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Friday, April 25, 1919

B2916 lmg

~~10~~ 17 Ao

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1 +62°1637 18 36.3 +62 2x 5.7 4gm 37917

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Saturday, April 26, 1919

D 27 828 cont. from 70, 82

108	9	Ao
109	.3	Ks⁻
110	4	Ao

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✓	108	+33°3044	48 m J37871
✓	109	+33°3048	48 " "
✓	110	+30 3133	48 " "

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April 26, 1919

B 1607

1	4	A0	4128,31 well marked.
2	3	B9	
3	4	F5	

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c	1	+26° 3421	18	54.1	+26 46	7.5	101 on 1378 C8
	2	+27 3228					118 " "
	3						

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April 26, 1919

d 3 8 5 -25

1 6 a3

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- 1 +13 38 26 18 50.5 +13 11 6.8 8m 37202

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Thursday May 8, 1919

36902 Chart

1 4 F5

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1 +14° 37 44 18 54.0 +1 4 29 8.2 9 2 m 37282

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May 5, 1919
B 46 & 56 cmb from 11 9, 30

1843 Ko

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184. -41° 13059

7m B3736 0

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Thursday May 15, 1919

I 33560 plvrt

1	4	75
2	3	78

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1	+14°	3911	19	19.2	+14	19	8.0	✓ Card made out
2	+14°	3909	19	19.1	+14	10	8.0	✓ " " "

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Thursday, May 15, 1919

I 31064

1 3 K5

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1 +4°	4994	2/3	11.5	+ 4	37	8.5

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May 15, 1919

RR Lyrae

I 36758
Very ill-defined. Looks like two stars.

I 34230
Class A. K line not seen
Star bright

I 37348 Star faint
K line well developed

Appears certainly appears to change.
confirming Shapley's observation.

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Tuesday, May 20, 1919

B 45435

1 4 A5

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✓ 1 −16°57′78″19 1.6 _16 √2 &6 333 m B3ξ3ξ1

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May 20, 1919

38808 emt. from 91, 170

27	5−	a0
28	5−	F5−
29	4	K0
30	3	B9
31	3	K0
32	5−	a0
33	F6	B3
34	1	K2
35	2	F5−
36	2	F0

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~	27	+11	3842				200 m J38506
~	28	+11	3840				199 " "
~	29	+13	3888				27 m J37202
~	30	+13	3951 3959				56 " "
~	31	+19	~~4004~~				171 " " ~~25 m J37829~~
~	32	+15	3866				25 m J37829
							226 m J37235
~	34	+15⁻	3868	19	28.0	+15⁻10	7.5⁻
~	35	+15	3863	19	27.4	+15⁻4	8.1
~	36	+15⁻	3811	19	19.4	+15⁻16	8.0

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Wed. May 21, 1919.

D 38561 cmth from 137, 40

91 6 Qs
92 4 Ro

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✓ 91	~~+38 3447~~ +38 3680	~~19 37.0~~ 19 32.2	~~+28 59~~ +38 16	~~7.2~~ 6.8	2.9 N on 32885
92	+38 3725				221 " "

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1919phae.proj.2222C

May 21, 919

D 37 230 Christ

1 3 Kv

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1919phae.proj.22220

/ 1 +44 3293 19 52.1 +44 20 8.7 132m B3789

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1919phae.proj.22220

May 21, 1919

A215-97

1	5	F5
2	3	K5
3	4	K0

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1919phae.proj.2222c

✓	1	+28'3275	19	11.5	+28	32	8.2
✓	2	+28 3187	19	0.2	+28	36	7.7
✓	3	+29 3473	19	0.2	+29	7	8.0

25 m J 38581

{ missing stars looked up. Too faint long.

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1919phae.proj.22220

May 21, 1919

D 34696

1 4 A3

D 30942

1 3 A3

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1919phae.proj.22222C

✓ 1 +55° 2190 19 18.8 +55 29 8.0 14? m 38518

✓ 1 +10° 3808 19 3.4 +10 40 8.5 17 m Bixi71

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1919phae.proj.22220

Friday June 6, 1919
Spectra by Stephen.

I 1228 Hδ is a strong br. line = 3 times cont.
Hγ barely bright.
Hβ may be barely br.

4227 dark, but not as dark as
Hδ is bright.
Breaks very bright. edged.

Sp. cont. from Hβ to violet

1269 Hγ = 1.7 cont. sp.
Hδ ~~very~~ broad

11553 Breaks H γ. ? decidedly stronger
~~4686~~ 4954

11945 Hζ br. = 1.5 cont.
Sp. very flt. except for breaks
+ lines from Hδ to Hζ

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1919phae.proj.22222c

June 6, 1919

I, 2013 No certain K. lines
Slight darkening at Hδ?

I, 2145 All a blur, bright portion from
~~Hδ~~ to ~~Hε~~

I, 3812 Focus poor, all lines double

13845 Break at ~~4168~~ 4954 the faintest.
Sp. same as I, 1764

23697 Break at ~~4168~~ 4954 strongest.
Sp. very ft. except between Hδ & Hε

32597 Break ~~4168~~ 4954 strongest
Sp. nearly like preceding.

33161 Very narrow poor def.
Hδ may be bright.

36166 Hδ = 2 cmt.
line 4202 = ½ Hδ.

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1919phae.prof.22220

June 6, 1919

ζ Cephei

38539 Hδ bl. ochre portion fl.
4554 5168 slightest but not so marked as in former cases

37254 Hδ bright. Hγ, Hβ n. S.

37291 H= me, slightly stronger than cont.
Hδ = 2 cont.
Breaks 5168 & 4554 =

38540 l Hδ = 3 cont.
Br. line nearly half way from Hγ to Hδ.

38562 l Hγ = 2.5 cont
Sood Hδ = 6 "
Br. line of gr. ½ " than Hδ pleas
Light cont.

36199 Hγ = 10 Hδ = 11 4202 = 13

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June 6, 1919

T Cephei

(mv 4202 bright.

At minimum the spectrum is like ζ and ζ Oph. Lines are bright Hδ and the light is between Hδ and Hε. The portions B for ζ are very faint except for the H & K lines.

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Saturday, June 7, 1919

χ Cygni

Max. 1890.

I 2119 (-27) Sp. rather faint. Hδ bright & sharp.

I 1326 Hβ probably br.
K bnd sharper than H
K = 1.7H.

I 1326 Cont. Sp. faint
Br. bnds sharp
Focus poor in regn of Hβ.

I 1668 Cont. still faint
Hγ faint both respect to Hδ

I 1819 All very br. except Hδ which stands forth as a very bright line

I 1978 Sp. barely seen, but Hδ is still bright

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1919phae.proj.22222c

June 7, 1919

Ment. 1881

I 3800 (-44)

Sp. very K. except for bright lines
for refer to 4307 Hδ and 4202
about bright but very faint
about equal.

I 3998 Lines very poor. (-6)
Hδ strongly bright.
Hε may be barely seen as abs. line

I 4066 (-6)

I 4090 +3
Hε barely seen Hδ strong.

4227 very strong.

See

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June 7, ~~19~~ 1919

χ Cygni

Harv. 1891 mag. 5.2 J.D. 1964 cent.

I ~~4608~~
4480

I 4608

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June 7, 1919

χ Cygni. Mart. 1893. 12774 4.6

Sp. from 25 days before to 74 after.

I9657 −25 long
Hβ barely seen Hδ very long.
Sp. much brighter than on I.12.19
which was 47 days before 1896
Mart. See p. 36

I9896 Mart long
Hδ 4227 decidedly strongest line

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1919phae.proj.22222C

June 7, 1919

χ Cygni

Marf. 1894 56.5 4.6.

