KG
11365
955

XXXII

Book XXXII

Standard Photographic Magnitudes

KG11365.955

Scale Corrections

Scale M, from I 32811, for I, B, and MA plates.

Scale 1 correction +0.2

Scale N, from AC 8858, for AC and AM plates with usual aperture

Scale 1 correction −0.2
2 −0.4
3 0.0

Scale O, from AC 8796, for AC and AM plates with reduced aperture and for AI plates

Scale 1 correction 0.0
2 −0.3
3 0.0

Scale P, from C 15350, for A, X, H, and C plates

Scale 1 correction −0.3

Scale R, from C 17493, for C and MC plates

Scale 1 correction +0.3

{Do not use scale 2 for images brighter than 8.0
when measures are made also on Scale 1.
Brighter images may be employed if Scale 1 is not used.
Reductions made previous to Oct. 12, 1910 need not be altered.}

Scale U, from MC 831

Scale 1 correction 0.0
2 0.0
3 +0.2

Scale W, from MC 2086 (Iso)

Scale 1 correction +0.1
2 0.0

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Saturday January 14, 1911

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North Polar Sequence.

Scale P. Plate M W 312 Different Apertures

Frist Exposure Re-measured Monday Jan 16 1911

3.00

	1st scale		2d scale		1st scale	2d scale			Mean
24	3.2	2.9	.	2.9 a.	3.1	2.8	-	2.8 a.	2.85 10
26	3 ~~3~~.6	3.3	.	3.3 a.	3.7 ~~3.4~~	3.4	.	3.4 a.	3.35 ±0
32	5.0	4.7	4.8	4.75 ±0	4.9	4.6	4.7	4.65 01	4.70 05 05
33	5.0	4.7	4.9	4.80 ±1	4.9	4.6	4.8	4.70 ±1	4.75 05 05
34	5.2	4.9	4.9	4.90 00	5.3	5.0	4.9	4.95 01	4.92 02 03
36	5.7	5.4	5.6	5.50 ±1	5.7	5.4	5.8	5.60 ±2	5.55 05 05
38	5.8	5.5	5.7	5.60 ±1	5.8	5.5	5.8	5.65 ±2	5.62 02 03
39	5.9	5.6	5.9	5.75 ±1	5.9	5.6	5.9	5.75 ±1	5.75 00 00
Remeasured '11,1,16 Rec'd'r W. 40	~~3.6~~	Reject, wrong star?	6.0	6.0 . a	6.2	5.9	6.0	5.95 ±0 1st scale 2nd scale 6.2 5.9 6.0	5.95 ±0 5.98 7 03 02 02
41	6.3	6.0	6.2	6.10 ±1	6.2	5.9	6.2	6.05 ±2	6.08 02 03
42	6.7	6.4	6.7	6.55 ±1	6.7	6.4	6.7	6.55 ±1	6.55 00 00
43	6.7	6.4	6.6	6.50 ±1	6.8	6.5	6.6	6.55 ±0	6.52 02 03
44	6.8	6.5	6.7	6.60 ±1	6.9	6.6	6.9	6.75 ±1	6.68 08 07
45			6.9				6.8		6.85 10
46			7.4	20 | 19 ±.095			7.4	22 | 25 ±.11	7.40 00
47			7.3				7.2		7.25 10
48			7.3				7.3		7.30 00
49			7.4 ~~7.7~~				7.4		7.40 00
50			7.7				7.8		7.75 ±0
51			7.8				7.9		7.85 01
52			7.9				8.0		7.95 ±0
53			8.2				8.3		8.25 01
54			8.1				8.1		8.10 00
55			8.3				8.3		8.30 00

H. I. S.

Saturday January 14, 1911

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North Polar Sequence.

Scale P. Plate M W 312 Different Apertures

First Exposure Re-measured

	1st Scale	2nd Scale	1st Scale	2nd Scale	Mean
56		. film def		def.	.
57		8.8		8.9	8.85 01
58		def.		def.	.
59		9.1		9.1	9.10 00
60		9.2		9.3	9.25 01
61		9.7		9.7	9.70 00
62		9.9		[illegible]	9.9 a.
63		.			
					56 | 170 ±.03

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North Polar Sequence

Scale P. Plate M W 312 Cont Monday Jan 16, 1911

Second Exposure Re-measured

	1st Scale	2nd Scale			Scale 1st		2nd Scale		Mean
24	1.1	0.8			1.1	0.8			0.80 00
26	1.7	1.4			1.5	1.2			1.30 11
32	2.8	2.5			2.7	2.4			2.45 10
33	2.9	2.6			2.7	2.4			2.50 11
34	2.9	2.6			2.8	2.5			2.55 01
36	3.2	2.9			3.0	2.7			2.80 11
38	3.5	3.2			3.1	2.8			3.00 22
39	3.7	3.4			3.3	3.0			3.20 22
40	3.8	3.5			3.7	3.4			3.45 10
41	3.9	3.6			3.9	3.6			3.60 00
42	4.3	4.0			4.2	3.9			3.95 01
43	4.7	4.4	4.5	4.45 01	4.2	3.9	4.5	4.20 33	4.32 13 12
44	4.8	4.5	4.7	4.60 ±1	4.9	4.6	4.7	4.65 01	4.62 02 03
45	4.7	4.4	4.7	4.55 21	4.9	4.6	4.7	4.65 01	4.60 05 05
46	5.6	5.3	now 5.4	5.35 10	5.6	5.3	5.5	5.40 ±1	5.38 03 02
Remeasured '11,1,16 Rcdr W 47	5.6	5.3	5.1	5.20 ±1	5.8 ·1 at scale 5.5 5.4	5.1	wrong star ~~4.3~~ reject 2nd scale 5.0	5.20 3 ±2	5.20 00 00
48	5.3	5.0	5.3	5.15 21	5.5	5.2	4.9	5.05 21	5.10 05 05
49	5.4	5.1	now 5.6	5.35 32	5.4	5.1	5.2	5.15 10	5.25 10 10
50	5.9	5.6	now 5.7	5.65 01	5.8	5.5	5.7	5.60 ±1	5.62 03 02
51	6.0	5.7	6.0	5.85 ±2	6.4	6.1	6.0	6.05 10	5.95 10 10
52	6.6	6.3	6.3	6.30 00	6.0	5.7	6.0	5.85 ±2	6.08 22 23
53	6.8	6.5	6.7	6.60 ±1	6.7	6.4	6.6	6.50 ±1	6.55 05 05
54	6.8	6.5	6.8	6.65 ±2			6.7	6.7 a	6.68 03 02
55	6.9	6.6	6.8	6.70 ±1	6.9	6.6	6.8	6.70 ±1	6.70 00 00

H. I. S.

26|28 ±.11

25|30 ±.12

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North Polar Sequence.

Scale P. Plate M. W 312 Cont Monday Jan. 16, 1911

Second Exposure Re-measured

	1st Scale	2nd Scale		1st Scale	2nd Scale	Mean
56	·	7.1			7.0	7.05 10
57	~~5.5~~	7.2			7.3	7.25 01
Remeasured '11,1,16 Rcdr W. 58	·	~~8.5~~	reject, another star?		7.3, 7.3	7.30 .00
59		7.6			def	7.6(?) a.
60		7.8			7.7	7.75 01
61	·	7.9			7.9	7.90 00
62		8.2			8.1	8.15 01
63		8.1			8.1	8.10 00
64	·	8.8			8.6	8.70 11
65		9.0			9.0	9.00 00
66		9.5			9.4	9.45 10
67		9.8 ~~9.5~~			9.9	9.85 01
68		9.9			10.0?	9.95 ±0
α		8.2			8.1 ~~9.7~~	8.15 01
γ		9.3			9.3	9.30 00
δ		9.0			8.8	8.90 11
ε		def			F	F (?)
ζ		9.6			9.7	9.65 01
η		9.7			9.7	9.70 00
Orig no 53		8.7			8.8	8.75 ±0
" " 54		9.1			9.1	9.10 00

86|480 ±.056

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North Polar Sequence

Scale P. Plate M.W. 312 cont

Third Exposure Re-measured Monday Jan. 16, 1911

	1st Scale	2nd Scale		1st Scale	2nd Scale		Mean
24	3.8 3.5		3.5 a.	3.8 3.5	.	3.5 a.	3.50 00
26	4.1 3.8	.	3.8 a.	3.9 3.6	.	3.6 a.	3.70 11
32	5.8 5.5	5.9	5.70 22	5.8 5.5	5.9	5.70 22	5.70 00 00
33	5.8 5.5	5.8	5.65 12	5.9 5.6	5.8	5.70 11	5.68 03 02
34	5.9 5.6	5.9	5.75 21	5.9 5.6	5.9	5.75 21	5.75 00 00
36	6.6 6.3	6.6	6.45 12	6.4 6.1	6.5	6.30 22	6.38 07 08
38	6.5 6.2	6.7	6.45 33	6.6 6.3	6.7	6.50 22	6.48 03 02
39	.	6.8		.	6.9		6.85 01
40	.	7.1	10)18 ±.18	.	7.0	10)17 ±.17	7.05 10
41	.	7.2		.	7.3		7.25 01
42	superposed	superposed		superposed	superposed		—
43	.	7.8			7.8		7.80 00
44	.	7.7			7.7		7.70 00
45		7.8			7.8		7.80 00
46		def			def		—.
47		8.2			8.5		8.35 21
48		superposed			superposed		—.
49		8.4			8.6		8.50 11
50		8.3			8.5		8.40 11
51		9.0			8.9		8.95 01
52		8.9			9.0		8.95 10
53		9.3			9.0		9.15 12
54		9.3			9.3		9.30 00
55		9.5			9.2		9.35 12

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North Polar Sequence

Scale P. Plate M.W. 312 cont Monday Jan. 16, 1911

Third Exposure Re-measured

	1st Scale	2nd Scale		1st Scale	2nd Scale	Mean
56		9.8			9.7	9.75 01
57	.	9.9			.	9.9 a.
58		9.9			9.9?	9.90 00
59	.	F.			.	F a.
60		.			.	
						46)12.45 ±.05

Images on this exposure are circular, and much better than those on other exposures, which are elongated.

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North Polar Sequence

Scale P. Plate M.W. 312 Cont.

Fourth Exposure

Re-measured Monday Jan 16, 1911

Exp.1-Exp.4	Exp.1		1st Scale	2nd Scale		1st Scale	2nd Scale		
+ 0.15	2.85	24	3.1 2.8	.	2.8 a.	2.9 2.6	. 2.6a: reject misinterpretation?		2.70 11
Remeasured '11,1,16 -0.03 Rec'dr	~~A~~3.35	26	3.9 3.6	.	3.6 a.	3.2 2.9 3.7 3.4	~~4.2~~ too bright 3.15 32		3.38 22 23
Remeasured '11,1,16 -.16 Rec'dr	~~W~~4.70	32	5.3 5.0	4.9	4.95 01	4.9 4.6 5.1 4.8	reject: wrong star or wrong unit? ~~5.9~~ 4.9 4.77 20		4.86 09 09
-.27	4.75	33	5.4 5.1	5.2	5.15 10	5.2 4.9	4.9 4.90 00		5.02 13 12
-30	4.92	34	5.6 5.3	5.2	5.25 10	5.6 5.3	5.1 5.20 11		5.22 03 02
-03	5.55	36	5.8 5.5	5.8	5.65 12	5.8 5.5	5.5 5.50 00		5.58 07 08
-18	5.62	38	5.9 5.6	5.9	5.75 21	6.0 5.7	6.0 ~~6.9~~ 5.85 12		5.80 05 05
-27	5.75	39	6.2 5.9	6.4	6.15 32	6.0 5.7	6.1 5.90 22		6.02 13 12
-35	5.97	40	6.6 6.3	6.4	6.35 10	6.6 6.3	6.3 6.30 00		6.32 03 02
-52	6.08	41	6.8 6.5	6.7	6.60 11	6.8 6.5	6.7 6.60 11		6.60 00 00
-45	6.55	42	.	6.9		.	7.1		7.00 11
-40	6.52	43	.	7.1	16)17 ±.11	6.9 6.6	6.9 6.75 21		6.92 18 17
-42	6.68	44	.	7.3		.	6.9		7.10 2 2
-30	6.85	45		7.0		.	7.3 21)22 ±.10		7.15 21
-25	7.40	46		7.6			7.7		7.65 01
-45	7.25	47		7.6			7.8		7.70 11
-60	7.30	48		7.9			too poor		7.9(?) a.
-40	7.40	49		superposed			7.8?		7.8? . a
-15	7.75	50		7.9			7.9		7.90 00
-60	7.85	51		8.4			8.5		8.45 01
-40	7.95	52		8.3			8.4		8.35 10
-60	8.25	53		8.8			8.9		8.85 01
-85	8.10	54		8.9			9.0		8.95 10
H. S. L. -70	8.30	55		9.0			9.0		9.00 00

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North Polar Sequence

Scale P. Plate M.W. 312, Cont.

Fourth Exposure Re-measured Monday Jan 16, 1911

Exp.1-Exp.4	Exp.1		1st Scale	2nd Scale	1st Scale	2nd Scale	Mean
.	.	56		poor 9.5	~~5.8~~	too poor	9.5 (?) a.
-55	8.85	57		9.5		9.3	9.40 11
.	.	58		9.7		9.7	9.70 00
-70	9.10	59		9.8		.	9.8 a.
-55 4.10	9.25	60		9.8		def. 3.50	9.8 (?) a.
..	9.70	61					
.	9.9	62					
							48)383 ±.08

+15
−0.8

+15
−1048

27)−1033
−.38

All images on Plate M W 312 are very slightly elongated except those corresponding to Exposure 3, which are very good

Images of Nos. 46, 48, 50, 51, 53 poor on account of distance from centre of plate

H. S. L.

Tuesday Jan 17, 1911.

12.05
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North Polar Sequence

Scale P.

Plate MW 313 Different Apertures

First Exposure

	1st scale	2d scale			1st scale	2d scale		Re-measured	mean	
24	2.8	2.5		2.5 a.	2.9	2.6	,	2.6 a.	2.55	10
2, ~~26~~	3.1	2.8	.	2.8 a.	3.1	2.8	,	2.8 a.	2.80	00
32	4.8	4.5	4.7	4.60 11	4.7	4.4	4.6	4.50 11	4.55	05 05
33	4.8	4.5	4.8	4.65 12	4.8	4.5	4.7	4.60 11	4.62	03 02
34	5.0	4.7	4.8	4.75 10	5.0	4.7	5.0	4.85 12	4.80	05 05
36	5.7	5.4	5.1	5.25 21	5.7	5.4	5.4	5.40 00	5.32	07 08
38	5.9	5.6	5.8	5.70 11	5.8	5.5	5 ~~4~~.7	5.60 11	5.65	05 05
39	6.0	5.7	6.0	5.85 12	5.8	5.5	5.9	5.70 22	5.78	07 08
40	6.3	6.0	6.2	6.10 11	6.4	6.1	6.2	6.15 10	6.12	02 03
41	.		6.3	6.3 . a	6.6	6.3	6.4	6.35 10	6.32	02 03
42	6.5	6.2	6.8	6.50 33	.		6.9	6.9 . a	6.70	20 20
43	.		6.9	6.9 . a	6.8	6.5	6.8	6.65 12	6.78	12 13
44	6.9	6.6	7.0	6.80 22	.		7.1	18) 18 ~~5.3~~ .100	6.95	15 15
45	~~5.2~~		7.2	8) 26 ± .14			7.3		7.25	01
46			7.7 ~~8.1~~				7.8		7.75	10
47			7.6				7.5		7.55	01
48			7.7				7.7		7.70	00
49			7.7				7.8		7.75	10
50			7.9				7.9		7.90	00
51			8.1				8.1		8.10	00
52			8.1				8.3		8.20	11
53			8.8				8.9		8.85	01
54			8.7				8.6		8.65	10
55			9.0				9.1		9.05	01

H. S. S.

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P

Plate MW 313 Cont.

First Exposure Cont.

	1st scale	2d scale		1st Scale	2d Scale	Re-measured mean	
56		9.4			9.5	9.45	01
57		9.4			9.3	9.35	01
58		9.7			9.7	9.70	00
59		9.8			9.8	9.80	00
60		9.8			9.8	9.80	00
61		10.0			9.9	9.95	01
62		.			W.S		

60) 290
±.05

H. S. S.

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P. Plate MW 313 Cont.

Second Exposure

	1st scale	2d scale			1st scale	2d scale	Re-measured		mean
24	def				def.				—
26	1.8	1.5			1.8	1.5			1.50 00
32	2.9	2.6			2.8	2.5			2.55 01
33	2.9	2.6			2.9	2.6			2.60 00
34	~~5.3~~ 2.9	2.6			2.9	2.6			2.60 00
36	3.1	2.8			2.9	2.6			2.70 11
38	3.5	3.2			3.2	2.9			3.05 21
39	3.8	3.5	.		3.6	3.3			3.40 11
40	3.8	3.5	.		3.7	3.4	.		3.45 10
41	4.0	3.7	4.2	3.95 32	3.9	3.6	.	3.8 a.	3.78 17 18
42	4.2	3.9	,	3.9 a.	~~5~~4.1	3.8		3.8 a.	3.85 10
43	~~6.8~~ 4.9	4.6	4.6	4.60 00	4.7	4.4	~~4.6~~	4.50 ±1	4.55 05 05
44	4.9	4.6	4.8	4.70 ±1	4.9	4.6	4.6	4.60 00	4.65 05 05
45	5.1	4.8	4.8	4.80 00	4.9	4.6	4.8	4.70 ±1	4.75 05 05
46	5.6 poor	5.3	4.9	5.10 22	5.6 very poor	5.3	5.0	5.15 12	5.12 02 03
47	5.7	5.4	5.7	5.55 ±1	5.7	5.4	5.6	5.50 ±1	5.52 03 02
48	5.6	5.3	5.1 poor	5.20 11	5.8	5.5	5.2	5.35 12	5.28 08 07
49	5.8	5.5	~~4.0~~ Rej. Touching star?	5.5 a.	5.6	5.3	5.6	5.45 12	5.48 02 03
50	5.8 poor	5.5	5.7	5.6$\overset{0}{5}$ ±1	5.9 poor	5.6	5.7	5.65 01	5.62 02 03
51	6.2	5.9	6.1 poor	6.00 ±1	6.3	6.0	6.2	6.10 ±1	6.05 05 05
52	~~6.2~~ 6.3	6.0	6.5	6.25 23	6.3	6.0	6.2	6.10 ±1	6.18 07 08
53	6.8	6.5	6.7 poor	6.60 ±1	.		6.6		6.60 00 00
54	.		6.8		.		6.8	20)20 ±.100	6.80 0 0
55	.		6.8	22)27 ±.12	.		6.9		6.85 01

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Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P. Plate MW 313 Cont.

Second Exposure Cont

	1st scale	2d scale		1st scale	2d scale	Re-measured mean
56		7.2			7.3	7.25 01
57	.	7.1		.	7.2	7.15 ±0
58		7.3			7.5	7.40 ±1
59		7.6			7.6	7.60 00
60		7.9			7.7	7.80 11
61		7.9			7.9	7.90 00
62		8.2			~~7~~8.3	8.25 01
63		8.3			8.3	8.30 00
64		9.0			9.1	9.05 01
65		9.5			9.6	9.55 ±0
66		9.8			9.7	9.75 01
67		10.0			10.0	10.00 00
68		9.8			9.8	9.80 00
69		10.0			10.0	10.00 00
70		-			.	.
α		8.6			8.3	8.45 21
γ		9.7			9.7	9.70 00
δ		9.7			9.7	9.70 00
ε		9.9			9.9	9.90 00
ζ		9.7			9.8	9.75 ±0
η		9.8			9.7	9.75 01
Ang. 53		9.0			9.1	9.05 01
Ang. 54		def			9.3	9.3 (?) .. a
						88)395 ±.04

H.I.S

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P. Plate MW 313 Cont.

Third Exposure

	1st scale	2d scale			1st scale	2d scale	Re-measured		mean
24	3.9	3.6	.	3.6 a .	3.8	3.5	.	3.5 a .	3.55 01
26	4.3	4.0	4.5	4.25 23	4.1	3.8	4.4	4.10 33	4.18 07 08
32	6.2	5.9	6.0	5.95 10	6.0	5.7	5.8	5.75 10	5.85 10 10
33	6.0	5.7	5.9	5.80 11	6.1	5.8	6.0	5.90 11	5.85 05 05
34	6.1	5.8	5.9	5.85 01	6.2	5.9	6.1	6.00 11	5.92 07 08
36	6.7	6.4	6.7	6.55 21	6.7	6.4	6.2	6.30 11	6.42 13 12
38	6.8	6.5	6.7	6.60 11	6.8	6.5	6.7	6.60 11	6.60 00 00
39	6.9	6.6	7.0	6.80 22	.		6.9		6.85 05 05
40	.		7.0		.		6.9		6.95 01
41	.		7.2	14)118 ±.13			7.2	12)115 ±.12	7.20 00
42	.		7.8				7.8		7.80 00
43	.		7.7				7.7		7.70 00
44	.		7.8				7.6		7.70 11
45	.		7.9				7.8		7.85 10
46			8.2				8.2		8.20 00
47			- poor 8.4?				8.0		8.20 22
48			8.4 poor				8.5?		8.45 01
49			8.7				$8.\overset{3}{\cancel{7}}$		8.50 22
50			8.8				8.9		8.85 01
51			9.1				9.1		9.10 00
52			9.3				9.4		9.35 10
53			9.7				9.7		9.70 00
54			9.8				9.8		9.80 00
55			10.0				9.8		9.90 11

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North Polar Sequence.

Scale P. Plate MW 313 Cont.

Third Exposure Cont.

		1st scale 2d scale		1st scale 2d scale Re-measured	mean
	56	10.0		9.9	9.95 01
	57	-		10.0 ~~F~~	10.0 . a
	58	,		~~F~~	F . a
	59	.		,	
1.15	60	.		.	50)285 ±.06

Tuesday Jan. 17. 1911

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North Polar Sequence

Scale P. Plate MW 313 Cont.

Fourth Exposure Cont.

2,40

Exp.1-Exp.4	Exp.1		1st scale	2d scale		1st scale poor	2d scale	Re-measured	mean
-05	2.55	24	3.0 2.7	,	2.7 a.	2.8 2.5	,	2.5 a.	2.60 11
-05	2.80	26	3.1 2.8	,	2.8 a.	3.2 2.9	,	2.9 a.	2.85 01
-10	4.55	32	5.0 4.7	4.7	4.70 00	4.8 4.5	4.7	4.60 11	4.65 05 05
-13	4.62	33	5.1 4.8	4.8	4.80 00	4.9 4.6	4.8	4.70 11	4.75 05 05
-22	4.80	34	5.3 5.0	5.0	5.00 00	5.3 5.0	5.1	5.05 01	5.02 02 03
-20	5.32	36	5 6.7 5.4	5.6	5.50 11	5.7 5.4	5.7	5.55 21	5.52 02 03
-07	5.65	38	5.9 5.6	5.9	5.75 21	5.9 5.6	5.8	5.70 11	5.72 03 02
-32	5.78	39	6.4 6.1	6.1	6.10 00	6.3 6.0	6.2	6.10 11	6.10 00 00
-33	6.12	40	6.7 6.4	6.6	6.50 11	6.6 6.3	6.5	6.40 11	6.45 05 05
-38	6.32	41	.	6.7			6.7		6.70 00
-15	6.70	42	,	6.9	14)7 ±.05		6.8	14)14 ±.100	6.85 00
-17	6.78	43	.	6.9		,	7.0		6.95 10
-25	6.95	44		7.3			7.1		7.20 11
-05	7.25	45		7.3			7.3		7.30 00
-05	7.75	46		7.8			7.8		7.80 00
-15	7.55	47		7.7			7.7		7.70 00
-15	7.70	48		7.8			7.9		7.85 01
-10	7.75	49		7.9			7.8		7.85 10
-10	7.90	50		8.0			8.0		8.00 00
-30	8.10	51		8.4			8.4		8.40 00
-35	8.20	52		8.5			8.6		8.55 10
-10	8.85	53		8.9			9.0		8.95 10
-20	8.65	54		8.8			8.9		8.85 01
00	9.05	55		9.0			9.1		9.05 01

~~2.40~~

Tuesday Jan. 17. 1911.

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North Polar Sequence

Scale P. Plate MW 313 Cont.

Fourth Exposure Cont.

Exp.1-Exp.4	Exp.1		1st scale	2d scale		1st scale	2d scale	Re-measured	mean
+15	9.45	56		9.3			9.3		9.30 00
-35	9.35	57		9.7			9.7		9.70 00
-10	9.70	58		9.8			9.8		9.80 00
+05	9.80	59		9.7			9.8		9.75 10
-10	9.80	60		9.9			9.9		9.90 00
.	9.95	61		n.s.			.	2.50	.

58)175
±.03

+20
-452
29)-432
-.15

The greater number of images on Plate MW 313 are good; those corresponding to Exposure 3 are, however, noticeably the best.

Images of Nos. 46, 48, 50, 51 and 53 are rather poor, showing wings.

Tuesday January 11, 1911

3.00

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North Polar Sequence

Scale P Plate MW 314 Different Apertures.

First Exposure

Re-measured Wednesday Jan 18, 1911

$12^{h}.5^{m}$

	1st scale	2d scale			1st scale	2d scale			Mean
24	3.3	3.0	.	3.0 a.	3.3	3.0	.	3.0 a.	3.00 00
26	2.9	2.6	.	2.6 a.	3.0	2.7	.	2.7 a.	2.65 01
32	4.2	3.9	.	3.9 a.	poor 4.4	4.1	.	4.1 a.	4.00 11
33	4.8	4.5	4.6	4.55 10	4.5	4.2	4.6	4.40 22	4.48 07 08
34	5.4	5.1	5.0	5.05 10	5.4	5.1	4.9	5.00 11	5.02 03 02
36	very poor 5.4	5.1	4.9	5.00 11	poor 5.6	5.3	4.9	5.10 22	5.05 05 05
38	6.0	5.7	5.9	5.80 11	~~5.1~~ 6.0	5.7	5.8	5.75 10	5.78 02 03
39	poor 5.8	5.5	5.9	5.70 32	6.0	5.7	poor 6.0	5.85 12	5.78 08 07
Images too poor on this plate ~~40~~									
41	6.7	6.4	6.0	6.20 22	6.8	6.5	poor 6.2	6.35 12	6.28 08 07
42	.		7.0				6.9		6.95 01
43	.		6.9	12)14 ±.12			6.9	12)17 ±.14	6.90 00
44	.		7.2				6.9		7.05 21
45			7.2				7.0		7.10 11
46			7.4				7.5		7.45 01
47			7.7				7.7		7.70 00
48			7.8				poor 7.8		7.80 00
49			7.7				7.7		7.70 00
50			superposed				too poor		–
51			8.2 ~~6.3~~				8.2		8.20 00
52			8.0				8.1		8.05 01
53			8.8				8.7		8.75 01
54			8.8				8.8		8.80 00
55			9.1	~~12.15~~			9.0		9.05 10

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Tuesday Jan. 11, 1911.

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North Polar Sequence

Scale P. Plate MW 314 Different Apertures Cont.

First Exposure Cont.

Re-measured Wed. Jan. 18, 1911

	1st Scale	2nd Scale		2nd Scale		Mean
56		~~9.8~~ Reject wrong star?		9.1	Remeasured '11, 1, 18 Rad'n A 9.1	9.10 . 00
57		9.1		9.1		9.10 00
58		9.7		9.7		9.70 00
59		9.9		9.9		9.90 00
60		9.9		10.0		9.95 10
61		10.0		10.0		10.00 00
62		w.S		w.S.		
~~12.15~~				$12^{h}15^{m}$		
						56)205 ±.04

Images very poor on this exposure elongated and poor in focus, especially 33, 39, 41, 26, 32, 36, 42

H.G.S.

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P. Plate M.W. 314 Cont.

Second Exposure

Re-measured Wednesday Jan. 18, 1911

	1st Scale	2nd Scale			12.15 1st Scale	2nd Scale			Mean
24	2.0	1.7		1.-	1.9	1.6			1.65 10
26	1.9	1.6			1.8	1.5			1.55 01
32	2.8	2.5			2.9	2.6			2.55 10
33	3.0	2.7			def	·			2.7? a ·
34	3.2	2.9	·		3.0	2.7			2.80 11
36	3.0	2.7			3.0	2.7			2.70 00
38	3.8	3.5			3.8	3.5			3.50 00
39	3.8	3.5			3.6	3.3			3.40 11
40	Too poor								
41	3.7	3.4			3.8	3.5	·		3.45 01
42	4.5	4.2	·	4.2 a ·	v.p. 4.6	4.3	4.7	4.50 22	4.35 ~~2+~~ 15 15
43	4.7	4.4	4.8	4.60 22	4.8	4.5	4.7	4.60 21	4.60 00 00
44	5.0	4.7	4.9	4.80 11	5.4	5.1	4.8	4.95 12	4.88 08 07
45	5.7	5.4	5.6	5.50 11	5.8	5.5	5.7	5.60 11	5.55 05 05
46	5.8	5.5	5.9	5.70 22	5.8	5.5	5.8	5.65 12	5.68 02 03
47	5.7	5.4	5.8	5.60 22	5.7	5.4	5.7	5.55 21	5.58 02 03
48	5.8	5.5	poor 5.7	5.60 11	v.p. 5.9	5.6	v.p. 5.9	5.75 21	5.68 08 07
49	5.9	5.6	5.9	5.75 21	6.0	5.7	5.9	5.80 11	5.78 03 02
50	6.0	5.7	6.0	5.85 12	6.2	5.9	6.0	5.95 10	5.90 05 05
51	6.3	6.0	poor 6.2	6.10 11	v.p. 6.2	5.9	v.p. ~~6.2~~ 6	6.25 34	6.18 08 07
52	-		6.8	6.8 · a	6.7	6.4	6.6	6.50 11	6.65 15 15
53	·		poor 6.9	6.9 · a	·		v.p. 6.9	6.9 · a	6.90 0 0
54	·		6.9	6.9 · a	·		6.8	6.8 · a	6.85 1 0
55	·		7.0	7.0 · a	·		7.3	7.3 · a	7.15 21

+13
−13
18) 26
±.144

+15
−17
22) 32
±.145

H.S.S.

Tuesday Jan 17, 1911.

copied

North Polar Sequence

Plate M.W. 314 Cont.

Second Exposure

Re-measured Wednesday Jan. 18, 1911

	1st Scale	2nd Scale		2nd Exp		Mean
56		7.3		7.3		7.30 00
57	·	7.5		7.5		7.50 00
58		7.7		7.7		7.70 00
59		7.8		7.9		7.85 01
60		7.8		7.7		7.75 01
61		7.9		8.0		7.95 10
62		8.2		8.4		8.30 11
63		8.3		8.3		8.30 00
α		8.8		8.7		8.75 01
β = Nr 65						
γ		9.5		9.4		9.45 10
δ		9.2		9.5		9.35 21
ε		9.7		9.8		9.75 10
ζ		9.7		9.6		9.65 10
η		9.8		9.8		9.80 00
Orig 53		9.1		~~7~~ 8.9		9.00 11
" 54		9.7		9.5		9.60 11
64		8.7		8.9		8.80 11
65		9.3		9.4		9.35 10
66		9.6		9.7		9.65 01
67		9.9		10.0		9.95 10
68		10.0		9.9		9.95 01
69		n.s		10.1?		10.1? · a
70		n.s		n.s	12.30	

H.S.S.

+217
−263
86) 480
±.06

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P. Plate M. W. 314
Third Exposure

Re-measured Wednesday Jan 18, 1911

	1st Scale	2nd Scale		12,30 1st Scale	2nd Scale		Mean
24	3.0 2.7		2.7 a.	3.0 2.7		2.7 a.	2.70 00
26	3.1 2.8		2.8 a.	3.1 2.8		2.8 a.	2.80 00
32	5.1 4.8	4.9	4.85 01	5.0 4.7	4.8	4.75 ±10	4.80 05 05
33	4.9 4.6	4.9	4.75 21	5.0 4.7	4.9	4.80 ±1	4.78 03 02
34	5.5 5.2	5.0	5.10 1±	5.3 5.0	4.9	4.95 0±	5.02 08 07
36	5.8 5.5	5.8	5.65 ±2	5.8 5.5	5.8	5.65 ±2	5.65 00 00
38	5.9 5.6	5.8	5.70 ±1	6.0 5.7	5.9	5.80 ±1	5.75 05 05
39	6.5 6.2	6.6	6.40 22	6.6 6.3	6.5	6.40 ±1	6.40 00 00
40	~~6.7~~ Too poor						
41	.	6.8	+8 −7 12)15	.	6.8	+5 −6 12)11	6.80 00
42	.	7.0	±.125	.	7.1	±.092	7.05 01
43		7.3		.	7.3		7.30 00
44		7.2			7.4		7.30 00
45		7.6			7.4		7.50 1±
46		7.8			7.8		7.80 00
47		7.9			7.8		7.85 10
48		7.9			good 7.8		7.85 10
49		7.9			7.9		7.90 00
50		8.0			8.0		8.00 00
51		8.6			good 8.4		8.50 1±
52		8.5			8.6		8.55 ±0
53		8.8 ~~9.6~~			8.9 good		8.85 01
54		9.0			9.1		9.05 01
55		9.4 poor			9.7		9.55 21

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Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P Plate M. W. 314 Cont
Third Exposure ~~Re~~

Re-measured Wed Jan. 18, 1911

	1st Scale	2nd Scale			2nd Scale	Mean
56		9.1			9.1	9.10 00
57		9.7			9.7	9.70 00
58		superposed			superposed	—
57		9.9			nearly superposed	9.9 a.
60		too poor			9.8	9.8 . a
61		10.1			F	10.1 a.
62		n.S.			n.S	12.40

+100
−70
50)170
±.034

H.I.S

Tuesday Jan. 17, 1911

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North Polar Sequence

Scale P Plate M.W 314 Cont

Fourth Exposure

Re-measured Wed Jan. 18, 1911

Exp.1-Exp.4	Exp.1		1st Scale	2nd Scale		12.40	1st Scale	2nd Scale			Mean
+20	3.00	24	3.0	2.7	.	2.7 a.	3.2	2.9	~~3.0~~	2.9 a.	2.80 ±1
-05	2.65	26	3.0	2.7	.	2.7 a.	3.0	2.7		2.7 a.	2.70 00
-88	4.00	32	5.2	4.9	4.9	4.90 00	r.p. 5.1	4.8	4.9	4.85 01	4.88 02 03
-28	4.48	33	4.9	4.6	4.8	4.70 ±1 Remeasured '11,1,18 Red'i 4	reject, wrong star? ~~5.4~~ 5.1	4.6	4.9 4.8	4.83 010	4.76 06 07
-53	5.02	34	5.8	5.5	5.6	5.55 ±0	Reject; probably mistake of unit ~~6.5~~ r.p. 5.7	5.4	5.7	5.55 ±1	5.55 00 00
-75	5.05	36	6.0	5.7	5.8	5.75 ±0	6.2	5.9	5.8	5.85 10	5.80 05 05
-42	5.78	38	6.5	6.2	6.2 poor	6.20 00	6.5	6.2	6.2	6.20 00	6.20 00 00
-82	5.78	39	.		6.5		.		6.7		6.60 ±1
	.	40	Too poor			+1 -3 10)4 ±.040				+4 -2 11)6 ±.055	
-97	6.28	41	.		7.2		.		7.3 r.p.		7.25 01
-70	6.95	42			7.7 poor				7.6		7.65 10
-85	6.90	43			7.7				7.8		7.75 ±0
-75	7.05	44			7.8				7.8		7.80 00
-70	7.10	45			7.8				7.8		7.80 00
-55	7.45	46			8.0				8.0		8.00 00
-80	7.70	47			8.6				8.4		8.50 1±
-50	7.80	48			8.4				8.2		8.30 1±
-40	7.70	49			8.1				8.1		8.10 00
.	superposed	50			8.4				8.5		8.45 01
-80	8.20	51			9.0				9.0		9.00 00
-85	8.05	52			8.9				8.9		8.90 00
-100	8.75	53			9.8				9.7		9.75 0±
-95	8.80	54			9.7				9.8		9.75 ±0
-80	9.05	55			9.8				9.9		9.85 01

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Tuesday Jan. 17, 1911.

