KG
11365
961

Book XXXVIII H. S. L.
Catalogues

KG 11365.969

Scale AI Cut from MC831 Used with Measuring Machine

Scale 1 Correction 0.0
Scale 2 " −0.5

Observations in this book, through page 202, were made with Scale A.I. In January 1917, this scale was damaged and discarded.

KG 11365.961

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Contents of Book XXXVIII H. S. L.

Comparison Stars for Catalogues measured with Measuring Machine. Also record of cards measured at each sitting.

			Page
Rich Region, Scutum Sobieski			
	Yellow Plate 8535 (M.E.O'R recorder)	Zones 1 and 2	6-11
		Zone 3	10-16
		Zone 4	18-21
		Zone 5	23, 24
		Zones 5, 6	24
		Zones 7, 8	26-32
	Blue Plate MC5619		
		Experimental Measures	34-51
		Comparison with MC8535	52, 53, 103
		Zone 1	54-58
		Zones 1-3	60-64
		Zones 2, 3	66-68
		" 2, 4	70-74
		Zone 4	76-78
		Zone 5	80-84
		Zones 5, 6	86-90
		Zones 6, 7	92-96
		Zones 7, 8	98-102

(over)

Region near Scutum Sobieski ($17^h 00^m$ ±0°.0)	
Yellow Plate MC 8302	
Zones 1 to 4	104-110
Zones 5 to 8	112-118
Blue Plate MC 8601	
Zones 1 to 4	120-126
Zones 5 to 8	128-134
Poor Region, Scutum Sobieski	
Yellow Plate MC 8519	
Zones 1 to 8	136-142
Blue Plate MC 5593	~~144-~~
Zones 1 to 8	144-148
Near Scutum Sobieski	
Stars omitted on Blue Plate MC 8601	149-151
B2 and B6. Number of Stars for Cat. 4°	152
B2 Catalogue 4° Square	~~154~~
Zones 1 to 4	154-162
Zones 5 to 8	164-166
Kapteyn Area 1	
Blue Plate MC 6921 Zones 1 to 8	168-176
Kapteyn Sequence	177, 178
Blue Plate MC 7556	~~18~~
Zones 1 to 8	180-188

Thursday May 26, 1915

Rich Region Scut. Sob. MC 8535 Yellow YELLOW

3:36

	V	H	R sc.1	R sc.2	P.12 V	P.26-32 V	Mean V		P.12 H	P.26-32 H	Mean H	
Ref.	1546	934	·		1547	1546	154.63	010	935	934	93.43	010
1	2043	1003	·		2044	2043	204.33	010	1004	1003	100.33	010
2	1761	1060	·		1762	1761	176.~~6~~13	000	1060	1060	106.00	000
2a	~~1346~~ 1341	~~1176~~ 1099	B.		1341	1341	134.10	000	1098	1098	109.83	100
3	1390	1162	·		1391	1390	139.03	010	1162	1161	116.17	001
4	1347	1175	·		1346	1346	134.63	100	1175	1177	117.57	111
5	12~~1~~66	1269	B		1265	~~1258~~ *	126.63 55	01.	~~1268~~ *	~~1250~~ *	126.85	10.
6	1284	1212	B.		1285	1286	128.50	101	1212	1211	121.17	001
7a	1320	1160	4.9	4.~~5~~4	1320	1320	132.00	000	1160	1160	116.00	000
7a	1429	1257	5.1	4.6	1429	1429	142.90	000	1256	1256	125.63	100
7b	1415	1252	5.1	5.2	1414	1415	141.47	010	1252	1253	125.23	001
8	1383	1110	B	·	1383	1383	138.30	000	1110	1110	111.00	000
9	1251	1140	B	·	1253	1252	125.20	110	1140	1140	114.00	000
10	1389	1227	6.3	5.8	1388	1387	138.80	101	1226	1228	122.70	011
11	1517	1121	6.0	5.5	1517	1516	151.67	001	1120	1120	112.03	100
12	1554	1127	6.2	6.2	1554	1553	155.37	001	1127	1126	112.67	001
13	1495	1082	6.7	6.7	1494	1495	149.47	010	1083	1082	108.23	010
14	1371	1088	7.2		1371	1370	137.07	001	1087	1088	108.77	010
15	1446	1159	7.1		1446	1445	144.57	001	1158	1158	115.83	100
16	1438	1163	7.6		1438	1436	143.73	111	1163	1164	116.33	001
17	1356	1140	7.8		1355	1354	135.50	101	1140	1140	114.00	000
18	1416	1179	7.8		1416	1415	141.57	001	1178	1178	117.83	100
19	1378	1195	8.6		1378	1377	137.7~~3~~7	001	1195	1196	119.53	001
20	1374	1140	8.0		1375	1374	137.43	010	1140	1140	114.00	000
21	1410	1110	8.3		1410	1410	141.00	000	1110	1110	111.00	000
22	1408	1186	8.9		1408	1407	140.77	001	1184	1185	118.50	110
23	1474	1121	9.8		1474	1474	147.40	000	1121	1123	112.17	111
24	1393	1111	~~8~~9.8		1393	1393	139.30	000	1110	1111	111.07	010

Evidently wrong unit. H.S.L. June 11, 1915

Reject No. 5 on p. 26. Apparently wrong star.

Dist. from Ref.

Star	V	H
Rf	0.00	0.00
1	-49.70	6.90
2	-21.50	12.57
2a	20.53	16.40
3	15.60	22.74
4	20.00	24.14
5	28.08	33.42
6	26.13	27.74
7a	22.63	22.57
7a	11.73	32.20
7b	13.16	31.80
8	16.33	17.57
~~10~~ 9	29.43	20.57
10	15.83	29.27
~~12~~ 11	2.96	18.60
~~13~~ 12	-0.74	19.24
~~14~~ 13	5.16	14.80
~~15~~ 14	17.56	15.34
15	10.06	22.40
~~17~~ 16	10.90	22.90
~~18~~ 17	19.13	20.57
18	13.06	24.40
~~20~~ 19	16.86	26.0
20	17.20	20.57
21	13.63	17.57
22	13.86	25.07
23	7.23	18.74
24	15.33	17.64

YELLOW

	V	H	R sc.1	Dist. from Ref V	Dist. from Ref H	P.12 V	P.26 V	Mean V		P.12 H	P.26-32 H	Mean H	
25	1480	1054	9.8	6.66	11.97	1480	1479	147.9~~8~~7	001	1054	1054	105.40	000
26	*.	$.	f	.		·				·			

+11
−16
27
86
± .03

+16
−11
2.7
86
± .03

Average deviation of a single reading in either H or V, when scale is read to tenths of a millimeter, is ±0.03 mm

Stopped at 5:00 after writing 100 cards.

Diffraction Images ~~f~~ "g" "h" YELLOW

	V	H	R			V	H	R	
	y		sc.1	sc.2					
Ref.	1540	940	8.0		8.0	1540	940	8.1	8.1
1			B					B	
2	1788	1055		6.3	5.8	1787	1046	6.4	5.9
2a	1340 ~~1030~~	1103 ~~1171~~	~~6.0~~ ~~7.9~~	6.6	6.1	1342 ~~1329~~	1092 ~~1171~~	~~8.0~~ 6.6	6.1
3	1389	1167	7.5		7.5			7.4	7.4
4	1329		8.1			1329	1171	8.2	
5	1244	1273	8.6			1243	1264	8.6	
6			8.8			1257	1208	8.9	
7	1291	1163	9.2					9.2	
7a	1		9.9	~~9.9~~				9.8	
7b			9.8				1249	9.9	
8	1362	1113	8.4			1362	1104	8.3	
9	1227	1144	*9 ~~8~~.1			1224	3 11~~4~~4	*9 ~~8~~.0	
10	f		f					f	
11									
12									
13									
14									
15									

* assume wrong unit recorded, as differences
in V show that magn. was nearer 9 than 8
H.S.L. June 18, 1915

Prismatic Comp. YELLOW

	V	H	R		
			sc.1	sc.2	
Ref	1541	922	7.4		7.4
1	2089	981		4.9	4.4
2					
2a	1341 ~~1329~~	1087 ~~1162~~	8.4	6.9	6.4
3	1380	1151		8.1	7.6
4	1330	1162	8.4	8	8.4
7a					
7b					
8			8.6		8.6
13					

Friday, May 28, 1915

Rich Scut. Sob. Mc 8535 Yellow. YE[illegible]

10:021

Ref.	sc.1	sc.2	1-2 ~~2 1~~				B.C. sc.1	sc.2	1-2 ~~2 1~~				
1	B.							4.8			4.3		
+ 2	B						7.6	7.8	2	7.3	7.45	2 1	{wrong image? Certainly wrong, Reject, June 28 '15
3	B.						7.9	8.2 ~~7.9~~	3	7.7	7.80	1 2	
4	B.						8.3	8.8 ~~8.3~~	5	8.3	8.30	00	
5		B.					8.8						
6		4.7			4.2		9.3						
* 7		4.9			4.4		9.7						
8		B.					8.7						
9		B.					8.9						
10	B.	6.21			5.7		f						
11		5.9			5.4		f						
12	6.2	6.7	5	6.2	6.20	00							
13	6.7	7.2	5	6.7	6.70	00							
14	6.9	7.5 ~~6.9~~	6	7.0	6.95	1 0							
15	*7.7² 7.2	7.6	m	7.1	7.15	0 1							
16	7.8	8.4	6	7.9	7.85	0 1							
17	7.8	8.5 ~~7.5~~	7	8.0	7.90	1 1							
18	7.9	8.3	4	7.8	7.85	1 0							
19	8.4	8.7	3	8.2	8.30	1 1							
20	8.1	8.1 ~~8.4~~	6	8.2	8.15	1 0							
21	8.6	f ~~8.6~~	.		8.6								
22	8.7		.										
23	10.0		.										
24	9.6	~~9.6~~	.										
25	10.0	~~10.0~~	.										
26	ns.												
* 7 a		4.9	.		4.4								
7 b		5.1	.		5.2								
+ 2 a		B					6.8						

* Assume 7.7 reading on second scale.

Friday, May 28, 1915.

Rich Scut. Sob. Mc 8535 Yellow YELLOW

Diffr. Images.

	g sc.1	sc.2	~~2-1~~ 1-2				h sc.1	sc.2	1-2 ~~2 1~~			
1	t.p.						t.p.					
2		6.1		5.6	5.6			6.2		5.7	5.7	
3	7.6	8.0 ~~7.6~~	4	7.5	7.55	0 1	7.5	8.0 ~~7.5~~	5	7.5	7.50	00
4	7.9	8.4	5	7.9	7.90	00	8.2 ~~8.3~~	8.5	3	8.0	8.10	1 1
5	8.7				8.7		8.6				8.6	
6	9.1						9.1					
7	9.2						9.0					
8	8.6						8.3					
9	9.0						8.9					
10	f						f					
11	f						f.					
12												
13												

10.23

1/2 gun at 10 23

1st zone finished at 10 53, card no. 178.

2nd zone finished at 12:08 Card no. 363

δ α

Ref. ~~1492~~ ~~9 24~~ Some mistake in record. No Star in this position

7a	9.9	9.8	
7b	10.0	10.0	
assume second scale 2a	6.3 5.8	6.8	6.3

10.23

Wednesday June 2, 1915

Rich Region Scut Sob. Mc8535 YELLOW

10:52	V	H	Diff. sc.1 sc.2		P.C. V	P.C. H	Diff. sc.1 sc.2	Diff. from Star W sc.1 sc.2
Ref.	1547 ~~2044~~	935 ~~1004~~	. .		~~2048~~ V	~~990~~ H .		
B.								
				~~4.9~~	~~2090~~	~~981~~		
no.1	2044	1004	. .		2048 .	990 · 0.9		
				2d. scale 4.49	2090	981	~~4.2~~ 4.2	. 4.6
~~R'dg~~ 2	1762	1060	. .		1766	1048		
R'dg B.				6.8	1763	"	0.3 →	0.1 . .
3	1391	1162	. .		1393	1150		
B				7.9	1380	"	1.3 .	1.1 .
4	1346	1175	. .		1351	1163		
B				8.3	1330	"	2.1 .	1.6 .
5	1265	1268	. .		1271	1258		
B		"		8.7	1247	"	2.4 .	1.8 .
6	1285	1212	. .		1289	1200		
B		"		9.2	1259		3.0 .	2.6 .
7	1320	1160	. .		1323	1147		
.	.	· 10		9.7	1288		3 ~~4~~.5 .	3.2 .
R'dg 4.9	1362	1150	~~4.2~~ 4.2					
8	1383	1110	. .		1386	1098		
B.		"		8.7	1364		2.1 ,	1.9 .

Plate Reversed.

	V	H	
Ref. Star	1304	1353	. .
	2851	2288	
Centre	1425.5	1144.0	

~~Tuesday~~ Wednesday June 2, 1915

Rich Region Scut. Sob. Mc8535 YELLOW

Diffr. Images

Ref ♀	Img g V	Diff. sc1 sc2	H	Im h V	Diff. sc.1 sc.2	H	Sc. R'dgs	Img g Diff. from Star Im. (V) sc.1 sc.2
1 ~~10~~	t.f.							
2 ~~11~~	1762		1065	1761		1055		
	.	~~2.6~~	1.0	.		07		
5.8 6.3	1788	.2.6	1055	1747 v.	.	1048	6.4 5.9	~~1.x~~ . 1.6
3 ~~12~~	1391		1168				7	
7.6	1380	1.1 .	"				7.6	1.1 .
4 ~~13~~	1347		1181					
8.0	1330	1.7 .	"			8+	8.1	1.6 .
5 ~~14~~	1267	~~2.4~~ .	1274					
8.6	1243	2.4 .	"				8.7	2.1 .
6 ~~15~~	1284		1216					
9.0	1257	2.7 .	"				9.1	2.8 .
7 ~~16~~	1320		1163	~~17~~				
9.6	1285	3.5 .	;	~~1287~~		~~1155~~	9.6	3.5 .
8 ~~17~~	1384		1113					
8.3	1362	2.2 .	"				8.2	2.1 .

Plate Reversed

	V	H
Star 7	1531	1130
	2851	2290
Centre	1425.5	1145.0

Wednesday
Tuesday June 2, 1915.

Rich Rich Scut. Sct. Mc8535 YELLOW

	Star Images		Diff. SC.1 SC.2 Diff V	P.C.			P.C. Diff from V Star im.
9	1253	1140		1255	1127		
	.	.10	9.1	1229	"	2.6 .	2.4 .
3.9 4.4?	1300	1130	. 4.7				
10	1388	1226					
	.	0.9					
5.6 6.1	1414	1217	. 2.6				
11	1517	1120					
	.	0.9					
5.6 6.1	1544	1111	. 2.7				
12	1554	1127					
	.	.11	.				
$\underline{6.\overset{3}{2}}$ 6.8	1572	1116	. 1.8				
13	1494	1083					
6.8	1490	"	0.4 .				
14	1371	1087					
7.0	1364	"	0.7 .				
15 ~~15~~	1446	1158					
7.0	1440	'	0.6 .				
16	1438	1163					
7.6	1424	'	1.4 .				
17	1355	1140					
8.2	1337	"	1.7 .				

Wednesday
~~Tuesday~~ June 2, 1915.

Rich Region Scut. Sct. Mc8535 YELLOW

	Diffr. Im G.			Im. H	
9	1252	1145	2.6 .		
8.9	1226	".: "		9.0	
10	7			.	
11	.			.	
12	.			.	
13	.			.	
1	.				

Tuesday June 2, 1915.

Rich Region Scut. Sob. cont. Mc 8535 YELLOW

	Star Images.		Diff V
18 ~~18~~	1416	1178	
7.9	1400	"	1.6 .
19	1378	1195	
8.4	1257	'	2.1 .
20	1375	1140	
8.3	1354	"	2.1 .
21	1410	1110	
8.4	1390	'	2.0 .
22	1408	1184	
8.9	1381	"	2.7 .
23	1474	1121	
9.9	1436	"	3.8 .
24	1393	1110	
9.7	1359	'	3.4 .
25	1480	1054	
9.9	1440	"	4.0 .
26	f.		

11:12 (over)

Begin 3rd zone at 11:14 Card 364
End of 3rd zone at 12:26 " 535

Tuesday June 2, 1915

Rich Cent. Sol cont.

YELL W

		Star Im.		Diff. V		P.C.			Diff V from Star im.
7a	~~7a~~	1429	1256			1434	1244		
		.	08		10.0	1394	"	4.0 .	3.5
	52	1467	1248	~~3.8~~ 3.8					
7b		1414	1252			1421	1242		
		.	09		9.9	1384	"	3.7 .	3.0
52	5.7	1448	1243	. 3.4					
2a		1341	1098			1346	1085		
~~2a~~	B				6.9	1341	"	0.5 .	0.0

Tuesday

YELLOW

	Im g		Diff V		Im h
7a	1429	1261			
9.9	1390	"	3.9 .	9.9	
				o	
7b	1414	1260			
9.8	1378	"	3.6 .	9.9	
2a	1341	1104			
2 .	.	1.0			
6.3 6.8	1361	1094	. 2.0	6.8	6.3

Thursday June 4, 1915

Rich Region MC8535 YELLOW

11:16

O.C.

Po	sc.1	sc.2		Sc1-Sc2		sc.1	sc.2		1-2	
Ref.	.									
1	B						4.9			4.4
2	B						7.0			6.5
2a	B					B.	7.4			6.9
3	B					7.8	8.3	7.8	-5	7.80
4	B					8.4	f.			8.4
5		B				8.7				
6		B.				8.9				
7		4.6?			4.1?	9.7				
7a	B	5.1			4.6?	9.9				
7b	B	5.8			5.3	n.s.				
8		B.				8.6				
9		B.				9.0				
10	B	6.1			5.6	~~9.3?~~				
11	B	6.0			5.5					
12	B	6.7			6.2					
13	6.7	7.2	6.7	-5	6.70					
14	6.9	7.6	7.1	-7	7.00					
15	7.2	7.6	7.1	-4	7.15					
16	7.8	8.2	7.7	-4	7.75					
17	7.9	8.2	7.7	-3	7.80					
18	7.9	8.4	7.9	-5	7.90					
19	8.4	f.			8.4					
20	7.9	f.								
21	8.3									
22	8.9									
23	10.0									

Thursday June 4, 1915

Rich Region Scut. Sct. MC8535 YELLOW

Diffraction Images.

	G. sc.1	sc.2		1-2		H. sc.1	sc.2		1-2	
~~24~~	.									
1 ~~25~~		t.p.					t.p.			
2 ~~26~~		6.3			5.8		6.5			6.0
2a	B.	6.8			6.3		6.7			6.2
3	7.5	8.2	7.7	-7	7.60	7.5	7.9	7.4	-4	7.45
4	8.0	8.6	8.1	-6	8.05	8.2	f.			8.2
5	8.5				8.5	8.6				8.6
6	8.8					8.8				
7	9.2					9.3				
7a	9.7					9.8				
7b	9.9					9.8				
8	8.2					8.2				
9	8.7					8.7				
10	n.s.					n.s.				
11										
11:32										

Began 4th zone - card 536 at 11:33
End of " " card 706 " 12:37

Thursday June 4, 1915

Rich Region Scut. Sob. MC8535. YELLOW

Star Images.

	sc.1
24	9.6
25	10.0
26	9 f.

Friday June 5, 1915

3:19 Rich Region Scut. Sob. MC8535

			P.C.		Diffr. Im.			
					g		h	
Ref	sc.1	sc.2	sc.1	sc.2	sc.1	sc.2	sc.1	sc.2
				~~7.8~~				
1			4.8	4.3	t.p.		t.p.	
2			6.9	6.4	6.4	5.9	6.4	5.9
2a	B		6.9		6.8	6.3	6.8	6.3
3	B.		7.8		7.4		7.6	
4	B.		8.2		8.0		8.0	
5	B.		Is star sup. on image? 8.5 ?		8.5		8.5	
6	B.		9.2		9.0		8.7	
7	4.6?	4.1?	9.5		9.2		9.1	
7a	5.1	4.6	9.8		9.9		9.6	
7b	6.0	5.5	m.s.		10.0		9.9	
8	B		8.6		8.2		8.2	
9	B		9.0		8.7		8.8	
10	6.1	5.5			f		f	
11	6.1	5.5						
12	6.7	6.2						
13	7.2	6.7						
14	7.1							
15	6.9							
16	7.7							
17	7.8							
18	7.9							
19	8.1							
20	8.2							
21	8.5							
22	8.7							
23	9.8							
24	9.6							
25	9.9.							
26	f							

Began 5th zone, card 707 at 3:29
Stopped " 829 4:11

3:28

Saturday June 6, 1915

10:14 Rich Region Scut Sob. MC 8535 P.C.

