4.3			
too far	.		
4.6	3.95?	8.55	
4.6	3.95?	8.55	
4.9	3.96	8.86	
5.3	3.98	9.28	
5.1 4.4	3.97	9.07	
5.3	3.98	9.28	
5.1	3.96	9.06	
5.3	3.98	9.28	
5.9 5.9	4.00	9.90	
5.6 5.9	3.99	9.64	
6.2	4.00	10.20	
6.3	4.01	10.31	
6.7	4.04	10.74	
6.8	4.04	10.84	
7.1	4.06	11.16	
7.2	4.07	11.27	
7.2	4.07	11.27	
7.2	4.07	11.27	
7.9	4.14	12.04	
8.1	4.16	12.26	
8.3	4.18	12.48	
8.4	4.20	12.60	

cont.

	P.C.	curve	magn.
6.2		0.76	6.96
6.8		0.70	7.50
6.9		0.68	7.58
7.3		0.63	7.93
7.4		0.62	8.02
7.9		0.56	8.46
7.1		0.58	8.28
7.9		0.56	8.46
8.3		0.52	8.82
8.7		0.48	9.18
8.7		0.48	9.18
8.9		0.46	9.36
8.9		0.46	9.36
8.9		0.46	9.36
9.4		0.39	9.79
9.4		0.39	9.79
10.0		0.29	10.29

29	9.0	4.33	13.33
30	9.3	4.45	13.70
31	9.7	4.63	14.33
32			

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Cont.

Scale 11 — Checked — December 23, 1912

S — Mc 2240 & 7.15° — S — Mc 2242 Pole & see below.

alt. -.18

P.C.

		curve	magn.	curve	magn.		curve	magn.	curve	magn.
too far away	1	6.		0.76	6.96					13.08
too far away.	2	.		6.2 3.63	9.83	28	8.1 3.53	12.23	+4.24	+2.94
	3	4.0	.	0.67	7.67					47
magn. curve	curve magn.			7.0 3.57	10.67	29	9.0 3.56	12.56	4.33	13.33
8.75	+3.95	4	4.2 .	0.66	7.76					47
88			curve magn.	7.1 3.57	10.67	30	9.0 3.56	12.56	4.33	13.33
8.86	3.96	6	4.9 3.71 8.61	0.63	7.93					89
8.96	3.96	7	5.0 3.70 8.70	7.3 3.56	10.86	31	9.3 3.62	12.92	4.45	13.75
9.06	3.96	8	5.1 3.70 8.80	0.56	8.46					47
8.9				7.9 3.54	11.44	32	9.7 3.76	13.46	4.63	14.33
9.46	3.96	9	5.0 3.70 8.70	0.54	8.64					61
9.17	3.97	10	5.2 3.70 8.90	8.1 3.52	11.62	33	9.8 3.80	13.60	4.67	14.47
9.28	3.98	11	5.3 3.69 8.99	0.52	8.91					
9.69	3.99	12	5.1 3.66 9.06	8.4 3.51	11.91					
9.38	3.98	13	5.4 3.68 9.08	0.50	9.00					
10.31	4.01	14	6.3 3.621 9.92	8.5 3.51	12.01					
10.10	4.00	15	6.1 3.63 9.13	0.52	8.82					
10.00	4.00	16	6.0 3.64 9.64	8.3 3.61	11.81					
10.41	4.01	17	6.4 3.62 10.02	0.48	9.18					
10.41	4.01	18	6.4 3.62 10.02	8.7 3.53	12.23					
10.41	4.01	19	6.4 3.62 10.02	0.48	9.18					
10.84	4.04	20	6.8 3.59 10.39	8.7 3.53	12.23					
11.27	4.07	21	7.2 3.56 10.76	0.44	9.54					
11.49	4.09	22	7.4 3.56 10.96	9.1 3.57	12.67					
12.04	4.14	23	7.9 3.54 11.44	0.50	9.10					
		24		8.6 3.52	12.12					
12.26	4.16	25	8.1 3.53 11.63	0.32	10.32					
		26		9.9 3.85	13.75					
		27		sup.						
				0.34	10.04					
				9.7 3.76	13.46					

Mc 2242 Pole & (see P. 185 for reduction)

5		5.3	
6		6.0	
8		7.6	
9		8.1	
10	5.0	8.3	scratch through both
11	5.3		42
12	5.6		9.0
13	6.1		9.3
14	6.4		9.7
15	6.9		n.s.
16	7.1		
17	7.3		
18	7.8		
19	8.3		
20	8.7		
21	8.9		
25	9.3		
26	9.7		
27	n.s.		

mor.

11:30

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C2. Measures of ~~p.e.~~ Polar Seq. 5–15. Standard Seq. Stars 1–10

Sc. U. Dec 23, 1912

HD 943

				Magn.	p.e
St.	1	3.7	+ 3.21	6.91	5.8
	10	7.1	3.60	10.70	
	5	5.0	3.33	8.33	
	2	4.1	3.24	7.34	
	8	5.8	3.40	9.20	
	3	4.8	3.32	8.12	
	6	5.3	3.36	8.66	
	4	5.1	3.34	8.44	
	9	6.1	3.43	9.53	
	7	5.9	3.41	9.31	
			Diff.		
Pol.	5	3.2	+ 3.19		
	10	5.4	3.49		
	15	7.2	3.74		
	8	4.9	3.20		
	11	6.0	3.42		
	9	5.3	3.40		
	14	7.0	3.52		
	12	6.3	3.43		
	13	6.7	3.47		
	6	3.9	3.18		

Plotted C.
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Measures of Prismatic Companions.