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North Polar Sequence

Scale P Plate M.W 314 Cont

Fourth Exposure

Re-Measured Wed Jan 18, 1911

Exp.1-Exp.4	Exp.1		1st Scale	2nd Scale	1st	2nd Scale	Mean
-65	9.10	56		9.7		9.8	9.75 ±0
-85	9.10	57		10.0		9.9	9.95 0±
.	9.70	58		superposed		superposed	.
.	9.90	59		n.s		superposed	.
.	9.95	60		n.s		n.s	
.	3.45 10.00	61		n.s.		n.s	12.50

H. I. S.

+94
-104
50)198
±0.40

+20
-1585
24)-1565
-65

On Plate MW 314, Exposures 1 and 2 are elongated while exposures 3 and 4 are nearly round.

The images of Nos. 32, 33, 36, 39, 42, 48, 51, 53 are poor on all exposures except the third, in which all the images are good. There are [illegible] wings on the images of the above stars.

Tuesday, January 17, 1911

North Polar Sequence.

Distances from Centre of MW Plates
(Brightest image

			MW310	MW 312	MW 313	MW 314
	√	24	10	19	19	13
		25	36	27	26	34
-	√	26	23	13	13	21
		27	39	39	39	34
		29	30	31	31	34
-	√	32	23	13	13	20
	√	33	26	12	12	20
	√	34	10	13	4	11
		35	36	29	28	36
-	√	36	23	13	13	20
		37	30	25	25	32
	√	38	10	4	49	7
	√	39	17	11	11	18
-	√	40	24	18	17	25
-	√	41	22	7	13	21
-		42	25	17	17	21
		46	11	~~19~~ 17	19	9
		47	17	8	7	15
-		48	25	20	20	21
		49	5	13	13	9
		50	12	19	21	11
-		51	23	18	18	18
		52	5	14	14	9
-		53	25	20	20	20
		54	16	7	7	13

North Polar Sequence

Remark on Plates MW 310 - 314

See also Book XXVII, 167, 168 XXXI, 45

Plate MW 310 is remarkably good, Stars distant from the centre by 25 mm give better images than those distant 20 mm on plates 312, 313, and 314

As a rule it may be said that images more than 20 millimetres from the centre of the plates cannot be safely measured, but MW 310 is, perhaps an exception to this,

According to the above, On Plate MW 196, measures of Nos. 26, 32, 33, 36, 41, 42, 48, 51, 53 should all be rejected as they are all distant from centre by from 24 to 30 mm. On Plate MW 200, Nos. 26, 32, 41, 42, 48, 51 and 53 are distant 21 or 22 mm. As the plate is not of very good quality any way, all these images are poorer than is usual at a distance of 20 mm. On MW 204, the distances and qualities are nearly the same as on MW 200.

February 28, 1911. But a distinction should be made between full aperture and images formed with diaphragms. The above remarks apply only to exposures with full aperture. Images with the 6-inch diaphragm have been found good as much as 35 mm distant from centre, being comparable with images in centre with full aperture. In the case of 14-inch aperture, images at 25 mm are easily comparable with central images of 60-in.

Tuesday, January 24, 1911

Effect of intervening time and exposures on size of images corresponding to exposures of the same length.

AC 966 multiple image

No. Coordinates Im. 1 Im. 4 Im. 8 Im. 12 Im. 16 15

1 Increases 0.1 from 1 to 4, Nos 4-12 Equally bright

H V Decreases 13-15 very faint 16 a little brighter

Pole	X160	X110	Im. 1	Im. 4	Im. 8	Im. 12	Im. 13	Im. 16	Im. 15
1	~~160~~210	118	1.1	1.0	1.0	1.0	3.0	4.0	5.0
2	216	107	4.2	4.0	4.0	4.0	~~3~~5.0	n.s.	n.s.
3	212	126	~~1~~3.4	~~1~~3.0	~~1~~3.0	~~1~~3.0	~~3~~5.0	n.s.	n.s.
4	210	137	4.2	4.0	4.0	4.0	< ~~8~~5.0	n.s.	n.s.
5	208	152	7.4	7.0	7.0	7.0	n.s.	-	—
6	207	156	8.1	8.0	8.0	8.0	< ~~8~~10.0	-	-
7	198	160	2.2	2.0	2.0	2.0	~~4~~5.0	6.0	6.5
8	192	160	2.1	2.0	2.0	2.0	~~4~~5.0	~~5~~6.0	~~5~~6.5
9	177	158	3.1	3.0	3.0	3.0	~~3~~5.0	~~5~~7.0	~~4~~8.0
10	174	154	5.1	5.0	5.0	5.0	~~5~~7.0	n.s.	-
11	175	164	7.0	7.2	7.0	7.0	n.s.	-	-
12	160	162	2.1	2.0	2.0	2.0	4.0	4.5	5.0
13	156	164	7.1	7.0	7.0	7.0	~~7.0~~ 10.0	n.s.	-
14	145	158	7.1	7.0	7.0	7.0	10.0	-	-
15	146	174	1.1	1.0	1.1	1.1	3.0	4.0	5.0
16	139	170	8.1	8.0	8.0	8.0	10.0	-	-
17	123	167	6.2	6.0	6.0	6.0	9.0	-	-
18	124	172	2.2	2.0	2.0	2.1	5.0	6.0	7.0
19	127	150	Relations as above						
20	125	152	Normal						
21	122	136	Normal						
24	090	121	Normal						

Tuesday, January 24, 1911

Observations Cont.

AC 824 Multiple Image

No.	Coordinates H	V	Im 2	Im 4	Im 7	Im 10	Im 13
Pole	169	116					
1	198	159	6.0	6.5	6.0	6.0	5.9
2	199	162	9.0	9.2	9.5	9.0	9.0
3	193	160	7.0	7.0	7.0	7.0	6.9
4	187	161	8.0	8.0	8.0	8.0	8.0
5	174	172	5.0	5.0	5.0	5.0	5.0
6	161	175	9.0	9.2	9.0	9.0	9.0
7	155	162	7.0	7.0	7.0	7.0	7.0
8	153	164	9.0	9.0	9.0	9.0	9.1
9	149	162	4.0	4.0	4.0	4.0	4.0
10	147	158	9.0	9.0	9.0	9.0	9.0
11	125	153	7.0	throughout			
12	137	151	6.0	throughout			
13	131	142	8.0	8.0	8.0	8.1	8.2
14	122	140	9.0	9.1	9.0	9.0	9.1
15	114	135	7.0	throughout			
16	115	138	9.0	"			
17	107	130	4.0	"			
18	104	121	9.0	"			
19	110	114	7.0	"			
20	112	146	3.0	"			
21	095	101	8.0	"			
22	108	099	4.0	"			
23	102	089	9.0	"			
24	118	071	7.0	"			

Observations Cont.

Plate AC 872. Multiple Images

No.	Coordinates		Im. 1	Im 2	Im. 6	Im. 10	Im. 13
Pole	2$\overset{4}{3}$3	051		~~4.0~~			
1	186	070	n.s	4.0	4.1	4.5	4.6
2	177	070		7.0	7.1	7.3	7.3
3	188	074		5.0	5.2	5.5	5.7
4	195	084		8.0	8.$\overset{2}{\cancel{3}}$	8.5	8.6
5	183	083		9.0	9.1	9.2	9.5
6	177	108		8.0	8.2	8.5	8.7
7	176	11$\overset{2}{\cancel{0}}$		8.0	8.1	8.6	8.7
8	1$\overset{6}{\cancel{8}}$8	106		9.0	9.1	9.5	9.8
9	158	120		7.0	7.1	7.3	7.5
10	151	119		7.0	7.0	7.4 elong.	7.7 elong.
11	148	118		8.0	8.1	8.3	8.6
12	139	111		8.0	8.0	8.5	8.6
13	138	124		7.0	7.1	7.2	7.4
14	133	128		9.0	9.1	9.3	9.4
15	115	126		6.0	6.2	6.3	6.4
16	123	113		6.0	6.2	6.4	6.5
17	121	115		9.0	9.1	9.3	9.3
18	096	091		8.0	8.1	8.3	8.5
19	088	086		8.0	8.0	8.2	8.3
20	076	078		8.0	8.1	8.2	8.3

Observations Cont.

Plate AC 832) Multiple Images

No.	Coordinates H	V	Im. 1	Im. 4	Im. 9	Im. $\overset{11}{\cancel{12}}$	Im. 12
Pole	140	042					
1	193	061	6.0	6.0	6.1	6.3	6.5
2	181	057	8.0	8.0	8.1	8.4	8.6
3	185	074	8.0	8.0	8.0	8.4	8.6
4	175	078	4.0 square	4.0 oblong	4.2 elong.	4.4 elong.	4.6 elong.
5	173	096	9.0	9.0	9.2	9.5	9.6
6	167	101	9.0	9.0	9.0	9.4	9.5
7	161	096	too bright				
8	152	102	7.0	7.0	7.1	7.4	7.6
9	142	113	8.0	8.0	8.0	8.1	8.5
10	136	086	8.0	8.0	8.0	8.4	8.6
11	122	107	8.0	8.0	8.1	8.3	8.6
12	119	106	9.0	9.0	9.0	9.4	9.6
13	123	100	8.0	8.0	8.0	8.3	8.4
1$\overset{5}{\cancel{4}}$	129	081	9.0	9.0	9.1	9.4	9.5
1$\overset{4}{\cancel{5}}$	111	098	8.0	8.0	8.2	8.4	8.5
16	095	095	8.0	8.0	8.0	8.3	8.4
17	104	072	7.0	7.0	7.1	7.4	7.6
18	093	073	8.0	8.0	8.1	8.3	8.5
19	084	060	8.0	8.0	8.2	8.4	8.6
20	078	087	7.0	7.0	7.0	7.2	7.4

Wednesday April 10, 1912.

Scale II

North Polar Sequence.

MC 1756 with and without Screens A + B.

3:13

	1st exp. without screen.			Remeasured		Mean	
	sc 1.	sc. 2.		sc 1	sc 2		
c¹	4.7			4.8		4.75	⊥ 0
c²	5.8	5.6				5.70	1 ⊥
c³	5.9	5.8				5.85	1 0
c⁶	6.1	5.9				6.00	1 ⊥
c⁷	6.2	5.9				6.05	2 ⊥
d	6.2	5.9				6.05	2 ⊥
e	6.4	6.3				6.35	0 ⊥
f	6.9	6.8				6.85	1 0
f²	7.3	7.5				7.40	⊥ 1
f³	7.9	7.8				7.85	1 0
g		8.1			$8.\overset{1}{2}$	8.10	0 0
h		8.4			8.4	8.40	0 0
i		8.3			8.4	8.35	⊥ 0
k¹		8.8			8.8	8.80	0 0
k²		8.7			8.7	8.70	0 0
k³		8.9			8.9	8.90	0 0
k4		9.6			9.6	9.60	0 0
k⁵		9.5			9.2	9.35	~~⊥~~ 1 2
l		9.6			9.6	9.60	0 0
386	6.7	6.7				6.70	0 0
197	6.8	6.9				6.85	0 1
408	7.5	7.5	nearly superposed.			7.50	0 0
248		8.6			8.4	8.50	1 ⊥
279		9.0			8.9	8.95	0 ⊥
292		8.8			8.7	8.75	0 ⊥
m		9.8			9.9	9.85	0 1

Wednesday April 10, 1912.

Scale II

North Polar Sequence.

MC 1756 Cont.

	2nd exp. with			Screen A. Remeasured	Mean	
	sc 1	sc 2		sc 2.		
c¹	7.3	7.3			7.30	0 0
c²	7.8	7.7			7.75	0 1
c³	t.f.	8.0		8.1	8.05	0 1
c⁶		8.2		8.2	8.20	0 0
c⁷		8.0		8.2	8.10	⊥ 1
d	t.f.	8.4		8.4	8.40	0 0
e		8.5		8.5	8.50	0 0
f¹		8.8		8.8	8.80	0 0
f²		9.7	def.?	9.6	9.65	1 0
f³		9.7		9.8	9.75	⊥ 0
g		10.0		10.0	10.00	0 0
h		m.s.				
i		m.s.				
k¹						
k²						
k³						
k⁴						
k⁵						
l						
386		8.7		8.8	8.75	⊥ 0
197		8.9		9.1	9.00	⊥ 1
408		9.2		9.3	9.25	0 1
248						
279						
292						
m						

Wednesday April 10, 1912.

Scale U

North Polar Sequence.

Mc 1756 cont.

3rd exp. with screen B

	Sc1	Sc2	Remeasured Sc1	Remeasured Sc2	Mean.	
c¹	7.6	7.6			7.60	00
c²	t.f.	7.9		7.9	7.90	00
c³		8.4		8.3	8.35	0⊥
c⁶		8.3		8.5	8.40	⊥1
c⁷		8.2		8.3	8.25	01
d		8.7		8.7	8.70	00
e		8.6		8.7	8.65	01
f¹		9.1		9.0	9.05	~~01~~ 10
f²		9.7		9.7	9.70	00
f³		9.9		9.9	9.90	00
g		n.s.		n.s.		
h						
i						
k¹						
k²						
k³						
k⁴						
k⁵						
l						
386		8.7		8.8	8.75	⊥0
197		9.2		9.0	9.10	1⊥
408		9.3		9.5	9.40	⊥1
248						
279						
292						

MAR.

Wednesday, April 10, 1912

Scale U

North Polar Sequence.

Mc 1756 cont.

4th exp. without screen.

	Sc1	Sc2	Remeasured Sc1	Remeasured Sc2	Mean		Exp. 1-4
c¹	4.8	t.b.	4.9		4.85	01	-10
c²	5.7	5.6			5.65	10	+05
c³	5.9	5.8			5.85	10	00
c⁶	5.9	5.8			5.85	10	+15
c⁷	6.0	6.0			6.00	00	+05
d	6.4	6.3			6.35	0⊥	-30
e	6.5	6.5			6.50	00	-15
f¹	6.9	6.8			6.85	10	00
f²	7.5	7.7			7.60	⊥1	-20
f³	7.9	7.8			7.85	10	00
g		8.2		8.3	8.25	01	-15
h		superposed					..
i		8.4		8.5	8.45	01	-10
k¹		8.7		8.7	8.70	00	+10
k²		8.8		8.8	8.80	00	-10
k³		9.3		9.2	9.25	10	-35
k⁴		9.5		9.5	9.50	00	+10
k⁵		9.4		9.7	9.55	2̲1	-20
l		9.8		9.7	9.75	0⊥	-15
m		9.8		9.9	9.85	01	00
386	6.7	6.6			6.65	10	+05
197	7.0	7.1			7.05	01	-20
408	~~6.4~~ 7.3	7.4			7.35	⊥0	+15
248		8.5		8.6	8.55	⊥0	-05
279		9.1		9.1	9.10	00	-15
MAR, 292		8.8		8.8	8.80	00	3.5 -05

Monday, April 15, 1912.

9:50 Scale U North Polar Sequence.

MC 1758 with and without Screens A + B

1st exp. without screen

	Scale 1	Scale 2	Sc 1	Remeasured Scale 2	Mean	
c¹	5.7	5.7			5.70	00
c²	5.8	5.7			5.75	01
c³	~~6~~5.9	5.8			5.85	10
c⁶	6.4	6.0	6.2	6.3	6.22	p2 2 01
c⁷	6.4	6.2			6.30	11
d	6.7	6.7			6.70	00
e	6.7	6.8			6.75	10
f¹	7.4	7.2			7.30	11
f²	7.7	7.6			7.65	10
f³	t.f.	8.0		8.2	8.10	11
g		8.4		8.3	8.35	01
h		8.6		8.7	8.65	01
i		8.5		8.7	8.60	11
k¹		9.0		9.0	9.00	00
k²		8.9		8.8	8.85	10
k³		9.7		9.8	9.75	10
k⁴		9.9		9.8	9.85	10
k⁵		9.8		9.8	9.80	00
l		10.0		10.0	10.00	00
386	~~7.3~~ reject	6.9	6.8	6.9	6.87	010
197	7.1	7.1			7.10	00
408	7.6	7.6			7.60	00
248		8.7		8.8	8.75	10
279		9.3		9.4	9.35	10
292		8.9		9.0	8.95	10
MCR. m		n.s.	Image difficult to compare with scale.			

Monday April 15, 1912.

Scale U North Polar Sequence.

MC 1758 cont.

2nd exposure with screen $\overset{B}{\&}$ .5 inches from plate.

	Scale 1	Scale 2.	Remeasured Sc 2.		Mean.		mean corrected for Time
c¹		8.2	8.2		8.20	00	8.07
c²		8.4	8.4		8.40	00	8.27
c³		8.4	8.6		8.50	11	8.37
c⁶		8.7	8.7		8.70	00	8.57
c⁷		8.6	8.6		8.60	00	8.47
d		8.7	8.9		8.80	00	8.67
e		9.0	9.4	9.1	9.17	221	$\overset{9}{8}$.04
f¹		9.7	9.7		9.70	00	9.65
f²		10.0	~~9.9~~ 10.0		10.00	00	10.00
f³		n.s.					
g							
h							
i							
k¹							
k²							
k³							
k⁴							
k⁵							
l							
386		9.2	9.1		9.15	01	9.02
197		9.7	9.3	9.5	9.50	220	9.37
408		t.p.	t.p.				
248							
279							
292							
m							

Monday April 15, 1912

Scale II North Polar Sequence.

Mc 1758 cont

3rd exp. with screen B 4 inches from plate.

	Scale 2	Remeasured Sc 2	Mean	Mean corrected for Time.
c¹	8.2	8.2	8.20 00	7.93
c²	8.6	8.5	8.55 01	8.28
c³	8.9	8.8	8.85 10	8.58
c⁶	8.8	8.8	8.80 00	8.53
c⁷	8.8	8.8	8.80 00	8.53
d	9.2	9.0	9.10 11	8.83
e	9.8	9.6	9.~~8~~70 11	9.60
f¹	9.7	9.7	9.70 00	9.60
f²	t.f.			
f³				
g				
h				
i				
k¹				
k²				
k³				
k⁴				
k⁵				
l				
386	9.2	9.0	9.10 11	8.83
197	9.6	9.7	9.65 01	9.51
408	9.8	9.9	9.85 01	9.80
248				
279				
292				

Monday April 15, 1912.

Scale II North Polar Sequence.

Mc 1758 cont

4th exp. without screen

	Scale 1	Scale 2	Remeasured. Scale 2	Mean.	1-4	Mean corrected for Time.	Mean 1, Corr. 4
c¹	6.0	5.9		5.95 01	-25	5.55	5.62
c²	6.2	6.1		6.15 01	-40	5.75	5.75
c³	6.5	6.4		6.45 10	-~~23~~ 60	6.05	5.95
c⁶	6.7	6.7		6.70 00	-48	6.30	6.26
c⁷	6.8	6.7		6.75 01	-45	6.35	6.32
d	7.0	6.9		6.95 01	-25	6.55	6.62
e	7.2	7.1		7.15 01	-40	6.75	6.75
f¹	7.7	7.~~7~~6		7.65 10	-35	7.25	7.28
f²		8.0	7.9	7.95 01	-30	7.55	7.60
f³		8.6	8.6	8.60 00	-50	8.20	8.15
g		8.8	8.7	8.75 01	-40	8.35	8.35
h		9.0	9.0	9.00 00	-35	8.60	8.62
i		9.0	8.9	8.95 01	-35	8.55	8.58
k¹		9.5	9.3	9.40 ~~2~~1 1	-40	9.00	9.00
k²		9.6	9.3	9.45 21	-60	9.05	8.95
k³		9.8	9.7	9.75 01	00	9.63	9.69
k⁴		9.9	9.9	9.90 00	-05	9.85	9.85
k⁵		t.f.	t.f.				9.80
l		10.0	10.0	10.00 00	00	10.00	10.00
386	7.5	7.3		7.40 11	-53	7.00	6.9~~2~~4
197	t.f.	7.7	7.7	7.70 00	-60	7.30	7.20
408	t.f.	7.9	8.0	7.95 10	-35	7.55	7.58
248		9.1	9.0	9.05 10	-30	8.65	8.70
279		t.f.					9.35
292		9.5	9.2	9.35 12	-40	8.95	8.95
m		n.s.					

(over)

Monday April 15, 1911

North Polar Sequence

Remark on MC 1758

The images are not easily compared with the scale, especially in the case of faint stars, which are poor. The grain of the plate is coarse.

The images on exp. 3, with screen B 4 inches from the plate, are better than those on exposure 2, with the same screen 5 inches from plate.

Wednesday July 10, 1912

Scale P.

North Polar Sequence

Scale Measures on MW 233

3 1 5 7

4 2 6 8

Aperture 60-23 Exp. 1 m

Cm. ? Dist	Mean 1,7	Dist	~~12~~	Exp. 1 sc1 sc2	Exp. 7 sc1 sc2	1-7		Dist (mean 1,7)	Exp. 1 sc2	Exp. 7 sc1 sc2	Mean 1,7		Comp. Dist
2.09	1.80	14.6	14	2.0? 1.7? 1.7	2.2? 1.9?	20	39	30.05	~~[illegible]~~ n.s. ~~[illegible]~~ .				
.			15	t.p. . .	t.p . .	.	~~17a~~	30.5	t.p. .	t.p.			
.			16	t.p. . .	t.p. .	.	11s	12.0	3.8 3.5	3.9 3.6 t.b. 3.6	3.55	10	3.87
.			18	t.p . .	t.p. .	.	12s	12.5	4.5 poor t.b. 4.2	4.6 4.3 4.7 4.50	4.35	30 6	4.?7
3.~~54~~ 42	2.70	14.5	19	3.1 2.8 2.8	2.9? 2.6?	20	5a	13.0	2.0? 1.7?	2.2 — 1.9?	1.80 2	20	2.0?
3.60	3.45	5.5	20	3.7 3.4 3.4	3.8 3.5	10	7a	12.5	3.2 2.9	2.9 t.b. poor 2.6	2.75	30	3.10
.			21	t.p. . .	t.p. .	.	8s	20.5	5.6 5.3 5.5 5.40	5.1 5.4 5.7 5.55	5.48	15	5.79
.			22	t.p. . .	t.h. .	.	9s	10.0	5.7 6.4 5.7 5.55	6.1 5.8 6.0 5.90	5.~~62~~ 7	35	5.85
4.28	4.12	5.5	23	~~3?~~ 42 poorly in meas. 3.~~5~~ 9 3.~~5~~ 9	4.5 4.2 4.5 4.35	45 ~~85~~	10a	13.5	6.3 6.0 6.5 6.25	6.5 6.2 6.3 6.25	6.25	00	6.25
.			24	t.p. . t.b.	t.p. t.p. .		11a	14.5	6.5 6.2 6.5 6.35	6.4 6.1 6.4 diff 6.25	6.30	10	6.38
4.94	4.68	11.5	25	4.8 4.5 t.b. 4.65	4.9 4.6 4.8 4.70	05	12s	9.0	6.5 6.2 6.6 6.40	6.5 6.2 6.6 6.40	6.40	00	6.46
5.6~~1~~ 7	5.~~90~~ 52	9.5	26	5.8 5.7 4.6 5.5 5.4 5 5.50	5.7 5.4 5.7 5.55	05	13s	15.6	6.6 6.3 6.8 6.50	6.8 6.5 6.7 6.60	6.55	10	
5.9?	5.90	4.5	27	6.0 5.7 5.9 5.80	6.2 5.9 6.1 6.00	20	14s	9.5	t.f. 7.2 7.2	t.f. 7.3	7.25	10	7.20
6.55	6.45	22.0	28	6.6 6.3 6.6 6.45	6.6 6.3 6.6 6.45	00	15s	10.5	7.8	7.7	7.75	10	
7.03	7.10		29	t.f. 7.1 7.1	t.f. 7.1 7.1	00	16s	14.0	8.1	t.f. 8.0	8.05	10	7.9
~~2.02~~ 7.27	7.55		30	. 7.5 7.5	7.6 .	10	17s	13.	sup.	def.	.	.	
7.38	7.50	12.0	31	7.4	7.6	20	18s	10.5	9.6	~~7.7~~ 9.3	9.45	30	8.4
7.65	7.85	10.5	32	~~7.7~~ 7.9	7.8	10	19s .		n.s.	n.s.	.	.	
8.14	9.0	12.5	33	sup.	9.0	.							
8.12	8.70		34	8.9	8.5	40							
8.50	9.30	[illegible]	35	9.7	8.9	80							
8.70	9.35	7.0	36	9.6	9.1	50							
9.58	9.70	20	37	10.0	9.4	60							
.			38	n.s.	n.s.	.							

Images not very comparable.

Wednesday, July 10, 1912.

Scale P. North Polar Sequence.

MW 233 Cont

Red. Const. 3.06 Magn.

Cn. for Dist. Mean 2,8	Mean Dist Exp 2,8		Ap. 60-23 Exp 1m Exp. 2 Scale 1 Scale 2		Ap. 60-23 Exp 1m Exp. 8 Sc 1 Sc 2		2-8	Mean 2,8	Ap. 60-23 + wire gauze Exp. 11m Exp. 3 Sc 1 Sc 2		Dist Exp. 3	Cn. for Dist
3.9~~8~~ 3	15.5	14	3.7 3.4 t.b.	3.4	3.9	3.6	20	3.50	4.8 4.5 4.6	4.55	13	4.90
.	37.5	15	t.p.	.	t.p.	.	.	.	t.p.	.	37	
.	30.5	16	t.p.	.	t.p.	.	.	.	t.p.	.		
.	32.0 31.5	18	t.p.	.	t.p.	.		.	t.p.	.		
5.90	14.5	19	5.8 5.5 5.8	5.65	poor 5.9 5.6 5.9	5.75	10	5.70	6.8 6.5 6.9	6.70	17	6.73
6.30	6.0	20	5.9 5.6 6.1	5.85	poor 6.4 ~~5.0~~ 6.1 6.2	6.15	30	6.00	7.0 6.~~5~~ 7 7.1	6.~~80~~ 90	8	~~6.8~~ 91
.		21	t.p. t.p.	.	t.p.	.	.	.	t.p.	.	34	
		22	t.p. t.p.	.	t.p.	.	.	.	t.p.	.		
6.6~~1~~ 3	4.5	23	6.8 6.5 6.7	6.60	6.6 6.5 6.8	6.~~70~~ 65	10	6.6~~5~~ 2	7.7	7.7	7	7.[illegible]
.	19.5	24	t.p. t.p.	.	t.f.	.	.	.	8.7 poor		22	7.~~6~~ 5 8
7.3~~8~~ 9 7.65	11.5	25	t.f. 7.7	7.7	t.f. 7.6	7.6	10	7.65	8.6		14	7.97
~~7.77~~	9.5	26	8.0	8.0	8.0		00	8.00	9.0		12	8.18
7.80	4.5	27	~~6.3~~ 7.9	7.9	7.9		00	7.90	9.7? poor		1	9.6?
7.6~~1~~ 0	21.0	28	9.1		8.8		30	8.95	n.s.	.		
7.85?	19.0 ~~21.0~~	29	9.9		9.9		00	9.90	n.s.			
7.95?	21.0	30	10.0		10.0		00	10.00				
.	30.5	7r	t.p. t.p.		t.p.			.	t.p. t.p.			
6.60	11.5	11r	6.6 6.3 ~~8.4~~ 6.7	6.50	6.7 6.4 6.8	6.60	10	6.55	t.f. 7.6		14	7.40
7.7[illegible]	13.0	12r	t.f. 7.2		t.f. 7.3	7.3	10	7.25	8.7		16	7.94
3.~~1~~ 8	12.0	5r	3.8 poor 3.5 t.b.	3.5	3.9 t.b.	3.6	10	3.55	poor 5.0 4.7 poor 4.6	4.65	15	5.00
5.82	11.5	7r	5.7 poor 5.4 5.7	5.55	5.9 5.6 6.0	5.80	25	5.68	6.8 6.5 6.7	6.60	15	6.65
7.4~~1~~ 8	19.5	8r	t.f. 7.9 ~~4~~		7.9		00	7.90	9.2		22	7.46
7.68	9.0	9r	t.f. 7.9		t.f. 7.9		00	7.90	9.4		10	8.44
8.01	13.5	10r	t.f. 8.4		8.7		30	8.65	9.8		11	8.72?
8.15	11.5	11r	8.9		8.9		00	8.90	n.s.			.
8.20	9.5	12r	8.8		8.6		20	8.70	n.s.			.
7.96	15.5	13r	8.9		t.f. sup.		,	8.9	10.1?			
8.5	9.5	14r	9.9		n.s.		.	9.9	n.s.		1:05	

Wednesday, July 10, 1912.

Scale P. North Polar Sequence.

MW 233 cont.

Red. Const. 1.96 magn.

	Ap. 60-23 + wire gauze Exp. 4 Exp. 1m Sc 1 Scale 2	Dist	Cn. for Dist	Ap. 32-23 Exp. 11m Exp. 5 Scale 1 Scale 2		Dist.	Cn. for Dist	Ap. 32-23 Exp. 1m Exp. 6 Scale 1 Scale 2		Dist.	Cn. for Dist
14	~~6.9~~ 7.1	14	7.36	3 ~~4~~.4? B.	3.1?	15	3.52	6.2 5.9 6.1	6.00	15	6.15
15	. t.p.	36		3.9 t.b.	3.6	38	.	6.6 6.3 6.4	6.35	37	6.58
16	. t.p.	31		4.2? t.b.	3.9	29	4.72?	6.8 6.5 6.8	6.65	36	6.73
18	t.p.	34		4.9 4.6 4.8	4.70	31	5.07?	t.f. 7.7		31	7.24
19	9.5	17	7.7	5.7 5.4 5.7	5.55	15	5.~~83~~ 78	7.9		15	7.57
20	9.7?	8	7.9?	5.9 5.6 5.8	~~6~~ 5.70	5	5.78	8.2		8	8.01
21	t.p.	3.		6.6 6.3 6.4	6.35	30	6.57?	9.1 ~~6.6~~		30	(6.90
22	t.p.	29		6.7 6.4 6.6	6.50	26	6.62	9.1		26	(7.[illegible]
23	9.8?	6	8.0? ~~7.2?~~	6.7 6.4 6.6	6.50	5	6.53	9.0		4	8.77
24	10.0?	22	.	t.f. 6.9		20	6.90	9.8		20	[7.25
25	sup. ~~n.s.~~			t.f. 7.3		12	7.22	sup.		12	
26				7.9		9	7.70	n.s.		9	
27				8.0		4	7.91				
28				8.6		22	7.60				
29				9.7		20	7.~~80~~ 35				
30				10.0		2	8.50				
7r ~~31~~		33		3.7 B.	3.4	30	4.26	6.3 6.0 6.2	6.10	30	6.39
11r ~~32~~	f.	14		6.5 6.2 6.5	6.35	12	6.42	t.f. 9.0		12	9.17
12r ~~33~~	n.s.			6.9 6.6 7.0	6.80	12	6.80	9.6		13	8.20
5r ~~34~~	7.3	14	~~6~~ 7.19	3.7 3.4 B.	3.4	13	3.77	6.3 6.0 6.4	6.20	12	6.3[illegible]
7r ~~35~~	9.0	14	8.07	5.6 5.3 5.7	5.50	12	5.67	t.f. 7.8		12	7.57
8r	n.s.			t.f. 7.8		20	7.42	n.s.			
9r				7.8		10	7.62	n.s.			
10r				~~8.9~~ 8.7 n.s.		14	8.00	.			
11r				8.9		12	8.15				
12r				8.9		9	8.22				
13r				9.1		15	7.90				
14r				n.s.						2:48	

Thursday July 11, 1912

Scale R S North Polar Sequence

2:15

Scale Measures on MW 233 See Remark page 53

Cor. by curve for July 12	Mean 1,7		Exp 1. sc1.	sc2.	Exp. 7 sc1	sc2.			Exp 1. sc1	sc2.	Exp. 7.		Cor for July 12	Mean 1,7
2.65	2.45	14	1.7	2.0	2.6	2.9	7r	7r	t.p.	.	t.p.		.	
		15	t.p.	.		.	11r	11r	4.7 ~~8.7~~ t.b.	5.0	hor 5.0 t.b	5.3	5.25	5.15
		16	t.p.	.		.	12r	12r	5.5 t.b.	5.8	5.9 t.p. t.b	6.2	6.21	6.00
		18	t.p.	.		.		5p	1.8	2.1	2.5 t.b.	2.8	2.65	2.45
4.25	4.05	19	3.7	4.0	3.8	4.1		7p	3.6	3.9	3.9	4.2	4.25	4.05
5.25	5.00	20	4.7	5.0	4.7	5.0		8p	6.9 7.2 6.9	7.05	hor 7.0 7.3 6.9	7.10	7.34	7.08
		21	t.p. t.	.	t.p.	.		9p	7.6 7.9 7.6	7.75	8.2 8.5 8.6	8.55	8.43	8.15?
		22	t.p.	.	t.p.	.		10p	8.6 8.9 8.7	8.80	8.7 ~~8.8~~ 9.0 9.0	9.00	9.18	8.90
6.21	6.00	23	5.7	6.0	5.7 t.b.	6.0		11p	8.6 8.9 8.7	8.80	9.0 9.3 9.5	9.40	9.38	9.10
		24	t.p.	.	t.p.	.		12p	8.7 9.0 9.3	9.15	8.8 9.1 8.9	9.00	9.36	9.08
6.52	6.30	25	5.8 t.b.	6.1	6.2 v.p. t.b.	6.5		13p	9.0 9.3 9.3	9.30	9.1 9.4 9.6	9.50	9.67	9.40
7.92 ~~8.1~~	7.65	26	~~9.6~~ 7.3 7.6 7.4	7.50	7.6 7.9 7.7 v.p.	7.80		14p	t.f. 10.3		t.f. 10.6		10.61	10.45
8.26	7.98	27	7.7 8.0 7.7	7.85	7.9 8.2 8.0	8.10		15p	t.f. 11.6?		11.6		11.65	11.60
9.13	8.85	28	8.6 8.9 8.8	8.85	8.7 9.0 8.7	8.85		16p	t.f. 12.5		12.3		12.38	12.40
10.42	10.23	29	9.6 9.9 10.3	10.10	t.f. 10.5			17p	sup.		def.		.	
11.10	11.00	30	11.0		t.f. 11.0			18p	13.8?		13.6		13.51	13.70
11.62	11.55	31	11.8		11.3			19p			n.s.		.	
12.20	12.20	32	12.3		12.1									
12.88	12.95	33	13.0 ~~sup.~~		12.9									
12.83	12.90	34	13.2		12.6									
13.25	13.35	35	13.6		13.1									
13.38	13.50	36	13.6		13.4									
13.74	13.90	37	14.0?		13.8									
		38												
		39												

MCR

Thursday July 11, 1912.

Scale R North Polar Sequence.

