

KG
11366
177

Ida E. Woods
Bk.
S S Bygri

KG 11366.6.1977

General Instructions

which will apply to all measures.

Underline magnitudes derived from scale
readings 9.7 to 9.9.
Underline twice if 10.0 or fainter.

See Bk. 13 for all scales. (See Index.)

KG 11 3.66.177



S. S. Bygri. Instructions.

Reference

- ✓ p. 4 - ~~10~~²¹ Measure 4 AC plates.
- ✓ p. 22. - Reduction of Comparison Stars: Results
Study of plates giving diff. of .7, L-B, Obs.
- ✓ p. 27-30 Remeasured.
- ✓ p. 26 Additional plates, no measure in Ledger.
Dec. 19, 17.
Remeasure: 1) all plates diff. of .3, L-B, Obs.
2) " " measured only by B.

Alt Cygni. Companion Stars.

Material

- (a) Early measures on 4 I plates
- (b) Measures on Series Plate MC 11062, 11133. Visual Sequence
Mean magnitudes in Book 9a, 177.
- (c) Measures of visual sequence, and of star d and fainter of photographic sequence, on 4 AC plates
- (d) ~~Measures of both sequences on MC 11062 and 11133, including primary images, primary snap. and diff. image~~
- (d) ^{Bk. 39, p. 202.} Companion of Stars a to e (photographic) with the North Polar Sequence on plates immediately preceding and following MC Plate. H. S. L. will
- (e) ^{Bk. 39, p. 204} do this ^{companion of} diff. im. of a, b, c, d, e, with primary im. of ft. stars.
- Reduction. For (c) and (d) plot measures of visual sequence, using magnitudes 9a:177. Read off magnitudes directly. Also for a, b, c, ^{d, e} of the photographic sequence ~~and any stars having diffraction gratings~~ ^{on MC Plate estimate} read off magn. from ~~gratings~~ in comparison with ~~gratings from curves~~ for primary images and subtract 3.74 to give absolute Magnitude.

For adopted magnitude, take mean of a, b, c, d, and e.

July 4, 1917.

21.0 + 45.0

AC 4111

S. S. L. y. g. m. 213843

Measures of photog.
and visual sequences

H. ink	red ink	Sc. M.	Scale N				
Vis.	Phot.		(B)			($Sc^B - 0.4 Sc^C = 0.0$)	Corr. Resid.
a	-	6.3	6.1	6.1	6.10 = 5.70	00	00
b			4.3	4.2	4.25 = 3.85	05	05
c = e			7.1	7.1	7.10 = 6.70	00	00
d	-	6.5	5.5	5.5	5.50 = 5.10	00	00
e	-	7.2	6.4	6.1	6.25 = 5.85	15	15
f	-	scale	7.5	7.6	7.55 = 7.15	05	05
g = f		not	7.4	7.2	7.30 = 6.90	10	10
h = g		suitable.	7.3	7.5	7.40 = 7.00	10	10
k	-	reject.	7.7	7.8	7.75 = 7.35	05	05
l = h			8.7	8.6	8.65 = 8.25	05	05
m = l			9.1	Sc. B 9.2 (B)	9.15 = 8.75	05	05
n	-		9.2	Sc. C 9.2 (C)	9.20 = 9.20	00	00
o = m			9.3	Sc. C 9.4 (C)	9.35 = 9.35	05	05
p	-		9.7	Sc. C 9.6 (C)	9.65 = 9.65	05	05
- a			3.1	Sc. B 3.1 (B)	3.10 = 2.70	00	00
- d			6.2	" 6.3 (B)	6.25 = 5.85	05	05
X - k			9.6 *	9.3 (B)	9.45 = 9.05	15	15
- m			9.7	Sc. C 9.4 (C)	9.70 = 9.70	00	00
- o			9.8	Sc. C 9.7 (C)	9.75 = 9.75	05	05
- f			-				
- g			-				

* { k, difficult
 k is close to f and very faint. Scale readings on the four
 AC plates are discordant. Estimates on AC plates to be
 rejected.

* On re-exam. it was found that oc-

✓ Bk. 9a h. 177	✓ Diff.	✓ Read. fr. Curve.	✓ Read. + Scale.
9.49	+3.79	3.66	9.36
8.90	+5.05	5.05	8.90
9.60	+2.90	3.20	9.90
9.14	+4.04	4.07	9.17
9.26	+3.41	3.57	9.42
10.29	+3.14	3.12	10.27
10.05	+3.15	3.16	10.06
10.36	+3.36	3.15	10.15
10.74	+3.39	3.10	10.45
11.07	+2.82	3.00	11.25
11.90	+3.15	2.97	11.72
11.91	+2.71	2.95	12.15
12.28	+2.93	2.95	12.30
12.68	+3.03	2.94	12.59

Readings Read.
from Curve. + Scale.

+3.56 ✓ 9.41
2.96 ✓ 12.01
~~+3.02~~ ~~11.07~~
+2.94 ✓ 12.64
+2.94 ✓ 12.69

— k, wrong est. Reject.

ale was read one division too bright.

July 19, 1917.

SS Cygni.

21.0+45

AC 5494 4354

as
4354, better
images than
ac 5494bl. imb. red imb. Scale H_N
Vis. Photo (Sc. B.) $\checkmark$

Corrections

Scale $N =$

Sc. A - 0.2

B - 0.4

C 0.0

✱

a	-	5.8 ^{5.4}
b	-	3.6 ^{3.2}
c = e		6.2 ^{5.8}
d	-	5.4 ^{5.0}
e	-	6.1 ^{5.7}
f	-	7.3 ^{6.9}
g = f		7.2 ^{6.8}
h = g		7.4 ^{7.0}
k	-	8.3 ^{7.9}
l = h		8.6 ^{8.2}
m = l		9.2 ^{8.8}
n	-	8.8 ^{8.4}
o = m		9.3 ^{8.9}
p	-	9.6 ^{9.2}

$\checkmark$ Bl. 9a $\checkmark$ h. 177	$\checkmark$ Diff.	$\checkmark$ Read. f. Curve.	Curve + Scale
9.49	+ 4.09	+ 3.96	9.36
8.90	+ 5.70	+ 5.70	8.90
9.60	+ 3.80	+ 3.75	9.55
9.14	+ 4.14	+ 4.21	9.21
9.26	+ 3.56	+ 3.80	9.50
10.29	+ 3.39	+ 3.29	10.19
10.05	+ 3.25	+ 3.33	10.13
10.36	+ 3.36	+ 3.25	10.25
10.74	+ 2.84	+ 2.98	10.88
11.07	+ 2.87	+ 3.00	11.20
11.90	+ 3.18 ⁰	+ 3.24	12.04
11.91	+ 3.51	+ 3.08	11.48
12.28	+ 3.38	+ 3.29	12.19
12.68	+ 3.48	+ 3.47	12.67

(Sc. A)
2.3^{2.1}

- a	5.8
- d	6.2
- k	8.9
- n	9.3
- o	9.7

Too ft.
Too ft.
Too ft.Read. f.
Curve.