Se. U C 3 Dec 26, 1912

HC 1422

			Curve reading	Magn.
St.	1	5.2	+1.10	6.30
	10	6.9	1.10	8.00
	8	6.7	1.10	7.80
	6	6.2	1.10	7.30
	2	5.4	1.10	6.50
	7	6.7	1.10	7.80
	3	5.6	1.10	6.70
	11	7.3	1.10	8.40
	4	6.0	1.10	7.10
	9	7.3	1.10	8.40
	5	5.9	1.10	7.00
	12	7.9	1.13	9.03
	14	8.3	1.16	9.46
	13	8.1	1.14	9.24
	15	8.7	1.19	9.89
	16	9.0	1.22	10.22
	17	8.9	1.21	10.11
	18	9.3	1.24	10.54
	19	9.1	1.23	10.33
	20	9.5	1.27	10.77
			Diff.	
Pol.	5	5.3	+1.09	
	10	7.9	0.99	
	6	5.8	1.18	
	11	8.2	1.22	
	8	7.0	1.10	
	12	8.7	1.03	
	9	7.6	1.10	
	13	9.1	1.07	
	14	9.2	1.22	
	15	9.7	1.24	

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HC 1422

		Sec 2	Sec 1	Curve reading.	Magn.
St. (1-7)	7	5.1		2.74	7.84
	1		3.9	2.69	6.59
	4		4.3	2.70	7.00
	6	4.9		2.73	7.63
	2	4.2	4.2	2.70	6.90
	5	4.8		2.72	7.52
	3		4.3	2.70	7.00
Pol.	5		3.7	2.69	~~6.83~~
	9	5.9		2.80	
	11	6.6		2.82	
	8	5.3		2.80	
	10	6.1		2.79	
	13	7.3		2.87	
	14	7.6		2.92	
	12	6.9		2.83	
	15	7.9		3.04	
	6	4.3		2.68	

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Rhodes takaki Dec. 1 1912.

11.45

December 27, 1912.

Scale U. MC 2242 Pole L. Remeasured - see P. 185 for reduction.

	sc. 1	sc. 2.	G.C.
5			5.4
6			6.0
8			7.6
9			8.2
10	4.9		8.3
11	5.3		8.9
12	5.7		9.4
13	6.1		9.9
14	6.2		
15	6.5		
16	7.0		
17	7.3		
18	7.9		
19	8.1		
20	8.5		
23	9.0		
25	9.4		
26	9.8		

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cont, Taken Dec. 1, 1912.

Scale 2

Copied S

December 27, 1912. copied S

S

Mc 2245 (30 K)

alt. +.17

curve →

	Rc.1		Magn.	
1	4.1			
2	4.8	3.72	3.95	8.75
3	4.9	3.71	3.96	8.86
4	5.3	3.69	3.97	9.27
5	6.2	3.63	4.00	10.20
6	6.1	3.63	4.00	10.10
7	6.3	3.60	4.01	10.31
8	6.7	3.60	4.03	10.73
9	7.2	3.56	4.08	11.28
10	7.3	3.56	4.08	11.38
11	8.0	3.53	4.15	12.15
12	8.4	3.51	4.20	12.60
13	8.6	3.50	4.23	12.83
14	8.9	3.55	4.29	13.19
15	9.1	3.54	4.37	13.47
16				
17				
18				

10.6 +45.1 L S

	P.C.	curve	Mag.
	7.3	+0.63	7.93
	8.1	0.54	8.64
	8.6	0.49	9.09
	9.2	0.43	9.63
	9.3	0.41	9.71
	9.9	0.31	10.21

* Mc 2246 alt. +.04

	Rc.1	curve	Magn.
1	.		
2	.		
3	.		
4	4.1	.	
5	.		
6	4.1	.	
7	.		
8	.		
9	4.7	+3.98	8.66
10	4.6?	3.96	8.56?
11	5.2	3.97 3.99	9.17
12	5.3	3.98	9.28
13	5.3	3.98	9.28
14	6.1	6.10 6.1 4.00	10.10
15	5.7	3.99	9.69
16	6.3	4.00	10.30
17	6.8	4.04	10.84
18	7.0	4.06	11.06
19	6.8	4.04	10.84
20	7.1	4.06	11.16
21	7.1	4.06	11.16
22	7.3	4.08	11.38
23	7.9	4.14	12.04
24	8.1	4.18 6	12.26
25	8.2	4.17	12.37

Cont →

	P.C.	curve	magn.
	6.1	+ 0.16	6.86
	6.1	0.76	6.86
	7.0	0.67	7.67
	7.1	0.66	7.76
	7.2	0.64	7.84
	7.8	0.57	8.37
	8.3	0.52	8.82
	8.2	0.53	8.73
	8.2	0.53	8.73
	8.9	0.46	9.36
	9.0	0.45	9.45
	9.3	0.42	9.72
9.7	9.7	0.34 0.34	10.04 10.04
	8.2	curve +4.17	12.37
	8.9	4.29	13.19
	9.0	4.33	13.33
	9.0	4.33	13.33
	9.2	4.41	13.61
	9.9	4.50 4.42	14.40 13.82

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* Mc 2246 - Neg. does not come in center of plate.

Nos 1, 2, 3, 5, 7, 8 are too far from center.

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1913phae.proj..988L

Taken Dec 1, 1912 const.

Scale.

Copied S

December 27, 1912.

	MC2247 9-15 L.D5. S			MC2248 Pole L. See P. 185 for reduction.	
		P.C. - curve Magn.			P.C.
trs fac from c. 1	curve Magn.	7.2 +0.64	7.84	5	5.3
" " 2	7.9	7.9 0.56	8.46	6	6.1
" " 3	8.0	8.0 0.54	8.54	8	7.2
" " 4	8.2	8.2 0.53	8.73	9	7.9
" " 5		8.6 0.50	9.10	10 4.3	8.2
6	5.1 +3.96	9.06	8.7 0.48	9.18	11 5.1
7	5.3 3.98	9.28	9.1 0.44	9.54	12 5.4
8	5.6 3.99	9.59	9.0 0.45	9.45	13 5.9
9	5.8 3.99	9.79	9.3 0.41	9.71	14 6.1
10	5.9 4.00	9.90	9.9 0.31	10.21	15 6.3
11	6.1 4.00	10.10	9.8 0.33	10.13	16 6.9
12	6.2 4.00	10.20			17 7.1
13	6.9 4.04	10.94			18 7.6
14	6.9 4.05	10.95			19 8.0
15	7.2 4.07	11.27			20 8.2
16	7.0 4.06	11.06			23 8.4
17	7.1 4.06	11.16			25 9.1
18	7.6 4.11	11.71			26 9.4
19	7.7 4.12	11.82			27 9.8
20	8.7 8.7 8.70 4.24	12.94			
21	8.3 8.3 8.30 4.19	12.49			
22	8.6 4.23	12.83			
23	8.8 4.27	13.07	copied.		
24	8.9 4.29	13.19			
25	8.9 4.29	13.19			
26	9.1 4.36	13.46			
27	9.7 4.63	14.33			
28	n.s.				

M. OR.

12.35.

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Prismatic Companions.

