KG
11365
960

Book XXXVII H.S.L.

Miscellaneous

KG 11365.960

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Tuesday, December 1, 1914

Scale M

10 50 Poor Reg. Scut. Sot. Plate MC 5680

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Reduce meas. pp 6-20 with meas of Seq. Bk 34, 216

	Dist. from No. 15 ⊕ E10275		Sc1	Sc2	curve magn.	P.C. Sc.1	Sc.2	curve magn.	MC 5593 ⊙ 10:156	MC 5593
elongated. Double?	mm 6 dp	245	5.6 58	5.40	11.20				·B	
	8 sp	246	4.8 50	5.62	10.62				10.54	08
	19 np	247	3.2 34	6.08	9.48	8.7	0.83	9.53	9.49	01
	20 np	248	5.4 56	5.46	11.06				10.96	10
	18 np	249	5.6 58	5.40	11.20				11.17	03
	17 np	250	6.7	5.15	11.85				11.63	22
	16 np	251	5.7 59	5.37	11.27				11.03	24
	19 np	252				8.5	0.85	9.35	⊢9.10	~~15~~
	18 np	253	5.4 56	5.46	11.06				10.90	16
	22 np	254	6.7	6.15	11.85				11.70	15
	26 np	255	4.3 45	5.75	10.25				10.54	29
	25 np	256	6.7	5.15	11.85				11.70	15
	27 np	257	5.7 59	5.37	11.27				11.17	10
	31 np	258	5.3 55	5.49	10.99	~~86~~			10.82	17
	35 np	259				8.7	0.83	9.53	9.49	04
Same as Star 9	23 np	9 ~~260~~				8.4	0.86	9.26	Reject this star ~~13.43~~	
	25 np	261	6.6	5.19	11.79				11.71	08
	25 np	262	5.2 54	5.51	10.91				10.96	05
	29 np	263	5.9 61	5.31	11.41				11.24	17
	24 sp	264	6.0 62	5.29	11.49				11.55	06
	46 sp	265	4.4 46	5.73	10.33				10.39	06
	55 sp	266	5.5 57	5.42	11.12				10.99	22 13
	57 sp	267	3.8 40	5.90	9.90	8.9	0.80	9.70	⊢9.72	~~08~~
	51 sp	268	6.5	5.21	11.71				11.24	47
	50 sp	269				7.8	0.94	8.74	⊢8.65	~~04~~
	~~47~~ sp	270	4.7 49	5.65	10.55				10.46	09 Ch. F.C.

~~245~~

245	~~246~~	-2° 4781	18	47.2	-2	40	9.5	✓
246	~~247~~	-2° 4780	18	47.2	-2	45	9.2	✓
247	~~248~~	-2° 4782	18	47.6	-2	3	8.8	✓
248	~~249~~	-2° 4779	18	46.7	-2	4	9.1	✓
	249 ~~25~~	-2° 4777	18	46.0	-2	21	9.8	✓
	250	-2° 4776	18	46.0	-2	26	9.8	✓
	251	-2° 4775	18	45.9	-2	35	9.8	✓
	252	-2° 4773	18	45.7	-2	36	8.8	✓
	253	-2° 4774	18	45.8	-2	48	9.4	✓
	254	-2° 4771	18	45.5	-2	54	9.8	✓
	255	-2° 4769	18	45.2	-2	59.6	9.1	✓
	256	-2° 477~~2~~0	18	45.~~6~~4	-2	~~12~~8	9.8	✓
	257	-2° 477~~9~~2	18	45.~~7~~6	-2	~~8~~12	9.8	✓
	258	-2° 4764	18	44.7	-2	10	9.4	✓
	259	-2° 4762	18	44.1	-2	9	9.0	✓
9 =	260	-2° 4768	18	45.1	-2	25	8.5	
	261	-2° 4766	18	44.9	-2	32	10.	✓
	262	-2° 4767	18	44.9	-2	26	9.4	✓
	263	-2° 4763	18	44.5	-2	26	9.8	✓
	264	-3° 4399	18	45.6	-3	3	9.8	✓
	265	-3° 4395	18	44.5	-3	42	9.0	✓
	266	-3° 4394	18	44.0	-3	58	9.4	✓
	267	-4° 4601	18 44	13.7	-4°	2.0	9.1	✓
	268	-3° 4396	18	44.5	-3	52	10	✓
	269	-3° 4397	18	44.8	-3	54	7.2	✓
	270	-3° 4398	18	44.9	-3°	48	9.2	✓

Tues. Dec. 1, 1914

Scale M

MC5680 Cont.

Dist from no 15 mm		SC.1	2	curve	mag. 1	PC. 2	curve	mag.	⊙10:157 MC5593	Diff.
63 sp	271					7.8	0.94	8.74	p 8.65	
58 sp	272	4.04.2		5.84	10.04	9.6	0.70	10.30	10.05	01
65 Double. Bstar N sp	273		5.6 7.5	5.46 5.03	11.06 12.53				10.75	
54 sp	274		7.7	5.01	12.71				12.33	37
52 sp	275		6.8	5.14	11.94				11.86	08
52 sp	276	5.7 59		5.37	11.27				11.10	17
51 sp	277	5.2 54		5.50	10.90				10.82	08
45 sp	278		5.7	5.42	11.12				11.17	05
43 sp	279	4.8 50		5.61	10.61				10.61	00
41 sp	280			5.84		7.7	0.95	8.65	p 8.55	
44 sp	281	4.04.2		5.84	10.04	9.7	0.69	10.39	9.96	~~43~~
45 sp	282	3.8 40		5.90	9.90	9.2	0.76	9.96	9.77	~~19~~
38 sp	283	5.6 58		5.40	11.20				10.96	24
36 sp	284	5.1 53		5.53	10.83				10.82	01
32 sp	285	3.7 39		5.92	9.82	9.0	0.78	9.78	10.05	23
41 sp	286	3.5 37		5.99	9.69	9.0	0.78	9.78	9.68	01
39 sp	287	5.8 6.0		5.34	11.34				11.17	17
43 sp	288		6.7	5.15	11.85				11.39	46
42 sp	289		6.9	5.11	12.01				11.94	07
38 sp	290	4.04.2		5.84	10.04	9.5	0.71	10.21	10.14	10
49 sp	291	Double								
47 sp	292	4.9 51		5.59	10.69				10.90	21
55 sp	293	3.7 39		5.92	9.82	9.1	0.77	9.87	9.58	24
53 sp	294		6.4	5.23	11.63				11.31	32
58 sp	293a	5.7 59		5.37	11.27				11.03	24
51 sp	294a	5.6 5.8		5.40	11.20				11.10	10

Ch. F. C.

271	-4°	$4\overset{6}{9}09$	18	45	36.8	-4°	23.3	8.3	✓
272	-4°	$4\overset{6}{9}06$	18	45	28.3	-4°	13.7	8.7	✓
273	-4	4604	18	45	14.2	-4°	7.5	9.5	✓
274	.	.	. .		.	.	.	.	
275	-4°	$4\overset{6}{9}05$	18	45	27.7	-4°	1.5	9.8	✓
276	-4°	4610	18	45	38.4	-4°	4.4	9.6	✓
277	~~-4°~~	~~4910~~	~~18~~	~~45~~	~~38.4~~	~~-4°~~	~~4.4~~	~~9.6~~	
278	-3°	4402	18		46.0	-3	53	9.5	✓
279	-3°	4400	18		45.8	-3	47	9.4	✓
280	-3°	4401	18		45.8	-3	43	8.4	✓
281	-3°	4404	18		46.4	-3	52	9.0	✓
282	-3°	4405	18		46.4	-3	55	9.3	✓
283	-3°	4403	18		46.4	-3	42	9.5	✓
284	-3°	4406	18		46.5	-3	38	9.7	✓
285	-3°	4407	18		46.8	-3	32	9.2	✓
286	-3°	4409	18		47.1	-3	48	9.2	✓
287	-3°	4408	18		47.1	-3	46	9.7	✓
288	-3°	4410	18		47.2	-3	53	9.5	✓
289	-3°	4411	18		47.5	-3	51	9.5	✓
290	-3°	4412	18		47.6	-3	45	9.4	✓
291	-4°	4618	18	46	44.0	-4°	2.6	9.2	✓
292	-4°	4628	18	47	19.8	-4°	0.3	9.7	✓
293	-4°	4622	18	47	8.0	-4°	13.9	9.1	✓
294	-4°	4626	18	47	15.4	-4°	11.4	9.5	✓
293a	.	.							
294a	.	.							

Tues. Dec. 1, 1914

MC5690 Cont

Dist from No. 15.		Sc1 Sc2	Corr magn	Magn.	Sc1 Sc2	Corr magn.		O10: MC 5593	Diff.
	~~294~~								
65 sp	295	4.7 49	5.65	10.55				10.14	41
65 sp	296	66	5.18	11.78				11.17	61
13 sp	297	4.0 42	5.84	10.04	9.7	0.69	10.39	10.14	
18 sf	298	4.1 43	5.81	10.11	~~9.7~~			10.39	28
42 sf	299	4.9 51	5.59	10.69				10.61	08
26 sf	300				9.1	0.77	9.87	9.78	
29 sf	301	4.7 49	5.65	10.55				10.54	01
26 sf	302	3.8 40	5.90	9.90	9.4	0.72	10.12	9.87	~~03~~
30 sf	303	5.4 56	5.46	11.06				10.90	16
30 sf	304	3.9 41	5.86	9.96	9.7	0.69	10.39	9.95	~~01~~
Double B preced. 40 ~~sp~~	305	5.0 7.2	5.62 5.04	10.62 12.24				10.39 11.86	23 38
36 sf	306	65	5.21	11.71				11.24	47
45 sf	307	4.9 51	5.59	10.69				10.39	30
Looked up Feb. 3, 1915 meas. direct. 47 sf	308	5.6 58	5.40	11.20				10.68	52
42 sf	309	6.3	5.25	11.55				11.17	38
(no star 310)	310	-	-						
31 sf	311	6.9	5.11	12.01				11.86	15
31 sf	312	5.6 58	5.40	11.20				11.17	03
26 sf	313	3.7 39	5.92	9.82	8.9	0.80	9.70	9.96	-
31 sf	314	5.6 58	5.40	11.20				11.03	17
32 sf	315	5.4 56	5.46	11.06				10.90	16
34 sf	316	5.5 57	5.42	11.12				10.90	22
ft. Companion? 35 sf	317	5.6? p 58?	5.40	11.20?				10.68	54?
32 sf	318	3.8 40	5.90	9.90	9.3	0.74	10.04	9.87	-

Ch. F. C.

~~319~~								
295 ~~320~~	-4°	4625	18 47	11.3	-4°	32.3	9.2	√
296 ~~321~~	-4°	4629	18 47	26.4	-4°	32.2	9.3	√
297 ~~322~~	-3°	4413	18	47.9	-3	0	8.7	√
298 ~~323~~	-3°	4414	18	48.2	-3	8	8.9	√
299	-3°	4415	18	48.3	-3	52	9.5	√
300	-3°	4417	18	48.5	-3	21	9.1	√
301	-3°	4418	18	48.9	-3	25	9.3	√
302	-3°	4419	18	49.0	-3	18	9.2	√
303	-3°	4420	18	49.3	-3	25	9.5	√
304	-3°	4422	18	49.4	-3	23	9.3	√
305	-3°	4421	18	49.3	-3	44	9.3	√
306	-3°	4423	18	49.6	-3	35	9.2	√
307	-3°	4426	18	50.0	-3	49	9.3	√
308	-3°	4427	18	50.1	-3	54	9.7	√
309	-3°	4428	18	50.2	-3	43	9.8	√
(no star 310) 310								
311	..							
312	-3°	4424	18	49.8	-3	23	9.7	√
313	-3°	4425	18	49.8	-3	13	9.0	√
314	-3°	4429	18	50.4	-3	17	9.5	√
315	-3°	4430	18	50.5	-3	17	9.4	√
316	-3°	4431	18	50.7	-3	20	9.7	√
317	-3°	4432	18	50.9	-3	18	9.4	√
318	-3°	4433	18	51.0	-3	8	9.0	√
~~319~~								

Tues. Dec. 1, 1914

MC 5680 Cut

Dist fr. no. 15		SC1	SC2	.	fr SC1 magn.	SC2	curve	Oc. magn.	Rem. 5593	Diff.
54 sf	319	4.5	47	5.70	10.40	9.8	0.68	10.48	10.05	35
44 sf	320		67	5.15	11.85				11.62	23
40 sf	321		5.9	5.37	11.27				11.24	03
39 sf	322		7.8	5.01	12.81				12.70	11
39 sf	323	4.7	49	5.65	10.55				10.54	01
	324									
65 sf	325	5.2	54	5.50	10.90				10.68	22
67 sf	326	4.5	47	5.70	10.40				987	53
66 sf	327		61	5.31	11.41				11.10	31
63 sf	328	4.7	49	5.65	10.55				10.05	50
61 sf	329					9.1	0.77	9.87	9.58	
55 sf	330					8.4	0.87	9.27	9.38	
60 sf	331	~~5.8~~	5.8 7.2	5.40 5.04	11.20 12.24				10.96	24
62 sf	332		6.8	5.13	11.93				11.71	22
67 sf	333	3.8	40	5.90	9.90	9.2	0.75	9.95	9.78	12
72 sf	334	3.4	36	-6.01	9.61	9.0	0.78	9.78	9.49	12
57 sf	335		6.7	5.15	11.85				11.39	46
57 sf	336	4.7	4.9	5.64	10.54				10.46	08
?	337									
64 sp	338	4.5	4.7	5.70	10.40	9.8	0.68	10.48	10.05	35
67 sp	339								10.38	
72 sp	340		6.0	5.34	11.34				11.17	17
74 sp	341	4.7	49	5.65	10.55				10.14	41
79 sp	342	4.7	4.9	5.65	10.55				10.14	41
84 sp	343	4.9	5.1	6.59	10.69				10.31	38
72 sp	344	~~47~~ 5.5	57	5.42	11.12				10.89	23

Ch. F. C.

319	-3°	4435	18		51.3	-3	58	9.0	✓
320	-3°	4434	18		51.3	-3	35	9.5	✓
321	..								
322	-3°	4436	18		51.5	-3	20	9.8	✓
323	-3°	4437	18		51.8	-3	13	9.3	✓
? 324	-3°								
325	-4°	4633	18	48	20.1	-4°	31.9	9.5	✓
326	-4°	4636	18	48	41.8	-4°	35.0	9.2	✓
327	-4°	4639	18	49	3.8	-4°	34.0	9.5	✓
328	-4°	4637	18	48	51.6	-4°	28.3	9.4	✓
329	-4°	4641	18	49	18.6	-4°	23.7	9.2	✓
330	-4°	4640	18	49	6.6	-4°	12.3	8.5	✓
331	-4°	4643	18	49	41.7	-4°	18.4	9.7	✓
332	-4°	4644	18	49	45.2	-4°	23.5	9.9	✓
333	-4°	4648	18	50	31.3	-4°	29.4	9.0	✓
334	-4°	4647	18	50	28.0	-4°	20.0	8.2	✓
335	-4°	4645	18	50	7.7	-4°	12.6	9.6	✓
336	-4°	4646	18	50	21.6	-4°	10.6	9.2	✓
337	-2°	4811	18		51.7	-2	57.9	9.8	✓
338	-4°	4599	18	43	53.0	-4°	15.0	9.3	✓
339	-4°	4598	18	43	44.9	-4°	19.1	9.2	✓
340	-4°	4595	18	42	28.2	-4°	16.1	9.4	✓
341	-4°	4594	18	42	15.6	-4°	18.1	9.3	✓
342	-4°	4593	18	42	8.3	-4°	29.2	9.3	✓
343	-4°	4591	18	41	28.0	-4°	31.8	9.8	✓
344	-4°	4592	18	41	51.9	-4°	9.8	9.5	✓

Tues. Dec. 1, 1914

MC 5680 Cont.

~~Diff.~~ Dist. from no. 15		1	2	curve magn.		1	2	P.C. magn.	Q 10:160 MC 5593	Diff.
81 sp	345	5.7	5.9	5.37	11.27				g.	
80 sp	346	4.2	4.4	5.79	10.19				10.05	14
75 sp	347					8.7	0.82	9.52	9.29	
68 sp	348	4.8	5.0	5.62	10.62				10.47	15
76 sp	349	4.2	4.4	5.79	10.19	9.9	0.67	10.57	10.05	14
80 sp	350	4.3	4.5	5.75	10.25				10.05	20
85 sp	351					8.9	0.80	9.70	f 9.64	
78 sp	352					9.0	0.78	9.78	9.95	
45 sp	353					3.9	2.12	6.02	f 6.19	
46 sp	354					5.0	1.58	6.58	f 6.93	
51 sp	355	5.9	6.1	5.31	11.41				11.24	17
59 sp	356					7.3	1.01	8.31	f 8.01	
44 sp	357	5.3	5.5	5.49	10.99				10.90	09
50 sp	358	5.1	5.3	5.53	10.83				10.61	22
54 sp	359	4.7	4.9	5.64	10.54				10.22	32
53 sp	360	4.9	5.1	5.59	10.69				10.46	23
59 sp	361	5.2	5.4	5.50	10.90				10.54	36
65 sp	362	5.2	5.4	5.50	10.90				10.61	29
59 sp	363	5.8	6.0	5.34	11.34				11.03	31
78 sp	364					8.9	0.80	9.70	f 9.64	
81 sp	365	5.1	5.3	5.54	10.84				10.54	30
35 sp	366					8.8	0.81	9.61	f 9.47	
62 sp	363a	5.8	6.0	5.34	11.34				11.17	17
38 sp	367	4.8	5.0	5.61	10.61	9.9	0.67	10.57	10.81	20
41 sp	368	4.4	4.6	5.72	10.32	9.6	0.70	10.30	10.54	22
44 sp	369		6.9	5.11	12.01				11.86	15
41 np	370	4.1	4.3	5.80	10.10	t.p			10.39	29

Ch. F. C.

	345	-4°	4590	18	41	24.1	-4°	11.9	9.8	√
Yes 350 =	346?									
	347	-4°	4587	18	41	5.6	-4°	3.3	8.8	√
	348	-4°	4586	18	40	53.6	-4°	0.2	9.6	√
	349	-4°	4584	18	40	28.9	-4°	15.1	9.5	√
Yes 346? =	350	-4°	4588	18	41	10.1	-4°	17.2	9.4	√
	351	-4°	4585	18	40	35.8	-4°	22.3	9.1	√
	352	-3°	4393	18		43.9	-3	38	9.2	√
2 =	353	-3°	4392	18		43.8	-3	29	6.5	√
3 =	354	-3	4390	18		43.5	-3	25	7.3	√
	355	-3°	4391	18		43.6	-3	41	9.8	√
	356	-3°	4388	18		42.5	-3	47	6.8	√
	357	-3°	4389	18		43.0	-3	8	9.7	√
	358	-3°	4387	18		42.4	-3	12	9.3	√
	359	-3°	4385	18		41.8	-3	12	9.1	√
	360	-3°	4384	18		41.8	-3	7	9.4	√
	361	-3°	4383	18		41.3	-3	11	9.1	√
	362	-3°	4381	18		40.8	-3	25	9.2	√
	363	-3°	4386	18		41.9	-3	34	9.5	√
	364	-3°	4380	18		39.8	-3	47	8.5	√
	365	-3°	4379	18		39.8	-3	55	9.4	√
	366	-2°	4761	18		43.9	-2	52	8.9	√
	36~~7~~3a									
	367	-2°	4760	18		43.4	-2	48	9.4	√
	368	-2°	4759	18		43.1	-2	53	9.3	√
	369	-2°	4755	18		42.8	-2	57	9.8	√
	370	-2°	4758	18		42.9	-2	36	9.0	√

Tues. Dec 1, 1914

MC 5680 Cont

12 10

Dist from no.15		1	2	curve magn.	1	2			Mc 5593	Diff. bete. star. Image.
54 np	371					8.4	0.86	9.26	p9.29	
47 np	372	5.5 5.1		5.42	11.12				10.82	30
51 np	373	4.9 5.1		5.59	10.69				10.61	08
50 np	374	4.9 5.1		5.59	10.69				10.54	15
50 np	375		6.5	5.31	11.71	~~8.8~~			11.55	16
54 sp	376					8.8	0.81	9.61	p9.55	.
64 sp	377	5.9 6.1		5.31	11.41				11.17	13
65 sp	378	4.8 5.0		5.62	10.62				9	.
7 68 sp	379		6.8	5.13	11.93				11.78?	15?
67 n ~~sp~~	380a		6.9	5.11	12.01				11.94	07
64 ~~sp~~np	~~380~~		6.7	5.15	11.85				11.62	23
659 ~~sp~~np	381					9.2	0.75	9.95	9.58	.
62 ~~sp~~np	382	5.0 5.2		5.57	10.77				10.46	31
66 ~~sp~~np	383		6.8	5.13	11.93				11.94	01
?	384									
72 ~~sp~~np	385		6.7	5.15	11.85				11.78	06
92 np	386	t.p.				9.0	0.78	9.78	p~~10.25~~	.
96 np ~~my pos~~	387	5.7? 5.9?		5.37	11.27				.	.
94 np	388	t.p.				8.4	0.86	9.26	p9.29	.
81 np	390	3.9? p 4.1?		5.86	9.96?	9.8?	0.68	10.48?	10.04?	08?
60 np	380b		6.8	5.14	11.94				11.39	55
90 np	391					7.7	0.96	8.66	p8.64	
84 np	392					9.3	0.74	10.04	p9.99	.
76 np	393					8.0	0.91	8.91	p8.89 ~~9.84~~	.
72 np	394					8.3	0.87	9.17	9.19	.
74 np	395					~~8.4~~ wrong star!	~~0.86~~	11.20? ~~9.26~~	10.89	3 21?
74 np	396	5.8? This is 395 ~~5.6?~~ p		5.40	11.20?				12.02	

Ch. F. C.

371	-2	4757	18	42.8	-2	18	8.9	√	
372	-2 -1	4756 3572	18 18	42.8 42.8	-2 -1	1 60	9.4 9.4	√	same star.
373	-2°	4754	18	42.2	-2	7	9.5	√	
374	-2	4753	18	42.0	-2	18	9.5	√	
375	-2°	4752	18	41.9	-2	31	9.4	√	
376	-2°	4751	18	41.4	-2	40	8.7	√	
377	-2°	4746	18	40.3	-2	39	9.7	√	
378	-2°	4744	18	40.1	-2	42	9.5	√	
379	~~-2°~~	~~4743~~	18	39.8	-2	49	~~9.9~~	√	
380a	-2°	4743	18	39.6	-2	49	9.9		
380	-2°	4747	18	40.4	-2	58.9	9.8	√	
381	-2°	4749	18	40.8	-2	28	9.0	√	
382	-2°	4748	18	40.6	-2	16	9.3	√	
383	-2°	4745	18	40.2	-2	10	9.2	√	
384									
385	.	.							
386	-0°	355~~4~~5	18	40.~~2~~3	-0	~~24~~ ~~38~~	8.0 ~~9.3~~	√	
387	-0°	3558	18	40.5	-0	32	9.5	√	
388	-0°	3559	18	40.9	-0	33	8.8	√	(Error in DM? 388 not south of 387)
390 ~~389~~	-0°	3565	18	42.0	-0	43	9.5	√	
380b ~~390~~	-2°	4750	18	41.1	-2	4	9.8	√	
391	-0°	3563	18	41.9	-0	33	8.3	√	
392	-0°	3570	18	43.2	-0	31	8.5	√	
393	-0°	3571	18	43.4	-0	43	8.9	√	
394	-0°	3574	18	43.8	-0	46	8.8	√	
395	-0°	3573	18	43.7	-0	42	9.5	√	
396	.	.							

Tues Dec. 1, 1914

12 25

MC 5690 Cont

Dist. from No. 15		1	2	curve	magn.	1 2	curve	magn.	MC 5593	Diff.
72 np	397					8.8	~~5.01~~ 0.68 0.81	9.61	ꝓ9.~~39~~52	13 12
74 np	398	4.3	4.5	$\overset{5}{4}$.75	$\overset{10}{9}$.25	9.8	0.68	10.48	9.87	38
66 np	399	5.7	5.9	5.37	11.27				11.03	24
68 np	400	5.2	5.4	5.51	10.91				10.61	30
56 np	401	4.7	4.9	5.65	10.55				10.61	06
68 np	402	4.2	4.4	5.78	10.18	9.6	0.70	10.30	10.05	13
66 np	403					8.3	0.87	9.17	ꝓ9.10	.
63 np	404	5.8	6.0	5.34	11.34				11.17	17
62	405	4.6	4.8	5.68	10.48				10.39	09
63 np	406					8.2	0.89	9.09	9.19	.
63 np	407	3.9	4.1	5.86	9.96	9.6	0.70	10.30	10.05	09
56 np	408					8.8	0.81	9.61	9.68	.
81 np	409					6.9	1.08	7.98	ꝓ8.01	.
. ?	410									.
76 np	411	4.2	4.4 p	5.78	10.18	9.6	0.70	10.30	9.94	24
69 np	412		-		.	9.8	0.68	10.48	10.31	.
73 np	413	$\overset{3}{5.8}$	5.5	5.49	10.99				10.68	31
72 np	414	5.9	6.1	5.31	11.41				11.17	24
67 nf	415		6.8	5.13	11.93				11.39	54
56 nf	416					7.4	1.00	8.40	ꝓ8.29	
66 nf	417	4.8	5.0	5.61	10.61				10.46	15
59 nf	417a	5.4	5.6	5.46	11.06				10.90	16
63 nf	418					8.3	0.87	9.17	ꝓ9.10	
64 nf	419	4.0	4.2	5.84	10.04	9.4	0.73	10.13	10.05	01
66 nf	420	4.8	5.0	5.61	10.61				10.46	16
64 nf	421	4.7	4.9	5.64	10.54				10.39	15

Ch. F. C.

	397	-0°	3575	18	44.1	-0	45	9.2	√
	398	-0°	3577	18	44.6	-0	35	9.5	√
	399	.	.						
	400	-0°	3580	18	45.9	-0	39	9.5	√
	401	-0°	3582	18	46.0	-0	59	9.5	√
	402	-0°	3587	18	46.6	-0	52	9.5	√
	403	-0°	3590	18	47.2	-0	54	8.9	√
	404	-0°	3586	18	46.6	-0	42	9.5	√
	405	-0°	3581	18	45.9	-0	44	9.5	√
	406	-0°	3583	18	46.1	-0	45	9.1	√
	407	-0°	3584	18	46.1	-0	44	9.1	√
	408	-0°	3592	18	47.7	-0	53	9.2	√
	409	-0°	357~~4~~8	18	44.~~6~~7	-0	~~35~~ 24	~~9.5~~ 8.1	√
	410								
	411	-0°	3585	18	46.3	-0	26	9.3	√
	412	-0°	3589	18	47.1	-0	33	9.3	√
dbl!?	413 414	-0°	3591	18	47.6	-0	28	9.5	√ which is DM star? 413, according to Miss Wells.
	415	.	.						
	416	-0°	3595	18	48.4	-0	55	7.6	√
	417	-0°	3596	18	48.5	-0	51	9.2	√
	417a	.	.						
	418	-0°	3597	18	48.7	-0	45	8.8	√
	419	-0°	3598	18	48.7	-0	44	9.3	√
	420	.	.						
	421	.	.						