Ref	sc.1	sc.2	11:55 sc.1 sc.2		Diffr Im. g sc.1 sc.2	h sc.1 sc.2	g sc.1 sc.2	h sc.1 sc.2	P.C. sc.1 sc.2	sc.1 sc.2
1					t.p.	t.p.	t.p.		4.843	4.944
2					6.560	6.358	6.459		7.261	7.261
2a					6.661	6.560	6.762		$\overset{7.0}{\cancel{6.2}}$	6.9
3					7.4	7.6	7.4		7.8	7.8
4					7.8	8.$\overset{0}{\cancel{2}}$	8.0		8.3	8.3
5		B.			8.7	8.5	8.6		8.9	8.7
6		B.	B.		9.0	8.8	8.9		9.2	9.0
7		4.641	5.045	4.$\overset{30}{\cancel{25}}$ 22	9.1	9.2	9.2		9.6	9.5
7a		5.550	5.146	4.80 22	9.7	9.7	9.8		9.8	9.8
7b		5.853	6.055	5.40⊥1	9.8	9.9	9.9		m.s.	m.s. -
8		B.	B.		8.1	8.3	8.3		8.7	8.6
9	B.	B	B		8.8	8.7	8.8		9.1	9.1
10		6.257	6.156	5.6510						12:02
11		6.156	6.257	5.6501						
12		6.762	6.661	6.1501						
13		7.368	7.368	6.8000						
14	~~B~~	~~7.6~~ 7.1	7.0	7.0510						
15		7.469	7.772	7.05⊥2						
16		8.176	8.277	7.6501						
17	7.8		7.9	7.8501						
18	8.0		8.1	8.0501						
19	8.2		8.4	8.30⊥1						
20	8.0		8.2	8.1$\overset{0}{\cancel{5}}$⊥1						
21	8.4		8.3	8.3501						
22	8.9		8.9	8.9000						
23	9.9		9.8	9.8510						
24	9.7		9.6	9.6510						
25	10.0?		10.0	10.0000						
26	±		10:26	~~+6~~ +11 -6 -4						

Cont 5th zone at 10:27 card 8$\overset{3}{\cancel{2}}$0
End " " " 10:49 " 897
Began 6th " " 10:50 " 898
End " " " 10:52 " 1079

Saturday June 6, 1915

Rich Region

	V	Jt
Ref	1546	934
12	1554	1$\overset{1}{\cancel{8}}$26

Reversed

Ref.	1305	1353
12	1299	1161
Ref.	2851 2 5 1425.5	2287 2 1143.5
12	2853 2 1426.5	2287 2 1143.5

Tuesday June 8, 1915

Rich Region Scut. Sob. Mc8535

10:54	S	V	H	Diff V	V	H	Plate reversed.	V	H	Centre V H
Ref		1546	934		1546 Diff V. P.12 sc.1 sc.2	935	V H H ~~1338~~ ~~1300~~ Wrong star	~~2884~~ ~~2~~	~~2235~~ 2	~~1442~~ ~~1118~~
	p 7.3	1541	921^{13}	0.5						
	g 7.0	1541	938^{04}	0.5						
	h 7.1	1540	930^{04}	0.6						
	1 °	2043	1003							
	p 4.9 4.4	2090	980^{23}	4.7	4.6					
	g	t.p.			.					
	h	t.p.			.					
	2	1761	1060		01					
	p 6.7 &	1764	1047^{13}	0.3	0.1					
	g 6.3 5.8	1788	1055^{05}	2.7	1.6					
	h 6.4 5.9	1786	1046^{14}	2.5						
	3	1390	1161							
	p 7.8	1380	1150^{11}	10	1.1					
	g 7.6	1380	1165^{04}	10	1.1					
	h ~~7.6~~	~~1380~~	1157^{04} ~~1165~~	10	.					
	4	1346	1177							
	p 8.5	1329	1163^{14}	1.7	1.6					

Tuesday June 8, 1915

Rich Region Scut. Sob. Mc8535.

	V	H	Diff. V	Diff V. P. 12 – sc.1 sc.2
4 g 8.2	1329	1180^{02}	1.7	1.6
h 8.0	1330	1171^{06}	1.6	.
5	1258	1250		
h 8.8	1237	1239^{11}	2.1	1.8
g 8.1	1235	1256^{06}	2.3	2.1
h 8.9	1240	1260^{10}	1.8	:
6	1286	1211		
B				
p 8.9	1262	1200^{11}	2.4	2.6
g 8.8	1258	1217^{06}	2.8	2.8
h 9.0	1258	1208^{03}	2.8	.
7	1320	1160		
4.8 4.3	1362	1150^{10}	4.2	
p 9.7	1291	1148^{12}	2.9	3.2
g 9.1	1291	1163^{03}	2.9	3.5
h		.	.	.
8	1383	1110		
p 8.6	1363	1097^{13}	2.0	1.9
g 8.4	1361	1113^{03}	2.2	2.1
h 8.1	1364	1104^{06}	1.9	.
9	1252	1140		
4.5 4.0	1298	1130^{10}	4.6	

Tuesday June 8, 1915.

Mc 8535. cont.

				Diff V	Diff V. 9.14. ac.1 ao.2	Plate reversed V	 H		Centre V	 H
cont. 9	f 9.1	1228	$\overset{13}{1127}$	2.4	2.4					
	g 8.8	1226	$\overset{04}{1144}$	2.6	2.6					
	h 8.9	1226	$\overset{05}{1135}$	2.6	.					
10		1387	1228							
	.	.	.							
	6.1 5.6	1414	$\overset{10}{1218}$	2.7	.					
	h	.		.	.					
	g 10.1?	1348	$\overset{04}{1232}$	6.6	.					
	h			.	.					
11		1516	1120			1336	1170	$\frac{2852}{2} = \frac{2290}{2}$	1426.0	1145.0
	.	.	.							
	6.0 5.5	1545	$\overset{10}{1110}$	2.9						
					.					
					.					
					.					
12		1553	1126							
		.								
Wrong unit. June 11, 1915	$\overset{6}{\cancel{7}}7\overset{6}{\cancel{8}}2$	1577	$\overset{09}{1117}$	2.4						
					.					
					.					
					.					
13		1495	1082							
	6.7	1493		0.2						
					.					
					.					
					.					

Tuesday June 8, 1915.

Mc 8535 cont.

				Diff V
14		1370	1088	
	6.9	1366	"	0.4
15		1445	1158	
	7.3	1437	"	0.8
16		1436	1164	
	7.8	1421	"	1.5
17		1354	1140	
	7.8	1340	"	1.4

Tuesday June 8, 1915

Rich Region Scut. Sob- MC 8535

				Diff V
18		1415	1178	
	8.0	1399	"	1.6
19		1377	1196	
	8.3	1358	"	1.9
20		1374	1140	
	8.2	1356	"	1.8
21		1410	1110	
	8.4	1390	"	2.0
22		1407	1185	
	8.7	1383	"	2.4

Tuesday June 8, 1915.

23		1474	1123	
	9.8	1436	"	3.8
24		1393	1111	
	9.5	1361	"	3.2
25		1479	1054	
	9.9	1441	"	3.8
26				

Tuesday June 8, 1915.

Rich Region Scut. Sob. MC 8535

				Diff V
7a		1429	1256	
	5.2 4.7	1466	$\overset{08}{1248}$	3.7
h	9.8	1397	$\overset{13}{1243}$	3.2
g	9.7	1392	$\overset{05}{1261}$	3.7
h	9.6	1396	$\overset{04}{1252}$	3.3
7b		1415	1253	
	5.7 5.2	1447	$\overset{09}{1244}$	3.2
	f			
g	9.7	1380	$\overset{05}{1258}$	3.5
h	9.8	1380	$\overset{05}{1248}$	3.5
2a		1341	1098	
h	7.1	1338	$\overset{12}{1086}$	0.3
g	6.5	1341	$\overset{05}{1103}$	0.0
h	6.3	1344	$\overset{04}{1094}$	0.3
~~2b~~				
11:16				

Began 7th zone at	1117	card	1080
End " " "	12:22	"	1273
Began 8th " "	1224	"	1274
Finished part " " "	12:58	"	1377
Began last . 8th " "	2:46	"	1378
End " " "	3:01	.	1426

M. E. O'R recorded pp. 6-$3\overset{3}{2}$

~~Wed~~ Tuesday June 8, 1915.

Rich Region Sculum Sob. MC 8535

3:01

Ref	sc.1 sc.2		Diffr. g sc.1 sc.2	Diffr. h sc.1 sc.2	B.C. sc.1 sc.2
1					~~4.9~~ 4.9 4.4
2			6.2 5.7	6.2 5.7	7.0 6.5
2a			6.7 6.2	6.8 6.3	6.9
3	~~7.8~~		7.6	7.5	7.7
4			8.0	7.9	8.4
5			8.6	8.6	8.7
6	B.		8.8	8.8	9.0
7	4.8 4.3		9.2	9.0	9.6
7a	5.0 4.5		9.7	9.7	9.9
7b	5.9 5.4		9.7	9.8	f.
8	B.		8.3	8.3	8.6
9	4.4 3.9		8.7	8.7	8.9
10	6.1 5.6				
11	6.0 5.5				
12	6.8 6.3				
13	6.7				
14	7.2				
15	7.1				
16	7.8				
17	7.8				
18	8.0				
19	8.2				
20	8.0				
21	8.4				
22	9.1				
23	9.8				
24	9.7				
25	10.0				

3:14

Tuesday, June 15, 1915

Not used

Rich region Scut. Sob. 12:26 MC 5679

		V	H		V	H
1		205$\overset{6}{8}$	99$\overset{7}{4}$		2054	997
1.	B.			B.		
2~~a~~		1773	1051		1772	1050
	B.			B.		
2a		1352	1084		1351	1084
	B.			B.		
3		1400	1149		1400	1148
	B.			B.		
4		1357	1162		1357	1162
	B.			B.		
5		1274	1253		1275	1254
	B.			B.		
6		1295	1197		1294	1197
	B.			B.		
7		13$\overset{3}{7}$0	1145		1330	1145
		.	.	B		
	4.7$^{4.2}$	1375	1135			
7a		1437	1$\overset{1}{2}$42		1437	1142
		.	.	B		
	4.8$^{4.3}$	1480	1232			
Ref. Star		1559	923		1558	923

Tues. June 15, 1915

Not used

Rich region Scut. Sob. cont. P. C. MC 5679

		V	H		V	H
1		2056	982		2054	982
	4.3	.	.	4.4	.	.
	4.8	2098	972	4.9	2095	972
2		1773	1035		1772	1036
	5.7	.	.	5.7	.	.
	6.2	1800	1025	6.2	1798	1026
2a		1351	1070		1351	1070
	7.7	1340	.	7.4	1341	.
3		1400	1133		1400	1133
	7.0	1396	.	7.1	1393	.
4		1357	1147		1356	1147
	7.6	1346	.	7.7	1343	.
5		1274	1239		1274	1239
	8.0	1258	.	8.3	1253	.
6		1295	1182		1294	1182
	8.7	1269	.	8.6	1271	.
7		1330	1130		1329	1130
	8.9	1303	.	8.9	1303	.
7a		1438	1228		1436	1227
	9.0	1410	.	9.1	1408	.

Tuesday, June 15, 1915

Not used

Rich region Scut. Sob. MC5679

7b		1425	1240		1423	1240
	5.2	·	·	5.2	·	·
	5.7	1457	1230	$5.\cancel{8}^{7}$	1456	1230
8		1393	1096		1392	1096
	B.			B.		
9		1263	1124		1262	1124
	4.5	·	·	B		
	5.0	1302	1114			
10		1397	1213		1397	1213
	5.6	·	·	5.6	·	·
	6.1	1424	1203	6.1	1423	1204
11		1527	1108		1527	1109
	5.6	·	·	5.4	·	·
	6.1	1556	1099	5.9	1556	1099
12		1564	1115		1563	1115
	5.8	·	·	5.7	·	·
	6.3	1590	1105	6.2	1590	1105
13		1506	1071		1505	1070
	5.9	·	·	$\overset{6}{\cancel{5}}.0$	·	·
	6.4	1529	1061	$6.\cancel{2}^{5}$	$15\overset{2}{\cancel{7}}8$	·
14		$13\overset{8}{\cancel{7}}2$	1073		1382	1073 ~~1069~~
	6.7	·	·	*$\overset{6}{\cancel{7}}.7$	1370	·
	7.2	1398	1065			
15		1456	1146		1455	1145
	6.7	1454	·	6.7	·	·
				7.2	1471	1136

*Assume mistake of a unit. H.S.L. July 23

Tuesday, June 15, 1915

Not used

Rich region Scut. Sob. MC5679

	1423	1225		1423	1225
10.1	1384	·	10.1	1383	·
	1392.	1081		1392	1082
8.9	1367	·	9.2	1364	·
	1262	1110		1262	1110
9.2	1232	·	9.2	1233	·

Tuesday, June 15, 1915
~~Not used~~

Rich region Scut. Sob. MC 5679

		V	H		V	H	
16		1447	1152		1446	1151	
	7.1	1439	·	7.2	1438	·	
17		1365	1125		1364	1125	
	7.3	1357	·	7.3	1356	·	
18		1425	1164		142~~7~~4	1164	
	7.6	1414	·	7.7	1412	·	
19		1387	1182		1387	1181	
	8.0	1370	·	8.0	1370	·	
20		1384	1126		1384	1126	
	8.1	1367	·	8.1	1366	·	
21		1420	1097		1420	1097	
	8.5	1400	·	8.6	1398	·	
22		1418	1172		1417	1172	
	9.2	1388	·	9.1	1388	·	
23		1484	1110		1484	1110	
	9.0	1458	·	~~9.5~~	~~1451~~		Wrong star?
24		1403	1097		1403	1097	
	9.1	1375	·	9.3	1373	·	
25		1490	1043		1490	1042	
	9.9	1452	·	9.9	1453	·	
26		1497	1053		1497	1054	
	10.1	1456	1053	10.0	1457	·	

12:50

Begun 1st zone at 11:27 Card 1
Stopped at 12:25 Card 140

Tuesday, June 15, 1915

Rich region Scut. Sob. MC 5679

Wednesday, June 16, 1915

Not used

10:48 1st read. Rich Region Scut. Sob. 12:12 sec. read. MC 5679

	V	H		V	H
1	2054	993		2052	994
B.			B		
2	1772	1047		1771	1048
B.			B		
2a	1350	1081		1350	1081
B.			B		
3	1400	1146		1400	1146
B.			B		
4	1356	1160		1355	1160
B			B		
5	1275	1251		1275	1251
B.			B.		
6	1293	1195		1293	1195
B.			B		
7	1329	1142		1330	1143
B.			B		
7a	1438	1240		1437	1240
B.			B		
Ref. Star	1558	920		1557	920

Wednesday, June 16, 1915

sec. read. 1st reading MC 5679

sec. read.	V	H	1st reading	V	H
				2054	979
4.5			4.4		
5.0			4.9	2095	969
				1772	1032
5.7			5.9		
6.2			6.4	1796	1022
				1350	1066
7.5			7.6	1340	
				1400	1130
7.0			7.0	1395	
				1355	1145
7.5			~~7~~ 7.3	1347	
				1273	1237
8.0			8.4	1253	
				1293	1180
8.7			8.6	1270	
				1329	1128
8.9			8.9	1302	
				1438	1225
9.0			9.0	1409	

Wednesday, June 16, 1915

Not used

1st read. Rich reg. scut, sob. sec. read. MC 5679

7b		1423	1237			1424	1238
	B 5.2				5.2	·	·
	5.7	1455	$12\overset{3}{8}7$		5.7	1456	{1229 {1238
8		1392	1094			1391 ~~1350~~	1094 ~~1081~~
	B. 4.1				B		
	4.6	1437	1084				
9		1262	1122			1261	1122
	4.4	·	·		4.4	·	·
	4.9	1303	1111		4.9	1303	1112
10		1397	1210			1396	1210
	5.6	·	·		5.7	·	·
	6.1	1423	1201		6.2	1421	1201
11		1526	1106			1525	1106
	5.5	·	·		5.6	·	·
	6.0	1554	1096		6.1	1552	1097
12		1563	1112			1564	1111
	5.7	·	·		5.9	·	·
	6.2	1590	1102		6.4	1588	1102
13		1504	1068			1503	1068
	6.2	·	·		6.2	·	·
	6.7	1527	1058		6.7	1525	1059
14		1380	1071			1381	1071
	6.6	1380	·		6.7	1380	·
15		1456	1143			1455	1142
	6.8	1451	·		6.7	1453	

Wednesday, June 16, 1915

sec. read Rich region Scut. sob. 1st read. MC 5679

			1424	1221
10.0		9.9	1387	·
			1392	1079
9.1 ~~7.5~~		9.1	1362	·
			1261	1107
8.9		9.3	1232	·

Wednesday, June 16, 1915

Not used

1st read. Rich reg. scut. sob. sec. read. MC 5679

	16		1446	1149		1446	1149
		7.2	1438	·	7.2	1439	·
	17		1364	1122		1365	1122
		7.3	1355	·	7.5	1353	\
	18		1424	1162		1425	1162
		7.6	1414	·	7.7	1411	·
	19		1388	1180		1385 1387	1180
		8.1	1369	·	8.2	1368	·
	20		1385	1124		1384	1124
		8.3	1364	·	8.3	1364	·
	21		1420	1094		1420	0 1995
		8.7	1396	·	8.6	1398	·
	22		1416	1170		1415	1170
Evidently mistake of a mint. L. July 23		9 8.0	1389	·	9.1	1387	·
	23		1483	1107		1482	1107
		9.2	1454	·	9.1	1455	·
	24		1402	1095		1402	1095
		9.3	1372	·	9.3	1372	·
	25		1490	1040		1490	1040
		9.9	1453	·	10.0	1451	·
	26		1495	1052		1495	1051
		10.1	1457	·	10.1	1456	·

12:25

11:12 ~~Began~~ Cont. Zone 1 at 11:15 card 141

Ended " " 12:11 " 272

Thursday, June 17, 1915

Not used

11:10

		V	H	V	H
1		2052	996		
	B				
2		1770	1049		
	B				
2a					
3					
4					
5					
6					
7					
7a		1436	1242		
	5.0	1475	1232		
Ref. Star		1557	922		

Thursday, June 17, 1915

		V	H	V	H
1					
	1.9	2094			
2					
	6.0	1800			
2a					
3					
4					
5					
6					
7					
7a					
	8.9	1410			

Thursday, June 17, 1915

Not used

		V	H	V	H
7h					
8					
9					
10					
11		1525	1107		
	6.0	1554	1097		
12		1563	1114		
	6.2	1589	1104		
13		1503	1069		
	6.5	1527	1059		
14					
15		1454	1144		
	7.1	1470	1135		

Thursday, June 17, 1915

	V	H	V	H
7h				
8				
9				
10				
11				
12				
13				
14				
15				

Thursday, June 17, 1915

Not used

		V	H	V	H
16		1445	1150		
	7.2	1447	·		
17					
18		1423	1163		
	7.7	1411	·		
19					
20					
21					
22		1416	1171		
	9.0	1389	·		
23		1482	1108		
	9.2	14$\overset{5}{8}$2	·		
24					
25		1490	1040		
	9.9	1451	·		
26		1495	1053		
	10.1	1455	·		

Thursday, June 17, 1915

		V	H
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

Thursday, June 17, 1915

Rich Scut. Measures for Comparison of Scale and positions on Plates MC5679 and MC8535

	MC 5679 (blue) V	H	V	H	Means V		H		Diff from Ref. Star V	H
1	2052	993	2052	993	205.20	00	99.30	00	49.40	~~73~~ 7.25
2	1771	1049	1771	1048	177.10	00	104.85	10	21.30	12.80
Ref	1558	921	1558	920	155.80	00	92.05	10	000	~~+87~~ 000
23	1482	1107	1482	1107	148.20	00	110.70	00	76.0	+87 ~~318~~ 18.65
7b	1422	1238	1422	1238	142.20	00	~~107.20~~ 123.80	00	13.60	~~318~~ 31.75
14	1380	1072	1380	1072	138.00	00	~~114.70~~ 107.20	00	17.80	~~152~~ 15.15
3	1399	1147	1399	1147	139.90	00	114.70	00	15.90	~~227~~ 22.65
22	1416	1171	1416	1171	141.60	00	117.10	00	14.20	25.05
4	1355	1161	1354	1160	135.45	10	116.05	10	20.35	24.00
9	1261	1123	1261	1122	126.10	00	112.25	10	29.70	20.20
5	1273	1252	1273	1252	127.30	00	125.20	00	28.50	~~332~~ 33.15

Plate Reversed

Ref	1299	1370
23	1373	1183

Ref $\frac{2857}{2}$ 142.85 $\frac{2291}{2}$ 114.55

23 $\frac{2855}{2}$ 142.75 $\frac{2290}{2}$ 114.50

Centre of Plate 142.80 114.52

June 17, 1915

Rich Scut. Sep. Cont.