Sc. U C5 Dec 28, 1913

NGC 1365

		Diff.	
Od.	6	6.7	+0.88
	8	8.0	0.10
	5	6.1	0.29
	10	8.6	0.29
	13	9.9	0.27
	9	8.4	0.30
	11	9.1	0.32
	14	?	.
	12	9.5	0.23
		Curve reading.	Magn.
St. near edge		6.3	+0.23 6.53
Near edge	3	7.0	0.21 7.21
	6	8.7	0.27 8.97
	4	7.7	0.22 7.92
	2	7.2	0.21 7.41
	5	8.3	0.25 8.55
	7	8.7	0.27 8.97
	9	9.0	0.28 9.28
	8	9.1	0.28 9.38
	10	9.7	0.30 10.00

NGC 206 C5.

		Diff.		
Od.	12	9.0	0.13	
	5	6.2	0.19	
	13	9.7	0.11	
	8	7.9	0.20	
	10	8.5	0.39	
	14	9.7	0.82	
	11	8.9	0.72	
	6	6.7	0.28	
	9	8.3	0.40	
	15	10.0	0.94	
			Curve reading.	Magn.
St.	1	6.5	+0.23	6.73
	3	7.3	0.35	7.55
	5	8.6	0.51	9.11
	2	7.7	0.31	8.01
	4	7.9	0.36	8.26
	9	8.7	0.54	9.24
	6	9.0	0.61	9.61
	10	9.5	0.77 ~~0.82~~	10.32
	7	8.5	0.56	9.36
	11	9.8	0.86	10.66
	12	9.8	0.86	10.66
	8	9.1	0.64	9.14

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Prismatic Comparisons

Dec 28, 1912

B3

Sc. U

HC 205

Pol.	5	~~4.8~~ 6.2	+0.19	
	10	8.9 8	0.59	
	6	6.7	0.28	
	9	8.3	0.30 0.40	
	8	7.7	~~0.24~~	
			curve reading	magn.
St.	7	7.5	+0.39	7.89
	2	6.3	0.20	6.50
	6	7.8	0.43	8.23
	1	6.2	0.18	6.38
	3	6.7	0.27	6.97
	5	7.2	0.34	7.54
	4	7.1	0.33	7.43

Plotted. O.

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C6

HC 992

Pol.	10	7.8	~~+1.38~~ +1.19	
	6	5.7	1.28	
	8	7.0	1.10	
	5	5.1	+1.29	
	9	7.7	1.00	
			curve	magn.
St.	6	7.1	1.14	8.24
Near edge of fil.	1	6.0	1.25	7.25
" " " "	2	6.2	1.23	7.43
	4	6.2	1.23	7.43
Right-ident.	10	7.7	1.08	8.18
	3	6.1	1.24	7.34
Im. super?	5	?	.	.
	7	6.9	1.16	8.06

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Prismatic Companions.

Sc U C 121 Dec 30, 1913

MC 154

			curve reading	magn.
St	15	9.7	−0.02	9.68
	2	6.0	+0.90	6.90
Near edge of pl.	8	7.8	0.44	8.24
	10	8.3	0.32	8.62
	7	7.4	0.54	7.94
	9	8.4	0.30	8.70
	3	6.1	0.88	6.98
	5	6.9	0.67	7.57
	11	8.7	0.22	8.92
	4	6.3	0.83	7.13
	12	8.9	0.17	9.07
	1	5.3	1.06	6.36
	6	7.7	0.47	8.17
	14	Reg. neglected.		
	13	9.3	0.07	9.37
			diff	
Pol.	5	5.3	+1.09	
	10	8.9	0.19	
	8	7.9	0.20	
	11	9.3	0.12	
	9	8.4	0.30	
	6	6.1	0.88	
	12	9.1	0.03	

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MC 154

			curve	magn.
St. ft. stars.	23	8.1	4.63	12.73
	24	8.5	4.64	13.14
	25	8.3	4.64	12.94
	26	8.7	4.64	13.34
	27	9.1	4.64	13.74
	28	8.9	4.64	13.54
	29	9.6	4.64	14.24
	30	9.8	4.63	14.43
			diff	
Pol. ft. stars.	19	7.7	4.58	
	23	8.6	4.60	
	21	8.1	4.72	
	25	9.1	4.63	
	26	9.5	4.69	
	27	9.9	4.65	
	20	7.9	4.69	

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Prismatic Companions

Dec 30, 1912

C12

Sc. "W"

*MC 1227

				magn.
St. ft stars	25	8.0	+ 5.07	13.07
	28	8.5	5.10	13.60
	26	8.3	5.09	13.39
	29	9.2	5.14	14.34
	27	8.7	5.12	13.82
	30	9.3	5.14	14.44
	31	9.7	5.15	14.85
Od. ft stars.	19	7.3	+4.98	
	25	8.6	5.13	
	20	7.5	5.09	
	23	8.2	5.00	
	27	9.4	5.15	
	26	9.0	5.19	
	28	9.8	5.17	
	21	7.8	5.02	

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*Images elongated

C9

MC 1280

				diff.
Od.	5	8.1		1.29
	10	8.1		0.79
	6	5.8		1.18
	8	7.2		0.90
	11	8.6		0.82
	9	7.8		0.90
	14	9.7		0.82
	12	9.0		0.73
	13	9.3		0.87
	15	10.0		0.94
			Curve	magn.
St.	1	5.9	+1.14	7.04
	5	6.9	0.97	7.87
	9	9.0	0.82	9.82
	2	6.0	1.13	7.13
	8	8.3	0.83	9.13
	10	defective		
	3	5.7	1.18	6.88
	6	7.1	0.94	8.04
	4	6.3	1.06	7.36
	7	7.9	0.85	8.75
	11	9.3	0.83	10.13
	14	9.7	0.84	10.24
	13	9.3	0.83	10.13
	13	9.3	0.83	10.13
	15	9.7	087	10.57

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Prismatic Companions

Sa. U A 3 Dec 31, 1912 C 10

		MC 1416				MC 1436		
			Diff.	magn.			Diff.	
St.	6	7.1	1.44	8.54	Pol.	5 5.4	0.99	
near edge	1	5.9	1.47	7.37		10 7.9	0.99	
	4	6.1	1.46	7.56		8 7.1	1.00 ~~0.08~~	
" "	2	5.9	1.47	7.37		9 7.8	0.90	
	5	6.2	1.45	7.65		11 8.3	1.12	
	13	5.9	1.47	7.37		14 9.5	1.02	
Pol.	10	7.4	1.49			13 9.1	1.07	
	8	6.7	1.40			6 5.9	1.08	
	5	4.9	1.49			12 8.7	1.03	
	9	7.3	1.40			15 9.8	1.14	
	6	5.4	1.58				curve.	magn.
					St.	3 6.1	+1.00	7.10
						9 8.2	1.00	9.20
						5 7.1	1.00	8.10
						11 8.7	1.02	9.72
						4 6.9	1.00	7.90
						6 ?		
					Dbl.	8 7.9	1.00	8.90
						10 8.7	1.02	8.92
						7 7.2	1.00	8.20
						2 6.2	1.00	7.20
						12 9.1	1.04	10.14
						1 5.6	1.02	6.62
						13 9.5	1.08	10.58
						14 9.8	1.09	10.89

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Prismatic Companions

Jan 2, 1913

Sciii Cg.