Tues. Dec. 1, 1914

12 38

Z 86 Cont.

~~Take mean of these measures and [illegible] on p. 216, Book 34, and use for reduction of measures Book 34, pp. 218, Book 37 pp 6-18~~

Dist from no. 15.		SC1 SC2	curve	magn.	pc. 1 2	curve	magn.	mc5593	Diff.
59 nf	422	5.7 5.9	5.36	11.26				10.90	36
56^5 nf	423	~~6.7~~			~~6.8~~	1.10 ~~5.13~~	7.90	p 7.82	
56 nf	424	5.4 5.6	5.46	11.06	~~6.8~~			10.96	10
59 nf	425	3.8 4.0	5.90	9.90	8.9	0.80	9.70	9.58	32
58 nf	426	4.8 5.0	5.61	10.61				10.61	00
56 nf	427				6.9	1.08	7.98	p 7.82	.
57 nf	428	4.1 4.3	5.81	10.11	9.3	0.74	10.04	10.05	06
58 nf	429	5.5 5.7	5.42	11.12				10.90	22
65 nf	430				7.4	1.00	8.40	p 8.29	
67 nf	431	5.1 5.3	5.53	10.83				10.61	22
70 nf	432	~~6.6~~ 6.6	5.19	11.19				11.31	48
72 nf	433				9.4	0.72	10.12	9.78	
71 nf	434				7.9	0.93	8.83	p 8.73	.
74 nf	435				9.3	0.74	10.04	9.87	.
64 nf	436				8.8	0.81	9.61	p 9.55	.
63 nf	437		-		9.6	0.70	10.30	10.39	.
64 nf	438	5.4 5.6	5.46	11.06				10.90	16
64 nf	439		6.2 5.29	11.49				11.31	18
65 ~~f~~ nf	~~440~~ 450				8.9	0.80	9.70	9.68	.
									.
Southern ~~[illegible]~~ of two 61 nf	421a	5.6 5.8	5.40	11.20				11.03	17
nearest of 2 near 430 66 nf	430a	5.6 5.8	5.40	11.20				10.81	39
White ~~red~~ 72 nf	432a	5.3 5.5	5.49	10.99				10.61	38
76 nf	435a	5.0 5.2	5.57	10.77				10.54	23

No numbers 440 to 449 Ch. F. C.

1 10 Interrupted for 20 minutes

422	-0°	3602	18	49.3	-0	52	9.5	✓
423	-0°	3599	18	48.8	-0	59	8.1	✓
424	.	.						
425	-0° -0	3600 3601	18 18	48.9 ~~47.0~~ 47.0	-0 -0	55 ~~57~~ 57	9.5 9.5	
426	-0 -0	3600 3601	18 18	48.9 49.0	-0 -0	55 57	9.5 9.5	
427	-0°	3603	18	49.4	-0	58	~~9~~ 8.1	✓
428	-1°	3606	18	49.8	-1	0	9.5	✓
429	-0°	3606	18	50.0	-0	58.7	9.5	✓
430	-0°	3607	18	50.2	-0	42	7.6	✓
431	.	.						
432	.	.						
433	-0°	3612	18	51.3	-0	39	9.3	✓
434	-0°	3614	18	51.5	-0	42	8.5	✓
435	-0°	3615	18	51.7	-0	36	9.4	✓
436	-0°	3613	18	51.4	-0	55	9.5	✓
437	-0°	3616	18	51.7	-0	58	9.5	✓
438	.	.						
439	.	.						
450	-0°	3619	18	51.8	-0	56	9.4	✓
430a	.	.						

Error in dec. in DM. Which DM star is 425?
" " " " " 426?

Tuesday, Dec. 1, 1914

Scale M

3 07

MC 5680 Cont.

For reduction of measures p. 24

	1 2	Diff.	B. 1 3	Diff.
1			3.739	+2.13
2			3.941	2.23
3			5.153	1.29
4			62	1.24
5			6.6	1.22
6			7.1	1.14
7			7.6	0.95
8			~~7.8~~ 7.8	1.24
9	3.032	+6.19	8.5	0.89
10	3.234	6.03	87	0.73
11	3.638	5.88	9.0	0.68
12	4.042	6.03	9.4	0.83
13	4.749	5.68	9.9	0.68
14	5.456	5.30		
15	5.658	5.60		
16	6.6	5.05		
17	68	5.18		
18	7.2	5.28		
19	7.6	4.95		
20	7.7	4.91		
21	8.2	5.21		
22	8.7	4.94		
23	8.9	5.04		
24	9.6	4.68		

Ch. F. C.

Tuesday, Dec. 1, 1914.

MC5680 Completed. Prov. Reg. Sext. Sb.

reduce with magn. p. 22

Dist. from no. 15		1 + 2			1	2		MC5593	Diff.
74 nf	451	54 5.6	5.46	11.06				10.61	45
68 nf	452	48 5.0	5.61	10.61				10.46	15
70 nf	453	54 5.6	5.46	11.06				10.82	24
72 nf	454				8.5	0.85	9.35	p 8.82	·
76 nf	455	43 4.5	5.75	10.25	9.3	0.74	10.04	9.86	39
80 nf	456				66	1.14	7.74	p 7.56	·
84 nf	457	46 4.8	5.68	10.48				10.14	34
85 nf	458	47 4.9	5.65	10.55				10.05	50
85 nf	459	~~5.8?~~ 6.8? N ~~5.6?~~ 6.6? S	5.13 5.18	11.93 ? 11.78 ?				·	· ·
89 nf	460				66	1.14	7.74	p 7.65	·
82 nf	461	68	5.13	11.93	~~68~~			11.54	39
83 nf	462				8.3	0.87	9.17	p 9.29	·
83 nf	463				7.9	0.92	8.82	p 8.64	·
87 nf	464	42 4.4	5.79	10.19	9.5	0.71	10.21	9.87	32
89 nf	465	57 5.9	5.37	11.27				10.68	59
91 nf	465a	55 5.7	5.42	11.12				10.81	31
69 nf	454a	54 5.6	5.46	11.06				10.82	24
79 nf	456a	57 5.9	5.37	11.27				10.89	38
81 nf	45~~8~~5a	53 5.5	5.48	10.98					·
88 nf	461a	50 5.2	5.57	10.77				10.22	55
89 nf	464a	56 5.8	5.40	11.20				10.89	31

3 3 2

Cont. p. 56

Ch. F.C.

451	~~−0°~~	~~36 21~~	~~18~~	~~52.8~~	~~−0°~~	~~50~~	~~9.0~~		
452	·								
453	−0°	36 23	18	52.9	−0	54	9.5	✓	
454	−0°	36 2~~8~~ 2	18	52.~~7~~ 8	−0	~~54~~ 50	~~9.5~~ 9.0	✓	
455	−0°	36 24	18	53.1	−0	46	9.5	✓	
456	−0°	36 26	18	53.3	−0	39	7.4	✓	
457	−0°	36 21	18	52.3	−0°	30	9.5	✓	
458	·	·							
459	·	·							
460	−0°	36 25	18	53.3	−0°	25	8.0	✓	
461	·	·							
462	−0°	36 ~~29~~ 32	18	~~54.3~~ 55.3	−0	~~20~~ 55	~~9.4~~ 8.5	✓	} dbl
463	−0°	36 ~~28~~ 31	18	~~54.2~~ 55.3	−0	~~21~~ 55	~~9.3~~ 8.5	✓	
464	−0°	36 33	18	55.6	−0	48	9.3	✓	
465	·	·							
465a	·	·							
454a	·	·							
456a	·	·							
458a	·	·							
461a	−0°	36 30	18	55.2	−0	39	9.5	✓	
464a	·	·							

Wednesday, December 23, 1914.

Observations of Eros.

MC 7273. Dec. 17, 1914

Sequence selected and compared with MC 7272 and 7278 in same series.

The image of Eros is a trail almost exactly twice as long as the star images, showing a partial separation into two nearly equal parts. Of these parts, one is estimated to have about the magn. 13.3, the other 13.6, mean 13.45 The actual light may be estimated as double that of the separate parts. It would, therefore, be of the magnitude 13.45 − 0.75, or 12.7

I 38983 7 exposures

1	12.5 (defective?)	5	12.6
2	12.7	6	12.7
3	12.7	7	12.6 (Images look alike)
4	12.7		

Images much easier to compare directly than on MC 7273, as it is not difficult to take account of both size and intensity. The form of the last images is about the same for Eros and for the star images.

It may be said with a good deal of confidence that Eros ~~is~~ was of about the magnitude 12.6 on December 17

Eros Cont.

MC 6867. Nov. 11, 1914
Estimated 12.0
I 38927 Nov. 10, 1914
Est. 12.0

Wednesday, Dec. 23, 1914

R Lyncis

Examination of Discordant Plates

AC 14802

11.11 m 2 V ? 11.31 10.85 v = 11.08 ?
10.85 V 3 K ? 11.15

Image of V peculiar and probably defective

AC 14832

9.79 g 3 V 10.09 v = 10.08
10.08 V 1 h' 10.18

Image of V large Comparison difficult

AC 14801

10.18 L' 5 V 10.68 v = 10.88
11.11 V 0 m 11.11.
10.85 V 3 K 11.15

AC 14780

9.79 g 1 V 9.89 v = 9.84
9.79^{8} V 4 h' 10.18

AC 6235

n.s. ~~fainter than O2~~ O^2 2 N > 12.4

AC 8025

9.08 f' 1 V 9.18 v = 9.10
9.03 V 4 f^2 9.43

J.D. 7244 A 7610

11.11 m 4 V 11.51. v = 11.72
11.70 $\overset{V}{\cancel{m}}$ 0 $\overset{11.68}{n}$ o O' 11.71
11.74 V 4 O^2 12.24

R Lyncis Cont.

MC 2975

9.79 g 3 V 10.09 9.98. V = 10.04
9.98 V 2 h' 10.18

MD 2975

9.79 g 5 V 10.29 10.18 10.24
10.18 V 0 h' 10~~20~~18
[10.51] V 5 m 11.11

Wednesday, January 6, 1915

Scale M

Poor Region Scutum Sct.

12 05 Measures of additional stars on yellow plate

Reduce with Seq. p. 34

MC 5524

		Sc1	Sc2	Magn.	P.C.	
	43a		8.3	11.09		
	56a		7.9	10.74		
	56b		8.2	11.00		
	63a		8.6	11.36		
	65a		8.2	11.00		
	74a		8.2	11.00		
	78a		8.0	10.83		
	94a		8.6	11.36		
	96a		8.1	10.91		
	98a		8.0	10.83		
	104a		8.1	10.91		
	105a		8.3	11.09		
	115a		8.0	10.83		
	117a		8.3	11.09		
	119a		7.9	10.74		
	123a		8.7	11.46		
	128a		8.2	11.00		
	130a		7.9	10.74		
	139a		7.8	10.65		
	144a		7.9	10.74		
	145a		8.5	11.27		
2,	148a					
	153a		8.9	11.64		
	155a		7.9	10.74		
	157a		8.3	11.09	8.3	
double	159a		pre. 8.7 9.2	(11.46 11.92)	Remeas. Mar. 2, 1917. 8.3 9.2.	Rec. O. Obviously meas. too faint. Reject for discordance. Pu&S.S.
	118a		7.7	10.57		

12 20

Star 153a. Scale meas. discordant but inspection of plates shows no variation in comp. with adj. stars. Due to peculiar appearance of image on most plates. much brighter on blue plates than on yellow plates. In MC 6070 this & other adj stars near the same brightness come out bright as compared with other plates. Prob. due to distance from centre.

Wednesday, January 6, 1915

12 20 Poor Region Scut. Sob. Cont.

Yellow Plate MC5524

		sc 1	sc 2	magn.
	160a		8.0 ~~7.9~~	10.83
	161a		7.9	10.74
	161b		7.9	10.74
	167a		8.2	11.00
	171a		7.9	10.74
	185a		7.8	10.65
216?	200a		7.8	10.65
	205a		8.3?	11.09?
	293a		7.9	10.74
	294a		8.0	10.83
	363a		8.2	11.00
Already measured and recorded on chart	380~~a~~		8.0	10.83
	380~~b~~ a		8.7	11.46
	417a		8.0	10.83
	421a		8.0	10.83
	430a		8.3	11.09
	432a		8.3	11.09
	435a		8.0	10.83
	454a		8.2?	11.00?
	455a		7.9	10.74
	456a		8.7	11.46
	~~458a~~		~~7.9~~	
	461a		8.0?	1083?
	464a		8.9?	11.64?
	465a		8.6?	11.36?

12 28

Wednesday, January 6, 1915

Scale M

Pror Reg. Scut. Sobieski   For Reduction of Meas. pp. 30, 32

11 50   Measures of Ref. Seq.   12 30

MC 5524 Yellow

	1 2	p.c. 1 2	1 2	pc 1 2
1		6.8		6.7
2		6.8		6.8
3		7.4		7.5
4	2.8?	8.2		8.5
5	3.7? p	8.7		8.8
6	4.2? p	9.0	4.0?	8.9
7	4.7?	9.2	4.7	9.3
8	4.2	9.0	4.0	9.1
9	5.0	9.8	5.5 ~~5.~~	9.9
10	5.3		5.4 5.5	10.0
11	4.9		5.2 5.4	9.9
12	6.9		6.8	+
13	7.2		7.3	
14	7.6		7.7	
15	7.9		8.1	
16	8.5		8.7	
17	8.7		8.8	
18	8.8		8.9	
19	8.8		8.9	
20	8.8		8.8	
21	9.8		9.8	
22	9.8		9.8	

12 05

12 40

Thursday, January 7, 1915

12 40   H. I. Regin C4.

Estimates of Positions on Plate D 16558

Continued from Book 34: 133

	Star	H	V	H	V	mean H	mean V	x"	y"
	024	+654	-808	+653	-810	+65.35	-80.90	-404.5	+326.8
	025	-304	-1327	-304	-1326	-30.40	-132.65	-663.2	-152.0
	~~026~~	+3							
	026	+315	-994	+315	-994	+31.50	-99.40	-497.0	+157.5
	027	~~+3~~ -13	~~-1336~~ -1408	-12	-1407	-1.25	-140.75	-703.8	-6.2
	028	-04	-882	-04	-883	-0.40	-88.25	-441.2	-2.0
	029	+263	-1244	+263	-1244	+26.30	-124.40	-622.0	+131.5
	030	+168	-688	+167	-688	+16.75	-68.80	-344.0	+83.8
	031	+341	-694	+341	-694	+34.10	-69.40	-347.0	+170.5
	032	-13	-1336	-11	-1336	-1.20	-133.60	-668.0	-6.0
	033	-131	~~-844~~ 915	-130	-915	-13.05	-91.50	-457.5	-65.2
	034	+163	-1031	+163	-1031	+16.30	-103.10	-515.5	+81.5
	035	+308	~~-1090~~ -1190	+308	-1190	+30.80	-119.00	-595.0	+154.0
	036	+97	-844	+96	-843	+9.65	-84.35	-421.8	+48.2
	037	-23	-791	-23	-792	-2.30	-79.15	-395.8	-11.5
	038a	-1~~8~~43	-811	-143	-810	-14.30	-81.05	-405.2	-71.5
	038b	-182	-696	-183	-695	-18.25	-69.55	-347.8	-91.2
	038	+40	-1402	+40	-1403	+4.00	-140.25	-701.2	+20.0
	039	-157	-666	-157	-667	-15.70	-66.65	-333.2	-78.5
approx	040	+438	-750	+438	-750	+43.80	-75.00	-375.0	+219.0
approx	041	+478	-803	+478	-803	+47.80	-80.30	-401.5	+239.0
approx.	042	-12	~~-1101~~ -1050	-13	-1051	-1.25	-105.05	-525.2	-6.2

1 10

Friday, January 8, 191~~4~~5

Quality of Prismatic Companions and Diffraction Images on Curved Plates.

Plates were taken on which there were both prismatic companions and diffraction images.

¶ Starting from edge of plate, a mark was made on glass side at a point where the diffraction images were not obviously poorer than prismatic companions. This was done independently from all parts of the edge, so that an approximate circle was drawn on each plate, within which the diffraction images are as good as the prismatic companions, while outside they grow rapidly worse. Although the estimate was made entirely independently for each point, using a magnifying glass, it being impossible to see where previous points had been marked, the approach to a circle with its centre very near the center of the plate was always noticeable.

Below are recorded the diameters of the circles thus drawn, together with estimates of the comparability of the prismatic companions at certain distances.

Friday, January 8, 1915

Plate	Reg.	Diam (Approx)	Comparisons				
		mm	0 mm	~~50~~ 45 mm	~~110~~ 90 mm	120	110
MC4831	Ple	110	3b	4a	2a	0	
4815	Ple	120	~~4~~3b	5	2a	0	1
			0-10 mm	35-45	70-75	90	100
MA4815	Ple	120	4b	5	4a	2a	1a
MC 4840	Ple	115	5	5	3a	2a	1
MC4802	Ple	105	4b	5	4a	2a	1
MC4846	Ple	110	5	4a	4a	2	
MC4852	Ple	120	4b	5	4a	3a	2a
MC7526	4h+4i	135	3b	4b	4a 5	1 3a	0 2a
Two sides of plate unlike							
MC7527	Ple	140	3b	4b	4a	1 3a	0 2a
MC7525	Cate	140	3b	4b	4a 5	1 4a	0 3a

Plates 4802 to 4852 were taken in the spring of 1914
Plates 7525, 26, 27 " " January 5, 1915

The three latter plates are not alike on the two sides, the focus being much poorer at the marked end of the plate. The circle on these 3 plates is larger than on the earlier ones by about 25 millimeters, or about 0°.67. This seems to be caused by the larger size of the prismatic companions, as the comparison at centre is 3b, while on the early plates it was 4b or 5.

b = p.c. larger than primary image
a = p.c. sharper " " "

All of the above plates were supposed to be taken with focus 16.6

Saturday, January 9, 1915

Diffraction Images. Comparison of Images in Different Parts of Plate.

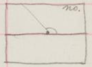
a^1 = Diff. Im. in direction of ~~Pole Star from Center~~ long edge with plate number

~~or " " more nearly in " " Star 9, if Pole Star is uncertain.~~

~~Position~~ angle = Approx. angle from line parallel to long edge of plate, reckoning from marked ~~end~~ corner

Comparison with adjacent star images

> brighter than



				a^2		$a^{\overset{1}{\cancel{2}}}$		
Plate	Star	Dist. mm	Angle	Form	Comp.	Form	Comp	
MC 4802	5	43	10°	4	5	3	5	$a^2 > a^{\overset{1}{\cancel{2}}}$
	6	45	260°	4	$\overset{5}{\cancel{4}}$	4	5	$a^2 = a^{\overset{1}{\cancel{2}}}$
	7	75	225	5	5	4	5	$a^2 > a^{\overset{1}{\cancel{2}}}$
	8	42	345	4	$\overset{5}{\cancel{3}}$	3	$\overset{4}{\cancel{5}}$	$a^2 = a^{\overset{1}{\cancel{2}}}$
	9	42	340	4	5	3	4	$a^2 = a^{\overset{1}{\cancel{2}}}$
	10	10	275	4	5	3	4	$a^2 > a^{\overset{1}{\cancel{2}}}$
	13	19	180+	5	5	4	5	$a^2 = a^{\overset{1}{\cancel{2}}}$
	14	4		4	5	4	5	$a^2 = a^{1\cancel{2}}$
	42	43	100	4	5	3	4	$a^2 = a^{1\cancel{2}}$

If the given star is too bright, fainter stars in the vicinity are compared

Form, ~~Sec~~ 5 = round 1 = extremely elongated

Form 5 = round 1 = extremely elongated

~~Comp~~. (Comparison with Primary images) 5 = excellent 1 = very poo

---

Saturday, January 9, 1915

Diffr. Im. Cont.

				a^1		a^2		
Plate	Star	Dist	Angle	Form	Comp.	Form	Comp	
MC 4779	5	49	345°	3	3	4	5	$a^2 > a^1$
	6	42	230	$\overset{3}{\cancel{4}}$	4	4	5	$a^2 > a^1$
	7	73	190	3	4	4	5	$a^2 > a^1$
	8	42	35	3	4	4	5	$a^2 = a^1$
	9	47	45	3	4	4	5	$a^2 = a^1$
	10	8	270	3	4	5	5	$a^2 > a^1$
	13	19	140	4	4	5	5	$a^2 > a^1$
	14	2		4	4	5	5	$a^2 = a^1$
	42	46	60	3	4	5	5	$a^2 \mid a^1$
MC 4815	5	51	70	3	4	4	5	$a^2 \mid a^1$
	6	42	325	4	4	5	5	$a^2 = a^1$
	7	71	280					
	8	44	50	4	4	5	5	$a^2 \mid a^{\overset{1}{\cancel{2}}}$
	9	47	45	4	4	5	5	$a^2 \mid a^1$
	10	9	5	4	5	4	5	$a^1 = a^2$
	13	17	225	4	5	5	5	$a^1 = a^2$
	14	1		5	5	5	5	~~$a^1 = a^2$~~ $a^1 \mid a^2$
	42	46	150	4	4	5	5	$a^1 = a^2$

Saturday, January 9, 1914

Diffraction Images cont.

	Plate	Star	Dist	angle °	a' Form	a' Comp	a^2 Form	a^2 Comp.	
MC	7527	5	53	320	4	5	4	5	$a' = a^2$
		6	45	225	4	5	4	5	$a' = a^2$
		7	72	180	4	5	5	5	$a' = a^2$
		10	15	270	5	5	4	5	$a^2 1 a'$
		13	14	160	5	5	5	5	$a' 1 a^2$
		14	6	270	4	4	5	5	$a' 1 a^2$
		42	42	45	3	4	4	5	$a' = a^2$
MC	7522	5	60	310 ~~60~~	3	5	4	5	$a' = a^2$
		6	45	210	4	5	5	5	$a' = a^2$
		7	68	150	4	5	5	5	$a' 1 a^2$
		10	19	265	5	5	4	5	$a' 1 a^2$
		13	7	100	5	5	4	5	$a' 1 a^2$
		14	12	270	5	5	5	5	$a' 1 a^2$
		42	42	15	5	5	5	5	$a' = a^2$

The estimates on pages 39 and 40 show that the diffraction images are usually closely comparable with star images in all parts of the plate. The form of images a^2 is usually better than that of images a^2, which are apt to be slightly elongated. On both sides of the plate, images a' are apt to be slightly brighter than those of a^2.

Friday, January 22, 1915.

3 20

Scale M Rich Region Cont. S.V. Not to be used

Yellow Plate MC 5523 4 35

			P.a.					
	1	2	1	2	~~1~~	~~2~~	~~1~~	~~2~~
1			48	5.0				
2				7.6				
3	3.3	3.5		8.8				
4	4.2	4.4		9.6				
5	4.9	5.1		9.7				
6		5.8						
7		6.2						
8	4.7	4.9						
9		5.4						
10		7.4						
11		7.8						
12						79		
13		8.3						
2a				8.0				
7a		6.7						
7b		6.9						

Saturday. Jan. 23, 1915

Scale M — Rich Reg. Section Sct MC 5523 Yellow

12 40

	1	2	P.C. 1	P.C. 2	Star 1	Star 2	P.C. 1~~+~~2
1			4.9	5.1			5.0 6.2
2				7.4			7.3
2a	2.0	2.2	8.0	8,0			7.9
3	3.3	3.5		8.8			8.9
4	4.1	4.3		def.	4.4	4.6	
5	4.9	5.1		9.3		4.8	9.5
6		5.7				5.7	
7		6.3				6.3	
7a		6.7				6.8	
7b		$7.\overset{0}{5}$				7.3	
8	4.7	4.9		9.8	4.8	5.0	9.7
9	5.2	5.4		10.0	5.2	5.4	10.0
10	~~7.5~~	7.5				7.6	
11		7.7				7.8	
12		8.1				8.2	
13		8.2				8.3	

1 40

For reducing Stars 41-71 pp 44-48

12 50

1 45

Wednesday, January 26, 1915

Scale M — Rich Sect. Sct

3 ~~35~~ 40 Yellow Plate MC 5523

4 35

4	1	2	p.c. 1	p.c. 2	1	2	p.c. 1 2
1			4.9	5.1			5.1 5.3
2				7.6			7.5
2a				7.9			7.8
3	3.3	3.5		8.9	3.4	3.6	8.8
4	4.3	4.5		9.4	4.0	4.2	9.2
5	4.9	5.1		9.5	4.9	5.1	9.7
6		5.7			5.6	5.8	9.9
7		5.9			5.8	6.0	
7a		6.8				6.9	
7b		6.8				7.2	
8	4.7	4.9			4.7	4.9	9.8
9	4.9	5.1			5.0	5.2	10.0
10		7.4				7.5	
11		$7.\overset{6}{7}$				7.9	
12		8.0				7.9	
13		8.2				8.3	

For reducing stars 72 to 123 pp 48-54

3 48

4 45

Sat. Jan. 23, 1915

Scale M Rich. Cont. Sel.

Yellow Plate ~~MC~~ 5523

12^{52} MC ~~55~~5523

Star	1	2	Star magn.	P.C. magn.
p 41		10.0		9.02
41	$\overset{6.6?}{6.4?}$		9.73?	
42	$\overset{6.4?}{6.2?}$	~~10.1?~~	9.60?	
p 42		10.1?		9.11?
p 43		10.0?		9.02?
43	$\overset{5.9?}{5.7?}$		9.25?	
p 44	$\overset{5.0}{4.8}$		8.64	..
p 45		9.6		8.67
45	$\overset{5.1?}{4.9?}$		8.71	
p 46		9.8		8.85
46	$\overset{5.8?}{5.6?}$		9.18?	
p 47		8.8		7.97
p 48	~~67~~	10.0		9.02
48	$\overset{6.9?}{6.7?}$	-	9.95?	
p 49		8.3		7.53
p 50		9.7		8.76
50	$\overset{5.6?}{5.4?}$		9.03?	
p 51		9.8		8.85
51	$\overset{5.9}{5.7}$		9.25	
p 52		$9.\overset{4}{\text{X}}$		8.50
52	$\overset{4.4}{4.2}$		8.31	
p 53		9.6		8.67
53	$\overset{5.0}{4.8}$		8.64	
p 54		9.8		8.85
54	$\overset{5.1}{4.9}$		8.71	

1^{15}

41	−6° 4986	18 50.5	−6 11	9.0	✓
42	−6° 4985	18 50.3	−6 26	9.0	✓
43	−6° 4983	18 49.9	−6 50	9.3	✓
44	−6° 4976	18 49.3	−6 2	5.0	✓
45	−6° 4971	18 48.7	−6 8	9.0	✓
46	−6° 4966	18 48.2	−6 32	9.2	✓
47	−6° 4964	18 47.9	−6 50	8.5	✓
48	−6° 4959	18 47.5	−6 20	9.2	✓
49	−6° 4953	18 46.7	−6 8	8.0	✓
50	−6° 4949	18 46.3	−6 17	8.9	✓
51	−6° 4952	18 46.6	−6 39	8.9	✓
52	−6° 4946	18 45.6	−6 44	8.8	✓
53	−6° 4945	18 43.6	−6 38	9.1	✓
54	−6° 4944	18 45.5	−6 26	9.0	✓

Saturday, ~~March 20~~ Jan. 23, 1915

Scale M

Rich Scut. Stf.