Marf. 6+29 4.3

I 32375 −13 Cont. very shrp.

Marf. 7648 5.1 (+25)

34630. 45 very bright.

Cont. portion faint

~~35568~~ Marf +0 45 1.2

I 35360 +54

Much like I 34630 only cont. portions are faint.

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June 7, 1919

χ Cygni

Mean 8446 4.5

I 36(0) (+38) H γ quite strong, even as
I 36(4) +40 long as mag.

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June 7, 1919

γ Cygni

Merk. 1890
C 2774 (+7)
C 2783 (+12)

Numerous bright lines not due to hydrogen and seen.

One is of the greatest & that Hg.
One is 4202
One is of Sirius & that Hγ

This is the strongest.

Compare with o Ceti.

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June 7, 1919

R Hydrae

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Monday, June 9, 1919

R Cyg

I 11229 Hγ bright. Sp. bright between Hβ and Hγ and little seen of either H & H.

I 33835 Sp. Hγ & all between Hβ and Hγ about 4570
One decided dark line which is probably

I 32398 Same as 33835 only a better specimen

I 33465 Nearly same as the two preceding.
Bright

I 22286
Br. band 0.4 from Hβ to Hγ.

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June 9, 1919

R Cygni I 2396

Not much from I 2286, taken 33 days before
Dark bands to red of intermediate
bright band between Hβ and Hγ
is not more conspicuous

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Tuesday, June 10, 1919

I 1010 Br. 4202 barely seen, not more than 1/10 of H5.

I 4961 long trig. about as I 1010

B 3373 long.
H γ, H ε, H ζ crossed by dark line of reversal
Perhaps not well as focus is not very good

I 1074 H5 very bright 4202 not conspicuous

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June 10, 1919

R Hydrae

I32986 Dense and very short dispersion

I32934 Hδ = 1.5 cmt.

I34024 almost exactly like I32981

I32915 Hγ very fl. = 1.1 cmt.
Focus poor in violet.

I33089 fair if may short disp.
4227 evidently familiar than above

I33370 long narrow h. line between Hδ & Hε
about 1/20 of Hγ

I14858 good of short dispersion may

B44467 Hε + Hη also bright but too near
edge to determine intensities

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June 10, 1919

R Hydrae.

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Thursday, June 12, 1919

MC 5561 for star 297 on P 37891

✓ 16 Does Hβ highest? Two bright lines or specks between Hβ and Hγ. Hδ surely seen (between Hγ and Hδ)

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June 12, 1919

B 30681 Peculiar objects in plate

1 Ro Good example.

2 Md. Hγ & Hδ bright.
Hγ = 10 Hδ 1. Spectrum very bright
from HB to Hγ and faint from
Hγ to violet.

3 Class O?
very faint

4 Mb. very faint.

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Thursday, June 26, 1919

I 38795 cmt. from 90, 66

	157	3	Q2
	158	3	Q0
	159	7	Q0
W.	160	2	B9
	161	3	K0
	162	3	F0
	163	5	F2
	164	1	K5

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✓	157	+60°2125						83 cm 137333
✓	158	+61°2012						84 " "
✓	159	+61°2028						85 " "
✓	160	+61°2032						87 " "
✓	1610	+61°2031						86 " "
✓	162	+61°2039						88 " "
✓	163	+60°2139						90 " "
✓	164	+63 1686	20	58	+63	7	7.8	—

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June 26, 1919

D 37874 cont. from 49, 24

284

285 1 G0

288 1 K5

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285	20 38.2	+41 39	+41° 3855	8.0	see also 16802
286	20 33.1	+41 34	+41 3836	7.8	

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June 26, 1919

D 3847 + cmth. from 128, 96

66	4	B9
67	6	A0
68	3	B8
69	1	A0
70	1	K0

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66	+49°3291							62 mod 37874
67	+58°3067							45 " "
68	+49°3258							42 " "
69	+46°2861							28 " "
70	+49°3222	20	8.2	+49	49	8.0		

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Friday June 27, 1919

D378'78 cmt. June 10, 12

163 3 as

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163 +38° 4301

15m 38942

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June 27, 1919

D 31134 chute

1	4	F8
2	4	F12
3	2	Mb

D 36161 chute

1	3	Ab
2	2	K5p Dark bands mean 4385
3	3	F12

B 41895 chute

1	2½	K2

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~	1	+34° 4222	20	53.0	+34	57	8.8	74 m 37912
✓	2	+38 4254						139 m 38508
	3	+36 4355	20	53.6	+36	11	8.0	

✓	1	+34° 3880	20	2.0	+34	19	8.3	137 m 37820
✓	2	+35 3920	19	56.6	+35	14	8.0	
✓	3	+39 4020	19	58.3	+39	52	8.0	

~	1	−25° 14871	20	26.8	−25	25	9.1	109 m B40617

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June 27, 1919

I, 19399

1 4 Hs

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1 +13°4531 20 42.8 +13 26 7.3 17m 137938

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Sunday June 30, 1919

19682 Imp.

1	7	B5-
2	4	B9
3	3	B9
4	4	A0
5	3	B8
6	3	B5-
7	3	G0

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1	+47° 3348	19m 37878
2	+46 3261	7 " "
3	+45 3326	9 " "
4	+44 3754	10 " "
5	+45 3384	33 " "
6	+45 3427	17 " "
7	+45 3429	18 " "

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Wed. July 2, 1919

H 1961

✓ +61°2134 Espris N.

Looking like Class N.
but it is Mc
Hγ seem to Hε but very ft. from
Hβ & Hε. Very strong in red light.

I 1962

+49°3673

✓

Per. like +49°53
all red lights

✓ (3) +49°3667
Mc.

✓ I 1956
+17°4607
Mc

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July 2, 1919.

I 33688

1	4	K_2	Peculiar dark lines
2	5	K_0	
3	2	K_0	Unfocl. like 1 & 2.
4	2	F_0	
5	3	F_0	

I 2162 Chart

1	3	A_2	Indistinct at end of Chart

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✓	1	+40°4564	21	27.6	+40	12	7.5	15m J37913
✓		+41°4224					8.2	25m "
✓		+41 4225					8.5	Comp. to 25 "
✓								26 m J37813
								35 " "

✓	1	+46°3463	21	45.5	+46 30	Fk		11.6m J37913

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July 2, 1919

38810 cont. from 92, 134

134.5	G5
135 5	A0
136 3	F0

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134	+49°	35-79	6m 37946
135	+49	3632	178m 37351
136	+50	3457	177 " "

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Thursday July 3, 1919

B.0346. Plate

1 N 1 2 As

I. 3491

1 2 F18

I 3692 2

1 2 F18
2 2 F12

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1919phae.proj.2222C

d 1 +2°4433 21 43.8 + 2 27 8.8 29 m B1491-

- 1 +53°2910 18m 19317

1 +70° 1163 11 m 13857 3
2 +69 1193 24 " "

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1919phae.proj.2222C

July 3, 1919

136289

1 3 Ko

136331

1 3 F5

B45132

1 2 A5

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1919phae.proj.2222C

C 1 +14°38 21 0.5 +14 18 8.8 .05m 38129

~1 +87°201 22 7.0 +87 6 F.2 1m 37287

1 -11 5763 69 m B38401

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1919phae.proj.2222C

July 3, 1919
B43491

1 5 B5

B13512 chart

1 2 A3

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1919phae.proj.2222C

-l -83°716 11m B6472

l +8 4707 25m B10143

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1919phae.proj.22C

Tuesday. July 8, 1919

D 37216

1	4	G5
2	2	F5
3	8	B8 Hp weaker

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1919phae.proj.2222C

1	+21°4696	167 m 38819
2	+21 4697	170 " "
3	+21 4695	166 " "

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1919phae.proj.2222C

Wednesday July 9, 1919

I 34819 Clust

1 K2p very ft. from H to violet. Strong lines about 4380.

c	2	4	A5	226 m	I 37317	
v	3	1	K5	221 "	"	Br. lines suspected
/	4	4	K0	265 "	"	
✓	5	3	F8	54 m	I 38803	
✓	6	3	F	50 "	"	
v	7	2	F5	55 "	"	
/	8	3	B	56 "	"	Perhaps B2 or 3
✓	9	3	F5	73 "	"	
	10	2	B8	71 "	"	

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1919phae.proj.2222C

1 +57° 2568 22 30.9 +57 41 var.