+ 3.75	9.55
+ 3.29	12.19
+ 3.54	12.84

✱ Scale H_N (Sc. B.) should not be used for stars fainter than 9.0 scale reading.
See page 20.

$-k$, reject estimate

July 25, 1917.

SS Cygni.

Late afternoon

21.0 +45.

AC 4257

H. imb	red imb	Scale N	✓
Vis.	~~Photo~~	Sc. B	
Corr. - 0.4	a -	5.7	5.3
	b -	4.8	4.4
	c = e	6.4	6.0
	d -	5.3	4.9
	e -	6.3	5.9
	f -	7.2	6.8
	g = f	6.7	6.3
	h = g	7.8	7.4
	i -	8.1	7.7
	l = h	8.4	8.0
	m = l	8.9	8.5
	n -	9.2	8.8
	o = m	9.2	8.8
	p -	9.7	9.3

Bk. 9a	✓	Diff.	✓	Read. f. Curve.	✓	Curve + Scale	✓
7.177							
9.49		+4.19		+3.98		9.28	
8.90		+4.50		+4.52		8.92	
9.60		+3.60		+3.62		9.62	
9.14		+4.24		+4.21		9.11	
9.26		+3.36		+3.66		9.56	
10.29		+3.49		+3.26		10.06	
10.05		+3.75		+3.46		9.76	
10.36		+2.96		+3.08		10.48	
10.74		+3.04		+3.03		10.73	
11.07		+3.07		+3.04		11.04	
11.90		+3.40		+3.18		11.68	
11.91		+3.11		+3.27		12.07	
12.28		+3.48		+3.27		12.07	
12.68		+3.38		+3.42		12.72	

			Read. f. Curve.	
- a				
- d		5.7 5.3	+3.98	9.28
- k		9.7 9.1	36	12.46
- m		9.8 9.4	+3.45	12.85
- o		9.9 9.5	+3.48	12.98
- p		Too ft.		
- rg		Too ft.		

On re-examination, it was found that

- k_1 reject estimate

scale was read one division too bright.

July 26, 1917.

SS Cygni.
ac 7906.

	bl. ink Vis.	red ink Phot.	Scale N. (Scale B)	✓ Bh. 9a, p. 177.	✓ Diff.	✓ Read. fr. curve	✓ Sc. R. + Curve R.
Corr -0.4	a	-	7.1 6.7	9.49	+ 2.79	+2.79	9.49
	b	-	4.5 4.1	8.90	+ 4.80	+4.80	8.90
	c = a	-	7.3 6.9	9.60	+ 2.70	+2.71	9.61
	d	-	5.8 5.4	9.14	+ 3.74	+3.75	9.15
	e	-	6.4 6.0	9.26	+ 3.26	+3.26	9.26
	f	-	8.2 7.8	10.29	+ 2.49	+2.56	10.29
	g = f	-	7.6 7.2	10.05	+ 2.85	+2.64	9.84
	h = g	-	8.2 7.8	10.36	+ 2.56	+2.56	10.36
	k	-	8.6 8.2	10.74	+ 2.54	+2.67	10.87
	l = h	-	8.7 8.3	11.07	+ 2.77	+2.72	11.02
	m = l	-	9.2 8.8	11.90	+ 3.10	+3.08	11.88
	n	-	9.1 8.7	11.91	+ 3.21	+2.99	11.69
	o = m	-	9.4 9.0	12.28	+ 3.28	+3.22	12.22
	p	-	9.7 9.3	12.68	+ 3.38	+3.42	12.72
	- a	-				Read. f. Curve.	
	- d	-	6.2 5.8			+3.43	9.23
	- k	-	9.3 8.9			+3.17	12.07
	- n	-	9.8 9.4			+3.49	12.89
	- o	-	Trace				
	- p	-	Trace				
	- q	-	-				

+279

+480

- k , reject estimate.

RejectVis
Seg.Photog
Seg.Magn.
Pk. 9a, 177.

	a	00
	b	.35
e = c	c	110
	d	152
	e	202
g = f	f	227
h = g	g	262
l = h	h	290
	k	332
m = l	l	370
o = m	m	392
	n	4.62
	o	4.90
	p	5.10
	q	5.35

9.26

September 6, 1917.

58 ^{begin}
(Subgrades)

I Plates.

Vis. Seq.	Photog. Seq.	Mean Magn. on 4 I Plates.*	Magn. 9a 1917	Diff.	Read. fr. Curve	Sc. read. + Curve read.
	a	.00				
	b	.35				
	c	1.10				
	d	1.52				
c = e		2.02	9.60	+7.58	7.60	9.62
g = f		2.27	10.05	+7.78	7.78	9.98
h = g		2.62	10.36	+7.74	7.88	10.50
l = h		2.90	11.07	+8.17	8.00	10.90
	k	3.32			8.14	11.46
m = l		3.70	11.90	+8.20	8.27	11.97
o = m		3.92	12.28	+8.36	8.34	12.26
	n	4.62				
	o	4.90				
	f	5.10				
	g	5.35				

* from
double sheet
with ledger.
Assumed, = Photog.
Sequence.

Sd Cygni

<u>Vis.</u>	<u>Photog.</u>	
Des. on print	Revised Des. on I 9725 and I 27783	Phot. seq. not in vis.
a	"	a
b not on print	"	b?
c	e	c?
d	"	d
e	"	h
f	"	n
g	f	o
h	g	t
k	"	g
l	h	
m	l	
n	"	
o	m	
p	"	

SS Cygni.