1 15 Jan. 23, 1915
Yellow
MC5523

	1	2	~~Star~~ Star	ı O.C.
p 55		9.7		8.76
55	$\overset{5.5}{5.3}$		8.98	
p 56		9.6		8.67
56	$\overset{5.1?}{4.9?}$		8.71?	
p 57		8.6		7.79
p 58		9.9		8.93
58	$\overset{5.8?}{5.6?}$		9.18?	
p 59		9.8		8.85
59	$\overset{5.9?}{5.7?}$		9.25	
p 60	~~5.3~~	9.8		8.85
60	$\overset{5.5}{5.3}$		8.98	
p 61	~~6~~	10.0		9.02
61	$\overset{5.9}{5.7}$		9.25	
In cluster p 62		-9.1		8.24
~~p 63~~				
p 6~~4~~3		9.8?		8.85?
6~~4~~3	$\overset{5.6?}{5.4?}$		9.03?	
p 6~~5~~4		9.4		8.50
64	$\overset{4.6}{4.4}$		8.42	
p 65		9.8		8.85?
65	$\overset{5.9}{5.7}$		9.25	
p 66		67		..
p 67		8.9		8.07
p 68		7.2		..
~~p 69~~	1 26			

55	-6° 4942	18	45.2	-6	27	9.0	✓
56	-6° 4943	18	45.3	-6	18	8.8	✓
57	-6° 4941	18	45.0	-6	0	7.5	✓
58	-6° 4938	18	44.2	-6	5	9.2	✓
59	-6° 4939 ~~4927~~	18 ~~18~~	44.4 ~~42.5~~	-6 ~~-6~~	58 ~~59~~	9.2 ~~9.6~~	✓
60	-6° 493~~6~~3	18	43.~~7~~5	-6	~~28~~ 30	~~9.5~~ 9.2	✓
61	-6° 493~~8~~2	18	43.5	-6	~~30~~ 31	9.2	✓
62	-6° 4929	18	43.4	-6	27	8.8	✓
63	-6° 4926	18	~~43.9~~ 42.3	-6	8	9.0	✓
64	-6° 4925	18	42.3	-6	25	9.0	✓
65	-6° 4924	18	42.3	-6	40	9.1	✓
66	-6° 4922	18	41.9	-6	4	6.8	✓
67	-6° 4923	18	41.9	-6	6	8.5	✓
68	-6° ~~4912~~ 4943	~~18~~ 18	~~40.9~~ 40.9	~~-6~~	~~9~~ 10	~~9.2~~ 7.2	✓

Rich. Scat. Sob.

Scale M Jan. 23, 1915

Yellow

M 5523

			Slat Magn	P.C.
~~p69~~	[1.28] 1	$\overset{2}{\cancel{9.5}}$		
p69		9.5		8.59
69	$4.2^{4.4}$		8.31	
p 70		9.8		8.85
70	$5.3^{5.5}$		8.98	
p 71		9.5		8.59
71	$4.8^{5.0}$		8.64	
	[1.32]			
	Jan. 26, 1915			
p 72		$9.\overset{9}{\cancel{8}}$		8.93
72	$4.9^{5.1}$		8.71	
p 73	~~5.9~~	10.0		9.02
73	$5.9^{6.1}$		9.39	
p 74		7.7		7.00
p 75		9.9		8.93
75	$5.8^{6.0}$		9.32	
p 76		8.3		7.53
p 77		9.8		8.85
77	$5.4?^{5.6?}$		9.03?	
p 78		8.4		7.62
p 79		9.0		8.16
p 80		9.3		8.41
* p 81		9.2		8.33
p 82		8.9		8.07
p 83		7.5		6.83

* For 81a, b, c, see p. 98, after 307b

69	−6° 4916	18 41.1	−6	30	8.7	✓
70	−6° 4917	18 41.3	−6	59	9.1	✓
71	−6° 4910	18 40.8	−6	37	8.8	✓
72	−6° 4905	18 39.9	−6	47	9.1	✓
73	−6° 4906	18 39.9	−6	24	9.3	✓
74	−6° 4897	18 39.4	−6	3	7.0	✓
75	−6° 4895	18 39.2	−6	30	9.3	✓
76	−6° 4893	18 39.0	−6	50	7.8	✓
77	−6° 4888	18 38.4	−6	17	9.0	✓
78	−6° 4885	18 38.3	−6	24	8.2	✓
79	−6° 4886	18 38.3	−6	28	8.7	✓
80	−6° 4879	18 37.8	−6	13	8.8	✓
81	−6° 4882	18 38.0	−6	36	8.9	✓
82	−6° 4871	18 36.9	−6	47	8.8	✓
83	−6° 4869	18 36.9	−6	40	7.0	✓

Rich Scut St.

Scale M

Jan. 26, 1913
Yellow
MC5528

Remeas. by O. in absence of H.S.L. 6.0 measure 6.3 appears too faint Image poor

Remeas by O. 5.9? P.c. 9.7.

	1	2	Star	P.C.
	[3 38]			
p84		9.1		8.24
p85		10.0		9.02
85	6.0 5.8?		9.32	
p86		67		..
p87		9.5		8.59
p88		9.9		8.93
88	6.5? 6.3?		9.66?	
p89		9.8		8.85
89	6.6? 6.4?		9.73?	
p90	6	9.8		8.85
90	6.7? 6.5?		9.80?	
p91		9.8		8.85
91	6.0? 5.8?	-	9.32?	
p92		9.7		8.76
92	5.4? 5.2?		8.90?	
p93		8.9		8.07
p94		9.3		8.41
p95		65		..
p96		97		8.76
96	5.0? 4.8?		8.64?	
p97		89		8.07
p98		99		8.93
p99		9.0		8.16

84	-6°	4872	18	37.1	-6	29	9.0	√
85	-6°	4857	18	36.0	-6	44	9.3	√
~~86~~								
86 ~~87~~	-6°	4859	18	36.1	-6	57	6.0	√
		~~4851~~	~~18~~	~~35.3~~	~~-6~~	~~59~~	~~9.2~~	
87 ~~88~~	-6°	4852	18	35.4	-6	58	8.7	√
88	-6°	4846	18	34.8	-6	58	9.5	√
89	-6°	4860	18	36.1	-6	12	9.2	√
90	-6°	4853	18	35.5	-6	10	9.2	√
91	-6°	4851	18	35.3	-6	59	9.2	√
92	-7°	4681	18	35.8	-7	2	9.4	√
93	-7°	4677	18	35.4	-7	7	8.6	√
		~~4678~~	~~18~~	~~35.4~~	~~-7~~	~~7~~	~~9.5~~	
94	-7°	4673	18	34.9	-7	6	9.0	√
95	-7°	4670	18	34.8	-7	12	6.2	√
96	-7°	4669	18	34.7	-7	28	9.0	√
97	-7°	4668	18	34.7	-7	46	8.5	√
98	-7°	4672	18	34.9	-7	50	9.0	√
99	-7°	4675	18	35.3	-7	37	8.5	√

Rich Reg. Scut, Sob,

Scale M

Jan. 26, 1915
Yellow
MC 5523

	1 . 2 [4 25]	Slat	A.C.
p 100	8.7		7.88
p 101	7.8		7.10
p 102	10.0		9.02
102	64 62	9.60	
p 103	8.8		7.97
p 104	9.7		8.76
p 105	9.8		8.85
105	5.8? 5.6?	9.18?	
p 106	~~5~~ 10.0		9.02
106	5.9? 5.7?	9.25?	
* p 107	8.3		7.53
p 108	8.8		7.97
p 109	9.1		8.24
p 110	9.7		8.76
p 111	9.5?		8.59?
p 112	9.7		8.76
* p 113	9.9		8.93
113	6.0? 5.8?	9.32?	
p 114	9.8		8.85
114	6.0? 5.8?	9.32?	
* p 115	8.9		8.07
p 116	9.5		8.59
p 117	10.0		9.02
117	9 5.8? 5.7?	9.25?	
	[4 30]		

* For 115 a see p. 100, after 327
For 107 a, b see p. 98 after 317
" 113 a " " " " 320

100	−7° 4683	18	35.9	−7	52	8.5	✓
101	−8° 4687	18	35.7	−8	31	7.5	✓
102	−8° 4685	18	35.4	−8	59	8.9	✓
103	−9° 4802	18	35.1	−9	19	8.3	✓
104	−9° 4805	18	35.6	−9	28	8.8	✓
105	−9° 4800	18	34.7	−9	35	9.0	✓
106	−9° 4809	18	35.8	−9	45	9.0	✓
107	−7° 4689	18	36.7	−7	15	8.2	✓
108	−7° 4687	18	36.6	−7	46	8.6	✓
109	−7° 4688	18	36.7	−7	43	9.0	✓
110	−7° 4692	18	37.1	−7	43	9.1	✓
111	−7° 4696	18	37.8	−7	44	9.1	✓
112	−7° 4694	18	37.4	−7	7	9.0	✓
113	−7° 4699	18	38.4	−7	41	9.3	✓
114	−8° 4692	18	36.9	−8	16	9.0	✓
115	−8° 4693	18	37.8	−8	41	8.3	✓
116	−8° 4699	18	38.6	−8	35	9.0	✓
117	−8° 4689	18	36.0	−8	47	9.2	✓

Rich Scut Sob

Scale M Jan 26, 1915
Yellow
MC 5523

	$\overset{1}{[4}\ \overset{2}{30]}$	Star	P.C.
p 118	8.7		7.88
p 119	9.8?		8.85?
119	$5.5?^{\,5.7?}$	9.10?	
p* 120	9.7		8.76
p 121	9.9		8.93
121	$5.4^{\,5.56}$	9.03	
p 122	9.9		8.93
122	$5.4^{\,5.56}$	9.03	
p 123	9.7		8.76
	[4 35]		

Continued p. ~~124~~ 68

* For 120a see p 100 after 328

118	−9° 4811	18 35.9	−9	4	8.3	✓
119	−9° 4815	18 36.6	−9	27	9.0	✓
120	−9° 4819	18 37.2	−9	33	8.8	✓
121	−9° 4828	18 38.1	−9	37	9.0	✓
122	−9° 4830	18 38.5	−9	20	9.3	✓
123	−9° 4835	18 39.5	−9	28	8.9	✓

Region Poor Scutum Sob.

Magnitudes copied from H.S.L. Bk. XXXIV, beginning page 199.

Dist. from No. 15 Σ 10275 mm	Des.	Blue Mc5680	mc 5593	Diff.
84 nf	41	$\overset{p}{9.70}$	9.49	+21
84 nf	42	12.52	12.10	+42
80 nf	43	$\overset{13,3}{10.17}$	9.59	+59
78 nf	44	10.04	10.04	00
76 nf	45	10.18	10.04	+14
74 nf	46	11.64	11.24	+40
73 nf	47	10.69	10.54	+15
70 nf	48	11.71	11.54	+17
68 nf	49	10.19	10.13	+06
65 nf	50	10.69	10.54	+15
63 nf	51	11.78	11.54	+24
64 nf	52	$\overset{38}{11.94}$	11.17	+21
74 nf	53	$\overset{07,08}{10.12}$	10.04	+08
66 nf	54	10.19	10.23	-04
	55	10.77	10.82	-05
60 nf	56a	12.43	12.33	+10
66 nf	56b	11.12	11.10	+02
62 nf	57	11.34	11.24	+10
55 nf	58	10.04	10.23	-19
50 nf	59	$\overset{01\ 02}{9.84}$	10.04	-20
68 nf	60	12.62	12.42	+20
70 nf	61	10.55	10.23	+32
71 nf	62	10.69	10.68	+01
69 nf	63	10.99	10.68	+31
64 nf	64	11.20	11.17	+03
61 nf	65	12.24	12.02	+22

	41	-1°	3629	18	55.8	-1	7	9.2		✓
	42	.	.							
	43	-1°	3627	18	55.1	-1	4	9.3		✓
	44	-1°	3624	18	54.6	-1°	2	9.5		✓
	45	.	.							
	46	.	.							
	47	.	.							
	48	-1°	532	18	55.7	-1	58.1	9.6	(S.D.m.)	✓ ~~which is DM star?~~
	49	-1° -1	3628 531	18 18	55.6 55.6	-1 -1°	58.7 58.3	9.5 9.3	 (S.D.m.)	✓ ~~Both on chart but only 1 position in DM.~~
~~on chart but not in DM?~~	50	-1°	~~36~~ 530	18	55.2	-1	58.9	9.5	(S.D.m.)	✓
~~on chart, but not in DM~~	51	-1°	529	18	54.8	-1	58.7	9.8	(S.D.m.)	✓
	52	.	.							
	53	-1°	3626	18	55.1	-1	23	9.5		✓
	54	-1° .	3625	18	54.7	-1°	34	9.5		
	55	~~1°.~~	~~3625~~	~~18~~	~~54.7~~	~~-1°~~	~~34~~	~~9.5~~		
	56a	.	.							
	56b	.	.							
	57	.	.							
	58	-1°	3622	18	53.9	-1	56	9.2		✓
	59	-1°	3620	18	53.2	-1	57	9.2		✓
	60	~~-1°~~	~~3625~~	~~18~~	~~54.8~~7	~~-1~~	~~34~~	~~9.5~~		✓
	61	-1°	3623	18	54.2	-1	16	9.3		✓
	62	.	.							
	63	-1°	3621	18	53.5	-1	7	9.5		✓
	64	.	.							
	65	.	.							

Region Poor Scutum Sct.

Jt.S.L. 34, 201

Dist from no.15			mc 5680	mc 5593	Diff.
58 nf	65a		11.41	11.39	+02
68 nf	66		12.24	12.02	+22
52 nf	67		11.26	11.17	+09
50 nf	68		12.62	12.42	+20
51 nf	69		11.12	11.10	+02
46 nf	70		11.20	11.04	+16
46 nf	71		10.91	10.90	+01
47 nf	72		10.55	10.54	+01
78 nf	73		10.69	10.39	+30
65 nf	74		12.24	12.10	+14
64 nf	74a	7< ~~75~~	11.27	.	
49 nf	75	~~76~~	06 06 9.84	10.04	-20
49 nf	76	~~77~~	p8.65	8.38	+27
48 nf	77	~~78~~	12.34	11.94	+40
55 nf		78	11.06	10.96	+10
52 nf		78a	06 11.79	11.03	+03 -24
56 nf		79	p9.62	9.58	+04
54 nf		80	10.62	10.54	+08
60 nf		81	12.71	12.61	+10
42 nf		82	06 06 9.84	p9.64	+20
40 nf		83	11.64?	11.24?	
		84	11.64?	11.31?	
40 nf		85	~~11.64?~~	p9.55	
57 nf		86	p8.91	p9.10	-19
53 nf		87	10.61	10.54	+07
45 nf		88	11.41	11.54	-13

	65a	. .							
	66	. .							
	67	. .							
	68	. .							
	69	. .							
	70	-1°	3619	18	52.2	-1	51	9.5	√
	71	-1°	3618	18	52.2	-1	49	9.5	√
	72	-1°	3617	18	52.1	-1	47	9.5	√
	73								
	74	. .							
	74a	. .							
	75	-1°	3616	18	52.0	-1	36	9.3	√
	76	-1°	3613	18	51.8	-1°	33	8.5	√
	77	. .							
	78	-1°	3615	18	51.9	-1°	20	9.5	√
	78a	. .							
	79	-1	3611	18	51.3	-1	13	9.2	√
	80	. .							
	81	. .							
	82	-1°	3614	18	51.9	-1°	55	9.3	√
which is DM? double	83								
	84	-1°	3612	18	51.5	-1	50	9.4	√
	85	-1°	3610	18	51.2	-1	48	9.2	√
	86	-1°	3607	18	49.9	-1	1	9.1	√
	87	-1°	3605	18	49.6	-1	6	9.3 !	√
	88	. .							

Region Poor Scutum Sct.

Dist from No. 15		mc 5680	mc 5593	Diff
46 xf	89	10.90	10.82	+08
47 xf	90	9.97	9.87	+10
75 xf	43a	11.27	11.17	+10
67 xf	63a	11.70	11.39	+31
50 xf	91	10.55	10.54	+01
46 xf	92	11.26	11.17	+09
43 xf	93	11.64	11.39	+25
54 xf	94	10.99 ~~11.44~~	10.90	+09
dbl. 52 xf	94a	11.06 12.71	11.54	
39 xf	95	11.85	11.86	−01
32 xf	96	11.12	11.10	+02
37 xf	96a	11.71	11.62	+09
27 xf	97	11.20	11.~~62~~24	−04
37 xf	98	10.48	10.39	+09
32 xf	98a	11.48	11.24	+24
41 xp	99	10.83	10.82	+01
45 xp	100	11.12	11.17	−05
35 xp	101	12.91	12.90	+01
29 xp	102	9.80 10.10	10.05	
40 xp	103	10.62	10.61	+01
52 xp	104	11.93	11.70	+23
~~52~~ 48 xp	105	9.76 06 06	9.68	+08
41 xp	106	11.12	11.17	−05
43 xp	107	10.61	10.61	00
39 xp	108	11.94	12.01	−07
52 xp	109 4a	11.41	11.39	+02
50 xp	105a	11.49	11.70	−31 2

89	.	.						
90	−1°	3608	18	50.3	−1	22	9.2	√
43a	.	.		.				
63a	.	.						
91	−1°	3603	18	49.3	−1	12	9.4	√
92	−1°	3604	18	49.5	−1	18	9.5	√
93	.	.						
94	.	.						
94a	.	.						
95	−1°	3601	18	48.6	−1	29	9.5	√
96	.	.						
96a	.	.						
97	.	.						
98	−1°	3600	18	48.2	−1	33	9.5	√
98a	.	.						
99	−1°	3598	18	47.8	−1°	24	9.5	√
100	.	.						
101	.	.						
102	−1°	3599	18	47.8	−1	45	9.3	√
103	−1°	3597	18	47.6	−1	25	9.5	√
104	.	.						
105	−1°	3594	18	46.9	−1	13	8.8	√
106	−1°	35.96	18	47.2	−1	22	9.5	
107	~~−1°~~	~~3596~~	~~18~~	~~47.2~~	~~−1~~	~~22~~	~~9.5~~	√
108	.	.						
104a	.	.						
105a	.	.						

Region Poor Sculum Sob.

Magnitudes copied from Bk. 34.

Dist from no. 15	Dec.	NSL 34,202. mc 5680	mc 5593	
39 ~~43~~ np	109	$9.\overset{60}{53}$ 0807	9.49	+11
40 np	110	$\overset{0404}{10.00}$	10.04	-04
40 np	111	p8.83	p8.73	+1
32 np	112	p8.40	p8.46	
29 np	113	10.69	10.96	17
28 np	114	10.61	10.61	00
36 np	115	10.90	11.10	20
34 np	115a	11.27	11.31	04
31 np	116	p9.17	p9.10	
40 np	117	11.34	11.17	17
38 np	117a	11.85	11.79	06
42 np	118	10.77	10.68	09
43 np	119	10.83	11.10	27
41 np	119a	11.20	11.24	04
50 np	120	10.62	~~9.96~~ 10.46	16
56 np	121	9.61 00 00	9.49	12
61 np	122	11.12	11.10	02
35 np	123	12.62	12.25	35
35 np	123a	11.94	1186	08
38 np	124	11.94	11.86	08
43 np	125	11.94	11.94	00
44 np	126	p9.42	p8.82	
42 np	127	$11.\overset{20}{\cancel{94}}$	11.17	03
41 np	128	10.55	10.61	06
37 np	128a	11.20	11.39	19
47 np	129	10.69	10.68	01
54 np	130	9.93 03 03	p9.68	

109	-1°	3595	18	47.1	-1	29	8.9	✓
110	-1°	3593	18	46.8	-1	27	9.3	✓
111	-1°	3591	18	46.6	-1	29	8.7	✓
112	-1°	3592	18	46.7	-1	43	8.3	✓
113	-1°	3590	18	46.5	-1	49	9.4	✓
114	-1°	3589	18	46.3	-1	53	9.3	✓
115	.	.						
115a	.	.						
116	-1°	3587	18	45.8	-1°	52	8.8	✓
117	~~-1°~~	~~3591~~	~~18~~	~~46.6~~	~~-1~~	~~29~~	~~8.7~~	
117a	.	.						
118	-1°	3588	18	46.4	-1	27	9.2	✓
119	.	.						
119a	.	.						
120	-1°	3586	18	44.9	-1	19	9.5	✓
121	-1°	3585	18	44.7	-1	8	9.3	✓
122	-1°	3583	18	44.4	-1	1	9.5	✓
123	.	.						
123a	.	.						
124	-1°	3584	18	44.5	-1	53	9.5	✓
125	.	.						
126	-1°	3580	18	44.1	-1	43	8.8	✓
127	-1°	3579	18	43.9	-1	52	9.5	✓
128	-1°	3578	18	43.8	-1	56	9.5	✓
128a								
129								
130	-1°	3577	18	43.7	-1	25	9.4	✓

Region Poor Scutum Sct.

Dist. from no 15	Des.	mc 5680	mc 5593	
50 np	130a	11.27	10.90	37
57 np	131	11.27	11.03	24
44 np	132	9.80$^{02\ 02}$	9.87	07
46 np	133	11.12	11.17	05
46 np	134	11.34	11.17	17
52 np	135	9.84$^{06\ 06}$	9.87	03
55 np	136	11.85	11.79	06
72 np	137	10.20$^{01\ 01}$	9.87 !	33
71 np	138	^{p}7.41	k 7.64	
74 np	139	11.06	10.54	52
73 np	139a	10.69	10.31	38
75 np	140	9.72$^{10\ 11}$	k 9.63	
	141		.	
77 np	142	^{p}9.36	k 9.55	
71 np	143	9.73$^{03\ 03}$	k 9.81	
66 dbl.? np	144	.	.	
63 np	144a	11.06	10.96	10
75 np	145	10.69	10.31	38
65 np	145a	11.27	11.24?	03?
	146		.	
72 np	147	^{p}9.87	9.~~58~~ 79$^{21\ 21}$	08
60 nf	148	11.13	11.03	10
68 nf	148a	11.12	11.03	09
68 nf	149	10.19	9.77	42
	150	.	.	
63 nf	151	10.48	10.22	26
60 nf	152	10.69	10.46	23

130a	.	.						
131	-1°	3576	18	43.2	-1	23	9.5	✓
132	-1°	3574	18	43.2	-1	59	9.2	✓
133	-1°	3573	18	43.1	-1	55	9.5	✓
134	-1°	3575	18	43.2	-1°	54	9.5	✓
135	-1°	3571	18	42.8	-1	44	9.3	✓
136	.	.						
137	-0°	3567	18	42.2	-0°	59	9.4	✓
138	-1°	3570	18	41.8	-1	8	8.0	✓
139	-1°	3569	18	41.6	-1°	3	9.5	✓
139a	.	.						
140	-1°	3568	18	41.6	-1	1	9.2	✓
141								
142	-1°	3565	18	40.6	-~~2~~ 1	10	9.2	✓
143	-1°	3566	18	41.1	-1	19	9.3	✓
144	.	.						
144a	..	..						
145	.. ..							
145a	. .							
146								
147	-1°	3564	18	40.2	-~~2~~ 1	38	9.3	✓
148	-1°	3567	18	41.3	-1°	50	9.5	✓
148a	-2°	4836	18	55.8	-2	12	9.8	✓
149	-2°	4837	18	55.8	-2	20	9.3	✓
150								
151	-2	4834	18	55.3	-2	29	9.4	✓
152	-2°	4832	18	55.0	-2	29	9.5	✓

Poor Region Scutum Sob.

Dist from no. 15	Des.	mc 5680	mc 5593	Diff.
63 nf	153	11.85	11.70	15
62 nf	153a	11.34	11.31	03
.	154	.	.	
61 nf	155	11.20	11.10	.10
62 nf	155a	11.12	10.90	22
59 nf	156	10.48	10.39	09
56 nf	157	9.52 07 08	p9.10	
57 nf	157a	11.27	11.55	28
55 nf	158	10.99	10.81	18
58 nf	159	10.69	10.61	08
66 nf	160	10.18	9.87	31
68 sf	161	p8.74	p9.10	
60 nf	159a		11.10	
	~~160a~~		~~10.81~~	
68 sf	161a		10.96.	

For Continuation of magns. see
A.S.L. Bk 34, page 210.

153	-2°	4833	18	55.3	-2	17	9.7	√
153a	.	.						
154	.	.						
155	-2°	4831	18	54.9	-2	7	9.8	√
155a	.	.						
156	-2°	4828	18	54.6	-2	10	9.5	√
157	-2°	4827	18	54.2	-2	8	9.0	√
158	-2	4826	18	54.1	-2	5	9.5	√
159	-2	4829	18	54.7	-2	28	9.8	√
160	-2°	4835	18	55.7	-2	44	9.3	√

Rich Region Scut. Sob.

Scale M

Feb. 4, 1915

MC 5523 Yellow

	12 20 1 2	Star	O.C.
p 124	9.9	$	8.93
124	5.6^{58}	9.18	
p 125	6.6		..
p 126	9.6		8.67
126	$4.8^{50?}$?	8.64?	
p 127	9.7		8.76
127	4.7^{49}	8.59	
~~No. 128~~ p 128	9.9		8.93
128	5.6^{58}	9.18 9.03	
p 129	9.7		8.76
* 129	$5.3^{5.5}$	8.98	
p 130	9.8		8.85
130	5.4^{56}	9.03	
p 131	9.6		8.67
131	4.8^{50}	8.64	
p 132	8.2		7.45
p 133	6.9		..
p 134	7.8		7.10
p 135	9.8		8.85
135	$5.6^{5.8}$	9.18	
p 136	9.8		8.85
136	$5.3^{5.5}$	8.98	
p 137	8.8		7.97
137	$3.8^{40?}$?	8.09?	
p 138	9.5^{3}		8.59?
138	$4.7^{49?}$?	8.59?	

Continued p. 72

*For 129a see p100, after 333

12 28

124	-9° 4841	18 41.0	-9	9	9.0	✓
125	-9° 4859	18 43.0	-9	56	6.3	✓
126	-9° ~~4847~~ 4863	18 43.7	-9	55	8.7	✓
127	-9° 4847	18 41.7	-9	11	9.0	✓
128	-9° 4866	18 44.1	-9	26	9.1	✓
129	-9° 4849	18 42.2	-9	1	9.0	✓
130	-9° 4850	18 42.2	-9	5	9.0	✓
131	-9° 4862	18 43.4	-9	12	8.8	✓
132	-9° 4867 8	18 44.2	-9	14 15	9.4 8.0	✓
133	-9° 4876	18 45.1	-9	45	6.6	✓
134	{ -9° 4886	18 46.0	-9	33	7.5 —	✓
~~135~~	~~-9° 4868~~	~~18 44.2~~	~~-9~~	~~15~~	~~8.0~~	
135 ~~136~~	-9° 4895	18 46.8	-9	38	9.1	✓
136	-9° 4896	18 46.9	-9	10	8.8	✓
~~137~~						
137	-9° 4906	18 47.7	-9	27	8.4	✓
138	-9° 4911	18 48.3	-9	9	9.0	✓

Rick Reg. Saut. Sob.