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1919phae.proj.222C

Thursday, July 10, 1919

I 38070 cont. from 86, 142

134 9 B5 Dense

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134 +41 4469

55 m 13848 40

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Friday, July 4, 1919

D 38139 cont. from 59, 134

53	8	a0	
54	3	a2	
55	5	a2	
56	2	g0	
57	7	a0	4077.9 and 4128.1, 4131.1 strong

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53	+74°	10 22	23	23.3	+74	26	7.0	no. 61 on I 38133
54	+73°	10 37	23	23.0	+73	30	8.0	60 " "
55	+72°	11 09	23	28.0	+72	8	7.5	58 " "
56	+76°	9H 2	23	51.5	+76	29	8.6	80 " "
57	+72°	11 35	23	54.3	+72	H8	6.5	53 " I 38068

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July 11, 1919

B 2979

1	3	a_2
2	7	B_5
3	7	a_3

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1	+60°	2482	23	1.1	+60	3	7.5	170	ow I	38078
2	+60°	2521	23	13.7	+60	21	7.0	7	"	"
3	+60°	2540	23	19.8	+60	17	7.0	3	"	"

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1919phae.proj.2222C

July 11, 1919

δ 36878 shut

1	3	F8
2	6	G5

δ 37245 shut

1	1	K0	
2	2	G5	
3	2	K5	
4	2	K0	40 m δ 38130
5	3	K4	92 " "

δ 13536 shut

1	3	B3
2	3	F8

δ 23138 shut

1	3	F8
2	3	A3
3	2	A3
4	2	F0
5	3	A

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1	+61°2258	13 m J38902
2	+62 2032	16 " "
1	+16 4545	17 m J38617
2	+13 5020	70 m J38101
3	+12 4917	76 " "
1	+64°1698	75 m J38202
2	+62 2100	65 " "
1	+24 4740	117 m J38617
2	+26 4627	Conf. of +26°4638
3	+25 4922	60 m J38607
4	+27 4501	36 " "
5	+25 4538	43 " " FG 20

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July 14, 9, 19
λ 12216 shut

1. 2 K0

λ 37242 shut

1	3	F5
2	B2	(4)
3	3	ma
4	2	ma
5	2	ma
6	2	mb
7	5	B0 Perhaps Oe5
8		
9		
10		
8	3	F2
9	4	K0
10		

Print

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1 +79°781 9m J38964

1 +53°3230 189m J37241
2 +56 3206 133 " "

3	+54°	3035	23	37.5	+54	41	7.7	
4	+55°	3028	23	42.5	+55	51	8.8	
5	+55°	3047	23	48.9	+55	55	8.7	
6	+54°	3091	23	52.8	+54	54	9.0	
7	+56°	3122	23	50.6	+56	17	8.5	7t. star worth pres. not in cat. sup.

Ident on cards a.mc
Ident in Book J. C. M.

8 +52°3491 122m J38198
9 +51 3769 268 " J37241

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1919phae.proj.2222C

Saturday, July 12, 1919

D 23698 shut

1	4	Ao
2	2	K5
3	2	Go
4	1	K5
5	2	Ma
6	2	G

B 1994 2 shut

1	2	G5

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~	1	+67° 1504						from B37609
.	2	+68 1358						5 " "
~	3	+67 1508						6 " "
	4	+68 1365	23	11.8	+68 51	7.8		
~	5	+66° 1596						9 " "
~	6	+66 1595						8 " "
	1	-47° 14529						14 from B39667

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July 12, 1919

B42496 R.

1 6 As

B39487 R.

1 3 Fs
2 2 F8

I36154 Plant

1 3 Gs

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1919phae.proj.2222C

✓ 1 −84°639 2m B15773

✓ 1 −18°6387 11m B24027
✓ 2 −18 6416 47 "

✓ 1 +77 891 2m J38964

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Monday, July 14, 1919

52 λ 3655.80 Re-regan
Composite K line outlined for
Jarvit for Class Fr. & Franklin
Spedrith probably As.

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Tuesday, July 15, 1919

δ 33 41.8

1	6	K_5
2	8	K_2

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1919phae.proj.2222C

1 +62° 2174[3] 18ᵐ.m 37257

2 +62° 2174 10 1 " "

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1919phae.proj.22220

Wed. July 15, 1919

D 38565

Reversa

~ 30 Comparitis F8 and L3

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July 15, 1919
D 37904

1 8 Ko Compositæ
As

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1 +45°4321 141 m B3F140

Also see B1920 where the spectrum is clearly Composite.

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1919phae.proj.2222C

Thursday, July 16, 1919

D 37241 Re-exam

200 Composite. F5
A3

Also confirmed on D 32464 slant where the region from Hβ to 7Hδ is a G slant, and the portion of shorter wave length is A3.

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1919phae.proj.2222C

July 16, 1919

D3859 8 Re-run

151 Comp. Red end = G
Violet = a

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1919phae.proj.2222C

July 17, 1919
J 35763 short

1	4	F0		
2	3	B8	4126 seen	27 m J37937
3	3	K2	28 m J37937	
4	4	K2	72 " "	

J 32383 short

1	3	F0
2	2	A
3	3	A0
4	3	A
5	3	F8
6	3	F5
7	3	F0
8	2	F5
9	2	F2

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1919phae.proj.2222c

✓	1	+5° 3276	20 on J37241

✓	1	+35 5047	17 on J38615
	2	+35 5020	21 " J38574
	3	+36 5114	8 " J38615
	4	+37 4873	12 on J38802
	5	+39 5131	8 " "
	6	+40 5121	6 " "
	7	+39 5140	5 " "
	8	+39 5144	4 " "

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1919phae.proj.2222C

July 17, 1919

B.D. 78 87

1 4 Ko Holding.

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1919phae.proj.2222c

1 - 57 °4471

213 m B3879

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1919phae.proj.2222C

July 17, 1919
B 10158 Flint

1	3	G5
2	3	Q3
3	3	G0
4	1	K0
5	2	F2
6	2	G5

D 34923 Flint.

1	Ma

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1919phae.proj.22220

1	+4°	4998	14m B14188
2	+3	4860	102m 38163
3	+3	4862	103 " "
4			
5	+3	4872	9m 37350
6	-0	4558	45 " "

1	+13	4857	24m 38114

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1919phae.proj.2222C

Friday, July 18, 1919

D 2 1 1 9 2

1 3 ma
2 1 mb

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1919phae.proj.2222C

Saturday, July 19, 1919

λ 32375

1 6 g5 a3

2 3 a

55 - m λ 37885

54 " "

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1919phae.proj.2222C

Friday, July 25, 1919.