MW 233 cont See Remark P. 53

Mean 2,8		Exp. 2 Scale 1	Scale 2	Exp. 8 Scale 1	Scale 2	July 12 sc. 2	July 12 Exp. 3. Sc1 Sc2	
5.10	14	4.7 5.0		4.9 5.2		B 5.2	6.2 6.3 B.	6.5
	15	t.p.					t.p.	
	16	t.p.					t.p.	
	18	t.p.					t.p.	
7.62	19	7.4 7.7 7.4 7.55		7.6 7.9 7.5 ~~hor~~	hor	7.70	t.f. 10.3	10.3
8.26?	20	7.7 8.0 7.8 7.90		8.3 8.6 ~~8.7~~	8.7	8.65	t.f. 10.8	
	21	t.p.		t.p.			t.p.	
	22	t.p.		t.p.			t.p.	
9.55	23	9.0 9.3 9.4 9.35		9.4 9.7 9.8		9.75	12.0	
	24	t.p.		t.p.			t.p.	
10.85	25	t.f. 10.7		11.0 11.0		11.0	13.0 v.p.	
12.15	26	12.0		12.3	12.3	12.3	13.6	
12.00	27	12.0		12.0	12.0		14.0?	
13.20	28	13.2		13.2	13.2		n.s.	
13.90	29	13.9		13.9	13.9			
	30	n.s.		n.s.	n.s.			
	7r	t.p.		t.p.			t.p.	
9.25	11r	9.0 9.3 8.7 9.00		9.1 9.4 9.6		9.50	11.8	
10.30	12r	t.f. 9.9		t.f. ~~10.7~~	10.7	10.7	12.7 ~~11.8~~	
5.10	5p	4.8 5.1 t.b. 5.1		4.9 5.2		5.2	6.3 B.	6.6
7.52	7p	6.9 7.2 7.2 7.20		7.7 8.0 7.7		7.85	t.f. 9.8	
11.80	8p	t.f. 11.7		t.f. 11.9		11.9	13.7	
12.25	9p	t.f. 12.1		t.f. ~~12.0~~	12.2		13.8	
12.70	10p	12.6		12.8	12.8		13.9	
13.00	11p	12.9		13.1	13.1		n.s.	
12.90	12p	12.9		12.7	12.9		n.s.	
13.25	13p	13.1		13.4	13.4			
	14p	n.s.		n.s.	n.s.			

Friday July 12, 1912.

Scale R.

North Polar Sequence.

MW 233 cont.

	Dist.	Exp. 4		Exp. 5				Exp. 6	
		Sc 1	Sc 2	Sc 1		Sc 2		Sc 1	Sc 2
14.5	14		10.4	4.7			5.0	8 9.7	Exam. Dec. 8, 1913
36	15		t.p.	5.1			5.4	9.5	
31	16		t.p.	5.6 poor		B.	5.9	9.8	
	17			6.2			6.5	10.9	
34	18		t.p.	6.7		B.	7.0	11.7	
17	19		13.7	7.4	7.7	7.5	7.60	12.0	
8	20		13.8	7.8	8.1	7.8	7.95	12.6	
24	21		t.p.	8.7	9.0	8.8	8.90	13.6	
29	22		t.p.	8.8	9.1	9.0	9.05	13.2	
6	23		14.0?	9.1	9.4	9.4	9.40	13.1	
22	24			t.f.		10.3		13.8?	
	25			t.f.		10.6		neb.	
	26					11.6		14.0	
	27					12.0		13.9	
	28					12.6 poor		n.s.	
	29					13.7? poor			
	30					14.0?			
30	7 R			4.6	4.9	B.	4.9	8.6	~~Assumed 9.6~~
	11 R		f.	t.f.		8.7		13.1	
	12 R		n.s.	t.f.		10.2		13.7	
14	5 R		11.2	4.9	5.2	B.	5.2	8.7	Assumed 9.7
	7 R		12.5	7.2	7.5	7.6	7.55	11.8	
	8 R		n.s.	t.f.		11.7		n.s.	
	9 R					11.7		n.s.	
	10 R					12.5			
	11 R					13.0			
	12 R					12.8			
	13 R					13.0? poor			
	14 R					14.0?			

Thursday July 11, 1912.

North Polar Sequence.

Distances in millimeters from the centre of the plate

MW 233.

	1	Con. PR	2	Con. PR	3	Con PR	4	Con PR	5	Con PR	6	Con PR	7	Con PR	8	Con PR
14	13		14		13		14		15	00 00	15	00 08	16		17	
15	38		37		37		36		38	" "	37	" "	39		38	
16	30		31		30		31		29		30		29		30	
17 ~~17~~	41		41		.		.		39		39		38		38	
18	32		33		33		34		31		31		30		31	
19	16		16		17		17		15		15		13		13	
23 ~~21~~	6		5		7		6		5		4		5		4	
21	33		33		34		34		31		31		30		30	
22	28		28		29		29		26		26		25		25	
20 ~~23~~	7		7		8		8		5		6		4		5	
24	21		21		22		22		20		20		18		18	
25	13		13		14		14		12		12		10		10	
26	11		11		12		12		9		9		8		8	
27	3		3		1		2		4		4		6		6	
28	22		21		.		.		22		.		22		21	
29	20		.		.		.		.		.		20		.	
30	22		.		.		.		.		.		21		.	
31	12		12		.		.		.		.		10		.	
32	10		.		.		.		.		.		11		.	
33	14 ~~[illegible]~~		.		.		.		.		.		12		.	
34	12		.		.		.		.		.		10		.	
35	8		.		.		.		.		.		8		.	
36	7		.		.		.		.		.		7		.	
37	4		.		.		.		.		.		0		.	
38	.		.		.		.		.		.		.		.	
39	.															

Thursday July 11, 1912.

North Polar Sequence

Distances in millimeters from the centre of plate MW 233

	1	2	3	4	5	6	7	8
7r	32	32	33	33	30	30	29	29
11r	13	13	14	14	12	12	11	10
12r	14	14	15	.	12	13	11	12
5 s	14	13	15	14	13	12	12	11
7 s	14	13	15	14	12	12	11	10
8 s	21	20	22	.	20	.	20	19
9 s	10	9	10	9	10	9	10	9
10 s	12	12	11	.	14	.	15	15
11 s	14	13	.	.	12	.	11	10
12 s	8	8	.	.	9	.	10	11
13 s	14	14	.	.	15	.	17	17
14 s	8	.	.	.	.	.	11	.
15 s	11	.	.	.	.	.	10	.
16 s	4	m.	.	.	.	.	4	.
17 s	~~11~~ sup.	.	.	.	.	.	13 ~~10~~	.
18 s	11	.	.	.	.	.	10	.
19 s	.	.	.	.	.	.	.	.

The centre for the above estimates and those on page 49 is about 3 mm from the centre of the plate, and coincides with the position of the 7th exposure of No. 37. It is the apparent centre for the quality of the images, found by marking on the plate, in different directions, the limit of good images. The result was approximately a circle about 36 mm in diameter, of which the position of No. 37, exp. 7, is the approx. centre.

MCB.

Friday July 12, 1912.

Scale R.

North Polar Sequence

10:34

MW 233

	Exp. 1 Remeasured SC1	SC2		Exp. 7 SC1	SC2		1-7 / 7-1	Cor. Mean 1,7 Mean P.46		Mean July 11,12
14	2.4		2.7	2.7		3.0	30	2.65	2.85	2.75 10 10
15	t.p.		,	t.p.		.	.		.	
16	t.p.		.	t.p.		.	.		.	
18	t.p.		.	t.p.		.	.		.	
19	3.8		4.1	3.8		4.1	00	4.25	4.10	4.18 07 08
20	5.2		5.5	4.9		5.2	30	5.25	5.35	5.30 05 05
21	t.p.		.	t.p.		.	.		.	
22	t.p.		.	t.p.		.	.		.	
23	6.0	~~9.5~~	6.3	5.8	B.	6.1	20	6.21	6.20	6.20 01 00
24	t.p.		.	t.p.		.	.		.	
25	6.5	B.	6.8	6.2 v.p.	B.	6.5	30	6.52	6.65	6.58 06 07
26	7.6 7.9	7.6	7.75	7.6 7.9	7.7	7.80	05	7.92	7.78	7.85 07 07
27	7.8 8.1	8.6	8.35	8.1 8.24	8.6	8.50	15	8.26	8.42	8.34 08 08
28	8.8 9.1	9.6	9.35	8.7 9.0	9.3	9.15	20	9.13	9.25	9.19 06 06
29	f	10.5		f.	10.4		10	10.42	10.45	10.44 02 01
30		11.5			10.7		80	11.10	11.10	11.10 00 00
31		~~13.1~~ 11.6			11.4		20	11.62	11.50	11.56 06 06
32		12.4			12.0		40	12.20	12.20	12.20 00 00
33		12.7 hor			12.7 r.f.		00	12.86	12.70	12.79 09 09
34		12.6			12.7		10	12.83	12.65	12.74 09 09
35		13.7 hor			13.1		60	13.25	13.40	13.32 07 08
36		13.8 hor			13.1		70	13.38	13.45	13.42 04 03
37		n.s.			13.8		.	13.74	13.8 [14.2]	13.74 a.
38					t.f.		.		:	
39										
11r	5.3		5.6	4.9	B.	5.2	40	5.25	5.40	5.32 07 08
12r	5.7 hor	B.	6.0	5.8 v.p.	B.	6.1	10	6.21	6.05	6.13 08 08

MCB. 10:48.

Friday July 12, 1912.

Scale R

North Polar Sequence

11:09

MW 233

	Exp. 2	remeasured			Exp. 8				2-8	Mean 2,8
	sc1		sc2		sc1		sc2			
14	4.8		B.	5.1	5.0			5.3	20	5.20
15	t.p.			.	t.p.			.	.	.
16	t.p.			.				.	.	.
18	t.p.			.				.		.
19	7.6	pos. 7.9	7.4	7.65	7.8 r.p.	8.1	8.5 ? r.p.	$8.\overset{3}{7}0$	$\overset{6}{5}5$	$7.9\overset{8}{3}$
20	7.9	8.2	7.9	8.05	8.7 pos.	9.0	9.0 r.p.	9.00	895	8.52
21	t.p.			.	t.p.				.	.
22	t.p.			.	t.p.			.	.	.
23	t.f.		9.9		t.f.		10.1		20	10.00
24	t.p.			.	t.p.			.		.
25	t.f.		11.2		t.f.		11.6		40	11.40
26			11.8				12.6		80	12.20
27			12.3 pos.				12.4		10	12.35
28			13.1				13.0		10	13.05
29			~~f~~ n.s.				13.9		.	13.9
30			n.s.				f	.	.	.
7r	t.p.				t.p.			.	.	.
11r	9.0	9.3	8.9	9.10	t.f.		9.9 10.		80	~~9.40~~ ~~5~~43
12r	t.f.		10.0				~~1~~.5	Examined & mistake of a unit found.	50 ~~150~~	10.~~75~~ 05
5a	4.5		B.	4.8	5.2	5.5	B.	5.5	70	5.15
7a	7.4	7.7	7.6	7.65	8.3 r.p.	8.6	8.2 r.p.	8.40	75	8.02
8a	t.f.		11.8				12.3 ~~8.2 r.p.~~		50	12.05
9a			12.5				12.0		50	12.25
10a			12.7				12.8		10	12.75
11a			12.9				13.0		10	12.95
12a			13.0				12.9		10	12.95
13a			13.2				13.3? pos.		10	13.25 ?
14a			f.				n.s.			11:21

MOR.

Friday, July 12, 1912.

North Polar Sequence

Remark on Measures of Plate MW 233.

The images are fairly comparable with those of Scale P, except for readings brighter than 4.0

The images are not comparable with those of Scale R except for readings brighter than 7.0. All fainter images are much larger than the scale images and comparisons are extremely difficult

Measures made with Scale R on July 11 were interrupted by thunderstorms and the light was variable. For this reason they are to be repeated

Examination of Plates for Doubtful Observations on MC, MD, and ME Plates for Harvard Standard Regions

Aug. 13, 1913 A1 √ ME 1202 No. 5 unit changed

Aug. 30 Take means through No. 27 MD 1202 No. 24 rejected (wrong ident.?)

Sept. 8 Region Passed, but remeasure Nos. 27-31 } MC
T Nos 23-28 } on [illegible]

T' Plates Complete See also Page 69

Order 5, 8, 6, 7 (?) Order 13, 15, 14

Sept. 10, 1913 A2 Region Passed No. 17a inserted. Meas 16, 17, 17a, 18, 19 all pl.

See also p. 70 Note that star measured as No. 7 is +74° 485 8 in ledge

Order 18, 20, 19

Take Means " " " No. 8 +74° 479 not in ledge

What about I plates? Not meas. by Ld. Meas. as above by O'R No. 7 in ledge not meas.

No MC T' plates; only 1 ME. Plates in Series called for

Take means A3 ME 1026 No. 17 wrong im. measured. Reject

Region Passed Order 5, 7, 6

T' Plates Complete Take means 20, 22, 21
26, 28, 27

Sept. 11 B1 No. 8 Different star marked on chart and

Take means on MC 677.

Star on Chart is +44° 312, and is the star in the ledger; star whose coordinates were measured

~~+44° 312 was meas. on T' Plate~~

MC 961 +44° 312 marked and apparently meas.
1201 +44° 312 crossed out and +45°. substituted
1425 +44° 312 Marked and app. meas.

MD 1201 +44° 312 " " " "
1425 +44° 312 " " " "

ME 1201 +44° 312 " " " "
1425 +44° 312 " " " "

Miss O'Reilly measured +45° 359 on I plates
Miss Leland measured +44° 312 on I plates

B1 Cont.

+44° 312 ~~is~~ appears distinctly brighter than No. 7 on inspection of plates. As it is a red star (K) the image is much sharper than that of No. 7 on MC and MD plates, which probably accounts for the scale readings usually being fainter.

~~Insert 23a~~

Order, 19, ~~21~~ 21, 20, 22, 23, ~~23a~~, 24

MC 961 ~~pr.~~ Reject ~~first~~ meas. (Nos 12, 13, 14, 15) Ld 39.90
Accidental errors too large

Reject No. 1 (Quality of this and of 5 Plates poor)

Region passed, ~~with insertion of No. 23a, to be measured with 22, 23, 24, and 25 on all possible plates.~~

Add star measured by O'R as No. 8 (+45° 359) and also on MC 1201.

T' Plates complete

~~Insert 23a~~, 26a, 26b

~~Stars~~ Also insert 8a, meas. by O'R on I plates (+45° 357)

Examination of I' Plates for Doubtful Measures
Cont. Standard Regions

Sept. 17, 1913 B2 The different plates give very discordant results.

(1 E.g. MD and ME 1409. The latter gives magnitudes nearly a magn. brighter. Examination of plates shows, by direct comparison with Star Seq. in each case, that the MD plate was measured correctly, but that measures of B2 on the ME plate were much too bright, probably on account of difficulty in comparing scale. Reject ME 1409 for abs. magn. but use for rel. magn.

This plate was retained after all
Rejected

MC 2039 star + p.c. gives magnitudes about a magn. brighter than other plates. MC 1231, MD 123
~~MC 1231 for~~ MD 1409 are accordant with each other and with the mean of Series Plates MC 2192, 2224, 2239 ✓

AC 13552, like ME 1409 gives magnitudes brighter than other plates, for stars brighter than No. 12, but agrees for fainter stars

Reject ~~ME 1409~~ retained
MC 2039 star and p.c. rejected
for absolute magn. but use for rel. magn.

Other plates accepted
Add star between Nos. ~~29 and 30~~, 31 + 32 ?
Insert 31 a

September 18, 1913

H. S. Regions Cont.

Sept. 18, 1913 B 2 Cont
I' Plates I 32989 and I 36422, measured by O'R., are in good agreement with MC and MD 1231 and MD 1409, as well as with the three series plates mentioned above.

It seems safe, therefore, to reject MC 2039, star and p.c. for discordance.

Reject MC 2039 star + p.c. (plate discordant) use for rel. magn.
ME 1409 retained (measures incorrect) but use for rel. magn.

Insert stars 31 a, 24 a

Region passed. I' plates complete.

Take means, omitting MC 2039 star + p.c., ME 1409

Order 5, 7, 6
11, 13, 12
21, 23, 22

Add star between Nos. 24 and 25 and between 31 and 32
For measures, see pp. 60, 61

~~Two Nos. 16 are marked on~~

September 18, 1913

N. S. Reg. Cont.

Take means B3 when MD and ME 2043 have been reduced + entered

T Plates not complete. MC Series plate asked for

		ME996 1	3	Diff	Stand.	1	2
2.20 Scale O							
Polar	3	2.9		+2.84			
	4	3.5		2.41	1	4.6	
	5	4.1		2.29	2	4.8	
	6	4.8		2.18	3	4.8	
	7	4.9		2.28	4	5.5	
	8	5.7	5.7 5.70 00	2.40	5	5.6	
	9	6.5	6.6 6.65 10	2.15	6	5.7	
	10	6.6	6.7 6.65 01	2.24	7	5.8	
	11		7.0	2.42	8	6.5	6.5
	12		7.7	2.03	9		7.2
	13		7.8	2.37	10		7.1
	14		7.9	2.62	11		7.6
	15		8.7	2.24	12		7.6
	16		8.9	2.36	13		7.8
	17		9.1	2.39	14		7.9
	18		9.9	2.02	15		8.4
	1r	4.3			16		8.6
	2r	5.6			17		8.5
	3r	6.4			18		8.7
	4r	6.6	6.6		19		8.6
	5r		7.~~8~~6		20		9.0
	6r		7.6		21		9.1
	20		10.0	2.59	22		9.9
					23		10.2

2 50

Sept. 24, 1913

N. S. Reg. Cont.

B3 Cont

ME 996 as measured by Ld is discordant with MD 996, especially for bright stars. ME plates in general give discordant results, partly probably because Scale H was used instead of Scale O. The images on the former are not usually comparable with images on QC and MD plates. Measures by L on preceding page, made with Scale O, are more accordant and probably represent the true scale more accurately, though the accidental errors are no smaller, probably.

As the difference in scale seems to be accidental, the plate may stand.

Regin. Passed. T' Plates not complete

Stars 13 to 19 inclusive were rejected on ME 996 and 2403

Sept. 24, 1913

N. S. Regions Cont.

2 $\overset{50}{35}$ B2

Measures of additional Stars 24a and 31a

MC 2192 (Series

Scale U	2	3
23	7.6	-
24	7.8	7.6
24a	7.9	7.8
25	8.4	8.1
26	8.3	8.3
30	9.1	9.0
31	9.8	9.7
31a	9.9	9.9
32	7	-
33		

MC 2224

23	6.8	
24	6.9	
24a	7.6	-
25	7.8	
26	7.9	
30	8.9	8.9
31	9.3	9.1
31a	9.5	9.4
32	10.0	9.9
33	-	

Sept. 24, 1913

Scale U B2 Cont

Scale U	MC 2239 (Series) 2	3	MC 2039 (Series 2	3
23	7.6		7.3	
24	7.6		7.2	
24a	7.9		7.7	
25	8.2	8.0	8.0	
26	8.3	8.1	8.3	
30	9.4	9.2	9.1	9.0
31	9.8	9.8	9.7	9.~~7~~ 5
31a	10.1	10.0	9.8	9.7
32	n.s.	-		
33				

MC 1231 T

23	5.8	
24	6.7	
24a	6.6	
25	6.8	
26	sup.	
30	8.4	8.2
31	8.9	8.8
31a	9.6	9.4
32	9.9	9.8
33	7	-

3 15

H. S. Regions Cont.

B4 MC 1364 gives magnitudes fainter than the other T plates MC, MD and ME. It agrees better than the others, however, with the T Plates I, and with series plates. Retain.

MC ~~1364~~ 1475 rejected

On ME 1475 reject No. 13 Many im. prob. meas
No. 18 extrapolated
MC 1364/pr ~~reject~~ No. 14 extrapolated
MC 1364 ~~reject~~ No. 19 retain - discordance accidental

October 21 Nos 29 and 30, especially 29 appear to be discordant on MC 1364 and 1475, but the discordance appears to be accidental. Images poor on MC 1475

No. 28 appears bright on I 28189; examination of the plates shows that the images are so faint that the effect is probably purely photographic

Add No. 19a

Region passed

Region C7

Examination of Plates for stars observed by E. E. Barnard with the 40-inch Yerkes Telescope See letter of June 19, 1913 with Chart

Mean H Magn.	Star (B.)	Barnard Magn.(B)	a7636	MC281	Plate a7636 120m exp.	MC 281
	1	15			n.s.	n.s.
16.60 19 20	2	14.3	16.41	16.8	16.24 32 2, 1 33 1648 16.44 16.38	16.70 34 1, 35 n.s.
13.56 00 00	3	11	13.56	13.56	13.39 23 2, 2 24 13.74 13.59 13.54	13.59 13.54 13.39 23 2, 3 24 13.74
15.20 a.	4	12	15.20	..	14.89 ~~15.08~~ 28 3, 0 29 ~~15.48~~ 23, 4 30 15.48 {15.19 15.23 15.18	hidden by ink
15.01 a.	5	12.1	15.01	..	1489 28 1, 2 29 15.23 14.99 15.03	. . .
..4	6		..	..	—	—
..	7	11½	..	..	fogged	—
14.36 a.	8	12	14.36	..	14.05 26 4, 0 27 14.28, 4 28 14.56 {14.45 14.28 14.36	hidden by ink
17.04 03 03	9	14.2	17.07	17.1	16.72 34 3, 1 35 17.28 17.00 17.14 17.10	16.70 34 2, 35 n.s.
12.33 . a	10	10	..	12.33		12.28 12.38} 12.18 20 1, 4 21 12.78
15.93 05 05	11	13.2	15.98	15.88	15.48 30 2, 1 31 16.38 {15.68 16.28	15.58 16.18 15.48 30 1, 2 31 16.38
15.45 05 05	12	13.4	15.50	15.40	15.23 29 3, 1 30 15.48, 4 28 {15.63 15.38	15.53 15.28 15.23 29 3, 2 30 15.48
17.7 a.	13	14.9	17.7	..	17.44 36 3, 37 n.s. {17.74	n.s.
14.67 a.	14	12	14.67	..	14.28 26, 5, 0 27, 14.56 14.78 14.56	hidden by ink
16.14 27, 26	15	13.4	16.41	15.88	16.24 32 2, 1 33 16.48 {16.44 16.38	15.58 16.18} ~~15.48~~ 88 30 1, 2 31 16.38
15.72 a 21 22	16	13.4	15.93	15.50	15.48 30 3, 3 31 16.38 {15.78 16.08	15.63 15.38} 15.23 29 4, 1 30 15.48
16.92 a.	17	15.1	16.92	..	16.70 34 1, 2 35 17.24 {16.80 17.04	n.s.
15.50 a,	18	13.6	15.50	..	15.23 29 4, 1 30 15.48 15.63 15.38	n.s.
18.32 ? a.	19	15.8	18.32?	..	18.12 37 2, 38 n.s. 18.32	n.s.
..	20	16	..	..	n.s.	n.s.
..	21	15.3	~~16.26~~	..	n.s.	n.S.
16.12 14, 14	22	14.0	16.26	15.98	16.24 32 1, 3 33 16.48 16.34 16.18	15.68 16.28} 15.48 30 2, 1 31 16.38
15.99 09.09	23	13.4	16.08	15.90	15.48 30 4, 1 38 16.38 15.88 16.28	15.63 15.18} 15.23 29 4, 1 30 15.48
17.54 a.	24	15.0	17.54	.	17.44 36 1, 37 n.s. 17.54	n.s.

(over

Wednesday, Oct. 1, 1913

Cl 7 Comparison with Barnard's Magnitudes Cont.

		Barnard No.	Magn.	a7636	MC 281	a7636	MC 281
6		25					
14.72	10,11	26	11	14.82	14.61	14.56 27 3, 1 28 14.89 14.86 14.79	14.28 26 4, 0 27 32 14.68 14.56 14.59 14.56
17.02	a.	27	14.7	17.02	.	16.70 34 2, 1 35 17.24 16.90 17.14	7?
17.07	a.	28	15	17.07	.	16.70 34 3, 1 35 17.24 17.00 17.14	7?
17.07	a.	29	14 3/4	17.07	.	16.70 34 3, 1 35 17.24 17.00 17.14	7
14.40	12,12	30	12.9	14.52	14.28	14.28 26 3, 1 27 14.56 14.58 14.46	0 26 14.28
16.45	19,19	31	14.4	16.26	16.64	16.24 32 1, 3 33 16.48 16.34 16.18	16.48 33 1, 0 34 16.70
15.18	00,00	32	12.6	15.18	15.18	14.89 28 3, 1 29 15.27 15.19 15.17	14.89 28 3, 1 29 15.27 15.19 15.17
16.97	a.	33	14.8	16.97	.	16.70 34 2, 2 35 17.24 16.90 ~~16.94~~ 17.04	7?
17.02	a.	34	15.0	17.02	.	16.70 34 2, 1 35 17.24 16.90 17.14	n.s. 14.66 14.69
14.73	05,05	35	12.3	14.78	14.68	14.56 27 2, 1 28 14.89 14.76 14.79	14.56 27 1, 2 26 14.89
16.08	05,05	36	13.9	16.13	16.03	15.48 30 5, 1 31 16.38 15.98 16.28	15.48 30 3, 1 31 16.38
14.06	00,00	37	12	14.06	14.06	14.05 25 1, 3 26 14.28 14.15 13.98	14.05 25 1, 3 26 14.28
17.02	a.	38	15.5	17.02	.	16.70 34 2, 1 35 17.24 16.90 17.14	n.s.
17.39	a.	39	16	17.39	.	17.24 35 1, 0 36 17.44 17.34 17.44	n.s.
16.97	a.	40	15.6	16.97	.	16.70 34 2, 2 35 17.24 16.90 17.04	7? 15.19 15.17
15.13	05,05	41	12.2	15.08	15.18	14.89 28 2, 2 29 15.27 15.09 15.07	14.89 28 3, 1 29 15.2
13.69	03,03	42	12.2	13.66	13.72	13.39 23 3, 1 24 13.74 13.69 13.64	13.39 23 4, 1 24 13.74 13.79 13.64

The numbers and magnitudes in ink are those given by Barnard.
The numbers given in estimates are those of the H. S. Sequences

---

Thursday, October , 1913

Cl 7. MW Plates.

Estimates of bright images of faint stars in terms of faint images on MW Plates.

MW 3~~7~~8 with and without wire gauge screen. Reduction Const. 3.06 magn.

~~24 15 2 24 ?~~

25 10.~~81~~77 15 2 2 25 10.97 19 / 11.36 20 / 12.16
25 1 17 11.46 4 15.22

26 11.46 17 3 26 ? 11.76 24 / 11.29 23 / 11.52
26 3 18 ? 11.59 14.~~65~~58

27 11.46 17 3 27 ? 11.76 18 / 11.39 18 / 11.58
27 2 18 ? 11.59 14.64

28 11.59 18 2 28 ? 11.79 02 / 11.75 02 / 11.77
28 1 19 ? 11.85 14.83

29 11.85 19 3 28 ? 12.15 01 / 12.18 02 / 12.16
28 5 21 ? 12.78 15.22
No. 20 is double

30 11.85 19 7 30 12.55 01 / 12.58 02 / 12.56
30 2 21 12.78 15.62

31 13.08 22 4 31 13.48 10 / 13.29 09 / 13.38
31 1 23 13.39 16.44

32 13.08 22 3 32 13.38 10 / 13.19 09 / 13.28
32 2 23 13.39 16.34

33 13.39 23 2 33 13.59 13 / 13.34 12 / 13.46
33 4 24 13.74 16.52

34 13.39 23 4 34 13.79 13 / 13.54 12 / 13.66
34 2 24 13.74 16.72

35 14.0~~5~~1 25 3 35 14.3~~5~~1 09 09 / 14.2~~8~~ 07 07 / 14.1~~4~~ 08 10
35 0 26 14.2~~8~~0
4 27 14.5~~2~~4 14.2~~2~~ 17.~~28~~32

36 14.2~~8~~0 26 3 36 14.50 08 / 14.34 08 / 14.42
36 2 27 14.5~~2~~4 17.48

37 ~~14.89~~ 15.08 28 1 37 15.18 00 / 15.18 00 / 15.18
37 3 29 ~~15.23~~ 15.48 18.26

38 ~~15.23~~ 15.48 29 2 38 15.68 18.74
38 3 30 ~~15.48~~

39 not seen

Thursday, October 23, 1913

C7 Ft Stars Cont.

MH ~~338~~ 9398 with and ~~without 14-in. Diaphragm~~. ~~wire gauze~~
Reduction Const. ~~2.97~~ 3.06 magr.

2~~5~~8 28 2 18 11.59 11.39 14.36

29 11.59 18 2 11.79 07
2 19 11.85 11.65 07
11.72 14.69

30 11.85 19 5 12.35 01
12.38 02
4 21 12.78 12.36 15.33

No. 20 double

~~31 19~~
~~1 21~~

32 13.08 22 2 13.28 10
3 23 13.39 13.09 09
13.18 16.15

31 13.08 22 3 13.38
1 23 13.39 13.29
13.34 16.31

33 13.39 23 2 13.59 13
4 24 13.74 13.34 12
13.46 16.43

34 13.39 23 4 13.79 07
1 24 13.74 13.64 08
13.72 16.69

35 14.20 26 1 14.30
4 27 14.54 14.14
14.22 17.19

36 14.20 26 3 14.50 08
2 27 14.54 14.34 08
14.42 17.39

37 14.54 27 5 15.04 03
1 28 15.08 14.98 03
15.01 17.98

38 15.48 29 2 15.68 18.65
3 30

39 30 1
31 not seen

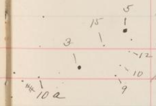
Tuesday, October 28, 1913

Examination of H.S. Sequences for Discordant Measures. Cont. from Page 62.

B5

No. 10 comes out too bright in measures of p.c. on Series Plate MC 2719. Inspection of plate shows that the measure was obviously wrong and the observation was rejected.

Stars may possibly need to be inserted later between 6 and 7 and between 10 and 12 (order, 11, 10, 12). It may be necessary to insert one or two two between 29 and 30, as the measured difference on MC 944 is more than a magnitude. On MC 195, however, the interval does not look so large.



No. 10a added ~~Oct.~~ Nov. 24, 1913. Marked on {AC 12337
MC 195

Region passed

Examined interval 29-30 on Series Plates. Too near limit of visibility. Probably no star needs to be added.

No. 10a is DM +44° 2165

B6

Some large accidental errors, but nothing which seems to require rejection.

A good many changes in order, and some stars will probably need to be inserted. The interval 5-6 is probably more than 0.5 magr. but ~~no~~ star within desirable distance is found. Make no addition unless found necessary after final means are taken.

Region passed

Wednesday, November 5, 1913

Examination of H.S. Regions Cont

B 7 Inserted stars 28a, 28 b, 28 C, between No 29 and 30. No. 30 appears brighter than No. 29 on most plates.

Probably a star will have to be inserted between 34 and 35, but wait for result of measures of series plates

Region Passed

Insert 28a, 28 b, 28c

B 8 Some stars may need to be inserted, especially 29-30 and 30-31, but this will not be certain until Series plates are measured.

Region Passed

B 9 No. 20 on MC 1411 pr appears to be discordant, but examination of the plate and record shows that the error is probably accidental

Insert 30 a. Possibly other stars may need to be inserted when Series plates are measured.

Region Passed. Insert 30a

Monday, Dec. 1, 1913.

Examination of H. S. Reg. Cont.

A 1 Cont. from p. 54. Between Nos. 9 and 10,

Insert 9 a = + 75° 154

9 b = + 74° 203

Marked on I 28212, AC 12311

Insert 4 a = +75° 160

4 b = +73° 204

Marked on I 28212, AC 12311 AC 12290 (Not in Reg. of Enlargement.)

N. B. Remeasure Nos. 27 and fainter P Nos 23 + fainter on I plates MK. (see p. 54

4a may possibly be brighter than No. 4, in which case it must not be retained in the sequence

4a =	+75°	160
4b	+73	204
9a	+75	154
9b	+74	203

Tuesday, Dec. 2, 1913.

Exam. of H. S. Reg. Cont.

A 2 Interval 6-7 found large, but the same stars were not always measured. Re-named stars

7a = +74° 484 meas. only on S plates 7 as 7
8a = +74° 485 meas. as 7 on MC plates 7
8b = +74° 479 meas. as 8 on MC plates 7

The interval 6 to 7a is not too large, Stars 5, 6, 7a, 8a, 8b, 9, and 10 must be measured on all series plates. Also on 2 AC charts and 2 I charts (if region is well covered).

Marked on AC 3436 and MC 231

Stars 17a, 21a, 21b inserted.

Wednesday, February 3, 1914

H. S. Reg. C4. Estimates of Brightness of Faint Stars on MW Plates with and without Screens or Apertures.

Screen G. Const. 306 MW 1046

Screen G Const. 306 11 35 MW 1047

			MW 1046				MW 1047		Corr. Mag. Sub .65		Corr. Mean ~~Sup~~ 95		
			Mean	Rev	Cor. Magn		Mean	Rev.		Magn		Mean	
	23	B											
	24	11.0 ?	11.00 0,0	11.0	14.06	11.3	11.30 0,0	11.3	14.38	14.36	14.27	14.26 1	15,15
double	25	11.5 ?	11.60 1,1	11.7	14.66	11.6 ?	11.55 0,1	11.5	14.64	14.61	14.6X 5	14.64	02,03
	25a	11.1	11.05 1,0	11.5 0	14.11	11.2	11.25 0,1	11.3	14.32	14.31	14.22	14.21	10,10
	25b	11.4	11.45 0,1	11.5	14.51	11.3	11.45 1,2	11.6	14.53	14.51	14.52	14.51	00,00
	26	11.5	11.65 1,2	11.8	14.71	11.7	11.75 1,1	11.8	14.86	14.81	14.78	14.76	05,05
double	27	11.9 ?	11.95 1,0 (companion)	12.0	15.01	11.8	11.90 1,1	12.0	15.03	14.96	15.02	14.98	03,02
	27a	11.5	11.60 1,1	11.9 7	14.66	11.6	11.65 0,1	11.7	14.75	14.71	14.70	14.68	02,03
	27b	11.8	11.85 0,1	11.9	14.91	11.8	11.85 0,1	11.9 ?	14.97	14.91	14.94	14.91	00,00
	28	12.0	12.00 0,0	12.0	15.06	11.9	11.90 0,0	11.9	15.07	14.96	15.04	15.01	05,05
	29	12.3	12.30 0,0	12.3	15.36	12.3	12.25 1,0	12.2 ?	15.44	15.31	15.38	15.34	02,03
	30					12.9 ?	12.9 a		16.10 ?	15.96 ?	16.10 ?	15.96 ?	a
	~~31~~												
	32												
	33												
	34												
	35												
	36												

Comparisons of Stars 24 to 29 were made with Stars 16 to 22 which average 10 millimeters away, and are much farther from the centre of the plate. The images formed with the screen are hazy and poor on both plates, especially on MW 1047. For these reasons, it is not safe to use the above magnitudes for Stars 24-29, which are rejected, accordingly. The fainter stars (page 82) and supplementary stars (page 81) are compared with brighter secondary images which are comparatively near, and can be used with more confidence.

11 45

Saturday, February 7, 1914

H. S. Reg. C 4 Cont.

Estimates of stars in Supplementary Sequence on Plates in Which Region is too far from Centre. (Nos. 13, 16, 17, 19, 20, 21, and 22 are near centre of these plates. Supp. Seq. begins with 024.)

Exposure 4, Ap. 14 in

	MH 656		Mean	+2.97
~~023~~		Rev.		
024	9.9?	10.0	9.95	12.92
025	11.3	10.9	11.10	14.07
026	11.3	11.3	11.30	14.27
027	11.3	11.3	11.30	14.27
028	11.8	11.8	11.80	14.77
029	11.8	11.9	11.85	14.82
030	11.9	11.8	11.85	14.82
031	12.0	11.9	11.95	14.92
032	12.0	11.9	11.95	14.92
033	12.4	12.3	12.35	15.32
034	12.8?	12.7?	12.75	15.72?
035				
036				
037				

Secondary and primary images much more comparable on this plate than on MH 1046 and MH 1047, taken with Screen G.