Scale M Feb. 4, 1915 MC 5523

12 10	1	2	P.C. 1	2	12 50 1	2	P.C. 1	2
1			4.8	5.0			48	5.0
2				7.4				7.7
3	3.3	3.5		8.7	3.4	3.6		8.8
4	3.9	4.1		9.1	4.2	4.4		9.3
5	5.0	~~5.0~~ 5.2		9.6	5.2	5.4		9.6
6		5.7			5.8	6.0		.
7		6.0			6.0	6.2		.
8	4.7	4.9		9.7	47	4.9		9.6
9	5.3	5.5		10.0	5.3	5.5		9.9
10		7.5				7.4		
11		7.6				7.6		
12		7.9				7.9		
13		8.1				8.3		
7a		6.7				6.8		
7b		7.2				7.3		
2a		-		7.9				80

12 55

Rich. Cont. Sct.

Scale M Feb 4, 1915

MC 5523 Yellow

p	12 30 1	2	Star	P.C.
p 139		9.7		8.76
139	5.0? 4.8?		8.64?	
p 140		9.9		8.93
140	5.9 5.7		9.25	
p 141		10.0		9.02
141	6.2 6.0		9.46	
p 142		8.1		7.36
p 143		9.9		8.93
143	6.0? 5.8?		9.32?	
p 144		9.~~9~~ 8		8.85
144	5.3? 5.1?		8.83?	
p 145		9.7		8.76
145	6.0? 5.8?		9.32?	
p 146		9.4		8.50
146	5.3? 5.1?		8.83?	
p 147		9.8		8.85
147	6.1? 5.9?		9.39?	
p 14~~7~~8		7.9		7.18 ~~7.22~~
p 149		8.9		8.07
149	4.1? 3.9?		8.14?	
p 150		9.3		8.41
150	5.1 4.9		8.71	
p 151		8.1		7.36
p 152		9.~~8~~ 9		8.93
152	6.0? 5.~~8~~?		9.32?	
	12	35		
p 168		9.8		8.85
168	5.5? 5.3?		8.98? ~~8.83?~~	

139	-9° 4920	18 49.7 -9	58	8.5	✓
~~140~~					
140	-9° 4917	18 49.2 -9	4	9.0	✓
141	-9° 4923	18 50.0 -9	8	9.2	✓
142	-9° 4935	18 51.2 -9	10	7.5	✓
143	-9° 4929	18 50.7 -9	19	8.9	✓
144	-9° 4927	18 50.3 -9	30	8.9	✓
145	-9° 4933	18 51.0 -9	47	9.3	✓
146	-9° 4936	18 51.2 -9	45	9.1	✓
147	-9° 4937	18 51.3 -9	44	9.2	✓
148	-8° 4767	18 48.0 -8	59	7.2	✓
149	-8° 4774	18 48.8 -8	44	8.3	✓
150	-8° 4777	18 49.1 -8	48	9.0	✓
151	-8° 4776	18 48.8 -8	37	7.6	✓
152	-8° 4772	18 48.4 -8	40	9.2	✓
168	-7° 4766	18 47.~~8~~7 -7	~~4~~ 13	9.0	✓

Rich Scut. Sct.

Scale M

MC 5523 Yellow

	12 1	35 2	Star	P.C.
p 153		9.7		8.76
153	5.8 5.6		9.18	
p 154		9.8		8.85
154	5.9 5.7		9.25	
p 155		9.6		8.67
155	5.1? 4.9?		8.71?	
p 156		9.7		8.76
156	5.1? 4.9?		8.71?	
p 157		8.7		7.88
157	3.4? 3.2?		7.78?	
p 158		9.8		8.85
158	5.8? 5.6?		9.18?	
p 159		9.7?		8.76?
159	6.9? 6.7?		9.95?	
p 160		9.9		8.93
160	6.0? 5.8?		9.32?	
p 161		9.1		8.24
161	5.1? 4.9?		8.71?	
p 162		8.1		7.36
p 163		10.0		9.02
163	6.2? 6.0?		9.46?	
p 164		$9.\overset{4}{\cancel{7}}$		8.50
164	4.4? 4.2?		8.31?	
p 165		8.8		7.97
	12	45		
p 166		9.9		8.93
166	6.2? 5.0?		8.77?	
p 167	6.2?	10.1		9.11*
167	6.0?		9.46?	

153	−8° 4770	18 48.2	−8 16	9.4	✓
154	−8° 4782	18 49.5	−8 21	9.1	✓
155	−8° 4789	18 50.9	−8 26	9.0	✓
156	−8° 4794	18 51.2	−8 26	9.0	✓
157	−8° 4795	18 51.4	−8 21	8.5 —	✓
158	−8° 4788	18 50.7	−8 8	9.2	✓
159	−7° 4795	18 51.2	−7 37	9.4	✓
160	−7° 4794	18 51.0	−7 32	8.9	✓
161	−7° 4799	18 51.4	−7 20	8.5 —	✓
162	−7° 4798	18 51.4	−7 2	7.7	✓
163	−7° 4784	18 49.4	−7 27	9.3	✓
164	−7° 4780	18 49.0	−7 8	8.3	✓
165	−8° 4761	18 47.2	−8 39	8.3 —	✓
166	−8° 4764	18 47.6	−8 22	9.5 —	✓
167 Not in Dm.					

Rich Region Scutum Sobieski

Remark. February 4, 1914

Stars were selected on yellow plate MC 5523

The boundaries of squares 2°, 3°, and 4° on a side were marked.

First all stars having distinct prismatic companions, outside of the region 2° square and within that 4° square were measured. When the prismatic companion was faint the star image was measured also. Star images were usually poor, especially near the corners. A comparison of the resulting magnitudes should indicate an approximate correction for distance of star images, assuming no correction for p.c. These stars outside region 2° square were numbered 41 to 168 128 in all

In region 2° square all stars brighter than number 10 of sequence were supposed to be measured. As there are a great many stars near this limit, selection may not have been always consistent. DM stars were measured, even if fainter than this magnitude. Included Nos. 169 to 287. Also additional stars 179a, 179b, 182a, 182b, 184a, 186a, 201a, 205a, 205b, 207a, 207b, 208a, 252a, 231a, 263a, 279a.

In region outside square 2° on a side and within region 3° on a side,

Remark Cont.

it was intended to measure all stars that were certainly brighter than No. 10, whether in the DM or not. Some faint DM stars were omitted. This included Nos. 288 to 379, inclusive, as well as stars between 41 and 168 not mentioned below, 51 in number

The stars outside square 3° on a side are Nos 41, 42, 43, 44, 45, 48, 49, 50, 54, 55, 56, 57, 58, 62, 63, 66, 67, 68, 73, 74, 77, 78, 80, 89, 90, 85, 86, 87, 88, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 117, 118, 119, 120, 125, 126, 133, 135, 139, 140, 141, 143, 144, 150, 154, 155 158 163, 164,

Sixty-six in all

Stars 145, 146, 147, 142, ~~155~~, 156, ~~158~~ 157, 159, 160, 161, and 162 are outside square 4° on a side, and are not to be measured on other plates

Whole Number in square 2° on side, 135
" " " " 3° " " ~~227~~ ~~278~~ 303
" " " " 4° " " ~~293~~ ~~344~~ 369

On other plates it might be well to measure only those stars which are included in square 3° on a side

Feb. 6 added 2~~6~~5 stars in region between 2° and 3° square, namely, 81a, 81b, 81c, 107a, 107b, 113a, 115a, 120a, 129a, 317a, 317b, 319a, 319b, 320a, 328a, 330a, 344a, 354a, 355a, 358a, 361a, 369a, 311a, 328b, 369b.

Rich Scut. Sob

Searle M February 5, 1915

	MC 5523		P.C.		4 40		P.C.	
3 35	1	2	1	2	1	2	1	2
1			4.8	5.0			4.9	5.1
2				7.3				7.6
2a				7.9				7.9
3	3.5	3.7		8.7	3.5	3.7		8.8
4	4.3	4.5		9.1	4.3	45		9.3
5	4.8	50		9.7		5.0		9.5
6		5.7				5.8		
7		5.9				6.0		
7a		6.8				6.8		
7b		7.2				7.0		
8		4.7		9.6				9.6
9		5.1		10.1				10.0
10		7.5				7.5		
11		7.6				7.7		
12		7.7				7.9		
13		8.3				82		
3 40					4 45			

For reducing Nos. 169 to 287 pp 80 to 92

Rich Sant. Sct

Feb. 5, 1915

MC5523 Yellow

	3 1	40 2	Mag. of Star		O.C.
p 169		9.8			8.85
169	$6.5^{6.7}$		9.80		
170		7.8	10.65	~~10.65~~	
171		6.9	9.95	~~9.95~~	
172		7.3	10.25	~~10.25~~	
p 173		10.0			9.02
173	$5.2^{5.4}$		8.90		
p 174		9.9			8.93
174	$5.7^{5.9}$		9.25		
175		7.2	10.19	~~10.19~~	
p 176		9.4			8.50
176	$4.7^{4.9}$		8.59		c
177		7.8	10.65		
178	$5.3^{5.5}$		8.98		
p 179		9.8			8.85
179	$4.8^{5.0}$		8.64		
p 180		9.8			8.85
180	$5.3^{5.5}$		8.98		
179a		7.1	10.10		
179b		7.5	10.41		
181p		9.8			8.85
181	$5.2^{5.4}$		8.90		
p 182		9.7			8.76
182	$5.5^{5.7}$		9.10		
182a		7.2	10.19		
182b		6.8	9.88		

169	−7° 4760	18 46.3	−7 14	9.4	✓
170	−7° 4758	18 46.1	−7 14	10.0	✓
171	−7° 4757	18 45.8	−7 5	9.8	✓
172	−7° 4756	18 45.5	−7 4	9.8	✓
173	−7° 4755	18 45.4	−7 15	9.1	✓
174	−7° 4754	18 45.4	−7 10	9.2	✓
175	−7° 4752	18 45.1	−7 6	9.6	✓
176	−7° 4761	18 46.4	−7 30	8.8	✓
177	−7° 4762	18 46.5	−7 39	10.0	✓
178	−7° 4759	18 46.3	−7 42	9.0	✓
179	−7° 4763	18 46.6	−7 46	8.9	✓
180	−7° 4753	18 45.2	−7 40	9.4	✓
179^a	Not in Dm.				
179^b	Not in Dm.				
181	−7° 4750	18 44.8	−7 41	9.0	✓
182	−8° 4747	18 45.2	−8 1	9.0	✓
182^a	Not in Dm.				
182^b	Not in Dm.				

Rich Acut. Sib.

Scale M Feb 5, 1915

5523 yellow

		1	2	Star	O.C.
		3	50		
	183	$5.9^{6.1}$		9.39	
	183a		7.2	10.19	
	184		5.7	9.10	
	184a		6.9	9.95	
	185		6.0	9.32	
p	186		8.6		7.79
	186 ~~186a~~	$3.3^{3.5}$		7.84	
	187		6.6	9.73	
	188		7.9	10.73	
	189		8.1	10.90	
p	190		9.2		8.33
	190	$4.2^{4.4}$		8.31	
	191		5.7	9.10	
p	192		9.3		8.41
	192	$4.3^{4.5}$		8.37	
p	193		9.7		8.76
	193	$4.9^{5.1}$		8.71	
p	194		9.7		8.76
	194	$4.7^{4.9}$		8.59	
p	195		9.2	~~8~~	8.33
	196		7.1	10.10	
	197		7.8	10.65	
	198		7.2	10.19	
	199	$5.6^{5.8}$		9.18	
p	200		$9.\cancel{X}^{5}$		8.59
	186a		7.1	10.10	
	200	$4.8^{5.0}$		8.64	
		4	50		

183	−7° 4751	18 45.0	−7 58	9.5	✓
183a	Not in Dm.				
184	−7° 4745	18 44.3	−7 46	9.1	✓
184a	Not in Dm				
185	Not in Dm.				
186	−7° 4746	18 44.3	−7 25	8.3	✓
187	−7° 4749	18 44.5	−7 20	9.3	✓
188	−7° 4748	18 44.5	−7 15	9.9	✓
189	Not in Dm				
190	−7° 4747	18 44.3	−7 9	8.3	✓
191	−7° 4741	18 43.5	−7 17	9.3	✓
192	−7° 4736	18 42.7	−7 10	8.3	✓
193	−7° 4735	18 42.6	−7 2	8.8	✓
194	−7° 4737	18 42.7	−7 28	9.0	✓
195	−7° 4733	18 42.5	−7 26	8.8	✓
196	−7° 4731	18 42.3	−7 14	10.0	✓
197	−7° 4727	18 41.8	−7 6	9.6	✓
198	−7° 4725	18 41.6	−7 3	9.6	✓
199	−7° 4723	18 41.2	−7 7	9.3	✓
200	−7° 4729	18 42.1	−7 38	8.9	✓
186a	−7 4742	18 43.7	−7 35	9.5	✓

Rich Scut Sct.

Scale M Feb. 5, 1915

	5523 yellow		
	4 , 10 1. 2	Star	A.C.
201	$\overset{59}{5.7}$ ~~3~~	9.25	
p 202	8.8		7.97
203	5.7	9.10	
204	6.8	9.88	
205	6.7	9.80	
205a	7.6	10.49	
205b	7.7	10.56	
206	$\overset{2}{7.0}$	10.19	
207	7.8	10.65	
207a	8.1	10.90	
207b	8.0	10.82	
208	7.6	10.49	
208a	7.7	10.56	
p 209	9.7		8.76
209	$\overset{54}{5.2}$	8.90	
p 210	8.8		7.97
210	$\overset{3.8}{3.6}$	7.99	
210a	7.6	10.49	
211	5.9	9.25	
212	7.9	10.73	
213	6.7	9.80	
214	7.4	10.33	
p 215	9.5		8.59
215	$\overset{5.1}{4.9}$	8.71	
216	7.0	10.03	
~~217~~			
	4 10		

201	−7° 4728	18	41.9	−7	37	9.3	✓
202	−7° 4726	18	41.7	−7	44	8.0	✓
203	−7° 4730	18	42.1	−7	49	9.3	✓
204	−7° 4738	18	42.8	−7	51	10.0	✓
205	−7° 4722	18	41.1	−7	50	9.5	✓
205a	Not in Dm.						
205b	Not in Dm.						
206	−7° 4715	18	40.3	−7	56	9.7	✓
207	−7° 4719	18	40.7	−7	43	9.6	✓
207a	Not in Dm.						
207b	Not in Dm.						
208	−7° 4724	18	41.3	−7	39	9.8	✓
208a	Not in Dm.						
209	−7° 4717	18	40.4	−7	35	9.3	✓
210	−7° 4721	18	40.8	−7	17	8.7	✓
210a	Not in Dm.						
211	−7° 4720	18	40.7	−7	21	9.5	✓
212	−7° 4718	18	40.5	−7	5	10.0	✓
213	−7° 4716	18	40.3	−7	2	9.8	✓
214	−7° 4714	18	40.2	−7	14	9.8	✓
215	−7° 4713	18	40.0	−7	12	8.9	✓
216	−7° 4712	18	39.9	−7	12	9.3	✓

Rich, Scut. Sct.

Scale M Feb 5, 1915

5523 yellow
4 10
1 2

		Star	P.C.
p 217	9.8	/	8.85
217	4.7 4.9	8.59	
218	~~5.8~~ 7.3	10.25	
219	5.8	9.18	
220	6.8	9.88	
221	7.1	10.10	
222	7.8	10.65	
223	7.0	10.03	
224	7.2	10.19	
225	7.~~2~~0	10.03	
p 226	8.0	~~10.82~~ 7.27	
227	6.9	9.95	
227a	7.4	10.33	
228	7.0	10.03	
229	6.7	9.80	
230	7.1	10.10	
p 231	9.7		8.76
231	dif	R	
231a	7.4	10.~~8~~33	
232	7.2	10.19	
233	5.7 5.9	9.25	
234	6.8	9.88	
235	7.7	10.56	
236	7.6	10.49	
237	7.0	10.03	
p 238	9.8		8.85
238	5.5 5.7	9.10	

4 20

217	-7° 4710	18	39.9	-7	4	8.9	✓
218	-7° 4711	18	39.9	-7	9	10.0	✓
219	-7° 4709	18	39.8	-7	6	9.5	✓
220	-7° 4704	18	39.2	-7	6	9.6	✓
221	-7° 4703	18	39.2	-7	6	9.5	✓
222	-7° 4702	18	39.1	-7	9	10.0	✓
223	-7° 4708	18	39.7	-7	43	9.8	✓
224	-7° 4705	18	39.5	-7	36	9.9	✓
225	-7° 4701	18	39.1	-7	35	10.0	✓
226	-7° 4700	18	39.1	-7	44	7.4	✓
227	Not in DM.						
227a	Not in DM.						
228	-7° 4707	18	39.6	-7	58	9.7	✓
229	-7° 470~~7~~6	18	39.5	-7	59.7	9.3	✓
230	-8° 4709	18	40.0	-8	2	9.4	✓
231	-8° 4754	18	46.3	-8	9	9.0	✓
231a	-8° 4753	18	46.2	-8	10	10.0	✓
232	-8° 4752	18	45.8	-8	6	9.8	✓
233	-8° 4751	18	45.7	-8	11	9.0	✓
234	-8° 4760	18	46.9	-8	23	9.5	✓
235	-8° 4758	18	46.7	-8	20	9.8	✓
236	-8° 4757	18	46.5	-8	20	9.7	✓
237	-8° 4755	18	46.4	-8	18	9.7	✓
238	-8° 4756	18	46.4	-8	31	9.0	✓

Rich, Scut. Sct.

Scale M Feb. 5, 1915

	5523 yellow			
	4 1	20 2	Slav	P.C.
239		6.8	9.88	
p240		9.8^{7}		8.76
240	$4.9^{5.1}$		8.71	
p241		9.7		8.76
241	$4.9^{5.1}$		8.71	
242		7.3	10.25	
243		7.6	10.49	
244		7.5	10.41	
246	$5.4^{5.6}$		9.03	
247		7.1	10.10	
248		6.4	9.60	
249		7.0	10.03	
p250		9.8		8.85
250	$4.9^{5.1}$		8.71	
251	$4.8^{5.0}$		8.64	
252		7.9	10.73	
p253		9.6		8.67
253	$4.7^{4.9}$		8.59	
p254		8.8		7.97
255		6.7	9.80	
p 4		9.5		8.59
256	$5.3^{5.5}$		8.98	
257	def		def	
258		7.4	10.03	
259	$5.9^{6.1}$		9.39	
260		7.0	10.03	
	4	28		

239	-8°	4759	18	46.9	-8	44	9.5	✓
240	-8°	4749	18	45.6	-8	45	8.9	✓
241	-8°	4748	18	45.4	-8	51	9.0	✓
242	-8°	4746	18	45.2	-8	45	10.0	✓
243	-8°	4750	18	45.7	-8	30	9.5	✓
244	Not in DM.							
246	-8°	4741	18	44.6	-8	30	9.0	✓
247	-8°	4744	18	44.8	-8	37	9.6	✓
248	-8°	4742	18	44.8	-8	41	9.4	✓
249	Not in DM.							
250	-8°	4737	18	44.1	-8	37	9.2	✓
251	-8°	4740	18	44.4	-8	37	8.8	✓
252	-8°	4738	18	44.3	-8	26	9.8	✓
253	-8°	4736	18	43.8	-8	34	9.0	✓
254	-8°	4732	18	43.3	-8	6	8.2	✓
255	Not in DM.							
4	See Page 109							
256	-8°	4731	18	43.1	-8	14	9.2	✓
257	-8°	4730	18	43.0	-8	31	9.5	✓
258	-8°	4734	18	43.4	-8	55	9.8	✓
259	-9°	4854	18	42.7	-9	2	9.0	✓
260	-8°	4728	18	42.7	-8	49	9.5	✓
245	-8	4743	18	44.8	-8	17	9.4	✓

Rich, Scut. Sct.

Feb 5, 1915

	5523 yellow			
	4	28		
	1	2	Star	AC.
261		7.9	10.73	
261a		6.9	9.95	
262		7.3	10.25	
p 263		9.6		8.67
263	4.5 4.7		8.47	
263a		7.0	10.03	
p 264		9.0		8.16
p 265		7.8		7.10
266		7.7	10.56	
267		6.9	9.95	
268		7.3	10.25	
269		7.0	10.03	
270		7.8	10.65	
p 271		8.6		7.79
272		6.9 -	9.95	
p 273		9.8		6.85
273	5.0 5.2		~~8.64~~ 8.77	
274		5.9	9.25	
275		6.9	9.95	
276		6.8	9.88	
277		7.2	10.19	
278		6.7	9.80	
279		7.6	10.49	
280		7.0	10.03	
281		dif.	dif.	
282		7.3	10.25	
		4 35		

261	-8°	4727	18	42.6	-8	39	9.8	✓
261a	Not in DM.							
262	-8°	4725	18	42.4	-8	41	9.8	✓
263	-8°	4723	18	42.2	-8	33	8.9	✓
263a	Not in DM							
264	-8°	4721	18	42.0	-8	21	8.5	✓
265	-8°	4717	18	41.4	-8	28	7.0	✓
266	-8°	4720	18	41.9	-8	46	9.5	✓
267	-8°	4719	18	41.8	-8	45	9.4	✓
268	-8°	4718	18	41.6	-8	49	9.8	✓
269	-8°	4724	18	42.3	-8	58	9.5	✓
270	-8°	4722	18	42.1	-8	59	10.0	✓
271	-8°	4714	18	41.1	-8	37	7.5	✓
272	-8°	4715	18	41.1	-8	43	9.5	✓
273	-8°	4712	18	40.7	-8	46	9.0	✓
~~273~~								
274	-8°	4713	18	40.7	-8	53	9.4	✓
275	-8°	4711	18	40.5	-8	34	9.8	✓
276	-8°	4716	18	41.3	-8	19	9.4	✓
277	Not in DM.							
278	-8°	4710	18	40.2	-8	10	9.4	✓
279	-8°	4708	18	39.9	-8	47	9.5	✓
280	-8°	4706	18	39.4	-8	59.6	9.5	✓
281	-8°	4707	18	39.4	-8	56	9.8	✓
282	-8°	4700	18	38.7	-8	56	9.6	✓

Rish, Sout. Sib.

Feb. 5, 1915

5523 yellow

	# 1	35 2	Star	P.C.
283		7.2	10.19	
p.284		9.9		8.93
284	5.2	5.4 ~~5.2~~	8.90	
p 285		9.2		8.33
285	43	4.5	8.37	
286	dbl		dbl.	
near No. 3 p287		7.7		7.00

4 38

Cont. p. 96

283	-8°	4705	18	39.2	-8	21	9.5	✓
284	-8°	4703	18	38.8	-8	13	9.2	✓
285	-8°	4702	18	38.8	-8	5	8.9	✓
286	-8°	4704	18	38.9	-8	3	9.6	✓
287	-8°	4726	18	42.3	-8	4	7.1	✓

Rich, Sext. Set

Scale M Feb. 6, 1915

	5523 Yellow	P.C.	11 45	P.C.
10 10			1 2	1 2
	1 2	1 2		1
1		4.9 5.1		4.9 5.1
2		7.4		7.7
3		8.8	3.3 3.5	8.8
4	4.3 4.5	9.1	4.1 4.2	9.1
5	5.2 5.4	9.3	5.1 5.3	
6	7 5.6		6 5.0 6.2	
7	6 5.8		6 5.7 6.9	
7a	6.8		6.8	
7b	7.1		7.2	
8	4.7 4.9	9.6	4.7 4.9	9.6
9	5.2 5.4	10.0	5.2 5.4	10.0
10	7.4		7.6	
11	7.7		7.7	
12	7.9		7.9	
13	8.2		8.3	
2a		7.8		8.0
10 15			11 50	

For Nos 288-379 pp 96-104

Remarks Plates 311a, 81a, b, c, 107a, b, 317a, b, 319a, b, 320a, 113a, 115a, 328a, b, 120a, 330a, 129a, 344a, 354a, 355a, 358a, 361a, 369a, b were added in course of measurement, in order to include in square 3° on side stars as ft as those in square 2° on side. These 25 plates added 35 minutes to time according to usual average. Selection + marking therefor some 1½ minutes!

Rich Saut. Sct.

Scale M Feb. 6, 1915

MC 552 3/5 Yellow

	10 1	15 2	Star.
288	7.8		10.65
289	7.7		10.56
290	6.8		9.88
291	7.1		10.10
292	7.0		10.03
293	7.7		10.56
294	7.7		10.56
295	8.0		10.82
296	7.9		10.73
297	7.8		10.65
298	7.2		10.19
299	7.7		10.56
300	6.6		9.73
301	6.9		9.95
302	6.9 -		9.95
303	7.8		10.65
304	7.9		10.73
305	6.8		9.88
306	7.4		10.33
307	7.8		10.65
308	6.9		9.95
309	6.7		9.80
310	7.6		10.49
311	6.3		9.52
310a	7.4		10.33
310f	7.5		10.41
310c	7.8		10.65
	10	25	

288	-6° 4973	18	48.8	-6	44	9.4	✓
289	Not in DM.						
290	-6° 4968	18	48.6	-6	44	9.5	✓
291	-6° 4967	18	48.4	-6	30	9.4	✓
292	-6° 4960	18	47.7	-6	33	9.5	✓
293	-6° 4962	18	47.8	-6	30	9.8	✓
294	-6° 4954	18	46.7	-6	31	9.5	✓
295	-6° 4950	18	46.5	-6	30	9.8	✓
296	-6° 4957	18	47.0	-6	44	9.8	✓
297	-6° 4955	18	46.9	-6	51	9.8	✓
298	-6° 4958	18	47.3	-6	3	9.8 10.0	✓
299	-6° 4947	18	46.3	-6	43	9.8	✓
300	-6° 4940	18	44.6	-6	34	9.3	✓
301	-6° 4937	18	44.0	-6	54	9.3	✓
302	-6° 4931	18	43.5	-6	52	9.3	✓
Either may be -6° 4930 { 303	-6° 4930	18	43.4	-6	43	9.5	✓
304							
305	-6° 4928	18	42.9	-6	57	9.4	✓
306	-6° 4927	18	42.5	-6	59	9.6	✓
307	-7° 4734	18	42.6	-7	0	9.7	✓
308	-6° 4921	18	41.9	-6	59	9.2	✓
309	-6° 4920	18	41.8	-6	48	9.1	✓
310	-6° 4918	18	41.6	-6	48	9.5	✓
311	-6° 4915	18	41.0	-6	37	9.4	✓
310a	Not in DM.						
310b	Not in DM						
310c	Not in DM.						

Rich. Scut. Sob.