		Mc 1776			Mc 1776
Sd.	5	4.9 +1.49	St. Sd. p. stars.	27	8.6
	10	7.0 1.89		28	9.1
	8	6.3 1.80		29	9.5
	11	7.7 2.02		30	9.9
	9	6.8 1.90		31	
	12	7.8 1.93			
	14	8.4 2.12	Sd. ft.	20	7.1 5.49
	6	5.3 1.68		21	7.3 5.52
	13	8.1 2.07		23	7.7 5.50
	15	8.8 2.14		25	8.2 5.53
	17	9.5 1.99		26	8.5 5.69
	16	9.1 2.16		27	8.7 5.85
		aive. magn.		28	9.0 5.97
St.	2	5.1 +1.61 6.71		29	9.5 6.02
	5	6.0 1.76 7.76		30	9.9 6.00
	3	5.2 1.62 6.82			magn.
	7	6.9 1.89 8.79	St. ft.	27	8.7 5.80 14.50
	9	8.3 2.06 10.36		28	9.0 5.87 14.87
	6	6.2 1.79 7.99		29	9.3 5.94 14.24
	1			30	9.8 6.06 15.86
	4	5.9 1.74 7.64			
	10	8.7 2.08 10.78			
	13	8.9 2.08 10.98			
	12	8.7 2.08 10.78			
	11	8.6 2.08 10.68			
	14	9.1 2.08 11.18			
	8	7.4 ? 1.96 9.36			
	15	9.7 2.06 11.76			

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1913phae.proj..988L

Plates taken Dec. 2, 1912.

Scale U

January 4 1912

9:10 Mc 2255 Pole L S

S

	Sc.						Pris. Comp. Mc 2266	mean.			Diff.
5							6.1	6.1	6.10	0 0	+0.29
6							6.6	6.7	6.65	0 1	0.33
8	8.2						8.2	8.1	8.15	0 1	-0.05
9		Mc 2260 P.201	mean	Res.	Diff.		9.0	8.7	8.85	2 1	-0.15
10	5.3	5.1	5.20	1 1	+3.69		9.2	8.9	9.05	2 1	-0.16
11	5.7	5.7	5.70	0 0	3.72		9.8	9.4	9.60	2 2	-0.18
12	6.2	6.0	6.10	1 1	3.63			10.0	10.0	2 2	-0.21
13	6.7	6.2	6.75	3 2	3.72						
14	6.9	7.0	6.95	1 0	3.55						
15	7.2	7.4	7.30	1 1	3.64						
16	7.5	7.8	7.65	1 2	3.61						
17	8.0	8.0	8.00	0 0	3.49						
18	8.4	8.4	8.40	0 0	3.52						
19	8.7	9.0	8.85	1 2	3.43						
20	9.0	9.2	9.10	1 1	3.49						
23	9.4	9.6	9.50	1 1	3.70						
25	9.8	9.9	9.85	0 1	3.88						
26	n.s.										
27											

2 1 0 0
4 4 3 3
+0.05 -0.02 0.00 0.00

4 3 6 4
2 3 3 3
+0.20 +0.20 -0.13

5 4
4 4
+0.12 -0.01

3 3
5 5
-0.06 +0.06

3 5
4 4
-0.08 +0.12

13 L 01 13 L 04
-08 +03

M.OR.

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1913phae.proj..988L

Plates taken December 2, 1912. cont.

Scale R.

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January 4, 1912

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Mc 2257 76K (2)

att. +.16

Pris Comp —

	Curve	mag.		Curve	mag.
1	4.2			8.0 0.00	8.00 .13
2	4.7	+3.73	8.43 .56	8.1 -0.01	8.09 .22
3	5.0	3.70	8.70 .33	8.3 -0.04	8.26 .39
4	5.6	3.67	9.27 .40	9.8 -0.22	9.58 .71
5	5.9	3.64	9.54 .67		
6	6.5	3.61	10.11 .24		
7	6.7	3.60	10.30 .43		
8	7.9	3.54	11.44 .58		
9	7.9	3.54	11.44 .58		
10	8.0	3.53	11.53 .67		
11	8.2	3.52	11.72 .86		
12	8.7	3.53	12.23 .37		
13	9.1	3.57	12.67 .81		
14	9.8	3.80	13.60 .74		
15	10.0	3.90	13.90 14.04		

Mc 2258 52K. Cl. 2.

att. +.21

+29° 177

				Pris Comp.	
1	4.1	+3.70	8.43 .56	9.2 -0.16	9.04 .17
1	4.1			7.9 0.02	7.88 7.92 8.05
2	4.2			8.1 ~~0.49~~ -0.01	8.04 .32
3	5.2	3.70	8.90 9.03	9.2 -0.16	9.04 .17
4	6.4	3.62	10.02 .15	n.s.	
5	6.8	3.60	10.40 .53		
6	7.1	3.56	10.66 .79		
7	7.7	3.54	11.24 .38		
8	8.1	3.53	11.63 .77		
9	8.5	3.52	12.02 .16		
10	8.9	3.55	12.45 .59		
11	9.0	3.56	12.56 .70		
12	9.2	3.59	12.79 .93		
13	9.3	3.62	12.92 13.00		
14	9.7	3.76 ~~3.67~~	13.46 .60		
15	9.9	3.84	13.74 .88		

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Plates taken December 2, 1912.

Scale U. S January 4, 1912.

Mc 2259 100 K. Cl. S alt. +.05 Mc 2260 Pole L. see P. 199 for reduction.