Plg
Dec

I AC

h 10.90 11.13

K 11.46 12.18

l 11.97 11.83

Is K really fainter
on AC than on L plates?
fainter than l on AC ± 0.35
brighter " " " I $(+0.51)$
looks much brighter than
l on paper print.

Underline magnitudes
derived from scale readings
9.7 to ~~10.0~~ ^{9.9}. Underline twice
if 10.0 is fainter

Estimates (Oct. 12, 1917)

red
K on MC 11133 about 11.20
" 11062 " 11.20
" AC 4354 " 11.30
" I 9725 " 11.30

Distinctly
fainter than
black l = red h

prop	Vio		
a	-	6.50 ✓	A
b	-	7.45 ✓	B
c	-	8.64 ✓	C
-	b	8.90 <i>ny</i>	
d	-	9.04 ✓	d'
-	d	9.15 <i>ny</i>	
-	e	9.35 ✓	e
-	a	9.43 <i>ref.</i>	
e	C	9.54 ✓	C
f	g	9.99 ✓	g
-	g	10.26	
g	h	10.39 ✓	h
-	K	10.74 ✓	K
h	b	11.03 ✓	b
K	-	11.46 ✓	b'
l	m	11.90 ✓	m
-	n	11.88 <i>ny</i>	
m	o	12.25 ✓	o
n	-	(12.80)	
-	p	12.68 ✓	p

add viz e, K, p

12.3	12.3
12.8	12.8
13.3	13.3
13.9	13.9
13.3	13.3

S. S. Byggn.

Measures on AC Plates.

Vis. Seg.	Photog.	p. 4, AC 4111	p. 8, AC 4257	p. 6, AB 4354	p. 10, AC 7906
a		9.36	9.28	9.36	9.49
b		8.90	8.92	8.90	8.90
c		9.90	9.62	9.55	9.61
d		9.17	9.11	9.21	9.15
e		9.42	9.56	9.50	9.26
f		10.27	10.06	10.19	10.36
g		10.06	9.76	10.13	9.84
h		10.15	10.48	10.25	10.36
k		10.45	10.73	10.88	10.87
l		11.25	11.04	11.20	11.02
m		11.72 Retain	11.68	12.04 Rej.	11.88 Retain
n		12.15 "	12.07 Rej.	11.48 Retain	11.69 Retain
o		12.30 "	12.07 Rej.	12.19 Rej.	12.22 Rej.
p		12.59 "	12.72 Rej.	12.67 Rej.	12.72 Rej.
	Photog.				
a		"	"	"	"
d		9.41	9.28	9.55	9.23
k		^{12.01} ~~11.07~~	^{12.46} ~~11.18~~	12.19	12.07
n		12.64	12.85	12.84	12.89
o		12.69	12.98	Ft.	Ft.
p		"	"	"	Ft.
q		"	"	"	"

AC plates were measured by Scale N. Scale B or Scale A should not have been used for scale reading fainter than 9.0. Therefore, stars m, n, o, p, are rejected on AC plates. The final mean of m and o is derived from readings from I plates and MC plates (a and b, page 3) p depends on MC plates only; n is

Mean	Resids.
9.37	<u>01</u> <u>09</u> <u>01</u> 12
8.90	00 02 00 00
9.67	23 <u>05</u> <u>12</u> <u>06</u>
9.16	01 <u>05</u> 05 <u>01</u>
9.44	<u>02</u> 12 06 <u>18</u>
10.22	05 <u>16</u> <u>03</u> 14
9.95	11 <u>19</u> 18 <u>11</u>
10.31	<u>16</u> 17 <u>06</u> 05
10.73	<u>28</u> 00 15 14
11.13	12 <u>09</u> 07 <u>11</u>
11.83	<u>11</u> <u>15</u> 21 05
11.85	~~30 22 37 16~~
12.20	~~10 13 01 02~~
12.68	~~09 04 01 04~~

9.37	04 <u>09</u> 18 <u>14</u>
11.63 ^{12.18}	~~56 45 56 44~~ 17 28 01 <u>11</u>
12.80	<u>16</u> 05 04 09
12.84	<u>15</u> 14 F F
"	
"	

rejected in final
sequence.

This retains stars of photog. seq., with the letters of of the visual
when given.
Additional, stars e, b, p, q, of visual seq.
" stars r - in marked on MC 11133.
S. S. Bygri.

On Sample Print:

Photographic
Sample Chart.

Stars a to f, in black ink. Visual Seq. H. A 6
" g, r, s, t, u, w " " added in Series
" a to f in red ink. Photographic Seq. mar he

Order of Stars.

Photog.	a b c . . d . . e f . g . h b l . m .
Vis.	. . . b d . e a c g f h k l . m n o p
Final letters, 20 =	A B C . . d' e . c g . h k l l' m . o . p
from Phot.	x x x x x x x x x x
" vis	x x x x x x x

Use photographic sequence through m.
Do not use n, o, p, q, as no photographic
If the variable grows fainter than m, use
In addition to stars of photog. seq., use stars

a 63.

Plate MC 11133.

varied from I 27783 (W. P. F.)

n . o p . . . g
. g . . . r . . s t u w
. g . . . r . . s t u w

magnitudes have been determined.

*p, g, r, etc.**e, k, p, g, r, etc., of visual sequence.*

December 5, 1917.

SS Cygni.

Measures of additional plates. See ledger of SS Cygni. These plates were blank, evidently not found at time ledger was made. Plates have been found and measured if possible.

ac 7918	Too poor.
9896	Does not cover region.
5179	Too poor.
7691	Too poor.

~~7857~~ Poor plate.
Perhaps = L (red)
very faint and near edge.

9827 d 5 12 f ? (red letters)
var. brighter, elongated images.

7857 L 2 2 m
on barely seen ^{var.} very ft. and near edge.

8065 Too poor.

8229 Too poor.

8190 Too poor. Near edge. Few stars and elongated.

5479 663c

9836 Too poor.

Dec. 5, 1917.

SS Cygni.