H. S. Reg. C 4 Cont

MH 323 4 Exp 1 Ap 60 2 Ap. 32 3 Ap. 32 4 Ap 60 All 10m

Reduction Const. 1.96 Corr. Mean	02 B	Exp. 1 ft stars Comp. with 3, Br St.	Exp. 4 ft with Exp 2 Br Rev.	Exp. 1 : Exp. 2 Rev.	Exp. 4 : Exp. 3 Dir	Mean	
12.46	024	10.6?	10.7?	1$\overset{0}{1}$.4?	10.3?	10.50	1 2 1 2
13.14	025	11.2	11.0	11.1	11.4?	11.18	0 2 1 2
13.61	026	11.5	11.8 (nearly sup.	11.5?	11.8?	11.65	1 2 1 2
13.61	027	11.9	11.7?	11.5?	11.5?	11.65	3 1 1 1
14.46	028	sup.	12.4?	sup	12.6?	12.50	· 1 · 1
14.24	029	12.3	12.4?	12.4?	12.0?	12.28	0 1 1 3
14.46	030	12.3	12.5?	12.6	12.6?	12.50	2 0 1 1
14.54	031	12.5	12.7?	12.4?	12.7?	12.58	1 1 2 2
14.56	032	12.5	12.7?	12.4?	12.8?	12.60	1 1 2 2
	033	t. f.					
	034		Images of Exp.				
	035		4 very poor				

This plate is too poor to be safely used
Reject all measures.

le4 Cont.

MN 324 Exp. 1,8 60 in; 2,7, 32 in; 3,6 14 in; 4,5, 8 in.

	Exp. 1 : Exp. 5 8-inch	Exp. 1 : Exp. 6 14-in Rev	Exp. 1 : Exp. 7 32-in Direct	Exp. 1 : Exp. 2 32-in Rev
024	B	too poor		11.7?
025	B ~~10.9?~~	10.9?	11.9?	11.8
026	B	11.2	12.1?	12.0
027	B ~~10.9?~~	11.1	12.1?	12.0
028	B	11.2	12.6?	12.9?
029	10.8?	11.8	12.7?	12.8?
030	11.1?	11.9 ~~12.0?~~		
031	11.2?	12.0?		
032	~~X~~ 11.0?	11.9		
033	7			
~~20~~				
.	Im. not comp.			
19			10.8?	10.4?
20			11.1?	11.2?
21			Dist.	Dist
22			11.3?	11.3?
23			Dist.	Dist
c			10.1?	10.2?

	Exp. 1 : Exp. 3 14-in Direct	Exp. 1 : Exp. 4 8-in Rev.	Corr. to Rev. Prelim Scale	32-in Cast.196 Means 2,7	14-in Cast.2.97 3,6	8-in Cast.418 4,5	Mean
024			11.8?	11.7? 13.66?	.	.	13.66? a: 024
025	10.8		11.93	11.85 1,0 13.81?	10.93 10.85 0,1 13.82	.	13.82 01 10: 025
026	10.9		12.14	12.05 1,0 14.01?	11. 11.05 1,2 14.02	.	14.02 01 00. 026
027	11.0		~~12.~~ 12.14	12.05 1,0 14.01?	11.10 1,1 14.07	.	14.04 03,03 027
028	11.7		12.87	12.75 2,1 14.71?	11.45 2,3 14.42	.	14.56 15,14. 028
029	11.7	10.6	12.87	12.75 1,0 14.71?	11.75 1,0 14.72	10.70 1,1 14.88	14.77 06,05 11 029
030	11.8	11.0		.	11.85 0,1 14.82	11.05 0,1 15.23	15.02 20 21 030
031	11.9	11.3		.	11.95 1,0 14.92	11.25 1,0 15.43	15.18 . 26 25 031
032	~~X~~ 11.6	10.9		.	11.75 2,1 14.72	10.95 0,1 15.13	14.92 . 20 21 032
033	–	–					
034	~~11.7~~						
19				10.60? 2,2 12.56			12.56 a: 19
20				11.15 0,1 13.11			13.11 a: 20
21				.			
22				11.30? 0,0 13.26			13.26 a: 22
23				.			
c				10.15 1,0 12.11			12.11 a: c

C4 Cont.

MW 324 Cont

	32-in Exp. 8: Exp. 2 (Const 1.96)	Mean 2,7		14-in Exp. 8: Exp. 3 Rev.	8 in Exp. 8: Exp. 4 Direct (Const .418)	Mean 4,5		32-in Exp. 8: Exp. 7 Rev
0								
025	11.6	11.55	0,1	~~10.0?~~ -				11.5
026	11.9	11.85	1,0	–				11.8
027	11.8	11.85	0,1	–				11.9
028	12.4	12.40	0,0	11.3				12.4?
029	12.3	12.30	0,0	$11.\overset{2}{6}$?	$10.\overset{2}{7}$	10.10	1,1	12.3
030	12.4	12.40	0,0	11.4	$10.\overset{5}{7}$	10.35	1,2	12.4
031	7	12.9?	.a	11.7	10.9	10.95	1,0	12.9?
032		12.4	.a	11.3	10.6	10.50	1,1	12.4
033		.		12.1?	11.4	11.40	0,0	-
19	10.1	10.10	00					10.1
20	$\overset{10}{9}.9$	10.85	10					10.8
21	–	–						–
22	11.1	11.10	00					11.1
23	-							–
24	-							-
e	9.9? ~~10.0?~~	9.95	10					10.0

	14-in Exp. 8: Exp. 6 (Const. 2.97)	Mean 3,6		8-in Exp 8: Exp 5 Rev.	32-in Gr. 2,7 Comp. Exp. 8	Comp. Exp. 1 p. 75	14-in Gr. 3,6 Comp. Exp. 8	Comp. Exp. p. 75	8-in Gr. 4,5 Comp. Exp. 8	Comp. Exp. 1 p. 75	Mean		Mean Exp. 1, Exp. 8 (Sep. 75)	
024											.		$13.6\overset{2}{6}$	a
025	$1\overset{0}{1}.6$	10.6	.a		13.51	13.66? ~~13.82~~	13.57	13.82	.		13.54	03,03.	$1\overset{3}{5}.68$	14,14.
026	11.0	11.0	.a		13.81	14.01?	13.97	14.02	.		13.89	08,08.	13.96	06,07
027	10.9	10.9.	a		13.81	14.01?	13.87	14.07	.		13.84	03,03.	13.94	10,10
028	11.4	11.35	1,0		14.36	14.71?	14.32	14.42	.		14.34	02,02.	14.45	11,11
029	11.4	11.30	1,1	10.0	14.26	14.71?	14.27	14.72	14.28	14.88	14.27	01,00,01	14.52	25,25
030	11.4	11.40	0,0	$10.\overset{7}{8}$	14.36	.	14.37	14.82	14.53	15.23	14.42	06,05,11	14.72	30,30
031	11.9	11.80	1,1	11.0	14.86?	.	14.77	14.92	15.13	15.43	14.92	06,15,21	15.05	13,13
032	11.5	11.40	1,1	$\overset{10}{~~11~~}.4$	$14.3\overset{2}{6}$	.	14.37	14.72	14.68	15.13	14.47	11,10,21	14.70	22,23
033	12.2	12.15	1,0	11.4	.		15.12	.	15.56	.	15.34	. 22,22	$15.3\overset{2}{4}$	a
19					12.06		.				12.06	a . .	$12.\overset{3}{2}1$	25,25
20					12.81		.				12.81	a . .	12.96	15,15
21					.		.							
22					13.06		.				13.06	a . .	13.16	10,10
23					.		.				.			
24					.		.				.			
e					11.91		.				11.91	a . .	12.01	10,10

W.S. Reg. C4 Comparison by Argelander's method of regular and supplementary stars of sequence.

	MC 698 Rev.
22 4 23	22 4 23
23 1 024	23 0 024
024 4 24	024 3 25a
24 1 25a	25a 1 025
25a 1 025	025 0 25
025 2 25	25 2 25b
25 1 25b	25b 1 026
25b 2 026	026 2 027
026 2 027	027 2 27a
027 3 27a	27a 0 028
27a 0 028	028 1 029
028 1 029	029 0 27
029 0 27b	27 2 27b
27b 1 28	27b 0 032
28 0 032	032 0 28
032 1 030	28 0 030
030 0 031	030 1 031
031 3 29	031 3 29
29 1 033	29 1 033
033 2 30	033 2 30
30 1 034	30 2 034
035 7	
31 not seen	

C4 Cont.

MC1561	MC1573 Rev	Feb. 10 MC144
22 3 23		
23 2 024	23 3 24	23 4 024
024 3 24	24 2 25a	024 3 24
24 2 25a	25a 1 025	24 3 25a
25a 0 025	025 0 25	25a 0 025
025 3 25b	25 1 026	025 1 026
25b 0 25	026 0 25b	026 1 25
25 0 26		25 2 26
26 1 026	Others too poor	26 0 25b
026 2 027		25b 2 027
027 1 27a		027 1 27a
27a 2 028		27a 3 028
028 1 27		028 1 27
27 1 029		27 3 029
029 0 27b		029 0 27b
27b 1 28		27b 2 28
28 0 032		28 0 032
032 1 030		032 0 030
030 1 031		030 3 031
031 3 033		031 1 29
033 0 29		29 0 033
29 2 30		033 1 30
034 df.		30 3 034
		034 0 31
		32 n.s
		035 n.S

Tuesday, February 10, 1914

Examination of H. S. Regions cont. from p. 70

C1 Inserted Nos. 07a, 13a, 21a
No. 26 shows large residuals on T plate, but on inspection, these appear to be accidental.
Region passed

C2 Inserted No. 12a
In checking identification, it is found that No. 10 (+14° 516) was not measured on T plates, or on early Series plates, the star +14° 519 being measured instead. No. 10 may not be needed, but if the interval 9-11 should prove to be too large it can be measured later. Call star measured 10a for the present

C3 No. 9 marked wrong on MC 2533, 2608 etc
Inserted Nos. 26a, 26b, 28a, 28b
Call wrong "9", 9a
No. 25 appears brighter on I plates than on MC plates. Is probably very white in comparison with Nos. 24 and 26.
Add stars fainter than No. 30 after enlargement is made from MC 4508

H. S. Reg. C4. MW Plates Estimates
Cont. from p. 71

	MW 1046	+3.06	MW 1047 Rev.	+306	Cor. sup. 95	Mean		+3.06	Cor Mean
024	10.3?	13.36?	10.8	13.86	13.86?	10.55	3 2	13.61	13.61?
025	10.7?	13.76?	10.9	13.96	13.96	10.80	1 1	13.86	13.86?
026	11.1?	14.16?	11.2	14.26	14.27	11.15	1 0	14.21	14.22?
027	11.0	14.06	11.0	14.06	14.07	11.00	0 0	14.06	14.06
028	11.7	14.76	11.7	14.76	14.81	11.70	0 0	14.76	14.78
029	11.5	14.56	11.5	14.56	14.59	11.50	0 0	14.56	14.58
030	11.8	14.86	11.8	14.86	14.93	11.80	0 0	14.86	14.90
031	11.9	14.96	11.9	14.96	15.04	11.90	0 0	14.96	15.00
032	11.5	14.56	11.7	14.76	14.81	11.60	1 1	14.66	14.68
033	12.3	15.36	12.1	15.16	15.25	12.20	1 1	15.26	15.30
034	12.5?	15.56?	12.4?	15.46?	15.57?	12.45	1 0	15.51?	15.56?
035	12.7?	15.76?	12.6?	15.66?	15.78?	12.65	1 0	15.71?	15.77?

Images with screen ~~better~~ proper than those without. The above stars were compared directly with stars 13, 16, 17, 18, 19, 20, and 22 of the sequence. They are situated near these stars. Stars 24 to 35 of the sequence are distant from stars 13 to 22.

The images formed with the screen are very hazy both on MW 1046 and on MW 1047, the latter plate being the worse. Comparisons were made with difficulty. The above comparisons were made with stars 13, 16, 19, 20, 21, and 22, near together, and are much more reliable, therefore, than those of Nos 23-29 on page 71, through doubtless affected by different appearance of images.

Thursday, Feb. 10, 1914.

H. S. Region C4 Cont.

Stars of Sequence, Nos 28 and fainter, Compared with Nos 19 – 30; Nos 03$\overset{3}{2}$ and fainter Compared with Bright Supplementary Stars

Revised Preliminary Magnitudes used.

Columns 1, 2, 3, not used.

Const. 3.06

1	2 Magn.	3 [+3.66] after Corr. MW1047	4	5 MW 1046 t.b.	6	7 Mean 1046+1047	8	9 MW 1047 Rev.	10 Magn [+3.06]	11 Corr. (see p. 95) Plot 2 Curve f
			28							
05 05	15.91?	02 02 15.98?	29	12.9?	15.96?	12.85?	10	12.8?	15.86?	16.00?
06 05	16.01?	02,02 16.08	30	13.0?	16.06	12.95?	01	12.9?	15.96?	16.10?
05 05	16.31	04 04 16.40	31	13.3	16.36	13.25	10	13.2?	16.26?	16.44?
05 05	16.41	04 04 16.50	32	13.4	16.46	13.35	01	13.3	16.36	16.54
20 20	16.86	10 09 16.96	33	14.0	7 14.06	13.80	22	13.6	16.66	16.87
05 05	17.11	06 06 17.22	34	14.1	17.16	14.05	10	14.0	17.06	30 17.28
25 25	17.71	13,13 17.83	35	14.9	17.96	14.65	32	14.4	17.46	3 17.72
05 05	18.21	08,07 18.34	36	15.2	18.26	15.15	01	15.1	18.16	18.49
a.	18.36?	a. 18.36	37	15.3	18.36	15.3?		sup.	.	
10 10	17.06	01,01 17.17	038a	14.1	17.16	14.00	11	13.9	16.96	17.18
10 10	17.46?	22 23 17.58	038b	14.3	17.36	14.40?	11	14.5?	17.56?	32 17.82
85-85 18		49-49 18	030							
±0.094		±0.054	031							
			032					11.6?	14.66?	7 14.70
			033							
	15.61?	Reject	034	12.6	5 18.66	12.55?	01	12.5?	15.56?	7 15.68
	16.36		035	13.3	6 18.36	13.30	00	13.3?	16.36?	7 16.55
	16.51		036	13.5	16.56	13.45	10	13.4?	16.46?	16.66?
	16.56		037	13.7	16.76	13.50	22	13.3	16.36	16.55
	17.11		038	14.2	17.26	14.05	21	13.9	16.96	9 17.18
	17.91		039	15.1	18.16	14.85	32	14.6	17.66	17.95
	18.31		040	15.3	18.36	15.25	10	15.2	18.26	61 18.51
	18.56 18.56?		041	15.7?	18.76?	15.50?	22	15.3	18.36	71 18.66
			042			15.5?	a	15.5?	18.56?	18.80?

after correcting for trace, these plates are [illegible] more accordant.

The magns with screen (Exp. 4) are very hazy in comparison with the principal images. The same is true on MW 1046 though comparisons are less difficult. No. 024 appears as bright as No. 22 on both plates, though on MC plates the latter is much the brighter and the preliminary magnitudes are, 22 = 12.6, 024 = 13.1

Reject meas. for 28 and 29, comp. with No. 22, which is too far away. The remaining stars are comparatively near together and of such faintness that the unlikeness of images will not probably make serious errors.

Thursday, Feb. 10, 1914

H. S. Reg. C4 Cont.

	1 MW 656		2 Rev.	3 Mean		S 4 Const. 2.97 Magn	5 Mean Screen + Ap.	
28							MW 1046, 47 MW 656 Very uncertain	
29							~~15.91~~	~~a.~~
Reject. Comp. with 024, magn uncertain 30	132		13.0	13.10	11	16.07	16.04	03 03
31	13.4		13.5	13.45	01	16.42	16.36	05 06
32	13.8		13.6	13.70	11	16.67	16.54	13 13
33	14.4		14.3	14.35	01	17.32	17.09	23 23
34	14.6		14.7	14.65	01	17.62	17.36	25 26
35	14.9		15.0	14.95	10	17.92	17.82	11 10
36	15.4		15.4	15.40	00	18.37	18.29	08 08
37	sup.						18.36?	a.
038a	14.2		14.4	14.30	11.	17.27	17.16	10 11
038b	14.7		14.7	14.70	00	17.67	17.56	10 11
030	~~13.2~~							
031	~~13.4~~							
032								
033								
Reject. Comp. with star 024 whose magn. is uncertain 034	12.8			12.8?	a.	15.77?	[15.69?]	08 ~~08~~
035	13.3		13.5?	13.40	11	16.37	16.36	00,01
036	13.8		13.8	13.80	00	16.77	16.64	13, 13
037	14.1		14.1	14.10	00	17.07	16.82	26 25
038	14.1		14.0	14.05	10	17.02	17.06	05, 04
039	15.3		15.3	15.30	00	18.27	9 18.08	8 17, 18
040	15.3		15.2	15.25	10	18.22	18.26.	05, 04
041	15.5		15.6	15.55	10	18.52	18.54	02, 02
042	15.6?		15.7	15.65	01	18.62	18.59?	03, 03

Saturday, Feb. 14, 1914

H. S. Region C 5 Examined for Discordances, etc.

Plate M$\overset{E}{\text{C}}$ 2415

Nos. 15 and 16 very discordant; nearly a magn. fainter than on MC + MD 2415. Examination of plate shows that these two stars are wrongly estimated, as direct comparison with Polar Sequence shows that both are brighter than No. 16. Reject.

Added stars 4a, 14a, 20a

Wednesday, Feb. 18, 1914

H. S. Region C 9

Faint stars. Two measures on MC 1776 Discordant

Reject Plate MC 1776 for distance and depend on series plates for fainter stars

Direct estimates in comp. with Polar Seq.

(Using magn. of H. C. 170)

		Meas. by Ld (1)	(2)	Est. – Scale First meas. Star	Second meas. ~~p.c.~~
~~20~~	12.5	12.11	.	+0.39	
21	13.0	12.31	.	+0.69	
22	13.1?	12.52		+0.68	
23	13.4?	12.95	.	+0.45	
24	13.5?	13.38	.	+0.12	
25	14.3	13.60	.	+0.70	
26	14.4?	13.93	.	+0.47	
27	14.6	14.04	14.50	+0.56	+0.10
28	15.0?	14.39	14.87	+0.~~12~~61	+0.13
29	15.4	14.63	15.24	+0.81	+0.16
30	15.5	14.39	15.86	+1.11	-0.36

The scale measures and estimates show wide divergence, the former being fainter by half a magnitude at about the tenth magn. and brighter by nearly a magn. at about the 15th mag. The second meas. with scale agree more nearly than the first.

Images of Seq. C 9 larger than those of Polar Seq. probably on account of distance from Center. Comparisons of ft. stars difficult

Est. – Scale Star	p.c.		~~H~~		p.c.	Star-P.C.	Meas by Ld Star	P.C.	Star-p.c.
-0.56	-0.48	10	9.7	~~10.26~~	10.3	-0.6	10.26	10.78	-.52
-0.46	-0.18	11	9.8		10.5	-0.7	10.26	10.68	-.42
-0.08	-0.28	12	10.0		10.5	-0.5	10.08	10.78	-.70
.	-0.28	13	9.7		10.~~5~~7	-1.0	.	10.98	.
-0.60	-0.38	14	10.0		10.8	-0.8	10.66	11.18	-.58
[-0.95?	-0.26?]	15	10.1 (red)		11.5?		11.05	11.76	-.71
+0.16	.	16	11.4		-		11.24	.	
+0.08		17	11.6		-	5|-3.6 -0.72	11.52	.	5|2.9 ? -0.59
+0.28 +0.48		18	11.9		.		11.62	.	
		19					11.5	.	

The prism. comp. came out fainter than star images both for scale meas. and est. As they resemble each other closely for the 2 sequences, it is probable that they give magnitudes which are nearly correct.

Friday, February 19, 1914

U. S. Regions Continued.

Region C 10 passed
Measures unusually accordant

Region C 11

Nos. 23 and 26 do not agree on MC and I plates. Examination shows that original measures were correct, and the discordance is probably partly accidental, but largely caused by color equation.

The combinations MC 1199 and MC 1420 with MD and ME plates show discordances among plates taken simultaneously. E.g. (residuals)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Magn		Sp. Dist.	Star		Plates 1199					Plates 1420				
Mg pr	I			Dist. mm Dist from 11,12,13	MC	MC pr	MD	ME	Dist mm Dist. from 11,12,13	MC	MC pr	MD	ME	Ptm
9.74	9.74	a	11	31 29	.	23 2	29 6	38 22	4 13	10 35	13 2	22 12	07 19	.
9.72	9.65	~~a~~ K	12	~~34~~ 36 47	43 3	13 8	42 7	11 02	34 32	23 02 ~~30~~	06 5	07 12	05 7	9.14
9.57	9.74	K	13	13 24	50 7	12 9	34 1	01 17	32 15	20 5	30 19	.	.	8.88
9.71	9.80	K	14	~~52~~ 44 55	53 13	36 15	20 15	13 03	59 46	64 39	16 5	08 2	39 27	8.97
10.20	10.24	~~K~~ F2? F2?	15	~~49~~ 28 42	13 27	- .	51 16	.	49 34	26 1	08 19	14 4	10 2	.
				152 47 5 30 39	−159 4 −0.40	84 4 +0.21	176 5 +0.35	−64 4 −0.16 56-56 ±0.280	178 150 5 5 36 30	−123 5 −0.25	+57 5 +0.11	−42 4 −0.10	47 4 +0.12 23-35 ±0.142	

	Plate 1199	Plate 1420
MC − pr	−0.61	−0.36
MC − MD	−0.75	−0.15
MC − ME	−0.24	−0.37

U. S. Reg. C 11 Cont.

The residuals on the preceding page for the combinations MC, MD, and ME 1199 and 1420 were taken from the mean which included also Plate MD 1230. The magnitudes derived from the MC combination and from the I plates, shown in the first two columns, are remarkably accordant. The residuals differ systematically for plates taken simultaneously, according to the instrument. On both plate evenings, the MC plates give large negative residuals, and the prismatic comparisons give positive residuals. The MD and ME plates, however, have opposite signs for the residuals on the two plates. The distance as measured in millimetres from the centre of MC plates is given in the fourth & tenth columns. The average for the 5 stars is 30 mm on MC 1199, and 36 mm on Plate MC 1420. The deviations of the four classes of images are smaller on the latter than the former. The small table shows that MC plates give results distinctly brighter than prismatic comparisons, or MD or ME plates by from 0.15 magn. to 0.75 magn. This may be partly due to color equation as 3 of the stars are of Class K, but is too large to be accounted for entirely on that basis. Neither can it be explained wholly by the larger distance from the centre as the discordance is ~~smaller~~ larger on Plate 1199 on which the distance is the smaller. But the dist. from stars 12 + 13 of P.S., with which stars of this magn. are compared, is larger on MC 1199, the more discordant plate.

H. S. Regions Cont.

C 12

Inserted Star 17a

No. 19 appears double on MC 3611. Substitute

Evidently double on all MC plates

No. 19 a substituted

No. 21 a inserted.

Faint Stars in H. S. Reg. C4 Cont. from p. 83

Stars Nos 28 and fainter compared with secondary images of Nos. ~~19~~ 18, 23 - 130. Stars 03~~3~~4 or fainter compared with Bright Supplementary Stars. (Revised preliminary magnitudes, Scale of H. C. 170.

With and Without Ap. 14-in.

MW 1035

		Rev	Mean		S Magn. [+2.97]
28	~~fogged~~ B				
29	~~susp.~~ B				
30	B 13.0?	13.0?	13.00	00	15.97?
31	13.5	13.5	13.50	00	16.47
32	13.8	13.7	13.75	01	16.72
33	14.0	13.9	13.95	01	16.92
34	14.6	14.6	14.60	00	17.57
35	15.1	15.2	15.15	10	18.12
36	15.6?	15.7	15.65	01	18.62?
37	15.8?	15.7	15.75	01	18.72?
034	12.9?	12.9	12.90	00	15.87?
035	13.6	13.7	13.65	01	16.62
036	14.2	14.0	14.10	11	17.07
037	14.3	~~15.7~~ 14.2	14.25	10	17.22
038	14.5	14.5	14.50	00	17.47
038a	14.7	14.5	14.60	11	17.57
038b	15.0	14.8	14.90	11	17.87
039	15.4	15.4	15.40	00	18.37
040	15.5	15.5	15.50	00	18.47
041	15.6	15.6	15.60	00	18.57
042	15.8?	15.9?	15.85?	01	18.82?

The images with full aperture and with ap. 14-in. are very easily comparable, although they are not suitable for scale measures.

Estimates on pp. 90, 91 show that no correction for time needs to be applied.

Corrections for distance should be small, as images compared are always fairly near together

Friday, Feb. 19, 1914.

Ce 4 Ft Stars Cont.

Comparison by Argelander's method of Images 1, 3, 5 with exp. of 1 minute, with exp. $\overset{2}{\cancel{4}}$ or 4, taken with ~~[illegible]~~ full ap.
For obtaining corrections for Time.

MW 1$\overset{0}{\cancel{4}}$35 $\overset{1}{1^m}$, $\overset{2}{40^m}$ with ap 14-in, $\overset{3}{1^m}$, $\overset{4}{40^m}$ full ap., $\overset{5}{1^m}$

Exposure 3 is elongated and cannot be used

Comparisons with exp. 4

	Im 1	Im 5	1-5
$\overset{3}{16a}$	1 13.6	14.4	-0.8
16	14.5	14.5	0.0
17	15.0	15.3	-0.3
18	15.1	15.2	-0.1
19	15.6	–	–
	exp. 2		
19 ~~20~~	1$\overset{2}{3}$.4		
20	13.2?		
22	13.6		
25a ~~24~~	–		
28			
29		–	
30			
025			
026			
029			
031			
034			
038			
040			
042			

Interrupted

Friday, February 19, 1914.

Ce 4 Ft Stars Cont.

MW 1$\overset{0}{\cancel{4}}$35 Cont.

	Comp. with Exp. 2			Direct Comp 1-5
	Im. 1	Im. 5	1-5	
19	12.5	12.5	0.0	-1
20	13.1?	13.$\overset{3}{8}$?	-0.2?	0
22	13.8	13.6	+0.2	1
25a	14.0	14.0	0.0	0
29	15.7?	15.7?	0.0	0
30	7	7	.	0
025	14.3	14.4	-0.1	1
026	14.8	14.5	+0.3	~~[illegible]~~ 2
029	15.3	15.3	0.0	0
031	15.5	15.5	0.0	1
034	7	–		–
038	7	–		–
040	7	–		–
27b	15.6	15.6?	0.0	1
032	sup.	–		–
033	16?	15.8?	+0.2	1
13				-3
16				0
17				0
18				-1
19				$\overset{+0}{-1}$

Images 5 are slightly larger than Images 1 but the difference is almost imperceptible except for brightest stars. Prof Sears method to reject plate because of poor figure, but comparisons by Arg. Method were made with unusual ease.

Feb. 19, 1914

H. S. Reg. C4.

Comparison of Images of 1st exp. on MW Plates

MW 656 $\overset{(1)}{1^m}$, $\overset{(2)}{40^m}$ (full) $\overset{(3)}{1^m}$, $\overset{(4)}{40^m}$ (ap. 14 in), $\overset{(5)}{1^m}$

	1 to ~~2~~ 3	1 to 5	~~1 to 5~~	3 to 5
13	B	B		0
16	+1	0		0
17	0	0		0
18	2	0		0
19	0	0		0
20	0	-1		0
22	+1	0		0
25a	0	+1		+1
28	-2	0		0
29	-1	0		0
30	7	7		-
025	0	0		0
026	-2	-1		-1
029	-2	0		-1
031	0	-3		-1
034	0	0?		-

Apply no correction for time

The Images (1) are larger than Images 3 or 5. Images (3) and (5) are pretty easily comparable. The systematic differences are small, though there is some evidence that, for the faintest stars, Images (5) appear brighter than Images (1), but nearly equal to images (3). There is probably no serious correction between (2) and 4)

Feb. 19, 1914

C4 Cont.

MW 1046

	1 to 3	1 to 3 +3 to 5	3 to 5	1 to 5	Mean 1 to 5
19	0	0	0	+1	+0.05
13	B	-			
16	0	0	0	0	0.00
17	fogged				
18	+2	+2	0	0	+0.10
20	0	+2	+2	+1	+0.15
22	+1	+1	0	0	+0.05
25a	0	0	0	0	0.00
28	-1	+2	+3	+1	+0.15
29	0	+1	+1	0	+0.05
30	0	-1	-1	-1	-0.10
025	+1	+1	0	0	+0.05
026	+2	+3	+1	+1	+0.20
029	0	+2	+2	+3	+0.25
031	0	+1	+1	0	+0.05
034		0	0	0	0.00
33	0	.	fogd	fg	+1.00 14 +0.07

Apply no corr. for Time

Some evidence that faint images appear slightly too faint on last exp. Probably not enough to affect scale of plate. But the haziness of exposure with screen (see Remark p. 82) is serious fault.

MW 1047

Magn	Star	1 to 3	3 to 5	1 to 3 +3 to 5	1 to 5	mean
12.0	19	0	0	0	+2	+0.10
10.0	13	B		.		
11.0	16	1	+1	+2	+1	+0.15
11.4	17	0	+1	+1	+3	+0.20
11.8	18	+1	+1	+2	+2	+0.20
12.4	20	def	-	.		
12.6	22	0	+4	+4	+3	+0.35
13.6	25a	0	+3	+3	+6?	+0.45
14.7	28	+2	+4	+6	+7?	+0.65
15.2	29	+2	+3	+5	+8?	+0.65
15.6	30	0	7	,		
13.7	025	+1	+1	+2	+7	+0.45
13.9	026	+2	+3	+5	+8?	+0.65
14.5	029	+1	+4	+5	+8?	+0.65
14.9	031	+1	+3	+4	+9?	+0.65
15.7	034	+1	7	.	7	.
15.4	033	+1	+3	+4	7	+0.4 555 13 +0.43

On this plate there is evidently a change in order of exposure, images growing progressively fainter for images of all magnitudes

Feb. 19, 1914

H. I. Region 64 Ft Stars Cont.

MW 1047 Comparison of Images 1, 3, and 5 with images 2 and 4, by using preliminary magnitudes, scale of H.C. 170.

Comparisons with Exp. 2 (without screen)

Prelim. Magn.		(1)		(3)		(5)		1-3	1-5	5-1	Mean Diff from Prelim. Magn.	
10.0	13	13.5? ~~2.5~~		B		B		.	.			
11.0	16	14.4	3.4	14.3	3.3	14.3	3.3	+0.1	+0.1	-0.1	3.33	1 00
11.4	17	14.6	3.2	14.8	3.4	15.2	3.8	-0.2	-0.6	+0.6	3.47	3 1 3
11.8	18	14.6	2.8	14.9	3.1	15.0	3.2	-0.3	-0.4	+0.4	3.03	2 1 2
12.0	19	15.6	3.6	15.4	3.4	15.5	3.5	+0.2	+0.1	-0.1	3.50	1 1 0
12.4	20	15.6	3.2	dif		7		.	.			
Mean Diff 40ᵐ-1ᵐ 3.32			16.2 5 3.24		12 4 3.30		18 4 3.45					

Comparison with Exp. 4 (with screen)

19 11.9?

20 12.3?

22

25a

28

29

30

025

026

029

031

033

034

Images (4) are not comparable with Images 1, 3, and 5

The above measures show that Images (1), (3) and (5), having exposures of 1ᵐ, are of about the same brightness of primary images 3.32 magnitudes fainter.

Feb. 19, 1914.

MW 1047 Cont.

1 Star Magn. Approx. [+3.3]		2 Magn.	Magn. Arr. scale Sept. 1914		3 Img. (1) in terms of (3)	4 Diff	5 (1) terms of (5)	6	7 (5) terms of (1)	8	9 Mean (1) terms of (5) (5) terms of (1) changing signs	10 Grades (p.93)	11 Mean Diff + Grades	12 Corr.
15.3	15.4	12.0	12.1	19	11.9	+0.1	B		12.1	-0.1	+0.1	+0.10	+0.10 00	+0.21
15.7	15.8	12.4	12.5	20	12.3	+0.1	12.1	+0.3	12.5	-0.1	+0.20 1 1	.	+0.20 a .	+0.28
15.9	16.0	12.6	12.7	22	12.5	+0.1	12.4	+0.2	13.0	-0.4	+0.30 1 1	+0.35	+0.32 02 03	+0.31
16.9	17.1	13.6	13.8	25a	13.6	0.0	13.3	+0.3	14.3?	-0.7	+0.50 2 2	+0.45	+0.48 02,03	+0.47
18.0	18.2	14.7	14.9	28	14.4	+0.3	13.9	+0.8	15.3	-0.6	+0.70 1 1	+0.65	+0.68 02,03	+0.53
18.5		15.2	15.4?	29	15.0	+0.2	14.7	+0.5	15.7?	-0.5	+0.50 00	+0.65	+0.58 08,07	+0.51
18.9		15.6		30	15.3	+0.3	15.1	+0.5	7		+0.5 . a	.		+0.49
17.0		13.7		025	13.6	+0.1	12.9	+0.8	14.0	-0.3	+0.55 2 3	+0.45	+0.50 05,05	+0.48
17.2		13.9		026	13.6	+0.3	13.5?	+0.4	14.4	-0.5	+0.45 01	+0.65	+0.55 10,10	+0.50
17.8		14.5		029	14.5	0.0	14.2	+0.3	15.2	-0.7	+0.50 00	+0.65	+0.58 08,07	+0.52
18.2		14.9		031	14.5	+0.4	14.2	+0.7	15.2	-0.3	+0.50 00	+0.65	+0.58 08,07	+0.52
18.6		15.4		033	15.3	+0.1	15.0	+0.4	15.7?	-0.3	+0.35 01	+0.4	+0.38 03,02	+0.50
19.0		15.7		034	15.6	+0.1	15.5?	+0.2	7	.	+0.2 . a	.	+0.2 a .	+0.47
14.3	14.4	11.0	11.1	16								+0.15	+0.15 . a	+0.03
14.7	14.8	11.4	11.5	17								+0.20	+0.20 . a	+0.~~05~~10
15.1	15.2	11.8	11.9	18								+0.20	+0.20 . a	+0.18

Comparison of the differences (5)-(1) Column 9 with the estimates in grades on p.93, shows that there is no large systematic difference, and the mean in Column 11 is adopted. Plotting these differences according to the preliminary magnitudes in Column 2, a surprisingly smooth curve is obtained, from which corrections in Column 12 are read. Primary images of the same size are about 3.3 magn. fainter. Therefore the corrections in the last column apply to primary images of magn. given in first column, after allowing for time. The corrections apply to interval of 82 minutes. The time between Exp. 2 + Exp. 4 was 42ᵐ. ∴ ½ Corr. in Column 12 should be added to magnitudes in Column 1

Saturday February 28, 1914.

H. S. Region C4 Ft Stars Cont

3:12

Estimates of Ft Stars in Grades.

		MW367	MW656 E4	MW1047	MW1035	MW1046	MW1407	Mean		Sum	Prov. Diff	Magn
26	~~027~~				x					0.00	13.98	14.11
27a	5	0	0	1	0	0	2	05	001002	0.05	14.~~31~~ 22	14.15
27b	4	5	6	6	6	5	7	58	100011	0.63	13.98	14.65
28	6	1	0	1	1	2	1	07	210010	0.70	14.02	14.71
29	3	6	5	7	7	6	6	62	011100	1.32	14.04 ~~13.70~~?	15.39
30	4	3	4	2	2	3	3	28	011100	1.60	14.16?	15.70
31	3	4	4	5	4	4	2	38	001002	1.98	14.09?	16.14
32	6	3	3	2	3	3	4	30	001001	2.28	14.32	16.50
33	2	6	5	6	3	4	3	45	212101	2.73	14.31	17.06
34	5	2	3	3	4	2	3	28	100110	3.01	14.40	17.39
35	3	5	4	5	5	5	5	48	010000	3.49	14.43	17.92
36	1	3	3	5	5	4	3	38	111101	3.87	14.55	18.38
37		1	sup.	sup.	2	1	2	15	1 . . 010	4.02	14.52	18.57

~~22~~
~~024~~
~~025~~
~~026~~

M.O.R.

Saturday February 28, 1914

H. S. Region C4. Ft. Stars Cont

Estimates of Ft Stars in Grades Cont.