	Cone	Magn.		Pris. Comp.		Magn.		P.C.
1	5.1	+3.70	8.80 .93	9.0	-0.12	8.88 .81	5	6.1
2	5.3	3.70	9.00 .93	9.3	-0.18	9.12 .80	6	6.7
3	5.4	3.69	9.09 .92	9.3	-0.18	9.12 .85	8	8.1
4	5.9	3.66	9.56 .69	10.0	-0.23	9.90 9.77	9	8.7
5	6.2	3.63	9.83 .96				10 5.1	8.9
6	7.1	3.57	10.67 .80				11 5.7	9.4
7	7.3	3.56	10.86				12 6.0	10.0
8	7.9	3.53	11.43 .57				13 6.2	
9	8.4	3.51	11.91 12.05				14 7.0	
10	8.3	3.51	11.81 .95				15 7.4	
11	9.0	3.57	12.57 .71				16 7.8	
12	8.9	3.56	12.46 .60				17 8.0	
13	9.1	3.58	12.68 .82				18 8.4	
14	9.5	3.69	13.19 .33				19 9.0	
15	9.9	3.89	13.79 .93				20 9.2	
							23 9.6	
							25 9.9	
							26	

Remeasured by O.

no.

5 6.3

6 7.1 no error in above measure

7 7.7 of plate 6.

May 8. 1916.

MAR

7:45

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1913phae.proj..988L

Plates taken December 3, 1912.

Series II

Scale W

YELLOW January 6, 1912.

2:08

* MC 2262 L' Pole.

	Sc. 1	Sc. 2	Mean.						
5									
6	~~5.3~~ ~~5.4~~	5.1	~~5.25~~	2.1					
8			MC 2266 P 204				Y	Y Curve	Magn.
9				Mean.		Diff. from Pleg.	Diff.		
10	7.4	~~7.7~~	7.7	7.55	±1	+1.34	+1.33	+1.24	8.79
11	8.2	~~8.4~~	8.4	8.30	±1	1.12	1.06	1.11	9.41
12	8.4		8.7	8.55	±1	1.18	1.03	1.08	9.63
13	8.8		9.15	8.98	±1	1.19	1.10	1.10	10.08
14	9.0		9.3	9.15	±1	1.37	1.09	1.13	10.28
15	9.3		9.5	9.40	±1	1.54	1.24	1.16	10.56
16	9.7		9.8	9.75	±0	1.51	1.19	1.24	10.99
17							ch W		
18									
19									
20									
23									
25									
~~50~~							Curve Magn.	Curve	Magn.
6R	~~7.7~~ ~~7.8~~	7.6	7.70	±1	7.8	7.75	.05 .05	+1.18	8.93	+1.20	8.95
4R	8.4		8.7	8.55	±1	1.20	9.75	1.08	9.63
5R	8.5		8.5	8.50	0	0	1.19	9.69	1.09	9.59
7R	8.3		8.6	8.45	±1	2	1.19	9.64	1.09	9.54
9R	10.0		~~9.3~~ 9.5	9.75	2 0	3 1	1.52 1.45	11.00	1.24	10.99
8R	9.0		9.3	9.15	±1	1.32	10.47	1.12	10.27

* Defects on plate.

MOR

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Plates taken December 3, 1912 - post.

Series 11

Scale 2 YELLOW Copied $ January 6, 1912 - Copied $ YELLOW

Mc 2263 D 1 L'

~~alt. -15~~

Yellow alt. corr. -10

Curve	Magn.			sc 1	sc 2		curve.	Magn.		
off plate.	1			.						
near edge	2			t.p.						
. .	3			5.4	5.2	5.30	i			
. .	4			5.3	5.1	5.20	i			
. .	5			5.9	5.7	5.80	i			
too far from c.	6			.						
off plate.	7			.						
. .	8				7.3					
. .	9			6.9	6.7	6.80	i			
. .	10			6.7	6.5	6.60	i			
+1.19	8.99		11		7.8		+1.18	9.98		
1.12	9.32		12	8	8.2		1.18	9.38		
1.21	8.91		13		7.7		1.18	8.88		
1.11	9.41		14		8.3		1.18	9.48		
1.12	9.32		15		8.2		1.18	9.38		
1.08	9.78		16		8.7		1.22	9.92		
1.15	10.45		17		9.3		1.36	10.66		
			18							

Mc 2264 C 1 L'

~~alt. +.17~~

	sc 1	sc 2			curve.	Magn.	Curve	Magn.
1	5.3	5.2						
2								
3								
4								
5	6.7	6.9	6.80	1				
6	6.3	6.3	6.30	0				
7	5.4	5.2	5.25	1				
8	7.5	7.6	7.55	1	+1.18	8.73	+1.25	8.80
9	6.8	7.1	6.95	2	1.20	8.15	.	.
10	7.5	7.3	7.40 double	1	1.19	8.59	1.28	8.68
11	7.8	7.9	7.85	0	1.18	9.03	1.18	9.03
12		8.5	8.5	a	1.19	9.69	1.09	9.59
13	7.5	7.4	7.45	1	1.18	8.63	1.26	8.71
14		9.0			1.28	10.28	1.10	10.10
15		9.3			1.36	10.66	1.15	10.45
16		9.2			1.34	10.54	1.13	10.33
17		8.9			9.58	11.48	1.30	11.20

y. alt corr. +.09

m.OR.

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Plates taken December 3, 1912 - cont.

Series 11

Scale W YELLOW Copied ✓ January 6, 1912 YELLOW

Mc 2265 B1 L' * Mc 2266. L' Pole

~~-118. +.220~~

	sc.1	sc.2		Curve Magn.		sc.1	sc.2
				g. alt. corr. +.13			
1	5.9	.		.	10		7.7
2	.			.	11		8.4
3	.			.	12		8.7
4	.			.	13		9.2 9.1
5	6.2			.	14		9.6[3]
6	6.3			.	15		9.5
7	6.3			.	16		9.8
8	6.2			.	17		.
9	7.3	+1.20	8.50	.			
10	8.1	1.18	9.28	+1.14 9.24	4R		8.7
11	6.5	.		. .	5R		8.5
12	7.4	1.19	8.59	1.28 8.68	6R		9.8
13	7.1	1.20	8.30	. .	7R		8.6
14	7.3	1.19	8.49	. .	8R		9.3
15	7.8	1.18	8.98	1.19 8.99	9R		9.5
16	8.7	1.20[2]	9.9[2]	1.08 9.78			
17	8.4	1.19	9.59	1.10 9.50			
18	9.2	1.34	10.54	1.13 10.38			
19	9.3	1.36	10.66	1.15 10.45			
20	~~5.9~~	1.28	10.28	1.10 10.10			
21	8.2	1.18	9.38	1.12 9.32			
22	t.f.						

copied.