Plates meas. by 2 observers, difference .70 or greater.

$$\checkmark \text{ I } 17184 \quad d14e \text{ (Ph. seg.)} = (8.43) \overset{\text{new reduction}}{9.14} \ 00 \ 00$$

$$\checkmark \ 16688 \quad k23l = 11.65 \ (1917) \ 01 \ 01$$

$$\checkmark \ 16580 \quad \overset{\text{(rejet d) see page 29}}{d23e} = 9.24 \ 00 \ 00$$

$$\checkmark \ 16574 \quad d22e = 9.29 \ \underline{05} \ 05$$

$$\checkmark \ 17213 \quad f21g = 10.24 \ \underline{05} \ 05$$

$$\checkmark \ 17671 \quad b42c = 8.14 \ \underline{29} \ 30$$

$$\checkmark \ 18534 \quad d32e = 9.34 \ 00 \ 00$$

Dec. 6, 1917.

SS Cygni

Continued Plate No.
I 16165 (broken
slide 1344)

Var. Est.
g 15 h = 10.51

December 8, 1917.

55 Cygni
Observations by H. S. Learitt, recorder, D. E. W.

✓ I 1854 c 30 d 4 e
reject observation of B in Ledger

✓ I 5114
reject plate

✓ I 16165
g 2 3 h
reject B in Ledger retain L.

✓ I 16574 (p. c.)
d 2 2 e (faint)
reject meas. by L. c too near edge.

✓ I 16580
5 e ? other stars too distant
reject obs by L and B with stars except e.
record anag. with (?) after taking mean.

✓ I 16688
h 20 k 5 l
reject B

✓ I 17184
b 60 c 3 d 300, fogged 8.48 43 16 26
reject plate, too poor.

Dec. 8. (continued)

SS Cygni

✓ I 17213

f 3 2 g

reject B in Ledger.

✓ I 17671

c 2 1 d

take mean of all observers.
Hazy image, near edge.
Mean of all will approx.

January 3, 1918.

SS Cygni.

Ledger. Plates measured by B only are to be re-measured.

Using new
final
sequence
letters,

✓	I 19394	031 p	12.57	12.58 = 12.58	01	01
✓	19412	032 p	12.57	12.48 = 12.53	04	05
✓	19632	032 p	12.57	12.48 = 12.53	04	05
✓	19659	^c ~~0~~ 12 ~~p~~	9.64	9.79 = 9.72	08	07
			~~10.09~~	~~10.19 = 10.14~~	~~05~~	~~05~~
✓	19439	032 p		12.53	04	05
✓	19473	012 p	12.37	12.48 = 12.42	05	06

April 5, 1918.

SS Cygni.

Measures of plates having
only one estimate in Ledger.

Direct estimate	✓ I 19662	9.45	✓ VI 19837	12.55
	✓ 19500	12.50	✓ 19856	12.60
	✓ 19523	12.50		
	✓ 19558	12.60		
	✓ 19615	12.50		
	✓ 19623	12.70		
	✓ 19665	9.45		
	✓ 19710	12.05		
	✓ 19759	12.50		
	✓ 19688	✓ 9.30		
	✓ 19692	9.42		
	✓ 19857	12.50		
	✓ 19786	12.35		
	✓ 19819	12.60		

August 23, 1918.

S S Cygni.

Measures of plates having only one estimate
in Hedger -

& is marked on I 19184	^{reject c} ✓ I 19184	^B 842 ^c	$7.85 \ 8.44 = 8.14$
	✓ 19181	^B 842 ^c	8.14
✓ 19169		^B 852 ^c	$7.95 \ 8.44 = 8.20$
✓ 19168		^B 841 ^c	$7.85 \ 8.54 = 8.20$
When B had & be used, I have not made direct estimates as intervals are so great.	✓ 19159	^B 842 ^c	= 8.14
	✓ 19165	^B 852 ^c	= 8.20
	✓ 19212 19219	^B 852 ^c	= 8.20
	✓ 19201	^B 851 ^c	= 8.24
✓ 19297		12.17	
✓ 19278		Faint. Too poor.	
✓ 19270		12.50	
✓ 19263		12.05	
✓ 19260		10.95	

August 23, 1918.

SS Cyg.

✓ T 19246 10.50

✓ 19234 Too poor.

✓ 19220 $\begin{matrix} B & C \\ \sqrt{51} & \end{matrix}$ = 8.24✓ $2\overline{8}84$ 12.17

✓ 3778 Too poor.

✓ 4075 On extreme edge.

✓ 3881 Too poor.

✓ 9303 Too poor.

not
needed { 7402 11.60

Found this was measured
by both B & L. Use for check
same as 7402

{ 7254 12.12

✓ 4377 Too poor.

✓ 18362 .. Too poor.

✓ 1854f $\begin{matrix} B & C \\ \sqrt{52} & \end{matrix}$ 795 8.44 = 8.20

✓ 18560 10.30

August 23, 1918.

SS Cygni.

A 150

Images too faint.

✓ I 18628

12.48

✓ 18700

12.40?

19199

✓ 19350

Very faint. Too faint to estimate

✓ 19341

12.50

✓ 19330

12.50

✓ 19319

12.35

✓ 19312

12.30

✓ 19313

12.50

✓ 19353

12.40

✓ 19370

12.50

✓ 19394

12.65

✓ 19439

12.63

August 23, 1918.

SS Cygni

✓ I 19375 12.45

✓ 19380 12.70

✓ 19412 12.58

✓ 19473 12.35

✓ 19500 12.52

August 26, 1918.

SD Cygni

PK Measures continued

cont Reject ✓	~~19692~~	~~B5.2C~~	~~7.95 8.44 = 8.20~~
?	✓ 20051	B6.2C	8.05 8.44 = 8.24
	✓ 20033	12.60	
	✓ 19970	12.60	
Reject. Wing ✓ stars used	~~19688~~	~~B10.2C~~	~~8.45 8.44 = 8.44~~
Reject Cont ✓	~~19665~~	~~B10.1C~~	~~8.45 8.54 = 8.50~~
cont ✗	19662	9.70	
	✓ 19710	12.17	
	✓ 19704	10.60	
	✓ 19837	12.37	
	✓ 19857	12.50	
	✓ 19856	12.50	
	✓ 19819	12.45	
	✓ 19786	12.15	

see c and $\underline{C}$ Remeasure all about the
magn. of c
August 26, 1918.