	MC 8535 (yellow) V	H	V	H	Means V	H	Diff. from Ref. Star V	H	b-y V	H	Corr V+H V +.01H	H −.01V	b-y Corr. V	H
1	2042	1003	~~1251~~ 2042	1003	204.20	100.30	49.60	6.70	20	~~6~~ 55	49.5	7.2	~~13~~ 11	05
2	1761	1061	1761	1061	176.10	106.10	21.50	12.50	20	30	21.4	12.7	04	08
Ref	1546	936	1546	936	154.60	93.60	000	000	00	00	000	000	0	0
23	1472	1122	1472	1122	147.20	112.20	7.40	18.60	20	05	7.6	18.5	011	2
7b	1415	1253	1414	1253	141.45	125.30	13.15	31.70	45	05	13.5	31.6	04	2
14	1370	1089	1370	1088	137.00	108.85	17.60	15.25	20	10	17.8	15.0	06	2
3	1390	1163	1390	1162	139.00	116.25	15.60	22.65	30	00	15.8	22.4	01	3
22	~~1414~~ 1407	~~1179~~ 1187	1407	1187	140.70	118.70	13.90	25.10	30	05	14.2	25.0	02	1
4	1347	1177	1346	1177	134.65	117.70	~~200~~ 19.95	24.10	40	10	20.2	23.9	2	1
9	1251	1140	1251	1141	125.10	114.05	29.50	20.45	20	25	29.7	20.0	06	1
5	1265	1270	1265	1270	126.50	127.00	28.10	33.40	40	25	28.4	33.1	02	1
													7	+15
													+.06	+.14

Plate Rev

Ref St.	1303	1354	1303	1354
23	1378	1168	1378	1168

Ref $\frac{2849}{2}$ 1424.5 $\frac{2290}{2}$ 1145.0 $\frac{2849}{2}$ 1424.5 $\frac{2290}{2}$ 1145.0

23 $\frac{2850}{2}$ 1425.0 $\frac{2290}{2}$ 1145.0 $\frac{2850}{2}$ 1425.0 $\frac{2290}{2}$ 1145.0

Centre of Plate 142.45 1145.0

Correct differences from Ref. Stars

On MC 8535 (to refer to MC 5679)

$$H_{5679} = H_{8535} + .01 - .01V_{8535}$$

$$V_{5679} = V_{8535} + .01 + .01H_{8535}$$

To refer MC 5679 to MC8535:

$$H_{8535} = H_{5697} - .01 + .01V_{5697}$$

$$V_{8535} = V_{5697} - .01 - .01H_{5697}$$

Corrections including Correction for Scale

$$H5679 = H_{8535} + .003H_{8535} - .010V_{8535}$$

$$V5679 = V_{8535} + .003V_{8535} + .013H_{8535}$$

$$H_{8535} = H_{5697} - .003H_{5697} + .010V_{5697}$$

$$V_{8535} = V_{5697} - .003V_{5697} - .013H_{5697}$$

Friday, June 18, 1915

Begin here for MC 5679

11:14 Rich Region Scut. Sob. MC 5679

		V	H	Diff. V sc1 sc2		V	H	Diff V (1) (2)
1		2053	995			2052	994	
	B				B			
2		1770	1049			1770	1049	
	B				B			
2a		1350	1083			1350	1083	
	B				B			
3		1399	1148			1399	1148	
	B				B			
4		1355	1160			1355	1161	
					B			
5		1274	1252			1273	1253	
	B				B			
6		1292	1196			1292	1196	
	B				B			
7		1328	1144			1329	1143	
	B				B			
7a		1436	1241			1436	1241	
	4.4				4.5			
	4.9	1478	1229	. 4.2	5.0	1477		→ 4.1
Ref. star		1557	921			1557	921	

Friday, June 18, 1915

Rich region. scut. sob. P, C. MC 5679

	V		Diff V			Diff. V
	4.4			4.4		
1	4.9	2094	. 4.1	4.9	2094	. 4.2
	5.6			5.6		
	6.1	1798	. 2.8	6.1	1798	. 2.8
	7.5	1340	1.0 .	7.6	1340	1.0 .
	7.0			7.2	1391	0.8 .
	7.5	1411	. 1.2			
	7.4	1345	1.0 .	7.6	1343	1.2 .
	8.1	1255	1.9 .	8.2	1255	1.8 .
	8.5	1271	2.1 .	8.6	1270	2.2 .
	8.8	1302	2.6 .	8.9	1300	2.9 .
	9.1	1408	2.8 .	9.1	1407	2.9 .
	6.6			6.8		
	7.1	157[illegible]	1.5	7.3	1570	1.3 .

Friday, June 18, 1915

Rich region scut. sob. MC 5679

				Diff. V				Diff V
7h		1422	1238			1422	1239	
	5.2	·	·		4.9	·	·	
	5.7	1455	1229	· 3.3	5.4	1456	·	· 3.4
8		1391	1095			1391	1095	
	4.0				B			
	4.5	1435	1084	· 4.4				· ·
9		1261	1123			1260	1123	
	4.3	·	·		4.4	·	·	
	4.8	1304	1113	· 4.3	4.9	1302	1113	· 4.2
10		1396	1211			1396	1211	
	5.6	·	·		5.5	·	·	
	6.1	1422	1202	· 2.6	6.0	1425	1202	· 2.9
11		1526	1107			1525	1107	
	5.5	·	·		5.5	·	·	
	6.0	1553	1097	· 2.7	6.0	1553	1097	· 2.8
12		1563	1113			1562	1112	
	5.7	·	·		5.8	·	·	
	6.2	1588	1103	· 2.5	6.3	1587	·	· 2.5
13		1503	1069			1503	1069	
	6.1		·		6.1	·	·	
	6.6	1526	1060	· 2.3	6.6	1526	·	· 2.3
14		1380	1072			1380	1073	
	6.7	1379	·	0.1 ·	6.7	·	·	
					7.2	1395	1064	· $1.\overset{6}{5}$
15		1455	1144			1454	1144	
	6.8	1450	·	0.5.	6.7	1452	·	0.2 ·

Friday, June 18, 1915

Rich region scut. sob. P.C. MC 5679

		Diff. V			Diff. V
9.0	1364	2.7	9.0	1363	2.8
9.2	1231	3.0			3.0
			9.2	1230	

Friday, June 18, 1915.

Rich region Scut. sob. MC 5679

		V	H	Diff V				Diff V
16		1445	1149			1445	1150	
	7.2	1437	·	0.8	7.3	1435	·	1.0
17		1363	1123			1363	1123	
	7.6	1353	·	1.0	7.3	1353	·	1.0
18		1424	1163			1424	1164	
	7.8	1409	·	1.5	7.8	1410	·	1.4
19		1385	1180			1386	1180	
	8.2	1368	·	1.7	7.9	1370	·	1.6
20		1382	1125			1384 1383	1124 1125	
	8.3	1364	·	1.8	8.1	1366	·	1.8
21		1420	1095			1420	1096	
	8.6	1397	·	2.3	8.6	1398	·	2.2
22		1415	1170			1415	1170	
	9.0	1389	·	2.6	9.0	1389	·	2.6
23		1482	1108			1482	1107	
	9.1	1453	·	2.9	9.1	1453	·	2.9
24		1402	1096			1402	1095	
	9.5	1370	·	3.2	9.3	1370	·	3.2
25		1489	1040			1489	1040	
	10.0	1451	·	3.8	9.9	1450	·	3.9
26		1495	1052			1495	1052	
	10.1	1455	·	4.0	10.1	1455	·	4.0

11:28

Began Zone 1 at 11:30 with card 1
Ended " 12:49 " " 194

Friday, June 25, 1915

11:19 Rich Region Sagt. Sob. 12:04 MC 5679

		V	H	Diff. V		V	H
1		2051	994				
	B				B		
2		1770	1048				
	B				B		
2a		1350	1082				
	B				B		
3		1398	1147				
	B				B		
4		1355	1160				
	B				B		
5		1273	1252				
	B				B		
6		1293	1196				
	B				B		
7		1328	1143				
	4.1				4.0		
	4.6^2	1373	1133	· 4.5	4.5^2		
7a		1436	1241				
	4.5				4.3		
	5.0	1475	1231	· $\overset{3}{\cancel{4}}.9$	4.8		
Ref. star		1556	920			1556	921
	B				B		

Friday, June 25, 1915

Rich reg. sagt sob. P.C. MC 5679

			Diff. V	V	H
1					
	4.4			4.3	
	4.9	2093	~~4.2~~ 4.2	4.8	
2					
	5.6			5.7	
	6.1	1797	· 2.7	6.2	
2a					
	7.6	1339	1.1 ·	7.5	
3					
	6.8	1395	0.3 ·	7.1	
				7.6	
4					
	7.4	1345	1.0 ·	7.4	
5					
	8.1	1255	1.8 ·	8.0	
6					
	8.6	1270	2.3 ·	8.5	
7					
	8.7	1303	2.5 :	8.8	
7a					
	9.2	1407	29	8.9	
Ref. star	6.5			6.5	
	7.0	1573	· 1.7	7.0	

Friday, June 25, 1915

Rich reg. Scut. Sob. MC 5679

		V	H	Diff V	
7h		1421	1238		
	5.2	·	·		5.0
	5.7	1454	1229	· 3.3	5.5
8		1391	1094		
	10	·			4.2
					4.7
9		1260	1122		
	4.4	·	·		4.3
	4.9	1301	1112	· 4.1	4.8
10		1395	1211		
	5.5	·	·		5.6
	6.0	1424	1202	· 2.9	6.1
11		1524	1107		
	5.4	·	·		5.4
	5.9	1554	1097	· 3.0	5.9
12		1562	1112		
	5.9	·	·		5.8
	6.4	1586	1103	· 2.4	6.3
13		1503	1068		
	6.1	·	·		6.2
	6.6	1526	1059	· 2.3	6.7
14		1380	1072		
	6.4	·	·		6.3
	6.9	1398	1062	· 1.8	6.8
15		1453	1142		
	6.7	1453	·	0.0 .	6.7
					7.2

Friday, June 25, 1915

Rich reg. Scut. Sob. P.C. MC 5679

			Diff V	
7h				
8				
	8.9	1364 ·	27.	8.9
9				
	9.2	1230	3.0.	9.1
10				
11				
12				
13				
14				
15				

Friday, June 25, 1915

Rich reg. Scut. Sob. MC5679

		V	H	Diff. V	
16		1445	1149		
	7.0	1439	·	0.6 .	7.2
17		1363	1123		
	7.2 ·	1355	·	0.8 .	7.5
18		1423	1162		
	7.6	1411	·	1.2 .	7.7
19		1386	1180		
	7.9	1370	·	1.6 .	7.9
20		1383	1124		
	7.9	1367	·	1.6 .	8.1
21		1419	1095		
	8.4	1398	·	2.1 .	8.6
22		1415	1170		
	8.9	1389	·	2.6 .	9.0
23		1482	1107		
	8.8	1455	·	2.7 .	9.0
24		1401	1095		
	9.1	1373	·	2.8 .	9.2
25		1488	1040		
	10.0	1450	·	3.8 .	9.9
26		1495	1051		
	10.1	1454	·	4.1 .	10.0

11:33 . $\overset{1}{2}$:15

Cont. Zone 1 at 11:35 with card 195
Ended at 11:54 " " " 246
Began Zone ~~2~~ 3 at 11:55 with " 247
~~Ended~~ Stopped " " 12:54 " " 389

Friday, June 25, 1915

Rich reg. Scut. Sob. P.C. MC5679

16

Plate Reversed

		V	H
17	Ref. Star	1299	1370
18	Star 3.	1457	1144
19	Star 17	1492	1168
20	Star 20	1472	1167
21			
22	Ref. Star	2855	2290
23			
24	Star 3	2855	2291
25	Star 17	2855	2291
26	Star 20	2855	2291
	Mean	28550	22908
	Centre	~~28~~ 14 275	11454

V H

Saturday, June 26, 1915

Rich reg. Scut. Sob. MC. 5679

	~~V~~	~~H~~	
1			
2			
2a			
3			
4			
5			
6			
7			
7a	4.5 5.0	4.5 5.0	
7b	5.2 5.7	5.2 5.7	
8	B	B	
9		4.2 4.7	
10	5.7 6.2	5.3 5.8	5.5 6.0
11	5.5 6.0	5.5 6.0	

	V	H
Ref. Star	1555	920

Saturday, June 26, 1915

P.C. Rich reg. scut. Sob. MC 5679

1	4.4 4.9	4.4 4.9
2	5.7 6.2	5.6 6.1
2a	7.3 7.8	7.3 7.8
3	7.1 7.6	7.1 7.6
4	7.5	7.6
5	7.9	8.0
6	8.7	8.6
7	8.9	8.9
7a	8.9	9.1
7b	10.1	
8	9.2	8.9
9	9.3	9.3
11	6 6.0	

Saturday, June 26, 1915

	Rich reg. Scut. Sob.			MC 5679
12	5.7	5.6		
	6.2	6.1		
13	6.0	6.1		
	6.5	6.6		
14	6.4	6.4		
	6.9	6.9		
15	6.8	~~6.7~~ 6.8		
	7.3	~~6.7~~ 7.3		
16	7.1	7.2		
17	7.4	7.4		
18	7.6	7.8		
19	7.8	7.8		
20	8.1	8.1		
21	8.7	8.6		
22	8.9	8.9		
23	9.0	9.0		
24	9.3	9.2	Cont. Zone 3 at 11:55	with Card 390
			Ended " " " 12:43	" " 520
25	10.0	9.9	Began " 2 at 12:45	" " 521
			Stopped " 1:10	" 589
26.	10.1	10.0		

Saturday, June 26, 1915

	Rich reg. Scut. Sob.		P.C.	MC 5679
12				
	~~6.2~~			
13				
	~~6.5~~			
15				
23	~~9.0~~			
	~~9.0~~			
25	~~10.0~~			
26	~~10.1~~			

Monday, June 28, 1915

10:50 Rich reg. Scut. Sob. MC 5679 12:50

	1st read.	2nd read.	1st	P.C. etc.	
Ref. Star	(V 1556 H 920)	(V 1556 H 920)			
1		B	4.3	4.4	
			4.8	4.9	
2			5.7	5.6	
			6.2	6.1	
2a	B	B	7.5	7.5	,,
3	B	B	6.8	7.1	7.1
			7.3	7.6	7.6
4	B	B	7.6	7.4	
5	B	B	7.9	8.0	
6	4.5?	B	*8.1	8.6	
			8.6		
7	B	B	8.8	8.9	
7a	4.5	4.4	8.9	8.9	
	5.0	4.9			
7b	5.1	5.0	10.1	10.0	
	5.6	5.5			
8	4.1	B	8.9	9.0	
	4.6				
9	4.4	4.3	9.2	8.9	
	4.9	4.8			
10	5.4	5.6			
	5.9	6.1			

* Reject. Probably meas. on first Scale
July 24, 1915

Monday, June 28, 1915

J. MC 5679

	Plate Reversed Pos.
Pos. ref. Star	1300 1370
Star 11	1331 1184
Ref. Star	2856 2290
~~Star 11~~	
Centre	14280 11450

Monday, June 28, 1915

Rich reg. Scut. Sob, MC 5679

Assumed mistake of a unit. H.S.L. July 23

	1st read.	2nd read.		P.C.
11		5.3	5.5	
	~~5.2~~ Wrong image?	5.8	6.0	
12	5.6	5.7		
	6.1	6.2		
13	6.1	6.1		
	6.6	6.6		
14	6.4	6.3		
	6.9	6.8		
15	6.4	6.5		
	6.9	7.0		
16	7 ~~6~~.1	7.2		
		7.7		
17	7.2	7.8^{2}		
18	7.7	7.8		
19	7.8	7.9		
20	8.1	8.2		
21	8.5	8.4		
22	9.4	9.1	9.0	
23	9.0	9.1		
24	9.3	9.6	9.2	

MC 5679

Monday, June 28, 1915

Rich reg. Sagit. Sol. MC 5679

P. C.

25 9.9 10.0

26 10.1 10.1

$\overset{1}{1\cancel{2}}$:00

10:58

Bont Zone 2 at 11:00 card 590
Ended " " " 12:04 " 794
Began Zone 4 at 12:05 " 795
Stopped " " " 12:4$\overset{9}{\cancel{5}}$ " 900 interruption prob. 5 min.

183 per hour

MC 5679

Tuesday, June 29, 1915

11:32 stopped at 11:35 Rich reg. Scut. Sob. P.C. MC 5679
1157

	Ref. Star.	1556 920	1556 920
1	B		4.4 4.9
2	B		5.6 6.1 ~~7.0~~
2a	B		7.4 7.9
3	B		7.1 7.6
4	B		7.3 7.8
5	B		8.0
6	B		8.5
7	B		8.7
7a	4.5 5.0		9.1
7b	5.2 5.7		10.1
8	B		8.9
9	4.2 4.7		9.4
10	5.5 6.0		

Tuesday, June 29, 1915

Rich reg. Scut. Sob. P. C. MC5679

11	5.5 6.0
12	5.8 6.3
13	6.1 6.6
14	6.4 6.9
15	6.9 7.4
16	7.3 7.8
17	7.2 7.7
18	7.7
19	8.1
20	8.4
21	8.6
22	9.1
23	9.2
24	9.7

Tuesday, June 29, 1915

Rich reg. Scut. Sob. P.C. MC. 5679

25 10.0

26 10.1

Cont. Zone 4 at 12:04 with card 901
Ended " " 12:39 " " 1004

	Plate	Reversed
	V	H
Ref. Star.	1300	1370
Star 7	1528	1148
Ref. Star	2856	2290
Centre	1428	114.5

Monday, July 19, 1915

11:28 Rich reg. Scut. Sob. 1st read — 2nd read. — MC5679

	V	H	Diff.	V	H
1	2052	994			
B					
2	1770	1048			
B					
2a	1350	1082			
B					
3	1399	1147			
B					
4	1355	1160			
B					
5	1273	1251			
B					
6	12~~60~~92	11~~22~~95			
B					
7	1329	1142			
B					
7a	1435	1240			
4.5					
5.0	1476	1230.	4.1		
Ref. Star	1557	920		1556	920

Monday, July 19, 1915

P.C. Rich reg. Scut. Sob. P.C. MC 5679

	V	H	Diff.
1			
4.5			
5.0	2093		.4.1
2			
5.4			
5.9	1800		.3.0
2a			
7.4	1340		1.0.
3			
7.0	1393		0.6.
4			
7.5	1344		1.1.
5			
8.1	1255		1.8.
6			
8.6	1270		2.2.
7			
8.9	1300		2.9,
7a			
9.0	1408		2.7.

Monday, July 19, 1915

Rich reg. Scut. Sob. MC 5679

		V	H	Diff V	sec. pos.	
7b		1422	1238			
	5.1	·	·			
	5.6	1457	1229	· 3.5		
8		1390	1094			
	B					
9		1260	1122			
	B					
10		1395	1210			
	5.6	·	·			
	6.1	1422	1200	· 27		
11		1525	1107			
	5.4	·	·			
	5.9	1555	1097	· 3.0		
12		1562	1112	~~1562~~	1562 1112	/
	5.7		·			
	6.2	1588	1103	· 2.6		
13		1503	1069			
	6.2		·			
	6.7	1525	1059	· 2.2		
14		1380	1071			
	B see p. 83					
15		1453	1143			
	6.7	1452		0.1 .		

Monday, July 19, 1915

Rich reg. Scut. Sob. P.C. MC 5679

		V	H	Diff V
7b				
	10.0	1383		3.9 .
8				
	9.0	1362		2.8 .
9				
	9.2	1231		2.9 .
10				
11				
12				
13				
14				
Stars in 2d scale	6.6			
	7.1	1397	1062	.1.7

Monday, July 19, 1915

Rich reg. Sat. Sob. MC 5679

		V	17	Diff. V
16		1445	1149	
	7.2	1438	·	0.7.
17		1362	1123	
	7.3	1355	·	0.7.
18		1423	1163	
	7.7	1410	·	1.3.
19		1386	1179	
	7.9	1370	·	1.6.
20		1382	1123	
	8.1	1365	·	1.7.
21		1419	1095	
	8.6	1397	·	2.2.
22		141~~2~~8	1168	
	8.3	1409	·	0.9.
23		1481	1107	
	8.8	1457	·	2.4.
24		1401	1095	
	9.3	1371	·	3.0.
25		1489	1038	
	10.0	1449	·	4.0.
26		1493	1051	
	10.0	1457	·	3.6.

Mistake of a Unit
H.S.L. July 27 1915
Is this the right star?

11:45

Began Zone 5 at 11:47 with card 1005
Stopped " " " 1:00 " 1197 5 min. interv.

175
~~160~~ per hour

Monday, July 19, 1915

Rich reg. Sat. Sob. P. C. MC 5679

Plate Reversed.

Ref. star	1300	1370
Star 12	1294	1178
Ref. Star	2857	2290
	2856	2290
Centre	14288	11450

Tuesday, July 20, 1915

11:00 Rich reg. Scut. Sob. 12:50 MC5679

	V	H	Diff. V	Sec. read.	V	H
1	2052	993			2052	993
	B			B		
2	1770	1048			1770	1048
	B			B		
2a	1350	1082			1350	1082
	B			B		
3	1400	1146			1399	1146
	B			B		
4	1355	1160			1355	1160
	B			B		
5	1273	1252			1273	1252
	B			B		
6	1292	1196			1293	1195
	B.			B		
7	1329	1142			1329	1143
	B			B		
7a	1437	1240			1436	1240
	B			B		
Ref Star	1557	920			1557	920

Tuesday, July 20, 1915

Rich reg. Scut. Sob. P. C. MC5679

			Diff. V	sec. read.	V	H Diff. V
1						
	4.4 4.9	2093	. 4.1	4.5 5.0	2092	. 4.0
2	5.7 6.2	1797	. 27	5.7 6.2	1797	. 2.7
2a	7.6	1340	1.0 .	7.7	1339	1.1.
3	7.1	1391	0.9 .	7.0	1392	0.7.
4	7.7	1342	1.3 .	7.6	1343	1.2.
5	8.2	1255	1.8 .	8.2	1255	1.8.
6	8.6	1270	2.2 .	8.7	1270	2.3.
7	8.9	1301	2.8.	8.9	1301	2.8.
7a	9.0	1409	2.8.	8.9	1410	2.6.

Tuesday, July 20, 1915

Rich reg. Scut. Sob. MC 5679

				Diff. V.		sec. read.		Diff V
7b		1423	1238			1422	.1237	
	5.1	·	·		5.1	·	·	
	5.6	1456	1228	· 3.3	5 ~~6~~.6	1457	1227	· 3.5
8		1390	1094			1391	1093	
	4.1	·	·					
	4.6	1436	1085	· 4.6				
9		1260	1123			1260	1122	
	4.4	·	·		4.4	·	·	
	4.9	1303	1113	· 4.3	4.9	1		· ·
10		1396	1210			1395	1211	
	5.7	·	·		5.6	·	·	
	6.2	1421	1202	· 2.5	6.1	1422	1201	· 2.7
11		1525	1106			1525	1106	
	5.5	·	·		5.5	·	·	
	6.0	1553	1097	· 2.8	6.0	1553	1097	· 2.8
12		1562	1112			1562	1112	
	5.9	·			5.9	·	·	
	6.4	1586	1103	· 2.4	6.4	1587	1103	· 2.5
13		1509	1068			1503	1068	
	6.1	·	·		6.1	·	·	
	6.6	1526	1059	· 2.3	6.6	1525	1058	· 2.2
14		1380	1071			1380	1071	
	6.4	·	·		6.4	·	·	
	6.9	1399	1062	· 1.9	6.9	1399	1062	· 1.9
15		1454	1143			1453	1143	
	6.8	·	·		6.8	·	·	
	7.3	1469	1133	· 1.5	7.3	1467	1133	· 1.4 .