	MW367	MW656	MW1047	MW1035	MW1046	MW1407	Mean		Sum	Diff	Magn.
22									0.00	12.64	13.18 ~~15.92~~?]
024	2?	0	2	1	1	2	13	111001	0.13	13.16?	13.45 ~~16.48~~?]
025	3	4?	2	3	1	1	23	120111	0.36	13.40	13.74
026	1	4	3	0	2	0	17	121202	0.53	13.42	13.95
027	1	1	0	1	0	0	05	110100	0.58	13.48	14.02
028	5	2	5	5	3	4	40	121110	0.98	13.54	14.50
029	1	1	1	0	0	0	02	111000	1.00	13.58	14.53
032	3	3	0	0	0	1	08	221112	1.08	13.64	14.64
030	1	0	1	1	1	1	05	101111	1.13	13.65	14.71
031	3	1	2	3	2	2	22	110100	1.35	13.61	14.96
033	4	4	3	5	4	4	40	001100	1.75	13.53	15.45
034	3	5	4	5	5	5	45	110111	2.20	13.49?	15.97?
035	3	3	4	4	3	4	35	110010	2.55	13.93	16.38
036	2	3	2	3	2	3	25	010101	2.80	13.96	16.67
037	3	4	4 ~~5~~ 3	2	3	2	30	011101	3.10	13.80	17.02
038	2	0	2	2	1	4	18	020012	3.28	13.95	17.26
038a ~~039~~	1	3	1	1	3	1	13	020022	3.41	13.89	17.42
038b ~~040~~	2	1	2	2	1	3	18	010011	3.59	14.09	17.65
039 ~~041~~	2	4	4	4	4	3	35	200001	3.94	14.24	18.10
040 ~~042~~	3	0	3	2	1	1	17	121011	4.11	14.28	18.31
041	1	3	2	1	3	4	23	110112	4.34	14.28	18.59
042	3?	3?	2	0	n.s.	n.s.	20?	1102..	4.54?	14.17?	18.86?

2:40

M.O.R.

Monday April 13, 1914.

y

Scale M.
3:20

Series of Isochromatic plates, for Determining Abs. Magn.
with and without wire screens.

MC 4635 D

B.C.

		sc.1	sc.2	MC 4639	MC 4642		
	5	2.1 ~~2.7~~ 3		~~2.2~~	2.4	2.~~27~~ .30	~~1 1 1~~ 0 1 1
	6	2.7 2.9		2.9	2.9	2.90	0 0 0
	7	3.5 3.7		3.9	3.2	3.60	1 3 4
	8	4.2 4.4		4.4	4.4	4.40	0 0 0
	9	5.8 6.0		5.95	6.1	6.02	0 ~~1~~ 0 1
	10	6.9 7.1	7.3 7.30 1 1	6.80	6.50	6.83	37, 03, 33
	11	6.9 7.1	7.3 7.30 1 1	7.5	7.25	7.32	12, 18, 07
	12	f.	7.7	7.7	7.0	7.47	2 2 5
	13		8.2	8.6	8.5	8.43	2 2 1
	14		8.7	8.7	8.9	8.77	1 1 1
	15		9.6	9.6	9.7	9.6~~7~~ 3	~~1 1 0~~ 0 0 1
	16		9.9	9.9	10.0	9.9~~7~~ 3	0 0 ~~2~~ 1
	17		9.8	9.9	9.9	9.87	1 0 0
	18		f.				
	19						
+87	15	4.3 4.5		4.9	5.0	4.80	3 1 2
+88	80	6.1 6.3		6.6	6.3	6.40	1 2 1
	86	5.9 6.1		6.4	6.0	6.17	1 2 2
	115	6.3 6.5		6.9	6.7	6.70	2 2 0
+88	2	3.8 4.0		4.4	4.2		
+87	12	3.9 4.1		4.5	4.3		
+88	90	5.9 6.1		6.4	6.2		
	105	4.7 4.9		5.1	5.0		

M.O.R.

Monday April 13, 1914.

Scale M

Series of Isochromatic plates cont.

y

MC 4635

assume 9.2 on MC 4639

	sc.1	sc.2	MC 4639	
2n	1.8 2.0		2.1 0	1.9
3n	3.1 3.3		3.4	3.4
4n	4.8 5.0		5.0	4.9
5n	5.4 5.6		5.6	5.2
6n	6.3 6.5	6.8 6.65 1 2	6.80	6.90
7n	f.	7.8	7.9	7.8
8n		8.6	8.8	8.9
9n		9.4	9.6	9.6
10n		n.s.		
11n		f.		
12n				
2s	1.9 2.1		2.1	2.0
4s	f.	7.8	7.9	7.8
5s		7.9	7.9	8.0
6s		9.0	~~8.2~~ 9	9.5
7s		n.s.		
8s				
a¹		8.6	8.6	8.9
a²		f.		
b		~~10.1~~ 9.8	9.7	9.8
c		n.s.		
d		10.1		
e				
f				
g				
h				

M.O.R.

Monday April 13, 1914.

Y

Scale M Series of Isochromatic Plates.

MC 4637. Wire Screen 17 to inch Reduction Const. 1.55

sc.1 sc.2

5 4.8 5.0 4.9

6 5.7 5.9 5.8

6.3 6.6

7 6.1 6.4 6.8 6.7

8 6.8 7.0 7.21

9 8.21 8.4

10 8.7 8.8

11 9.8 9.8

12 9.8 9.8

13 n.s. n.s.

14

+87 75 f 7.3

+88 80 f 8.9

86 f 8.8

115 8.9

+88 2 7.6

7.15 7.0

+87 12 6.9 7.1 7.2

90 8.7

105 7.9

2r 3.9 4.1 B.

3r 6.0 6.2 6.6

4r f 7.8

5r 8.1

6r 9.2 9.2

7r 10.0 10.1

8r n.s.

Nos. 9, 10, 11, 12, 6r, & 7r were measured after series was completed.

M.O.R.

Monday April 13, 1914

Y

Scale M Series of Isochromatic plates

MC 4637 cont.

sc.1 sc.2

2r 3.8 4.0 B.

4r f. t.p.

5r 10.0 10.0

6r

7r

a¹ n.s.

a²

b Scr.

c

M.O.R.

Monday April 13, 1914

y

Scale M

Series of Isochromatic Plates.

MC 4639.) Plain

	sc.1	sc.2		
5	2.0	2.2		
6	2.7	2.9		
7	3.7	3.9		
8	4.2	4.4		
~~7~~	~~3.~~			
9	5.8	6.0 5.9	5.95	0.1
10	6.6	6.9 6.7	6.80	.1
11	f	7.5		
12	f	7.7		
13		8.6		
14		8.7		
15		9.6		
16		9.9		
17		9.9		
18		f.		
19				
+87 15	4.7	poor 4.9		
+88 80	6.4	6.6		
86	6.2	6.4		
115	6.7	6.9		
+88 2	4.2	4.4		
+87 121	4.3	poor 4.5		
+88 90	6.2	6.4		
105	4.9	5.1		

M.D.R.

Monday April 13, 1914.

y

Scale M.

Series of Isochromatic Plates.

MC 4639 cont.

	sc.1	sc.2	
2n	1.8 ~~4~~ w.s.	2.2	
3n	3.2	3.4	
4n	4.8	5.0	
5n	5.4	5.6	
6n	6.6	6.80 .0 6.8	6.8
7n	f	7.9	
8n		8.8	
9n		9.6	
10n		n.s.	
11n			
12n			
2a	1.9	2.1	
4a	f	7.9	
5a		7.9	
6a		8.2	
7a		n.s.	
8a			
a'		8.6	
a^2		n.s.	
b		9.7	
c		n.s.	
d		f	
e			

M.D.R.

Monday April 13, 1914.

Y

Scale M. Series of Isochromatic Plates.

Mc 4641 ~~A~~ Wire Gauze Screen. B. Reduction Const. 2.50

		sc.2	
5	4	7.0	
6		8.1	
7			8.6
8		9.3.	9.1
9		f.	
10			
11			
12		~~9.0~~	
+87 15		9.1	9.2
+88 80		n.s.	
86		n.s.	
* 115		~~10.0~~	~~10.0~~
+88 2		9.21	9.6
+87 12		9.0	9.0
+88 90		n.s.	
105		n.s.	
2r		6.7	
3r		8.3	8.3
4r		9.9	9.73 2 3 1 9.5 9.8
* 5r		n.s.	
6r		n.s.	
2s		6.7	
4s		n.s.	

Nos. 7, 8, +87 15, 115, 3r, 4r were measured the second time after Series was completed

April 16 The image measured as +87° 115 is seen, with a higher power to be a defect. The image of 5r is present, though very faint (10.1?)

M.B.R.

Monday April 13, 1914.

Y

Scale M Series of Isochromatic Plates

Mc 4642 Plain

	sc.1	sc.2		
5	2.2	2.4		
6	2.7	2.9		
7	3.0	3.2		
8	4.2	4.4		
9	5.9	6.1		
10	6.1	6.3	6.7 .6.50	2.2
11	7.0	7.2	7.3 7.25	0.1
12	f.	7.0		
13		8.5		
14		8.9		
15		9.7		
16		10.0		
17		9.9		
18		n.s.		
19				
+87 95	4.8	5.0		
+88 80	6.1	6.3		
86	5.8	6.0		
115	6.5	6.7		
+88 21	4.0	4.2		
+87 12	4.1	4.3		
90	6.0	6.2		
105	4.8	5.0		

No. 7 examined with scale April 14. Reading 3.3. Difficult to compare with scale. Let original reading 3.0 stand.

M.B.R.

Monday April 13, 1914.

j

Scale M. Series of Isochromatic Plates.

Mc 4642 cont.

	sc.1	sc.2
2N	1.7	1.9
3N	3.2	3.4
4N	4.7	4.9
5N	5.0	5.2
6N	6.8 $7.0^{6.9\ 0}$	$6.8^{7.1}$
7N	f	7.8
8N		8.9
9N		9.6
10N		n.s.
11N		
12N		
2a	1.8	2.0
4a	f	7.8
5a		8.0
6a		9.5
a¹		8.9
a²		f
b		9.8
c		n.s.
d		n.s.

M.O.R.

Monday April 13, 1914

j

Scale M. Series of Isochromatic Plates.

Mc 4643 Not in Series Erythrosin

		sc.1	sc.2
	5	B.	
pon	6	1.9	
	7	t.p.	
	8	4.1^{pon}	
	9	5.4^{pon}	
	10	5.8^{pon}	5.8
	11	6.7	6.9
	12	7.0	7.0
	13		7.9
	14		8.2
	15		8.7
	16		8.9
	17		9.0
	18		10.0
	19		10.0
	20		
	23		
	+87 15	3.9^{pon}.	
	~~+88 2~~		
	+88 80	6.4	
	+88 86	$5.9^{o.p.}$	
	115	$5.9^{p.}$	
	+88 2	4.0^{pon}	
	+87 12	4.1	
	+88 90	6.0	
	105	$4.8?^{pon}$	

M.O.R.

Monday April 13, 1914.

Scale M. Series of Isochromatic plates

Mc 4643 cont.

	pc.1	pc.2
2n	1.8	
3n	t.p.	
4n	3.9^{hom}	
5n	5.3^{hom}	
6n	6.4	6.7
7n		7.2
8n		8.2
9n		8.8
10n		f.
11n		
2s	t.p.	
4s	7.0	7.3
5s		7.7
6s		8.3
7s		n.s.
a1		8.0
a2		9.8
b		9.1
c		9.8
d		9.6
e		f
f		

M.O.R.

Monday April 13. 1914.

Scale M. ~~Series of Isochromatic plates.~~

Mc 4644. Pinacyanol Red Screen R1.

	5	3.9 $\overset{\text{hom}}{4.1}$			
	6	4.8 $\overset{\text{hom}}{5.0}$			
	7	6.0 $\overset{\text{hom}}{6.2}$			
	8	6.8 7.0	$\overset{6.95\ 0\ 1}{6.9}$		
	9	f.	7.9		
	10		8.1		
	11		9.0	$\overset{8.95\ 0\ 1}{8.9}$	
	12	~~6~~	~~9.6~~ res	9.1	$\overset{9.10\ 00}{9.1}$
	13		9.8	$\overset{9.75\ 0\ 1}{9.7}$	v.p.
	14		9.8	$\overset{9.75\ 0\ 1}{\text{~~9.3~~}}$	9.7
	15		~~f~~	f.	
	16		n.s.		
+87	15	6.8 7.0			
+88	80	f	8.2		
	86	f.	8.1		
	115	f.	8.7		
+88	2	6.1 6.3			
+87	12	5.8 $\overset{\text{hom}}{6.0}$			
	90	f	7.9		
	165	6.8 7.0 $\overset{7.00\ 00}{7.0}$			

Images not comparable with scale.

M.O.R.

Monday April 13, 1914.

Scale M. ~~Series of Isochromatic Plates.~~

MC 4644 cont.

2r	2.0 7hon 2.2	
3r	4.3 hon 4.5	
4r	6.8 hon 7.0 6.9 5 0 1	6.9
5r	6.7 6.7 0 ° °	6.7
6r	~~7~~	7.8
7r		8.8
8r		9.7
9r		9.7
2r	2.8 hon 3.0	
4r		9.0
5r		8.9
6r		n.s.
a'		9.8
a^2		n.s.
b		~~4~~ 10.0
c		n.s.
d		defective

4:30

M.O.R.

Saturday, April 13, 1914.

11 55 North Polar Sequence.

Experiment in view of Catalogue of Regni

Scale M 4° Square.

Plate MC5248

Polar Sequence

	1	2
5	~~B~~	
6		
7	2.3?p	
8	3.5	
9	4.7	
10	49	5.3
11	5.9	6.0
12	6.4	6.8
13	6.8	7.1
14		7.2
15		8.0
16		8.3
17		8.3
18		9.7
19		9.8
20		7
21		7
3s		
2r	~~B~~	
3r	B	
4r	3.5	
5r	4.0	
6r	5.6	
7r	6.1	
12 10 8r		7.6

P.C.

5	1	2
6		7.1
7		7.9
8		8.0
9		9.9
10		10.0
11		7
3s		6.8?.
4s		n.s.
2r		7.0
3r		8.6?p
4r		9.3
5r		7

	1	2
4s		6.7 ~~7.9~~
5s		
6s		7.9 ~~7.6~~
9r		7.9
10r		9.6
11r		

Saturday, April 13, 1914

Experiment Continued Scale Measures in Zones

Began 12:25
At 12:50 had measured first zone (of 5) (Mer. 6^h)
75 images

Measured all images as bright as No. 17 (ptm. magn. 11.18) At this rate, there would be nearly 400 stars in the region 4° Square.
The scale measure of No. 17 is 8.3
There are 15 stars whose readings are 8.0 or fainter
Therefore if the magn. of No. 15 (ptm magn = 10.78) were taken as a limit, there would be about 300 stars in the region

There are 40 stars readings 7.6 and fainter.
Therefore if the magn. 10.60 (half way between Nos 14 and 15) were taken, the number would be about 185.

The above stars were measured with Scale M attached to eye piece by rubber bands. The readings, all on the second scale, were written on glass side of plate using a fine pen.

Hereafter it may be better to mark six zones instead of 5, and remeasure Polar Sequence after each two zones.

Later in afternoon took the zone around 18^h. Measured all im as bright as No. 17; there were only ~~5~~ 49. Gave each image a current no. and marked ~~magn~~ reading on ~~enlargement~~ print including prism comp. readings

2 18

Scale M Experiment Cont
Polar Sequence
Plate MC 5083 (Superposed on MC 5248

	1	2	P.C. 1	P.C. 2
5	B		4.5	4.8
6	B		5.6	5.6
7	B		5.8	5.9
8	2.6		6.7	6.8
9	2.8			7.8
10	3.0			7.9
11	3.2			8.5
12	3.9			8.8
13	4.1			9.3
14	4.9			
15	5.7	5.8		
16	5.9	6.3		
17	6.3	6.7		
18	6.8	6.9		
19	6.9	7.1		
20		7.7		
21		7.9		
22		7.9		
23		8.0		
24		8.4		
25		8.7		
26		9.0		
27		9.2		

2,30

Tuesday May 12, 1914

Scale P

12:22

Measures to determine Corrections for Distance on MW Plates.

Centers at 21h 40m +48° 52′

Stars with numbers named at Mt Wilson by Seares?)

" " letters named by H. S. L.

MW 615

		Exp. 1	Exp. 2	Exp. 3	Distance 1	2	3
	1	sc.1 sc.2	sc.1 sc.2	sc.1 sc.2	9	~~13l~~	
	1	6.7	6.8?	6.8? v.f.	9l	-13l	-23
	3	3.9 3.6 3.7.5	3.8 3.5	3.8 3.5	5	-7	-19
	5	5.2 4.9	5.3 5.0	5.6? 5.3 5.7? 5.50	2	-10	-22
	~~12~~		.	.			.
wr. unit.	15	5.3? 5.0 5.7 5.35	4.7? 5.4 5.8? 5.60?	6.0? 5.7 6.0? 5.85?	8r	-14	-26
" "	16	5.6? 5.3 5.2 5.25	5.7 5.4 4.8 5.60	5.9? v.f. 5.6 6.0? 5.80	10r	-19	-30
	19	4.3 4.0	4.1 3.8 ~~3.8~~ neg.	t.p.	9l	-19	.
	20	f 5.0	5.1? 4.8	t.p.	14l	-24l	.
	21	f 5.8	5.9?	t.p.	12l	-25l	.
	31	2.9 2.6	2.8 2.5	t.p.	-16	-27	.
	33	1.7 1.4	1.8 1.5	t.p.	-16	-28	-
	86	5.7? 5.4 5.7 5.55	~~5.8~~ 5.8 6.0? 5.75	5.9? 5.6 5.9? 5.75	13	6l	-15
	87	2.7 2.4	2.9 2.6	2.8 2.5	19	9	-9
	89	2.8 2.5	3.1 2.8	3.2 2.9	23	12	9r
	90	2.3 2.0	2.7 2.4	2.6? [illegible]	25	15	8r
	93	7.7	7.8	7.8	16r	-18r	-27
	94	4.3 4.0 ~~4.15~~	4.1	4.3? 4.0 ~~4.3?~~	11r	-9r	-20
	95	7.6	7.8	8.0	12r ~~23r~~	-13r	-23
	96	2.9 2.6 2	3.0 2.7	~~2.9~~ 2.6 ~~2.9~~	21	11	10l
	97	5.0	5.2? 4.9	5.6?	14	2	-12
	98	f 5.0?	5.4? 5.1	t.p.	23	16	15l

M.O.R.

Tuesday May 12, 1914.

Scale P

Measures to determine Corrections for Distance on MW Plates.

MW 615

		Exp. 1 sc.1 sc.2	Exp. 2 sc.1 sc.2	Exp. 3 sc.1 sc.2	Distance 1	2	3
	a	9.2	9.1	9.7	4	-10	-22
	b	9.1	9.1	9.8 9.7 9.75	4	-10	-22
	c	9.7	10.0	10.0	4	-10	-22
	d	7.8	8.0	8.2	20	9	9l
	e	8.3	8.6	8.3	20	9	9l
	f	9.1	9.3	9.0	4r	-13	-25
	g	6.8	6.7	6.8?	3	-10	-22
	h	9.0	9.2	9.2	3	-10	-22
Ident.?	k	9.4?	9.8	9.9	14	2	-13
	l	n.s.	n.s.	n.s.	.		.
	m	n.s.			.		.
	n	n.s.			.		.

Cont. p. 157

Images are extremely difficult to compare with scale.

M.O.R.

1–

Thursday May 21, 1914 Y

YELLOW

Scale M. 2.00

Measures to determine Absolute Magnitudes and Color Indices of Polar Stars and Stars measured with 12-inch Photometer. ~~Yellow~~

Diffraction Grating. MC 4718 Yellow Screen.

Polar Seq			a.1	a.2	P.C.
5	1.0 1.2		7.7 7.65 1 0	7.6	[illegible]
6	2.6 2.8		8.2 8.20 0 0	8.2	
7	3.0 3.2		9.0 8.85	8.7	
8	3.9 4.1		9.2 9.45 2 3	9.7	
9	5.1 5.3.		n.s. 10.0 2	10.0	
10	5.7 5.9		n.s.	n.s.	
11	6.2 6.4				
12	6.7 6.9				
13	H 7.8				
14	H 7.5				
15	8.1				
16	8.7 8.60 1 1 8.5				
17	8.8 8.75 0 1 8.7				
18	9.7 9.60 1 1 9.5				
19	9.9 9.90 0 0 9.9				
20	10.0 10.00 0 0 10.0				
21	n.s.				
22	n.s				
23	n.s.				
24					
25					
26					
27					
28					
29					

Thursday, May 21, 1914 Y

Scale M MC 4718 Cont.

			a1	a.2	P.C.
+87 15	3.7 3.9 ~~9.8~~		9.6 9.40 2 2	9.2	
+88 80	5.9 6.1		n.s.	9.9	
+88 86	5.1 5.3		n.s.	n.s.	
+88 115	5.7 5.9		H	n.s	
2r	1.8 2.0		7.3 7.30 0 0	7.3	
3r	2.8 3.0		8.8 8.70 1 1	8.6	
4r	3.9 4.1		9.3 9.50 2 2	9.7	
5r	4.8 5.0 ~~6.~~		10.1 10.00 1 1	9.9	
6r	5.8 6.0 5.8 5.90 1 1				
7r	6.8 7.0 6.9 6.95 0 1				
8r	H 7.8				
9r	8.1				
10r	9.8				
11r	9.8				
12r	n.s.				
+88° 2	3.8 4.0		9.7 9.55 1 2	9.4	
+87° 12	3.0 3.2 ~~9.8~~		9.0 9.05 0 1	9.1	
+87° 96	3.7 3.9		n.s.	n.s.	
+88° 105	4.4 4.6		n.s. 9.9	n.s.	
arr. No.17 ~~d~~					
No.28 ~~d~~					
49 D ~~f~~					
50 ~~f~~					
d	8.8				
e	9.4				
f	9.7				
g	9.9				
~~h~~	n.s.				

Thursday, May 21, 1914

y

Diffr. Grating MC 4718 Cont.

k
l
l'
m
n
o
p
p'
q
q'
r
s
t
t'
w
w'
y
y'

Current Numbers used by Professor Pickering with 12-inch. Marked on Chart. Print from D

		a1	a2.
1	7.8	h.	.
2	8.9	.	.
3	8.6	.	.
4	8.0	.	.
6	8.1	.	.
7	5.9	H	.
8	5.9	.	.
9	8.8	.	.

Tues. May 21, 1914

y

MC 4718 Cont.

Curr. No.		a1	a.2
10	7.4	.	.
11	6.7 6.9 6.9 6.90 .00	.	.
12	9.5	.	.
13	5.9	.	.
14	8.6	.	.
15	9.1	.	.
16	7.1	.	.
17	7.8	.	.
18	8.8	.	.
19	9.0	.	.
20	7.9		.
21	9.0	.	.
21D	9.2	.	.
22	8.8	.	.
23	8.4	.	.
24	7.8	.	.
25	9.5	.	.
26	8.9	.	.
28	8.8	.	.
29	5.8	.	.
31	7.7	.	.
32	4.0 4.2 - 4.1 4.3 4.25 .01	10.0 9.95 .01	9.9
33	7.5	.	.
35	~~[illegible]~~ 8.4	.	.
35d	8.5	.	.
36	8.1	.	.
39	8.0	.	.

(over)

MC 4718 Cont.

			a 1	a 2
Ann. No. 40	7.8		.	.
40D	9.8		.	.
41	8.1		.	.
42	7.7		.	.
43	8.2		.	.
46	7.4		.	.
47	7.8		.	.
48	8.0		.	.
49	7.7		.	.
49D	8.2		.	.
50	9.6		.	.
51	7.6		.	.
52	8.4		.	.
57D	9.2		.	.
58	7.7		.	.
59	8.1		.	.
61	8.1		.	.
65	8.1		.	.
65D	9.8		.	.
66 H.8	5.0		.	.
69	8.9		.	.
69D	8.0		.	.
71	6.8		.	.
71D	8.0		.	.
72	8.6		.	.
72D	8.9		.	.
72E	9.0		.	.
73	Double		.	.

MC 4718 Cont.

			a 1	a 2
Ann. No. 74	7.9		.	.
75	9.0		.	.
~~76~~			.	.
77	7.9		.	.
78	6.7		.	.
79D	10.0		.	.
80	7.6		.	.
80D	8.8		.	.
81	7.9		.	.
82	8.2		.	.
83	9.4		.	.

Ann. No. ~~Ann. No.~~ 76 ~~29~~ 27 68 67 63 37 56 38 45 44 34 30 79 57 54 53 64 62D 60 55 62 55D

Pol. Sq. ~~Pol. Seq~~ 6 10 11 12 13 14 15 16 17 18 2s 4s 5s 6s 7s 8s 9s 10s 4S 5S 6S 7S

					a 1	a 2
2s	2s	1.0	1.2		7.6 & 7.40 22	7.2
4s	4s	6.9 7.1	7.0	7.05 10	.	.
5s	5s	6.9 7.1	7.0	7.05 10	.	.
6s	6s	F	9.9		.	.
7s	7s		9.6		.	.
8s	8s		n.S		.	.

2.50
G.E.S.

Thursday, May 21, 1914

YELLOW

Scale 0 Series of Yellow Plates with and without wire screens.

3.08

Polar Seq.	MC 5444 Without wire screen Sc. 1		Sc. 3	MC 5446 With wire screen B	MC 5447 Without wire screen Sc. 1		Sc. 3	Mean MC 5444, 5447
5	B			6.0 6.00 00 6.0	B			.
6	1.1			7.6 7.60 00 7.6	1.8			1.45 3 4
7	2.0			8.4 8.40 00 8.4	2.0			2.00 00
8	3.2			9.1* ~~9.8~~ Rej.	4.3			3.75 6 5
9	4.7			n.s.	5.7			~~4.90~~ 5.20 5 5
10	5.5				5.8	5.80 00	5.8	5.65 15 15
11	6.2	6.15 01	6.1		6.6	6.60 00	6.6	6.38 23 22
12	6.3	6.35 10	6.4		F		7.2	6.78 43 42
13	F		7.6		F		8.3 8.20 11 8.1	7.90 30 30
14	F		7.9 8.0 7.95 10		F		8.8 8.65 21 8.5	8.30 35 35
15	F		8.8 8.7 8.75 01				9.3 9.15 12 9.0	8.95 20 20
16			9.2 9.2 9.20 00				9.7 9.70 00 9.7	9.45 25 25
17			9.1 9.1 9.10 00				10.0? 10.00 00 10.0?	9.55 45 45
18			n.s. F				n.s. n.s.	.
19								
20								

Plates without wire screen discordant. Reject this series for Absolute Magnitudes but use for Relative Magnitudes. July 16, 1914.

* Second reading for Plate 8 on MC 5546, 9.8, rejected. Certainly wrong.

Thursday May 21, 1914

YELLOW

Scale 0 Yellow Plates with Wire Screens Cont.

	MC 5444 Sc. 1		Sc. 3	MC 5446 Sc. 3	MC 5447 Sc. 1		Sc. 3	Mean MC 5444, 5447
+87 15	3.8			n.s. n.s.	4.1			3.95 ~~15~~ 2 1
+88 80	4.9			n.s. n.s.	5.8			5.35 5 4
+88 86	4.8			n.s. n.s.	5.6			5.20 4 4
+88 115	5.7			n.s. n.s.	6.2			5.95 3 2
2r	B			5.8 5.80 00 5.8	2.1 Poor			2.1 . 2
3r	1.7			7.9 8.00 21 8.1	2.3			2.00 3 3
4r	3.7			10.0 n.s.	4.6			4.15 5 4
5r	4.0			n.s.	4.7			4.35 4 3
6r	5.6				6.0	6.00 00	6.0	5.80 2 2
7r	6.3	6.45 22	6.6				7.4	6.92 47 48
8r	F		7.8				8.6	8.20 4 4
9r			8.8				9.1	8.95 2 1
10r			n.s.					
11r								
12r								
+88° 2	3.6			9.6 9.65 01 9.7	4.0			3.80 2 2
+87 12	3.0			8.8 8.80 00 8.8	B			3.0 a .
+88 90	4.8			n.s. n.s.	5.7			5.25 4 5
+88 105	3.8			n.s. n.s.	4.8			4.30 5 5
d								
e								
f								
g								
h								

Remeas. July 16, 1914.

	5444	5446	5447	
2r	B		B	Reject measure above.

Lower nos.

YELLOW

Scale 0 Yellow Plates with Wire Screens, Cont.

	MC 5444		MC 5446	MC 5447		mean
Curr. No. Pickering	Sc 1	Sc 3	Scale 3	Sc 1	Sc 3	MC 5444, 5447
1		7.8	.		8.6	8.20 4 4
2		10.0 ? F	.		.	10.0? a .
3		9.0	.		9.8	9.40 4 4
4		8.7	.		9.6	9.15 5 4
6		8.9	.		9.9	9.40 5 5
7	5.8		.		6.0	5.90 1 1
8	5.6		.	6.0		5.80 2 2
9		9.7	.		n.s.	9.7 a .
10		7.7	.		8.0	7.85 1 2
11		6.7	.		* ~~n.s.~~	6.7 a .
12		n.s.			n.s.	
13	5.8		.		6.1	5.95 2 1
14		9.4	.		9.9	9.65 2 3
15		9.1	.		n.s.	9.1 a .
16		7.2	.		7.6	7.40 2 2
17		7.6	.		8.5	8.05 4 5
18		F	.		Def.	.
19		10.0	.		n.s.	10.0 a .
20		8.6	.		Def.	8.6 a .
21		~~9.4~~ n.s.	.		n.s.	.
21d		9.0	.		n.s.	9.0 a .
22		9.7	.		n.s.	9.7 a .
23		9.0	.		9.6	9.30 3 3
24		7.9	.		8.6	8.25 3 4
25		n.s.	.		n.s.	.
26		9.3	.		10.1 ?	9.70 4 4
28		F	.		n.s.	.

11 is bright on MC5447. Reject first reading (6.7 on MC5444) as scale is unbalanced.

YELLOW

Scale 0 Yellow Plates with Wire Screens Cont.

	MC 5444		MC 5446	MC 5447		mean
Curr. No.	Sc 1	Sc 3	Sc. 3	Sc 1	Sc 3	MC 5444, 5447 ..
29	5.8		.	6.2		6.00 2 2
31		7.65 01 7.6-7.7	.		8.3	7.98 3 3 3 2
32	4.50 1 1 4.4-4.6		.	5.0		4.75 2 5 2 5
33		7.45 01 7.4-7.5	.		7.9	7.68 2 3 2 2
35		9.0	.		9.5	9.25 ~~25 25~~ 2 3
35d		9.5	.		9.9	9.70 2 2
36		9.2	.		9.6	9.40 2 2
39		8.9	.		9.6	9.25 3 4
40		8.7	.		8.9	8.80 1 1
40D		n.s.	.		n.s.	.
41		8.7	.		9.2	8.95 3 2
42		7.7	.		8.3	8.00 3 3
43		8.90 1 1 8.8--9.0	.		9.7	9.30 4 4
46		7.35 01 7.4--7.3	.		7.8	7.58 2 3 2 2
47		7.95 01 8.0--7.9	.		8.4	8.18 2 3 2 2
48		8.8	.		9.1	8.95 2 1
49		7.7	.		8.5	8.10 4 4
49D		8.8	.		9.7	9.25 4 5
50		n.s.	.		n.s.	.
51		7.7	.		7.8	7.75 1 0
52		9.0	.		9.8	9.40 4 4
57D		n.s.	..		n.s.	.
58		7.6	.		7.9	7.75 2 1
59		8.5	.		8.7	8.60 1 1
61		9.1	.		9.2	9.15 1 0
65		8.7	.		8.8	8.75 1 0
65D		n.s.	.		n.s.	.

YELLOW

Scale O   Yellow Plates with Wire Screens Cut.

Curr. No.	M 5444 Sc 1	Sc 3	Mb 5446 Sc 3	Mb 5447 Sc 1	Sc 3	mean mc 5444 5447
66	4.7-4.8 4.75 10		.	5.1		4.92 17 18
69		10.0	.		F	10.0 a.
69D		8.3	.		8.6	8.45 12
71	6.0		.		5.9	5.95 01
71D		8.7	.		8.8	8.75 10
72		9.0	.		9.9	9.45 45
72B		9.9	.		n.s.	9.9 a.
72C		10.1?	.		n.s.	10.1? a.
73		5.9	.		6.7	6.30 44
74		8.3	.		8.4	8.35 10
75		9.7	.		10.0	9.85 12
77		8.0	.		8.8	8.40 44
78		6.1	.		6.8	6.45 34
79D		n.s.	.		n.s.	.
80		7.8	.		7.9	7.85 01
80D		9.2	.		9.9	9.55 43
81		7.9	.		8.7	8.30 44
82		8.3	.		9.1	8.70 44
83		9.8	.		F	9.8 a.
2a		B	5.8 5.7 5.75 01	B		.
4a		6.6	.	F		6.6 a.
5a		6.8	.	.	7.5	7.15 43
6a		~~n.s.~~ 8.4	.		~~6.0~~ 8.8	8.60 22
7a		n.s.	.			.

4.15
G.E.S.

Friday, May 22, 1914

YELLOW

Scale R   Yellow Plate ~~Series~~ Diffraction Grating

m ~~mean~~

2.25	Mb ~~5248~~ 4769 Sc 1		Sc 2		Pole		a 1		a 2	
Polar Seq.										
5	B						8.8 Poor .		Too poor	
✓6	1.7	2.0 ?					9.4	9.55 21	9.7	
✓7	2.0	2.3 ?					10.6	10.65 01	10.7	
✓8	5.9	6.2	Reject. Inv. t.p.				11.2	11.10 12	11.0	
✓9	6.9	7.2	" " "				12.2	12.15 01	12.1	
✓10	6.1	~~6.4~~ 7.4					12.5	12.55 10	12.6	
✓11	7.0	7.3					12.7	12.80 11	12.9	
✓12	7.8	8.1 ~~8.45~~					13.1	13.10 00	13.1	
13	8.8--8.6						13.6	13.60 00	13.6	Poor
14	8.8	9.1	8.7	8.90 22			13.8	13.75 01	13.7	
15	9.0	9.3	8.7	9.00 33			13.8	13.85 01	13.9	
16	F		10.2				n.s.		n.s.	
17	F		10.7							
18			11.0							
19			11.6							
20			11.9		11.7	11.80 12				
23			12.2		12.~~1~~3	12.25 01				
24			12.7		* ~~1~~2.8	12.75 10				
25			13.2		13.2	13.20 00				
26			Def.		Def.					
21			11.9		11.9	11.90 00				
27			F		Too poor					
28			13.9		14.0	13.95 10				
29			F		F					
22			12.2		12.0	12.10 12				

Assume Unit wing. Read. 7.1

* Unit changed May 26, 1914

Friday, May 22, 1914.

YELLOW

Scale R Cont.