39

SS Cygni

Measures continued.

✓ I 19523 12.50

✓ 19759 12.35

✓ 19659 9.85

✓ 19623 12.88

✓ 19692 9.50

✓ 19632 12.50

18544

remeas. 19184

19665 *

19688 *

19692

20051

August 27, 1918.

SS Cygni.

measures continued.

✓ I 19615 very faint. too faint to estimate

✓ 19558 12.5

August 28, 1918

Hereafter, ✓ I	20611	12.5
estimates ✓	20720	12.5
given in ✓	20820	8.2
tenths, ✓	20816	8.1
only. ✓	20539	8.8
✓	20529	8.7
✓	20510	Too poor, faint.
✓	20080	8.3
✓	20074	8.2
✓	20067	8.2

September 5, 1918.

SS Cygni.

Measures continued.

✓ I 20979	12.9	
✓ 21601	"	Too poor. In extreme corner.
✓ 21529	12.5	
✓ 21520	12.6	
✓ 21186	8.4	

September 10, 1918.

SS Cygni.

Meas. cont.

✓ I	22863	8.2	
✓	22616	12.5	
✓	22856	8.3	
✓	~~22842~~ 22842	about 8.1	
✓	22131	8.2	
✓	21682	8.2	
✓	22845	8.2	
✓	22841	8.2	
✓	22127	8.2	
✓	22144	8.4	
✓	23138	8.3	
✓	21689	8.3	
✓	23149	9.9	
✓	22867	8.2	
✓	22870	8.3	
✓	22877	8.5	
✓	23153	10.1	
✓	22884	9.4	
✓	24118	10.9	
✓	24037	12.1	
✓	23733	12.5	
✓	23407	8.2	
✓	23794	12.4	
✓	23945	8.0	
✓	23400	8.2	
✓	23607	12.4	Prov. Near edge. Images elongated.

September 11, 1918.

SS Cygni.

Meas. cont.

✓ I	25267	9.4
✓	25256	8.7
✓	25248	8.2
✓	24422	8.2
✓	25233	9.5
✓	24417	8.2
✓	24783	8.2
✓	24890	10.0
✓	24418	8.2
✓	24406	8.2
✓	27649	12.8
✓	27552	12.4
✓	26865	8.4
✓	27335	8.2
✓	26556	8.2
✓	26559	8.2
✓	26113	"
✓	26018	8.2
✓	26000	12.4
✓	25277	9.9
✓	26022	8.1

Trailed images

near extreme edge

September 14, 1918.

SS Cygni

Meas. cont.

✓	I	19874	12.6
✓		19944	12.6
✓		19684	8.3
✓		28701	12.5
✓		28724	12.4
✓		28725	12.4
✓		28729	12.3
✓		28694	12.5
✓		28695 ⁶	12.3
✓		28630 ⁹¹	12.4
✓		28728	12.4
✓		28723	12.5 [#]
✓		28630	8.2
✓		28726	12.4
✓		28697	12.5
✓		27783	8.2
✓		28826	12.1
✓		28388	8.2
✓		28825	11.7
✓		28829	11.7
✓		28698	12.5
✓		28831	12.2 ? Too far ?
✓		28832	11.8
✓		28837	12.1
✓		28699	12.5
✓		28700	12.3
✓		28389	8.1

September 16, 1918.

SS Cyg

Meas. cont.

✓ I	28838	12.0	
✓	27877	12.5?	Poor image.
✓	28833	"	Too poor.
✓	28841	12.2	
✓	28846	12.1	
✓	28849	"	Too poor; faint.
✓	28845	12.1	
✓	28834	12.0?	Poor image.
✓	28835	11.8	
✓	28842	12.2	
✓	28843	12.2	
✓	28737	12.5	
✓	28739	12.4	

September 28, 1918.

SS Cygni

Mear. cont.

✓ ± 19199 hr. 8.3

✓ 25240 hr. 8.1

✓ 20531 hr. 8.2

✓ 20499 hr. 12.5

✓ 20800 hr. 8.2

✓ 16035 hr. " Faint. Too faint to est.

✓ 22823 hr. 8.2

✓ 28727 hr. 12.5

October 1, 1918.

Late afternoon

SS Cygni

Measures Count

✓ I 28951	12.2	
✓ 29023	10.3	
✓ 29031	10.4	
✓ 29026	10.3	
✓ 29033	10.4	
✓ 28947	12.4	
✓ 28932	12.2	
✓ 28933	12.5	
✓ 28949	" Too poor. Faint,	
✓ 29032	10.5	
✓ 29028	10.5	
✓ 29030	10.5	

Oct. 2, 1918

Late afternoon

SS Cygni

Measurements continued.

✓ I	28931	12.4
✓	29034	10.5
✓	29039	10.6
✓	29025	10.5
✓	29036	10.5
✓	28934	12.4
✓	28940	12.4

? Out of focus, badly.

October 3, 1918.

55 Cygn.

Measures cont.

(Measures on these pages are made a few at a time, frequently interrupted by other work, and therefore are entirely independent of any knowledge of the magn. as running on a group of plates at minimum.)

J.E.W.)

✓	I	28935	12.3
✓		28939	12.4
✓		28857	12.5
✓		29027	10.8
✓		28952	12.2
✓		28944	12.4
✓		29040	10.5 ?
✓		28928	12.4
✓		28854 br.	12.5
✓		29035	10.5
✓		28937	12.5
✓		29037	10.5
✓		28938	12.3 ?
✓		28860	12.5
✓		29021	9.9
✓		28840	12.3
✓		28851	12.4
✓		29038	10.6
✓		29477	12.3
✓		29478	12.4
✓		29196	12.2
✓		29478	12.3
✓		28862	12.5
✓		29504	11.4
✓		29215	12.3
✓		29194	12.4
✓		29511	8.2

October 3, 1918.

55 Cygni.

Measures continued.

✓	I	29195	12.5
✓		29205	11.9
✓		29203	12.3
✓		29208	12.4
✓		29197	12.5
✓		29210	12.3
✓		29202	12.4
✓		29024 br.	10.6
✓		29042	10.6
✓		29046	10.8
✓		29043	10.7
✓		29045	10.8

October 4, 1918

SS Cygni.