Search for spectrum of +7°2692
See letter of Schlesinger, June 3, 1919.

I 36039 fc— K5?
B 11364 For poor.
B 11373 n-s.
B 20729 K5 Poor. Wide abs. at 4227
B 1548 all lines bet. Hδ + Hε
B 195-89 n.s.

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Sunday, Aug. 11, 1919.

B19232 shut.

1 #3 F/2

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1919phae.proj.2222C

- 1 -3°2908 10 15.1 -3 10 9.0 77 m B19393

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1919phae.proj.2222C

Monday Sept. 8, 1919

D 3 5 1 5 1 Clusta

1 3 Go

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1919phae.proj.2222C

1 +38° 2377

3m 1382 86

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1919phae.proj.2222C

Friday Sept. 12, 1919

I 37347

17 Bz Lines appear to be narrow

1919phae.proj.2222C

1 +40°3902 4 cm 1373x9

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1919phae.proj.2222C

Thursday, Sept. 18, 1919

B38063
Re-exam. of No. 48

48 $\frac{F_2}{a_2}$ Composites

MC 6041

134 $\frac{F_2}{a_3}$ Composite

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1919phae.proj.2222C

48 18 45.8 -17 25 (new) -17° 5350

134 +44 2690 17 14.6 +44 17 8.7

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1919phae.proj.2222C

Thursday, Sept. 25, 1919.

H plates

1636 S Cephei.

1637 No other star on plate beyond K

1641 Br. line in Cygnus

No star on plate beyond K

1642 ϑ Cass.
2 K stars.

1643 φ Persei
only star

1644 +43°53
Nd

+44° 06
0 14.0 + 44 4 9.0
Nb or Nc

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1919phae.proj.2222C

Tuesday, October 21, 1919

J, 19677

1 7 95 Lunia 4383 = 4227

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1919phae.proj.22220

1 +38°2285

37m 138 [illegible]

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1919phae.proj.2222C

Saturday, Oct. 25, 1919

McC 16271 $22^h +50^\circ$

1	4	Ko Ao	Composite.
2	2	Mb	
3	2	Ma	
4	1	Ma	
5	2	Mb	

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1919phae.proj.22220

✓	1	+49°	3648	21	46.8	+49	7.4	9.0	✓ ✓
✓	2	+49°	3667	21	49.5	+49	28.8	8.8	✓
✓	3	+50°	3595	22	4.7	+50	8.9	8.7	✓
✓	4	+47°	3760	22	11.4	+47	12.0	9.0	✓
✓	5	+50°	3371	22	2.0	+50	15.5	9.0	✓

Checked by G. R. B. 1, 3, 4, 5

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1919phae.proj.2222C

October 25, 1919

MC 16254 $20^h + 30°$

1	3	Ma
2	3	B8
3	1	Ma
4	2	Ma

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1919phae.proj.22220

Dist

1	+27° 3631	20	3.7	+27	58	8.2	26 m	3879 x
2	+28 3652	20	5.4	+28	9	9.0	31 "	"
3	+27° 3642	20	5.6	+27	1	8.7 ✓		
4	+31° 3879	19	54.2	+31	27	8.1 ✓		

3 & 4 checked by G.R.B.

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1919phae.proj.2222C

Wednesday Oct. 29, 1919

MC 16256 $23^h +60°$

1	2	B
2	1	B
3	3	B8
4	2	B

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1919phae.proj.22220

✓	1	+58°	2511	22	50.2	+58	7.6	8.0	✓ ✓
✓	2	+58°	2521	22	54.2	+58	51.3	8.5	✓ ✓
✓	3	+57°	2668	22	55.4	+57	29.2	8.0	✓
		+59°	2673	23	7.7	+59	1.2	8.5	
✓	4	~~+58°~~	~~2560~~	~~23~~	~~8.5~~	~~+58~~	~~53.8~~	Var.	✓

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1919phae.proj.222C

Oct. 29, 1919

MC 16265

23h +60°

1	2	Nb	
2	4	K2	
3	1	Nb	
4	1	Ma	
5	2	Mc	Van?
6	1	B	
7	3	B	
8	2	Ma	

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1919phae.proj.2222c

1	+60°	2434	22	38.7	+60	~~46.1~~ 58	~~7.5~~ 8.9	✓
2	+58°	2534	23	56.7	+58	47.8	8.0	✓
3	+60°	2469	22	33.6	+60	47.3	9.0	✓
4	+56	2446	23	0.2	+56	6	7.1	✓
5	+58°	2360	23	3.5	+58	53.8	var.	
6	+58°	2386	23	~~8.0~~ 7.7	+58	35.5	~~9.4~~ 8.4	✓
7	+57°	2724	23	14.1	+57	28.0	8.7	✓
8	+58°	2396	23	21.4	+58	32.1	7.5	✓

Checked by S.R.B. all but 1, 5

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1919phae.proj.2222C

October 29, 1919

Mc 16266 0 +60°

1	3	A	Two sp. superposed
2	4	B	Σ
3	4	B0	
4	A2	N	
5	2	Mb	
6	4	B0	
7	3	A0	Another plate sup. N. also.
8	3	B5	
9	4	B2	
10	3	B2	
11	4	B0	Bright lines?
12	3	B0	Bright lines?
13	4	B0	
14	5	B8	
15	4	B9	
16	5	B9	
17	1	B	

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1919phae..proj..22222C

1	+60°	2625	23 42.5	+60	4.0	8.7	✓ ✓
2	+61°	2585	23 56.6	+61	~~25.5~~ 24.9	8.5	✓ ✓
3	+60°	2662	23 56.5	+60	17.6	8.5	✓ ✓
4	+59°	2810	23 53.9	+59	33.1	7.8	✓
5	+59°	2806	23 53.0	+59	32.9	9.0	✓ ✓
6	+58°	2676	23 53.5	+58	54.0	7.8	✓ ✓
7	+56°	1	0 0.2	+56	34.9	8.5	✓
8	+59°	36	0 12.7	+59	28.6	8.9	✓
9	+60	25	0 10.5	+60	55.4	7.9	✓
10	+61°	38	0 12.2	+61	15.5	8.0	✓
11	+60°	2636	23 46.7	+60	2.6	7.0	✓ ✓
12	+60°	2637	23 47.0	+60	47.8	7.3	✓ ✓
13	+61°	2562	23 47.5	+61	2.1	6.8	✓ ✓
14	+57°	18	0 3.0	+57	36.2	8.9	✓
15	+57	19	0 3.1	+57	36.0	8.9	✓
16	+57	22	0 3.2	+57	58.1	8.6	✓
17	+59°	2801	23 51.9	+59	13.8	9.5	✓ ✓

Cards made out.

Check mark of cards at night, checked by S.A.B.