Scale M

Feb 6, 1915

MC552$\frac{3}{8}$ Yellow

		10 1	25 2	Star
double ?	311a		8.1?	10.90? R
	312		6.6	9.73
	313		6.8	9.88
	314		6.9	9.95
	315		7.0	10.03
	316		7.1	10.10
	317		6.7	9.80
	317a		7.7	10.56
	317b		7.8	10.65
	~~317c~~			
	81a		7.8	10.65
	81b		8.0	10.82
double	81c		–	R
	107a		7.0	10.03
	107b		7.7	10.56
	318		5.8	9.18
	319		6.8	9.88
	320		7.0	10.03
	320a		7.5	10.41
	319a		6.8	9.88
	319b		7.0	10.03
	113a		7.3	10.25
	321		7.3	10.25
	322		7.6	10.49
	323		7.7	10.56
	324		7.1	10.10

10.55

311^{a}	−6°	4914	18	41.0	−6	44	9.9	✓
312	−6°	4907	18	40.0	−6	44	9.7	✓
313	−6°	4904	18	39.8	−6	49	9.7	✓
314	−6°	4902	18	39.7	−6	54	9.9	✓
315	−6°	4900	18	39.7	−6	45	10.0	✓
316	−6°	4901	18	39.7	−6	50	10.0	✓
317	−7°	4698	18	38.1	−7	11	9.4	✓
317^{a}	−6°	4883	18	38.1	−6	59	9.6	✓
317^{b}	Not in DM.							
81^{a}	−6°	48~~79~~ 80	18	37.8	−6	~~13~~ 40	~~8.8~~ 10	✓
81^{b}	−6°	4876	18	37.6	−6	40	9.7	✓
81^{c}	−6°	4877	18	37.6	−6	46	9.5	✓
107^{a}	Not in DM.							
107^{b}	−7°	4693	18	37.1	−7	18	10.0	✓
318	−7°	4695	18	37.5	−7	7	9.3	✓
319	−7°	4690	18	36.9	−7	44	9.6	✓
320	−7°	4691	18	37.0	−7	52	9.5	✓
320^{a}	Not in DM.							
319^{a}	Not in DM.							
319^{b}	Not in DM.							
113^{a}	Not in DM.							
321	~~Not in Cat.~~ −7°	4697	18	38.0	−7	16	10	✓
322	−8	4696	18	38.1	−8	2	9.5	✓
323	Not in DM.							
324	−8°	4694	18	37.5	−8	21	9.5	✓

Rich Scut. Sob.

Scale M   Feb 6, 1915

MC 552$\overset{3}{5}$ yellow

	1 2	
325	7.4	10.33
326	5.9	9.25
327	6.8	9.88
115a	7.6	10.49
328	6.7	9.80
328a	7.7	10.56
328b	7.9	10.73
120a	8.0	10.82
329	7.4	10.33
330	6.7	9.80
330a	7.9	10.73
331	6.8	9.88
332	6.5	9.66
333	6.6 -	9.73
129a	7.2	10.19
334	6.9	9.95
335	7.8	10.65
336	8.0	10.82
337	7.7	10.56
338	6.2	9.46
339	6.5	9.66
340	6.2	9.46
341	6.6	9.73
342	7.0	10.03
343	7.4	10.33

325	-8° 4698	18	38.1	-8	28	9.6	✓
326	-8° 4697	18	38.1	-8	44	9.3	✓
327	-9° 4831	18	38.6	-9	2	9.1	✓
115a	-8° 4693	18	37.0	-8	48	9.5—	✓
328	-9° 4827	18	38.0	-9	6	9.5—	✓
328a	-9° 4826	18	37.9	-9	14	9.5—	✓
328b	-9° 4825	18	37.9	-9	23	9.8	✓
120a	-9° 4822	18	37.4	-9	28	10.0	✓
329	Not in DM.						
330	-9° 4838	18	40.1	-9	10	9.0	✓
330a	-9° 4836	18	39.6	-9	7	9.5—	✓
331	-9° 4839	18	40.2	-9	16	9.2	✓
332	-9° 4840	18	41.0	-9	11	9.1	✓
333	-9° 4843	18	41.3	-9	26	9.5—	✓
129a	Not in DM.						
334	-9° 4855	18	42.7	-9	16	9.4	✓
335	-9° 4860	18	43.0	-9	5	9.8	✓
336	-9° 4856	18	42.9	-9	7	10.0	✓
337	-9° 4857	18	42.9	-9	26	9.5—	✓
338	-9° 4861	18	43.4	-9	26	9.3	✓
339	-9° 4864	18	43.9	-9	27	9.2	✓
340	-9° 4871	18	44.6	-9	6	9.0	✓
341	-9° 4875	18	45.0	-9	~~45~~ 5	~~6.6~~ 9.4	✓
342	-9° 4877	18	45.3	-9	12	9.5—	✓
343	-9° 4878	18	45.3	-9	14	9.5—	✓

Rich. Scut. Sct.

Scale M Feb. 6, 1915

MC5523 yellow

		11 15	
		1 2	Magn
	344	7.5	10.41
	344a	7.9	10.73
	345	6.8	9.88
	346	6.9	9.95
	347	6.7	9.80
	345a	7.4	10.33
	348	7.0	10.03
Central of three	349	6.7	9.80
	350	$5.6^{5.8}$	9.18
	351	6.8	9.88
	352	7.6	10.49
	353	7.7	10.56
	354	7.6	10.49
	354a	7.8	10.65
	355	7.3	10.25
	355a	7.9	10.73
	356	6.9	9.95
	357	6.6	9.73
	358	6.9	9.95
	358a	7.9	10.73
double?	359	7.5 ?	10.41 ? dbl?
	360	6.8	9.88
	361	$5.5^{5.7}$	9.10
double	361a	–	

11 30

344	−9° 4874	18 45.0	−9	27	9.3	✓
344a	−9° 4870	18 44.5	−9	22	9.8	✓
345	−9° 4883	18 45.8	−9	14	9.3	✓
346	−9° 4885	18 45.9	−9	11	9.5	✓
347	−9° 4884	18 45.9	−9	6	9.5	✓
345a	Not in D.M.					
348	−9° 4889	18 46.3	−9	6	9.5	✓
349	−9° 4893	18 46.7	−9	7	9.4	✓
350	−9° 4900	18 47.0	−9	11	9.0	✓
351	−9° 4901	18 47.2	−9	3	9.2	✓
352	−9° 4903	18 47.4	−9	3	9.7	✓
353	−9° 4905	18 47.7	−9	1	10.0	✓
354	−9° 4898	18 46.9	−9	32	9.5	✓
354a	−9° 4897	18 46.9	−9	24	9.8	✓
355	−9° 4907	18 47.8	−9	24	9.5	✓
355a	−9° 4910	18 48.2	−9	30	9.5	✓
356	−9° 4914	18 48.8	−9	20	9.3	✓
357	−9° 4912	18 48.6	−9	12	9.3	✓
358	−8° 4763	18 47.3	−8	46	9.0	✓
358a	−8° 4762	18 47.3	−8	55	9.8	✓
359	−8° 4769	18 48.2	−8	32	9.8	✓
360	−8° 4773	18 48.6	−8	25	9.0	✓
361	−8° 4766 ~~4765~~	18 47.9 ~~18 47.9~~	−8 ~~−8~~	23 ~~21~~	9.2 ~~9.5~~	✓
361a	−8° 4765 ~~4764~~	18 47.9 ~~18 47.6~~	−8 ~~−8~~	21 ~~22~~	9.5 ~~9.5~~	✓

Rich Scut. Sct.

Scale M Feb. 6, 1915

MC $552\overset{3}{5}$ yellow

11 35

	1 2	Star
362	5.7 5.9	9.25
363	7.1	10.10
364	6.7	9.80
365	7.0	10.03
366	7.6	10.49
367	6.9	9.95
double { 368	6.7	{ 9.80
double { 369	6.9	{ 9.95
370	7.6	10.49
369a	7.6	10.49
369b	7.5	10.41
371	7.6	10.49
372	6.7	9.80
373	6.9	9.95
374	6.8	9.88
375	7.2	10.19
376	7.8	10.65
377	7.5	10.41
378	def.	def.
379	7.7	10.56

11.. 43

362	−8°	4768	18	48.1	−8	15	9.4	✓
363	−8°	4775	18	48.8	−8	9	9.5	✓
364	−8°	4771	18	48.3	−8	6	9.1	✓
365	−7°	4771	18	48.1	−7	59	9.8	✓
366	Not in DM.							
367	−7°	4779	18	48.8	−7	46	9.4	✓
368	−7°	$476\overset{9}{8}$	18	47.9	−7	44	9.3	✓
369	−7°	4768	18	47.8	−7	43	9.3	✓
370	−7°	4778	18	48.7	−7	34	9.7	✓
369a	Not in DM.							
369b	Not in DM.							
371	−7°	4777	18	48.4	−7	32	9.7	✓
372	−7°	4772	18	48.2	−7	21	9.3	✓
373	−7°	4770	18	48.0	−7	26	9.7	✓
374	−7°	4765	18	47.5	−7	22	9.2	✓
375	−7°	4773	18	48.2	−7	12	9.4	✓
376	−7°	4776	18	48.4	−7	8	10.0	✓
377	−7°	4775	18	48.2	−7	4	9.9	✓
378	−7°	4767 ~~4765~~	18 ~~18~~	47.8 ~~47.5~~	−7 ~~−7~~	9 ~~22~~	9.1 ~~9.2~~	✓
379	−7°	4764	18	47.4	−7	10	9.6	✓

Rich Region Scut Sob.

Scale M Feb, 10, 1915

		MC 5523 Yellow 2 25	
		1 2	Star.
	47a	7.6	10.49
	296a	8.0	10.~~03~~ 82
	297a	7.9	10.73
	300 a	7.9	10.73
	311 b	7.8	10.65
	311 C	7.9	10.73
	312a	7.8	10.65
	75a	6.6	9.73
	84a	7.7	10.56
	84 b	7.5	10.41
	206a	7.3	10.25
	254a	7.5	10.41
	257a	7.6	10.49
	258a	7.8	10.65
	260a	7.8	10.65
added Feb 10	~~254 b 5.1 5.1~~		
" " "	~~254 c 5.05~~		
" "	254b	7.7	10.56
" "	254c	7.7	10.56

47^{a} Not in D.M.
296^{a} Not in D.M.
297^{a} Not in D.M.
300^{a} Not in D.M.
311^{b}. Not in D.M.
311^{c} Not in D.M.
312^{a} Not in D.M.
75^{a} -6° 4903 18 39.8 -6 28 9.3 ✓
84^{a} -6° 4874 18 37.4 -6 32 10.0 ✓
84^{b} -6° 4875 18 37.3 -6 28 9.6 ✓
206^{a} Not in D.M.
254^{a} Not in D.M.
257^{a} Not in D.M.
258^{a} Not in D.M.
260^{a} Not in D.M.

254^{b} Not in D.M.
254^{c} Not in D.M.
365^{a} -7° 4774 18 48.2 -7 37 9.8 ✓

Rich Reg. Sout. Sct.

Scale M Feb. 10, 1915 MC5523

For additional stars selected on

2 20 Blue plate 5592

	1	2	P.C. 1	P.C. 2	1	2	P.C. 1	P.C. 2
1			4.9	5.1			4.9	5.1
2				7.5				7.4
2a				7.9				7.9
3	3.4	~~34~~ 3.6		8.6	3.4	3.6		8.8
4	4.1	~~4.1~~ 4.3		9.2	4.1	4.3		9.0
5	5.0	~~5.0~~ 5.2		9.3	5.1	5.3		9.4
6	5.8	~~5.8~~ 6.0			5.8	6.0		
7		6.0			5.9 ~~5.0~~	6.0		
7a		6.8				6.8		~~7.0~~
7b		7.0				7.0		
8	4.8	~~4.8~~ 5.0		9.8	4.7	4.9		9.7
9	5.2	~~5.2~~ 5.4		10.1	5.0 ~~5.0~~	5.2		10.0
10		7.4				7.6		
11		7.6				7.7		X
12		7.8				7.9		
13		8.3				8.2		
14		8.4				8.3		

1	−8°	4687^6	18	35.6	−8	25	5.5	✓
2	−8°	4701	18	38.7	−8	16	7.0	✓
2a	−8°	4733	18	43.3	−8	10	7.2	✓
3	−7°	4739	18	42.8	−7	59.7	8.3	✓
4	−7°	4740	18	43.3	−7	57	8.7	✓
5	−7°	4744	18	44.2	−7	43	8.9	✓
6	−7	4744^3	18	44.0	−7	52	9.1	✓
7	−8° ~~−7~~	4735 ~~4743~~	18 ~~18~~	43.6 ~~44.0~~	−8 ~~−7~~	0 ~~52~~	9.4 ~~9.1~~	✓
7a	−7°	4732	18	42.4	−7	45	9.5	✓
7b								
8	−8°	4729	18	42.9	−8	9	8.8	✓
9	−8°	4739	18	44.3	−8	4	9.4	✓
10								
11								
12								
13								
14								

Tuesday, February 16, 1915

10 15 η Carinae. Estimates by Argelander's Method to determine Variability.

For Comparison Stars, See Plate B 36032

Plates taken by Dr. Gould between 1875 and 1882, designated G.

North at Top

G 761

$a\,8\,b'\,0\,a'\,1\,b\,3\,c\,1\,d\,3\,e\,0\,f\,4\,g'$

$a\,10\,a'\,0\,\eta\,1\,b$

Star b' (~~following~~ preceding star of double) too close to its companion to use for comparison.

Images very large and comparisons difficult, but η is certainly slightly brighter than b

Second exposure near edge. Images unevenly affected. Comparisons impossible except between η and b, which appear equal.

G 19 Two Images, round and elongated

Round Images

$a\,1\,a'\,9\,b'\,3\,b\,2\,a^2\,3\,a^3\,0\,c\,0\,d\,1\,a^4\,3\,e\,2\,f$

$a\,3\,\eta\,4\,b'$

$a'\,3\,\eta\,4\,b$

G 758

$a\,3\,a'\,5\,b\,1\,a^2\,2\,a^3\,1\,c\,2\,a^4\,1\,d\,4\,e\,0\,f\,4\,g'$

$a\,7\,\eta\,1\,b$

$a'\,5\,\eta\,3\,c$

η Carinae Cont.

G 31 round images

$a\,3\,a'\,6\,b'\,1\,b\,1\,a^2\,3\,a^3\,4\,a^4\,0\,c\,0\,d\,1\,e\,1\,f$

$a\,6\,\eta\,2\,b'$

$a'\,3\,\eta\,4\,b$

G 750

$a\,0\,a'\,7\,b'\,2\,b\,\#\,\underline{1}\,a^2\,3\,a^3\,2\,a^4\,0\,c\,2\,d\,3\,e\,1\,f\,3\,g'$

$a\,6\,\eta\,2\,b$

$b'\,1\,\eta\,\overset{3}{2}\,c$

G 32 (? Box No.) Plate No. 2? Date, Apr. 2, 187–

Following images (nearly round)

$a\,4\,a'\,4\,b'\,1\,b\,0\,a^2\,2\,a^3\,1\,a^4\,1\,c\,0\,d\,2\,e$ (f defective)

$a\,3\,\eta\,5\,b'$

$a\,4\,\eta\,0\,a'\,5\,b$

G $\overset{\text{Box No.}}{7185}$ Preceding images (edge of plate) $\overset{\text{Plate No}}{L\,4451}$

$b'\,1\,\eta\,5\,c$

Preceding of 2 images near centre

$a\,5\,a'\,2\,b'\,3\,b\,\overset{0}{\underline{2}}\,a^2\,\alpha^2\,a^3\,1\,a^4\,0\,c\,1\,d\,2\,e\,1\,f\,3\,g'$

$a\,7\,\eta\,1\,b'$

$a'\,2\,\eta\,1\,b$

Images on this plate near northern edge

Tuesday, Feb. 16, 1915

11 15

η Carinae Cont.

G 797. (Box No. 250)
a 4 a′ 3 b′ 2 b 1 a^2 1 a^3 1 c 1 a^4 1 d 3 e 1 f 3 g′
b′ 2 η 1 b
Plate scratched, but images unusually good. May be measured with scale

G 266 Prec. im (round)
a 2 η
η 3 b′
η 2 a′
η 6 b
a 3 a′ 2 b′ 3 b 2 a^2 2 a^3 1 a^4 0 c 1 d 3 e 2 f 3 g′

G 558 (L 4451) May 21, 1881 Preceding Images
a′ 4 b′ 4 η 0 b 3 c
a 3 a′ 4 b′ 3 b 0 a^2 1 a^3 2 a^4 0 c 1 d 3 e 2 f 3 g
Region near northern edge of plate

G 281 Preceding images
a 3 η 0 a′ 5 b′ 1 b
a 3 a′ 5 b′ 1 b 0 a^2 0 a^3 1 a^4 $\underline{2}$ c 2 d 3 e 1 f
a′ 0 η 5 b
Film in very bad condition but star images are clear and distinct

η Carinae Cont.

G 316 Preceding images
a 3 a′ 5 b′ 3 b $\underline{1}$ a^2 1 a^3 1 a^4 3 d 3 e 2 f 4 g′
a 3 η 5 b′
a′ 0 η 7 b
Film in bad condition. Star d defective

G 306 Preceding images
a 4 η 3 b′
a 5 a′ 3 b′ 2 b 0 a^2 1 a^3 0 a^4 2 c 0 d 3 e 2 f 3 g′
a 3 η 2 a′

G 282 ("Following part of η Carinae)
η Carinae not on plate

G 310 Preceding Images
a 4 η 4 b′
η 2 a′ 6 b
a 5 a′ 3 b′ 3 b″ 0 a^2 2 a^3 1 c 2 a^4 2 d 2 e 2 f 4 g′
Film in poor condition

G 552 Preceding images
a 4 a′ 3 b′ 3 b $\underline{2}$ a^2 2 a^3 1 c 1 a^4
b′ 3 η 1 b
a′ 7 η 2 c
Film poor. Faint stars not seen

Tues. Feb. 16, 1915

η Carinae Cont.

G554 Prec. Im.
$b'\ 2\ \eta\ 1\ b$
$a\ 3\ a'\ 4\ b'\ 3\ b\ \underline{2}\ a^2\ 2\ a^3\ 1\ a^4\ 0\ c\ 1\ d\ 2\ e\ 3\ f\ 3\ g'$
$a'\ 7\ \eta\ 2\ c$

G299 Prec. Im.
$a\ 2\ \eta\ 6\ b'$
$a'\ 1\ \eta\ 10\ b$
$a\ 1\ a'\ 9\ b'\ 2\ b\ \underline{4}\ a^2\ 3\ a^3\ 1\ a^4\ 0\ c$
Film in very poor condition. Faint stars too poor to measure. η Carinae extremely very bright.

G26
$a\ 2\ a'\ 6\ b'\ 3\ b\ \underline{2}\ a^2\ 3\ a^3\ 3\ a^4\ \underline{1}\ c\ 0\ d\ 4\ e\ 2\ f$
$a\ 4\ \eta\ 3\ b'$
$a'\ 2\ \eta\ 5\ b$

G696 Preceding of 3 Images in centre of plate
$a\ 2\ a'\ 5\ b'\ 3\ b\ \underline{2}\ a^2\ 2\ a^3\ 1\ a^4\ 2\ c\ 1\ d\ 3\ e\ 2\ f\ 3\ g'$
$b'\ 2\ \eta\ 1\ b$

G705 Preceding of 2 Im. near centre (Southern end)
$b'\ 2\ \eta\ 0\ b\ 2\ c$
$a\ 2\ a'\ 3\ b'\ 2\ b\ 3\ c\ 0\ d\ 3\ e\ 1\ f\ 3\ g$
Images large, near southern edge of plate. Comparisons difficult

Tuesday, Feb. 16, 1915

η Carinae Cont.

G714 Preceding images (single, ft) preceding centre
$b'\ 2\ \eta\ 1\ b$
$a\ 0\ a'\ 7\ b'\ 2\ b\ 3\ a^2\ 2\ a^3\ 1\ c\ 1\ a^4\ 1\ d\ 2\ e\ 3\ f\ 2\ g'$
Images large. Apparently corr. for distance will be serious.
$a'\ 7\ \eta\ 1\ b$

G7 Preceding Images (trails)
$a'\ 3\ \eta\ 3\ b$
$a\ 3\ \eta\ 2\ b'$
Poor - Near northern edge of plate

G 25 Preceding Im.
η defective.
Poor plate All images very poor. Near northern edge

Thursday, February 18, 1915

12 ~~40~~ 50 s R Lyncis

Estimates of a few plates on which Discordant magnitudes were derived from original estimates by H.S.L.

I10271 Badly fogged Quality 2

Var. n.s. $< o^2$ v < 12.24

I10273 Badly fogged Corner of plate

n.s. < n v < 11.68

C6036

13.03 q' 4 V, 13.43 13.34 V = 13.38 05 04

13.34 V 1 q' 13.44

Images poor and faint

Examined Feb. 19. Estimate correct. Orig. Est. in 1896 placing var. between r and s is wrong. Reject.

C6764

11.15 K 2 V 11.35 11.28 V = 11.32 03 04

11.28 V 4 n 11.68

*C6035

13.44 q' 3 N 13.74 V < 13.74

C6710

11.15 K 3 V 11.45 11.48 V = 11.46 01 02

11.48 V 2 n 11.68

1 05 *C6035. q' n.s.? probably intended, as second, q' 3 N. But Variable is seen; estimated 0.4 magn. fainter than q'. Adopt

13.03 q' 4 V, 13.43 13.44 V = 13.44 01 00

13.44 V 0 q' 13.44

Friday, Feb. 19, 1915

Kapteyn Regions Discordant Stars

30 K Star 3 gives extremely large residuals. Both star image and p.c. were measured very bright on MC 4648 and faint on MC 7639. Star 3 is evidently very white, while star 4 is red. This probably accounts for a part of the discordance, but there is probably a real but small fluctuation in brightness.

On the following AC plates, Stars 2, 3, and 4 show no changes to exceed 0.1 magn.

AC 5920, 4903, 2524, 741, 11583, 15725, 15139,

AC 11573, 11297, 11008, 6126

Saturday, March 6, 1915

9 47 Estimates of Brightness of η Carinae on Plates taken by Dr. Gould. See page 110

Repeated. Plates reversed. (Turned 180°)

G 761
a 5 a′ 3 η 2 b
Images large and poor difficult

G 758
a 2 a′ 5 η 2 b
See Remark G 761

G 19 Prec. m. elong.
a 5 b′ 0 η 5 b

G 750
a 0 a′ 5 b′ 5 η 1 b 3 c
R G 761

G 31 Elong m
a 3 a′ 3 η 1 b′ 4 b 2 c

Brx No. 715 Foll. m. near centre
a $\overset{3}{5}$ a′ 5 η 0 b 3 c

G 32 Prec. m. elong.
a 5 a′ 0 η 1 b′ 4 b 3 c

G 558 Foll. m
a 5 a′ 3 b′ 4 η 1 b 3 c

η Carinae Cont.

G 258 (Brx No.) No. 797
a 3 a′ 4 b′ 4 η 1 b 2 c

G 316 Foll. m
a 3 a′ 0 η 6 b 3 c
b′ nearly superposed

G 266 Foll. m
a 2 η 1 a′ 6 b 3 c

G 30$\overset{6}{8}$ Foll m
a 2 η 1 a′ 7 b 3 c

G 281 Foll.
a 1 a′ $\overset{2}{3}$ η 7 b $\underline{1}$ c 5 d

G 299 Foll.
a 0 a′ 3 η 6 b 1 c

G 282 η Carinae not on plate

G 25 Foll. m
a 3 a′ 0 η $\overset{6}{4}$ b 1 c 4 d

G 310
a 3 a′ 2 η 6 b $\underline{1}$ c 3 d

η Carinae cont.

G26 Foll. im.
a 3 a' 3 η 1 b' 5 f 0 c 4 d

G552 Foll.
a 2 a' 9 η 1 b''' 0 c 4 d

G7 Foll. im. (second)
Too poor

G554 Foll.
a 2 a' 8 η 1 b 1 c 2 d

G714 Foll
Too difficult. Images large and intense

G696 ~~Foll.~~ Prec. of 3 near centre
a 3 a' 2 b' 6 η 1 b 2 c
This is the same set of images measured before. The others are too large and intense to compare safely

G705 Foll.
a 2 a' 7 η 1 b 2 c

10 45

When b' was not used in the above comparisons, it was too near the image of its companion.

Saturday, March 20, 1915

Scale M   Rich Region Scutum Sob.

Not to be used

Experiment toward Catalogue.

	MC5530 Yellow 5:30
41	8.8
42	8.6
43	8.9
44	8.5
45	7.9
46	8.9
47	7.8
48	6.5
49	8.8
50	8.7
51	9.0
52	{8.7 prec. of dble {9.7
53	7.9
54	8.3? neb.
55	8.9
56	8.5
dble {57	9.4?
{58	9.4?
59	8.9
60	8.6
61	9.0
62	9.0
63	7.8
64	9.0
65	6.9
66	8.5

Monday, March 22, 1915

Focus not properly adjusted.

Measuring Machine.

Rich. Reg. Font. Sol.

MC 5530 Yellow N at Right

3:20

	Scale	V=x	H=y	For Magn.
~~Dm -~~		~~130.8~~	~~138.8~~	
5		131.9	128.1	
	3.8	0.3 131.6	.	0.3
5 pc		131.9	126.7	
	8.8	7.1 124.8	0.5 127.2	7.1
19		1431	120.9	
	8.8	136.0	0.7 121.6	7.1
22		1461	119.9	
	9.2	138.4	0.8 120.7	7.7
16		~~140.0~~ 149.0	117.8	
	8.1	142.7	0.6 118.4	6.3
15		149.9	117.1	
	7.6	144.2	0.9 118.0	5.7
23		152.8	113.6	
	98	144.3	0.6 114.2	8.5
13	~~154.8~~ 6.9	1548	109.6	
	6.9	149.8	0.7 110.3	5.0

		V	H	For Magn.
25		153.3	106.8	
	9.7	145.2	0.6 107.4	8.1
21		1463	1123	
	9.0	139.0	0.7 113.0	7.3
24		144.8	112.5	
	9.3	1370	06 113.1	7.8
Dm -		152.0	104.6	

By taking the difference between the 2 readings for V when star is set between images of scale (on second line) for magn. gives a value for the magnitude which is closer than the direct estimate in left hand column if images of scale are more than a mm. apart, as they are in this case. If the interval were less than 1 mm, the estimate would be better.

For each star the first line gives the readings when the star image is placed half way between the 2 brightest images of scale. The second line gives readings when it is placed between images of similar brightness. First line for position, second line for magn. If H is the same on both lines, magn. was read on first scale. If it is larger on the second line by 0.5 or more, magn. was read on second scale.

Rich Sent. Sib. Cont.
MC 5530 Yellow Cont. Catalogue.

Est.	V	H	For Magn.
	140.0	126.3	
8.9	132.8	$\overset{0.7}{127.0}$	. 7.2
	~~141.0~~	~~126.2~~	
	139.3	126.8	
6.8	135.7	$\overset{0.0}{-}$	3.6
	141.0	126.2	
9.7	133.2	$\overset{0.7}{126.9}$	. 7.8
	141.1	125.8	
9.0	133.8	$\overset{0.6}{126.4}$	. 7.3
	143.3	126.1	
7.1	139.3	$\overset{0.1}{126.0}$	4.0
	143.2	126.0	
9.8	135.0	$\overset{0.8}{126.8}$	. 8.2
	142.3	125.8	
9.8	134.0	$\overset{0.7}{126.5}$	. 8.3
	143.6	125.7	
9.2	136.0	$\overset{0.5}{126.2}$	. 7.6

	V	H	
	142.4	124.3	
9.3	134.9	$\overset{0.8}{125.1}$	. 7.5
	142.2	124.2	
9.5	$134.\overset{5}{\cancel{9}}$	$\overset{0.8}{125.0}$	. 7.7
	$1\overset{4}{\cancel{7}}4.1$	124.0	
5.8	141.6	$\overset{0.0}{124.0}$	2.5
	143.6	123.3	
9.6	135.8	$\overset{0.7}{124.0}$	. 7.8
	143.1	122.9	
9.0	135.8	$\overset{0.7}{123.6}$	. 7.3
	142.9	122.6	
8.8	135.8	$\overset{0.7}{123.3}$	. 7.1
	142.1	122.7	
8.7	135.2	$\overset{0.5}{123.2}$	. 6.9
	142.2	122.1	
9.6	134.2	$\overset{0.7}{122.8}$	. 8.0
	144.1	122.2	. ~~7.2~~
8.9	136.9	$\overset{0.8}{123.0}$	7.2

Rich Scut Sp. Cont.