Measures continued.

✓ I	29609	12.2	
✓	29615	12.4	
✓	29802	9.9	
✓	29951	10.5	
✓	29803	9.9	
✓	30166	12.1	
✓	29825	12.4	
✓	30436	"	Too poor.
✓	30442	11.8	
✓	30453	"	
✓	29049	10.8	
✓	30449	"	Too poor.
✓	30437	11.7	
✓	30454	11.7	
✓	30455	12.4	
✓	29051	10.8	
✓	30439	11.8	
✓	29050	10.9	
✓	29052	10.7	
✓	32231	12.0	?
✓	32228	12.1	
✓	30730	"	Too poor, edge
✓	30844	8.9	? Out of focus. Star C, near edge.
✓	32232	12.0	
✓	31688	12.2	
✓	32221	12.1	
✓	32046	8.2	edge.
✓	32222	"	Too poor.

October 4, 1918.

SS Cygini

Measurements continued.

✓ I	32233	"	Too poor -
✓	30848	8.2	
✓	30851	8.2	
✓	32217	12.3	
✓	30854	8.2	
✓	32218	12.2	
✓	30865	perhaps 8.2	C badly out of focus
✓	32219	12.2	
✓	31028	"	Bright. Extreme edge. Probably 8.2.
✓	32220	12.1	
✓	32229	12.1	
	~~30869~~		
✓	32230	12.3	
✓	32227	12.2	
✓	31381	12.2	
✓	31664	12.2	
✓	31682	12.0	
✓	31663	11.6 ?	
✓	34039 ⁸	9.5	
✓	34085	8.2	
✓	34036	9.2	
✓	33146	12.4	
✓	34081	8.2	Br.
✓	33689	8.2	
✓	34099	9.3	
✓	34089	11.8	
✓	34094	9.2	
✓	34001	12.3	

October 4, 1918.

SS Cygni.

Measurements continued.

✓	I 34094	8.2
✓	31665	12.0
✓	34091	8.2
✓	33988	12.2

October 5, 1918.

SS Cygni.

Measures continued.

✓ I	34239	10.6	
✓	34472	8.2	
✓	34237	9.8	
✓	34225	8.7	
✓	34466	10.1	
✓	34223	8.2	
✓	34229	9.4	
✓	34408	9.5	
✓	34300	11.0	
✓	34224	8.2	
✓	34501	8.3	
✓	34511	8.2	
✓	34809	10.2	
✓	34221	8.2	
✓	342 ¹⁵ 17	8.2	edge
✓	34296	9.5	
✓	34219	8.3	
✓	34186	12.0	
✓	34297	9.6	
✓	34190	12.3	
✓	34216	8.1	
✓	34286	8.1	
✓	342 ¹⁹⁶ 15	11.9	
✓	34283	8.3	
✓	34500	8.3	
✓	34222	8.2	
✓	34497	11.0	near edge.
✓	34220	8.2	

October 5, 1918.

SS Cygni.

Measures. cent.

✓ I	34197	10.7
✓	34217	8.3
✓	34208	9.3
✓	34170	11.9
✓	34182	12.2
✓	34147	9.4
✓	34278	9.2
✓	34249	12.2

October 7, 1918.

S S Cygni.

Measures cont.

✓	I 34245	10.9
✓	34149	10.3
✓	34146	8.2
✓	35053	9.6
✓	35212	9.6
✓	35501	9.9
✓	34945	12.0
✓	34844	12.3
✓	35263	10.0 (or 1)
✓	34843	12.4
✓	34830	12.5 (or 6)
✓	34828	10.5
✓	35266	10.8
✓	34826	9.8
✓	34824	9.6
✓	35310	8.7
✓	34816	8.8
✓	34958	8.1
✓	35499	9.9
✓	34815	9.5
✓	34956	8.1
✓	34950	8.4
✓	34812	9.5
✓	34951	8.1
✓	34955	8.0
✓	34948	9.4
✓	34207	9.7

October 6⁷, 1918.

SS Cygni

Meas. cont.

✓ I	34949	9.3
✓	33479	12.5
✓	34205	9.6
✓	34947	11.9
✓	34957	8.1
✓	34952	8.1
✓	~~34955~~	~~8.1~~
✓	34203	10.6
✓	34214	8.2
✓	34954	8.0
✓	34212	8.2
✓	35661	8.3
✓	35530	9.7
✓	35585	9.7
✓	35592	9.6
✓	35574	10.1
✓	35610	10.4
✓	35532	10.2
✓	35542	10.1
✓	35580	9.9
✓	35607	10.3
✓	35665	8.3
✓	35504	9.6
✓	35670	9.5
✓	35615	10.3
✓	35587	9.6
✓	35502	9.6

October 7, 1918.

33 Cygni.

Meas. Cont.

✓	I 35618	10.7
✓	35596	10.1
✓	35622	10.8
✓	35625	10.8

October 8, 1918.

55 Cygni.

Measures Cont.

✓ AC 2511	about 12.0
✓ 1783	Trace, no east, faint stars not seen
✓ AC 2030	12.3
✓ 1864	8.0
✓ 2510	N.S.
✓ 1684	8.1
✓ 1732	11.8?
✓ 825	N.S.
✓ 1966	12.3?
✓ 1064	12.4
✓ 577	11.7
✓ 1984	" Too faint to east.
✓ 474	N.S.
✓ 391	N.S.
✓ 316	8.0
✓ 4060	8.1
✓ 4202	12.1
✓ 4257	10.2
✓ 3104	10.0
✓ 4077	8.0
4245	
✓ 4090	9.5
✓ 4158	N.S.

October 28, 1918.

SS Cygni.

Measurements cont.

✓	AC. 4126	11.1	
✓	4245	8.8	
✓	4186	11.7?	
✓	4329	12.3	
✓	3539	"	Too poor.
✓	3909	12.0	See estimate.
✓	3942	9.4	
✓	3980	12.0	
✓	2865	12.1	
✓	2883	12.1	
✓	3100	12.3 ²	
✓	2946	12.1	
✓	3058	"	Faint stars not distinct enough make estimate.
✓	5285	"	Too poor.
✓	5184	"	Too poor. Near ~~extreme~~ edge
✓	4982	"	Too poor.
✓	4389	"	Defective.
✓	5056	9.5	
✓	4098	9.7	
✓	5259	8.2	
✓	4010	11.8	
✓	4323	12.3?	
✓	4343	"	Defective
✓	3823	"	Too poor.
✓	5092	8.1	

October 29, 1918.