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1919phae.proj.2222C

October 29, 1919

Me 1627 2° +60°

1	2	Ma		
2	1	B		
3	3	B8		
4	3	G_0 p	Comp.?	K line fr. a star of Class G may be superposed
5	3	B_0		
6	3	B2		
7	1	B		
8	4	Bp	Comp? From Hβ & Hγ resembles Class G.	
9	1	Ma		
10	1	B		

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1919phae.proj.22220

								H.D.
1	+60°	299	1	30.1	+60	9.7	8.6	..
2	+58°	343	1	49.1	+58	13.9	9.4	..
3	+56°	382	1	44.2	+56	49.1	8.8	Q_3
4	+57°	424	1	45.1	+57	34.1	8.4	9_0
5	+58°	384	1	39.4	+58	56.0	8.5	B_3
6	+58°	383	1	39.3	+58	5.4	8.7	B_8
7	+57°	469	1	54.1	+57	17.2	9.0	..
8	+58°	396	2	2.7	+58	51.2	8.2	B_3
9	+56°	583	2	12.2	+56	26.3	8.6	Ma
10	+60°	447	2	1.3	+60	1.2	8.6	9_5

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1919phae.proj..2222C

October 29, 1919

Mc 16267 l_{2} +60°

1	3	K5
2	2	Me
3	3	B
4	4	A7 f 4077 0+12+.3) Plus
5	2	F2 a ~~Comp~~ Perhaps composite
6	1	B
7	4	B
8	2	F5
9	1	Ma

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1919phae.proj.22220

1	D.M.	+58°	89	0	32.2	+58	42.3	7.3
2	D.M.	+58°	127	0	43.8	+58	56.2	8.8
3	D.M.	+61°	187	0	49.5	+61	8.7	8.9
	~~D.M.~~	~~+59°~~	~~163~~	~~0~~	~~51.8~~	~~+59~~	~~39.6~~	~~8.7~~
4	D.M.	+59°	163	0	51.8	+59	39.6	8.7
5	D.M.	+59°	185	0	58.5	+59	8.6	8.9
6	D.M.	+59°	191	1	0.2	+59	51.3	8.9
7	D.M.	+61°	223	1	3.4	+61	7.4	8.5
8	D.M.	+56°	246	1	10.4	+56	34.9	8.9
9	D.M.	+56°	269	1	16.2	+56	52.7	8.6

Cards made out for 3, 6, 7, 9.

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1919phae.proj.2222C

October 29, 1919

MC 16270 21h 43m.0

1	1	Ma
2	2	Mb
3	1	Ma
4	3	Ma

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1919phae.proj.22226

1	+37°	4101	20	49.0	+37	44.2	8.9	✓ ✓
2	+38°	4323	20	37.2	+38	0.1	8.6	✓
3	+39°	4437	21	3.9	+39	45.6	9.1	✓
4	+39°	4440	21	1.3	+39	44.0	8.3	✓

Cards made out.
Checked by G.R.B.

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1919phae.proj.2222C

Tuesday, Nov. 11, 1919

X 13129 Norwalk

	Int			Rejected Foreknight	Rejected	Rejected
c w b	2	6216	6224	6214	6211	6199 hazy
" " d	3	6245	6258	45	35	6234
" b diff.	3	6268	6265	54	59	
" "		6277	75	69	69	61
s. "		6291	92	6288	77	
c w d	2	6311	6304	6313	6296	88
c. b. edge	2	6348	6342	41	35	26
s. " "		6361	57	52	50	43
c d "		6368	77	66 71	72	62
s " "		6402	6401	93	91	82
g d. edge		6485	81	6469	72	64
g " "		6497	91	6490	85	75
g " " s b. edge		6514	6570	6498 6500	94	87
c. b. edge		6526		6508	05	94
s " "		6535		21	15	05
c dach	HB	6555		41	38	30
g b. edge		6583		86	73	53
g " "		6592		95	82	65
s " "		6604			89	81
c dh		6612		6593	92	86
c "	1	6677			cl 6751	6751
g b. b.		6788		6776	6764	6764
g dh e		6838		6821	6810	6810
c br.		6848		6838		22

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1919phae.proj.22220

	X13129	very dark day Could not be sure of setting after the first measure.	
C in d	6883	6871	61
2 b.	6925	6915	6897
2 b.	6937	26	6909
2 b.	6953	43	6929
2 d Center	6975	67	53
2 b	6996	84	72
2 b	7017	08	6994
2 b.	7035	32	7012
d. line c. 1	7052		
C b. 2	7096	82	71
c. d. 1	7110	7101	
c. b. space 2	7211	7195	7179
" " " 2	7306	7296	77
c d " 3	7337	7321	7309
" " " "	7418	7409 7436	c b. 7390
2 b. " 4	7527		7505
" d. band 2	7554	7539	7523
c. b 4.	7562	7554	
g. b. edge	7614	7602	
2 " "	7626	13	7597
2 " " 4	7634	23	
line ver. 1	7661	46	
" "	7685	72	
2 b.	7731	22	7701
c. dark	7738	29	7711

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1919phae.proj.22220

Nov. 11, 1919

		X 13129	Report	
c. d.	1	7811	7794	
c vr d fg.	2	7856	7848	
" b "	2	7913	7901	
" "				
" " d "		7966	58	
" " b.	1	8006	03	
" " d "		8056	41	
c " "		8227	8222	
c b "		8257	49	
c vr d fg		8286	80	
b edge		8299	91	82
" "		8316	08	8288
" "		8330	20	
c vr ver.		8363	55	
b edge	H5	8396	84	
" "		8423	16	
" "		8455	48	
c d "		8478	8461	8446
c b fg.		8522	8503	
c d line	2	8544	31	
c b band	3	8679	8665	
c vr d "	4	8724	8707	8697
c b e		8746	34	
c d ver.	H2	8823	08	
b e		8898	86	
c. d.		8916	99	

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	X13129	Repeats
f b e	9053	9038
c d "er	9087	73
c d m	9111	91 07
c b ed	9157	
f s. b "	9213	9298
e m d 4	9245	29
c b 2	9288	71
e m h d	9377	69
c b. 2	9432	27
c m d	9499	9489
e d	9683	

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1919phae.proj.2222C

X 13129
Trial

C. b.	6256	6259
C. d.	6359	6359
C. b. Hβ	6496	6494
A. b. "	6578	81
4 b.	6822	15
C. d. 4540	6952	52
g. b. e. Hγ	7595	98
" " Hδ	8288	88
C. m. d.	8697	94

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Friday, Nov. 13, 1919

M F1338 for B stars
Search for B + M stars.

1			
2	2	B	
3			
4	3	B	
5			
6			Too poor
7	3	B	
8	4	B	
9	2	B	
10	3	B	
11	4	B	
12	2	B	
13	2	B	
14	2	B	
15	2	B	
16	4	B	
17			Too poor
18	4	Pec.	Hγ, Hδ bright ? Perhaps defective B star
19	2	Pec	Bright lines ? " " " "
20	3	B8	
21	3	B	
22			Too poor
23	4	B	
24			
25	3	B	

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1919phae.proj.22220

1							
2							
3							
4	+37° 3870	20	14.3	+37	32.9	9.0	
5							
6	+37° 3888	20	13.5	+37	16.2	9.0	
7	+37° ~~3888~~ 3909	20	17.2	+37	39.8	8.8	
8	+38° H036	20	16.5	+38	10.0	8.8	
9	+38° H043	20	17.0	+38	15.4	9.0	
10	+38° H059	20	18.3	+38	25.0	9.0	
11							
12	+38° H053	20	17.4	+38	32.7	9.0	
13	+38° H028	20	15.5	+38	54.5	9.1	
14	+39° H131	20	16.3	+39	21.8	9.0	
15	+38° H002	20	13.5	+38	57.2	8.8	
16	+38° H012	20	14.3	+38	35.7	9.0	
17	+39° H132	20	13.7	+39	17.8	9.3	
18	+39° H130	20	13.5	+39	46.5	8.0	
19	+38° H000	20	13.2	+38	25.3	8.8	
20	+38° 3997	20	12.8	+38	16.0	8.5	
21	+37° 3878	20	13.5	+37	23.0	8.8	
22	+37° 3881	20	13.8	+37	19.9	8.7	
23	+38° 3980	20	11.4	+38	27.2	8.1	
24							
25	+38° 3958	20	8.2	+38	2.6	8.4	

B2 in H.D
No 239 in 37891.
B1 in H.D.
✓
B8 in H.D.