Friday, April 16, 1915

Examination of Plates with 1-inch Cooke lens to determine limiting magnitude for long exposures

No suitable AC plate was found. AK 637, exp. 16h 40m shows Star 30 of H.S. Sequence D4 very clearly. The photographic magnitude is about 13.5. Limit of visibility perhaps 13.9. As the images are very large this does not, perhaps, give a very reliable test.

It is improbable that with an exposure of 4 hours, under favorable conditions, the limit would be fainter than 13.5. There would be no comparison in value with MC plates having exposures of 10 minutes.

Saturday, April 17, 1915

Examination of Plates for Possible Proper Motion in DM + 45° 1720, Star 14 in H.S. Sequence B4.

Plate I 1138, May 3, 1890
I 3318, March 25, 1891
I 29999, Feb. 17, 1903

Each of the two early plates was superposed on I 29999. No difference in the position of DM + 14° 1720 could be detected as having taken place between 1890 and 1903. A change in position as large as $1/40$ of a millimeter could not have been overlooked. It seems to be certain that the star did not move as much as 5" in the thirteen years.

The residual of the position obtained by measurement of enlargement is 60" from the Gesellschaft position. There is apparently an error of 1' in the catalogue.

Correction entered in Margin of Catalogue η Carinae Cont. from page 12$^{0}_{2}$

11 15 **Monday, April 19, 1915**

Observations on X Plates
North at top

ᒍ X 6969 Exp. 10^{m}
a 7(?) a′ 2 η 1 b 3 c 8.25 8.28 8.24 8.26 01 02 02

ᒍ X 4635 10^{m}
Too much ink on back of plate

ᒍ X 5554 365^{m}
Exposure too long. Images too large.

ᒍ X 6524 10^{m}
a 7(?) a′ 3 η 1 b 2 c 8.35 8.28 8.24 8.29 06, 01, 05

ᒍ X 4636 last exp. Exp. 1 2 3 4
a 0 η 7.59 7.51 7.41 · 7.47
η 5 7? a′ } η 11 b? 7.~~35~~ 28? 7.44 7? ~~15~~ 16 12 12 All X 4636 7.46 05 05 01
a′ 4 b

ᒍ X 7763 10^{m}
a 8 a′ a 9 η = 6.69 (omit 4 & 1.)
a′ 1 η 8.15
η 1 b 8.28 8.21 19 ~~07 07~~ 04 09 05
η 4 c 8.14

ᒍ X 6543 836^{m}
Exposure too long. Large Images

Monday, April 19, 1915

η Carinae Cont.

ᒍ X 4628 45^{m}
Images too large

ᒍ X 5720 60^{m}
Images too large

ᒍ X 6523 60^{m}
Images too large

ᒍ X 4605 6^{m}
η 1 a 7.49
η 7(?) a′ 7.35? 7.51 02 16 17
η 7(?) b 7.68
b 0 b′

ᒍ X 6367 60^{m}
Images too large

ᒍ X 4571
η 1 a 7.49
η 7(?) a′ 7.35 7.41 08 06 03
η 8 10(?) b 7.38
Two groups of images. The northern group is too bright. Southern group preceding image used for comparison

X 4636 15^{m} First Image 24p? (See P. 132.)
η 1 a 7.49
η 5 a′ 7.55 7.51 02 04 03
η 9(?) b 7.48

Monday, April 19. 1915

η Carinae Cont.

↓ X 7762 10^m

a′ 3 η 8.35

η 0 b 8.38 8.32 03 06 08

η 3 c 8.24

X 4636 15^m Second exp. exp.? (see P. 132)

a 0 η 7.59

η 7(?) a′ 7.35? 7.41 18 06 13

η 10(?) b 7.28?

↓ X 6483 14^m

a′ 3 η 8.35 8.32 03 04

η 1 b 8.28

Images large. Observation difficult

↓ X 3884 28^m

Images too large

↓ X 4634 10^m

a 0 η 7.59 7.57 02 02

η 5 a′ 7.55

↓ X 6970 10^m

a′ 3 ~~2~~ η 8.35 8.26 09 08

η 2 b 8.18

↓ X 4604 10^m

Images large. Diff.

a 0 η 7.59 7.57 02 02

η 5 a′ 7.55

Monday, April 19. 1915

η Carinae Cont.

↓ X 4567 60^m

Images too large

↓ X 6484 10^m

Images too large

↓ X 4666 40^m

Images too large

↓ X 4669 90^m Images too large

↓ X 4692, 120^m 5551, 90^m 5555 365^m Images too large

X 4636 15^m Third exp. exp.? (see P. 132)

Form of η slightly elongated. Perhaps partly superposed

11 45

There are no later plates, except spectrum plates.

Look up Spectrum plate 4709 (near time when var. was bright)

There seem to be no spectrum plates taken in 1895 and 1896 when it was faint

April 9, 1915

12 ~ η Carinae Cont.

↓ B 36032 p.c.
a 8(?) η 8.39?
η 0 b 8.38 8.34 05 04 10
η 3 c 8.24

↓ B24970 Star im (no p.c.)
η 0 b? 8.38?

↓ B22676 Star im (no p.c.)
a 10 η? 8.59?
η 0 b 8.38 8.40 19 02 16 8.31 ㉘^B 07 07
η 2 c 8.24

↓ B27332
Im. too large. No p.c.

↓ B37353 Star im. No p.c.
η < b? <8.38?

↓ B35834 p.c.
a 10 η? 8.59 8.48 11 10
η 0 b 8.38 8.38 ㉑^B a
c not seen

↓ B31632 pr
a 10 η? ~~8.59?~~
η 1 b? 8.28? 8.44 15 16 00 8.36 ㉑^B 08 08
η 1 c 8.44

April 9, 1915

η Carinae Cont.

↓ B29557 Star im. (no p.c.)
η 0 b? ~~Very~~ 8.38?
Very difficult

↓ B5001 Star im. (no p.c.)
a 0 η 7.59 ~~7.48 11 10~~ 7.59 a ㉑^7
η 10 b? 7.38?

↓ B3315 Star im. (no. p.c.)
a 1 η? 7.69? ~~7.54 15 14~~ 7.69? ㉛^7
η 10 b 7.38 ~~7.38~~
Images poor. η certainly very bright

↓ B21171 Star im (no p.c.)
η 2 b? 8.18?
Very difficult

↓ B18702 p.c.
a 4 a′ a 8 η 8.39
a′ 4 η ~~a 8 η~~ 8.$\overset{45}{3}$9
η 0 b 8.38 8.3$\overset{2}{\cancel{4}}$ ~~09 08 16~~ (07)^B 13 06 18
η 4 c 8.14

↓ B 15420 p.c.
a 3 a′
a′ 5 η a 8 η 8.39
a′ 5 8 8.55
η 2 b 8.18 8.2$\overset{9}{\cancel{4}}$ ~~15 06 10~~ ⑩^B 26 11 15
η 4 c 8.14
Images unusually clear; elongated.

η Carinae Cont.

↓ B12813 p.c.

a 3 η   7.89

η 1 a′   7.58

a′ 7 b } η 8 b   ~~7.95~~   7.92 03 03 ⑶④ 7

η 1 a′   ~~7.95~~ 68

Images very clear

B9420

Prismatic compar of η superposed.

Star images too large for observation

η is certainly very bright

↓ B ~~10836~~ 13183 p.c.

a 8 η ?

η 1 b   8.39?   8.28   8.34 05 06

a″ superposed

Wrong plate found in cover. Observation actually made on B13183

↓ B10836 p.c.

α 1 η

η 5 a′   7.55

a′ 1 b

p.c. of a scratched

B10752 Star images (no p.c.)

Images too large

↓ B7959 p.c.

Too poor

April 19, 1915

η Carinae Cont.

Observations of star images on plates already observed for p.c. only. Not to be used.

For Comparison

B36032

a 10 η ?   8.59?

η 0 b ?   8.38? ~~8.50? 09 12 04~~ 8.46 ⑬ 08 08

η 0 c ?   8.54?

B18702

a 10 η ?   8.59?

η 0 b ?   8.38? ~~8.44? 15 06 10~~ 8.36 ㉓ 02 02

η 2 c ?   8.34?

B12813

η 2 b?   8.18?

Very difficult

B13183

η 0 b ?   8.38?

Very difficult

B31632

η 0 b ?   8.38?

Very difficult

B15420

η 0 b ?   8.38?

very diff-

~~B10836~~

~~a 2 η 2~~

April 19, 1915

η Carinae Cont.

Est. of Star in. Cont.

B 10836

a 2 η ? 7.79?

η – b

Certainly very bright, but observation difficult

B35834

b 2 η 8.58

η 0 c 8.54 8.56 02 02 00

η 1 d 8.56

April 20, 1915

Comparison Stars for η Carinae.

Estimates by Argelander's Method on Series Plates.

A 10880

Compared with C7 on A 10882 (Quality B)

a 10 4 ? 7.2?

f′ 2 4 ? 8.0?

a′ 5 4 ? 7.7?

f 3 4 ? 7.9?

Other comparisons too difficult

Images slightly double on A10882. Stars brighter than No. 4 too far from centre

η —

adopted scale

a 5 η ? 8.09

η 0 a′ ? 8.05 8.11? 02 06 07

a′ 2 f ?7.26 8.18

A 10903

Compared with C6 on A 10901

a fainter than 4. No other star brighter than No. 9. Comparison almost impossible as image of a is much more hazy than 4 allowing for haziness a appears nearly as faint as Star 9

b 10 2 b ? 9.03 9.29 9.16? 13 13

b 1 11 ?

f 13 3 f ? 9.94 9.99 9.96? 02 03

f 1 14 ?

g′ 14 2 g′ ? 10.29 9.82 10.06? 23 24

g′ 1 15 ?

g 17 2 g ? 10.84 10.88 10.86? 02 02

g 1 18 ?

April 20, 1915

η Carinae and Comp. Stars Cont.

a 10903 Cont. Compared with C6

Scale of C6 η   10 2 η ?   9.03   9.11 ?   08 08
η 2 11 ?   9.19

Comparison with η easier than with stars of sequence, as there is very little penumbra about image

Stars a', b', c, d, a², a³, a⁴, a5 are quite urs. comparable with stars of C6

Adopted scale   η 1 b ?   8.38 ?

Image of η quite incomparable with stars of sequence

a 10880
Compared with C 6 on a 10877

a   a 3 4 ?   7.22 ?   a
a'   a' 1 4 ?   7.42 ?   a
b   4 2 b ?   7.72 7.99   7.86 ?   14 13
b 2 6 ?
f   6 1 f ?   8.29 8.37   8.33 ?   04 04
f 2 9 ?
g'   10 2 g' ?   9.03 9.04   9.04 ?   01 00
g' 3 12 ?
g   13 3 g ?   9.94 ~~9.99~~ 10.09 9.82   9.95 ?   01 14 13
g 0 14 ?
g 1 15 ?

Scale of C6   η   4 2 η ?   7.72 7.99   7.86 ?   14 13
η 2 6 ?

April 20, 1915

η Carinae and Comp. Stars Cont.

a 10880 Cont.

η Adopted Scale   a 2 η ?   7.79   7.98 ? 19 20
η 2 b ?   8.18

a 10926 (η Carinae not near centre)
Compared with C 7 on a 10925

a not far from magn. of 2, which is in corner of plate and probably affected by distance to the extent of several tenths of a magnitude. a = 7.8 ?

b   6 1 b ?   9.06 9.20 9.43   9.23 ?   17 03 20
b 0 7 ?
b 2 8 ?
c   6 1 c ?   9.06 9.43 ~~9.24~~   9.24 ?   18 19
c 2 8 ?
d   6 1 d ?   9.06 9.43   9.24 ?   18 19
d 2 8 ?
f   10 1 f ?   10.19 10.01   10.10 ?   09 09
f 1 11 ?
g'   10 3 g'   10.39 10.01 10.16   10.~~26~~ 19 ?   ~~19~~ 20 ~~19~~ 18 03
g' 1 11 ?
g 2 12 ?
g   13 1 g ?   10.79 10.76   10.78 ?   01 01
g 1 14 ?
η   6 1 η ?   9.06 ? 9.53 ?   9.30 ?   24 23
η 1 8 ?
e   8 1 e ?   9.73 9.99   9.86 ?   13 13
e 1 10 ?

April 20, 1915

η Carinae and Comp. Stars Cont.

A 10926 Cont.

a - η

η adopted scale η 0 b 8.38 8.41? 03 03

η 1 ~~a~~ c 8.44

The images on A 10925 are slightly double. Images on η Carinae plate have faint companion

A 10926

Compared with Cq on Plate A 10936

a a 2 3? 6.84? a

Star 1 off plate Star 2 too near edge

b 7 4 f? 9.45 9.68 9.~~75~~89? 9.67? 22 01 22

f 0 8a?

b 2 9?

e 8 2 e? 9.73 10.09 10.36 10.06? 33 03 30

e 0 9?

e 3 10?

g′ 9 1 g′? 10.19 10.36 10.28? 09 08

g′ 3 10?

g 13 2 g? 10.92 10.69 10.80? 12 11

g 1 14?

b η 1 b? 9.15 9.38 9.26? 11 12

f 3 8a?

d 7 3 d? 9.35 9.58 9.46? 11 12

d 1 8a?

η 7 1 η? 9.15 9.48 9.32? 17 18

η 2 8a?

April 20, 1915

η Carinae and Comp. Stars Cont.

A 10926 Cont

a 10 η? 8.59

η 0 b? 8.38 8.50 09 B 12 13

η 3 e? 8.63

Images on A 10926 and A 10936 are more comparable than was the case usually in these comparisons

Wednesday, April 21, 1915

η Carinae. Comparison Stars compared with Stars having Phot. Magn.

Car. Phot. Magn.

1 = −59° 2784 7.04 a, 0 9 2 6

2 −60° 2199 7.51 a $^{7.51}$2 6 a 8.11 8 38 8.24 13 14

3 −59° 2772 8.78 a 4 $3^{8.78}$

4 −59° ~~692~~ 2693 8.44 b $^{8.44}$4 3 b 8.74 9.29 9.02 28 27

5 −60° 2320 9.49 b 2 $5^{9.49}$

6 −59° 2735 9.31 f f 0 $7^{9.54}$ 9.54 9.45 9.50 04 05

7 −59° 2725 9.54 f 0 $8^{9.45}$ ~~9~~

8 −60° 2307 9.45 η $^{8.44}$4 4 η 8.84 9.39 9.11 9.11 27 28 00

η 1 $5^{9.49}$

η 2 $6^{9.31}$

B16379 p.c.

a $^{7.04}$1 10 a? 8.04? 8.11? 7.44? 7.86 18, 25, 42

$^{51}_{\text{7.04}}$2 6 a?

a 1 0 $4^{8.44}$?

b b 1 $4^{8.44}$? 8.34? 8.48 8.41 07, 07

b 3 $3^{8.78}$?

a 9 η 8.49 8.33 16 15

η 2 b. 8.18

Wednesday, April 21, 1915

η Carinae. Additional Plates

3 45 B15212 p.c

✓ a 10 ~~b~~ η? 8.59 ~~8.44~~ 15 16 8 28 (31)^{B} a

η 1 b 8.28

✓ B7264

Too poor

✓ B15503 p.c. elongated

a 5 a′

a′ 3 η 8.3~~7~~^{5}

η 2 b 8.58 8.3~~1~~ 01 ~~02~~ 22 ~~21~~ ~~12~~ 22 ~~23~~

η 4 c 8.14

B15190 p.c. superposed

✓ B9291 p.c.

a 0 η 7.59 7.72 13 13 (14)^{F}

η 2 a′ 7.85

η 8 f? 7.58?

✓ B11317 Images too large

✓ B13182 pc

a 5 a

a′ 1 η 8.1~~9~~^{5} ~~7.95~~

η 2 b 8.18 8.~~14~~^{12} ~~07~~ ~~07~~$^{5\ 04}$ 10 03 06 08

η 5 c 8.04

P.C. clear near corner. Meas phot stars on this plate

April 21, 1915

η Carinae Cont.

√ B12538 p.c.
β 2 α
α 1 a
β 3 η
~~β~~ α 1 ~~α~~ η
η 0 a . 7.59 7.57 02 02
η 5 a′ 7.55

√ B12743 p.c.
β 2 η
η 0 a 7.59 7.57 02 02
η 5 a′ 7.55

√ B12793 p.c.
β 3 η
α 1 η
a scratched
η 3 a′ 7.75 ~~7.66? 09 08~~ 7.75 a (17) 7
η 8 b? 7.58?

√ B12834 p.c.
α 1 ~~β~~ η
η 0 a 7.59 7.62 03 03
η 4 a′ 7.65

√ B12791 ~~for~~ p.c.
α 2 η
η 0 a 7.59
η 3 a′ 7.75 7.68 09 07 01
η 5 b′ 7.69

4 10

April 21, 1915

4 10 η Carinae Cont.

B12791 p.c. Cont
Comparison unusually easy. Measure sequence + photo magn. on this plate

√ B12833 p.c.
a 4 a′ } = a 5 η
a′ 1 η 8.09 ~~8.15~~
a′1a 8.15 ~~7.95 14 14 21~~
η 1 b′ 8.09 ~~7.97 18 12 29~~ 8.11 02 04 02 (43) 7
η 7 b? 7.68?

√ B12742 p.c.
β 2 α
α 1 a ~~7.49~~
a 0 η 7.59 7.72 13 13
η 2 ~~α~~ a′ 7.85
Difficult

√ B16634
a′ 2 b′
b′ 2 η 8.39 45
η 0 b 8.38 8.37 07 01 03
η 2 c 8.34

√ B11171 p.c. too poor

√ B16042
a′ 2 b′ a′5η 8.55
b′ 3 η 8.49 55
η 0 b 8.38 ~~8.37 10 01 13~~ 9 16 01 15 8.43 12 12 05 19
η 3 c 8.24

4 20

April 21, 1915

4 20 η Carinae Cont.

↓ B13478 poor p.c. superposed

Mean

↓ B1347$\overset{9}{8}$ p.c.
a 6 η 8.19 8.08 11 10
η 4 b 7.98
a' and b' too poor
B11294 too poor

↓ B12537 p.c.
α 1 η
η 1 a 7.49 7.52 03 03
η 5 a' 7.55
↓ B11302 too poor
↓ B7107 too poor

↓ B40,001 slow ein. (no p.c.)
f 1 η? 9.05? 9.06? 01 01
η 2 g' 9.07
High power eye piece used to separate
η from triple star.

B4748 too poor
↓ B15721 p.c.
η 0 b? 8.38?
Nearly superposed
↓ B13^{5}20 too poor

April 21, 1915

η Carinae Cont.

↓ B12939 too poor .

B12988 p.c. Off edge .

↓ B12941 p.c. too poor .

↓ B15101 p.c.
η 0 b? 8.38?
poor
B15016 too poor

B15211 p.c. too poor

↓ B13861 p.c. too poor

↓ B13860 p.c.
a' 4 b η 8.45 8.2$\overset{7}{6}$ 1$\overset{8}{9}$ 18
η 1 b' 8.09
↓ B12941 p.c.
4 40 α 1 η?
η 1 a? 7.49 7.57? 08 08
η 4 a'? 7.65
↓ B129$\overset{39}{\cancel{88}}$ p.c
a 3 η? 7.89
η 0 a'? 8.05? 7.98? 09 07 01
η 2 b'? 7.99
↓ B16379 p.c.
a' 3 η 8.35 8.22 13 14
η 3 b 8.08

April 29, 1915

9 50 η Cassiae Cont

↓ B17106 p.c.
a – η
η 1 b 8.28
a and b superposed
η 3 c 8.24 8.26 02 02
↓ B3559 Images too large
↓ B17032 no p.c. Im. too large
↓ B16969 p.c.
b 2 η 8.58
η 0 c 8.54 8.65 07 11 01 18
η 0 d 8.66
η 1 e 8.83
near edge. Comparisons good
↓ B16866 p.c.
a – η
η 2 b 8.18
8.16 02 02
η 4 c 8.14
a and b superposed
↓ B16301 p.c
b 4 η 8.59
8.42 17 18
η 3 c 8.24
b nearly superposed
near edge. Comp. good
↓ B16506 p.c.
b 3 η 8.49 ~~7.89~~ 8.38 11 10
η 1 b 8.28

April 29, 1915

η Cassiae Cont.
↓ B 15919 p.c
b 3 η 8.49
η 1 b″? 8.28 8.34 15 06 10
η 3 c 8.24
b partly superposed
↓ B13477 p.c.
b 2 η 8.39 8.34 05 06
η 1 b 8.28
near edge. Nebulosity makes comp rather diff.
↓ B16507 p.c.
b 4 η 8.59
η 1 c 8.44 8.43 16 01 17
η 4 d 8.26
b superposed
↓ B13199 p.c.
a 2 η 8.25 ~~7.85~~ ~~7.96 11 12~~ 8.16 09 08
η 3 b 8.08
b superposed
↓ B8983 p.c. too poor. Star im. too large
↓ B7554 p.c
a 5 η 8.19 7.99 ~~10 10~~
13 07 07
η 3 b 7.89
a superposed
η 5 b 7.89
↓ B7726 trails. Too poor B7727 Trails t.p.
↓ B10882 p.c.
β 2 η
η 1 a 7.59
η 1 [illegible]

10 20

April 29, 1915

10 20 η Carinae Cont.

B7140 Trails
η 0 a? 7.59?
No precise estimate can be made, but η is very bright.

B11086 p.c.
a 3 η?, 7.89 7.88 01 00
η 5 b? 7.88
Very poor

B10884 p.c.
β 1 a η?
η 1 a? 7.49?
η 0 α?

B10644 p.c.
a 2 η $7.\overset{7}{3}9$ $7.8\overset{2}{4}$ $\underline{0\overset{3}{8}}$ 03
η 3 a′ 7.85

B11171 p.c.
β 2 η
η 0 a, 7.59
η 0 a′ 8.05 7.92 $\underline{33}$ 13 21
η 2 a² 8.13

B10924 p.c.
β 3 η
α 1 η
η 1 a, 7.49 $7.6\overset{7}{2}$ $\underline{18}$ 18
η 3 a′ 7.85

B10835 p.c.
η 0 β
η 1 α
η 2 α 7.39

April 29, 1915

η Carinae Cont.

B10796
β 1 η
η 2 a 7.39 7.47 $\underline{08}$ 08
η 5 a′ 7.55
Very poor plate. Fair comparison of star images obtained, as all images are faint.

B8982 p.c.
a 2 η? 7.79 7.87? $\underline{08}$ 08
η 1 a′? 7.95
Nebulosity makes Comp. diff.

B15556 p.c.
a′ 4 η 8.45
η 1 b? 8.28? 8.32 13 $\underline{04}$ $\underline{08}$
η 3 c 8.24
b superposed to faulty ref.

B12741 p.c.
a 4 η 7.99
η 1 α

B15290 p.c.
b′ 3 η 8.49 8.38 11 $\underline{10}$
η 1 b 8.28
~~B12792 p.c.~~

B12792 p.c.
a 5 η 8.09
a′ 1 η 8.15 8.05 04 10 04 $\underline{11}$
η 1 b′ 8.09
η 5 b 7.88

10 30

April 29, 1915

10 50 η Carinae Cont.

✓ B15292 p.c.
η 1 b? 8.28?
Nebulosity makes comp. diff
✓ B12811 p.c.
a 5 η 8.09 8.08 01 07 11 20
a′ 1 η 8.15 ~~7.95~~
η 0 b′ 8.19
η 5 b 7.88
✓ B15351 p.c.
a 7 η? 8.29 8.24 05 06
η 2 b 8.18
a and b sup.
✓ B15352 p.c.
a′ 4 η 8.45
b′ 2 η 8.39 8.34 11 05 16
η 2 b 8.18

✓ B15353 p.c.
η 1 b?. 8.28?
Very poor and diff.
✓ B15291 p.c.
b′ 3 η 8.49
η 1 b 8.28
8.38 11 10
✓ B15178 p.c.
a′ 3 η 8.35
η 2 b 8.18
8.26 09 08

April 29, 1915

η Carinae Cont.

✓ B12812 p.c.
a 3 η 7.89
η 1 a′ 7.95 ~~7.84? 05 11 16~~ 7.92 03 03 (24) 7
η 7 b? 7.68?
✓ B12832 p.c.
a 4 η 7.99
a′ 1 η 8.15 ~~7.97 02 18 19~~
η 6 b 7.78
✓ B15179 p.c.
a′ 3 η 8.35 8.26 09 08
η 2 b 8.18
very poor
✓ B13859 p.c.
a′ 2 η 8.25
η 3 b 8.08 8.12 13 04 08
η 5 C 8.04
Difficult Nebulosity interferes
✓ B13579 p.c.
a′ 2 η 8.25 ~~8.16 09 08~~
η 3 b 8.08 8.12 13 04 08
η 5 C 8.04
nebulosity makes comp. diff.
✓ B12938 p.c.
a′ 1 η 8.15 8.06 09 08
η 4 b 7.98
nebulosity makes obs. diff.
B5199 Images too large η bright

20

April 29, 1915

η Carinae Cont.

↓ B5251 No p.c. Im. too large η bright

↓ B15214 p.c.

η 2 b ? 8.18?

Very poor. Neb. interferes

↓ B15213 p.c.

a′ 3 η 8.35 ~~7.45~~ 8.16 19 18

η 4 b 8.98

↓ B15140 too poor

↓ B15151 " "

↓ B15672 p.c.

a′ 5 η 8.55 8.39 16 01 15

η 0 b 8.38

η 3 C 8.24

b superposed

↓ B15419 p.c.

a – η

η 2 b 8.18 8.11 07 01

η 5 C 8.04

11 25 B16528 off edge

April 30, 1915

Praesepe for Color Index.

Stars of Classes A and K.

For determining Color Indices of Gould Plates.

Estimates in Grades

All Numbers in DM Zone +20°

Gould 85 North at top preceding in,

2159 1 2171 8 2175 4 2152 1 2158 2 2163

2163 1 2166 0 2153 2 2150 0 2132 3 2185 3 2133

Gould 84 North at top preceding in.

2159 1 2171 4 2175 5 2152 1 2158 1 2163 1 2166

2166 0 2153 4 2150 0 2132 2 2185 ~~4 2133~~ 5 2133

Gould 244 North at top preceding in

omitting 2132, 2133 First 2 figures of designation dropped in recording

59 2 71 7 75 3 52 3 63 1 58 0 66 0 50 2 53 3 85

Gould 278 North at top prec. in.