Tuesday, July 20, 1915

Rich reg. Scut. Sob. P. C. MC 5679

			Diff V		sec. read.	
7b						
	9.9	1384	3.9.			
8						
	8.9	1364	2.6.	9.0	1362	2.9.
9						
	9.3	1230	3.0.	9.3	1230	3.0.
10						
11						
12						
13						
14						
15						

Tuesday, July 20, 1915

Rich reg. Scut. Sob. MC5679

				Diff. V		sec. read.		
16		1445	1149			1444	1148	
	7.1	1438	·	0.7.	7.1	1438	·	0.6.
17		1363	1123			1362	1123	
	7.5	1352	·	1.1.	7.5	1353	·	0.9.
18		1423	1162			1423	1163	
	7.6	1412	·	1.1.	7.7	1411	·	1.2.
19		1385	1179			1385	1180	
	8.0	1370	·	1.5.	8.1	1369	·	1.6.
20		1383	1124			1383	1124	
	8.3	1363	·	2.0.	8.3	1362	·	2.1.
21		1420	1095			1420	1095	
	8.7	1396	·	2.4.	8.6	1397	·	2.3.
22		1415	1170			1415	1170	
	8.9	1390	·	2.5.	9.0	1389	·	2.6.
23		1481	1107			1481	1107	
	9.2	1453	·	2.8.	9.2	1452		2.9.
24		1402	1095			1402	1095	
	9.3	1371	·	3.1.	9.2	1372	·	3.0.
25		1491	1038			1489	1040	
	9.8	1453	·	3.8.	9.9	1450	·	3.9.
26		1494	1050			1494	1051	
	10.0	1456	·	3.8.	10.0	1460	·	3.4.

11:15

Cont. Zone 5 with card 1198 at 11:17
Ended " " " 1246 " 11:34
Beg. on Zone 6 " " 1247 " 11:35
Stopped " " " 1440 " 12:47

161 per hour

Tuesday, July 20, 1915

Rich reg. Scut. Sob. ~~P.C.~~ MC5679

Plate reversed.

	V.	H
Ref. Star	1300	1370
Star 23	1373	1183
1:04		
Ref. Star	2857	2290
	2854	2290
Centre	1428	1145

Wednesday, July 21, 1915

11:24 Rich reg. Scut. Sob. MC5679 12:55

1
B

2
B

2a

3

4

5

6

7

7a ~~4~~
4.4
4.9

Ref. Star 1557 920 1556 920

Wednesday, July 21, 1915

Rich reg. Scut. Sob. P.C. MC5679

	1st read.	2nd read.
1	~~4.9~~ 4.4 4.9	~~5.0~~ 4.5 5.0
2	~~6.0~~ 5.5 6.0	5.7 6.2
2a	7.4	7.5
3	7.1 7.6	7.1 7.6
4	7.3	7.5
5	8.0	8.0
6 ~~4~~	8.7	8.6
7	8.8	8.9
7a	9.0 ~~4~~	9.0

Wednesday, July 21, 1915

Rich reg. Scut. Sob. MC 5679

7h				
	5.0		5.1	
	5.5		5.6	
8				
9	1261 1122			
	4.3		4.5	
	4.8		5.0	
10				
	5.4		5.5	
	5.9		6.6	
11				
	5.4		5.5	
	5.9		6.0	
12	1562 1112		1562 1112	
	5.6		5.8	
	6.1		6.3	
13				
	6.1		6.2	
	6.6		6.7	
14				
			6.4	
			6.9	
15				
	6.6		6.7	
	7.1		7.2	

Wednesday, July 21, 1915

Rich reg. Scut Sob. J. C. MC 5679

	1st read		2nd read	
7h	10.0		9.9 ~~9.0~~ ~~5.6~~	
8				
	9.0		9.1	
9	9.2		9.1	
10				
11				
12				
13				
14				
	6.5			
	7.0			

Wednesday, July 21, 1915

Rich reg. Scut. Sob. MC 5679

16	7.2	7.1
	7.7	7.6
17		
	7.5	7.3
18		
	7.7	7.7
19		
	7.8	7.9
20		
	8.0	8.1
21		
	8.6	8.7
22		
	8.5	8.6
23		
	9.1	9.1
24		
	9.2	9.5
25		
	9.9	10.0
26		
	10.0	10.0

11:29

Cont. Zone 6 card 1441 at 11:30
Ended " " " 1504 " 11:53
Began Zone 7. " " 1505 " 11:55
Stopped " " 1665 " 12:52

160 per hour

Time 1.00

Wednesday, July 21, 1915

Rich reg. Scut. Sob. Plate Reversed MC. 5679

Ref. Star	1300	1370
Star 12	1294	1178
Star 9	1595	1168
Ref. Star	2857	2290
Star 12	2856	2290
Star 9	2856	2290
Centre	1428	1145

Thursday, July 22, 1915

11:20 Rich reg. Scut. Sob. 12:56 MC 5679

		V	H	Diff. V		
Ref Star		1557	920		1557	. 920
1		2052	994			
B						
2		1771	1048			
B						
2a		1350	1082			
B						
3		1400	1146			
B						
4		1355	1160			
B						
5		1274	1252			
B						
6		1294	1196			
B						
7		1329	1143			
B						
7a		1437	1240			
B						
7b	4.9	1422	1238		5.1	
	5.4	1457	1228	· 3.5	5.6	
8		1391	1094			
B						
9	4.4	1261 ~~1350~~	1122 ~~1082~~		4.3	
	4.9	1303	1113	· 4.2	4.8	
10	5.6	1396	1211		5.6	
	6.1	1422	1200	· 2.6	6.1	

Thursday, July 22, 1915

Rich reg. Scut. Sob. P.C. MC 5679

			Diff V	V.	H
1	4.4			4.5	
	4.9	2094	·4.2	5.0	
2	5.9			5.6	
	6.4	1794	·2.3	6.1	
2a	7.5	1340	1.0 ·	7.5	
				~~7.5~~	
3	7.2			6.9	
	7.7	1410 1121	· 1.0	7.4	
4	7.6	1343	1.2.	7.6	
5	8.4	1252	2.2.	8.0	
6	8.6	1270	2.4.	8.2	
7	8.9	1301	2.8.	8.9	
7a	8.9	1410	2.7.	9.0	
7b	10.0	1383	3.9.	9.9	
8	9.0	1364	2.7.	9.0	
9	9.6	1227	3.4.	9.4	
10					

Thursday, July 22, 1915

Rich reg. S cut. MC5679

		V	H	Diff. V		
11	5.4	1526	1106		5.4	
	5.9	1555	1097	· 29	5.9	
12	5.7	1563	1112		5.7	
	6.2	1588	1103	· 2.5	6.2	
13	6.2	1504	1068		6.1	
	6.7	1526	1058	· 2.4	6.6	
14	6.4	1380	1071		6.3	
	6.9	1399	1062	· 1.9	6.8	
15	6.7	$1\overset{4}{5}54$	1142		6.7	
	7.2	1470	·	· 1.6	7.2	
16		1445	1148			
	7.4	1435	·	1.0 .	7.3	
17		1364	1123		1363 7.3	1123
	7.3	1354	·	1.0 .	7.8	
18		1423	1162			
	7.7	1412	·	1.1 .	7.6	
19		1386	1179			
	7.9	1370	·	1.6 .	7.8	
20		1383	1123			
	8.0	1367	·	1.6 .	8.0	
21		1420	1095			
	8.7	1397	·	2.3 .	8.6	
22		1416	1170			
	9.0	1390	·	2.6 .	9.0	
23		1483	1106		~~9.2~~	
	9.1	1453	·	3.0 .	9.2	
24		1402	1095			
	9.3	1371	·	3.1.	9.3	

Thursday, July 22, 1915

Rich reg. Sect. Sob. MC5679

		V	H	Diff. V		
25		1489	1039		~~10.~~	
	9.9	1451	·	3.8.	~~1~~	10.0
26		1494	1051			
	10.0	1455	·	3.9.		10.0

11:28

Cont. Zone 7 with card 1666 at 11:30
Ended " " " " 1732 " 11:50
Began Zone 8 " " 1733 " 11:50
Ended " " " " 1926 " 12:56

109 per hour

Recorder, Miss Harvey

Plate Reversed.

Ref. Star	1300	1370
17	1492	1167
Ref Star	2857	2290
Star 17	2856	2290
Center	1428	1145

Thursday, July 29, 1915

905 Rich Reg. Sect. Sob

Measures to determine Relative Orientation and Scale of Plates MC 5679 and MC 8535

MC 5679

	V	H	V	H	Mean V	Mean H	Diff from Ref. V	Diff from Ref. H
Ref	1557	920	1557	919	155.70	91.95	0.00	0.0
α	~~2161~~ 2353	~~547~~ 1916	2353	1916	235.30	191.60	-~~5~~79.60	99.65
β	406	1732	405	1732	40.55	173.20	115.15	81.25
γ	639	717	639	717	63.90	71.70	91.80	-20.25
δ	2161	547	2160	547	216.05	54.70	-60.45	-37.25
1	2052	992	2052	991	205.20	99.15	-49.50	7.20
12	1562	1111	1562	1111	156.20	111.10	-0.50	19.05
5	1274	1251	1273	1251	127.35	125.10	28.35	33.15

MC 8535

	V	H	V	H	Mean V	Mean H	Diff from Ref. V	Diff from Ref. H	5679-8535 V	5679-8535 H
Ref	1547	~~944~~ 934	1547	934	154.70	93.40	~~90.60~~ 0.00	0.00	0.00	0.00
α	2353	1923	2353	1923	235.30	192.30	-~~90.60~~ 80.60	98.90	+1.00	+0.75
β	401	1761	400	1761	40.05	176.10	114.65	82.70	+0.50	-1.45
γ	626	740	626	740	62.60	74.00	92.10	-19.40	-0.30	-0.85
δ	2148	555	2148	556	214.80	55.55	-60.10	-37.85	-0.35	+0.60
1	2042	1002	2042	1002	204.20	100.20	~~-50~~ -49.50	6.80	+~~1~~.00	+0.40
12	1553	1127	1553	1127	155.30	112.70	-0.60	19.30	+0.10	-0.25
5	1267	1269	1267	1269	126.70	126.90	28.00	33.50	+0.35	-0.35

925

YELLOW

Friday, January, 7, 1916

MC 8302 V H Region near Scut. Sob. 17^h 0· +0 0 (yellow)
p. 112

1 1262 872

Riondu, H. S. Locke B

2 1277 1461

B

2a 1426 11$\overset{4}{\cancel{5}}$9 cf. p 112. Plate meas. with paper mm scale Jan. 21, 1916. H

B

3 834 914

B

4 1142 1576

B

5 870 1178

B

6 1249 1442

4.3 · · 4.2 · 4.25 4.15

4.8 55/ 4.7

7 1224 1119

4.3 · · 4.5 · 4.40 4.45

4.8 43/ 1100 5.0

8 1341 1284

5.3 · · 5.3 · 5.30 5.30 .30

5.8 31/ 1275 5.8

9 1288 1261

5.5 · 30/ 5.4 · 5.45 ~~5.6~~ 5.55

6.0 1253 5.9

Friday, January, 7. 1916
P. C

MC 8302 Region near Scut. Sob.

1

· · · ·

5.8 1288 875 5.9

2

· · · ·

6.3 1298 1465 6.1

2a · · · ·

7.1 1438 1152 7.0

3 820 926

7.3 7.3

4 8.1 1120 1587 8.3

5 849 1190

8.1 8.2

6 9.0 1218 1454 9.0

7 1185 1123

$\overset{9}{\cancel{8}}$.9 9.8 9.8

11 ~~8~~ ~~not seen~~ 9.9

12a ~~9~~

9.2 reject

YELLOW

Friday, January 7, 1916

MC 8302 g

1

4.9p 1303 868

2

5.1 1313 1458 5.0

2a

5.9 1458 1142 5.9

3 6.8 831918 7.0

4 8.0 1126 1580 ~~8.5~~ 7.9

reject wrong image?

5 7.7 g 857 1182 7.8

6 8.9 1223 1446 8.9

7 9.2 g 9.1

8 g

9.9

11 9.8

Friday, January 7, 1916

MC 8302 h

1

4.8 p 1303 859

2

5.0 1315 1459

2a

5.9 1458 11.35

3 6.8 830 909

4 8.0 1126 1570

5 7.7 h 858 1173

6 9.0 1223 1436

7 9.4 H

8 H

9.8

YELLOW

Friday, January 7, 1916

MC 8302 Region near Scut. Sob.

10 1527 1215
6.0 5.9
11 1230 1200
5.2 1191 5.1
12 1528 1061
6.9 7.0
12a 1229 1095
~~1250 1211~~
6.8
~~7.8~~ ~~1211~~ 7.2 7.2
13 1383 1123 cf p 116. Plate meas. with paper mm scale Jan. 21, 1916. W
6.7 6.8
14 1250 1211
7.8 1211 7.9
14a 1230 1038
7.3 7.4
14b 1152 1149
7.4
~~8.4~~ 1149 7.6
15 1316 1157
7.8 1157 7.8
16 1388 1176
8.0 8.0
16a 1253 1197
8.2 1197 8.1
17 1314 1171
~~9.2~~ rej. wrong star? 8.6 8.6
17a 1365 1250
8.8 1250 8.8
17b 1331 1275 cf. p. 117. Plate meas. with paper mm scale Jan. 21, 1916. W
8.9 1275 9.0

MC 8302 Region near Scut. Sob.

17c 1340 1233
8.9 1233 9.3
18 1290 1153
9.9 9.7
19 1277 1130
9.7 11.30 9.9
1

Ref Star 1644 916
rev. 1210 1378
2854 2294
Centre 1427 1147
α 2126 596
rev. 729 1696
2855 2292
Centre 1428 1146
β 678 667
rev. 2172 1626
Centre 1425 1146
γ 786 1783
rev. 2068 509
Centre 1427 1146
δ 2058 1788
rev. 796 503
Centre 1427 1146
Mean Centre 1427 1146

YELLOW

MC 8302

Friday, January 7, 1916

Began Zone I card I 11.26
~~Ended Zone I~~
Began Zone II card 27 11.43 Limits 1468
1415
Began Zone III card 57 12.01 Limits {1415
1368
Began Zone IV card 81 12.13 Limits 1368
1318
Began Zone V

100 per hour

Miss Locke recorded. First time.

~~Friday~~, 8.

YELLOW

MC 8302

10.30

Saturday, Jan. 8, 1916

Ref. Star:
V = 1644
H = 916

			p.104	Means H	From Ref V H	Cor. to Scale of MC 8601 V H
1	1262 871 B	1262 872 B	1262 872	1262. 872	382 44	382 40
2	1276 1462 B	1278 14$\overset{6}{\cancel{7}}$1 B	1277 1461	1277 1461	367 545	360 549
3	834 914 B	834 914 B	834 914	834 914	810 2:	810 $\overset{7}{\cancel{2}}$
4	1142 1575 B	1142 1576 B	1142 1576	1142 1576	502 660	494 666
5	870 1179 B	870 1179 B	870 1178	870 1179	774 263	771 271
6	1249 1442 4.2 . . 4.7 12$\overset{55}{\cancel{94}}$ 1433	1249 1441 41 . . 4.6	1249 1442 ~~4.15,4~~	1249 1442	395 525	389 529
7	1223 1118 4.4 . . 4.9 12$\overset{43}{\cancel{66}}$ 1110	1223 1119 4.5 . . 5.0	1224 1119 ~~4.45~~	1223 1119	$\overset{21}{\cancel{460}}$ 203	$\overset{418}{\cancel{457}}$ 208
8	1341 1283 54 . . 5.9 13$\overset{31}{\cancel{72}}$ 1274	1341 1283 52 . . 5.7	1341 1284 ~~5.30~~	1341 1283	303 368	298 372
9	1288 1262 5.5 . . 6.0 13$\overset{30}{\cancel{18}}$ 1253	1288 1$\overset{2}{\cancel{2}}$61 5.6 . . 6.1	1288 1261 ~~5.55~~	1288 1261	356 345	352 349
2a	1428. 1149 B	1428 1149	1426 11$\overset{4}{\cancel{5}}$9	1427 1149	217 233	214 236

Saturday, Jan. 8, 1916
P.C.

1	. . 6.0 1286 875	. . 5.9	
2 ~~2~~	. . 6.2 1298 1465	. . 6.3	
3	7.2 822 926	7.5	
4	8.3 1118 1587	8.5	
5	7.9 850 1191	~~8.5~~ reject wrong image	8.0
6	9.5 1212 1454	9.6	
7	9.9 1182 1131	9.9	
8			
2a	. . 7.0 1409 1152	. . 7.1	

YELLOW

Saturday, Jan. 8, 1916

MC 8302	g	Diffraction Images
1		
2	5.0 1315 1457	5.0
2a	6.3 1152 1145	6.1
3	6.9 831 919	7.1
4	8.0 1126 1581	7.9
5	7.9 854 1182	7.8
6	9.0 1223 1447	8.9
7	9.4 1191	9.1
8	10.0	10.0
11	9.9 1191 1203	9.9

Saturday, Jan 8, 1916

MC 8302	n	Diffraction Images
1		
2	4.9	5.0
2a	6.2	6.1
3	6.9	7.0
4	7.9.	8.0
5	7.9	7.8
6	9.0	9.0
7	9.5 1191 1113	9.5
8	9.9 1302 1277	9.9
11	9.9 1191 1192	9.9

Saturday, Jan 8, 1916

MC 8302							p107		Means		From Ref. V	H	Corr. to scale of MC8601	
~~2a~~														
10		1528	1215		1528	1214	1527	1215	1528	1215	116	299	113	300
	5.6 6.1	1555	1206	5.3 5.8										
11		1229	1201		1230	1201	1230	1200	1230	1200	414	284	411	289
	4.6 5.1	1268	1191	4.5 5.0										
12		1528	1059		1528	1059	1528	1061	1528	1060	116	144	114	145
	6.9	1523		6.9										
12a		1230	1096		1231	1096	1229	1095	1230	1096	414	180	412	185
	7.4	1244	1086	7.2										
13		1382	1114		↗		1383	1113	1383	1113	261	197	258	~~199~~ 200
	6.8	1403	1106	6.8	1383	1113								
14		1249	1211		1251	1211	1250	1211	1250	1211	394	295	390	299
	7.9	1235		7.9										
14a		1231	1039		1231	1038	1230	1038	1231	1038	413	122	411	127
	7.3	1222		7.5										
14b		1151	1151		1151	1149	1152	1149	1151	1150	493	234	490	239
	7.6	1139		7.7										
15		1316	1156		1316	1158	1316	1157	1316	1157	328	241	325	245
	7.8	1301		7.9										
16		1388	1176		1388	1176	1388	1176	1388	1176	256	260	253	263
	8.0	1372		8.1										
16a		1254	1197		1253	1197	1253	1197	1253	1197	391	281	387	285
	8.5	1232		8.2										
17	≠	1313	1171		1313	1171	1314	1171	1313	1171	331	255	328	259
	8.6	1291		8.7										
17a		1365	1249		~~1359~~ ~~1291~~	~~1262~~ ~~1153~~	1365	1250	1365 1365	1249 1249	279	333	275	336
	8.9	1338		~~8.0~~			8.8							

Saturday, Jan. 8, 1916

					p108		means		From Ref. V	H	Corr. to scale of MC8601	
17b	1332	1215	1331	1215	1331	1215	1331	1215	313	299	309	303
	9.0 1304		9.0									
17c	1338	1238	1339	1237	1340	1233	1339	1236	305	320	301	324
	9.6 1305		9.2		9.3							
18	1291	1154	1291	1153	1290	1153	1291	1153	353	237	350	241
	9.7 1256		9.6									
19	1277	1131	1277	1131	1277	1130	1277	1131	367	215	364	219
	9.8 1239		9.8									
Ref Star	1644	916	1644	916	1644	916	1644	916				
rev.	1210	1376			1210	1378	1210	1377				
Centre	1427				Jan. 7		Mean V	Mean H				
α	2124	597	2123	596	2126	596	2124	596				
rev.	729	1695			729	1696	729	1696				
Centre	1426	1146										
β	678	668	679	668	678	667	678	668				
rev.	2176	1625			2172	1626	2174	1626				
Centre	1427	1146										
γ	787	1783	787	1783	786	1783	787	1783				
rev.	2068	510			2068	509	2068	510				
Centre	1428	1146										
δ	2058	1788	2058	1788	2058	1788	2058	1788				
rev.	798	504			796	503	797	504				
Centre	1428	1146										
											10.56	
Mean Centre	1428	1146										

YELLOW

Saturday, Jan. 8, 1916

MC 8302

Began zone V	card 104	10.57	Limits	1317 1268
Began zone VI	card 136	11.13		1278 1218
Began zone VII	card 171	11.32	limits	1218 1178
Began zone VIII	card 198	11.46	limits	1178 1119
Ended zone VIII	card 222	11.55		

118 per hour

H. S. Locke

Wednesday. January 12, 1916

Ordinary Region Near Sect. Sb.

p.128 Mean 17h 00m 0°.0

MC 8601

Blue

1 . 1414 851

B

2 1438 $\overset{4}{1}$41

B

2a 1584 1125

B

3 988 899

B

4 1306 1556

B

5 1028 1163

B

6 1411 1421 4.05 4.05

B

7 1379 1097

4.6 . . 4.5 . 4.55 4.45 4.50

5.1 1418 1088 5.0

8 1499 1262

5.2 . . 5.3 . 5.28 5.3 . . 5.30 5.29

5

~~4.7~~ 1533 1252 5.8 5.8

Lo

Wednesday. Jan. 12, 1916

MC 8601

P. C

1 4.4 4.3 . .