No. 90 in 38508

B2 in H.D.

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1919phae.proj.22220

Nov. 13, 1919
M # 1338

26				
27				
28				
29	2		B	
30				For four
31				For four Two star stripes.
32				
33				
34				
35				
36	2		B	
37	3		B	
38	5		B3	
39				
40				
41				
42				
43				
44	3		B	
45				
46				
47	2		B	Bright lines?
48				
49				
50	3		B	

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1919phae.proj.22220

26	+37°	3866	20	11.6	+37	14	8.0	B in H.N.
27	+37°							B in H.D.
28	+36°	3958	20	9.1	+36	55	7.5	Oe5 in H.N.
29	+37°	3828	20	7.5	+37	48	8.9	
30	+37°	3827	20	7.5	+37	57	8.8	
31	+37°	3811	20	6.0	+37	48	8.7	
32								B2 in H.D.
33								B3 in H.N.
34								B3 in H.D.
35								B2 in H.D.
36	+40°	4090	20	11.9	+40	24	8.8	
37	+40°	4132	20	16.8	+40	44	8.3	
38	+40°	4137	20	17.0	+40	31	8.6	
39	+40°	4139	20	17.6	+40	15	8.3	
40								B0 in H.D.
41								B8 in H.D.
42								B in H.D.
43								B2 in H.D.
44	+41°	3884	20	6.3	+41	31	8.5	
45								B in H.D.
46								B8 in H.D.
47	+41°	3875	20	10.4	+41	58	8.3	
48								B in H.D.
49								Me in H.D.
50	+42°	3703	20	15.7	+42	40	8.5	

Dec. 6 cont on page 164

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1919phae.proj.2222C

Saturday Nov. 22, 1919

MC plates

MC16334 R Scuti 18430 5

Rather dense Class K

Somewhat poor in dark lines

MC16335 U Cygni 20168

1 U Cygni Class K with shiny bright hydrogen lines

Hγ = 10 Hδ = 2 Hβ = 10

No distinct lines seen from Hγ to shutter end

This is the first photographic one have of this sp. shiny bright lined.

2	5	B5	+47°	3038	20	~~5.0~~ 6.4	+47	2 3	var.	~~B2~~ B3	in H.D.
3	3	Mc	+49°	3245	20	8.5	+49	1	8.7	Mc ~~B5~~	" "
4	2	Ma	+48°	3107	20	18.4	+48	3	8.4	✓	
5	3	Ma	+48°	3108	20	18.7	+48	21	8.1	K5	in H.D.

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1919phae.proj.22220

November, 1919

MC 16336

✓ δ Lacertae

Hγ 10 Hγ gl. Mb

Hδ 9

2 2 Ma +38° 4754 22 17.6 +38 29 8.8 Ma in H.D.

MC 16337

✓ R Andromedae

1 Pec Probably Class R

Hγ = 10 Hδ = 11 Hβ = 9

Spectrum peculiar between Hβ and Hγ

✓ 4227 strong & dark

MC 16339

7 Cass.

Hγ gl.

Hδ bright

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1919phae.proj.2222C

Thursday Dec 4, 1919

MC 16343

R Trans.

1 md H γ 10 K5 = 16

4227 fc.

Sp Md.

2 3 Ma +35° 531 2 31.7 +35 24 8.1 K5 in H.D.

MC 16345 3 30 +85

1 1 Mb +43° 749 3 23.1 +43 16 9.0 Mb in H.D.

2 4 Mb +42° 831 3 40.6 +42 9 8.0 Ma in H.D.

Ident on cards

MC 16346

1 2 Mb +32° 830 4 35.9 +32 39 8.7 Ma in H.D.

2 2 R 0,6,10 +34° 911 4 39.7 +34 44 8.8 Mb " "

Ident. on cards.

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1919phae.proj.22220

Friday, Dec. 5, 1919

MC 16347

1	1	Ma	+30°	775	4	55.3	+30	10 8.5	✓
2	2	Mb	+30°	786	4	58.2	+30	35 9.0	✓
3	2	Ma	+29°	842	5	5.3	+29	55 8.5	✓

Identn. on cards.

MC 16348 ~~+21° 1146 6 3.1 +21 54 7.3~~

1	5	Ma	+21°	1146	6	3.1	+21	54 7.3	Ma in H.N.
2	6	B8	+20°	1322	6	5.5	+20	13 8.8	~~B5~~ in H.N.
3	3	Mb	+17°	1187	6	7.0	+17	48 9.0	Ma in H.N
4	4	B2	+20° +19°	1369 1335	6	10.6	+20	38 8.3	✓
5	5	a	Narrow lines		6	16.1	+19	46 8.8	B5 in H.N.

Identn. on cards.

MC 16368

1 W Lyrae Md

Hγ = 10 wide bred. 4363 present?

Hδ = 20 sharp

Hβ = 2 Sp. Ma

2 2 Ma

Identn. on cards.

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1919phae.proj.2222C

Dec. 5, 1919.

mc ✕16371 ✕ Camelop. N.S.

mc ✕16372

Nearly all the region covered by mc ✕6449

mc ✕16369 R S Cygni

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1919phae.proj.22226

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1919phae.proj.2222C

Dec. 5, 1919
Mc 16364 R S Cygni region

1	5	B3	
2	3	Ma	smaller of two.
3	1	Mc	variable?
4	3	Ma	foll. of 2
5	4	Ma	
6	6	B	
7	4	B	
8	6	B	prec. of 2.
9	3	B8	
10	3	B8	
11	3	B5	
12	2	Ma	
13	1	N	R S Cygni. Mch. lines.
14	6	B	
15	6	B	
16	8	B	
17	6	B	
18	2	B	Hβ bright.
19	7	B	
20	7	B	
21	6	B	
22	3	Mc	
23	B5	B	

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1919phae.proj.22220

1	+39°	4033	20	0.9	+39	39	8.2	B in H.D.
2	+37°	3744	19	58.4	+37	55	7.2	K5 " "
3	+36° ~~+35~~	3852 ~~3765~~	19 ~~18~~	59.1 ~~4.4~~	+36	25	8.7	Nf. " "
4	+36°	3883	20	2.0	+36	9	7.1	K5 " "
5	+36°	3892	20	2.8	+36	15	8.3	K5 " "
6	+35°	3966	20	1.6	+35	59	8.1	B5 in H.D.
7	+36°	3906	20	4.0	+36	4	8.5	B " "
8	+37°	3783	20	3.0	+37	42	8.0	G5 " "
9	+37°	3816	20	6.4	+37	8	8.5	
10	+37°	3811	20	6.0	+37	48	8.7	✓
11	+37°	3828	20	7.5	+37	48	8.9	✓
12	+38°	3948	20	7.4	+38	35	8.9	Mb in H.D.
13	+38°	3957	20	8.1	+38	17	var.	Nr. " "
14	+39°	4082	20	7.4	+39	50	7.5	B3 in H.D.
15	+39°	4096	20	9.3	+39	53	8.1	
16	+36°	3958	20	9.1	+36	55	7.5	Oe5 in H.D.
17	+37°	3866	20	11.6	+37	14	8.0	B " "
18	+37°	3881	20	13.8	+37	20	8.7	
19	+37°	3892	20	14.5	+37	53	7.6	B8 in H.D.
20	+38°	4006	20	13.9	+38	49	7.5	B2 in H.D.
21	+38°	4032	20	15.8	+38	34	8.0	A2 " "
22	+39°	4152	20	16.4	+39	59	8.8	Mc in H.D.
23	+40	4150	20	18.1	+40	17	7.4	B0 " "

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1919phae.proj.2222C

Dec. 5, 1919

Mc X 16374 X Monroe

1	1	Ma	
2	3	Mb	X Monroe. Jet. No h. lines seen
3	5	Mb	
4	6	B	Hβ hajek.
5	6	B	
6	2	B	Hβ hajek.