71 1 59 ~~2 71~~ 4 75 4 52 4 63 1 66 1 53 1 50

Stars 32, 33, 59, 85, too near edge 58 poor

Gould 280 N. at top prec. in

71 2 59 5 75 5 52 4 63 2 66 2 53 1 50

Gould 102 North at top prec. in

59 0 71 6 75 5 52 4 63 3 66

Stars 50 and 53 defective

Gould's plate 704 is ruined. It is the only dry plate! All plates behind were wet plates

Praesepe Cont. for Chr. Index.

Gould 85 South at Top Foll. Im.
59 ,71 4 75 6 52 5 63 0 58 ,66 2 53 ,50
50 2 32 4 85 4 33

Gould 84 S at Top Foll. Im.
~~71 ,75 4~~
71 ,59 4 75 5 52 3 53 0 63 ,50 ,66 0 32
32 2 85 4 33

Gould 244 S at Top. Foll. Im.
71 2 59 5 75 4 52 2 63 2 66 0 50 0 5~~2~~3
5~~2~~3 0 58 3 85

Gould 278 S at Top Foll. Im.
71 4 75 5 52 ,63 ,53 ,66 ,50
Stars 58, 59, 32, 33, 85, too near edge

Gould 280 S. at Top Foll. Im.
71 5 75 6 52 0 63 4 53 0 66 0 50

Gould ~~201~~ 102 S. at Top Foll. Im.
71 2 59 2 75 6 5~~3~~2 3 63 2 53 ,66 0 58

Stars 58, and 59 are near each other
" 32 " 33 " " " "
All of these 4 and Star 85 are distant from centre

Praesepe for Chr. Index Cont.

B334 North at Top For Est. with S. at Top, see page 162
59 2 71 3 75 5 52 3 63 ,66 2 58 2 5~~2~~3 ,50
50 3 32 4 85 0 33
Images very large and poor.
Estimates difficult

B~~3~~2082 Images too large for est. or scale meas.

MC 8160 p.c. N. at top Yellow
71 3 5~~7~~8 166 2 59 3 50 3 75 2 85 10 52 0 63
63 ,53 2 32 (33 n.s.)

~~MC 8160 star ii.~~
MC 5176 N. at top p.c.
71 ,59 2 75 7 52 3 63 1 66 2 53 0 50 1 5~~7~~8
5~~7~~8 ,32 ,85 3 33

I 35221 p.c. N. at top
71 1 59 4 75 5 52 ,66 2 63 0 50 ,53 2 32
32 3 85 3 33
For star 2158, see page 162

I 35197 p.c. S. at Top.
71 2 59 3 75 5 52 ,66 0 63 0 5~~7~~8 ,50 ,53 3 32
32 3 85 4 33

Friday, April 30, 1915

Praesepe Cont. for Colm Dudley

B334 South at Top For Est. with North at Top, see p.161
59,71 4 75 6 52 3 58.063 $\overset{032}{\wedge}$ 266 2 53,50
50 185 133

D35221 p.c. North at top
52 158,63

Saturday, May 1, 1915

MC 8121 p.c. South at top
71 2 59 2 75 6 5~~0~~ 2 066 $\overset{058}{\wedge}$ 263 0 50, 53 2 85
85,32 4 33

MC 8121 diff. "g" m. N. at top
59 0 71 3 75 6 5~~3~~ 2 2 58 3 66 1 63 2 50 3 85,32 4 33
Star 53 superposed

MC 8121 diff. m. "h" S at Top
71 3 59 0 75 5 5~~2~~ 8 066 1 50 26~~6~~ 3 153 0 85,32 3 33
Star 52 superposed

Praesepe Cont.
Measures of Diameters

Sp. Ptm		B 2082 N. at Top	Diff	P. edge Top	Mean	Corr Ptm	Magn.	Magn - Ptm a class	K
a0 –	2132	24.7	4.8	29.5	27.6	·	7.~~12~~ 50		
a2 8.20	33	20.5	3.5	24.0	22.2	8.31	8.~~22~~ 30	~~-09~~ -.01 c	
K0 6.68	50	22.7	3.8	26.5	24.6		7.~~42~~ 93		~~74~~ 125
a 6.94	52	sup.		28.0	26.8 [28.0-1.2]	6.94	[7.~~25~~ 62]	[~~31~~ 68] a	
a 7.15	53	sup.		27.5	26.3 [27.5-1.2]	7.15	[7.~~36~~ 68]	[~~21~~ 53]	
K0 6.48	58	~~31.5~~ ~~27.8~~ 26.2	1.0	27.2	2~~7~~ 6 .7		7.~~28~~ 63		~~80~~ 115
a0 6.52	59	31.5	3.5	35.0	33.2	6.52	6.~~61~~ 70	~~09~~ 18	
a 7.40	63	27.5	2.0	29.5	28.5	7.40	7.~~40~~ 38	~~-40~~ -02	
g5 6.40	66	26.8	1.7	28.5	27.6		7.~~12~~ 51		~~72~~ 111
a2 6.32	71	35.0	1.5	36.5	35.8	6.39	6.~~45~~ 308	-09 c	
a3 6.75	75	31.5	2.5	34.0	32.8	6.86	6.~~63~~ 76	~~-25~~ -10 c	
QK0 6.98	85	25.7	1.2	26.9	26.3		7.~~35~~ 67		~~37~~ 69
			23.5 10 2.5					18-22 ~~70~~ 74 6 ~~0.00~~ -0.01	28 ~~4.29~~ 4.20 4 1.05 ~~0.63~~ ~~0.75~~

The above observations were made with difficulty as the plate is heavily fogged. The images are nearly circular, and this is the only plate on the region taken with the Bache telescope, except B334 already measured. The divisions of the scale could not be seen except by lifting it slightly from the surface of the plate.

Stars 52 and 53 are partly superposed, on account of the large size of images. Rejected in reduction.
Average Diff. Ptg-Ptm a (corr) −0.01
K +1.05

~~Monday~~ Tuesday, May ~~3~~ 4, 1915

3 30 η Cassiae Cont. from p. 158

↓ B33364 no p.c. Im. too large
↓ B31344 " " " " "
↓ B31347 " " " " "
↓ B31365 " " " " "
↓ B39235 no p.c.
b 1 η ? 8.48? 8.41? 07 07
η 2 c ? 8.34?
Images large and poor. Difficult
↓ B38878 no p.c. Im. too large
↓ B31212 " " " " "
↓ B29009 " " " " "
↓ B29430 no p.c.
b 1 η ? 8.48? 8.46? 02 02
η 1 c ? 8.44?
↓ B31211 no p.c. Im. too large
↓ B26967 " " " " "
↓ B25490 " " " " "
↓ B36009 p.c.
b 1 η 8.48
c supposed
↓ B36010 p.c.
b 1 η 8.48 8.36 12 12
η 3 c 8.24
↓ B31883 p.c.
nebulosity too strong for safe estimate
↓ B33407 no p.c. images too large
↓ B21557 p.c.
b 1 η 8.48 8.46 02 02
η 1 c 8.44

Tuesday, May 4, 1915

η Cassiae Cont.

↓ B21565 p.c.
b 1 η 8.48 8.41 07 07
η 2 c 8.34
↓ B21112 p.c.
b 1 η ? 8.28? 8.31? 03 03
η 2 c ? 8.34?
Very poor
↓ B26841 no p.c. Images too large
↓ B26842 no p.c.
η 0 b ? 8.38?
a – η 8.31 07 07
η 3 c ? 8.24?
↓ B26856 no p.c. Im. too large
↓ B24646 no p.c.
a 5 η 8.55
η 0 b 8.38 8.36 19 02 22
η 4 c 8.14
Trails. Intensities of trails estimated
↓ B27295 no p.c. Im. too large
↓ B26939 no p.c. Im. too large
↓ B26941 " " " " "
↓ B35305 p.c.
b 3 η 8.68
η 0 c 8.54 8.56 12 02 10
η 2 d 8.46
↓ B35351 p.c.
scratched over image of η

Tues. May 4, 1915

η Carinae Cont.

✓ B35834 p.c.
a ~~4~~ 3 η ? 8.35? 8.36? 09 $\underline{08}$
η 2 f ? 8.18?
Very faint and poor
✓ B38621 no p.c. Dm. too large
✓ B38522 " " " " "
✓ B41279 p.c.
superposed
✓ B31526 p.c.
superposed
✓ B31655 p.c.
superposed
✓ B28802 no p.c. Dm. too large
η
✓ B41281 p.c.
a 5 η 8.55
η 1 b 8.28 8.36 19 $\underline{08}$ $\underline{12}$
η 3 c 8.24
✓ B26857 out-of-focus
a - η
η 0 b 8.38 8.36 02 $\underline{02}$
η 2 c 8.34
Intensities estimated
✓ B31285 no p.c. Dm. too large
✓ B27377 out-of-focus
superposed

Tues. May 4, 1915

η Carinae Cont.

✓ B27352 out-of-focus
superposed
✓ B27574 no p.c. Dm. too large
✓ B27199 " " " " "
✓ B19292 p.c.
b 4 η 8.59
η 0 b 8.38 8.37 22 01 $\underline{23}$
η 4 c 8.14
✓ B19470 p.c.
too poor
✓ B19668 p.c.
b 4 η 8.59
η 1 b 8.28 8.34 25 $\underline{06}$ $\underline{20}$
η 4 c 8.14
✓ B18629 p.c.
superposed
✓ B24652 no p.c. Dm. too large
✓ B21439
nebula too dense

Tues. May 4, 1915

η Carinae Cont.

√ B18270 p.c.
b 5 η 8.69 8.46 23 23
η 3 c 8.34
b superposed

√ B22642 no p.c. Im. too large
√ B22779 " " " " "
√ B22810 " " " " "
√ B18466 p.c.
b 2 η 8.39 8.26 13 12
η 4 c 8.14
b superposed
√ B18427 p.c.
too poor
√ B19872 p.c.
b 1 η 8.48 8.36 12 12
η 3 c 8.24

√ B19263 p.c.
b 4 η 8.59
η 0 b 8.38 8.37 22 01 23
η 4 c 8.14

√ B18321 p.c.
b 4 η 8.59 8.36 23 22
η 4 c 8.14
b superposed

~~Friday Apr. 30.~~
Tuesday, May 4, 1915

η Carinae Cont.

√ B21067 p.c.
too poor

√ B18859 p.c.
b 3 η 8.49
η 0 b 8.38 8.37 12 01 13
η 3 C 8.24

√ B21266 p.c.
c 1 η 8.64 8.55 09 09
η 2 d 8.46
nebulosity dense

√ B21328 p.c.
c 1 η 8.64 8.55 09 09
η 2 d 8.46

√ B18702 p.c.
b 1 η 8.29 8.28 01 00
η 1 b 8.28
faint and poor
√ B18201 too poor
√ B18748
too poor

√ B18802 p.c.
b 1 η 8.29 8.24 05 06
η 2 b 8.18

4 25

Wednesday, May 12, 1915

3 25 η Carinae Cont

↓ A 10886
b 1 η 8.48 8.42 06 06
η 3 d 8.36
c defective
Images very large. Obs. difficult

A 10890
a - η
η 0 b ?: 8.38 8.36? 02 02
η 2 c ?: 8.34

A 10887
b 1 η 8.48 8.46 02 02
η 1 c 8.44

A 10926
b 0 η ? 8.38 8.41 03 03
η ~~k~~ 1 c 8.44

A 10903
b 0 η ? 8.38 8.41? 03 03
η 1 c ? 8.44

A 10880
η 1 b 8.28 8.31 03 03
η 2 c 8.34
A

Wednesday, May 12, 1915

η Carinae Cont

↓ A 10715
b 1 η ? 8.48 8.46? 02 02
η 1 c ? 8.44
Images double.

All estimates on A plates were made with difficulty, on account of the large size of the images. Also, the image of η is difficult to compare on account of the redness of this star. Stars a' and b' could not be used, as they are not separated from their companions.

There is no doubt that on all of the above plates η is not far from the magnitude of b. Probably it is slightly the fainter of the two.

3 35

Friday, May 14, 1915

3.15 η Carinae Cont.

B3^{38}~~379~~4 p.c.
superposed

B31850 p.c.
superposed

B27000
η 0 b? 8.38?
No p.c. Obs. difficult

B20978 p.c.
nebula too strong

B21036
~~Does not converg.~~
Too poor

B16378 p.c.
b 1 η 8.29 8.24 05 06
η 2 b 8.18

B12940 p.c.
superposed

B15131 p.c.
superposed

B7959
Too poor

May 14, 1915

η Carinae Cont

B3606
Too poor

B11087 p.c.
η 0 a 7.59 7.57 02 02
η 5 a' 7.55

B10807
Too poor

3 30
3 50 A2549
Im. too large

A2386
b 1 η 8.48 8.46 02 02
η 1 c 8.44

A3101
b ~~1~~ 2 η 8.58
η 0 c 8.54 8.60 02 06 06 03
η 0 d 8.66
η 3 e 8.63

A3102
b 1 η 8.48 8.46 02 02
η 1 c 8.44

A3012
b 1 η 8.48 8.46 02 02
η 1 c 8.44

May 14, 1915

η Carinae Cont.

√ a 2268

Does not corr Reg.

√ a 7700

b 1 η 8.48 8.46 02 02

η 1 c 8.44

a 7745

Too poor (edge)

√ a 2200

b 2 η 8.58

η 0 c 8.54 8.60 02 06 06 03

η 0 d 8.66

η 3 e 8.63

√ a 2248 Too near edge

√ a 2~~4~~249 " " "

~~a 2250 " "~~

√ a 2250 Does not corr reg.

√ a 2240 Too near edge

√ a 2236 " " "

√ a 7685 Does not corr Region

√ B 7584 p.c

a 2 η 7.79 7.84 05 05

η 3 b′ 7.89

a′ superposed

4 05

May 14, 1915

4 20

η Carinae Cont.

√ B 15083 p.c.

superposed

√ B 15239 p.c

a′ 3 η 8.35 8.32 03 04

η 1 b 8.38

√ B 15365 p.c.

b′ 2 η 8.39

η 0 b 8.38 8.38 01 00 02

η 3 d 8.36

c superposed

√ B 39235 no p.c. Dm. too large

√ B 79~~46~~51 Too poor

√ B 7936 p.c.

a′ 0 η~~b~~ ~~b~~ ? 8.05?

η 3 b ? 8.08? 8.08 7? 02 01 02

η 1 b′ ? 8.09? ~~8.28?~~

a superposed

√ B 41281 p.c.

a′ 3 η 8.35

η 0 b 8.38 8.32 03 06 08

η 3 c 8.24

May 14, 1915

η Carinae Cont.

↓ X 8293
b′ 2 η 8.39
η 0 b 8.38 8.37 .02 .01 .03
η 2 c 8.34

↓ X 4572
a 3 η ? 7.89? 7.92? .03 .03
η 1 a′ ? 7.95?
Difficult. Images very large

↓ X 5551
Images too large

↓ X 4161
a 2 η ? 7.79? 7.87? .08 .08
η 1 a′ ? 7.95?
Images very poor and large. Difficult

↓ X 4162
a 2 η ? 7.79? 7.87? .08 .08
η 1 a′ ? 7.95?

↓ X 8292
b 1 η 8.48 8.41 .07 .07
η 2 c 8.34

↓ B15626 no p.c.
Im. too large

May 14, 1915

η Carinae Cont.

↓ B15180 p.c.
Too poor

B15181 p.c.
Too poor

↓ B15111 p.c.
b 3 η 8.49
η 0 b 8.38 8.37 .12 .01 .13
η 3 c 8.24

↓ B13521 p.c.
b′ 2 η 8.39 8.34 .05 .06
η 1 b 8.28

↓ B12832 p.c.
a 4 η 7.99
a′ 1 η 8.15 8.03 .04 .12 .06 .15
η 1 b′ 8.09
η 5 b 7.88

X
↓ B12536 p.c.
Too poor

B7584 p.c.
a 2 η 7.79 7.84 .05 .05
η 3 b′ 7.89

Quality of Prismatic Comparisons
Comparison with Plate Images
For method, see page 36
Poor Region Scutum Sob

Plate	Diameter mm	0 mm	20 mm	40 mm	50	60 mm	80 mm	90 mm	100 mm	110 mm
MC5593	125	6 4b	5 1	5 1	4a 2	4a 2	3a 3	2a 4	2a 4	1 5
MC5680	150	7k $\overset{3}{4}$b 2?	6 4b 1	5 2	5 2	5 2	4a 3	3a 4	$\overset{3}{2}$a 4	2a 5

(~~Size~~)		Quality of Plate Images. Absolute					Size and Def. (not form)	
MC ~~5593~~ 5680	prec.		4 0	4 0	3+0.5	3 1.0	2 2	2 2
	fll.	4	4 0	4 0	4 0	3+0.5	3 1	3− 1.5
MC 5593	prec	5	5 0	4 1	3 2	3− 2.5	2 3	1 4
	fll		5 0	4 1	3+1.5	3 2	3 − 2.5	2 3
5593 − 5680	prec		0	1	1.5	1.5	1	2
	fll	0	0	1	1.5	1.5	1.5	1.5

MC5593 has elongated images, small and sharp. The circle of comparability is smaller than on MC 5680. Also at the distance of 60 mm the contrast with central image is much greater than on MC5680. On both plates the quality deteriorates more rapidly toward the preceding than toward the following edge.

On MC ~~5593~~ 5680 the images are a little larger than on MC 5593, but they are nearly uniform to a distance of 60 mm. Comparability with p.c. is good as far as 80 mm and ~~fair~~ possible as far as 100 mm

The effect of the greater uniformity of images on MC 5680 ought to be to make corrections for distance smaller than on MC 5593.

Wednesday, June 23, 1915

11-Inch Draper Telescope.

Measures to Determine approximate Scale

Stars	Polar Dist. mm	Polar Dist.	Scale
15	16.6	883	53.2
16	19.3	1006	52.2
10	21.7	1128	52.0
12	35.0	1867	53.3
13	24.4	1299	53.2
11	34.8	1856	53.3
4	31.3	1666	53.2
			264
			7
			52.9

Wednesday, June 23, 1915

T Ursae Majoris

3 25 Estimates repeated

I 15~~300~~ 177

u 1 N $v < 13.9$

I 15300

s 2 $N^?$: $v < 13.4^?$

Variable probably not on plate. Certainly more than 2 grades fainter than s.

I 15309

s 3 V $v = 13.49^?$: a

t n.s.

Original observation u IV, v 2 IV Too uncertain. Reject Plate

AC 1607

g^2 3 V $v = 9.91^?$: a

g^3 n.s.

AC 1604

g^2 3 V 9.91

V 0 h 10.12 $v = 10.02$ " 10

k n.s.

g^3 image defective

AC 251

~~Region not on plate~~ Too near edge

AC 261

n 1 N $v = < 11.9$

T Urs. Maj. Cont

C 8875
g 4 v 9.~~76~~ 39
v 1 g³ 9.63 v = 9.~~42~~ 51 ~~06~~ 12 ~~07~~ 12
Poor images

C 6517
g 2 v 9.~~56~~ 29
v 4 g³ 9.33 v = 9.~~44~~ 31 ~~12~~ 02 ~~11~~ 02

C 556~~8~~9
h 1 v 10.22
v 1 k 10.50 v = 10.36 14 14
Original obs g'3v, v1h wrong. Var. certainly ~~fainter~~ than h

C 5538
g 5 v 9.~~86~~ 59
v 1 g³ 9.63 v = 9.~~44~~ 61 ~~12~~ 02 ~~11~~ 02
Images large and elongated. Difficult

C 5568
g³ 2 v 9.93
v 0 h 10.12 v = 10.12 19 00 18
v 3 k 10.30

R Aurigae Estimates repeated

I 19744
f 3 v 9.83
v 1 g 9.54 v = 9.68 15 14

I 19743
f 3 v 9.83
v 0 g 9.64 v = 9.66 17 02 14
v 3 g' 9.52

Wednesday, June 23, 1915

S Ursae Majoris
Estimates Repeated Original obs. by Miss Raymond

AC 12524
Too poor Orig. Obs. 11.0 reject
AC 12590
h 3 v 10.50
v 1 l 10.54 v = 10.52 02 02
Image of v hazy
AC 12408
l 3 N v < 10.94
AC 4591
h 3 v ? 10.50?
v 0 l ? 10.64? v = 10.57? 07 07 Very discordant. Reject. Perhaps a defect
l = 0.1 K n.s.
At limit of visibility, uncertain
AC 4656
m 0 N v < 11.40
AC 5756
~~AC 573~~
m 2 v ? 11.60?
v 0 n ? 11.60? v = 11.60? 00 00
o n.s.
AC 7679
Too poor
AC 6348
o 2 N v < 12.56
AC 6391
n 3 N v < 11.90

Wednesday, June 23, 1915

S Ursae Majoris Cont.

AC 5621
m 2 v ? 11.60?
v 0 n ? 11.60? v = 11.79? 19 19 37
v 2 o ? 12.16?
Image of v probably defective
AC 5602
n 2 v ? 11.80?
v 1 o ? 12.36? v = 12.08? 28 28
Image of v hazy and ~~elongated~~ irregular
AC 5584
l 2 v 10.84 v = 10.84 f a
m n.s.

3 50

Saturday, July 17, 1915

Color Index of S Cephei

MC 6237 Iso, yellow Screen, Sept. 13, 1914
Var. between e and f (Ptm 9.04, 9.37)
Assume 9.2
Visual curve shows variable about 9.5, increasing in brightness

MC 6284, blue, Sept. 15, 1914.
Variable seen? a magnitude fainter than t 0.2 fainter than w. Ptg magn. of t 15.~~28~~32
of w 15.9~~7~~4

Magnitude probably about 16. Uncertain, ~~because the photographic magnitudes of Comparison Stars depend on only one plate (MC 6284)~~ Ptg magn. Depend on Plate MC 5887 and 6284.

The above Comparisons indicate a color-index of at least six magnitudes

On MC 3634, Yellow taken Aug 19, 1913, the variable is fainter than a (Ptm 7.40) and brighter than b or c (Ptm. 7.83, 8.15) Probably about 7.7.
Visual curve shows Var. about 8.0, near max
On MD 3634, blue, var. not seen. Limit of visibility of plate 12.5 or fainter
Color index more than four magnitudes.

Probably the color of index of S Cephei when near maximum is as much as six magnitudes.

Wednesday, July 21, 1915

Color Index S Cephei Cont.

MC 6284, blue.
Examination of this plate shows that the object seen and recorded on page 186 is not in the exact position of the variable, and is a defect in the film. The variable is not seen and is certainly fainter than 16.9.

This confirms the color index of more than 6 magnitudes mentioned on the preceding page and renders it more striking. The estimates would indicate nearly 7 magnitudes.

Thursday, July 22, 1915

Color Index of S Cephei Cont.

MC 6113 (yellow) Aug. 31, 1914 Exp. 10^m

10.56 ~~11.82~~ K 0 V ~~11.52~~ ~~11.95~~ ~~11.74~~ ~~22 23~~

10.42 ~~11.85~~ l ~~2~~ 1 V 10.56 10.52 [10.24?] 10.54 02 02 ㉚?

11.44 V 12 m?

~~Is m variable?~~ ~~Look upon the plate~~

Image of variable very hazy. Defective?
m more than a magn. fainter than K and l which are of nearly the same magnitude on this plate.

MC 5887 (blue) July 19, 1914 Exp. 10^m

V not seen

15.94 W = 0.1 Var. < 16.0

MC 6237, Sept. 13, 1914 yellow Exp. 10^m

9.10 l 3 V 9.40 9.36 04 07 04

V 0 f 9.27 9.27 9.40

V 5 g 9.90 Im. of var. very clear.

MC 6187 Sept. 10, 1914 (yellow) Exp. 10^m

9.27 f 2 V 9.47 9.60 9.54 07 06

V 3 g 9.90 Im. of var. very clear.

MC 6284 Sept 15, 1914 blue Exp. 10^m

V not seen

15.94 W = 0.1 >16.0

MD 6237 Sept. 13, 1914 blue

Var not seen < 12.5

12.52 n ~~V~~ = 0.1

MD 6187

var. not seen

12.18 m = 0.4 Var < 12.5

Thursday, July 22

S Cephei Cont.

~~M~~

MD 6113

Var. not seen Var < 12.5

12.52 n = 0.1

MD ~~6364~~ 3634

Var. not seen

12.52 n = 0.4 Var. < 12.8

o = 0.1

MC ~~6364~~ 3634 (yellow) Aug 19, 1913 10^m

7.50 a 1 V 7.60 7.76 7.62 7.66 06 10 04

V 2 c 7.96

V 4 b 8.02

Estimates difficult and somewhat uncertain on account of brightness and distance of comparison stars. Certainly nearly as bright as a

I 17007. Jan. 7, 1897 Exp. 30^m

13.71 q 5 V 14.21 14.45 21 15 13

V ~~2~~ 0 r 14.56 14.56

V 4 s 14.98 14.58

Image of var. sharp, elongated, possibly defective.

Thursday, July 22

S Cephei Cont.

Early Obs. in 1895- Books 1, 2 and 3.

I 6909 Sept. 7, 1892 Edge BK 1:155

v 0 0 13.61

0 = 0.1

I 12775 March 2, 1895 1 : 155

13.61 o 2 v 13.81

v = 0.1

r n.s.

I 13104 March 26, 1895 1 : 155

12.52 n 2 v

v 1 p' ?

Edge of plate. Images very poor 1 : 155

The above observations are the only ones in which the variable seemed almost certainly to be seen; last observation was made May 7, 1896

Thursday, July 22

S Cephei Cont.

I 17871 April 17, 1897 Exp. 59^m

~~v 6~~

12.52 n 6 v 13.12 12.92 20 19

v 1 n' 12.83 12.73

I 17212 Jan. 26, 1897 Exp. 48^m

13.71 ~~14.14~~ q' 5 v 14.~~64~~ 21 14.28 07 08

v 2 p 14.56 14.36

I 27409 Aug. 30, 1901 Exp. 76^m

Too poor

Friday, July 23, 1915

δ Cephei Cont.

Examination of early plates on which δ Cephei was supposed to be seen

I 6909

Object observed is a defect near variable

I 12775

13.71 g 4 v? 14.11?

v n.s.

Variable certainly on plate; or rather, there is a faint trace of an object in position of variable

I 13104

An object close to position of variable is seen under higher power to be a defect

δ Cephei

Remarks on Comparison Stars.

On yellow plates MC 6117, 6237, 6187, 3634, k is always fainter than l

The ~~photometric~~ original magnitudes according to estimates both of Mr. Reed and of Mr. Wendell, as given in H.A. 36, page 10, are brighter for k than for l. The residuals are small for both observers.

Has magnitude changed, or are these stars.

Differences [yellow − Ptm H.A. 37] are for h, -0.03; k, -0.14; l, +0.38; m -0.14

Star l therefore seems to be the discordant one being half a magnitude dimmer ~~brighter~~ with respect to k and m, ~~than Star~~ on the yellow plates.