SS Cygni.

Measurements continued.

✓ AC 5137	11.7
✓ 4453	8.1
✓ 4016	10.9
✓ 4494	9.5
✓ 5108	9.6
✓ 4104	10.3
✓ 4085	8.8
✓ 4069	8.7
✓ 3190	11.3
✓ 3765	11.6
✓ 3050	12.4
✓ 3092	12.1
✓ 3101	12.1
✓ 2909	11.2 ?
✓ 2979	8.1
~~3815~~	
~~3826~~	
✓ 3785	8.1
✓ 5375	Too far. Faint.
✓ 5089	8.1
✓ 5073	8.1
✓ 4483	8.2

October 30, 1918.

SS Cygni

Measurements continued

✓	ac 5399	11.6	
✓	5338	11.7	
✓	5279	10.1	
✓	5225	11.7	
✓	5191	11.7?	
✓	5167	11.6	
✓	5095	8.1	
✓	5090	8.1	
✓	5039	11.7	
✓	4987	"	Too poor.
✓	4387	11.8	
✓	4404	12.0	
✓	4423	10.6	
✓	4267	10.8	
✓	4117	10.8	
✓	4438	8.2	
✓	4938	"	Too poor. In corner.
✓	4950	"	Too poor.
✓	4211	11.8?	
✓	4236	8.2	
✓	4002	12.0?	
✓	4041	11.7	
✓	4096	9.4	
✓	2593	11.9	
✓	2631	11.7	
✓	3105	10.0	
✓	2679	11.4	

October 31, 1918.

Raining and very dark.

S.S. Cygnus.

Measurements continued.

✓ AC 2889	11.8	
✓ 3020	11.8	
✓ 3077	11.8	
✓ 3678	"	Too poor.
✓ 3780	8.1	
✓ 3801	9.4	
✓ 3869	n.s.	< 11.4
✓ 5829	8.2	
✓ 6434	8.1	
✓ 6455	n.s.	< 10.7
✓ 5446	8.1	
✓ 5509	11.3	
✓ 5519	11.5	
✓ 5594	11.7	
✓ 7791	8.2	
✓ 7857	"	Too poor.
? — 6903	8.9?	
✓ 6922	10.9	
✓ 7752	8.2	
✓ 6557	"	Too poor.
✓ 6567		
✓ 6709	9.5	
✓ 6840	n.s.	< 11.5
✓ 5676	12.0	
✓ 5721	12.0?	
✓ 5821	8.1	
6426		Too dark to continue.

November 1, 1918.

SS Cyg.

Measurements continued.

AC 6567

6426

✓	5443	8.1	
✓	5420	10.8	
✓	5475	8.1	
✓	5494	9.9	
✓	5546	11.8	
✓	5733	11.7	
✓	5146	11.2	
✓	5173	11.6?	
✓	4951	11.1	
✓	5346	11.8	
✓	5385	11.6?	
✓	5014	11.6	
✓	5179	Too poor. Var. faint.	
✓	5025	11.5	
✓	5043	11.2? Defect on Var.	
✓	5213	11.8	
✓	5051	9.9	
✓	5242	11.9	
✓	5270	9.6	
✓	5059	9.4	
✓	5077	8.1	
✓	5294	12.0	
✓	7682	10.1	
✓	7691	Too poor.	
✓	7889	Trace < 11.0	
✓	7482	8.1	

November 1, 1918.

Fine plate,

faint - ac 7906

and 7614

and 6989

S S Cygn.

Measurements continued.

✓ ac 7918	" Too poor: Var. faint.
✓ 6547	11.3?
✓ 6581	9.5
✓ 6708	9.4 ⁵
✓ 6894	8.1
✓ 7046	Too poor? Brighter 8.1?
✓ 6789	11.8
✓ 5607	11.7
✓ 6426	8.1
✓ 5821	8.1
✓ 5615	about 12.0?
✓ 7971	11.6
✓ 7810	" Too poor
✓ 7906	11.7
✓ 7921	< 10.7 ms.
✓ 7779	8.1
✓ 3815	11.7
✓ 7983	11.6
✓ 7126	11.8
✓ 7775	8.1
✓ 7429	9.5
✓ 7614	8.1
✓ 7654	11.5
✓ 7710	11.8
✓ 7740	10.3
✓ 7744	9.5
✓ 7745	9.5

November 2, 1918.

SS Cygni

Measurements continued

✓	AC 7750	8.1	
✓	6738	11.8	
✓	6798	11.7?	Defect on Var...
✓	6939	12.0 ~~2~~ 1?	
✓	7094	10.7	
✓	6385	12.0	
✓	6989	12.3	
✓	6806	11.8?	Comp. stars barely seen.
✓	6968	11.8	Scratch on Var.
✓	6417	"	Too poor.
✓	6440	8.1	
✓	6600	11.8	
✓	6620	11.7	
✓	6667	12.1	

November 4, 1918.

Very dark day.

SS Cygni.

Measure continued.

✓	ac 2747	12.0
✓	2583	11.8
✓	2867	12.0
✓	2758	11.8
✓	5479	8.2
✓	5467	8.1
✓	5448	8.2
✓	5504	18.2 ?
✓	5553	12.0 ?
✓	5663	11.7
✓	3838	Trace. < 11.4
✓	7852 broken	11.6
✓	9848	10.8
✓	9766	10.2
✓	8849	12.1
✓	9525	11.8
✓	9021	12.0
✓	8957	9.4
✓	8906	8.1
✓	8595	Trace < 11.5 ⁴
✓	8921	8.1
✓	8549	11.7
✓	8937	8.2
✓	8013	11.8
✓	8035	11.2 ?
✓	9867	10.6
✓	9836	Traced. Too poor.

November 5, 1918.

SS Cygni.

Measurements continued.