~~Ideal~~

Mc
X 16373 R Gem.

1	4	Pec.	R Gem. Hγ=10, Hδ=2, Hβ=7. Sp. Pec.
2	5	Ma	Slightly pec. Bright lines from Hβ to HK

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1919phae.proj.2222C

1	−8°	1626	b	48.7	− 8	46	8.8	Sp. ma in H.N.
2	−8°	1641	b	50.3	− 8	53	8.0	Sp. md " "
3	−8°	1650	b	51.2	− 8	50	7.7	Sp. mb " "
4	−10°	1774	b	50.3	− 10	38	7.2	Sp B5f " "
5	−8°	1667	b	53.7	− 9	0	6.8	Sp. Bo " "
6	−11°	1760	b	56.9	− 11	20	9.0	Sp. Bp " "

Identt. on cards.

1	+22°	1577	b	58.6	+ 22	55	var.	Pec. in H.D.
2	+24°	1531	b	58.5	+ 24	23	7.1	ma " "

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1919phae.proj.2222C

Dec. 6 1919 (Cont from p. 152)
In F, 1338

51	5	B8
52		
53		
54	4	B5
55	3	B5
56		
57		
58		
59		
60	2	B
61	3	B
62		
63	3	B5
64	3	B8
65	4	B8
66	3	B3
67		B

cont. 145, 57

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51	+42°	3590	20	1.6	+42	40	8.0	
52								B in H.D.
53								B in H.D.
54	+43°	3195	20	24.9	+45	0	8.6	
55	+44°	3506	20	25.9	+44	20	8.7	
56								B in H.D.
57								B3 in H.D.
58								B in H.D.
59								B in H.D.
60	+39°	4177	20	20.1	+39	45	9.1	
61	+40°	4187	20	23.2	+40	19	9.0	
62								B8 in H.D.
63	+43°	3290	20	43.9	+45	6	8.5	
64	+43°	3747	20	47.0	+43	53	8.8	
65								258 on J3756
66	+42°	3894	20	47.6	+42	4	8.3	
67	+39°	4368	20	49.9	+39	45	7.2	

I deriv on cards A.M.C.
" " Bool. L.D.W.
Compared A.M.C.

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1919phae.proj,2222C

Monday, April 5, 1920

Further search for the spectrum of Nova Aquilae, 3, on early plates.

Sun

May 31, 1910	B 41398	not clearly defined
Sept. 10 "	B 41894	" " "
June 27, 1910	B 41579	background
Aug. 25, 1895	24010	" "
Aug. 26 "	24022	" "
" 31, "	24026	" "

1909	H. S. on	
May 2, ~~1909~~	B 40280	J 36778 Sun
Sept. 11, 1910	41898	J 36782 "
July 27, "	41723	J 20790 "
Aug 28, 1909	40336	J 20566 "
June 9, 1910	41434	
	14656	
	24327	
	12038	
	11379	
	14192	

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1919phae.proj.2222C

Saturday, April 17, 1920

ν 37229 short
trial to compare with classif. in MC 5404
Numbering the rows.

1	2	K2	
2	3	F5	
3	1	A	Torpl.
4	1	K?	" "
5	5	F8	
6	2	G	very poor.
7	6	F2	
8	5	F8	
9	1	K	
10	1	K	
11	1	K	
12	7	F2	
13	3	K5	
14	3	K4	
15	2	K0	
16	4	K0	
17	5	A3	
18	1	F?	Torpl.
19	1	K?	" "
20	1	F?	

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1919phae.proj.2222C

April 17, 1920
I 3722 E cont.

21	1	G	
22	4	G5	
23	2	F8?	
24	1	G	
25	3	a5?	K line evidently
26	1	K?	Iron.
27	1	a	" "
28	1	K	" "
29	2	Hα	
30	8	K5?	Iron lines
31	3	G5	
32	10	a	
33	5	a2	
34	1	K?	Iron.
35	5	G0	
36	2	G5	
37	4	K0	
38	4	K0	
39	4	G5	
40	2	F	

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1919phae.proj.2222C

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1919phae.proj.2222C

April 17, 1920
δ 37229 emb

41	3		Puzzle. Comp.? Lefft resembles K.
42	2	F	
43	2	F8	
44	4	F1	K n. s. cleary
45	1	a	
46	2	F8	
47	1	K5?	
48	7	F5	
49	4	K0	
50	1	G	
51	2	G0	
52	1	K0	
53	2	K5	
54	1	K5?	
55	2	G?	
56	1	K?	
57	1	F?	
58	4	K2	
59	~~00~~	1	K
60		4	K5

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1919phae.proj.2222c

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1919phae.proj,2222C

April 17, 1920
J 37229

61	9	K	Fowler
62	10+	M	" "
63			Tough.
64	1	K	
65	2	G5	
66	2	K0	
67	1	G1	
68	2	K5	
69	2	K0	
70	9	G5	
71	1	K	
72	2	K	
73	6	G0	
74	1	Ma	
75	1	F?	
76	1	K	
77	2	F1	
78	1	K	
79	1	K	
80			Poor For F5?

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1919phae.proj.2222C

April 17, 1920
37229

81	1	F8
82	1	K5?
83	1	K
84	1	F?
85	9	K0
86	8	F2
87	7	K5
88	2	F0
89		Torpl.
90	7	A2
91		Torpl.
92	3	G5
93		Torpl.
94	3	G0
95	4	G0
96	4	K0
97	1	F?
98	2	F
99	2	G
100	2	G5!

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April 17, 1920
I 37229

101	1	G?
102	2	K
103	4	A5
104	6	F0
105	1	G
106	10	F5?
107	4	K0
108	2	G5?
109	2	K2
110	2	G
111		Lost.
112	3	K0
113	3	G0
114	2	K5
115	3	G5
116	2	G5
117	5	K0
118		Lost.
119		" "
120	2	K0

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April 17, 1920
J 37229

121	1	K	
122	2	f1	
123	4	K2	
4	10	a	
5	2	g	hazy.
6			Torpt.
7	6	g0	
8		g?	Torpt.
9		K:	"
130		g	"
1	3	g0	
2	3	f10	
3		g?	f1.
4	3	f10	
5	1	K5	
6			Torpt.
7			Torpt.
8		a5	
9		f18	
140		K2	

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April 17, 1920
λ 37229

141	1	G
2	1	F?
3	1	K?
4	6	K0
5	9	G0
6		Inft.
7		" "
8	2	K0
9	3	K0
150	4	G5
1	5	K5
2	1	K?
3		Inft.
4		" "
5	7	K0
6	8	K0
7	4	K2
8	1	K?
9		F
160		K

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April 19, 1920
D 37229

161 1 Kz
2 2 Ma
3 4 Kz
4 2 Kz
5 2 To
6 1 G?
7 1 F? Torpl-
8 1 Torpl-
9 2 Gr
170 1 K?
1 Torpl:
2 " "
3 1 Arcf
4 1 K?
5 Torpl-
6 " "
7 " "
8 1 Korma n. f. y r
9 7 a3
180 10 + a

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April 20, 1920

D 3722 9

181	1	K	
2	1	g	Another class refs.
3	3	g:	
4	2	g:	Poor def.
√	1	K	
6	2	g5	
7	3 40	g5	Two faint
8			
9	2	~~f5 f5~~	
190	1	f	
1	8	a	
2	3	a5	
3	1	K	
4	1	f:	
√	1	K	
6			Amplif.
7	1	K5	
8	1	g:	
9	1	g:	
200	1	K	

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Tuesday, April 20, 1920.