4.9 1461 4.8

2 . . . .

6.1 1468 1418 6.0

2a . . . .

. 6.1 1616 1103 6.0

3 . . . .

6.9 1011 8.78 7.0

4

7.7 1297 7.5

5 7.9 1018 7.9

6 . .

8.4 1393 1407 8.6

7 9.0 1357 8.9

8 9.8 1468 9.6

Lo

Wednesday, January 12, 1916

MC 8601	g		h		Diffraction Images g	h	
1	Too poor						
2	Too poor						
2a	Too poor						
3	6.7	1009	6.7	1010	6.6	6.8	
4	6.9	1301	6.9	1301	7.0	6.9	
5	7.4	1018	7.5	1018	7.5	7.4	
6	8.0	1395	7.9	1396	8.0	7.9	
7	8.3	1359	8.5	1358	8.3	8.6	
8	8.8	$1\overset{4}{5}75$	8.9	$1\overset{4}{5}74$	8.9	8.9	cf p 130. Plate meas. with paper mm scale Jan. 21, 1916. W

Wed. Jan. 12, 1916

MC 8601	g		h		g	h	h
9	8.9	1419	9.0	1419	9.0	9.5	9.0
10	$\overset{g}{8.9}$	1658	$\overset{h}{9.1}$	1657	9.0	9.2	
11	9.1	1358	9.2	1358	9.2	9.2	

Wednesday. January. 12, 1916

Mc 8601						P.C
9		1448	1241			9 9.9 1413 9.8
	6.0	1466	1231	5.9		P.
10		1686	1189			10 9.9 1651 9.8
	6.2	1712	1181	6.0		
11		1388	1179			
	6.2	1414	1169	6.1		
12		1682	1034			
	6.7	1704	1026	6.9		
12a		1387	1075			
	7.5	1377		7.6		
13		1538	1091			
	7.0	1534		7.5	6.9	
14		1408	1189			
	7.6	1397		7 ~~6~~.3	7.3	
14a		1386	1018			
	6.9	1382		6.9		
14b		1308	1129			
	7.7	1297		7.6		

Wednesday, Jan. 12, 1916

Mc 8601					
15		1473	1133		
	7.7	1460		7.7	
16		1547	1152		
	8.3	1525		8.2	
16a		1412	1176		
	8.1	1395		7.8	7.9
17		1469	1148		
	8.6	1448		8.5	
17a		1523	1226		
	8.1	1506		8.0	
17b		1489	1192		
	8.2	1469		8.3	
17c		1497	1214		
	9.7	1462		9.7	
18		1448	1132		
	9.1	1419		9.2	
19		1432	1108		
	9.7	1398		9.8	
Ref. Star		1798	889	1797 889	
		±			
α		2271	563	2271 564	
rev.		588	1744		
β		829	657	829 656	
rev.		2031	1659		
*					
γ					

Wednesday, Jan. 1~~9~~2, 1916

MC 8601

γ	955	1768	954	1768
rev.	1912	546		
δ	2224	1754	2224	1754
rev.	643	554		

Began zone I card 1 2.13 Limits {1674 1629

Began Zone II card 48 2.32 " {1629 1578

Began ~~zone~~ Zone III card 101 2.52 Limits {1578 1529

Began zone IV card 137 3.06 Limits {1528 1476

Ended zone IV card 175 3.20

160 per hour

H.S. Lo.

Thursday, January, 13, 1916

MC 8601

Ordinary Region near Scutum Sob. 17h 00m 0° 0

			Page 120	P120 (corr)	Means	Diff. from Ref.
Blue	1	1418 853 B	B 1414 851	1418 855	1418 854	382 40
	2	1438 1443 B	1438 1441 B	$14\overset{39}{\cancel{40}}$ 1445	1438 1444	362 $\overset{5}{\cancel{4}}50$
	2a	1587 1129 B	B 1584 1125	1586 1129	1586 1129	214 235
	3	992 902 B	B 988 899	991 901	992 902	808 $\overset{8}{\cancel{8}}6$
	4	1307 1558 B	1306 1556 B	1307 1559	1307 1558	493 $\overset{6}{\cancel{5}}64$
	5	1031 1166 B	1028 1163 B	1030 1165	1030 1166	770 272
	6	1412 1423	1411 1421	1412 1425	1412 1424	388 530
		4.0 . . 4.5 1458 1416	4.1 . . 4.6			
	7	1383 1101	1379 1097	1382 1100	1382 1100	418 206
		4.5 . . 5.0 1422 1092	4.4 . . 4.9			
	8	1502 1267	1499 1262	1501 1266	1502 1266	298 372
		5.3 . . 5.8 1535 1257	5.3 . . 5.8			

Thursday, January, 13, 1916

MC 8601		PC
1	4.5 . . 5.0 1462 832	4.4 . . 4.9
2	5.5 . . 6.0 1472 1422	5.5 . . 6.0
2a	5.5 . . 6.0 1619 1108	5.5 . . 6.0
3	6.5 . . 7.0 1016 880	6.5 . . 6.9
4	7.5 1299 1546	7.6
5	7.9 1019 1152	7.8
6	8.6 1396 1412	8.4
7	8.9 1361 1088	8.9
8	9.8 1469	9.9

Thursday, Jan. 13, 1916

MC 8601	g	h	Diffraction Images g	Diffraction Images h
1	J.P			
2	J.P.			
2a	Too poor			
3	6.8 1012 897	6.7		
4	6.9 1303	6.9		
5	7.1 1024 1171	7.5	7.1	7.3
6	7.9 1398 1427	7.8		
7	8.2 1364 1104	8.3		
8	8.9 ~~[illegible]~~ 1477	9.0		

Lo

Thursday, Jan. 13, 1916

MC 8601	g	h
9	9.0 1422 1247	9.2
10	9.0	9.2
11	9.3 1358 1186	9.2

Lo

Thursday, Jan. 13, 1916

MC 8601		Page 124	Corr Means	PC
9	1449 1243	1448 1241	1450 1245 $\overset{50}{1449}$ $\overset{4}{1243}$ 350 350 9	9.9 1417 1231
	5.9 1479 1232	6.0	2nd reading	9.8
10	1688 1194	1686 1189	1688 1194 1688 1194 112 300 10	9.9 1656
	6.2 1716 1185	6.1	2nd reading	9.9
11	1389 1182	1388 1179	1390 1182 1390 1182 410 288 11	10.0 1356 1169
	6.4 1413 1172	6.2	2nd reading	9.9
12	1687 1039	1682 1034	1685 1039 1686 1039 114 145	
	6.8 1706 1029	6.8		
12a	1389 1078	1387 1075	1390 1078 1390 1078 410 184	
	7.7 1378	7.6		
13	1542 1094	1538 1091	1541 1095 1542 1094 258 200	
	6.9 1538	7.4	7.4	
14	1411 1193	1408 1189	1410 1193 1410 1193 390 299	
	7.4 1401	7.5		
14a	1389 1021	1386 1018	1389 1021 1389 1021 411 127	
	7.0 1384	7.0		
14b	1311 1133	1308 1129	1310 1132 1310 1132 490 238	
	7.6 1301	7.7		

Lo

Thursday, Jan. 13, 1916

MC 8601		Page 125	Corr. Means	
15	1477 1138	7 1473 1133	1475 $\overset{7}{1134}$ 1476 1138 324	244 ~~662~~
	7.7 1464	8.6		
16	1548 1156	1547 1152	1549 1156 1548 1156 252	262 ~~644~~
	8.3 1529	8.5		
17	1472 1152	1469 1148	1471 1152 1472 1152 328	258
	8.5 1451	8.4		
17a	1527 1231	1523 1226	1525 1230 1526 1230 274	336
	8.3 1508	8.2		
17b	1492 1196	1489 1192	1491 1196 1492 1196 308	302
	7.9 1477	8.2	8.2	
17c	1498 1218	1497 1214	1499 1218 1498 1218 302	324
	9.7 1463	9.6		
18	1451 1134	1448 1132	1450 1136 1450 1135 350	241
	9.0 1422	9.0		
19	1436 1112	1432 1108	1434 1112 1435 1112 365	218
	9.9 1398	9.9		
16a	1414 1178	1412 1176	1414 1178 1414 1178 386	284
	7.9 1399	8.0		
Rfst.	1801 894	1797 889 1800 894	1800 894 g = 7.9 h. 8.2	
	4.7 1843	4.8		
rev.	1063 1418			

Lo

Thursday, Jan. 13, 1916

MC 8601

α	2276 571	2276 571
rev.	588 1743	
β	833 657	833 657
rev.	2029 1655	
γ	955 1770	955 1771
rev.	1909 543	
δ	2225 1761	2224 1761
rev.	639 553	

Began zone V	card 176	11.43	Limits	1474 1428
Began zone VI	card 226	12.03	Limits	1428 1378
Began zone VII	card 273	12.23		1378 1328
Began zone VIII	card 325	12.44	Limits	1328 1278
Ended zone VIII	card 369	1.02 148 per hour		

Finished second meas. Comp. Stars 1 15

Lo.

YELLOW

11.00

Thursday, ~~Jan.~~ Feb. 3, 1916

MC 8519	v H	Poor Region Scut. Sob.
1	1411 1152 B	B
2	1872 593 B	B
3	1898 615 B	B
4	1488 965 B	B
5	1847 1431 B	B
6	2124 *6$\overset{7}{8}$2 ~~1751 989~~ B	B
7	1842 1167 B	B
8	1213 1232 B	B
9	1751 989 B	B

* mistake of unit. Plate meas. on paper ruled in mm. W April 26, 1916.

YELLOW

Thursday, Feb. 3, 1916

MC 8519			P. C.
1	$\overset{5.2}{\underline{5.7}}$ 1438 1154	$\overset{5.4}{\underline{5.9}}$	
2	$\overset{5.4}{\underline{5.9}}$ 1898 597	$\overset{5.2}{\underline{5.7}}$	
3	$\overset{6.2}{\underline{6.7}}$ 1917	$\overset{6.2}{\underline{6.7}}$	
4	7.2 1477 977	7.2	
5	7.8 1828	7.8	
6	~~8.9 1721 1003~~ 7.9 2106	7.9	
7	8.5 1818 1179	8.5	
8	7.9	8.0	
9	8.9 1721·1003	8.9	

YELLOW Thursday, Feb. 3, 1916

MC 8519	g		h	Diffraction Image	
1	4.5 5.0		4.4 4.9		
2					
	4.3 4.8	1916	4.7? 5.2?		
3					
	5.7 6.2	1923	5.6 6.1		
4	6.8	1485	7.0		
5	7.4	1837	7.5		
6	~~8.8~~	~~1727~~			
	8.0	2108	7.6	7.8	7.7
7	8.1	1825	8.0		
8	7.7	~~19~~	7.8		
9	8.8	1727	8.8		
10	8.7		8.5		
11	8.6	1748	8.4		
12	9.0		9.2		
13	9.8		9.9		
14	9.9	1574	9.9		

YELLOW

Thursday, Feb. 3, 1916

MC 8519 PC

10 1354 853 8.8 1325 8.9
B B

11 1771 832 8.8 1742 845 8.7
B B

12 1305 927 9.7 ~~[illegible]~~ 1268 938 9.6
4.6 4.4
5.1 4.9

13 1378 982 10.1? 1333
5.1 4.9
5.6 5.4

14 1612 1001 n.S
5.4 5.5
5.9 1642 6.0

15 1503 915
6.3 6.3
6.8 1522 905 6.8

16 1573 1078
6.4 6.5
6.9 1592 7.0

17 1536 1049
7.1 1528 7.1

18 1382 895
7.4 1371 7.4

19 1443 976
7.3 1435 7.2

20 1609 1042
7.2 1602 7.1

YELLOW

Thursday, Feb. 3, 1916

MC 8519

21 1539 1016
8.4 1518 8.3

22 1535 954
8.8 1511 8.7

23 1541 933
8.9 1514 8.9

24 1528 943
reject
~~9.7~~ 1493 9.2 9.2

25 1498 993
9.9 1461 10.0

26 7 7

Wrong Star 27 1473 1028
Mar. 22, 1917 9.7 1438 9.5

11.23

YELLOW

Thursday, Feb. 3, 1916

MC 8519			P. C.	
Ref. Star	1985 482	1985 481		
rev.	B 874 1815		6.8 2000	6.8
α	2156 ~~1576~~ rej.	2156 1573		
rev.	704 722			
β	777 1636	778 1635		
rev.	2081 662			
γ	·849 503	849 502		
rev.	2009 1794			
δ				

Began zone I card I 11.24 Limits {1909 1858

Began zone II card 30 11.42 Limits {1858 1809

Began zone III card 54 11.52 Limits {1810 1758

Began zone IV card 77 12.02 Limits {1758 1709

Began zone V card 100 12.12 Limits {1710 1657

Began zone VI card 132 12.31 Limits {1657 1604

Began zone VII card 167 12.45 Limits {1607 1553

H.S. Locke reader

Began zone VIII card 201 1.00 Limits {1558 1507
Ended " 235 1.14 130 an hour 1.31

10.35

Wednesday, March 1, 1916

MC 5593	Poor Region	Scut. Sob. 2nd. reading		mean V~~H~~ H
~~Blue~~ 1	1358 1363 B	1358 1363 B		1358 1363
2	1826 810 B	1826 811 B		1826 810
3	1850 833 B	1850 832 B		1850 832
4	1437 1178 ~~1826~~ ~~810~~ B	1437 1177 B		1437 1178
5	1789 1646 B	1790 1646 B		1790 1646
6	2077 892 B	2075 890 B		2076 891
7	1788 1382 B	1788 1382 B		1788 1382
8	~~1168~~ 1440 3.6? 4.1?	1158 1440 B	1158	1158 1440
9	1699 1205 4.1? 4.6? 1745	1699 1205 B		1699 1205

Wednesday, March 1, 1916

Mc 5593		2nd reading	P. C	
1	$\overset{4.5}{\underline{5.0}}$ 1397 1338	$\overset{4.5}{\underline{5.0}}$ 1398 1338		
2	$\overset{4.2}{\underline{4.7}}$ 1859 786	$\overset{4.9}{\underline{5.4}}$ 1860 785	$\overset{4.6}{\underline{5.1}}$	very difficult
3	$\overset{5.9}{\underline{6.4}}$ 1875 808	$\overset{5.6}{\underline{6.1}}$ 1878 808		
4	$\overset{6.4}{\underline{6.9}}$ 1455 1152	$\overset{6.3}{\underline{6.8}}$ 1457 ~~1452~~	1457 1152~~+4~~	
5	6.8 1785 1631	6.9 $1\overset{7}{6}85$ 1631		
6	7.2 2068 875	7.1 2069 875		
7	7.4 1778 ~~1377~~	7.5 1778 1367	1367	
8	7.7 1146 1425	7.8 1143 1425		
9	8.6 1678 1189	8.4 1678 1189		

Wednesday, March 1, 1916

Mc 5593		Mean V H entered only when different from 2nd reading 2nd reading	P.C.	2nd reading
10	1305 1063	1064 1305 ~~1164~~	8.4 1284 1048	8.4 1284 1048
	4.3? 4.8? 1349 1053	4.3? 4.8? 1348		
11	1721 1049	1721 ~~1710~~ 1049	8.7 1697 1033	8.9 1695 1033
	~~X~~ 4.3 4.8	4.4 4.9 1762 1041		
12	1257 1136	1256 1136 1255 1137	9.0 1229 1120	9.0
	5.4 5.9 1287 1127	5.3 5.8 5.0 5.5 1290 1127		
13	1327 1193	1327 1192	9.5 1293 1176	9.7
	5.5 6.0 1355 1183	5.3 5.8 1357 1183		
14	1560 1214	1560 1214	10.0 1521 1198	10.0 1521 1199
	6.1 6.6 1582	5.9 6.4 1585		
15	1452 1128	1452 1128		
	6.4 6.9 1472	6.5 7.0 1471 #		
16	1523 1292	1522 1521 1292		
	6.7 1518	6.7 1519		
17	1484 1261	1484 1483 1262		
	7.1 1478	6.8 1479	7.0	
18	1332 1106	1332 1106		
	7.2 1324	7.3 1324		
19	1392 1188	1392 1391 11.88		
	7.5 1382	7.5 1381		
20	1557 1253	1254 1557 1255		
	7.6 1547	7.6 1547		

Wednesday, March 1, 1916

Mc 5593		2nd reading	3rd reading	mean V H
21	~~1486 1249~~	1488 1227	1488 1227	1488 1227
	~~7.2 1478~~	7.9 1472	8.0 1472	
22	1485 1168	1484 ~~1267~~	1167	1484 1168
	8.5 1463	8.5 1462		
23	1490 1147	1490 1146		1490 1146
	8.7 1467	8.7 1467		
24	1478 ~~1107~~	1478 1157	1157	1478 1157
	9.0 1450	8.9 1451		
25	1447 1204	1447 1204		1447 1204
	9.7 1412	9.6 1412		
26	1441 1227	1441 1227		1441 1227
	9.8 1407	9.7 1407		
27	n.s	n.s		
18a	1286 1151	1285 1151		1286 1151
	7.6 1274	7.7 1273		
18b	1209 1213	1209 1214		1209 1214
	9.0 1180	9.1 1179		

Wednesday, March 1, 1916

Poor Reg. Scut. Sob.

MC5593

Ref. Star	1940	700	1939	700	7.0	1933	684
B							
rev.	921	1603					
α	2097	1794	2097	1793			
rev	768	510					
β	720	1838	720	1838			
rev.	2142	470					
γ	805	709	805	709			
rev	2057	1600					
δ							

Began Zone I card 1 10.57 Limits {1861 1809

Began Zone II card 24 11.08 Limits {1809 1759

Began Zone III card 39 11.18 Limits {1759 1708

Began Zone IV card 61 11.27 Limits {1709 1658

Began Zone V card 83 11.37 Limits {1658 1609

Began Zone VI card 112 11.50 Limits {1610 1557

Began Zone VII card 135 12.00 Limits {1555 1505

Began Zone VIII card 172 12.17 Limits {1508 1458. 4.00

20. Ended Zone VIII card 201 [illegible]

Wednesday, April 5, 1916

Region near Scut. Sob

Stars omitted on Blue Plate MC ~~8302~~ 8601

	V	H	V	H	Means		Diff from ref star V H	Cor V (-1797)	H (-889)	Cor. Read.
Ref. Star	1797	889					− 1797 − 889			
12	1683	1032					~~+ 1797~~			
13	1539	1089					1797 888			
7	1379	1096	1380	1095			1797 889			
14 b	$13\overset{0}{7}9$	1129	1308	1129			1797 891	~~219~~		
~~15~~.	1578	992	1577	991	1578	992		219	102 meas.	
	~~8.4~~ 9.0 1550		9.0 1549		9.00	1550	10			
.	1572	991	1572	991	1572	991		225	102 meas.	
	8.9 1547		8.9 1546		890	1546	10			
.	1570	986	1570	985	1570	986		227	96 meas.	
	7.8 1557		7.9 1555		7.85	1556	05			
15	1473	1132					1798 888			
	7.6		77		7.65		03			
17 b	8.1		8.2		8.15		00			
14	7.2				7.2					
.	1328	1140	1328	1139	1328	1140		469^{+1}	$25\overset{1}{0}^{-2}$	$\overset{75}{8.8}$
	8.7 1303		8.7 1303		8.70	1303	00			
. 1	1339	1137	1340	1137	1340	$1\overset{1}{8}37$		457^{+1}	248^{-1} meas.	
	8.6 1317		8.7 1316	+	8.65	1316	05			
.	1331	1121	1331	1121	1331	1121		466^{+1}	232^{-2} meas.	
	8.5 1309		8.6		8.55		05			
10	8.0		8.0		8.00					
Blue Card written	$156\overset{2}{6}$	$\overset{85}{977}$	$156\overset{2}{6}$	983	$156\overset{2}{6}$	985		235	96	9.65
Entered in Table	96		9.6		9.60		38 8 8048			

Reg. Near Sout. Sob.

Stars Omitted on Yellow Plate MC 8302

					Means		Diff. V	H	Corr (+1643)(-913)		
Ref.	1643	915					1643	9 15			
13	1383	1112					1642	911			
15	1316	1157					1640	912			
17b	1330	1214					1637	912			
	8.9					00					
Yellow card written. Entered in Table	1418	1017	1418	1016	1418	1016	~~1673~~ ~~1418~~	~~815~~ ~~1016~~	225	103	8.95
	9.0		9.0		9.00						
yellow card written. Entered in Table.	1416	1009	1416	1009	1416	1009			227	96 ~~106~~	8.15
	8.3		8.1		8.20						
meas.	1408	1008	1408	1009	1408	1008	1643	913	235	95	R
	9.8		9.8		9.80	-10 Corr. by -05					

Thursday, April 13, 1916

Reg. Near Sout. Sob.