Mb 4769 Pole

	Sc1	Sc2		a.1		a.2
+87 15	6.7	7.0 poor ~~±2~~	Rejct t.p.	11.7	11.90±2	12.1
+88 80	6.1	6.4	Rejct t.p	Too poor		Too poor
+88 86	6.9	6.2	Rejct t.p.	" "		" "
+88 115	6.9	7.2 ?		12.7	12.70 00	12.7
2 r	B			8.1	8.25±2	8.4
3 r	2.9	3.2 ?		10.4	10.15±3	9.9
4 r	4.7	5.0 ?		11.3	11.35±0 *	~~11.4~~ 11.
✓5 r	5.8	6.1		11.7	11.70 00	[illegible] 11.7
6 r	6.2	6.5		12.4	12.45 01	12.5
7 r	7.8	8.1		12.9	12.95±0	13.0
8 r	8.6 8.9 ~~8.65 01~~	8.7 8.80±		13.8	13.75 01	13.7
9 r	F	9.3		Def.		Def.
10 r	~~6.4~~	11.4		"		"
~~11 r~~		11.6 11.35	Image poor. take mean of readings	"		"
12 r		~~11~~ 12.9 11.90	Remeasured June 20, 1914. 11.8 mistake of unit in first reading	h.s		h.s.
+88 2	5.7	6.0	Rej. t.p.	10.9	11.05±2	11.2
87 12	6.2	6.5	Rej. t.p.	12.2	12.10±2	12.0
88 99	6.2	6.5 ?		12.5	12.45 10	12.4
88 105	5.0	5.3		12.7	11.70 00	11.7
d		10.0				
e		10.9				
f		11.0				
g		Def				
h		12.2				
(cont. on P. 132.) 1		8.5		13.9	13.80±2	13.7

apparently Star images remeas. } June 20, 14

↓

~~11.1~~ Rejected by H.S.L. '14-5-27
. . . . Restored .. .. '14-6-20
~~11.9~~ Reject " " '14-5-27
. . . . Restored .. .. '14-6-20

*Unit changed May 26, 1914

Friday, May 22, 1914.

YELLOW

Scale R Cont.

Mb 4769 Pole

Corr. No. Preliminary.		Sc 2	a 1		a 2
✓2		10.8	h.s		h.s.
✓3		9.7	h.s.		h.s.
✓4		9.6	14.0	13.90±2	13.8 poor
~~5~~					
✓6		9.8	F		13.9
✓7	6.7 7.0		12.6	12.75±1	12.9
8	6.1 6.4		12.5	12.50 00	12.5
9		10.4	F		h.s.
10		8.0	13.6	13.60 00	13.6
✓11	7.3 7.6		13.1	13.00±2	12.9
12		10.6	h.s.		h.s.
13	6.7 7.0		12.9	12.80±2	12.7
14		9.6	F		h.s.
15		10.8	h.s.		h.s.
16	7.6 7.9		13.4	13.40 00	13.4
17		8.5	13.7	13.75±0	13.8
18		10.1	F		h.s.
19		10.4	h.s.		h.s.
20		9.0	13.5	13.70±2	13.9
21		10.7	h.s.		h.s.
21d		10.8	h.s.		h.s.
22		10.0	h.s.		h.s.
23		9.7	h.s.		h.s.
24		8.7	13.7	13.70 00	13.7
25		10.9	h.s.		h.s.
26		10.4	h.s.		h.s.
~~27~~					
28		10.1	h.s		h.s

Friday, May 22, 1914

Scale R YELLOW Cont.

Mb 4769 Pole

Curr. No.	Sc 1	Sc. 2.		a 1		a 2	
31	8.7 9.0			13.6 ?	13.70 11	13.8	
32	5.7 6.0		Rej. t.p.	* ~~13.7 ?~~ 11.8	~~11.75~~ 13.60 01	~~13.7~~ 13.5	32 11.8 11.75 11.7
33	8.3 8.6			* ~~11.8~~ 13.7 ?	~~13.65~~ 11.75 11	~~13.6~~ 11.7 ?	33 13.7 13.60 13.5
35		9.~~6~~3		13.8	~~13.~~85 01	13.9	
35d		9.6		F		14.0	
36		9.5		13.9	13.95 10	14.0	
39		9.7		Too poor		14.0	
40		8.8		13.9	13.90 00	13.9	
40d		10.8		h.S.		h.S.	
41		9.1		13.7	13.70 00	13.7	
42	8.2 8.5			13.8	13.70 12	13.6	
43		9.8		h.S.		h.S.	
46		9.4		13.2 ?	13.20 00	13.2	
47		Def.		13.7	13.80 11	13.9	
48		9.7		13.9		F	
49		8.6		13.2	13.50 33	13.8	
49d		9.7		F		h.S.	
50		10.9		h.S.		h.S.	
51		8.6		Def.		13.5	
52		10.3		13.9		h.S.	
57D		10.5		h.S.		h.S.	
58		8.3		13.2	13.45 33	13.7	
59		9.1		Def.		13.9	
61		9.5		h.S.		h.S.	
65		9.1		14.0		h.S.	
65d		11.0		h.S.		h.S.	
66	5.9 6.2			11.9	11.90 00	11.9	

* Diffraction images a of stars 32 and 33 transposed. No. 32 is much brighter than 33.

Friday, May 22, 1914

Scale R YELLOW Cont.

Mb 4769 Pole

Curr. No.	Sc 1	Sc 2		a 1		a 2	
69		10.3		h.S.		h.S.	
69d		8.8		13.9	13.85 10	13.8	
71	6.9 7.2		poor	12.6	12.70 11	12.8	
71d		9.7		13.9	13.90 00	13.9	
72		10.0		h.S.		h.S.	
72D		10.7		h.S.		h.S.	
72E		10.9		Def.		h.S.	
73		T.p.		Too poor		Too poor	
74		9.2		h.S.		" "	
75		10.3		h.S.		h.S.	
77		8.9		13.4	13.60 32	13.8	
78	7.0 7.3			12.9	13.05 12	13.2	
79d		11.5 poor		F		h.S.	
80		8.9		13.6	13.65 01	13.7	
80D		10.3		F		F	
81		8.7		13.5	13.70 32	13.9	
82		9.3		h.S.		13.8	
83		10.4		h.S.		h.S.	
20	B			Too poor.		Too poor	
✓ 40	7.1 7.4			12.9	12.85 10	12.8 poor	
50		8.2		13.6	13.65 01	13.7	
60		8.8		13.7	13.55 12	13.4	
70		12.1		F		F	
80		13.1					
90	B.	13.2					
100		F					
110		F					F

May 22, 1914

YELLOW

Scale R MD 4769 Pole. Cut.

	Sc1	Sc2
k		11.8
l	1	11.9
l'		12.7
m		12.9
n		11.6
o		12.7
p		13.6
p'		13.4
q		13.1
q'		13.6
r		13.6
s		14.0 ?
t		13.2
t'		13.9
w		n.s.
w'		n.s
y		13.1
y'		n.s.

8.50
J.E.S.

Friday, Dec. 4, 1914

Scale R 8s	13.1
9s	13.1
10s	13.9? Recalculated
25	12.9
27	13.8
28	13.9

Monday May 25, 1914

YELLOW

Scale M. Yellow Screen.

MD 4776 Pole

2.26

	Sc1	Sc2	mean	a1	a2	mean
5	1.6 1.8?		1.8 a ·	9.3 9.2	9.3 9.4	9.30 0 1 01
6	2.7 2.9		2.9 a ·	9.3 9.4	~~9.0~~ ~~9.8~~ 9.9	9.60 3 2 2 3
7	3.6 3.8 ? poor		3.8 a.	10.0 9.9	n.s. n.s.	9.95 0 1 · ·
8	4.8 5.0		5.0 a.	n.s. n.s.	n.s.	
9	5.9 6.1	6.6	6.35 3 2			
10	~~2.9~~ 6.7 6.9	6.9	6.90 0 0			
11	F	7.7	7.7 · a			
12	F	8.2 8.1	8.15 0 1			
13	F	8.8 8.8	8.80 0 0			
14	~~4.8~~ F	8.9 8.8	8.85 1 0			
15		9.3 9.5	9.40 1 1			
16		9.9 10.0	9.95 1 0			
17		n.s. n.s.				
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						

J.E.S.

Monday May 25, 1914

Scale M. YELLOW Yellow Screen Cont.

	Mb 4776					
	Sc1	Sc2	mean	a1	a2	mean
+87 15	Too poor			ns.	ns.	
+88 86	Too poor			ns.	ns.	
88 86	" "			ns.	ns.	
88 115	F			ns.	ns	
2r	1.2 1.4		1.30 ±1	8.3 8.3	8.7 8.7	8.50 ±± 22
3r	3.6 3.8 ?		3.8 a.	9.9 9.9	10.0 10.0	9.95 ±± 00
4r	5.0 5.2 Poor		5.2 a.	ns. ns	ns. ns.	
5r	5.7 5.9	5.7	5.80 1±	ns.		
6r	6.7 6.9	6.9	6.90 00			
7r	F	7.9	7.9 · a			
8r		8.9	8.9 · a			
9r		9.7	9.7 · a			
10r		ns.				
11r						
12r						
+88°2	~~Too poor~~ 4.9		4.9 · a	ns	ns	
87 12	" "		.	ns.	ns.	
87 90	6.7 6.9		6.80 ±1	ns.	ns.	
88 105	5.2 5.4		5.30 ±1	ns.	ns.	
d		ns.				
e		ns.				
f						
g						
h						
k						
l						
l'						

G. E. S.

Monday May 25, 1914

Scale M. YELLOW Yellow Screen Cont.

	Mb 4776					
	Sc1	Sc2		a.1	a2	
m						
n						
o						
p						
p'						
q						
q'						
r						
s						
t						
t'						
w						
w'						
y						
y'						

Cur. No. Pickering

1		9.1				
2		F				
3		10.0?				
4		9.6				
6		8.7				
7		7.2				
8		7.3				
9		ns.				
10		8.8				
11		8.2				
12		F				

G. E. S.

Monday May 25, 1914

Scale M. YELLOW Cont.

Mb 4776

Curr. No.	Sc. 1	Sc. 2	a1	a2
13		7.4		
14		10.0		
15		9.8		
16		8.2		
17		8.8		
18		n.s.		
19		n.s.		
20		9.0		
21		n.s.		
21d		n.s.		
22		n.s		
23		9.9		
24		9.0		
25		n.s.		
26		n.s.		
28		7.0		
29		7.8		
31		8.8		
32		6.7	n.s.	n.s.
33		8.7		
35		9.5		
35d		Fl		
36		9.9		
39		10.0		
40		9.6		
40d		n.s.		
41		9.8		

G.Es

Monday May 25, 1914

Scale M. YELLOW Cont.

Mb 4776

Curr. No.	Sc. 1	Sc. 2	a1	a2
42		8.9		
43		n.s.		
46		8.7		
47		8.9		
48		9.8		
49		8.8		
49d		9.8		
50		Fl		
51		8.8		
52		Fl		
57d		n.s		
58		8.6		
59		9.0		
61		9.7		
65		9.2		
65d		n.s		
66		5.8		
69		n.s.		
69d		9.2		
71		7.6		
71d		9.6		
72		9.9		
72d		10.1		
72e		n.s.		
73		Double		
74		9.0		
75		9.9		

G.E.S.

Monday May 25, 1914

Scale M YELLOW Cont.

Mb 4776

Curs. No.	Sc1	Sc2		a1	a2	mean
77		9.1				
78		7.9				
79d		n.s.				
80		8.7				
80d		10.0				
81		8.8 ~~n.s.~~				
82		9.7				
83		n.s.				
28	Too poor	— —		8.2 8.3	8.8 Poor 8.7	8.50 32 32
40		7.8		n.s.		
50		8.0		n.s.		
60		9.7				
70		n.s.				
80						

3.00

G.E.S.

Monday May 25, 1914

Scale M YELLOW Yellow Screen

Mb 4910 Pole

3.08	Polar Seq.	Sc1	Sc2	mean	a1	mean	a2	P.L.
	5	2.1 ? 2.3		2.3 a.	8.4 8.3	8.38 01 00	8.4 8.4	6.6
	6	3.0 3.2		3.2 a.	8.9 8.8	9.02 1 2 1 3	9.1 9.3	8.9
	7	Too poor	7.7	.	9.8 9.8	9.85 00 "	9.9 9.9	9.0
	8	4.9 5.1		5.1 a.	n.s.			
	9	6.0 6.2		6.2 a.				
	10	6.7 6.9	6.8	6.85 10				
	11	F	8.3	8.3 · a				
	12		7.9	7.9 · a				
	13		7.6	7.6 · a				
	14		8.6 8.6	8.60 00				
	15		8.9 8.4	8.65 32				
Looked up. Large diff. probably accidental.	16		9.8 9.2	9.50 33				
	17		9.7 9.7	9.70 00				
	18		10.0 10.1	10.05 01				
	19							
	20							
	21							
	22							
	23							
	24							
	25							
	26							
	27							

G.E.S.

Monday May 25, 1914

Scale M. **YELLOW** Cont.

Mb 4910 Pole

	Sc1	Sc2		a1	mean	a2	P.b
+87 15	Tot poor			h.s			h.s.
88 80	6.8	7.0 Poor		h.s.			h.s.
88 86	6.6	6.8		h.s.			h.s.
88 115	6.9	7.1		h.s.		h.s.	h.s.
2r	2.3	2.5		8.0 7.9	8.02 01''	8.1 8.1	9.1
3r	2.6	2.8		9.8 9.7	9.78 01 00	9.8 9.8	h.s.
4r	5.0	5.2	9.7	h.s. h.s.		h.s. h.s.	h.s.
5r	5.7	5.9		h.s. h.s.			h.s.
6r	6.7	6.9	9.2				
7r	7.1	7.7					
8r		8.4					
9r		8.9					
10r		9.2					
11r		10.1	h.s.				
12r							
+88 2	Tot poor			10.1 10.1	10.10 00	h.s. h.s.	
87 12	" "			h.s.		h.s.	h.s.
87 90	6.7	6.9		h.s.			h.s.
88 105	Tot poor						
a		9.9					
e		h.s.					
f		h.s.					
g							
h							
k							
l							

G.E.S.

Monday May 25, 1914

Scale M. **YELLOW** Cont.

Mb 4910

	Sc1	Sc2
l'		
m		
n		
o		
p		
p'		
q		
q'		
r		
s		
t		
t'		
w		
w'		
y		
y'		

Arr. no. Parking

	Sc1	Sc2
1		8.4
2		h.s.
3		9.7
4		8.9
6		9.0
7		7.1
8		6.9
9		10.0
10		8.2
11		7.8

G.E.S.

Monday May 25, 1914

Scale M. YELLOW Cont.

Mb 4910

Curs. No.	Sc1	Sc2
12		n.s.
13		7.4
14		9.3
15		Fl
16		7.9
17		8.3
18		9.7
19		10.1
20		8.7
21		n.s.
21d		n.s.
22		9.8
23		8.4
24		8.6
25		10.0
26		9.9
28		
29		9.8
31		8.6
32		5.8
33		8.1
35		8.9
35d		9.1
36		Scratched
39		9.1
40		8.8
40d		Fl

G.E.S.

Monday May 25, 1914

Scale M. YELLOW Yellow Screen

Mb 4910

Curs. No.	Sc1	Sc2
41		8.9
42		8.3
43		9.7
46		9.1
47		8.6
48		8.4
49		8.5
49d		9.2
50		Fl
51		8.3
52		9.8
57d		10.1
58		8.1
59		8.8
61		9.0
65		8.9
65d		n.s.
66		6.0
69		7.9
69d		8.8
71		7.2
71d		9.0
72		9.3
72d		10.0
72b		Fl
73		Double
74		9.0

G.E.S.

G.E.S.

Monday May 25, 1914

YELLOW

Scale M. Cont.

MC 4910

Gizr. No.	Sc1	Sc2		a1	mean	a2	Ple.
75		9.8					
77		8.8					
78		7.7					
79d		7.1					
80		8.4					
80d		8.9					
81		8.7					
82		9.2					
83		7.1					
1							
20				8.0 8.0	8.08 11 01 001	8.1 8.2	7.8
40		7.8		h.s.		h.s.	
50		7.8					
60		8.8					
70		Too poor					

3.36

G.E.S.

Friday 9

~~Tuesday~~ May 26, 1914

YELLOW

Scale M. With yellow Screen.

3.07 MC 4767

Phot Seq.	Sc1	Sc2	mean	a1	mean	a2
5	B			5.8	5.75 01	5.7
6	1.0 1.2		1.2 a.	6.8	6.85 01	6.9
7	1.8 2.0		2.0 a.	7.6	7.60 00	7.6
8	2.7 2.9		2.9 a.	8.2	8.20 00	8.2
9	3.6 3.8		3.8 a.	8.8 ?	8.80 00	8.8
10	3.8 4.0		4.0 a.	9.0 ?	8.95 01	8.9
11	4.7 4.9		4.9 a.	9.7	9.75 10	9.8
12	4.9 5.1		5.1 a.	9.8	9.75 01	9.7
13	5.7 5.9		5.9 a.	10.1 ?	10.05 10	10.0
14	5.8 6.0		6.0 a.	h.s.		h.s.
15	6.9 7.1	6.9	7.00 11			
16		7.1	7.1 a.			
17		7.4	7.4 a.			
18		7.9	7.9 a.			
19		8.2	8.2 8.20 00			
20		8.6	8.4 8.50 11			
21		8.7	8.5 8.60 11			
22		9.1 ? Poor	8.9 9.00 11			
23		9.0 8.8	9.1 9.05 01			
24		9.6	9.2 9.40 22			
25		9.8	9.8 9.80 00			
26		9.9	9.9 9.90 00			
27		10.0	10.0 a.			
28		h.s.				

G.E.S.

Friday 9
~~Tuesday~~ May 2~~6~~, 1914

J

Scale M. Cont.

M.C. 4767

~~Corr. No.~~	Sc1		Sc2		mean	a1	mean	a2
+87 15	2.8	3.0				8.2 Poor	8.25 01	8.3
+88 80	3.7	3.9				* ~~9.7~~		8.8
+88 86	3.1	3.3				9.2 ?	9.10 ±1	9.0
+88 115	3.9	4.1				8.9	8.90 00	8.9
2n	13	.				5.7	5.65 10	5.6
3n	1.9	2.1				7.2	7.20 00	7.2
4n	2.9	3.1				7.9	7.85 10	7.8
5n	3.3	3.5				8.6	8.65 01	8.7
6n	4.2	4.4				8.9	8.95 ±0	9.0
7n	4.9	5.1				9.8	9.8 2.	Df
8n	5.9	6.1				ns.		ns.
9n	6.7	6.9	6.8	6.9	6.87 0±0			
10n			8.0	8.3	8.15 20			
11n			8.2	8.1	8.15 01			
12n			8.7	8.7	8.70 00			
+88 2	2.7	2.9				7.8	7.85 01	7.9
+87 12	2.3	2.5				7.9 Poor	7.85 10	7.8
87 90	3.6	3.8				8.9	8.85 10	8.8
88 105	2.9	3.1				7.8		Df.
d			7.2					
e			7.9					
f			7.8					
g			8.2					
h			9.0					
k			8.6					
l			8.8					

* Remeas. June 10, 1914.
a' 8.8 a² t.p. Wrede

Assume a² 8.8 a₁ t.p.

Reject orig. meas for a1 (9.7)

J.E.S.

Friday 9
~~Tuesday~~ May 2~~6~~, 1914

y

Scale M. Cont.

M.C. 4767

	Sc1	Sc2	a1	mean	a2
l'		9.8			
m		8.9			
n		8.6			
o		9.7			
p		F			
p'		F			
q		9.7			
q'		10.0			
r		9.9			
s		ns.			
t		~~ns~~ 10.0			
t'		10.1?			
w		ns			
w'		ns.			
y		10.1?			
y'		ns.			

Avr. No. Pickering

	Sc1	Sc2	a1	mean	a2
1		6.0	10.0	10.00 00	10.0
2		7.8	ns		.
3		6.9	F		.
4		6.8	F		F
\					
6		6.9			
7	3.9 4.1		9.0	8.90 ±1	8.8
8	3.9 4.1		8.9	8.90 00	8.9
9		7.2	ns		.

Friday 9
~~Tuesday~~ May 26, 1914

Scale M

Cont.

Mb 4767

Curr. No.	Sc1	Sc2	a1	mean	a2
10		5.8	Fl		.
11		5.2	9.7	9.75 10	9.8
12		7.9	n.s.		n.s.
13	4.1 4.3		9.0	9.30 33	9.6
14		7.3	n.s.		.
15		7.9	n.s.		.
16		5.9	10.0 ?	10.8 a	Fl
17		6.8	.		Fl
18		7.6	.		Fl
19		7.7	n.s.		
20		6.7	ns		.
21		7.8	ns		.
21d		8.0	ns.		.
22		7.0	.		.
23		6.9	.		.
24		6.0	.		.
25		7.9	.		.
26		7.9	.		.
28		Def.	.		.
29	3.9 4.1		9.0	9.00 00	9.0 Poor
31	5.9 6.1		10.0	9.95 01	9.9
32	3.2 3.4		8.3	8.30 00	8.3
33	5.7 5.9		Def.	9.9 a	9.9
35		6.8	Fl		.
35d		7.0	ns		.
36		6.9	.		.
39		6.9	.		

Friday. 9
~~Tuesday~~ May 26, 1914

Scale M

Cont.

Mb 4767

Curr. No.	Sc1	Sc2	a1	mean	a2
40		6.3	.		
40d		7.9	.		
41		6.8	.		
42		5.8	9.9	9.90 00	9.9 ?
43		6.9	ns.		
46		5.5	.	10.0 a	10.0
47		5.9	.		.
48		6.8	.		.
49		5.9	9.9	9.9 a	.
49d		6.9	ns		.
50		6.8	.		.
51		5.7	10.0 ?	9.95 01	9.9
52		7.0	.		.
52d		7.7	.		.
58		5.9	.	10.0 a	10.0
59		7.8	.		.
61		7.0	.		.
65		6.8	.		.
65d		8.0	.		.
66		8.2	8.6	8.65 01	8.7
69		7.8	.		.
69d		6.7	.		.
71	4.6 4.8		9.2	9.25 01	9.3
71d		6.7	.		ns.
72		6.9	.		.
72d		7.7	.		.
72e		7.8	.		.

~~Tuesday~~ Friday May ~~26~~ 9, 1914

Scale M. Comp.

M.B. 4767

Cur. No.	Sc1	Sc2	mean	a1	mean	a2
73		Double		.		8.5
74		6.7		.		.
75		7.7		.		.
77		6.7		.		.
78		5.1		9.2	9.45 ±3	9.7
79d		8.3		h.s.		.
80		7.7 5.8		Def.		.
80d		7.4		h.s.		.
81		5.9		.		7.1
82		6.8		.		.
83		7.7		.		.
2s 20	B			5.6	5.20 ±4	4.8
4s 40	5.0 5.2			9.7 2:	9.75 ±0	9.8
5s 50	5.7 5.9			9.9	9.90 00	9.9
6s 60	6.2 6.4	6.9	6.55 ±1	~~XX~~ 11	10.0 ±	10.0
7s 70	Fl	- 8.6				
l ~~8s 80~~		. 8.9				
9s 90		9.9	9.7 9.80 ±1			

G.B.S.
4.10

Friday, Dec. 4, 1914

9s	9.7
10s	7
8s	97
7s	Star measured before for 8s is star l

Tuesday May 26, 1914

Scale

	Sc1	Sc2		a1	a2
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Tuesday May 26, 1914

Scale	Cont.			
	Sc 1 Sc 2			
+87 15				
88 80				
88 86				
88 115				
2r				
3r				
4r				
5r				
6r				
7r				
8r				
9r				
10r				
11r				
12r				
+88 2				
87 12				
87 90				
88 105				
d				
e				
f				
g				
h				
h_2				
l				

Tuesday May 26, 1914

Scale	Cont.			
	Sc 1 Sc 2			
l'				
m				
n				
o				
p				
p'				
q				
q'				
r				
s				
t				
t'				
w				
w'				
y				
y'				
y''				
1				
2				
3				
4				
5				
6				
7				
8				
9				

Tuesday May 26, 1914

Scale	Cont.	
	Sc1	Sc2
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
21d		
22		
23		
24		
25		
26		
28		
29		
31		
32		
33		
35		
35d		
36		
39		

Tuesday May 26, 1914

Scale	Cont.	
	Sc1	Sc2
40		
40d		
41		
42		
43		
46		
47		
48		
49		
49d		
50		
57		
52		
57d		
58		
59		
61		
65		
65d		
66		
69		
69d		
71		
71d		
72		
72d		
72e		

Tuesday May 26, 1914

Scale	Cont.		
	Sc1 Sc2		
73			
74			
75			
77			
78			
79d			
80			
80d			
81			
82			
83			
20			
40			
50			
60			
70			

Tuesday June 2, 1914

Scale — Measures to determine corrections for Distance on MW Plates

Cont. from p. 115

2.25 — Centres at 21h 40m, +48° 52'

F.E.S. — Stars with numbers named at Mt Wilson by Seares

" " letters named by H.S.L.

M.W 614

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1.	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
1									
3									
5									
15									
16									
19									
20									
21									
31									
33									
86									
87									
89									
90									
93									
94									
95									
96									
97									
98									

Tuesday June 2, 1914

Scale P
2.35
J.E.S.

Measures to determine Corrections for Distance on M W Plates.
Centres at 21h 40m , +48° 52′
Stars with numbers named at Mt Wilson
" " letters named by H.S.L

M W 614

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
1		6.9		6 5.8		6.9?	1l	-14l	-24l
3	3.8 3.5	8.	3.9 3.6		4.0 3.7		+6	-8l	-20
5	5.1 4.8		5.6 5.3		5.7? 5.4?		+3	-10	-23
15	5.9 5.6		5.8? 5.5?.			5.9 Poor?	6r	-14	-26
16	5.7 5.4		5.8? 5.5?.			5.8	9r	-19	-30
19	4.1 3.8			4.3?	3.9 Poor 3.6		-10l	-19	
20		5.0?	5.6? 5.3?.		Poor .		-15l	-24	-34l
21		6.7		6.5?	" .		-15l	-24	-36l
31	3.0 2.7		2 2.6		2.9 Poor 2.6		-16l	-28	-40
33	1.8 1.5		1.9 1.6		1.4 " 1.1		-16	-29	-41
86	1.2 0.9			6.0		6.6?	+13l	7l.	-15
87	2.9 2.6		2.9 2.6		2.9 2.6		+18	+7r	-9 ~~722~~
89	3.1 2.8		3.2 2.9		3.6 3.3		+21	+11r	-7r
90	2.7 2.4		2.8 2.5		2.7 2.4		+25	+13r ~~8~~	5r
93		7.8		~~7~~7.8		7.9	14r.	-17r	-27
2. 94	4.2 3.9		5.7 5.4		5.0 ~~5~~4.7		+9r	-8r	-19
95		7.7		7.7		8.0	10r	-12r	-22
96	3.1 2.8		3.2 2.9		3.0 2.7		+22	+11l	-11
97		4.9	5.2 4.9			5.7?	+14	2l.	-8
98		5.3?	5.6 5.3		5.7? 5.4?		+24l	16l	16l

3, x 2 ~~88~~ ~~7.8~~

Tuesday June 2, 1914

Scale P Measures to determine Corrections for Distance on M W Plates
M W 614

	Exp. 1		Exp. 2		Exp. 3		Distance		
	sc1	sc2	sc1	Sc2	sc1	sc2	1	2	3
a	~~1.8~~ ?	9.1	~~1.2~~ ?	9.2	~~1.1~~ ?	9.8	+3	10l	-23
b		9.7		9.3		9.7	+3	+9l	-23
c		9.9		9.9		10.0	+3	-10	-23
d		7.9		~~7~~9.9	~~XX~~	8.3	+20	-10	-10l
e		8.2		8.1		8.7	+20	+9l	-8l
f		9.2		9.0		9.9?	2r	-10	-26
2. g		6.5?		5.7		7.7	+3	-10	-22
1. h		8.8		9.0		8.3	+3	-10	-22
k		9.8		9.9		9.9	+13	4l	-12
l		9.8		n.s.		n.s.			n.s.
m		n.s.		n.s.					n.s.
n		n.s.		n.s.					-23
α	1.8		1.2		1.1				

3.12
J.E.S.

Tuesday June 2, 1914

Scale P
3.15
S.E.S.

Measures to determine Corrections for Distance on M W Plates

Centres at

Stars with numbers named at
" " letters named by H.S.L.

M W 615

		Exp. 1		Exp. 2		Exp. 3		Distance		
		Sc 1	Sc 2	Sc 1	Sc 2	Sc 1	Sc 2	1	2	3
	1	6.7 6.4			6.6?		6.9	+13l	-13l	-24l
	3	^{4}1.0 ^{3}4.7		4.2 3.9		4.0 3.7		+6	-7	-20
	5		5.3?	5.5? 5.2		5.7? 5.4		+3	-10	-23
	15		5.7?		5.6?		5.9?	7r	-14	-26
	16	5.8? 5.5			5.7?		5.8?	-11r	-19	-30
	19	4.7? 4.4		4.4? 4.1		A	Poor	-10l	-19l	-31
	20		5.0	5.7? 5.4			"	-14l	-23l	-35
2.	21		5.8		6.7?		"	-14l	-24l	-35
	31	3.2 2.9		2.9? 2.6			"	-16	-27	-39
	33	1.9 1.6		1.8? 1.5			"	-17	-28	-41
	86		5.7?		5.9		5.9	+12	6l	-16l
	87	2.9 2.6		2.9 2.6		3.0 2.7		+19	+9r	-10r
	89	3.3 3.0		3.2 2.9		3.6 3.3		+19	+12r	10r
	90	2.7 2.4		2.8 2.5		2.9 2.6		+25	+15	8r
	93		7.8?		7.8?		7.8?	16r	-18r	-22
2.	94	4.2 3.9		5.6? 5.3		4.1? 3.8		+11r	-9r	-20
	95		7.8		7.7?		7.9?	11r	-13r	-23r
2.	96	3.0 2.7		4.7 4.4		3.2 2.9		+21	+11l	-19
	97		5.7?		5.6?	5.6 5.3		+14	+2	11l
2.	98	5.3 5.0		4.9 4.6		5.7 5.4		+24l	+16l	-16l

Tuesday June 2, 1914

Scale P

Measures to determine Corrections for Distance on M W Plates M.W. 615

	Exp. 1.		Exp. 2		Exp. 3		Distance		
	Sc 1	Sc 2	Sc 1	Sc 2	Sc 1	Sc 2	1	2	3
a	~~B~~	9.1		9.3		9.6	+13l	8l	-23
b		Poor		9.4		9.7	+3	-10	-23
c		"		9.9		10.1	+3	-10	-23
d		7.8?		7.9		8.0	+20	+9l	-9l
e		8.0?		8.5		8.2	+20	+9l	-7l
f		9.1		9.2		9.2	4r	-13	-26
g		6.9		6.7		7.6?	+3	-9	-22
h		8.9		9.1		9.2?	+4	-10	-23
k		9.9		10.0		9.9	+13	3l	4l
l		ns.		ns.		ns.			ns.
m	ns.			ns.		ns.			
n		ns.		ns		ns.			

α B

S.E.S.
3.46

Tuesday June 2, 1914

Scale P Measures to Determine Corrections for Distance on M.W. Plates

G.E.S. 4.50

Centres at Stars with numbers named at
" " letters named by H.S.L.

M.W. 616

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
1	6.8 6.5			6.7		Poor	+10l	-14l	-24l
3	3.9 3.6		4.3 4.0			3.7	+6	-8	-20
5		5.7		5.7		Poor	+2	-11	-22
15		5.8		5.9		Poor	7r	-15r	-27
16		5.9		5.8		"	-10r	-19r	-30
19	4.5 ~~Poor~~ 4.2		4.6 ~~Poor~~ 4.3			"	-9l	-20	-32
20	5.3? 5.0		5.5? 5.2			"	-14l	-23l	-35
21		6.6?	~~5.5?~~ Poor			"	-14l	-24l	$\overset{3}{-25}$
31	3.0 2.7		3.1? 2.8			"	-16	-29	-41
33	1.7? 1.4		1.8 1.5			"	4 +18l	-29	-41
86		5.8		5.8		6.0?	+13l	6l	-15
87	2.9 2.6		2.9 2.6		3.0 2.7		+19	+8r	-9r
89	3.4 3.1		3.5 3.2		3.7 3.4		+21	+18r	-9r
90	2.7 2.4		2.7 2.4		2.9 2.6		+25	+12r	8r
93		7.7		7.9	Too poor		15r	-18r	-25r
94	4.8 4.5		4.7 4.4		4.8 4.5		+9r	-10r	-20r
95		7.7		7.6		7.8	10r	-13r	-23r
96	$\overset{3}{\cancel{4}}.8$ $\overset{3}{\cancel{4}}.5$		3.9 3.6		3.7 3.4		+21l	+11l	-10l
97		5.7	5.7 5.4			5.2	+14	+1	-12
?. 98	5.2 4.9		5.7 5.4		4.3? 4.0		+23l	+16l	16l

Tuesday June 2, 1914

Scale P Measures to Determine Corrections for Distance on M.W. Plates M.W. 616

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
a	~~1.1?~~	9.2		9.2		Poor	+2	-10 ~~+13~~	-22
b		9.3		9.5		"	+2	-10 ~~+13~~	-22
c		9.8		9.8		"	+2	-10 ~~+13~~	-22
d		8.1		7.8		8.2	+19	+8l	-9l
e		8.2		8.0		8.4	+20	+9l	-8l
?, f		~~9.7~~ ?.		9.3		8.7	3r	-14	-26
?. g		7.9		7.4		~~5.4~~ ?.	+2	-10	-22
h		8.8		9.2		$\overset{9}{\cancel{5}}.2$	+2	-10	-22
k		9.6		9.7		10.0	+13	2l	-13
l		8.3		n.s.		Sup	+3	n.s. 5l	n.s.
m		n.s.		n.s.		n.s.	n.s.		n.s.
n		9.9		n.s.		n.s.			n.s.

α 1.1?

4.20
G.E.S.

Monday June 8, 1914

Scale P

Measures to Determine Corrections for Distance on M.W Plates

G.E.S.
2.20

Centres at
Stars with numbers named at
" " letters by H.S.L.

M.W 617

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1.	Sc2.	Sc1	Sc2	Sc1	Sc2	1	2	3
1		6.8	6.9 6.6			7.0	-10	-13l	-23l
3	4.6 4.3		4.1 3.8		4.0? 3.7		+5	-6	-19
5		5.8		5.5?		5.8	+1	-11	-23
15		5.9		5.9		Poor	8r	-15	-26r
16	5.9 5.6			5.9?		"	-10r	-20	-31r
19	4.6 Poor 4.3			Poor		"	-10l	-20l	-31
20	5.7 Poor 5.4			Poor		"	-14l	-23l	-34
21		6.5 ?		"		"	-13l	-24l	-35
31	2.2? 1.9			"		"	-15	-27l	-40
33	3.6? 3.3			"		"	-16	-28l	-41
86		6.7		6.4?		6.7	-12l	6l	-15l
87	3.0 2.7		3.2 2.9		2.9 2.6		+19r	8r	-10r
89	3.2 2.9		3.8 3.5		3.6? 3.3		+22r	11r	10r
90	2.9 2.6		3.0 2.7		2.9 2.6		+25r	+13r	9r
93		7.8		7.9?		8.0	15r	-19r	-28r
a. 94	5.2 4.9	~~7.8~~	4.7 4.4		5.7 5.4		+10r	-10r	-20r
95		7.8		7.9		7.9	11r	-14r	-23r
96	3.3 3.0		3.2 2.9			3.2?.	+21	+11l	-9l
97		5.8		5.9			+14	+1	-11
98		5.7		5.0?		5.6	+24l	16l	14l
α α	1.2 0.9		1.5? 1.2		13.		-13l	8l	-16l

Monday June 8, 1914

Scale P

Measures to Determine Corrections for Distance on M.W Plates

M.W 617.

	Exp. 1		Exp. 2		Exp. 3		Distance		
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
a		.		.		9.2	.	.	.
b		.		.		Poor	.	.	
c		.		.		10.0?	.	.	.
d		8.0		8.4		9.1	+19	7l	-9l
e		8.3		8.5		Def.	+19	8l	-8l
2. f		7.9		9.5?		9.6	4r	-14	-26
2. g		7.3?		6.9		7.9	+2	-10	-23
2. h		8.9		9.0		8.4	3r	-11	-24
2. k		9.2		9.8		9.7	+13	3l	-12
l		8.8		8.9		.	-11l	.	.
m		.		.		.	.	.	.
n		.		.		.	.	.	
o									

2.50
G.E.S.

Monday June 8, 1914

Scale R

Measures to Determine Corrections for Distance on M. W. Plates

J.E.L.
2.50

Centres at Stars with numbers named at
" " letters by H. S. L.