*Defects on plate

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Plates taken Dec. 3, 1912.

Series II

YELLOW copied $ January 6, 1912 $

Mc 2268 C 2 L' Mc 227 L' Pleiades.

~~alt. +17~~ ~~alt. +20~~ YELLOW

	sc 2	curve	magn.	Curve	magn.	sc 2	sc 1	Curve	magn.
				y. alt. corr. +15	Y			y. alt. corr +11	Y
1	.			.				.	
2	5.1			.		i=19	7.3 7.40 7.5	7.4	+1.28 8.68
3	5.2			.		f=15	5.2 5.30 5.4	5.3	. .
4	6.3			.		g=28	8.9 8.9		1.09 9.99
5	.			.		i'=22	7.7 7.65 7.6	7.5	1.22 8.87
6	6.3			.		q=16	5.6 5.65 5.7	5.6	. .
7	7.2	+1.20	8.40	.		j=23	7.9 7.85 7.8	7.7	1.18 9.03
8	7.4	1.19	8.59	+1.28	8.68	k=29	8.3 8.3		1.11 9.41
9	6.4	.		.	.	h=17	6.1 6.25 6.4	6.3	. .
*10	~~8.5~~	~~+19~~	~~9.69~~	~~1.09~~	~~9.59~~	b=6	. 3.2	3.1	. .
11	7.4	1.19	8.59	1.28	8.68	a=1	1.8	1.7	. .
12	8.1	1.18	9.28	1.14	9.24	j'=27	8.4 8.4		1.10 9.50
13	8.1	1.18	9.28	1.14	9.24	l'=12	5.0 5.05 5.1	5.0	. .
14	9.1	1.31	10.41	1.12	10.22	l=11	4.8 4.85 4.9	4.8	. .
15	9.3	1.36	10.66	1.15	10.45	~~i~~	=24	7.6 7.60 7.6	7.5	1.23 8.83
16	9.7	1.50	11.20	1.23	10.93	j 3	=25	7.8 7.80 7.8	7.7	1.19 8.99
						k'	=30	9.5		1.19 10.69

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* wrong star measured. Star measured is 10a, as marked on Mc 3959.

O. Dec. 19, 1915.

M.O.R.

3:35

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Plates taken December 7, 1912

Scale 1" = 10:45

January 9, 1913.

Mc 2280 & Ple.

S

S

Diff	Mean 1st + 2nd col's.			Mc 2285	Mc 2285 remeas.	Mc 2291	Mean		Diff.
4.09	4.80	±1	10	4.7	4.9	4.8	4.7	4.75	0 1	+4.14
4.17	5.25	1 0	11	5.3	5.2	5.1	5.2	5.15	±1 0	4.27
4.28	5.45	2 1	12	5.6	5.3	5.4	5.4	5.40	0 0	4.33
4.32	5.85	2 1	13	6.0	5.7	5.8	6.2	6.00	2 2	4.17
4.32	6.20	1 1	14	6.3	6.1	6.3	6.7	6.50 6.45	2 2	4.02
4.34	6.60	±1	15	6.5	6.7	6.7	6.9	6.80	±1	4.14
4.26	7.00	1 1	16	7.1	6.9	7.1	7.2	7.15	±1 0	4.11
4.34	7.15	1 2	17	7.3	7.0	7.2	7.5	7.35	2 1	4.14
4.32	7.60	1 1	18	7.8	7.5	7.7	8.0	7.85	±2	4.07
4.28	8.00	0 0	19	8.0	8.0	8.1	8.3	8.20	±1	4.08
4.29	8.30	0 0	20	8.3	8.3	8.3	8.6	8.45	±2	4.14
4.45	8.75	0 1	23	8.8	8.7	9.0	9.0	9.00	0 0	4.20
4.53	9.20	0 0	25	9.2	9.2	9.2	9.4	9.30	±1	4.63
4.54	9.65	1 0	26	9.7	9.6	9.6	9.9	9.75	2 1	4.44
4.55	10.0	a	27	10.0	9.8			9.8	a	4.15

	P.C. Mc 2280	Mc 2285	Mc 2285 (See below for mean of these two plates)	Mc 2291	Mean of Mc 2280 and 2285		Diff
5	5.3	5.3	5.3	5.3	5.30	0 0	+1.09
6	6.2	5.9	6.2	6.3	6.05	2 1	0.98
8	7.3	7.2	7.4	7.3	7.25	1 0	0.85
9	8.0	7.9	8.1	8.1	7.95	0 1	0.75
	8.7	8.3	8.3	8.3	8.50	2 2	0.39
	9.1	8.9	9.0	9.0	9.00	1 1	0.42
	9.3	9.2	9.2	9.4	9.25	1 0	0.48
	9.9	9.7	10.0	9.9	9.80	1 1	0.37

Mean of 3rd + 4th col's.

5	5.30	0 0	+1.09
6	6.25	0 1	0.73
8	7.35	0 1	0.75
9	8.10	0 0	0.60
10	8.30	0 0	0.59
11	9.00	0 0	0.42
12	9.30	±1	0.43
13	9.95	0 1	0.22

3	2
4	4
+.08	-.05
5	4
4	4
+.12	-.10
8	6
8	8
+.10	-.08

0	0
4	4
.00	.00
1	0
4	4
-.02	.00
1	0
8	8
-.01	.00

Coffeis.

5	2
5	5
+.10	-.04
2	3
5	5
+.04	-.06
1	1
4	4
+.02	-.02
8	6
14	14
+.06	-.04

Coffeis.

5	3
5	5
-.10	+.06
6	5
5	5
-.12	+.10
4	4
4	4
-.10	+.10
15	12
14	14
-.11	+.09

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Plates taken December 7, 1912. cont.

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Scale 2.