Blue MC 8601

V = ~~137~~ 129 H = ~~245~~ 273

Estimate on Yellow 8302

12.99 17b 3 S 1 17c 13.23 $\frac{24}{4}$ = 0.6 ✓ 13.17

Blue V = 192 H = 304

Estimate on Yellow 8302

12.36 16a 4 S 0 17 (12.67) 0 17a (12.85) 2 17b (12.99) 12.76
12.67
12.85
12.79 ✓ 12.77 01 10 08 02

Blue V = 230 H = 204

Est. on Yellow 8302

12.85 17a 1 S 2 17b 12.99 $\frac{14}{3}$ = .05 12.95 12.79 ✓ 12.94

Blue V = 367 H = 439

Est on Yellow 8302

12.99 17b 1 S 2 17c 13.23 $\frac{24}{3}$ = 0.8 ✓ 13.15

The above reductions were made by method of proportions, instead of assuming that a grade equals 0.1 magn., except for magn. 12.77

Yellow V = 123 H = 378

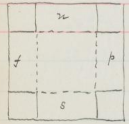
Est. on Blue 8601

13.86 17 3 S 2 18 14.50 14.16 14.30 14.23 07 07

Tuesday, April 25, 1916

Number of Stars to be Measured in Catalogues
"4° square"   B2 (milky way) and B6 (poor)

	No. Spectra		Added			Whole No.				All	Corners Omitted
	All	Corners	2° sq.	p, f.	n, s	Corners	2° sq	p, f	n, s		
B2	263	43	~~141~~ 86	80	60	43	141	135	120	439	396
B6	117	23	34	34	29	23	73	59	58	214	191



All stars as faint as the eleventh magnitude on blue or yellow plates were marked after transferring numbers from spectrum plate observed by Miss Cannon. The corners, 1° square, were omitted in adding stars.

In region B2 the number of stars added in square 2° on a side ~~was~~ (86) was nearly as large as the whole number (97) added in Region B6.

If corners are omitted in discussion, The number available for B2, including additional stars in reg. 2° square is 306. The number available for B^{6}2, including all additional stars, is 191.

For B2 measure add. stars only in 2° square
" B6 " all add. stars.

Thursday April 27, 1916

Sheet 9
Blue MC 7143

10.10 H.S. Reg B² Cat: 4° Square

1

1 1266 1470
B

2 1584 646
B

3 1888 830 B
B

4 1306 895
B

5 1096 788
B

6 1145 689
B

7 1119 1170
B

8 1472 1245
B

9 1401 900
$\overset{5.1}{\underline{5.6}}$ 1435 890 $\overset{4.7}{\underline{5.2}}$ $\overset{5.0}{\underline{5.5}}$ $\overset{4.93}{\cancel{4.85}}$ I 2 2 $\underline{2}$ 1
$\underline{51a}$.

Thursday April 27, 1916

MC 7143

P. C

	1		Mean.	
	$\overset{6.6}{\underline{7.1}}$ 1278 1462	$\overset{6.6}{\underline{7.2}}$	6.60 00	
assume each reading out by a unit.	2 $\overset{6}{\cancel{7}}.8$ 1582 623	$\overset{6}{\cancel{7}}.9$	6.90 00	
	3 $\overset{7.1}{\underline{7.6}}$ 1889 809	7.2	7.15 10	
	4 7.7 1232 882	7.5	7.60 11	
	5 7.7 1079 776	7.6	7.65 10	
	6 7.7 1128 679	7.8	7.75 10	
	7 7.8 1100 1156	7.6	7.70 11	
	8 7.9 1450 1233	7.9	7.90 00	
	9 9.8 1359 889	9.7	9.75 01	

Thursday April 27, 1916

MC 7143

	g	h tripod		Diffraction
1	~~7.0~~ $66^{6.1}$ ~~1595~~	~~630~~	6.1 $\underline{a}$ ..	
~~2~~				
2	$\underline{6.7}^{6.2}$		6.20 00	
~~3~~		$\underline{6.7}^{6.2}$		
~~3~~				
	$\underline{6.8}^{6.3}$	$\underline{6.9}^{6.4}$	6.35 $\underline{1}$0	
~~4~~				
4		6.8	6.80 00	
~~5~~	$\underline{7.3}^{6.8}$			
~~5~~		6.7	6.65 01	
	$\underline{7.1}^{6.6}$			
~~8~~				
6	6.9	6.9	6.90 00	
~~9~~				
7X	6.9	6.8	6.85 10	
8X	7.4	7.2	7.30 1$\underline{1}$	
9X	8.6	8.6	8.60 00	
10X	7.7	7.8	7.75 $\underline{1}$0	
11X	7.6	7.9	7.75 $\underline{2}$1	

MC 7143

				Diffraction
12	7.7	8.1	7.90 $\underline{2}$2	
13	7.9	7.8	7.85 10	
14	8.0	8.0	8.00 00	
15	8.2	8.3	8.25 01	
16	7.9	8.3	8.10 $\underline{2}$2	
17	8.8	8.9	8.85 01	
18	8.7	8.9	8.80 $\underline{1}$1	
19	9.0	9.4	9.20 $\underline{2}$2	
20	9.6	~~9.1~~ 9.3	9.45 2$\underline{1}$	
21	8.9	9.2	9.05 $\underline{1}$2	
22	–	9.9	9.9 · $\underline{a}$	
24a	10.0		10.0 $\underline{a}$.	

Thursday April 27, 1916

MC 7143

10 1157 1200 Mean.

B

11 ~~1316 1234~~

B

12 1279 1121

$\overset{4.4}{\underline{4.9}}$ 1321 1112 4.4 a

13 1403 1061 B

$\overset{43}{\underline{4.8}}$ 1459 1000 43 a

14 13.95 1085

$\overset{4.4}{\underline{4.9}}$ 1439 1075 4.4 a

15 1405 1302

$\overset{4.6}{\underline{5.1}}$ 1442 1292 4.6 a

16 1450 1259

$\overset{4.5}{\underline{5.0}}$ 1470 1550 4.5 a

224 = 17 1296 1064

5.00 3 30

$\overset{4.7}{\underline{5.2}}$ 1360 1054 $\overset{5.3}{\underline{5.8}}$ $\overset{50}{\underline{5.5}}$

18 1270 1194

$\overset{5.4}{\underline{5.9}}$ 5.50 11

$\overset{5.6}{\underline{6.1}}$ 1299 1183

Thursday April 27, 1916

MC 7143

P. C

10 8.6 1130 1189 8.6 8.60 00

11 ~~9.0~~ 8.9 ~~1315 1224~~ 1285 1221 8.8 8.85 10

12 8.8 1248 1110 8.9 8.85 01

13 8.8 1307 1110 8.7 8.75 01

14 8.9 1365 975 9.1 9.00 11

15 9.6 1365 1290 9.2 9.40 22

16 ~~9.7~~ reject 1390 1248 9.1 $\overset{9.05}{9.0}$ 10

17 ∇

18 10.1? 1225 1181 10.1? a

Thursday April 27, 1916

MC 7143

19		1496 1052		Mean	
	6.0 6.5	1529 1023		6.0	a.
20		1491 1070		6.15	0 1
	6.2 6.7	1512 1060	6.1 6.6		
21		1335 1147			7
			6.1 6.6		
	6.2 6.7	1357 1438		6.15	0 1
22		1362 1201			
			6.4 6.9		
	6.4 6.9	1382 1192		6.40	0 0
23		~~1469~~ 1349 1068	6		
			6.2 6.7		
	6.3 6.8	1364 1057		6.25	1 0
24		1600 1300			
	6	1438 1301	6.6 7.1	6.6	. a
25		1423 1080	7.2		
	7.3	1415 1090		7.25	1 0
26		1702 1602	7.5		
	7.4	1602 1602		7.45	0 1
27		1430 1090	7.5		
	7.7	1429 1090		7.60	1 1
28		1504 1506	7.8		
	7.9	13.38 1507		7.85	1 0
29		1378 1102	7.7		
	7.8	1372 1102		7.75	0 1

Thursday April 27, 1916

30		1371 1092	8.2		
	8.2	1382 1092		8.20	0 0
31		1342 1107			
	9.0	1323 1106		9.0	a.
32		1364 1105			
	9.9	1328 1105		9.9	a.
33		1362 1104			
	10.0	1328 1104		10.0	a.
34					
35					
31b		1359 1093			
	9.0			9.0	a.
31a		1349 1140			
	10.2?	1810 1140			
24a		1440 1206	6.7 7.2		
	6.8	1438 1206		6.75	0 1
24b		- 1362 1260			
	7.0	1357 1260		7.0	a.

1045

12.40

Thursday, April 27, 1916

B 2 Catalogue 4° Square MC 7143 (blue)

Began Catalogue 10.45
End of Zone I card 171 11.00
Begin Zone II card 278 11.00
End of Zone II Card 67 11,15
Beginning of Zone III Card 276 11.15
End of Zone III Card 35 11.45
Beginning of Zone IV Card 268 11.46
End of Zone IV Card 35 12.30

For additional stars, see pages 200, 201

Friday April 28, 1916

9.50 H.S Reg B2 Cat 4° Square P.C MC 7143

1	Sc1 B	sc2	B		7.2^{67}	7.2^{67}	6.70 00
2	B		B		7.1	7.0	7.05 10
3	B				$7.7^{7.2}$	7.2	7.20 00
4	B		B		7.6	7.6	7.60 00
5	B		B		7.6	7.5	7.55 01
6	B		B		7.8	7.7	7.75 01
7	B.		B		7.7	7.7	7.70 00
8	B		B		7.9	7.9	7.90 00
9	B		$\overset{52}{57}$	52 a	9.7	9.8	9.75 10
10	B		B		8.7	8.7	8.70 00
11		$4.5^{4.0}$	B	4.0 a.	8.7	8.8	8.75 10
12		$4.8^{4.3}$	B	4.3 a.	8.8	8.9	8.85 01
13		$4.8^{4.3}$	$4.8^{4.3}$	4.30 00	8.7	8.7	8.70 00
14		$5.0^{4.5}$	$4.9^{4.4}$	4.45 10	$\overset{9}{8}.0$	9.0	9.00 9.50 2 20
15		$5.0^{4.5}$	$5.1^{4.6}$	4.55 10	9.3	9.7	9.5
16		$4.7^{4.2}$	$5.0^{4.5}$	4.95 21	9.3	9.1	9.20 11
17		$5.6^{5.1}$	$5.7^{5.2}$	5.15 10	7	7	.
18		$5.9^{5.4}$	$6.0^{5.5}$	5.45 01	10.1	[illegible]	10.1 a.
19		$6.3^{5.8}$	$6.2^{5.1}$	5.75 01			
20		$6.3^{5.8}$	$6.7^{6.2}$ $6.6^{6.1}$	6.03 221			
21		$6.6^{6.1}$	$6.6^{6.1}$	6.10 00			
22		$6.8^{6.3}$	$6.9^{6.4}$	6.35 10			
23		$6.8^{6.3}$	$6.6^{6.1}$	6.20 11			
24		$7.0^{6.5}$	$6.9^{6.4}$	6.45 10			
25	7.0		7.2	7.10 11			
26	7.3		7.5	7.40 11			
27	7.3		7.6	7.45 12			
28	7.7		7.7	7.70 00			
29	7.7		7.8	7.75 10			

Friday April 28, 1916

MC 7143

Diffraction

	g	h	
1	$6.5^{6.0}$	$6.3^{5.8}$	5.90 11
2	$6.8^{6.3}$	$6.9^{6.4}$	6.35 10
3	$6.8^{6.3}$	$6.8^{6.3}$	6.30 00
4	$7.1^{6.6}$	$7.1^{6.6}$	6.60 00
5	$7.3^{6.8}$	$7.2^{6.7}$	6.75 01
6	6.8	$7.4^{6.9}$	6.85 01
7	6.9	6.9	6.90 00
8	7.3	7.2	7.25 10
9	8.5	8.6	8.55 10
10	7.6	7.7	7.65 01
11	7.4	7.2	7.30 11
12	7.6	7.5	7.55 01
13	7.8	7.9	7.85 01
14	8.2	8.1	8.15 01
15	8.0	7.5	8.25 23
16	8.2	8.5	8.35 21
17	8.7	9.1	8.90 22
18	$\overset{7}{8.6}$	9.0	$8.\overset{8}{9}5$ $\overset{12}{2}$
19		8.9	8.9
20		9.2	9.2
21			
22			
23		9.9	99
24			

Friday April 28, 1916

MC 7143.

B2 Catalogue 4° Square

	Sc¹	Sc 2			
24a		$7.2^{6.7}$	$7.3^{6.8}$	6.75	10
24b		$7.3^{6.8}$	6.9	6.85	01
30	8.3		8.2	8.25	10
31	8.9		9.0	8.95	10
31b	8.8		8.9	8.85	01
32	10.0		9.9	9.95	01

Begining Zone ~~X~~V Card 26~~1~~3 10,05
End of Zone V Card 22 10.40
Begining Zone VI Card 262 10.40
End of Zone VI Card 16 11.15
Begining of Zone VII Card 137 11,15
End of Zone VII Card 7 11.30
Begining of Zone VIII Card 280 11.30
End of Zone VIII Card 202 11.50

For this plate, numbers were copied from Spectrum plates on which stars were classified by Miss Cannon. See Remark on cover of Plate MC 7143.

In measuring this catalogue, two images were usually measured of each star, selected from principal image, prismatic companion, and grating image g.

Friday April 28, 1916.

MC 7143

Diffraction
g h
10,0

2 45 Diffr.

	g	L
15	7.9	8.1
16	8.2	8.1
17	8.7	9.0
18	8.8	8.9
19	9.0	9.0
20	9.2	9.4
21	9.1	9.2
22	9.5	9.8
23	9.6	9.9
24	9.7	9.9
24a	10.0	10.0
24b	10.1	10.1
25	7	

3.00

Recd. L.

Re-measured because some images were omitted this morning.

See also p. 200.

10:05
12,05

Wednesday May 24, 1916

9.40 General measure of stars in Kapteyn Area 1.
North Polar, Sequence

MC 6921

x	V H		Mean V Mean H
1	Off plate		
2	" "		
3	1 693 369 B	6.93 369	6930 3690
4	Off plate		
5	1099 .947 B	1100 946	10995 9465
6	1633 1489 B		
7	2116 1557 B	B 2117 1558 (copied from p. 169	21165 15575
8	1159 1132 B		
9	1116 1197		

Wednesday May 24, 1916

Polar Sequence

MC 6921

Diff. V		Sc 1	Sc 2		Corr. 2d scale −0.3 P C adopt	p.179 +.1.0	Mean Reading
	1						
	2						
					Diff.		
	3	4.3 4.8	4.2 4.7	4.25 4.75 00	~~4.25~~ 4.45		
	4						
42	5	4.5 5.0 1142	~~4.9~~ ~~1137 945~~ 4.5 5.0	4.50 00	4.70	1.79 4.~~7~~ 5	4.63
37	6	5.1 5.6 1170 1497	4.9 5.4	5.00 .1	5.20	1.91 4.~~7~~ 8	5.0~~6~~ 7
35	7	5.3 5.8 2151 1573	5.3 5.8 2117 1558	5.30 00	5.50	1.81 5.~~3~~ 4	5.47
26	8	5.8 6.3 1185 1138	6.0 6.5		5.90 .1 6.10	2.13 6.~~05~~ 1	6.02
24	9	6.3 6.8 1140 1262	6.5 7.0		6.50 4 .1 6.60	2.23 6.~~60~~ 70	6.55

Wednesday May 24, 1916

MC 6921

9 h

Diffraction

1

2

3

4

5

6

7

8

9

Wednesday May 24, 1916

MC 6921

10

11

12

13

14

15

16

17

18

19

20

21

22

23

Wednesday May 24, 1910

Polar Sequence

MC 6921

Diff. V							Adopt		p.179 +.10	Mean Red.
	10		1534 1136							
		B								
	11		1787 128							
		B								
	12		1824 1102							
		B								
	13		1760 1053							
4^3		4.0 4.5	1803 1043		4.0	a	4.2	6.10		4.2
	14		1584 1076							
		B								
44		4.4 4.9	1628 1066	4.5 5.0	4.45	01	4.65	6.00	4.68	7 4.66
	15		1628 1188							
34		4.7 5.2	1662 1179	4.5 5.0	4.60	11	4.80	6.28	4.8	4.80
	16		1609 998							
34		5.1 5.6	1643 989	5.1 5.6	5.10	00	5.30	6.10	5.1	5.23 ~~4.97~~
	17		1693 991							
				5.3	5.25	00	5.45	6.18	5.5	5.47
34		5.2 5.7	1727 981	5.8 ~~8.8~~						
	18		1668 1111							
25		5.7 6.2	1693 991	5.5 6.0	5.60	00	5.80	6.26	5.9	5.82

Wednesday May 24, 1910

Polar Sequence

MC 6921

Diff. V		Prismatic Comp.					PC Adopt	Diff.	p. 79	Mean Red.
24	10	6.4 6.9	1548 1192	6.4 6.9	6.40	00	6.60	2.42	7 6.65	6.68
8	11	7.4	1779 1223	7.3	7.35	01		2.20	3 7.25	7.35
7	12	7.6	1817 1118	7.6	7.60	00		2.26	6 7.55	7.62
12	13	7.9	1748 1070	8.0	7.95	10		2.35	8.15 ~~7.96~~	8.05
16	14	8.2	1568 1092	8.3	8.25	01		2.40	2 8.15	8.25
19	15	8.6	1609 1202	8.7	8.65	01		2.43	8.6	8.63
24 ~~77~~ x	16	8.9	1375 1012		8.9	a		2.50	8.8	8.85
14x ~~36~~	17	9.0	1679 1006	8.9	8.95	01		2.68	9.0	8.97 ~~8.93~~
	~~18~~				03					
28	18 ~~19~~	9.1	1640 1016		9.1	a		2.96	9.8	9.45
					00					

Wednesday May 24, 1916

Polar Sequence

MC 6921

Diff V							Adopt		p.177 +10	Mean Reading
	19		1663 1058							
22		6.2 6.7	1685 1649	6.0 6.5	6.10	1 1	6.30	6.12	6.10	6.20
	20		1636 1067							
		6.2 6.7	1658 1058	6.3 6.8	6.25	0 1	6.45	6.28	655	6.50
	21		1694 1024							
		6.8	1691 1024	6.7	6.75	0 1		6.21	685	6.80
	22		1671 921							
		6.8	1668 921	7.0	6.90	1 1		6.29	7.00	6.95
	23		1646 1049							
		6.9	1641 1050	6.9	6.90	0 0		6.44	690	6.90
	24		1666 1042							
		7.3	1656 1042	7.3	7.30	0 0		6.34	7.30	7.30
	25		1608 1057							
		7.6	1657 1057	7.5	7.55	0 1		6.32	7.6	7.57
	26		1648 1063							
		7.7	1638 1065	7.7	7.70	0 0		6.63	7.7	7.70
	27		1616 1085							
		7.8	1601 1085	8.0	7.90	1 0		6.79	7.9	7.90
	28		1663 1128							
		8.0	1648 1128	8.3	8.15	2 1		6.96	8.3	8.20
	29		1655 1126							
		8.9	1629 1126	9.0	8.95	1 0		6.71	8.9	8.93
	30		1675 1125							
		8.9	1639 1125	9.0	8.95	1 0		7.09	9.0	8.97
	31		1656 1083							
		9.0	1629 1073	9.0	9.00	0 0		7.22	9.1	9.03
	32		1617 1072							
		9.7	1582 1072	9.5	9.60	1 2		7.02	98	9.67

Wednesday May 24, 1916

Kapteyn Area 1

MC 6921

33 4

34 7

35

V ✱ Magn. V-C X-C X^2 y^2 sum dist

p

C

1401 10 ☐

180 16000

11480

sum [illegible]

Beginning Zone III card 81 Limits {1392 1440

End of Zone III card 131 11.10

Beginning of Zone IV card 130 Limits {1438 1492

End of Zone IV card 174 11.30

Beginning of Zone V Limits {1491 1541

End of Zone V card 217 11.45

Beginning of Zone VI card 218 Limits {1520 1572

End of Zone VI card 253 12.05

Wednesday May 24, 1916

Polar Sequence MC 6921

Diff V							Adopt		p.177 +10	Mean Reading
	19		1663 1058							
22		6.2 6.7	1685 1049	6.0 6.5	6.10	1 1	6.30	6.12	6.10	6.20
	20		1636 1067							
		6.2 6.7	1658 1058	6.3 6.8	6.25	0 1	6.45	6.28	655	6.50
	21		1694 1024							
		6.8	1691 1024	6.7	6.75	0 1		6.21	685	6.80
	22		1671 921							
		6.8	1668 921	7.0	6.90	1 1		6.29	7.00	6.95
	23		1646 1049							
		6.9	1641 1050	6.9	6.90	0 0		6.44	690	6.90
	24		1666 1042							
		7.3	1656 1042	7.3	7.30	0 0		6.34	7.30	7.30
	25		1608 1057							
		7.6	1657 1057	7.5	7.55	0 1		6.32	7.6	7.57
	26		1648 1063							
		7.7	1638 1065	7.7	7.70	0 0		6.63	7.7	7.70
	27		1616 1085							
		7.8	1601 1085	8.0	7.90	1 0		6.79	7.9	7.90
	28		1663 1128							
		8.0	1648 1128	8.3	8.15	2 1		6.96	8.3	8.20
	29		1655 1126							
		8.9	1629 1126	9.0	8.95	1 0		6.71	8.9	8.93
	30		1675 1125							
		8.9	1639 1125	9.0	8.95	1 0		7.09	9.0	8.97
	31		1656 1083							
		9.0	1629 1073	9.0	9.00	0 0		7.22	9.1	9.03
	32		1617 1072							
		9.7	1582 1072	9.5	9.60	1 2		7.02	9.8	9.67

Wednesday May 24, 1916

Kapteyn Area 1 MC 6921

33	~~7~~			
34		7		
35				
36				
~~14~~				
29	2210 1379 2209 1379			
	B		4.9 p 2253 1356	
35				

Began Cat 10.10 Kapteyn Area 1

Beginning Zone I card 1 10.10

End of Zone I card 35 10.25 {1341 1392

Beginning of Zone II card 36

End of Zone II card 80 10.48

Beginning Zone III card 81 Limit {1392 1440

End of Zone III card 131 11.10

Beginning of Zone IV card 132 Limit {1438 1492

End of Zone IV card 174 11.30

Beginning of Zone V Limits {1491 1541

End of Zone V card 217 11.45

Beginning of Zone VI card 218 Limits {1520 1572

End of Zone VI card 253 12.05

Wednesday May 24, 1916

MC 6921

Beginning of Zone VII card 254 ^{1215} Limits $\left\{\begin{matrix}1588\\1640\end{matrix}\right.$
End of Zone VII card 301 1235
Beginning of Zone VIII card 302
End of Zone VIII card 350 1255

It was intended to include stars as far as the magnitude 15.5, or to about the reading 8.6 on the scale, though many fainter stars were included.