Spectra of recent Novae.

Apr. 14, 1920 D 39934 T Pyxidis ord.

Hβ, Hγ, Hδ sharp wide b. bands with dark bands toward violet.

Hβ brightest = 2 Hγ.
Hγ = 1.5 Hδ.

Very much like Nova Aq. 3, on June 11, 1918

H + K faintly shown on Apr. 9.

Apr 9, 1920 D 39928 T Pyxidis. Ord.

Hγ sharp. Dark Hδ Green

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April 20, 1920.

C80911 I39937 Nova Ophi. 4 April 14, 1920

Nebulous!

Bright lines only are seen

4363 very far the strongest.

Hβ next

Hγ

Hδ

4640

5007

Also Jl. m. AC 22588, April 10, 1920.

Get magn. ~~Parkes about 12.~~ 11.0 m

April 14, 1920.

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Thursday, ~~Friday~~, April 2nd, 1920

Jan 3, 1920 I 39715 Nova Lyrae 1918 29

Hβ, Hγ, Hδ bright. Hβ strongest
Spectrum responds above nine details.

Jan 2, 1920 I 39711 Nova Lyrae
Hβ, Hγ bright.
Dark limit ab violet, perhaps
band near Hδ.
Very poor night.

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Thursday ~~Friday~~, April 24, 1919.

1, 2 3588 3 Shwb. Pleiades.

Same ~~star~~ nebs. as Mc. 647?

1	2	K2 E
2	2	F5? pnn
3	3	G0
4	3	G4
5	3	K0
6	5	G5
7	5	G0
8	3	K0
9	5	G0
10	7	G5
11	1	A
12	7	A0
13	3	G0
14	2	K0
15	4	K2
16	7	A
~~17~~ 17,18	2 1	F5? two ?
18	1	Ma
19	3	K2
20	~~3 K2~~	
21	3	F5
22	6	G5
23	3	A
24	2	G
25		two pnn

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April 2[illegible], 1920.

26	1	A5
27	2	F0
28	2	K0
29	2	A5
30	1	K2
31	1	G
32	1	F
33	2	G
34	4	A Perhaps B8
35	3	G0
36	3	K
37	2	G
38	1	F5?
39	2	G0
40	3	A
41	5	G0
42	3	K2
43	3	G
44	2	G0
45	1	G
46	2	F5
47	2	K0
48	2	A3
49	5	K0
50	2	F8

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April 27, 1920

J 3544 3

51	3	F0	
52	2	F8	
53	4	G0	
54	1	F?	torpl.
55	3	a	K h.s.
56	3	a	
57	4	a	
58	2	a5?	
59	10	a0	
60	4	a	
61	2	K0	
62	3	K0	
63	1	K5?	
64	1	a	
65	1	G5	
66	2	F5?	Ausdehnung des Kerns
67	1 oop.		" " "
68	1	K	E
69	3	F0	
70	1	K	
71	2	F	
72	3	a0	
73	5	a	
74	5	a	
75	4	a	

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April 2½, 1920 I 35883

76	2	F5	
77	3	F8	
78	6	a_3	
79	2	F5?	hazy.
80			Two stars?
81	4	F0	
82	1	G5	
83	4	K0	
84	6	a_2	
85	7	G0	
86	7	a0?	
87	6	a	K n. s.
88	3	a_3?	
89	4	a_2	
90	3	G0	
91	2	F8 G5	
92	2	F8	
93	5	a_0	
94	1	F5?	
95	3	F0	
96	3	F2	
97	5	a_0	
98	5	a_2	
99	3	K_2	
100	3	a_5	

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April 22, 1920

J 35883

101	1	F5?
102	1	K
103	1	K?
104		Too much superposed.
105	5	A2
106	4	A K n.s.
107	6	A5
108		Torpl.
109		" "
110	1	A
111	1	K
112		K5? Torpl.
113	2	F2
114	4	A5
115	3	A2
116	3	F0
117		K? Torpl.
118		Torpl.
119		K?
120	4	F2
121	6	A2
122	3	A5
123	3	K5
124	2	K5
125	1	K

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April 22, 1920

I 35883

126	6	A2	
127	3	F2?	
128	4	G5	
129	6	A	Perhaps A2.
130	2	F1	
131	2	A5	
132	2	F4	
133	2	K5	
134	3	A5 or F0	
135	2	Ma	
136	5	K5	
137	4	F0	
138	4	K2	
139	4	K5	
140	1	K5 or Ma	
141	1	A	
142	1	K	
143	5	K0	
144	5	G5	
145	5	F2	
146	3	K0	
147	6	K2	
148	5	K0	
149	2	G	
150	2	G4	

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April 22, 1920

I 35883

151	2	g
152	2	F5
153	3	K2
154	3	G5
155	1	K
156	4	G3
157	4	F0
158	4	G2
159	2	g?
160	1	K
161	3	F2
162	3	F8
163	4	F2
164	3	F2
165	2	F8
166	2	g
167	2	K
168	2	g?
169	5	F0
170	~~2 g~~ 2	G5
171	5	K0
172	2	K
173	2	g
174	4	K5 Norman
175		

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April 22, 1920 l 35883

176	1	Torpon K?
177	1	F
178	1	G
179	3	G5
180	2	K0
181	3	F1
182	2	A
183	5	G3
184	5	G0
185	4	G5
186	1	K5
187	3	G5
188	3	G0
189	2	F 3 K0 (wrong class marked)
190	4	F1
191	2	G
192	4	K2
193	2	G5
194	3	A or F E
195	1	G
196	2	G5
197	2	F8
198	2	A
199	2	F5?
200	1	G5

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April 22, 1920

201	1	A m fl
202	1	K
203	1	K5
204	1	A
205	1	g5? foggy
206	1	fl
207	1	A
208	2	g
209	3	g0
210		
211	3	A m fl
212	3	fl
213	3	A0
214	3	A m fl
215		
216	2	g5
217		

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Saturday April 24, 1920

B. 1057

1 6 Go

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1 -7° 4242

18m B41735

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Sunday, April 26, 1920

B 676 ζ Lyrae
18h 41.3m

ζ¹ A5
ζ² A5 ? perhaps F

Both are bowed out so that the fine lines are not seen.

On most of the plates the K line of ζ² seems to be a little stronger than that of ζ¹, but I am not sure whether the spectrum is really later.

C 15018 best of ζ 1 4

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Saturday, June 19, 1920

B 42253 long.

1	6	A_2	
2	4	K_2	
3	6	B9	K shrinks for steepness of 40268

I 25264

1	4	$F1_2$	

I 36057 short.

1	6	G5	Hδ shrinks.

B 40401 Rowland

123 Two shots in same R. Ca.
The families and members is a little better than the members
Classes F5
G

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1	-42°9722	14 42.9	-42 18	7.0	205m	B37630
2	-41 9312	14 49.1	-41 38	7.3	230 "	"
3	-40 9037	14 44.0	-40 17	7.5	19 "	"
1	+44°2407	14 47.8	+44 17	8.9	143m	J37640
1	+55°1664	14 6.3	+55 6	8.0	50m	J37828

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Tuesday, July 27, 1920

C 3710 α Librae

– A3

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