M. W. 628

		Exp. 1		Exp. 2		Exp. 3		Distance		
		Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
	1		9.4		8.9	.		11l	-12l	.
2.	3		8.0	6.6 6.9		Poor		+7	-6l	-
	5		8.6	7.7 8.0		Poor		+4	-8	.
	15		8.7	8.0 Poor 8.3		Poor		7r	-13	.
	16		8.6	8.0 Poor 8.3		"		9r	-17	-16l
2.	19	7.5 7.8			Poor	4.9 5.2		-8l	-18l	.
	20		8.0		Poor	.		-15l	.	.
	21		8.9		"	.		-13l	.	.
	31	5.9 Poor 6.2			"	.		-15l	.	.
	33	3.9 4.2			"	.		-15	.	.
	86		8.8		8.7	8.	8.9	+14	6l	-14l
	87	5.0 5.3		2. 8.7 9.0		4.9 5.2		+20r	+9r	-8r
	89	5.7 6.0		2. 8.9 9.2		5.8 6.1		+23r	+12r	8r
	90	4.0 4.3		2. 9.2 9.5		.		$+2\overset{6}{9}$r	+15r	7r
	93	Sup.			Poor	Poor		15r	-17r	.
	94	7.2 7.5		6.8 7.1		Poor		+11r	-8r	.
	95		10.7		10.6	"		11r	-12r	.
	96	5.7 6.0		5.7 6.0		.		+22	+12l	-9l
	97	7.9 8.2			7.9	7.8 8.1		+15r	+3	-12
	98	7.8 8.1		7.7 8.0		7.8 Poor 8.1		+25l	+17l	-16l
α	1	3.0 3.3		2.6 2.9		2.2 2.5		+15l	9l	-15l

Monday June 8, 1914

Scale R Measures to Determine Corrections for Distance on M. W. Plates

M W 628

		Exp. 1		Exp. 2		Exp. 3		Distance		
		Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
	a		11.9		12.0		.	+4	-9	.
	b		12.0		12.6		.	+4	-9	.
	c		12.8		12.9		.	+4	-9	.
	d		10.8		10.8		11.0	+20	+10l	-9l
	e		11.0		10.7		11.2	+21	+10l	-7l
2.	f		11.8		10.8		.	3r	-12	.
2.	g		9.7		Scratched		10.6	+4	-7	.
	h		11.8		11.9		12.7	+4r	-8	-21
	k		12.6		12.7		13.2	+14	+4l	-12
	l		13.4		13.3		13.9	+13	5l	-15l
	m		Poor		.		.	—	—	.
	n		13.2 Poor		13.7		.	-5l	-9	.

3.20
J.E.L.

Wednesday June 10, 1914

Scale P — Measures to Determine Corrections for Distance on M W Plates 629

G.E.S
3.06

Centres at Stars with numbers named at
" " letters by H.S.L.

M W 629

	Exp. 1 Sc1	Exp. 1 Sc2	Exp. 2 Sc1	Exp. 2 Sc2	Exp. 3 Sc1	Exp. 3 Sc2	Distance 1	Distance 2	Distance 3
1		6.8		6.8		6.8	11l	-14l	17l
3	4.7? 4.4		4.7? 4.4		4.8? 4.5		+6	-8	-20
5	5.7 5.4			5.9		6.0	+2	-10	-23
15		5.8		6.1		6.3?	6r	-14	-27
16		5.9		6.0?		6.0?	-10r	-19	-21
19	4.9? 4.6		5.0? 4.7			Poor	-10l	-21	.
20		5.9	5.7 5.6			"	-15l	-24l	.
21		6.6		6.3		"	-14l	-25l	.
31	3.7 3.4		3.1 2.8			"	-16	-28	.
33	2.3? 2.0		2.0 1.7			"	-17	-29	-
56		5.9	6.2 5.9		r. 3.8 3.5		+12	7l	-17l
87	3.2 2.9		3.6 3.3		3.7 3.4		+18	+5r	9r
89	3.9 3.6		3.8 3.5		4.7? 4.4		+22	+11r	9r
90	2.8 2.5		3.0 2.7		3.7 3.4		+25	+14r	8r
93		7.6		7.6		7.7	15r	-18r	-28r
94	5.1 4.8		5.0 4.7		5.3? 5.0		+10r	-9r	-20r
95		7.7		7.6		7.6	10r	-13r	-23r
96	3.7 3.4		3.7 3.4		4.0 3.7		+22	+11l	-10l
97	5.9 5.6			5.7		5.9	+14	2l	-12
98		5.9?	5.8 5.5			6.0	+24l	17l	18l
α1	2.1 1.8		Def.		2.7? 2.4		+13	9l	-17l

Wednesday June 10, 1914

Scale P — Measures to Determine Corrections for Distance on M W Plates . M W 629

	Exp. 1 Sc1	Exp. 1 Sc2	Exp. 2 Sc1	Exp. 2 Sc2	Exp. 3 Sc1	Exp. 3 Sc2	Distance 1	Distance 2	Distance 3
a		8.3		8.5		8.1	+3l	-11	-23
b		8.6		8.7		8.5	+3l	-11	-23
c		8.9		9.2		9.0	+3l	-11	-23
d		7.8		7.6		7.4	+20	+9l	-10l
e		8.1		7.9		7.5	+20	+9l	-9l
f		8.5		8.6		8.6	3r	-14	-27
g		6.8		6.8		6.9	+3	-10	-23
h		8.3?		8.6		8.3	+3r	-11	-23
k		9.0		8.9		8.6	+13	3l	-13
l		9.7		9.9		n.s.	+12	6l	n.s.
m		.		.		.	.	.	-
n		9.7		9.4		9.7	+4l	-11	-23

G.E.S
3.35

Wednesday June 10, 1914

Scale R

Measures to Determine Corrections for Distance on M.W. Plate 630

G.E.S.
A 3.40

Centres at stars with numbers named by
" " letters by H. S. L.

M.W. 630

		Exp. 1		Exp. 2.		Exp. 3.		Distance		
		Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3
	1		9.2		9.6	Poor		11l	-14l	
	3		6.2		6.0		5.8	+6l	-7l	-20
	5	7.7 8.0		8.0 8.3		7.7? 8.0		+3	-10	-22
	15	8.8	8.0		7.7	Poor		6r	-14r	-25r
	16	7.8	7.9	7.8 8.1		"		10r	-18r	-30r
2.	19	6.8 7.1		6.0? 6.3		"		+14	-20l	-32
2.	20	7.4? 7.7		7.0? 7.3		"		-15l	-23l	-32
	21		8.3?		8.8	"		-15l	-23l	
2.	31	5.0 5.3		4.1 4.4 Poor		"		-16	-28	-39
2.	33	5.7 6.0		2.0? 2.3 "		"		-16	-29	-40
	86	7.8 8.1			8.7		8.3?	+13l	7l	-15l
	87	Sup.		4.0 4.3		4.0 4.3		+18	+9r	-8r
	89	B		4.8 5.1		5.0 5.3		+22	+11r	-8r
	90	2.9 3.2		3.1 3.4		3.6 3.9		+25	+14r	7r
	93	.		Poor		"		15r	.	-27r
	94	6.7 7.0		6.0 6.3		6.1 6.4		+10r	-9	-19
	95	.	10.6	Poor		.		10r	-13	-22r
	96	.			5.1	5.0 5.3		10r	+12l	-10l
	97	7.7 8.0		7.7 8.0	7.9	7.7 8.0		+13	+2l	-11
	98	\				7.6 7.9		.	.	-16l
α	\	1.2 1.5		1.0 1.3		1.0 1.3		+14l	10l	-17l

Wednesday. June 10, 1914.

Scale R

Measures to Determine Corrections for Distance on M.W. 630

	Exp. 1		Exp. 2		Exp. 3		Distance			
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	1	2	3	
a		12.5		12.8?		12.8?	3l	-10l	-22	a
b		12.7		12.9		12.8?	3l	-10l	-22	b
c		13.1		13.0?		13.1?	3l	-10l	-22	c
d		.		9.7?		11.8?	+20	+10l	-9l	d
e		.		12.0?		11.9?	+22	+10l	-8l	e
f		12.3		12.6		13.0	2r	-13	-25	f
g		Sup		9.9		10.3	+3	-10	-22	g
h		12.4		12.6		12.9?	+3	-10	-22	h
k		2. ~~5.7?~~		12.8		13.6?	+14	4l	-12	k
l		13.7?		Def.		h.s.	+17	6l	.	l
m		.		.		.	.	.	.	m
n		13.6		13.8		Poor	+16r	-10l	-22	n

4.10
G.E.S.

Friday
~~Thursday~~ June 12, 1914

Scale P Measures to Determine Corrections for Distance on M W Plates 630 Remeasured with Scale P.

J.E.S. Centres at
2.15 Stars with numbers named by
" " letters by H. S. L.

M. W. 630

	Exp. 1		Exp. 2		Exp. 3		(Distance)
	Sc 1	Sc 2	Sc 1	Sc 2	Sc 1	Sc 2	
1		6.6		6.8		6.7	11l -14l -24l
3	4.8 4.5		4.7 4.4		4.8 4.5		
5		5.9		5.9		5.9	
15		6.0		5.9		5.9 Poor	
16		6.20		5.9		5.8	10r -18r -30r
19	5.1 4.8		4.7 4.4			.	+14 -20l -32
20		5.8	5.3 4.9			.	-15l -23l -32
21		6.6		6.0		.	-15l -22l
31	3.7 3.4		3.3? 2.9			.	-16 -28 -39
33	2.8 2.5		2.1 1.8			.	-16 -27 -40
86		6.3		6.2		6.0	+13l 7l -15l
87	Sup.		3.2 2.9		3.3? 3.0		+18 +9r -8
89	3.8 3.5		3.7 3.4		3.9 3.6		+22 +11r -8r
90	2.9 2.6		2.0 2.7		3.0 2.7		+25 +14r 7r
93		7.6		7.8 Poor		.	15r -18r -27r
94	5.0 4.7		4.8 4.5		4.8 4.5	4.8 ?	10r -9 -19
95		7.7		7.7	.	7.8 ? Poor	10r -13 -22
96	4.0 3.7		3.8 3.5		3.9 3.6		+22 +11l -9l
97		5.8		5.9	5.7 5.4		+10 +2l -11
98	5.7 5.4			5.8	5.7 5.4		+24l +17l -16l
a	1.9 ? 1.6		1.8 1.5		1.9 [illegible]		+14l 10l -17l

Friday
~~Thursday~~ June 12, 1914

Scale P Measures to Determine Corrections for Distance on M.W. Plates.

M.W. 630

	Exp 1		Exp 2		Exp 3.	
	Sc 1	Sc 2	Sc 1	Sc 2	Sc 1	Sc 2
a		8.3		8.8		8.9
b		8.5		8.8		9.1
c		9.1		9.2		9.7
d		7.8 Poor		7.8		8.2
e		7.9		7.9		8.1
f		8.0		8.7		8.6
g		7.8		7.6		7.0
h		8.2		8.9		8.8
k		8.6?		8.9?		9.2
l		9.7		Poor		Sup.
m		.		,		.
n		9.6		9.8		9.8

Mag Identification of k uncertain.

J.E.S.
2.35

Friday
~~Thursday~~ June 12, 1914

scale P Measures to Determine Corrections for Distance on
M.W. Plates
Centres at
G.E.S. Stars with numbers named by E.C.P.
2.35 " " letters by H.S.L.

M.W. 631

	Exp. 1 Sc1	Exp. 1 Sc2	Exp. 2 Sc1	Exp. 2 Sc2	Exp. 3 Sc1	Exp. 3 Sc2	Distances 1	2	3
1		6.7		6.8		6.7	11l	-14l	-24l
3	4.3 4.0		4.6 4.3		4.6 4.3		+6	-6l	-19
5		5.7		5.7		5.9	+8^{2}	-10	-22
15		5.7		6.0	Poor		7r	-15r	-26r
16		5.9		5.8?	"		-10r	-19r	-30r
19	4.9 4.6		4.8 4.5		"		-9l	-21l	-32
20		5.2		5.7	"		-16l	-24l	-34l
21		6.4		6.6	"		-14l	-24l	-35
2. 31	2.6 2.3		3.6 3.3		"		-16l	-28	-39
33			2.3 2.0		"		-16	-29	-41
86		5.9		5.8		6.0	+12l	7l	-15l
87	Sup.		3.1 2.8		3.4? 3.1		+14	+8r	-9r
89	3.8 3.5		3.9 3.6		3.9 3.6		+24	+11r	-9r
90	2.8 2.5		3.0 2.7		3.2? 2.9		+26	+14r	8r
93		7.7	: Poor			7.7	15r	-18r	-27r
94	4.9 4.6		4.7 4.4		4.8? 4.5		+10r	-10r	-19r
95		7.6		^{7}.8		7.7	10r	-13r	-23r
96	3.8 3.5		3.5 3.2		3.9 3.6		+22	+11l	-9l
97		5.7	4.7 ^{5}4.4			5.7	+14	2l	-11
98		6.9		5.1		5.7	+24l	+17l	-16l
a	2.1 1.8		1.7 1.4		2.1? 1.8		+14l	9l	-16l

Friday
~~Thursday~~ June 12, 1914

scale P. Measures to Determine Corrections for Distance on
M.W. Plates 631

	Exp. 1 sc1	Exp. 1 sc2	Exp. 2 sc1	Exp. 2 sc2	Exp. 3 sc1	Exp. 3 sc2	Distances 1	2	3
a		8.6		8.6		8.8	+4l	-10	-23
b		8.8		8.7		8.9	+4l	-10	-23
c		9.2		9.3		9.3	+4l	-10	-23
d		^{7}8.8		7.7		7.7	+20	+9l	-9l
e		^{8}.0		7.9		7.8	+20	+8l	-8l
f		8.6		8.9		8.8	3r	-17	-26
g		Sup.		6.6		6.7	+2	-10	-22
h		8.7		8.4		8.6	+3	-10	-22
k		Def.		9.1		8.9	+13	3l	-12
l		F		F		9.9	+12l	5l	-15l
m		.		.		.	.	.	.
n		9.8		9.8		9.7	+4l	-10	-23

G.E.S.
Stopped 2.55
Began at 4.15
Stopped 4.26

Friday June 26, 1914

YELLOW

North Polar Seq.

Scale W

Yellow Screen ~~Sequence~~ Series 265

G.E.S.

Mean (3 plates)		MC 5646 (mean)		MC 5646 5m Sc1		Sc2	MC 5648 5m Sc1	Sc2	MC 5650 5m Sc1		Sc2	MC 5646 Repeated Sc1	Sc2	First Column − Read.
Time 11.47							Time 4.40		Time 5.25			5.32		
Polar Seq.														
B		B	5	B		B	B		B		B	B		
3.90	01 R 01	3.90	6	3.7 3.8		B	3.0 ? 3.1?		3.9 4.0		B	3.9 4.0		0.2
4.8	Q . R	48	7	4.7 4.8		B	Poor		Poor		6.8^{2} aj.	Poor		.
5.6$\overset{3}{8}$	~~04~~ 03 ~~38~~ 33 ~~32~~ 37	5.60	8	5.7 5.8	5.75	5.7	5.2 5.3	B	5.9 6.0 ~~6.40~~		6.8^{2} aj.	5.2 5.3		0.45
6.68	02 18 7	6.70	9	6.6 6.7	6.70	6.7	6.3 6.4 6.50	6.6	6.8 6.9	6.85	6.8	6.6 6.7		0.00
~~6.90~~ 6.91	~~03~~ 05 ~~16~~ 15 ~~19~~ 20	6.88	10	6.7 6.8	6.85	6.9	6.6 6.7 6.75	6.8	7.0 7.1	7.10	7.1	6.8 6.9 6.90	6.9	0.05
7.66	02 16 14	7.68	11	7.5 7.6	7.65	7.7	7.4 7.5 7.50	7.5	7.8 7.9	7.80	7.7	7.7 7.8 7.70	7.6	0.05
7.77	02 07 08	7.75	12	7.6 7.7	7.70	7.7	7.6 7.7 7.70	7.7	F	7.85	7.9 -- 7.8	7.6 7.7 7.80	7.9	0.10
8.28	05 08 02	8.33	13		8.30	8.4 8.2	F	8.2		8.30	8.3 -- 8.3	F .	8.4	0.10
8.51	06 11 04	8.57	14		8.45	8.5 -- 8.4		8.4		8.55	8.6 -- 8.5		8.8	0.35
8.78	12 08 03	8.90	15		8.85	8.9 - 8.8	F	8.7		8.75	8.7 -- 8.8		9.0	0.15
9.12	08 22 13	9.20	16		9.25	9.2 - 9.3		8.9		9.25	9.2 - 9.3		9.1	0.15
9.09	08 09 01	9.17	17		9.10	9.1 - 9.1		9.0		9.10	9.1 -- 9.1		9.3	0.20
9.83	03 03 07	9.80	18		9.80	9.8 - 9.8		9.8		9.90	9.9 -- 9.9		9.8	0.00
		.	19		.	n.s.		F		.	n.s. n.s.			+0.60
		.	20							.				−1.20

12) −60
−0.05

+15
−100
10) −85
−0.08

For "r" stars, see p. 177 " s stars, p. 180

Plates MC 5646 and MC 5647 were measured at noon (11.47 to 1.15) The other plates were measured in the afternoon (4.40 to 5.25) The reduction in the last column of this page shows that stars were measured slightly fainter at the second sitting, but the amount is small and uncertain and correction seems to be unnecessary. The three plates of 5m exposure are in fair agreement

all +0.95
−1.55
2) −60
−0.03

Friday June 26, 1914

Scale W YELLOW. Yellow Screen

	MC 5646 5m Sc1		Sc2	MC 5648 5m Sc1		Sc2	MC 5650 5m Sc1		Sc2	MC 5646 Repeated			First Column − Read.
+87 15	Poor			Poor			Poor						
+88 80	Poor			Poor			Poor						
+88 86	"			"			"						
+88 115	"			6.7 6.8			6.9 7.0						
2r	B			B			2.7? 2.8?		B				
3r	Poor			4.6 4.5			Poor		B	4.8			.
4r	5.8 5.9		B	5.6 5.7			5.8 5.9		B	5.7 5.8		B	+0.10
5r	6.6 6.7	6.65	6.6	6.1 6.2			6.4 6.5		B	6.4 6.5	6.45	6.4	+0.20
6r	6.9 7.0	7.10	7.2	6.8 6.9	7.00	7.1	8.1 8.2	7.30	7.4	7.0 7.1	7.10	7.1	0.00
7r	7.6 7.7	7.65	7.6	7.7 7.8	7.75	7.7	8.7 8.8	7.85	7.9	Rej. 8.3 7.7		7.7	−0.05
8r	F	8.30	8.3 - 8.3	F .		8.3	F		8.3	8.8		8.5	−0.20
9r		8.80	8.8 - 8.8	F .		8.8	F		8.9			8.8	0.0
10r		10.00	10.0 - 10.0			n.s.			n.s.			10.0	0.0
11r			F			F			F				
12r						n.s.							
+88° 2	5.2 5.3	5.25		4.8 4.9			7.4						
+87° 12	Poor			Poor			Poor						
+88 99	Poor			"			Poor						
+88 105				5.7 5.8			6.2 6.3						
d													
e													
f													
g													
h													
1													
2													

+30
−25
7) +0.05

G.E.S.

Friday June 26, 1914

Scale W	Yellow Screen						
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	
3							
4							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
21d							
22							
23							
24							
25							
26							
28							
29							
31							

Friday June 26, 1914

Scale W	Yellow Screen						
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	
32							
33							
35							
35d							
36							
39							
40							
40d							
41							
42							
43							
46							
47							
48							
49							
49d							
50							
57							
52							
57d							
58							
59							
61							
65							
65d							
66							
69							

Friday June 26, 1914

Series 265

YELLOW

Scale W

Yellow Screen

	MB 5646		MB 5648		MB 5650		M	
	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2		
69D								
71								
71D								
72								
72D								
72C								
73								
74								
75								
77								
78								
79								
79D								
80								
80D								
81								
82								
13								
20	B		B.	B.		B		
40	7.8 7.9 7.85	7.8	7.5	7.8		7.8	7.8	+0.05
50	7.7 7.8 7.80	7.8	7.7	7.8	8.7	8.0		
60		8.6		8.6		8.7	8.7	-0.10
70		n.s		9.9		Poor		

Time 4.50 G.E.S.

Time 5.32 G.E.S.

G.E.S. 12.00

13ᵐ

10ᵐ

7ᵐ

Friday June 26, 1914

Scale W

YELLOW

G.E.S.	MB 5647			MB 5649			Time 4.50
Time 12.00	Yellow Screen		Sc. Exp. 3 min.	Wire Screen 17 to inch		Exp. 2	
Polar Seq.	Sc1	Sc2	Sc1 Sc2	Sc1	Sc2	Sc1	Sc2
5	B		Poor	B			6.6
6	B		4.7 4.8	B			7.0
7	B		Poor	2.9 3.0			7.8
8	B		6.4 6.3 6.4	4.7 4.8 Poor			8.3
9	B		7.0 7.1	5.8 5.9			8.9
10	2.7 2.8		7.3 7.4 7.6 7.50 ii	5.9 6.0	5.9 5.95 0i		9.1
12	4.3 4.4	mag star? July 9, 1914	8.0	6.8 6.9	6.7 6.80 ii		9.8
13	5.3 5.4	B	8.6	7.4 7.5	7.2 7.35 ii		n.s.
14	5.8 5.9	B	8.7	7.8 7.9	7.7 7.80 ii		F
15	6.2 6.3 6.15 ii	6.0	9.0	F 8.0			
16	6.6 6.7 6.70 00	6.7	9.2	8.5			
17	6.6 6.7 6.65 i0	6.6	9.2	8.6			
18	6.9 7.0 7.10 ii	7.2	9.9	8.9			
19	7.7 7.8 7.80 00	7.8	10.0?	9.0			
20	7.7 8 7.9 7.85 i0	7.8	n.s.	9.6?			
21	F	8.0 7.8 7.90 ii		9.7?			
22	F	8.2 8.0 8.10 ii		9.8?			
23	F	8.7 8.7 8.70 00		n.s.			
24	F	8.7 8.5 8.60 ii		n.s.			
25	F	8.7 8.8 8.75 i0		n.s.			
26		9.0 8.8 8.90 ii					
27		9.8 9.7 9.75 0i					
28		9.7 9.7 9.70 00					
29		n.s..					
30		n.s..					
31		10.0 9.9 9.95 0i					

Friday June 26, 1914

Scale W

YELLOW

		Ml 5647 Yellow Screen Sc1 Sc2	Sec. Exp. 3 min. Sc1 Sc2	Ml 5649 Wire Screen 17 to inch Sc1 Sc2	Exp. 2 Sc1 Sc2
	+87 15	B	Poor	Poor	8.4
	+88 80	B	Poor	Poor	9.0
	+88 86	B	"	"	9.0
	+88 115	B	7.6 7.7 7.6 7.65 .10	4.6 4.7	9.1
	2r	B	3.8	B	6.3
	3r	B	Poor	B	7.7
	4r	B	6.6 6.7 6.6 6.65 .10	4.6 4.7	8.1
	5r	B	6.6 6.7 6.7 6.70 .00	4.9 5.0	8.7
Unit changed July 9, 1914.	6r	3.8 3.9	7.5 7.67 ~~6.7~~ 7.68 .1	5.9 6.0	8.9
Assume 6.8	7r	4.6 4.7	Poor 8.1	6 ~~7.8~~ * 6 5.9	9.9
	8r	5.5 5.6	" 8.8	7.6 7.7 7.8 7.75 .10	n.s.
	9r	5.9 6.0	" 9.0	7.4 7.9	.
	10r	7.2 7.3	" 9.9	8.9	.
	11r	7.5 7.6 7.65 .01 7.7	" n.s.	9.0	.
	12r	7.8 7.9 7.95 .10 8.0	.	9.8	.
	+88 2	B	6.3 6.4 6.7 6.55 .21		8.3
	+87 12	B	Poor	Poor	8.1
	+88 90	B	"	Poor	9.1
	+88 105	B	6.6 6.7 6.5 6.60 .1		8.5
a'a² &c on P. 186	d	6.2	9.7	8.8 4	.
	e	7.0	10.0?	8.8	.
	f	7.4	n.s.	9.0	.
	g	7.4	"	9.1	.
	h	8.6	n.s.	9.8	.
cont. on 186					
	1	5.3 5.4	8.7	7.7	.
	2	7.2	"	8.9	.

Friday June 26, 1914

Scale W

YELLOW

	Additional Stars. 12-inch	Ml 5647 Yellow Screen Sc1 Sc2	Sec. Exp. 3 min Sc1 Sc2	Ml 5649 Wire Screen 17 to inch Sc1 Sc2	Sc1 Sc2
	3	6.2	9.0	8.0	.
	4	5.8	8.8	7.9	.
	6	6.2	9.0	7.9	.
	7	3.7 3.8	7.7	6.0	9.0
	8	3.7 3.8	7.6	5.9	8.9
Wrong inv.	9	6.8	~~6.8~~	8.6	.
	10	5.0 5.1	8.6	7.4	.
	11	4.6 4.7	8.2	6.7	.
Assume 9.0	12	7.4	10.0	9 ~~7.0~~ *	.
* Assume reading 6.6	13	3.7 3.8	7.8	6 ~~8.6~~ *	9.2
	14	6.6	9.1	8.7	.
	15		9.8	8.9	.
	16	4.8 4.9	8.2	7.2	.
	17	5.1 5.2	8.6	7.2	.
	18	6.8	9.7	8.7	.
	19	7.0	9.9	8.8	.
	20	5.9	8.8	7.8	.
	21	7.3	9.9?	8.8	.
	21d	7.3	7.4	Def.	.
	22	6.8	9.3	8.6	.
	23	6.0 6.1	9.0	7.9	.
	24	5.3 5.4	8.8	7.6	.
	25	7.4	10.0?	8.0 9	.
	26	6.8	Sup.	8.7	.
	28		9.9	8.7	.
	29		7.6	6.0 6.1	9.2

Friday June 26, 1914

Scale W

YELLOW

	Mb 5647			Mb 5649			
	Yellow Screen		Sec. Exp. 3 min	Wire Screen 17 to inch			
	Sc1	Sc2		Sc1	Sc2	Sc1	Sc2
31	4.8 4.9		8.6		7.5		.
32	B		6.8	4.9 5.0			8.7
33	4.8 4.9		8.7		7.4		R.S.
35		6.2	8.9		8.0		.
35a		6.3	9.3		8.0		.
36		6.6	10.0		8.0		.
39		6.5	9.0		8.0		.
40	5.8 5.9		9.3		7.9		.
40a		7.2	7.4		8.8		.
41		5.9	9.0		7.8		.
42	4.8 4.9		8.5		7.6		.
43		6.1	8.9		8.2		.
46	4.8 4.9		8.4		6.9		.
47	5.1 5.2		8.8		7.6		.
48		6.0	8.9		7.9		.
49	4.9 5.0		8.4		7.2		.
49a	6.0 6.1		9.1		8.3		.
50		7.3	10.0		8.9		.
Reject. Wrong Star? 57		~~7.2~~ ×	8.6		✓7.3		.
52		6.6	9.3		8.4		.
57a		7.0	9.9		8.7		.
58	4.9 5.0		8.5		7.7		.
59		5.8	8.9		7.8		.
61		6.2	8.8		8.0		.
65	5.7 5.8	7.8	8.8		7.9		,
65a		7.4	7.4		8.9		,

Friday June 26, 1914

Scale W

YELLOW

		Mb 5647				Mb 5649			
		Yellow Screen		Sec. Exp. 3 min		Wire Screen 17 to inch			
						60m		3m	
		Sc1	Sc2	Sc1	Sc2	Sc1	Sc2	Sc1	Sc2
	66	2.0 2.1			6.7	5.0 5.1			8.7
	69	5.8 5.9			9.8		8.6		.
	69a		6.8		8.7		7.8		.
	71	3.7 3.8			8.7		6.6		9.6
	71a		6.4		8.8		7.9		
	72		6.6		8.9		8.4		.
	72a		6.8		9.6		8.7		.
	72b		6.9		9.8		8.9		.
	73	Poor			D.f.		Poor		.
	74	5.7 5.8			8.7		7.8		.
	75	5.7 5.8			9.0		8.3		.
	77	5.7 5.8			8.6		7.7		.
	78	3.8 3.9			7.8		6.8		9.8
	79				Omit		Omit		.
	79a				7.4		9.1		.
	80	4.9 5.0			8.4		7.7		.
	80a		6.7		9.0		8.6		.
	81	5.3 5.4			8.7		7.8		.
	82	5.8 5.9			8.9		8.0		.
	83a		7.0		9.9		8.9		.
	83b		7.4		9.9		9.0		
2s	20			Poor		B			6.4
3s	30			″					7.2
4s	40	4.7 4.8		″	8.1	6.8 6.9			9.8
5s	50	5.2 5.3		.	8.2	7.0 7.1			9.9
6s	60	5.8 5.9		.	8.7		7.8		.
7s	70	Poor assume 7.4	9.4	.					.
8s	80			.					.

J. E. S.

Friday June 26, 1914

Scale W

YELLOW

		M C 5647 Yellow Screen sc1	sc2	sec. exp. 3 min sc1	sc2	M C 5649 Wire Screen 17 to inch sc1	sc2	sc1	sc2
9 s	9_0		9.0				.		.
10 s	10_0		9.7				.		.
11 s	11_0		9.8				.		.
12 s	12_0		9.8 n.s.				.		
13 s	13_0		10.0				.		
	h		7.8				9.7		
	l		7.9				9.7		
	m		8.3				9.9		
	n		.				n.s.		
	o		..				.		
	p		.				.		
	p'		.				.		
	r		.				.		
	t'		9.6				.		
	w		n.s				.		
	w'						.		
	y						.		
	y'		F				.		
	q		8.5				n.s.		
	x		8.8				.		
	o						.		
	a'		5.2	8.6			7.3		.
x Assume an error of a unit	a²		x 6 4	9.8			8.6		.
	b		6.2	9.3			8.2		.
J. E. S.	c		6.4				8.9		.

1.15

5.25

J. E. S.

Thursday, July 9, 1914.

YELLOW

Measures on plates with and without Wire Screen

Scale R

4.19

	MC 5647 1st exp sc1	sc2	2nd exp 3m sc1	sc2	MC 5649 with Screen sc1	sc2	2nd exp. 3m sc2
5	B		5.5	5.8 poor	2.1	2.4	9.0
6	B		6.8	7.1	3.2	3.5	9.9
7	B		7.9	8.2 poor	4.7	5.0 poor	10.8
8	2.3	2.6	8.8	9.1 9.3 9.20 1 1	6.1	6.4	11.6
9	4.0	4.3 poor		10.2	7.8	8.1	12.7
10	4.8	5.1		10.5	7.8	8.1	12.7
17	5.8	6.1		11.1	8.8	9.1 9.5 9.30 2 2	13.5
12	6.0	6.3		11.3		9.1	13.8
13	6.9	7.2		12.2		w.s ~~11.4~~ 10.6	F
14	7.7	8.0		12.4		10.7	
15	8.3	8.6		12.9		11.1	
16	8.9	9.2 9.2 9.20 0 0		13.1		11.8	
17		9.9		13.3		12.1	
18		10.3		F		12.8	
19		10.8		F		13.1	
20		11.0				13.6	
21		11.6				13.7	
22		11.8				F	
23		12.1					
24		12.4					
25		12.9				n s	
26		12.9					
27		13.9					
28		13.7					
29		n s					
30							
31							

Thursday, July 9, 1914.

YELLOW

Measures

Scale R

	MC 5647	2nd exp. 3m	MC 5649 with Screen	2nd exp. 3m
	sc1 sc.1	sc1 sc2	sc1	sc2
+87°15	1.7 2.0	8.8 9.1	tp	12.2
+88°80	tp	~~9.0~~	tp	tp
+88°86	tp	·	tp	tp
+88°115	5.0 5.3	10.7	7.9 8.2	13.1
2r	B	5.7 6.0	2.8 3.1	8.8
3r	1.6? 1.9?	7.0 7.3	4.9 5.2	10.7
4r	2.9 3.2	8.7 9.0 9.0 9.00	6.1 6.4	11.8
5r	3.9 4.2	9.4	6.9 7.2	11.9
6r	5.2 5.5	10.7	7.9 8.2	12.9
7r	6.0 6.3	11.6	9.8	
8r	7.2 7.5	12.4	10.7	
9r	8.1 8.4	13.0	11.6	
10r	· 10.7	14.0?	12.7 ms ~~10.8~~	
11r	10.6		13.1	
12r	11.2		13.8	
+88° 2	2.8 3.1	8.8 9.1	6.1 6.4	11.8
+87°12	1.8 2.1	8.6 8.9	5.9 6.2	11.6
+88°90	4.8 5.1	·	tp	13.1
+88°105	3.0 3.3	7.9 9.2	6.7 7.0	11.9
9r	13.1			
2r	B	tp	B	8.7
11r ~~3r~~	13.8			
4r	5.9 6.2	11.7	9.6	
5r	6.2 6.5	11.7	9.9	
6r	7.8 8.1	12.6	10.8	
7r	too close to 5 s		Diff.	
8r	.. 12.9			

Thursday, July 9, 1914.

YELLOW

Measures of Plates with and without Wire Screen

Scale R

17 to inch

	MC 5647	2nd exp 3m	MC 5649 with Screen
	sc1 sc2	sc1 sc2	sc1 sc2
a'	7.6 7.9 ·	12.5	10.6
a²	~~8.9~~ · 9.8 9.8	13.7	12.4
b	8.8 9.1 8.8 8.95	13.0	11.7
c	· 10.1	F	12.9
d	8.7 9.0 9.2 9.10	13.2	12.0
e	· 10.0	13.9	12.8
f	10.7		13.4
g	10.7		13.0
h	11.7		13.8
k	11.2		13.8
l	11.6		13.9
l'	12.1		F
m	11.9		14.0
n	·		
o	12.6		
p	12.8		
p'	13.0		

Light failing – remeasures to determine if measures were affected.

MC 5647 1st exp.