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mc2282 45K L S S

alt. +.15

	Pc.	curve	Magn.	Pc.	curve	magn.
1	4.0			7.3	+0.83	8.13 (.26)
2	4.3			8.0	0.71	8.71 (.84)
3	4.9	+4.16	9.06 (.17)	9.0 8.7	0.58	9.28 (.41)
4	5.1	4.19	9.29 (.42)	8.9	0.53	9.43 (.56)
5	5.3	4.22	9.52 (.65)	9.8	0.32	10.12 (.25)
6	6.1	4.29	10.39 (.52)	10.0	0.26	10.26 (.39)
7	6.3	4.31	10.61 (.74)			
8	6.9	4.33	11.23 (.37)			
9	7.2	4.34	11.54 (.68)			
10	8.0	4.39	12.39 (.53)			
11	8.7	4.44	13.14 (.28)			
12	8.9	4.46	13.36 (.50)			
13	9.0	4.47	13.47 (.61)			
14	9.5	4.50	14.00 (.14)			
15	9.7	4.51	14.21 (.35)			

mc2283 21K L.

alt. +.17

	Pc.	curve	magn.	Pc.	curve	magn.
1	3.3	+ 3.0		5.9	+ 1.01	6.91 (7.03)
2	3.7			6.9	0.88	7.78 (.91)
3	4.9	+ 4.16	9.06 (.19)	9.1	0.49	9.59 (.72)
4	5.2	4.20	9.40 (.53)	9.8	0.32	10.12 (.25)
5	5.4	4.23	9.63 (.76)	10.0	0.26	10.26 (.39)
6	6.1	4.29	10.39 (.52)			
7	6.4	4.32	10.72 (.85)			
8	7.0	4.34	11.34 (.48)			
9	7.9	4.39	12.29 (.43)			
10	8.2	4.41	12.61 (.75)			
11	8.7	4.44	13.14 (.28)			
12	9.0	4.46	13.46 (.60)			
13	9.1	4.47	13.57 (.71)			
14	9.5	4.50	14.00 (.14)			
15	10.0	4.53	14.53 (.67)			

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Plates taken December 7, 1912 cont.

Scale 11.

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January 9, 1913.

	Mc 2284 & 15 Ke alt. +22			P.C.			Mc 2285 & Pole.	P.C.
	sc.	curve	Magn.					
1	3.7			6.9	+0.88	7.78 .91	5	53 4.1
2	4.7	+4.12	8.82 .95	8.7	+0.58	9.28 .41	6	5.9
3	5.2	4.20	9.40 .53	9.3	+0.44	9.74 .87	8	72 8.3
4	5.3	4.22	9.52 .65	~~7.9~~ 9.9	+0.29	10.19 .32	9	7.9
5	6.3	4.31	10.61 .74	9.9	+0.29	10.19 .32	10 4.9	8.3
6	6.3	4.31	10.61 .74		Checks. O.		11 5.2	8.9
7	7.0	4.33	11.33 .47				12 ~~5.3~~ 5.3	9.2
8	7.8	4.38	12.18 .32				13 5.7	9.7
9	7.9	4.39	12.29 .43				14 6.1	
10	8.3	4.41	12.71 .85				15 6.87	
11	8.7	4.44	13.14 .28				16 6.9	
12	8.9	4.46	13.36 .50				17 7.0	
13	9.2	4.48	13.68 .82				18 ~~7.5~~ 7.5	
14	9.5	4.50	14.00 .14				19 8.0	
15	9.8	4.52	14.32 .46				20 8.3	
							23 8.7	
							25 9.2	
							26 9.6	
							27 10.0	

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Plates taken December 1, 1912 cont.

Scale 11

January 13, 1913

10:18 Mc 2285 L Pole Remeas.

5		5.3 ~~4.9~~
6		6.2
8		7.4
9		8.1
10	4.8	8.3
11	5.1	9.0
12	5.4	9.2
13	5.8	10.0
14	6.3	
15	6.7	
16	7.1	
17	7.2	
18	7.7	
19	8.1	
20	8.3	
23	9.0	
25	9.2	
26	9.6	
27	9.8	

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Taken December 7, 1912.

Scale 2.

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January 13, 1913. copied S

S

	MC 2286 4K L (alt. +.10) (2nd curve for 13 cc.)				MC 2288 (48 K) L. (Alt. +.20)			
	cc.	curve	Magn.	P.C.	curve	Magn.	P.C.	curve magn.
1	3.0			6.7	0.87	7.07 .20	1 13	curve magn. 5.7 0.94 6.64 .75
2	3.3			6.8	0.79	7.59 .72	2 5.1	+4.20 9.30 .43 9.0 0.42 9.42 .55
3	4.9	+4.23	9.13 .26	8.9	0.44	9.34 .47	3 5.7	4.64 9.84 .97 9.8 0.27 10.07 .20
4	5.2	4.20	9.40 .53	9.2	0.40	9.60 .73	4 6.3	4.80 10.40 .53 n.s.
5	6.0	4.62	10.12 .25	n.s.			5 6.3	4.60 10.40 .53
6	6.4	4.10	10.50 .63				6 6.9	4.58 11.12 10.98
7	7.2	4.10	11.30 .43				7 7.3	4.60 11.40 .54
8	7.1	4.10	11.20 .33				8 7.8	4.02 12.06 11.92
9	7.9 7.90	4.12	12.02 .15				9 8.1	4.04 12.24 .38
10	7.7 7.75 20	4.11	11.86 12.00	S			10 8.7	4.13 12.93 13.07
11	8.0	4.13	12.13 .27				11 9.0	4.27 13.27 .41
12	8.6	4.20	12.80 .94				12 9.2	4.84 13.54 .68
13	9.0	4.28	13.28 .42				13 9.2	4.84 13.54 .68
14	9.3	4.36	13.66 .80				14 9.5	4.85 14.95 14.09
15	9.7	4.52	14.22 .36				15 9.9	4.59 14.49 .63

M.O.R.

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Taken Dec 7, 1912.

Scale

Copied January 13, 1913.

Mc 2289 S

alt. – 22

293. S

S Mc 2291 Pole L.

Very defective!