On this plate the zones ran up and down instead of from right to left, as usual. This may have led to larger accidental errors than would otherwise have been the case.

Wednesday May 24, 1916

Sequence for Kapteyn areal

MC 6921

Reading
p.169 p.177
~~4.7, 4.7 4.5~~
5.3, 5.4, 4.8

		No. Card	V	H	Prism. Comp.		Diff V		Card Read			Mean Reading	[Mag. Sent.] Diff
1	1633 1479	150	163^2	1489	54.7 5.0	1675	42	1498	5.2 5.5 p	1669	1498	5.02 4.95 p	2.09
	B												
2	1669 1498	191	16$\overset{6}{5}$9	1497	7.8	1658	11	1513	7.8 p	1657	1512	7.80 p	2.20
	B												
3	1618 1588	237	1619	1588	7.7	1610	8	1605	7.8 p	1607	1603	7.75 p	2.29
	B												
4	1699 1589	229	1699	1589	7.9	1685	14	1605	7.9 p	1688	1604	7.90 p	2.45
	B												
5	1543 1442	[162]	1542	1441	8.7	1522	21	1458	8.4 p	1523	1457	8.55 p 4.5	2.30 6.35
	4.8 1575 1433		B										
6	1565 1548	[247]	1564	1548	8.6	1548	17	1563	8.8 p	1542	1562	8.70 p 4.9	2.58 6.38
	5.2 1601 1541		B										
7	165$\overset{4}{9}$ 1562	[234]	1652	1563	9.0	1628	26	1570				9.0 p 5.50	2.91 6.41
	5.8 1683 1554	5.8	1683	1552								~~9.7 p~~	
8	1749 1397	[92]	1749	1396	9.7	1719	30	1413				9.7 p 6.20	2.66 6.16
	6.6 1773 1388	6.4	1772	1388									
9	1728 1349	[48]	1728	1349								6.10	6.29
	6.5 1752 1340	6.3	1752	13.40									
10	1711 1459	[140]	1711	1456								6.80	6.32
	7.2 1726 1449	7.0	1731	1450									
11	1608 1446	[153]	1608	1444								6.95	6.51
	7.0 1601 1447	6.9	1602	1444									
12	~~1315 1385~~		1722	1448	[143] 1722 1448								
	~~7.8 1532 1485~~	7.6	1711	1448	7.6 1711 1448							7.60	6.52

Wednesday May 24, 1916

		Card	Rd.	V	H	Mean Read.	Diff.
13	1534 1513	204		1535	1512		
	7.5 1524 1513		7.4	1526	1512	7.45	6.75
14	1578 1460	158	~~7.9~~	1578	1460		
	7.9 1562 1460		7.9	1562	1460	7.90	6.62
15	1545 1385	68		1546	1386		
	7.8 1532 1385		7.9	1529	1386	7.85	6.71
16		193	8.0			8.0	6.60
17		98	8.6	1673	1409	8.6	6.50
18		97	8.6	1684	1409	8.6	6.87
19		.	.	.	.	.	

1.15

Thursday May 25, 1916

Measures of Polar Sequence Repeated MC 6921

	Sc 1	Sc 2	Prev. Meas.	P.C. 1	P.C. 2	Prev. meas.
5					4.4 4.7 30	5.0
6					4.7 5.0 50	5.50
7					5.3 5.6 20	5.80
8				6.0	6.1 6.4 -4 00	6.40
9				6.5	6.6 6.9 -3 00	6.90
10				6.6	6.7 7.0 -4 10	6.90
11				7.1	7.4 7.7 -6 25	7.35
12				~~7.1~~ 7.5	7.6 7.9 -4 10	7.60
13				7.9	8.0 8.3 -4 05	7.95
14		4.5 4.8 15	4.95	8.0	8.3 8.8 25	8.25
15		4.7 5.0 10	5.10	8.5	15	8.65
16		5.0 5.3 30	5.60	8.7	20	8.9
17		5.4 5.7 05	5.75	8.9	05	8.95
18		5.8 6.1 00	6.10	9.7		9.1
19	6.0	6.0 6.3 -3 30	6.60			
20	6.5	6.4 6.7 -2 05	6.75			
21	6.8	6.7 7.0 -2 05	6.75			
22	6.8	7.0 7.3 -5 10	6.90			
23	6.9	6.7 7.0 -1 00	6.90			
24	7.0	7.4 7.7 -7 30	7.30			
25		7.5 7.8	7.55			
26		7.6 7.9	7.70			
27	7.8		10 7.90			
28	8.2		05 8.15			
29	8.8		15 8.95			
30	8.9		05 8.95			
31	9.0		00 9.00			
32	9.7		9.60			

Scale 1 - scale 2
$\frac{-51}{13}$ − 0.4

These measures show that the correction −0.5 applied to readings on second scale is too large for readings 7.0 and brighter. For these readings, −0.3 would be more nearly correct.

$\frac{155}{16}$ + .10 $\frac{350}{29}$ +12 Second meas. ~~fainter~~ brighter by between 0.1 + 0.2. $\frac{195}{13}$ +.15

Saturday May 27, 1916

Kaptyn Area 1
North Polar Sequence mC 7556

1	off plate	
2	off plate	
3	off plate	
4	B 2517 1486	
5	B 1691 439	B
6	1148 973 B	B
7	B	B
8	1507 498 B	B
9	1541 457 B	B
10	B	B
11	B	B
12	B	B
13	B	B
14	B	B

Saturday, May 27, 1916

Polar Sequence mC 7556

				P. C	Diff.	Diff. V
	1					
	2					
	3					
	4	4.5 2560 1498		4.2		43
	5	~~13~~ 4.4 ~~1691 459~~ 4.7 1737443	4.4 4.7?	4.40	2.09	46
Card p.187 5.1 5.0 47 5.9 5.3 5.0?	6	4.5 4.8 1180 998	4.9 5.0?	80 4.60	3 2.51	32x
	7	5.5 5.8	5.1 5.4?	5.30	2.01	
	8	6.0 6.3 1530 602	6.0 6.3	6.00	2.23	23
	9	6.4 6.7 1462 461	6.5 6.8	6.45	2.38	79x
	10	6.7 7.0	6.6 6.9	6.65	2.37	
	11	7.1	6.9	6.95	2.60	
	12	~~7~~ 7.1	7.1	7.10	2.76	
	13	7.6	7.6	7.60	2.70	
	14	7.9	7.8	7.85	2.80	

Saturday, May 27, 1916

Polar Sequence

MC 7556.

	g ~~h~~		h	Diffraction
1				
2				
3				
4				
5	B			
6	B			Diff.
7	4.0 4.3?			4.0? 3.31
8	5.7 6.0	1538492	5.7 6.0	5.70 2.53
9			6.4 6.7	6.4 2.43
10	6.3 6.6		6.5 6.8	6.40 2.62
11	6.8		6.8	6.80 2.75
12	6.9		7.0	6.95 2.71
13	7.4		7.5	7.45 2.85
14	7.7		7.7	7.70 2.90

Saturday, May 27, 1916

MC 7556

Polar Sequence

	g	h	Diff
15	8.0	8.0	8.00 3.08
16	8.3	8.2	8.25 2.15
17	8.6	8.6	8.60 3.03 ~~8.75~~
18	8.7	8.8	8.75 3.31
19	9.0	9.1	9.05 3.37
20		9.3	9.3 3.43
21			
22			
23			
24			
25	10.0		
26			
27			
28			

Saturday, May 27, 1916

Polar Sequence

MC 7556

				Diff.
15	4.8 5.1	4.6? 4.9?	4.70	638
16	1638 948 B5.2 1675 940	B	4.9	6.50
17	1643 1032 5.3 5.6 1679 1025	4.9 5.2	5.10	6.53
18	5.5 5.8	5.4 5.7	5.45	6.41
19	1578 1002 6.2 6.5 1601 992	6.1 6.4	6.15	6.27
20	6.3 6.6	6.2 6.5	6.25	6.48
21	6.6 6.9	6.7 6.8	6.65	6.31
22	6.6	6.9 7.2	6.75	6.44
23	6.8 7.1	7.0 7.3	6.90	6.44
24	7.0	6.8	6.90	6.74
25	1578 1006 7.3 1569 1006	7.3	7.30	6.57
26	7.6	7.6	7.60	6.73
27	7.7	7.7	7.70	6.99
28	8.1	8.2	8.15	6.96

Saturday May 27, 1916

Polar Sequence

MC 7556

P C

				Diff.	Diff V
15	8.2	8.0	8.10	298	
16	8.6 1614 962	8.5	8.55	285	24
17	8.8 1617 1046	8.8	8.80	2.83	26
18	9.0	9.3	9.15	291	
19	9.3 1545 1016	9.3	9.30	3.12	33
20		10.0?	10.0?	2.73	

25 ms

Saturday, May 27, 1916.

MC 7556.

Polar Sequence

				Diff
29	8.7	8.7	8.70	6.96
30	8.9	8.8	8.85	7.19
31	9.0	8.8	8.90	7.32
32	9.1	9.0	9.05	7.57
33	sup.			
34	9.9	9.9?	9.90?	7.35
35	ns			
36	ns			

Saturday May 27, 1916

Kapteyn Area 1 MC 7556

Diff. from MC 6921

N.B. On this plate H corresponds to x and V to y

x ~~1148~~ H: −973, 0

y ~~1149~~ 1148 V: V−1148, −1

1 = 6 of Polar S.

V H: 1149 973; B; B

PC Diff: 5.0, 5.3? 4.7 5.0 p 1184 35 972 4.85?; a: B; h: B

Diff. from Magn Seq to Kapteyn

+37 1 −9 0 2: 1139 1010 B; B; ~~+44~~; PC: 7.6 1128 11 1016 7.65, 7.7; a h: 7.4 7.40 7.4

−14 1 −101 2 3: 1047 959 B; B; PC: 7.2 1037 10 972 7.30, 7.4; a h: 7.0 7.10 7.2

+66 0 −101 1 4: 1047 1039 B; B; PC: 7.8 1031 16 1052 7.75, 7.7; a h: 7.5 7.55 7.6

−91 1 +47 0 5: 1195 882 B; 4.3 4.6 1238 872 4.3 6.55; PC: 8.3 p 1172 23 794 8.40, 8.5; a h: 7.9 7.95 8.0

−67 1 −59 0 6: 1089 906; 4.7 5.0 1129 896 4.8 5.1 4.75 6.53; PC: 8.6 1066 23 918 8.55, 8.5; a h: 8.2 8.10 8.0

+19 2 −75 2 7: 1073 992 ~~1066 993~~ ~~B~~; 5.5 ~~B~~ 5.8 1103 983 5.5 5.8 5.50; PC: 9.0 1043 30 1003 9.00, 9.0; a h: 8.7 8.75 ~~8.88~~

+116 0 +93 1 8: 1241 1089; 6.1 6.4 1264 1079 6.1 6.4 6.10; PC: 9.3 1208 33 1102 9.40, 9.5; a h: 9.0 8.95 8.9

+96 1 +140 0 9: 6.1 1288 1069 6.2; 6.4 1312 1059 6.5 6.15; PC: 9.2 1257 31 1082 9.35, 9.5; a h: sup 8.95 8.9 9.0

+79 1 +30 0 10: 1178 1052; 6.7 7.0 1196 1043 6.6 6.9 6.65; PC: 10.0 10.0

−25 0 +43 0 11: 1191 948; ~~−26~~ 6.8 1186 947 7.0 7.3 6.90

+89 0 +41 0 12: 1189 1062 7.3 7.35; 7.4 1178 1062

−97 2 −24 0 13: 1124 876 7.4 7.40; 7.4 1114 876

~~71~~ 57 2 +28 1 14: 1176 916 7.7 7.65; 7.6 1166 916

av. Diff x 6−7 [illegible]

av. diff y 7.7/15 ± .06

No correction for orientation need be applied to Plates MC 6921 and MC 7556

Saturday May 27, 1916

mc 7556

✓ Kapteyn Area 1.

-891 +103, 15 1251,884 7.7 7.65
7
1.6 1239 884
16

Kapteyn Area 1

Beginning of Zone I card 1 10.40 Limits {1350 / 1298}
End of Zone I card 40
Beginning of Zone II card 41 / 10.55 Limits {1298 / 1247}
End of Zone II card 97
Beginning of Zone III card 98 11.15 Limits {1248 / 1200}
End of Zone III card 159
Beginning of Zone IV card 160 11 35 Limits {1202 / 1148}
End of Zone IV card 213
Beginning of Zone V card 214 1155 Limits {1148 / 1098}
15m out End of Zone V card 269 1215
Beginning of Zone VI card 270 12 30 Limits {1100 / 1048}
End of Zone VI card 313
Beginning of Zone VII card 314 1245 Limits {1050 / 1000}
End of Zone VII card 380
Beginning of Zone VIII card 381 1,10 Limits {1002 / 943}
End of Zone VIII card 436 1,30

$2^h 50^m$ for 436 cards 1.45
156 cards per hour

It was intended to include stars as far as the reading 8.7 on the scale, though many fainter were included

2.50

Thursday June 1, 1916

Rich Reg Scut Sob **YELLOW** mc 8535

			Diff meant	Diff meant
1	2042 1004		+1	-1
	B	B		
2	1761 1061		0	-1
	B	B		
2a	1341 1100	1 B	0	-2
	B			
3	1388 1163		+2	-1
	B	B	~~0~~	
4	1347 1178		-1 ~~2~~	-2 -3
	B	B		
5	1266 1271		0	-2
	B	B		
6	1284 1213		+1 ~~2~~	-1
	4.8 1327 1206	B		
7	1319 1161		+1	-1
	4.8 1362 1152	4.8		
7b ~~7a~~	1409 1264	5.8	+6?	-12?
7a	5.7 1408 1264			
~~7~~	1428 1257		+1	-1 ~~2~~
	5.6 1462 1248	5.3		
8	1382 1111		+1	-1
	B	B		
9	1252 1141		0 ~~1~~	-1
	B	B		
10	1386 1229		+2 ~~3~~	-2
	6.4 1413 1220	6.5		
11	1514 1121		+3	-1 ~~2~~
	6.4 1549 1112	6.1		

Thursday June 1, 1916

Rich Reg. Scut Sob. **YELLOW** mc 8535

pc

1	
	5.5 2082 982 5.2
2	
	7.0 1784 1039 7.1
2a	6.8 1341 1088 7.0
3	7.8 1378 1152 7.8
4	8.3 1331 1164 8.1
5	8.5 1248 1256 8.6
6	9.0 1260 1200 8.9
7	9.7 1288 1148 9.8
7b	
7a	9.0 1406 1241
8	8.6 1363 1099 8.6
9	9.1 1228 1125 9.0
10	
11	

Thursday June 1, 1916

Rich Reg. Scut. Sob. **YELLOW** MC 8535

					Diff mean V	Diff mean H
12		1554	1128		0	-1
	6.6	1576	1118	6.8		
13		1494	1083		+1	-1
	7.0	1511	1079	7.0		
14		1370	1089	7.0	+1	∓1
	7.1	1363	1090			
15		1446	1160		0	∓2
	7.1	1438	1160	7.6		
16		1436	1166	7.8	-1	-3
	7.7	1424	1166			
17		1436	1165	7.8	-19?	-15?
	7.7	1422	1165			
18		1414	1179	7.9	+2	-1
	7.9	1399	1179			
19		1378	1197	8.4	0	-2
	8.4	1356	1197			
20		1374	1141	7.9	0	-1
	8.0	1357	1141			
21		1408	1112	8.2	+2	-2
	9.1	1388	112			
22		1406	1186	8.7	+2	-1
	8.7	1383	1188			
23		1473	1123	9.9	+1	-1
	9.9	1436	1123			
24		1386	1112	9.3	+7?	-1
	9.2	1359	1112			
25		1479	1056	10.0	+1	-2
	10.0	1441	1056			

Thursday June 1, 1916

21

Thursday June 1, 1916.

Rich. Reg. Scut. Sob. YELLOW MC 8535

26 γ		
ηγ	1546937	1546 936
δγ	2354 1926	2353 1925
β		
βγ	401 1762	401 1762
γ δ		
γ	626 742	626 742
δ	~~2142~~ 549	246 556

3.15 Zone 5 card 1426 Limits {1272 / 1232}
End of Zone 5 4.05 card 1591

This zone was omitted in previous measure.

4.15

Saturday, June 24, 1916

Kapteyn Area.
Examination of Plates for two stars on MC 6921 not seen on MC 7556

	Var(?) A	Var.(?) B
MC 6921	Image good	very bright; slightly hazy?
7556	n.s.	n.s.
7742	not seen, ~~normal~~	n.s.
7111	not seen	not seen
7521	not seen	not seen
7664	not seen	not seen
7676	" "	" "

All of the above plates have long exposures. The objects are probably defects on MC 6921.

Var.(?) A Corresponds to card
V = ~~H=~~ H=

Var(?) B Corresponds to card
V= H=

Monday, June 26, 1916

10.00 ~~Zone IV omitted in previous measures.~~

Rich Reg. Scut Sob

YELLOW

mc 8535

			Diff. mean V	mean H (p6)
1	2043 1005 B	204.30 100.45 2043 1004	03	12 .
2	1761 1061 B	176.15 106.10 1762 1061	02	10
2a	1339 1100 B	134.00 110.00 1341 1100	10	17
3	1389 1163 B		1	1
4	1346 1178 B	B	0	2
5	B			
6	B	B		
7	B 5.0	5.0		
7b	1415 1254 5.9 1443 1243	5.9	0	2
7a	1428 1257 5.6 1463 1249	5.3	1	1
8	1382 1112 B		1	2
9	B			
10	1387 1228 6.2 1413 1220	6.5	1	1
11	1515 1123 6.4 1538 1114	6.2	2	3

3

Rich Scut Sob

YELLOW

mc 8535

	PC		~~PC~~ Diff. g	h
1	5.1 2076 982	5.5?		
2	6.8 1763 1049	6.7	6.6	6.4
2a	6.9 1340 1088	6.9	6.8	
3	7.7 1380 1152	7.7	7.5 1378 1157	7.4
4	8.2 1332 1164	8.2	7.9 1329 1184	8.0
5	8.7	8.7	8.6	8.6
6	8.9	9.0	8.9	8.8
7	9.2	9.2	9.0	9.0
7b				
7a	~~m~~ t.f.		99 ~~[illegible]~~	9.6
8	8.6 1363 1098	8.7	8.1 1365 1116	8.2
9	9.0	9.1	8.8	8.7
10				
11				

Monday June 26, 1916.

Rich Scint Sob

YELLOW

MC 8535

				Diff. mean V	mean H (p6)
12	1553 1128			1	1
	6.7 1576 1119	6.7			
13	1494 1084			1	2
	7.0 1513 1076	6.9			
14	1369 1089	6.8		2	1
	7.0 1364 1089				
15	1444 1159	7.2	7.2	2	1
	6.8 1442 1159				
16	1436 1167	7.7		1	4
	7.7 1424 1167				
17	1354 1141	7.7		1	1
	7.8 1339 1142				
18	1415 1180	7.8		1	2
	7.7 1403 1180				
19	1378 1197	8.1		0	2
	8.4 1357 1197				
20	1373 1141	7.9		1	1
	8.0 1358 1141				
21	1409 1113	8.4		1	3
	8.4 1388 1113				
22	1406 1188	8.8		2'	3
	8.8 1382 1188				
23	1474 1123	9.7		0	1
	9.9 1437 1123				
24	1393 1112	9.4		0	1
	9.1 1359 1112	9.4			
25	1479 1057			1	3
	9.8 1442 1057	9.9			

Monday, June 26, 1916

Rich Scint Sob

YELLOW

MC 8535

			Diff. mean V	mean H (p6)	Diff. MC5679 mean V	mean H (p103)
~~76~~ f	~~1553 1128~~	26 f				
	~~6.7 1576 1119~~					
		15435 93.65				
ref	1543 936	1544 937	28	22		
		23530 19265				
α γ	2353 1926	2353 1927				
		4000 17625				
β	400 1763	400 1762				
		6255 7420				
γ	626 742	625 742				
		21470 5570				
δ	2147 558	2147 556				
			25) +239 +10	25) −441 −18		

Beginning Zone IV Limits {1334 1282 - Card 1591 10.15

End of Zone IV Card 1789 11.15

11.25

Friday June 30, 1916

B² Cat 4° Square MC 7143

			PC	
1	1266 1471		6.6 1259 1460	
2	1593 644 B		6.9 1573 633	
3				
4			7.5	
5	1096 785 B		7 ~~6~~.7 1076 776	
6	1143 689 B		7.8 1124 677	
7	1119 1169 B		7.8 1099 1157	7 ~~6~~.7 7.75 01
8	B		7.8	7.8 a.
9	5.~~1~~ ~~1400 901~~ ~~1433 891~~	1394 895	7.8 1372 883 ~~9.9 1358 887~~	~~9.8~~ ~~7.8 a~~. 9.85 10
10	1157 1200 B		8.7 1126 1188	8.7 8.70 00
11	B		8.7	8.7 8.70 00
12	B		8.8	8.9 8.85 01
13	B		8.8 1353 995	8.8 8.80 00
14	44 1394 985 4.9 1438 975	4.4 a.	9.2 1358 976	8.9 9.05 21
15	4.7 1406 1303 5.2 1444 1294	4.7 a.	9.8? 1363 1304	Ap 9.8? a.
16	B ~~1419~~ 1258	.	9.7	9.2 9.~~50~~ 45 32
17	52 1324 1064 5.7 1356 1055	53 5.8 5.25 01		
18	5 ~~6.8~~ 6.1 56	6.0 55 5.55 01	m s	
19	1495 1083 6.3 1522 1074	6.4 59 5.85 01		
20	62 1491 1072 6.7 1514 1063	6.5 60 6.10 11		
21	6.4 59	6.6 6.1 6.00 11		
22	6.8 6.3	6.8 6.3 6.30 00		
23	6.7 6.2	6.6 6.1 6.15 01		
24	1419 1032 6.6 1418 1032	6.6 6.60 00		
25	7.2	7.1 7.15 01		
26	7.0	7.4 7.20 22		
27	7.6	7.7 7.65 01		
28	7.7	7.8 7.75 10		

assume p.c. est. out by a unit Apr. 30, 1918

Assume reading crossed out to be correct. Apr. 30, 1918.