Monday August 2, 1915

Plt 200

1 35

Rich Region in Scutum Sobieski –
Re-measurement of Series Plate
for Yellow Magnitudes
Prismatic Comparisons

Scale R

Plte	MC 5520	Mean		Diff	MC5525
5	10.5	10.30	2 2	-3.87	10.1
6	11.2	11.10	1 1	-4.12	11.0
7	11.7	11.65	1 0	-4.09	11.6
8	12.3	12.45	1 2	-4.42	12.6
9	13.6	13.65	0 1	-4.91	13.7
10	13.8	13.75	0 1	-4.87	13.7
11	14.2?	14.15?	0 1	-4.79	14.1?
12	n.s.				n.s.
2r	10.3	10.15	1 2	-3.84	10.0
4r	12.2	12.40	2 2	-4.30	12.6
5r	13.0	13.15	2 1	-4.69	13.3
6r	13.8	13.90	1 1	-4.88	14.0

Images on these 3 plates not comp. with Scale

alt. -.05

Rich Reg.	MC 5523	Curve	Magn	page 195	Mean	
1	7.9	.	.	.		
2	10.8	-4.00	6.80	6.58	6.69	11, 11
2a	11.7	-4.21	7.49	7.17	7.33	16, 16
3a	12.7	-4.47	8.23	7.86	8.04	19, 18
4	12.9	-4.53	8.37	8.47	8.42	05, 05
5	13.3	-4.68	8.62	8.86	8.74	12 ~~02~~, 12
6	13.8	-4.83	8.97	8.94	8.96	01, 02
7	n.s.	.	.	.		
7a	n.s.	.	.	.		
7b	n.s.	.	.	.		
8	13.1	-4.57	8.43	8.77 ~~8.44~~	8.60	17, 17
9	13.9	-4.87	9.03	9.12	9.08	04, 04

August 2, 1915

Plot 200

Scale Y Rich Reg. Cont.

Yellow

	MC5520^5	Mean		Diff.	MC5525^0
5	7.6	7.65	0 1	-1.22	7.7
6	8.1	8.15	1 0	-1.17	8.2
7	8.4	8.40	0 0	-0.94	8.4
8	8.8	8.75	0 1	-0.72	8.7
9	9.7	9.65	1 0	-0.91	9.6
10	9.7	9.75	1 0	-0.87	9.8
11	10.0	10.05	0 1	-0.69	10.1
2r	7.7	7.70	0 0	-1.39	7.7
4r	8.9	8.90	0 0	-0.80	8.9
5r	9.6	9.35	2 3	-0.89	9.1
6r	10.0	9.95	0 1	-0.93	9.9

alt. -.05

	MC5523	Curve	Magn
1	6.2	.	.
2	7.8	-1.22	6.58
2a	8.2	-1.03	7.17
3	8.7	-0.84	7.86
4	9.3	-0.83	8.47
5	9.7	-0.84	8.86
6	9.8	-0.86	8.94
8	9.6	-0.83	8.77 ~~8.44~~
9	10.0	-0.88	9.12

August 2, 1915

Plot 200

Scale M Rich Reg. Series Plates Re-meas. Cont.

Yellow

		MC 5665	Mean		Diff	MC 5670
Pole	5	7.8	7.50	3 3	-1.07	7.2
	6	8.0	8.05	0 1	-1.07	8.1
	7	8.3	8.40	1 1	-0.9~~6~~4	8.5
	8	9.6?	9.3?	3 3	-.12 ?	9.0
	9	10.1	10.00	1 1	-1.26	9.9
	10	9.9	10.00	1 1	-1.12	10.1
	11	n.S.	.		.	n.S.
	12	n.S.	.		.	n.S.
	2r	7.6	7.50	1 1	-1.19	—
	4r	9.2	9.20	0 0.	-1.~~79~~ 10	2r 7.4
	5r	9.7	9.80	1 1	-1.34	4r 9.2
	6r	n.S.	10.0	. a	-0.98	5r 9.9

		MC 5666	Curv	Magn	p.197	alt. -.02 Mean		
								6r 10.0
Rich Reg.	1	5.9	.	.	.			
	2	7.9	-1.07	6.83	6.93	6.88	05 05	
	2a	8.4	-1.03	7.37	7.09	7.2~~4~~3	14, 14	
	3	9.4	-1.11	8.29	8.20	8.24	05, 04	
	4	9.7	-1.12	8.58	8.72	8.65	,07, 07	
	5	10.0	-1.13	8.87	8.97	8.92	05, 05	
	6	n.S.	.	.	8.90	8.90	a a	
	7	n.S.		.	.	.		
	7a	n.S.	.	.	.	.		
	7b	n.S.	.	.	.	.		
	8	10.0	-1.14	8.86	.	8.86	a .	
	9	10.1	-1.15	8.95	8.89	~~8.89~~ .92	03, 03	
	10	n.S.		.	.			

August 2, 1915

Plot 200

Scale R Rich Reg Cont.

Yellow

	MC 565~~5~~6	Mean			MC 5670
5	11.3	11.10	2 2	-4.67	10.9
6	11.9	11.90	0 0	-~~3~~4.92	11.9
7	12.2	12.30	1 1	-4.84	12.4
8	1~~3~~2.6	12.75	2 1	-4.72	12.9
9	n.S.	.		.	n.S.
10	13.8	13.95	. 2 1	-5.07	14.1 ?
2r	10.9	10.95	1 0	-4.64	11.0
~~3r~~					
4r	13.2	13.30	1 1	-5.20	13.4
5r	13.7	13.75	1 6	-5.29	13.8
6r	n.S.	14.1	. a	~~-4.9~~ -5.08	14.1

	MC 5666	Curv	Magn. alt. -.02
1	9.1	.	..
2	11.7	-4.77	6.93
2a	11.9	-4.81	7.09
3x	13.2	-5.00	8.20
4	13.8	-5.08	8.72
5	14.1	-5.13	8.97
6	13.9	-5.10	8.90
7	n.S.	..	
8	n.S.	.	
9	14.0	-5.11	8.89
10	n.S.	.	

2 35

Tuesday, August 2, 1915

Scale M Rich. Sent. Sel. Re-measurement Plt 200

11 20

Pole	MC 5520	Mean	Diff.	Ptr	MC 5525 Curve
10	4.9 5.1	5.05	10	3.83	4.8 5.0
11	5.7	5.75	10	3.61	5.8
12	6.4	6.25	21	3.33	6.1
13	6.9	6.95	10	3.13	7.0
14	7.3	7.45	12	2.79	7.6
15	7.8	7.80	00	2.84	7.8
16	7.9	7.90	00	3.04	7.9
17	8.2	8.25	01	2.79	8.3
18	8.8	8.85	01	2.71	8.9
19	9.1	9.30	22	2.64	9.5
20	9.4	9.55	21	2.64	9.7
21	9.4	9.60	22	2.67	9.8
22	9.9	9.95?	10	2.54	10.0?
23	10.1	10.00	11	2.76	9.9
24	7?				n.s.
25	7?				7?

Tuesday August 2, 1915

Rich. Sent. Sel. Cont Plt 200

alt. -.05

		MC 5523	Aun	Magn
Rich Reg	10	7.6	2.87	10.47
	11	7.8	2.82	10.62
	12	7.9	2.80	10.70
	13	8.3	2.73	11.03
	14	8.6	2.71	11.31
	15	8.7	2.70	11.40
	16	9.0	2.68	11.68
	17	9.3	2.68	11.98
	18	9.0	2.68	11.68
	19	9.6	2.69	12.29
	20	9.1	2.68	11.78
	21	9.4?	2.68	12.08?
	22	10.1?	2.73	12.83?
	23	n.s.		

Images on this plate larger than those on Pole plate and more difficult to compare with scale.

Tuesday August 2, 1915

Scale M — Rich Sext Sp, Cont.

	MC 5665		Mean		Diff.	MC 5670
10	5.0	5.2	5.20	00	3.68	5.0 5.2
11		6.1	6.00	11	3.36	5.9
12		6.8	6.60	22	2.98	6.4
13		7.6	7.45	2 3	2.63	7.1
14		7.6	7.60	00	2.64	7.6
15		8.0	8.05	01	2.59	8.1
16		8.4	8.50	11	2.44	8.6
17		~~8~~8.5	8.60	11	2.44	8.7
18		9.0	9.05	01	2.51	9.1
19		9.8	9.75	01	2.19	9.7
20		~~10.1~~ 9.9	9.90	00	2.29	9.9
21		10.0	9.95	01	2.32	9.9
22		10.0	10.0	4 7	2.49	7?
23		7?	.			7?
24		n.s.	.			n.s
25		n.s.	.			n.s.

11 55

Tuesday August 2, 1915

Rich Sext Sp. Cont.

alt. -.02

	MC 5666	Curr	Magn
10	7.8	2.60	10.40
11	7.9	2.58	10.48
12	8.3	2.50	10.80
13	8.3	2.50	10.80
14	8.8	2.42	11.22
15	8.8	2.42	11.22
16	9.6	2.32	11.92
17	9.2	2.37	11.57
18	9.7	2.32	12.02
19	9.8	2.31	12.11
20	9.8	2.31	12.11
21	9.9	2.30	12.20
22	7	.	.
23	n.s.	.	.
24			
25			

Monday, August 9, 1915

T Cassiopeiae - Estimates Repeated

C 3955
9.9 diff. Images large and poor

C 8742
not seen < 11.4

AC 673
10.6? Image poor and faint. Edge of plate

AC 1996
10.2? Orig. est. 10.00 Adopt 10.1?

AC 2019
11.0? Orig. est. 11.28 Adopt 11.1?

I 23520
12.3? Very poor Orig. Est. 12.42 Mean 12.4?

I 9177
Too poor

I 23524
12.3. Orig. est. 12.42 Mean 12.36

I 5002
9.0? Near edge. Very uncertain
Reject est. L.I, 86. Only one comparison.

I 23546
12.0? Very poor Orig. est. 11.76 Mean 11.9?

~~Thurs~~ Wednesday Aug. 18, 1915

S Cephei Cont. from page 193

I 29281
12.83 n' 1 V 0 0 0 q 12.93 13.61 13.57 13.37 $\frac{44}{56}$ 24, 20 ✓
r n.s. V.F

I 29632
13.71 q' 3 V < 14.0 ✓

I 31045
14.56 r 1 V? ~~14.6~~ 14.7? ✓
s n.s.
V.F

I 31081
14.98 s 1 V 15.08 15.00 08, 08 ✓
V 4 t 15.32 14.92
faint

I 27586
o 3 V < 13.9 ✓

I 19261 Some mistake about plate no. Not measured Reject.
t 2 N < 15.3 ✓
Var. possibly on plate, but certainly at least 0.3 mags fainter than t

~~I 19354~~
~~14.56 p 3 V 14.86~~ 14.87 01, 01 ✓
~~14.88 V 1 s 14.98~~
Comp. Stars wrongly ident.
See page 207

Wednesday, Aug 18, 1915

S Cephei Cont.

I 18405

12.52 n 6 V   13.12   13.09   03, 26, 22   ✓
V 0 n′ 12.83   12.83
13.31 V 3 0 13.61   13.31

I 18022

12.52 n 5 V 13.02   12.88   14, 15   ✓
12.73 V 1 n′ 12.83

I 18039

12.52 n 4 V 12.92   12.78   14, 15   ✓
12.63 V 2 n′ 12.83

I 17451

13.61 0 3 V 13.91   13.80   11, 07, 19   ✓
13.57 q 3 V 13.87
13.61 V 1 q′ 13.71

I 17664

12.83 n′ 2 V 13.03   13.22   19, 19   ✓
13.41 V 2 0 13.61

I 17708
Too poor

Friday, August 20, 1915

S Cephei Cont.

I12775
There is certainly something on the film in the position of S Cephei but it is too faint to say certainly that it is a star image. If S Cephei is actually on the plate, it must have been far less red than usual, as it would indicate a color index of only about 2 magnitudes, while the usual color index is 5 or 6 magnitudes

I 18068
n 4 V   12.92   12.82   10 09
V 1 n′   12.73

I 18183
n 5 V   13.02   12.88   14 15
V 1 n′   12.73

I 18378 t.p.
I 18363 t.p.
I 18058
n 5 V   13.02   12.88   14 15
V 1 2 n′   12.73
I 18085
n 4 V   12.92   12.82   10 09
V 1 2 n′   12.73

Friday, Aug. 20, 1915

δ Cephei Cont

I 18104			
12.52 n 2 v	12.72 ~~13.0~~ 12.53	12.62	10 09
12.53 v 3 n′ 12.83			
I 18140			
n 5 v	13.02	12.88	14 15
v 1 n′	12.73		
I ~~1863~~ 18163			
n 5 v	13.02	12.82	20 19
v 2 n′	12.63		
I 18235 t.p.			
I 18236			
n 4 v	12.92	12.78	14 15
v 2 n′	12.63		
I 18254			
n 4 v	12.92	12.78	14 15
v 2 n′	12.63		
I 18~~316~~ 231			
n 4 v	12.92	12.82	10 09
v 1 n′	12.73		

Saturday Aug. 28, 1915

δ Cephei Cont

I 19354 re-measured			
q′ 7 v	14.41	14.52 11 06 16	
v 1 r	14.46		
v 3 s	14.68		
Plate unused			
q′ 7 v	14.41	14.48 07 02 10	
v 1 r	14.46		
v 4 s	14.58		
I 18405			
n 6 v	13.12	13.09 03, 26, 22	✓
v 0 n′	12.83		
v 3 o	13.31		
I 17007			
q′ 7 v	14.41	14.52 11 04 06	✓
v 0 r	14.56		
v 4 s	14.58		
I 17664			
n′ 2 v	13.03	13.27 24 24	
v 1 o	13.51		
I 17451			
q 2 v	13.77	13.6~~5~~4 1~~2~~3 13	
v 2 q′	13.51		
I 17212			
q′ 5 v	14.21	14.24 03 02	
v 3 s	14.26		

Monday, Aug. 23, 1915

Scale m

Rich Reg. Scut. Sob. Comp. stars.

2:35

	Star images MC 8503 Sc.1 Sc.2	MC 8521	Pris. comp. MC 8503 Sc.1	Sc.2	Curv	Magn.	A MC 8521 Sc.1	Sc.2	Curv	Magn.
1	B	B	4.0	4.2	1.95	6.15	3.0	3.2	2.93	6.13
2	B	B	5.0	5.2	1.54	6.74	4.1	43	2.53	683
2a	B	B		7.4	0.88	8.28		6.8	1.70	8.50
3	~~B~~ 1.8 2.0	B	~~5~~6.7	6.9	0.98	7.88		5.8	206	7.86
4	2.3 2.5	B		7.6	087	8.47		6.6	1.76	8.36
5	3.0 3.2	1.8 2.0		7.8	0.86	8.66		7.2	1.58	8.78
6	3.3 3.5	2.2 2.4		8.2	0.86	9.06		7.6	1.43	9.03
7	3.6 3.8	2.3 2.5		8.7	0.88	9.58		8.0	1.29	9.29
7a	4.2 4.4	2.9 3.1		8.9	0.89	9.79		8.6	1.11	9.71
7b	5.3 5.5	3.7 39		9.3	0.9~~2~~3	10.23		9.0	1.07	10.07
8	3.7 3.9	2.6? 28?		~~7.3~~ 8.8	0.89	9.69		8.6	1.11	9.71
9	4.2 4.4	2.8 3.0		8.9	0.89	9.79		8.8	108	9.88
10	5.5 5.7	3.8 4.0		9.2	0.92	10.12		9.0	1.06	10.06
11	5.4 5.6	3.9 4.1		9.9	.			9.6	1.13	10.73
12	5.2 5.4 5.7 5.55	4.2 4.4						9.7	1.15	10.85
13	5.8 6.0 5.9 5.95	4.0 4.2						p		
14	6.8 7.0 6.9 6.95	5.0 5.2						9.9	1.19	11.09
15	6.7 69 6.8 685	5.2 5.4 5.7 5.55								
16	~~1~~7.2	5.8 6.0 5.8 5.90								
17	7.2	5.9 6.1 6.1 6.10								
18	7.5	6.7 6.9 6.9 6.90								
19	7.9	7.0 7.2 7.0 7.10								
20	7.7	7.0								
21	8.0	7.8								
22	8.6	8.6								
23	8.8	8.7								
24	8.8	8.9								

Cont. p. 210

Images on MC 8521 large and difficult to compare with scale

Monday, Aug. 23, 1915

Rich Reg. Scut. Sob. Comp. Stars.

	g ~~Image h.~~ h MC 8503 Sc.1	Sc.2		MC 8503 Sc.1	Sc.2	Curv	Mag	g MC 8521 Sc.1	Sc.2		~~Image H.~~ h MC 8521 Sc.1	Sc.2	Curv	Mag
1	p		3.7?	3.5?	3.7?			p		3.1 0 a	2.9	3.1		
2	5.2	5.4	5.40 00	5.2	5.4	.		3.9	4.1	4.25 12	4.2	4.4	~~2~~3.01 2.~~4~~62	6.11 6.87
2a		~~5~~6.8	6.80 00		6.8	1.29	8.09		5.7	5.80 11		5.9	2.~~09~~12	7.~~89~~92
3		6.7	6.75 01		6.8	1.29	8.0~~9~~4		5.7	5.70 00		5.7	2.16	7.86
4		6.9	7.00 11		7.1	1.28	8.~~3~~28		6.6	6.50 11		6.4	1.9~~4~~2	8.42
5		7.8	7.70 11		7.6	1.27	8.~~8~~97		7.2	7.20 00		7.2	1.72	8.92
6		7.8	7.80 00		7.8	1.28	9.08		7.8	7.65 21		7.5	1.6~~6~~4	9.29
7		8.0	8.10 11		8.2	1.~~32~~29	9.~~52~~39		7.7	7.70 00		7.7	1.63	9.33
7a		8.7	8.70 00		8.7	1.39	10.09		8.5	8.25 32		8.0	1.62	9.87
7b		8.9	9.00 11		9.1	1.~~50~~47	10.~~50~~47		8.7	8.65 10		8.6	1.62	10.27
8		8.2	8.10 11		8.0	1.29	9.~~2~~39		7.8	7.85 01		7.9	1.63	9.48
9		8.7	8.60 11		8.5	1.3~~9~~6	9.~~84~~96		8.5	8.25 32		8.0	1.62	9.87
10		8.9	8.9 a.		sup.	1.43	10.33		8.9	8.80 11		8.7	1.6~~5~~7	10.47
11		8.8	8.90 11		9.0	1.4~~7~~3	10.~~47~~33		8.9	8.95 10		9.0	1.72	10.67
12		8.9	9.10 22		9.3	1.5~~4~~0	10.~~84~~60		9.0	9.10 11		9.2	1.7~~8~~5	10.85
13		9.7	9.50 22		9.3	1.~~54~~62	~~10.84~~ 11.12		9.2	9.25 01		9.3	1.~~82~~79	11.04
14		10.0	10.00 00		10.0	1.75	11.75		9.7	9.70 00		9.7	1.98	11.68
15		10.0	9.90 11		9.8	1.~~69~~73	11.~~49~~63		9.7	9.75 10		9.8	2.0~~8~~0	11.75
16		10.1?	10.1?		J.	1.78	11.88?		9.9	9.95 10		10.0	2.~~20~~15	12.10
17									J.	10.1 .a		10.1	2.29	12.39
18										10.1 .a		10.1	2.29	12.39
19														
20														
21														
22														
23														
24														

Monday, Aug. 23, 1915

Rich Reg. Scut. Sob. Comp. Stars.

	Star Images				
	MC 8503		MC8521		
	Sc. 1	Sc. 2	Sc. 1	Sc 2	Sc
25		9.2		9.0	
26		9.8		9.5	
27		9.1		9.7	
28		10.1		10.0	

B:10

Star 25 has nebulous appearance Perhaps there are 2 or 3 fainter stars closely adjacent stars. Not suitable for Comparison star.

Stars 26, 27, and 28 are difficult to measure on account of faintness. Measures of Star 27 are discordant. Apparent variability seems to be photographic.

Plate MC 8521 was exposed 60 minutes but shows little if any more than MC 8503, which was exposed but 15m. In May 1915, when these plates were taken, faint stars were never photographed, the limit for the very best blue plates of 15m exp. being about 15th magn. Plates MC 8521 and 8503 show little if any more than MC5592 taken May 30, 1914, with 10m exp.

25

26

27

28

Tuesday, October 19, 1915

093656 W Ursae Majoris

Estimates of intervals between bright comparison stars.

Adopted Magnitudes checked with red ✓

BK9a: 93

Mean	Series Magn.	No.		aI 3596 dir.	rev.	aI 10917	rev.		AC 14828	Resid. from Mean aI	I 16652 p.c.		Scale aI	Curve	Magn.	
7.36 06,05	✓ 7.42	1	α										0.00	7.31	7.31	α
✓ 7.70 . a	.	2	β	3	5	3	4	38 1110	3	1	+ off edge		0.38	7.32	7.70	β
✓ 7.94 . a	.	4	γ	2	3	2	2	22 0100	3	1	(X-H) 4	2	0.60	7.34	7.94	γ
✓ 7.88 . a	.		δ	0	2	0	0	05 0200	2	2	0	0	0.55	7.33	7.88	δ
✓ 8.12 . a	.		ε	1	4	1	3	22 1211	E.p.		2	0	0.77	7.35	8.12	ε
7.91 05 05	✓ 7.86	3= 1= Ref. Seq.	ζ	2	2	1	1	15 0011	2	1	1	1	0.62	7.34	7.96	ζ
✓ 8.26 . a	.	5	η	3	4	2	2	28 0111	1	2	2	1	0.90	7.36	8.26	η
✓ 8.57 . a	.	7	θ	2	4	3	3	30 1100	3	0	1	2	1.20	7.37	8.57	θ
8.57 02 03	✓ 8.55	6	b	1	1	1	0	02 1110	0	0	0	0	1.22	7.37	8.59	b
8.93 01,01	✓ 8.94	8= 2= Ref. Seq.	b′	4	3	~~3~~ 4	2	32 1011	5	2	m.s.		1.54	7.38	8.92	b′
✓ 9.16 R a	[8.93]	9	e′	1	2	3	4	25 1012	1	1			1.79	7.37	9.16	e′
9.44 10 09	✓ 9.54	10	e	2	2	1	3	20 0011	2	D			1.99	7.36	9.35	e
9.73 05 05	✓ 9.68		d	4	-5	5	5	48 1000	~~4~~ 3	2			2.47	7.31	9.78	d
[illegible] 16 09	✓ 9.92		f	3	4	4	4	38 1000	4	0			2.85	7.26	10.11	f
[illegible]	✓ 10.48		g	m.s.	-	3	2	25 . . 10	3	1			3.10	7.21	10.31	g

13–16
54
±0.054

The variable does not become much fainter than b′, probably never as faint as b′. Magnitudes derived from estimates agree well with Series magnitudes for these brighter stars. The magnitude for e′ was derived from Measures in 1903 for Mrs. Fleming's sequence, reduced to standard scale by means of a curve. As it was derived from ~~an~~ I plates, rather near edge, it may best be disregarded. Adopt Series magnitudes when they exist, otherwise relative magn. from aI plates

---

Wednesday Oct. 20, 1915

New Variable near +54° 2755 $22^h 17^m 28^s$ +54° 46′.2

$22^h 17^m.5$ +54° 49′.6 (1855)

See letter from E. E. Barnard Oct. 18, 1915

This star comes out bright on print from   taken   1893, but is not seen on print from   taken

Not seen on the following AC plates, most of which show stars considerably fainter (0.6 magn. or more) than the object photographed in 1893. They are not sufficiently good to show fluctuations in light unless very near the maximum of 1893. Miss Walker looks up on I plates.

AC plates do not show faint enough stars for this variable. No list necessary

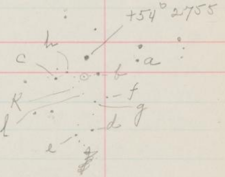
Thursday Oct. 21, 1915

Variable near ~~+54~~° 2755 Cont.

Comp. Stars on I 29513. See also I 9727

I plates show change. Compared with sequence to which arbitrary magnitudes are assigned.

a 11.0	f 12.~~9~~ 5
b 11.3	g 13.~~4~~ 0
c 11.5	h ~~14.0~~ 13.5
d 12.0	K 14.~~6~~ 2
e 12.~~5~~ 4	l ~~15.0~~ 14.5



I 34774	~~13.3~~ 12.9
27590	~~13.3~~ 12.9? at lim. of visibility
29513	n.s. <14.5
16315	n.s. <14.2
36992	11.9
27823	142
29347	n.s. <14.5
6886	n.s. <13.5:
9727	11.5
13332	13.5? at lim. of vis.
9716	too poor

Paper Print	11.5	Oct. 11, 1893
Paper Print	7 16th magn.?	Aug 22, 1909

Friday, December 3, 1915

11 ~~25~~ 30 U Cephei ~~Mc~~ Estimates of brightness of comparison stars γ and δ, corresponding to "f" and "h" in Professor King's sequence. Marked on MC 3717

Magnitudes derived from Series Plates MC pr Book 19, 44 used for reduction.

MC 3717 p.c.

7.79 e 4 γ x 8.19 816 03 06 02
γ 0 d′ 8.10 8.10
8.18
γ 3 d 8.48 8.16

9.16 h′ 1 δ 9.26 9.48 22, 21
~~δ 5 h~~ 9.69
δ 2 m′ 9.89

AC 5497

7.79 e 4 γ. 8.19 8.10 09, 10
γ 1 d′ 8.10 8.00

9.08 K 2 δ 9.18 9.21 03, 03
δ 2 h 9.44 9.24

AC 6000

7.79 e 5 γ 8.29 8.23 06, 13, 05
γ 0 d′ 8.10 8.10
γ 2 d 8.48 8.28

9.08 K 3 δ 9.38 9.44 06, 00, 05
δ 0 h 9.44 9.44
δ 4 m′ 9.89 9.49

~~Thurs~~ Friday, Dec. 3, 1915

U Cephei
Comparison Stars Cont

AC 7241

8.10	d′ 1 γ	8.20	8.19	01, 01
	γ 3 d 8.48	8.18		
9.08	k 3 δ	9.~~2~~³8	9.31	07, 07
	δ 2 L 9.44	9.24		

11 45

Saturday, August 5, 1916.

10 20 Region 4m Following ε Ophiuchi.

Examination of Charts published by Tucker of Lick and Lowell at Flagstaff. See
Publications Astr. Soc. of Pacific, 27, 227
Popular Astronomy 13, 7.
Enlargement to scale of 20″ to a mm.
from B28115, Lwp. Taken
Print from D 11501

Count of stars not on enlargement

Lick and Flagstaff ~~Both~~	卌 卌 卌 卌 卌 卌 卌 ||	37 Common to Lick and Flagstaff
Lick only	卌 |||	8 Lick only
Flagstaff only	卌 卌 卌	15 Flagstaff only
		60 Whole number omitted

Six seen on enlargement and Flagstaff chart, but not on Lick chart

Three seen on enlargement and Lick, but not Flagstaff

One seen on enlargement, but neither at Lick nor at Flagstaff.

Seven stars noticeably bright on enlargement, are probably very white.

Two stars noticeably faint are probably red

Count of Stars on enlargement

卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌 卌
卌 卌 卌

Approximately 115 stars on chart

Number seen at Lick, 161
" " " Flagstaff 173

11.30 Whole Number Lick + Flagstaff, 188