				P.C.	Curve	Magn.		Sec 2	curve	Magn.			P.C.
1	B.			6.1	+0.88	6.98	27	9.0	+4.27	13.27			
too far from center 2				6.1	0.88	6.98	28	9.1	4.31	13.41	5		5.3
" 3				5.9	0.91	6.81	29	9.2	4.34	13.54	6		6.3
4	3.6			6.3	0.86	7.16	30	9.5	4.45	13.95	8		7.3
" " 5				6.8	0.79	7.59	31	9.5	4.45	13.95	9		8.1
" " 6				6.9	0.77	7.67					10	4.1	8.3
" " 7				7.0	0.76	7.76					11	5.2	9.0
8	4.0	+4.33	8.33	7.2	0.74	7.94					12	5.4	9.4
9	4.2	4.30	8.50	7.9	0.62	8.52					13	6.2	9.9
10	4.3	4.29	8.59	8.1	0.59	8.69					14	6.7	
11	4.3	4.29	8.59	8.1	0.59	8.69					15	6.9	b
12	4.6	4.26	8.86	8.6	0.50	9.11					16	7.2	
13	4.9	4.23	9.13	8.7	0.49	9.19					17	7.5	
14	5.5	4.16	9.66	9.8	0.27	10.09					18	8.0	
15	5.6	4.16	9.76	10.0	0.24	10.24					19	8.3	
16	5.7	4.14	9.84								20	8.6	
17	6.2	4.11	10.31								23	9.0	
18	6.4	4.10	10.50								25	9.4	
19	6.5	4.10	10.60								26	9.9	
20	6.3 (6.30)	6.3	4.10	10.40									
21	7.0	4.09	11.09										
22	8.3 (8.25)	8.2	4.15	12.40									
23	7.4 (7.40)	7.4	4.10	11.50									
24	7.8		4.12	11.92									
25	8.3		4.16	12.46									
26	8.7		4.23	12.93									

M O R

cont →

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Scale 11.

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copied S

S

	Mc 2298 C5 L S alt. +16					Mc 2301 B4 L alt. +22					9 20 +45°
				P.C.					P.C		
too far from centl		+0.1		6.0	5.8 0.16 6.76	1	3.0	3.2 2.8	6.3	6.2	+0.89 7.09
2	3.9	4.0	4.28 8.28	7.3	7.1 0.14 7.84	2			6.4	6.3	0.86 7.16
" " 3				6.9	6.1 0.81 7.51	3	3.3	3.5 3.1	6.3	6.2	0.89 7.09
4				7.3	7.1 0.14 7.84	4			7.1	7.0	0.15 7.15
5	4.3	4.4	4.26 8.66	8.3	8.1 0.51 8.61	5			7.2	7.1	0.14 7.84
6	4.9	5.0	4.24 9.24	8.9	8.7 0.36 9.06	6			7.3	7.2	0.12 7.92
7	4.6	4.7	4.25 8.95	8.7	8.5 0.43 8.93	7			7.7	7.6	0.14 8.34
8	5.3	5.4	4.24 9.64	9.6	9.4 0.21 9.61	8	4.7	4.9 4.5 +4.26 8.76	8.2	8.1	0.51 8.61
9	5.2	5.3	4.24 9.54	9.6	9.4 0.21 9.61	9	4.3	4.5 4.1 4.27 8.37	8.0	8.9	0.56 8.46
10	5.4	5.5	4.24 9.74	9.8	9.6 0.16 9.76	10	5.1	5.3 4.9 4.25 9.15	8.9	8.8	0.35 9.15
11	5.3	5.4	4.24 9.64	9.7	9.5 0.18 9.68	11	5.2	5.4 5.0 4.24 9.24	9.0	8.9	0.34 9.24
12	5.7	5.8	4.24 10.04			12	5.8	5.5 5.1 4.24 9.34	9.4	9.3	0.24 9.54
13	5.4	5.5	4.24 9.74			13	5.1	5.3 4.9 4.24 9.14	9.1	9.0	0.31 9.31
14	5.5	5.6	4.24 9.84			14	5.7	5.9 5.5 4.24 9.74	9.8	9.7	0.14 9.84
15	6.3	6.4	4.24 10.64			15	5.9	6.1 5.7 4.24 9.94	t.f.		
16	6.7	6.8	4.26 11.06			16	6.1	6.3 5.9 4.24 10.14			
17	7.1	7.2	4.28 11.48			17	6.4	6.6 6.2 4.24 10.44			
18	7.1	7.2	4.28 11.48			18	6.3	6.5 6.1 4.24 10.34			
19	7.3	7.4	4.29 11.69			19	6.3	6.5 6.1 4.24 10.34			
20	7.7	7.8	4.30 12.10			20	7.3	7.5 7.1 4.27 11.37			
21	8.1	8.2	4.31 12.54			21	6.3	6.3 6.50 4.24 10.34			
22	8.3	8.4	4.35 12.75			22	7.2	7.4 7.0 4.27 11.27			
23	8.9	9.0	4.40 13.40			23	7.7	7.9 7.5 4.29 11.79			
24	9.0	9.1	4.40 13.50			24	8.0	8.2 7.8 4.31 12.11			
25	9.7	9.8	4.49 14.29			25	7.9	8.1 7.1 4.30 12.00			
26	9.7	9.8	4.49 14.29			26	8.3	8.5 8.1 4.34 12.44			
M.O.R. 27	10.0	10.1	4.53 14.63			Cont. →					

Cont.

27	8.7	8.9	8.5	4.36	12.86
28	8.8	9.1	8.6	4.36	12.96
29	8.8	9.1	8.6	4.36	12.96
30	9.1	9.3	8.9	4.38	13.28
31	9.4	9.6	9.2	4.42	13.62
32	t.f.				

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Scale 4

January 13, 1912 3?

	Mc 2302 alt. +2.2 See Bk 40: 50 sc.1 -0.1		53 K L -0.1 P.C.		Mc 2303 Pole L sc.1 -0.3		P.C. -0.1	
1	5.0	4.9	8.9	8.8			5.3	5.2 5.2
2	5.1	5.0	9.3	9.2			6.3	6.2
3	5.3	5.2	9.3	9.2			7.5	7.0 7.4
4	5.7	5.6	9.9	9.8			8.2	7.9 8.1
5	6.2	6.1					8.7	8.4 8.6
6	6.2	6.1					9.2	9.1
7	7.3	7.2					9.5	9.4
8	7.3	7.2					9.9	9.8
9	7.7	7.6						
10	8.0	7.9						
11	8.1	8.0						
12	8.5	8.4						
13	8.7	8.6						
14	9.1	9.0						
15	9.8	9.7						
~~16~~								
~~17~~								
~~18~~								
19								
					5			
					6			
					8			
					9			
					10	4.9 4.6		
					11	5.2 4.9		
					12	5.7 5.4		
					13	6.2 5.9		
					14	6.7 6.4		
					15	6.9 6.6		
					16	7.2 6.9		
					17	7.5 7.2		
					18	8.0 7.7		
					19	8.3 8.0		
					20	8.5 8.2		
					23	~~8.~~ 9.0 8.7		
					25	9.7 9.4		
					26	n.s.		

1286
1296
1296
1328
1362

M.O.R.

11:40

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