Friday, June 30, 1916

B² Cat 4° Square MC 7143

	g	h	
1	B		
2			
3			
4			
5	B		
6	B		
7	6.8 1116 1123	6.8	6.80 00
8	7.1		7.1 a.
9	7.2 1384 898 ~~8.6 1378 903~~	~~8.6~~	8.60 00 ~~7.2 a~~.
10	7.6 1145 1203	7.8	7.70 11
11	7.7	7.8	7.75 10
12	7.7	7.8	7.75 10
13	7.6	8.2	7.90 33
14	7.8 1383 988	8.2	8.00 22
15	8.1 1387 1305	8.4	8.25 12
16	8.3	8.3	8.30 00
17	8.7 1300 1067	8.7	8.70 00
18	8.8	8.9	8.85 01
19	9.0 1468 1084	9.0	9.00 00
20	9.3 1458 1074	9.0	9.15 12
21	9.1	9.3	9.20 11
22	9.6	9.6	9.60 00

Friday June 30, 1916

B² Cat 4° Square MC 7143.

Assume that this is 24a May 2, 1918.	29	7.9	7.9	7.90 00
	29a	6.7		6.7 a
	30	8.2	8.5	8.35 2 1
	31	8.9	9.0	8.95 1 0
	31b			
	32			
	34			
	35			

The above measures of Comparison stars were made for the reduction of Nos (A. J. C.) 29, 45, 207, 217, 256, 257, 258, 259 and Nos. (H.S.L) 337, 355 381, 382

4 15

				Orig. on Card
Rec L.	361	6.5 1043 957		62 1044 957
		~~8.9~~ 9.6g		9.3g
	363	5.9 1047 1014		60 1048 1015
		8.9g		8.8g
	362	6.3 1076 992		
		8.8g		
	365	~~1044~~ 6.8 1099 1060		70 1101 1060

Card 362 written at this time. No corrections needed

Thursday, December 13, 1917

Rich Scut. Sob.

Examination of Stars having Color Indices Discordant with Spectrum

No. 104 -9°4805 18h 38.1m Sp. B Obs C. I. 0.55 Pg 9.49

This star is about 0.2 brighter than No. 120 on both blue and yellow plates It is about 0.5 mag. brighter than No. 119 on yellow plates, but about equal brighter by about 0.2 mag. on blue plates, showing that Nos 104 and 120 have similar colors and are slightly redder than No. 119

				Pg
No. 119	is Spectrum	A 0,	Obs. C. I. 0.23	9.52
120	" "	B 8	" " " 0.37	9.38
103		K 0	" " " 1.21	9.35

Much fainter than No. 103 on yellow plates, nearly equal on blue plates

Does not show variation on

Blue plates MC 8503, 5592, 5679, 5497, 8521

Yellow " MC 5523, 5666, 5530, 8536

All color indices in this part of the region are much larger than normal, but relative to ~~stars of spectrum~~ other stars in vicinity this star is especially discordant. This is not due to correction for distance, as this is common to other stars near by. Nor does it seem to be due to accidental errors of measurement.

Thursday, Dec. 1$^{3}_{8}$ 1917

Rich Scut. Sct. Cnt.

No. 118 About equal to No. 103 on yellow plates and about 0.7 brighter on yellow plates, showing that it is relatively white, in accordance with difference in observed color indices. The plates mentioned on p. 203 show no variation. After correction for systematic error in this quadrant the outstanding residual is 0.34 (from H.A. 89, 9)
Corrected for systematic error according to magn., also, outstanding resid. +0.08

No. 89 This star is nearly equal to No. 90 on yellow plates, and somewhat fainter on blue plates. The residual from the computed C.I. after correcting for the systematic error in this part of the plate, is −0.89. That for No. 90 is −0.65. These two stars are in the extreme corner, much more distant than any others in the quadrant, which doubtless accounts for the discordance. The system of corrections apparently breaks down for objects so distant. L magn. poor.

Correction for Magn. and Distance −0.38?

Thurs. Dec 1917

Rich Scut. Sct. Cnt.

No. 285 The plates mentioned above show no variation. The star is a little brighter than No. 216 (Class A0) on both blue and yellow plates. While it is rather a bright star, observations are not very difficult. It does not come out conspicuously bright on the blue plates, as would be expected of a star of Class B0

No. 207
This star is about equal to No. 211 on blue plates, but fainter on yellow plates by about 0.~~4~~5 magn. 208a It is about equal to 208 and ~~209~~ on yellow plates, while on blue plates it is about 0.2 fainter than No. 208 and 0.8 brighter than 208a

−7°4/24 18h 43m.7

207	Ptg 10.50	C.I. 0.04	Sp. G
208	10.19	−0.07	..
208a	11.68	1.26	..
211	10.74	1.44	..

No. 207 is evidently very white as compared with 208a and 211

Nos. 207a and 207b are both red stars and closely adjacent. In classifying the spectra, did they possibly have some influence though so much fainter on the blue plates?

The plates mentioned above show no variation

Thurs. Dec. 13, 1917

Rich Scut. Sob. Cont.

No. 61 and 62

On yellow plates, No. 61 is 0.2 magn. fainter than ~~nearly equal to~~ No. 60 and a magn. fainter than No. 62. It is 0.8 fainter than No. 64 and 0.1 brighter than No. 65

On blue plate, No. 61 is a magnitude brighter than No. 60, and equal to No. 62. It is 0.6 ~~fain~~ brighter than No. 64 and about equal to No. 65

On blue plates No. 62 is equal to No. 65, and 0.7 brighter than No. 64

On yellow plates No. 62 about equal to No. 64 and nearly a magn. brighter than No. 65.

From the above it is evident that No. 62 is redder than No 61

Nos. 61 and 65 appear to be white stars, while 62 and 64 are reddish

	Dm	R.A.	Ptg	C.I.	Sp.
60	-6° 49~~[illegible]~~33	4~~4~~5m.9	9.81	0.83	..
61	4932		9.44	0.24	F8
62	4929	45.8	8.74	0.52? ~~8.22~~	B8
64	-6° 4925	44.7	9.91	1.48	K5
65	4924	44.7	9.55	0.29	F2

No. 62 is in a cluster and observations are uncertain, especially on blue plates

In Cluster Messier 11, - the only bright star.

Friday, December 14, 1917

Rich Scut. Sob. Cont.

Nos 61 and 62 Cont.

MC 5523 Yellow 64 3 62 3 60 2 61 1 65

MC 5679 Blue 61 0 62 1 65 3 60 1 64

Star	Diff b	Diff y	Sum b	b-y	y	b/y
61			0.0	0.0	0.0	0.0
	0	5				
62			0.0	+0.5	-0.5	
	4	3				
60			0.4	+0.6	-0.2	
	1	6				
64			0.5	+1.3	-0.8	
	4	9				
65			0.1	0.0	0.1	

Order of redness ~~65, 61, 64, 62,~~ 65, 61, 60, 62, 64
F2 F8 · B8 K5
b-y ~~C.I.~~ 0.0 0.0 0.6 0.5 1.3

The above observation confirms that of yesterday in which it was found that No. 62 comes out markedly redder on the plates than No. 61, although its spectrum is B8 as compared with F8 for No. 61.

Although ~~[illegible]~~ observations in the cluster are difficult, the effect is the reverse of what might be expected to result from error due to this cause, as it is on the yellow plate, where the stars are fewer and interfere less, that the star 62 is bright.

MC 8536, yellow, 3m, shows No. 62 brighter than any of the other stars - Stars in cluster not seen, images very clear. MC 5530 y, like MC 5523 MC 8503(b) like 5679, Also 8521, 5497, 5592, all blue

Friday, Dec. 14, 1917.

Rich Scut. Sob.

Nr. 62 Cont.

On the following blue AC and AM plates, the order of stars is as follows!—

62 163 267 261 165 360 264

AC 7550, 5227, 11759, 1730, 16565, 17547
AM 11957, 473, 6605, 8309

On the following yellow plates, the order of stars is as follows:—

67 162 863 $\overset{0}{2}$ 64 $\overset{2}{2}$60 061 365
AC 16917, 16889, 16331, 16539

Plg.	C.I. Catalogue	Sp.		Diff. b	Diff. y	Sum b	Sum y	b-y	MC p.207 b-y	Mean b-y		Mean ± 0.20	Order
9.44	0.24	F8	61	-5		0.0	0.0	0.0	0.0	0.00	0,0	+0.20	3
9.91	0.52?	B8	62		-10	-0.5	-1.0	+0.5	+0.5	+0.50	0,0	+0.70	4
9.06	-0.06	A0	63	1	8	-0.4	-0.2	-0.2	.	-0.2	a.	0.00	1
9.81	0.83	.	60	8	2	0.4	0.0	+0.4	+0.6	+0.50	1 1	+0.70	5
9.91	1.48	K5	64	×2	~~0~~.2	0.6	-~~0.0~~ 0.2	+0.~~6~~ 8	+1.3	+1.05	2 3	+1.25	7
9.55	0.29	F2	65	-5	~~3~~5	0.1	0.3	-0.2	0.0	-0.10	1,1	+0.10	2
8.82	0.85	K0	67	-3	-14	-0.3	-1.~~4~~ 1	+0.8	.	+0.8	a.	+1.00	6

No variation seen on the above plates. It will be noticed that the anomalous redness of No. 62 comes out (1) in measures for Catalogue (2) in estimates on MC plates (3) in estimates on AC and AM plates.

Could the prevailing type of other stars in the cluster have affected classification of this one bright star?

Thursday December 20, 1917

Rich Scut. Sob. Cont.

Nos 186a, 253

						C.I. 186a	C.I. 253
y	MC 5523	186a	9.9	253	8.9		
y	5666		9.9		8.9	0.40	0.10
b	5679		10.3		9.0		
b	5592		10.3		9.0		
	In Catalogue y		9.93		8.65	0.39	0.17
	b		10.42		8.82		

The above estimates agree well with the Catalogue, especially for Color indices. Neither star shows evidence of variability on the plates mentioned on page 203

Nos 184, 187

y	MC 5523	184	8.8	187	9.2
y	5666		8.9		9.3
b	5679 pr		8.9		9.7
b	5592 pr		9.1		9.8
C.I.			0.~~2~~15		0.50
	Catalogue	b	9.20		9.76
		y	8.99		9.60
		C.I.	0.21		0.16

The magnitudes and Color index for No. 184 agree fairly well, ~~but~~ with Catalogue; but No. 187, while it agrees for the blue light, was estimated much brighter on yellow plates than it was measured, thus giving a Color index of 0.50 as comp. with Cat. 0.16

(over)

Thurs. Dec. 20, 1917

Rich Scut. Cl. Cont.

No. 187 Cont.

This star seems to have been measured too faint on both yellow plates for the Catalogue, thus giving too small a color index. The estimated color index (see page 209) agrees well with theoretical color for Class F8. Reverse magn. for Catalogue? or depend on Remark? Images not perfectly comparable.

Nos 345, 347

y MC 5523 345 347
y 5666
b 5592
b 5679

MC 5523 y
341, 340 2 345 2 347 3 346
MC 5679 b
3~~4~~0 2 347 1 345 3 34~~7~~6 – 341 (341 very red!)
MC 5592 b
340 2 347 2 345 3 346 – 341
MC 5666 y
340 0 341 2 345 0 347 3 346

b-y		~~b~~ y	b	Spec ~~b~~ y	b
	341				
		05	–		
ov	340			00	00
		25	35		
F5 +10	345			25	25
		40	30		
ov	346			65	65
		30	45		
A0 +15	347			35	20

Star	ptg	C.I.	Sp
340	9.57	0.17	A3
3.41	11.20	1.60	.
3.45	9.72	0.01	F5
346	9.92	0.10	.
347	9.72	–0.02	A0

Wed. ~~Thurs.~~ Dec. 20, 1917

Rich Scut. Cl. Cont.

Nos. 345, 347 Cont

According to the comparison in steps, Star 345 is ~~two~~ 25 grades redder than Star 347 while in the Catalogue it is only 0.03 magn.

Grades on blue plate 340 to 346, 65 Diff magn. 0.35
" " yellow " " " " 65 " " 0.42

Value of grade about 0.~~15~~06 magn.
" " Color index est. in magn. = 0.6 × 25 = 0.15

The difference in the estimated color index from that in the Catalogue is, therefore, not more than 0.1 magn.

Wednesday, December 26, 1917

Rich. Sout. Sot. Cont.

No. 351
Estimates
MC 5523 yellow
136 1 350 5 349 1 347 0 351 4 348 3 352

MC 5679 blue
136 5 347 1 351 3 348 1 352 2 350 1 349

	b	y	Sums b	Sums y	b-y	Sp.	Ptg	C.I.
136			0.0	0.0	0	B8	8.98	0.02
	5	7						
347			0.5	0.7	-0.2	A0	9.72	-0.02
	4	4						
348			0.9	1.1	-0.2	·	10.34	0.26
	4	-5						
349			1.3	0.6	+0.7	·	10.42	0.75
	-1	-5						
350			1.2	0.1	+1.1	·	10.34	1.18
	-6	6						
351			0.6	0.7	-0.1	K5	10.02	0.24
	4	7						
352			1.0	1.4	-0.4	·	10.26	-0.08

The estimates (b-y) made above agree with color index in catalogue in showing that No. 351 is not very red in comparison with adjacent stars.

No variation is seen on the plates mentioned on page 203

Rich Sout. Sot. Cont.

Nos 173, 174 -7°4755, -7°4754

MC

168 .01

MC 4191

Sp. Ptg C.I.

168 K0 9.80 0.87
173 B5 9.19 0.36
191 10.63 1.61
174 2 9.97 0.87
59 A2 9.62 0.36
378 A0 9.58 -0.11
301 · 9.92 0.06

ith color
in indicate
th ed for a
sl s and
cr redder
th about equal
to

To be reported on

Miss Ashall's variable
V Cassiopeiae (Mr. Crane)
Variables in Carina (Innes)
Variables for –
Clusters for Schlesinger.

Wednesday, December 26, 1917

Rich Scut. Sct. Cont.

No. 351
Estimates
MC 5523 yellow
136 1 350 5 349 1 347 0 351 4 348 3 352

MC 5679 blue
136 5 347 1 351 3 348 1 352 2 350 1 349

	b	y	Sums b	Sums y	b-y	Sp.	Ptg	C.I.
136			1.0	0.0	0	B8	8.98	0.02
	5	7						
347			0.5	0.7	-0.2	A0	9.72	-0.02
	4	4						
348			0.9	1.1	-0.2	.	10.34	0.26
	4	-5						
349			1.3	0.6	+0.7	.	10.42	0.75
	-1	-5						
350			1.2	0.1	+1.1	.	10.34	1.18
	-6	6						
351			0.6	0.7	-0.1	K5	10.02	0.24
	4	7						
352			1.0	1.4	-0.4	.	10.26	-0.08

The estimates (b-y) made above agree with color index in catalogue in showing that No. 351 is not very red in comparison with adjacent stars.

No variation is seen on blue plates mentioned on page 203

Rich Scut. Sct. Cont.

Nos 173, 174 −7° 4755, −7° 4754

MC

168 01

MC

4 191

b. Ptg C.I.

168 0 9.80 0.87
173 5 9.19 0.36
191 10.63 1.61
174 2 9.97 0.87
59 2 9.62 0.36
378 0 9.58 -0.11
301 9.92 0.06

Th ith color
ind indicate
tha d for a
sta s and
col redder
tha but equal
to

173
174

✓59
191
✓301
✓168
✓378

174
301
191

Wednesday, December 26, 1917

Rich Sent. Sct. Cont.

No. 351
Estimates
MC 5523 yellow
136 1 350 5 349 1 347 0 351 4 348 3 352

MC 5679 blue
136 5 347 1 351 3 348 1 352 2 350 1 349

	b	y	Sums b	Sums y	b-y	Sp.	Ptg	C.I.
136			0.0	0.0	0	B8	8.98	0.02
347	5	7	0.5	0.7	-0.2	A0	9.72	-0.02
348	4	4	0.9	1.1	-0.2	·	10.34	0.26
349	4	-5	1.3	0.6	+0.7	·	10.42	0.75
350	-1	-5	1.2	0.1	+1.1	·	10.34	1.18
351	-6	6	0.6	0.7	-0.1	K5	10.02	0.24
352	4	7	1.0	1.4	-0.4	·	10.26	-0.08

The estimates (b-y) made above agree with color index in catalogue in showing that No. 351 is not very red in comparison with adjacent stars.

No variation is seen on blue plates mentioned on page 203

Rich Sent. Sct. Cont.

Nos 173, 174 -7°4755, -7°4754

MC 5523 (yellow)
168 2 173 0 191 1 174 0 59 5 378 0 301

MC 5592 (blue
168 5 173 2 378 0 59 3 301 0 174 4 191

	blue	yellow	blue	yellow	b-y	b-y +1.1	Sp.	Ptg	C.I.
168			0.0	0.0	0.0	1.1	K0	9.80	0.87
173	5	2	-0.5	0.2	-0.7	0.4	B5	9.19	0.36
191	9	0	0.4	0.2	+0.2	1.3	·	10.63	1.61
174	4	1	0.0	0.3	-0.3	0.8	K2	9.97	0.87
59	3	0	-0.3	0.3	-0.6	0.5	A2	9.62	0.36
378	0	5	-0.3	0.8	-1.1	0.0	A0	9.58	-0.11
301	3	0	0.0	0.8	-0.8	0.3	·	9.92	0.06

The estimates agree well with color indices in Catalogue, and indicate that Star 173 is relatively red for a star of Class B5. Both estimates and catalogue make it much redder than No. 378, Class A0, and about equal to Star 59, Class A2

Tuesday April 2, 1919

B, Catalogue 4° Square
Discordances on Blue Plates MC 7135, 7329

Resid. Star
17, 17 15 The magnitude is f measured faint on MC 7329.
Appears of same magn. as on MC 7135. Perhaps
due to systematic error, since primary was
measured on 7329 and pc. on 7135

17, 17 p, 39 These two stars look about alike on the
16, 16 p 40 two plates. Discordance due principally to
accidental error. perhaps also systematic
error from comparison of primary + pc.

54 This star is a ~~unit~~ magnitude out on MC 7329 Assume
a mistake of unit in record or reduction.
Should be mean magn. 9.7

63 ~~62~~ A star of nearly the same magn. (0.1 magn. fainter)
is north about 0.4′ Measured on MC 7135. Reject the
measure of Companion in the Table but include
in Remarks.

62 Measured much brighter than 61 on MC 7135 but
equal on 73$\overset{2}{4}$9. Appears equal on both plates. Large
accidental error, but do not reject

65 Brighter than No. 66 on 7135, but fainter on 7366
Discordance accidental

77 About a magn. too bright on MC 7135. Probably
a unit out. Examination of plate shows that
measure was wrong, probably by a unit.
Reject on account of uncertainty

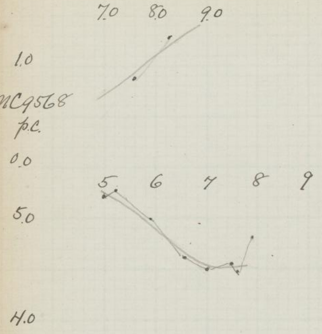
211 Measured bright on 7135. Probably systematic
error due to measuring diffs. image

Number of Star Images Counted on Victoria and Mount Wilson plates.

Copy given to Professor P.
Sept. 11, 1918

Region	Diameter	Observed No.			Diam	Computed No.		
		Victoria 60m	MW 60m	MW 240m		Victoria	MW 60m	MW 240m
North Pole	8'	29	.	~~530~~	12'	65	.	~~191~~
	20'	.	.	530	"	.	.	191
B 8	8'	224	.	.	"	505	.	.
B 9	8'	160	.	.	"	360	.	.
C 10	8'	493	511	.	"	1125	1150	.

Counts were made on the original negatives, using a sheet of paper cut out for circles of about 18 mm and 22 mm diameter, corresponding to about 8'.2 on Victoria and MW plates, respectively. Both the circles and the estimates are approximate. The estimated limiting magnitude for C 10 was the same on the Victoria and on the M.W. plate. The difference in the number computed from ~~estimates~~ counts for a circle 10' in diameter is only 25 and the apparent slight superiority for MW is not significant.


7.0
8.0
9.0
1.0
MC9568
p.c.
0.0
5
6
7
8
9
5.0
4.0