	MC 5647		sc 1	sc 2	~~2nd meas – 1st~~ 1st meas – 2nd		sc.2	
q	12.6							
r	13.4	10	4.9		-1	27	13.8	+1
s	F	12	6.2		-2	26	12.9	0
t	13.6	15	8.0		+3	18	10.4	-1
t'	F	11	5.7		+1	24	12.4	0
w	·	15		8.6	·			
w'	·	17		9.7	+2			
y	F	19		10.7	+1			
y'	F	25		12.9	0			
10s	13.8	12r		10.9	+3			
12s	13.9 F	11r		10.5	+1			

+12
−4
13)+8
+.06

Diff. less than 0.1 of a unit.
Probably no serious error will result from the failing light

5.08

W

Monday, July 13, 1914

YELLOW

Scale W MC Plates Eryth. Yellow screen. Series 267

		MC5658		MC5661		MC5664			Mean 5658 5661	5661 5664
		sc1	sc2	sc1	sc2	sc1	sc2	Mean		
2:38	5	B		B		B		B	B	·
	6	2.7 2.8		B		B		28 2 · ·	28	·
	7	t.p.		P		P		q	·	·
	8	4.8 4.9		4.8 4.9		B		4.90 0 0 ·	4.90	4.9
	9	6.2 6.3		5.7 5.8		5.9 6.0	5.8 5.90 11	6.00 30 20 10	6.05	5.85
	10	6.3 6.4	6.6 6.50 11	6.0 6.1	6.0 6.05 10	5.9 6.0	6.0 6.00 00	6.18 32 13 18	6.28	6.08
	11	6.9 7.0	7.1 7.05 01	6.8 6.9	6.8 6.85 10	6.6 6.7	6.8 6.75 10	6.88 17 03 13	6.95	6.80
	12	7.1 7.2	7.2 7.20 00	6.9 7.0	7.3 7.15 21	6.9 7.0	6.9 6.95 01	7.10 10 05 15	7.18	7.05
	13		7.8	7.6 7.7	7.8 7.75 10	7.7 7.8	7.7 7.75 01	7.77 03 02 02	7.78	7.75
	14	7.7 7.8	7.9 7.85 01	8.0 8.1	7.8 7.95 12	7.9 8.0	7.9 7.95 01	7.92 07 03 03	7.90	7.95
	15	F	8.2		8.5		8.3	8.33 1 2 0	8.35	8.40
	16		8.6	8.8	8.75 02 8.7		8.7	8.68 08 07 02	8.66	8.72
	17		8.7	8.9	8.85 10 8.8		8.7	8.75 05 10 05	8.78	8.78
	18		9.2	9.3	9.20 11 9.1		9.6	9.33 13 13 27	9.20	9.40
	19		9.8	9.7	9.70 00 9.7		9.7	9.73 07 03 03	9.75	9.70
	20		9.8	9.8	9.85 01 9.9		10.0	9.88 08 03 12	9.82	9.92
	21		-		n.s.		n.s.	·		
	22									
	23									
	24									
	25									
	26									
	27									
	28									
	29									
	30									
	31									

Monday, July 13, 1914

YELLOW

Scale W MC Plates Eryth. Yellow screens Series 267

	MC5658		MC5661		MC5664			5658 5661	5661 5664
	sc1	sc2	sc.1	sc2	sc.1	sc.2	Mean Res.		
+87° 15	~~4.3~~ 4.7 4.8 +		P		5.0 v.p. 5.1		4.95 2 · 1	48	5.1
+88° 80	6.2 p 6.3 b		6.2 p 6.3		P		6.30 0 0 ·	6.30	63
+88° 86	6.0 p 6.1		6.0 p. 6.1		5.8 5.9		6.03 $\overset{1}{0}$ $\overset{1}{0}$ 1	6.10	6.00
+88° 115	6.0 6.1				6.1 6.2		6.15 1 · 0	6.1	6.2
2r	~~t.b~~ B		B		B		B	·	·
3r	3.9 4.0		4.0 4.1		$\overset{3}{4}$.1 3.2		3.77 2 3 6	4.05	3.65
4r	4.8 4.9		4.7 4.8		4.8 4.9		4.87 0 1 0	4.85	4.85
5r	5.7 5.8		5.7 5.8		5.1 5.2		5.60 2 2 4	5.80	5.50
6r	6.7 6.8	6.7 6.75 01	6.2 6.3	6.2 6.25 10	6.1 6.2	6.4 6.30 11	6.43 32 18 13	6.50	6.28
7r	7.2 7.3	7.4 7.35 10	6.9 7.0	7.1 7.05 01	6.8 6.9	7.0 6.95 10	7.12 23 07 $\overset{7}{19}$	7.20	7.00
8r	F	7.9	7.8 7.9	7.8 7.85 10	7.8 7.9	7.9 7.90 00	7.88 02 03 02	7.88	7.88
9r	F	8.3	F	8.6	F	8.3	8.40 1 2 1	8.45	8.45
10r		9.7		9.8		9.6	9.70 0 1 1	9.75	9.70
11r		9.5		9.7		9.8	9.67 2 0 1	9.60	9.75
12r		n.s.		10.0		9.9	9.95 · 0 1	10.0	9.95
+88° 2	4.9 5.0		4.8 4.9		4.7 4.8	B	4.90 1 0 1	4.95	4.85
+87° 12	4.3 4.4		P		4.7 4.8	B	4.60 2 · 2	4.4	4.8
+88° 90	6.4 p 6.5		6.0 6.1		6.0 6.1		6.23 3 1 1	6.30	6.10
+88° 105	4.9 5.0		4.9 5.0		4.9 5.0		5.00 0 0 0	5.00	5.00
2s	B		B		B		B	·	
4s	7.2 7.3	7.4 7.35 10	6.9 7.0	7.0 7.00 00	6.8 6.9	6.8 6.85 10	7.07 28 07 22	7.18	6.92
5s	7.4 7.5	7.6 7.55 10	7.3 7.4	7.5 7.45 01		7.1	7.37 18 08 27	7.50	7.28
6s	F	8.1		8.0		7.9	8.00 1 0 1	8.05	7.95
7s		9.2		9.7		9.5?	9.47? 3 2 0	9.45	9.60
8s									
9s									
10s									

Monday, July 13, 1914

YELLOW

Scale W MC Plates. Eryth. Yellow screens. Series 267

Mean 5658 5661	Mean 5661 5664		MC5658 sc	MC5658 sc 2	MC5661 sc 1	MC5661 sc 2	MC 5664 sc.1	MC 5664 sc. 2	Mean
7.80	7.80	a'		7.8		7.8	7.7 7.8	7.8 7.80 0 0	7.80 00 00 00
8.75	8.75	a²		8.8		8.7	F	8.8	8.77 0 1 0
8.60	8.65	b		8.6		8.6		8.7	8.6~~7~~3 0 0 1
9.25	9.30	c		9.2		9.3		9.3	9.27 1 0 0
8.75	8.80	d		8.7		8.8		8.8	8.77 1 00
8.95	9.00	e		8.9		9.0		9.0	8.97 1 00
9.45	9.55	f		9.3		9.6		9.5	9.47 2 1 0
9.70	9.70	g		9.7 ~~m.s.~~		9.7		9.7	9.70 0 0 0
.	10.1?	h		m.s		m.s.		10.1?	10.1? 1 1 2
9.90	10.00	k		9.8		10.0		10.0	9.93 1 1 1
.		l		F		F		F	.
.		l'		m.s.		m.s.		m.s.	.
.		m		m.s.					
		n							
		o							
		p							
		p'							
		q		m.s.		m.s.		m.s.	.
		r							
		s							
		t							
		t'							
		w							
		w'							
		y							
		y'							

Monday, July 13, 1914

YELLOW

Scale W Eryth. Yellow screen. Wire screen 17 to inch Series 267

Polar Seq	MC 5659 sc.1	sc 2	sc.3	~~MC 5663~~ ~~sc.~~ ~~sc~~	MC 5663 sc.1	sc 2	Mean
5	4.7	4.8			4.8 4.9	B	4.8~~2~~5 0 1
6	5.8	5.9			5.9 6.0	5.8 5.90 1 1	5.~~85~~90 ~~05~~ ~~05~~ 00 00
7	6.6	6.7			6.7 6.8	6.6 6.70 1 1	6.~~65~~70 ~~05~~ ~~05~~ 00 00
8	7.2	7.3			7.1 7.2	7.3 7.25 01	7.2~~2~~8 ~~02~~ 02 03
9	7.8	7.9			8.0 8.1	8.1 8.10 00	~~7.95~~ 8.00 ~~15~~ ~~15~~ 10 10
10	8.0 8.1	8.2	8.2	8.17 1 00	F	8.2	8.18 01 02
11		8.7	8.6	8.65 10		8.7	8.68 03 02
12		8.8	8.8	8.80 00		8.9	8.85 05 05
13		9.6	9.2	9.40 22		9.6	9.50 10 10
14		9.7	9.4	9.55 12		9.8	9.68 13 12
15		10.0?	9.9	9.95? 01		10.0?	9.98? 03 02
16		m.s.	m.s.			m.s.	.
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

Monday, July 13, 1914

YELLOW

Series 267

Scale W Eryth. Yellow screens Wire screen 17 to inch

	MC 5659		~~MC 5663~~		MC 5663			
	sc1	sc2	sc	~~sc~~	sc1	sc2	Mean	Res.
+87° 15	6.9 7.0				7.3 7.4	7.6 7.50 11	7.25	25 25
+88° 80	F				F	8.3	8.3	. a
+88° 86	F				F	8.0	8.0	. a
+88° 115	F				F	8.6	8.6	. a
2r	4.8 4.9				4.6 4.7	B	4.80	1 1
3r	6.5 6.6				6.4 6.5	6.3 6.40 11	6.50	10 10
4r	7.0 7.1	7.2 7.15 10			7.5 7.6	7.6 7.60 00	7.38	23 22
5r	7.6 7.7	7.8 7.75 10				7.7	7.72	03 02
6r		8.3				8.2	8.25	1 0
7r		8.9				9.0	8.95	1 0
8r		9.6				9.3	9.45	2 1
9r		10.0				9.9	9.95	0 1
10r		m.s.					.	
11r								
12r								
+88° 2	7.3 7.4					7.4	7.40	0 0
+87° 12	6.7 6.8				6.9 7.0	7.0 7.00 0 0	6.90	10 10
+88° 90	F				8.0 8.1	8.0 8.05 1 0	8.05	. a
+88° 105	7.4 7.5				7.4 7.5	7.5 7.50 0 0	7.50	00 00
2s	4.7 4.8	B			4.7 4.8	B	4.80	0 0
4s		8.9				8.9	8.90	0 0
5s		8.8				9.0	8.90	1 1
6s		9.8					9.8	a .
7s		m.s. ~~9.9~~					.	
8s								
9s								
10s								

Monday, July 13, 1914

YELLOW

Series 267

Scale W Eryth. Yellow screen Wire screen 17 to inch

	MC 5659		~~MC 5663~~		MC 5663		
	sc1	sc2	sc	sc	sc1	sc2	Mean
a¹		9.4				9.6	9.50 1 1
a²		m.s.				10.1?	10.1? . a
b		m.s.				F	
c		m.s.				m.s.	
d		m.s.				m.s.	
e							
f							
g							
h							
k							
l							
l'							
m							
n							
o							
p							
p'							
q							
r							
s							
t							
t'							
w							
w'							
y							
y'							

YELLOW

Monday, July 13, 1914

Series 267

Scale W MC Plates Eryth. Yellow screen. Screen B.

	MC 5660		~~MC 5662~~	M.C. 5662		
	sc1	sc 2	~~sc~~ ~~sc~~	sc.1	sc.2.	mean
5	6.8 6.9	6.9	6.90 00	6.6 6.7	6.6 6.65 10	6.78 12 13
6	7.3 7.4	7.6	7.50 11	7.2 7.3	7.5 7.40 11	7.45 05 05
7	7.9 8.0	8.0 8.2	8.07 11	7.8 7.9	8.0 7.95 10	8.01 06 06
8		8.6 8.7	8.65 01	F	8.5	8.58 07 08
9		9.1 9.2	9.15 10	F	8.9	$\overset{8}{9}$.02 13 12
10		9.3 9.2	9.25 10		9.4	9.32 07 08
11		n.s. $\overset{9.9}{\text{~~n.s.~~}}$			n.s.	9.9 a .
12					n.s.	
13					n.s.	
14					n.s.	
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

YELLOW

Monday, July 13, 1914

Series 267

Scale W MC Plates Eryth. Yellow screen Screen B

	MC 5660		~~MC 5662~~	MC 5662		
+	sc1	sc 2	~~sc~~ ~~sc~~	sc.1	sc 2.	mean
+87° 15	F			$\overset{F}{\text{~~n.s.~~}}$	8.3	8.3 . a
+88° 80		9.9			n.s.	9.9 a .
+88° 86		9.7			9.8	9.75 1 0
+88° 115		9.7		F	9.8	9.75 1 0
2r	6.6 6.7	6.7 6.70 00		6.2 6.3	6.6 6.45 12	6.58 12 13
3r		7.9		7.9 8.0	7.9 7.95 01	7.92 02 03
4r		8.6		F	8.6	8.60 0 0
5r		8.8 8.9	8.85 11		8.9	8.88 03 02
6r		9.3 9.7	9.50 22		n.s.	9.50 a :
7r		F				
8r						
9r						
10r						
11r						
12r						
+88° 2		8.7				8.7 a :
+87° 12		8.5		def.	8.1	8.30 2 2
+88° 90		9.6			P	9.6 a :
+88° 105		8.7			8.7	8.70 0 0
2s	6.6 6.7	6.6 6.65 10		6.6 6.7	6.5 6.60 11	6.62 03 02
4s		n.s.			n.s.	
5s						
6s						
7s						
8s						
9s						
10s						

Monday, July 13, 1914

Series 267

Scale W. MC Plates Eryth. Yellow screen Screen B

	MC 5660		~~MC5662~~		MC 5662	
	sc1	sc2	~~sc~~	~~sc~~	sc1	sc2
a'		F				F
a^2						
b						
c						
d						
e						
f						
g						
h						
k						
l						
l'						
m						
n						
o						
p						
p'						
q						
r						
s						
t						
t'						
w						
w'						
y						
y'						

4.00 M.A.H.

~~Monday, July 13, 1914~~

Monday, September 28, 1914

N. S. Region C~~4~~1. Estimates of Magnitudes on M W Plates. Preliminary Scale of Sept. 1914

Exp. 1, 4 Full Ap. 2, 3 ap. 32 in. Reduction Const. 1.96 magn.

Mean +1.96	Mean - Prelim.		MW 319 Ht St Exp. 1 Comp. with Br. St. Exp. 3	Rev Ht ~~4~~: Br 2 3	Ht 4: Br 3 ~~7~~	Rev. Ht 1: Br 2	Mean
		21	Br .		B	B	B
.		21a	11.8?		B	B	B
13.68	13	22	11.8	11.~~8~~7	11.8?	11.6	11.72 1011
13.~~8~~66	11	23	11.9	11.6	too faint	11.6	11.70 21R1
13.86	28	24	12.0	~~12.1~~ 11.9	11.9	11.8	11.90 1001
.	.	25	—	—	—	—	.
14.24	07	26	12.4	12.1	12.4?	12.2	12.28 1211
14.58?	20	27	12.8	12.4?	12.7?	12.6?	12.62? 2210
14.76	20	28	13.0	12.7	12.8	12.7	12.80 2101
15.14	40	29	13.4	13.0	13.3?	13.0	13.18 2212
15.48		30	13.6	13.6	13.4	13.5	13.52 1110
15.84		31	13.7	14.1	13.7	14.0	1~~4~~3.88 2212
16.58		32	14.5	~~20~~14.6	~~291, 431~~ 14.7	14.7	14.62 1010
16.84 .		33	14.7	14.82 291, 330 15.12 {14.92 14.82}	29, 431 15.56 {14.92 15.16}	28 4, 029, 230 {15.01 14.82 14.92}	14.88 18, 01, 16, 04
17.05		34	[293, 231 {15.12 15.36}]	292, 230 {15.02 14.92}	293, 231 {15.12 15.36}	293, 230 {14.92 14.92}	15.09 15 12 15 17
17.30		35	~~31 2 N ?~~ 7	7	294, 131 {15.22 15.46}	7	15.34 . . a .
		36	~~31 2 N ?~~ 7	7	7	7	
		37	n.s.				

See Remark page 201.
Direct estimates were made assuming prelim. magn.

N. S. Region C1 Cont.

MW 31~~7~~6 Comparisons by Argelander's Method

Mean 316 and 319 +1.96		Ht 1: Br 3	Rev. Ht 4: Br 2 ~~Images (2) double~~		Ht 4: Br 3	~~Rev. Ht 1: Br 2 Im. (2) double~~		Mean	+1.96
13.62 06,06	22	11.50 17 3 S 5 18 11.96	11.80 11.46	11.63	17 1 S 4 18	11.60 11.56	11.58	11.60 03,02	13.56
13.65 01,01	23	17 2 S 3 18	11.70 11.66	11.68	17 2 S 3 18	11.70 11.66	11.68	11.68 00,00	13.64
13.78 09,08	24	17 3 S 2 18	11.80 11.76	11.78	17 2 S 3 18	11.70 11.66	11.68	11.73 05,05	13.69
. . .	25	—			—			.	.
14.20 04,04	26	12.21 19 1 S – 21 12.88	12.31 –	12.31	18 1 S 1 19	12.06 12.11	12.08	12.20 11,12	14.16
14.60 01,02	27	19 – S 2 21	– 12.68	12.~~6~~7	19 4 S 3 2~~2~~1	12.61 12.58	12.60	12.65 05,05	14.61
14.72 04,04	28	19 – S 1 21	– 12.78	12.8	19 5 S 3 2~~2~~1	12.71 12.58	12.64	12.72 08,08	14.68
14.98 16,16	29	12.88 21 1 S 5 22 13.55	12.98 13.05	13.02	19 – S 2 21	{– 12.68	12.7	12.86 16,16	14.82
15.30 18,18	30	21 3 S 2 22	13.18 13.35	13.26	21 1 S 4 22	{12.98 13.15	13.06	13.16 10,10	15.~~0~~12
15.82 01,02 15.81 03,03	31	13.58 13.67 24 2 S 3 26 14.17 14.13	13.78 87 1~~4~~3.87 83	1~~4~~3.82 13.85	24 2 S 3 2~~2~~6	{13.78 87 13.87 83	13.82 85	13.85 00,00 13.82 00,00	15.81 15.78
16.34 16.35 30 23,24 ~~16.60~~ ~~16.28~~ 28 23,23	32	14.13 26 2 S 1 27 14.38 14.44	14.37 32 14.18 24	14.28 14.28	24 4 S 1 26	{13.98 14.07 14.07 14.03	14.02 05	14.16 12,11 14.15 13,13	16.12 ~~15.98~~ 16.11
16.57 a ~~16.70~~ 13, 11,10 16.74	33	14.56 14.61 28 2 S 0 29 3 30 14.74 14.82	14.76 81 14.74 82 82	14.75 14.82	27 1 S 1 28	{14.48 54 14.46 51	14.47 52	14.67 15,15 14.61 14,14	16.63 ~~16.43~~ 16.57
16.98 07,07 16.84 a .	34	14.82 29 2 S 1 30 15.04 15.12	14.94 15.02 15.02	15.02	28 3 S 0 29 2 30	{14.86 91 82 14.79 92	14.82 88	14.95 07,07 14.88 06,06	16.91 16.84
17.26 04,04	35	30 2 S 1 31 15.12 15.36 15.56	15.32 15.46	15.39	29 4 S 1 30	15.14 {15.22 15.02}	15.1 15.12	15.26 13,14	17.22
17.46 a .	36	31 1 S 32 n.s.	15.66	15.66	30 2 S 2 31	15.32 36	15.34	15.50 16,16	17.46
	37	7							
	38	7							
	39								

Magnitudes in black ink are preliminary magnitudes of Sept., 1914, based on T and Series plates.
Magnitudes in red ink are second prelim. magn, based on comparisons with prelim. magn. on MW and Lick plates.

Monday September 28, 1914.

Harvard Standard Region C1

4:20 Estimates in grades on Mount Wilson Plates

M W ~~10~~ 1051

		Rev.	Mean	Sum	Diff.
26	3 ~~27~~	1	20 1$\underline{1}$	0.00	+14.17
27	2 ~~28~~	2	20 00	0.20	+14.18
28	0	0	00 00	0.40	14.16
29	4	3	35 0$\underline{1}$	0.40	14.34
30	3	4	35 $\underline{1}$0	0.75	14.25
31	6	6	60 00	1.10	14.30
32	2	2	20 00	1.70	
33	3	2	25 $\overset{10}{\cancel{01}}$	1.90	
34	5	~~4~~3	40 1$\underline{1}$	2.15	
35	1	1	10 00	~~2.25~~ 2.55	
36	2	2	20 00	~~2.45~~ 2.65	
37	1	1	10 00	~~2.55~~ 2.85	
38	1	0	05 10	~~2.60~~ 2.95	
39	3	1	20 1$\underline{1}$	~~2.80~~ 3.00	
40	2	3	25 01	$\overset{3\,05}{\cancel{2}}$ 3.20	
41	3	1	20 1$\underline{1}$	3.45	
42	1	1	10 00	3.65	
43	3	3	30 00	3.75	
44	0	2	10 $\underline{1}$1	4.05	
45				4.15	

M.OR.

Monday September 28, 1914.

Scale P

H. S. Region C1

Scale measures on M W Plates.

M W 1051

		sc.1 sc.2 sc.2	sc.1	Mean	Resid.	Diff.
	17	3.0 2.7	3.0 2.7	2.70	00	+8.80
Not I m very close }	18	3.2? 2.9	3.2? 2.9	2.90	00	9.06
	19	3.2 2.9	3.2 2.9	2.90	00	9.31
	21	3.8 3.5	3.7 3.4	3.45	10	9.43
	21a	4.0 3.7	3.9 3.6	3.65	10	
	22	3.9 3.6	4.1 3.8	3.70	$\underline{1}$1	9.85
	23	4.0 3.7	4.0 3.7	3.70	00	9.85
	24	4.2 3.9	4.2 3.9	3.90	00	9.68
	26	4.8 4.5	4.9 4.6	4.55	$\underline{1}$0	9.62
	27	5.0 4.7	5.1 4.8	4.75	$\underline{1}$0	~~9.42~~ 9.63
	28	5.3 5.0	5.4 5.1	5.05	01	~~9.33~~ 9.51
	29	5.1 4.8 B.	5.1 4.8	4.80	00	9.94
	30	5.7 5.4 5.8		5.60	$\underline{2}$2	9.40
	31	6.2 5.9 6.0		5.95	$\underline{1}$0	9.45
we unit	32	6.4 6.1 $\overset{6}{\cancel{7}}$.5		6.30	$\underline{2}$2	
	33	6.8 6.5 6.8		6.65	$\underline{1}$2	
	34	7.0 6.9		6.95	0$\underline{1}$	
	35	7.3 7.3		7.30	00	
	36	7.6 7.5		7.55	0$\underline{1}$	
	37	7.7 7.8		7.75	$\underline{1}$0	
	38	7.7 7.9		7.80	$\underline{1}$1	
	39	7.9 7.8		7.85	10	
	40	8.2 8.0		8.10	1$\underline{1}$	
	41	8.6 8.4		8.50	1$\underline{1}$	
	42	8.8 8.6?		8.70?	1$\underline{1}$	
	43	8.8 8.8		8.80	00	
	44	9.2 9.1		9.15	0$\underline{1}$	
M.OR.	45	9.3 9.4		9.35	$\underline{1}$0	

4:35

Monday, October 5, 1914

Scale R N. S. Region C1

10:30 Scale Measures on Lick Plates

L 2372 Exp. 1 Exp. 2

	Exp. 1 Sc1		Sc2		Exp. 2 Sc1	Sc2		
17	3.9	4.2		4.2	5.5			5.8
18	dbl			R	—			.
19	48	5.1		5.1	60			6.3
20	D			D	–	–		.
21	5.9			6.2	7.0			7.3
22	59			6.2	7.7			8.0
23	6.1 elng.			6.4 R	7.8 elng			8.1 R
24	6.3			6.6	8.2	8.5	8.4	8.45
25	D			D	—		—	
26	6.9			7.2	8.7	9.0	8.9	8.95
c = 27	7.7			8.0	9.1	9.4	9.6 elng	9.50
28	7.8	8.1	8.0	8.05			9.8	
29	D ~~8.1~~		D	D			9.8	
30	8.7	9.0	9.1	9.05			10.9	
31			9.8				sup.	
32			D				12.2	
33			sup. ~~11.4~~				12.6	
34			11.6				12.8	
35			12.6				13.8	
36			D				13.7	
37			12.9				13.9	
38			13.2				~~7~~	
39			13.5				-	
40			13.7					

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L 2372 Exp. 1 cont

41		14.0		
42				
43		N.S.		
44				
21a	6.2	6.5		7.9 8.2 8.0 8.10

~~18 = a~~

~~17 = b~~ ~~7.6 elng~~

~~c~~

d D ~~7.8 elng~~

e D

11 00

~~10 11.05~~ Scale R H. S. Region C 1

11:05 Lick 2398

	Exp. 1		Exp. 4		Mean 1,4
	sc1	sc2	sc1	sc2	.
17		pm		p	.
18		pm		p	.
19		10.6		p	10.6 . a
20		D		–	D
21		11.4		11.8	11.60 2 2
21a		11.8		12.4	12.10 3 3
22		pm		p	.
23		pm		p	.
24		12.1		13.0	12.55 5 4
25		D		–	.
26		12.7		13.4	13.05 3 4
27		12.9		13.8	13.35 5 6
28		13.2		14.1	13.65 4 5
29		13.4		14.0	13.70 3 3
30		13.9		–	13.9 a .
31		sup		–	
32		7			

11:15

Scale R H. S. Reg. C 1

11:20	Exp. 2		Lick 2398 Cont.	Exp. ~~4~~ 3		
	sc1	sc2		sc1	sc2	
17	4.8		5.1	68		7.1
18	p		.	p		.
19	~~4~~5.6		5.9	7.9 8.2	8.1	8.05
21	5.9		6.2	8.7 9.0	9.0	9.00
21a	6.7		7.0	~~8.7~~	9.7	
22	p		.		p	
23	p		.		p	
24	69		7.2		10.4 p	
26	7.4		7.7		10.7	
27	p		.		11.3 p	
28	8.2 8.5	8.6	8.55		11.7 p	
29	8.6 8.9	8.9	8.90		11.9	
30	8.9 9.2	9.3	9.25		$\overset{12}{11}$.4 p	
31		10.0			12.9	
32		10.7			13.6	
33		11.7			14.1	
34		11.5			14.1	
35		p			7	
36		12.4			-	
37		12.8			-	
38		12.9				
39		13.0				
40		13.8				
41		13.9				
42		14.1				
43		14.1				
44		n.S.				

11:35

Monday, Oct. 5, 1914

H. S. Region C 1.

11.44 Estimates of Intervals in grades

Star	L2372 1	L2372 2	L2395 2	L2395 3	L2398 2	L2398 3
26	5	5	4	3	3	3
27	2	3	3	2	1	2
28	2	2	3	3	2	2
29	5	4	4	5	2	4
30	4	5	5	3	5	2
31	6?	4	6	6	4	4
32	2	3	4	3 (34)	6	3
33	1	0	2	sup.	0	0
34	5	4	1		6	
35	0	1	2	ms	-3	ms
36	4	1	2		4	
37	0		2		2	
38	1	ms	3		0	
39	2		1		4	
40	-1		1		0	
41	4		1		2	
42	0		0			
43					ms	
44	ms		ms			

A. D. W.
11.55

Thursday, October 8, 1914

H. S. Region C 10

12 05 Comparisons by Argelander's Method MN 1261

	Br. Eff. ~~3~~ 4 : 2	Rev. + 4 : 2 Rev.
25	~~16 1 S 2 17~~	
26	16 1 S 2 17	16 1 S 2 17
27	17 4 S 1 18	17 3 S 1 18
28	19 1 S 1 20	18 3 S 0 19 0 20 2 21
29	19 3 S 0 20 1 21	20 1 S 2 21
30	20 2 S ~~3~~ 1 2~~2~~1	20 4 S ~~7~~ 0 21 4 22
31	21 1 S 2 22	21 3 S 1 22 ~~21 5 S 0 22 1 24~~
32	24 1 S 3 25	21 5 S 0 22 1 24
33	24 1 S 3 25	22 2 S 0 24 1 25
34	25 2 S 1 26	25 1 S 1 26
~~35~~		
35 ~~36~~	26 2 S 1 27	26 2 S 1 27
36 ~~37~~	27 1 S 28 ~~ms~~ F?	27 1 S ? 28 7?
37	Sup ? F	

Images 4, full aperture, much larger than Images 2, ap. ~~40~~ 14 in., which appear very sharp. Comparisons difficult and uncertain.

Corrections for distance probably very small indeed.

12 35

H. S. Region C 10

12 35 MW 1261 Cont.

	Exp. H: 1	Exp. H: 5 (Rev.
2		
26	16 3 S 2 17	15 3 S , 16
27	17 , S 4 18	16 2 S , 17
28	18 3 S 0 19 5 20	18 , S 2 19
29	18 3 S 0 19 4 20	18 3 S 1 19
30	20 2 S 3 21	20 , S 2 21
31	20 4 S , 21	20 4 S , 21
32	21 3 S , 22	21 3 S 0 22 4 24
33	21 3 S , 22	21 2 S 2 22
34	24 2 S , 25	24 2 S , 25
35	25 3 S , 26	26 2 S , 27?
36	26 , S , 27	26 4 S 0 27?

Exposures 1 and 5, 1m each give excellent images. Those of exp. 5, however, are sharper.

Comparisons are easier, especially for exp. 1 than in the case of comparisons with images taken with small aperture, given on p. 209

1 00

MW Plates on Regions C1, C4, C7 C10 -

Examination for distance. A circle is drawn to indicate limits of good definition on each plate, and images outside are to be rejected.

MW 316 All images poor - Accept stars ~~18~~ 17 and (C1) fainter, except 20 and 25

C1 MW 319 Accept all stars 17 and fainter except 20 + 25

C4 MW 323 Accept Nos. 13, 16, 17, 18, 19, 20, 21, 22, and fainter stars except Nos. 23, ~~24~~, 25, 28, ~~30~~, 31, 34, 35 Also accept all supplementary stars, 024 etc

C4 MW 324 Accept Nos. 13, 16, 19, 20, 22, and supplementary stars. Nos 23 and fainter rejected.

C4 MW 367 Reject Nos 13, 16, 17, 19, 20, 22, and all supplementary stars. Accept Nos. 18, 23, 24 and all fainter

C7 MW 368 Accept No. 19 and all fainter except Nos, 20, 23, 24

C7 MW 388 Accept Nos. 18 and fainter, except Nos. 20, 21, 23, 24, ~~25~~, 26, 27, which are to be rejected

C7 MW 389 Accept Nos. 19, 22, 25, 27, 28 ~~28~~, and all fainter.

C4 MW 6~~2~~56 Same stars as on MW 324 Primary and Secondary Images more comparable than on MW 1046, 1047. See page 72

C4 MW 1035 Accept Nos 13, 16, 17 and fainter stars except Nos. 23, 25, 28, 31, and 34. Also accept supplementary stars. Images with full + reduced aperture comparable, though not suitable for scale.

Thursday, Oct. 22, 1914

MW Plates. Examinations for Distance, cont.

C4 MW 1046 Accept Nos. 18, 23, 24 and all fainter
Reject Nos. 13, 16, 17, 19, 20, 21, 22 and all
supplementary stars. Images with Screen hazy. See p. 71, 81

C4 MW 1047 Accept Nos. ~~17~~ 16 and fainter,
except Nos. 20 21, and 22 Accept all
supplementary stars except 025, ~~028~~ 027, 029,
032, 035, and 038 Images with Screen hazy. See p. 71, 81

C1 MW 1051 Accept stars 21 and fainter,
except Nos. 22, 23, 27, 29, 32, 35, 36

C7 MW 1178 Accept Nos 19 and fainter,
except Nos. 23, 24, and 26,

iso C4 MW 1394 Measure as many stars
as possible. Look carefully for
faint stars. For final magnitudes
it will probably be necessary to
reject all stars brighter than No. 23
Return 23, 24, 25a, 25b, 27a, 27b. etc.
Also all supplementary stars.
Quality of plate poor.

M C4 MW 1407 Accept 16, 19, 20, 22 and supplementary
stars. Reject Nos. 23 and fainter of regular
sequence.

Thursday, Oct. 22, 1914

Lick Plates Examined for Dist

C1 2371 Reject entirely
C1 2372 Accept Nos ~~18~~ 17 and fainter,
except Nos. 18, 20, and 25

C1 Lick 2395 Accept Nos. 17, 19 and fainter, except
Nos. 20, 23, and 25

C1 Lick 2396 Reject
Lick 2398 Accept Nos. 17, 19, and fainter
except Nos. 20 and 25

C4 Lick 2173 Accept Nos. 9, 12, 23 and fainter
Reject 13, 14, 15, 16, 17, 18 and supplementary stars

Lick 2441 Accept Nos 9, 12, 16, 21, 23 and fainter except No. 30
Reject 13, 14, 15, 17, 18, (19, 20, 22) and supp. stars

C4 Lick 24~~4~~53 Like Lick 2441. Also reject 25a

C4 Lick 2~~4~~391 Accept Nos. 9, 12, 16, 21, 25b, 27b,
26, and fainter, except No. 30

C10 Lick 2510 Accept Nos 8, 14, 16, 17, 24 and
fainter. This plate may have to be rejected
as nearly all stars are outside of the circle
Lick 2504 like 2510
Lick 2509 " 2510

Thursday, Oct. 22, 1914.

MW Plates. Exam. for Dist.

C7 MW 398 Accept Nos. 21 and fainter,
except Nos. 23, 24, and 31.

C7 MW 399 Accept Nos. 21 and fainter except Nos. 23,
24, 26 and 31

C10 MW 369 Accept Nos 7. ~~8~~, 15 and fainter, also b + l
except 24, 25, 26

C10 MW 463 Accept Nos ~~11~~ 15 and fainter,
except No. 21

C10 MW 468 Same as MW 463

C10 MW 469 Same as MW 463 except reject No. 20

C10 MW 470 Same as MW 469 poor plate

C10 MW 1261 Same as MW 463 also accept b and l

iso C10 MW 1263 Accept No. 15 and all fainter

Lick Plates Exam for Dist.

C7 Lick 2179 Reject plate

C7 Lick 2455 Reject plate?
Lick 2498 Accept Nos. 15, 17, 20, 21, 26 and
fainter, except 31 and 32

C7 Lick 2500 Reject plate?

C4 ~~MW~~ Lick 2418 Accept Nos 9, 12, 16, 19, 20
and fainter, except 23, 24, 25, 28, 29, 30
Accept suff stars

C10 ~~MW~~ Lick 2348 Accept 15 and all fainter

Lick 2495 All dots except Nos. 15, 16, 17, ~~22~~ 22 23
are outside circle. Reject plate?

C10 Lick 2501 Accept 19, 22, 24, and fainter

Scale P Allegheny Plate 1284

H.S. Reg. B5

Remeasures of faintest images to other magn. of Star

	Exp. A 60m			Mean	Diff.	Curv. A	Magn.	Curv. B	Curv+2.38 Magn.	Curv. C	Curv+3.18 Magn.
34	8.2	8.2	8.2	8.20	7.78	~~15.98~~ 7.64	15.84	5.24	15.82	4.42	15.80
35	8.2	8.2	8.3	8.$\overset{2}{3}$3	·	·	·	5.2$\overset{3}{0}$	15.$\overset{84}{91}$	4.$\overset{40}{36}$	15.8$\overset{1}{7}$
36	8.6	8.5	~~8~~	8.55	·	·	·	5.10	16.03	4.23	1$\overset{5}{6}$.96
37	9.5	9.2	9.6	$\overset{9}{8}$.43	·	·	·	~~5.13~~ 4.70	~~15.94~~ 16.51	~~4.30~~ 3.81	~~15.91~~ 16.42
32	7.6	7.7	7.6	7.63	7.79	7.79	15.42	[5.48]	[15.49] e	[4.70]	[15.51] e
33	8.1	8.1		8.10	7.56	7.68	15.78	5.29	15.77	[illegible]	15.75

Exp. B 3m

26	7.8	5.54
27	7.8	5.31
28	9.0	4.87
29	9.4	4.77
30	n.s.	
~~25~~		

Exp. A Mean

Des.	A+a	A+b	A+c	Mean	Res
32	~~7.7~~ 15.42	15.49 e	15.51 e	Σ	.
33	15.78	15.77	15.75	15.77	01,00,0
34	~~7.78~~ 15.84	15.82	15.80	15.82	02,00,0
35	·	15.$\overset{84}{91}$	15.8$\overset{1}{7}$	15.8$\overset{2}{9}$	.02 02
36	·	16.03	15.96	16.00	.03 04
37	·	16.51	16.42	16.46	.05 04

Exp. C 1m

20	7.9	4.54
21	8.3	4.15
22	8.2	4.48
26	9.4	3.94
27	9.2	3.91
28	n.s.	·

Curv. $\overset{7.75}{A}$ − Curv. $\overset{5.42}{B}$ at Read. 7.8 = 2.33
" $\overset{7.66}{A}$ − " $\overset{5.24}{B}$ " " $\overset{5.42}{}$ 8.2 = 2.42
2.38

A − ~~B~~ $\overset{4.63}{C}$ Read. 7.8 = 3.12
A − $\overset{4.42}{C}$ Redd. 8.2 = 3.24
3.18