✓	AC 8899	8.1	
✓	8724	11.9	
✓	8890	12.0	
	8687	9.4	
✓	9771	10.5	
✓	8624	"	Faint. Too poor.
✓	9756	10.0	
✓	8051	10.6	?
✓	8004	11.8	
✓	8632	"	Trace. Fainter than 10.7
✓	8806	11.9	
✓	8190	"	Too poor. Very faint.
✓	8229	"	Too poor.
✓	8071	8.1	
✓	8065	"	Too poor.
✓	8021	11.3	
✓	8006	~~10.5~~	" Defective
✓	9886	10.5	
✓	9814	10.5	
✓	9858	10.8	
✓	8028 broken	11.1	
✓	4394	11.6	
✓	4353	< 11.5	N.S.?
✓	4258	10.4	
✓	3818	11.5?	

November 5, 1918.

SS Cygni

Measures continued.

✓ AC5533	Trace	< 11.0
✓ 5545	11.8?	
✓ 2823	8.1	
✓ 2990	8.1	
✓ 3807	7 " Too poor.	
✓ 4091	9.5	
✓ 6693	8.1	
✓ 6715	10.1	
✓ 3912	8.1?	
✓ 6899	8.2?	
✓ 7036	8.2	
✓ 7226	" Too poor, Faint.	
✓ 4067	8.2	
✓ 5675	" Too poor, Faint.	
✓ 5805	" Too poor.	
✓ 6546	" Trace, Fainter than 11.4	
✓ 9864	10.3 near edge	
✓ 9887	10.3 " "	
✓ 9073	" Bright.	
✓ 9008	" Too poor.	
✓ 8914	8.1	
✓ 8592	" Too poor.	
✓ 8561	8.1	
✓ 8041	10.9?	
✓ 6583	" Too poor.	
✓ 4095	9.5	
✓ 4203	Trace, < 10.9	

November 5, 1918.

SS Cygni.

Measurements continued.

✓	ac 7607	8.1	
✓	7663	"	Too poor.
✓	7807	10.3 ?	Distorted
✓	5429	8.1	
✓	5489	- 9.5	
✓	6562	"	Trace < 11.0
	3630	no	plate in cover.
✓	9794 broken	"	Too poor.

Note: Many of these plates are centered at $+60^\circ$, approx. This brings SS Cygni very near edge of film, always distorted. Poor plates to estimate.

November 8, 1918.

SS Cygni.

Measurements continued.

✓ AC	2043	8.1	
✓	2062	8.1	Corner of plate.
✓	1603	9.5	Corner.
✓	852	"	Too poor.
✓	2015	"	Too poor. Var. Faint.
✓	1881	9.3	?
✓	914	8.1	
✓	668	8.1	
✓	509	11.4	n.d.?
✓	1985	12.3	
✓	2037	< 11.4	
✓	1900	11.7	
✓	1942	12.0	
✓	I 31667	11.5 ⁷	
✓	34953	~~10.9~~ 8.1	
✓	35628	10.9	

	AC 1014	superfused on AC 5446	not identified
✓	2076	8.1	c out of focus, edge.
✓	8700	8.1	
✓	~~5499~~ 6903	11.6	
✓	4137	perhaps 11.2	
✓	1892	9.9	
✓	399	12.0 ?	
✓	487	12.0 ?	
✓	1240	"	Too poor.
✓	6903	"	Too poor.
✓	2142	Trace	< 12.2

May 5, 1931

Miss Woods - I wish you
would substitute this for
your other variable star work.
We are awfully anxious to know
what this freak does in pg
light.
H.S.

55 Cygni 213843

Please make as complete a collection
of photographic observations as possible;
it is hoped that for many stretches
the observed curves will be
continuous. All series of plates
to be used.

The comparison stars and their
adopted pg. magnitudes are
marked on the chart in green.
Some positions are on R.H. 2696

Index

S. S. Bygner

95 21+30

89 AC 21+45

87 22+30

91 22+45

— 21+30

93 AY 22+30

— 22+45

85 21+45

112 I

100 AI 21+30

102 22+30

104 21+45

107 22+45

111 MB 21+45

111 MB

110 RH 21+45

— 22+45

— 21+30

114 22+30

115 mc

— A

ac Plats

19823	black
20039	8.6
20588	4112
20562	4113
20362	Td pen
20390	4115
20224	11.5

21 + 45

19823	black	1918	
20039	8.6	April 6	21690
20047	< 11.3	Apr 14	21698
20224	11.5	June 20	21765
20362	Tor from	Aug. 14	21820
20390	< 11.5	Aug 19	21825
20562	< 11.3		21870
20588	< 11.2		21877
20880	Tor from	1918	
21365	10.3	April 21 1919	22070
21504	Tor from		
21569	10.5	June 29, 1919	22139
21665	Th.	Aug. 4	
21720	Th	" 21	
21759	< 11.0	" 28	22199
21896	< 11.3		22244
22069	< 11.2	Dec. 4	22297
22119	< 11.5	" 18	22311
22170	Tor from	— 1919	
22430	< 10.3	Feb. 20 1920	22375
22690	8.0 ?	June 23 1920	22499
22805	Tor from	—	
22817	Tor from	—	
22917	< 11.3	Oct 1 "	22599
22958	< 11.3	Oct 8 "	22606
22987	Th	—	
23014	< 11.3		22621
23111	11.6	Dec 7 "	22666

Plate from
probably about 8.5

23170	Taper	—	1920	
23472	black		1921	
23616	black		April 9 1921	22789
23772	<113, ^{sup} about 116		June 7 "	22848
23812	NS		—	
23913	NS <11.3		Aug 5 1921	22907
23960	<10.3		" 16 "	22918
23994	NS <11.3		" 22 "	22924
24193	Vary fr <11.3		Oct 5 "	22968
24250	72 about 114			22977
24283	<11.3			22985
24442	10.9			23031
24543	11.5		Dec 30 "	23054
24601	<11.3		Jan 25 1922	23080
24785	<11.3	cl C	June 7	3313
24804	—	C2	June	3578
24807	—	cl C		
24809	—	cl C		
24823	—	C		
24830	—	C	Probably N.S.	
24850	—	black		
24867	—	cl C		
24926	—	C	Bright, Est if needed	
24961	10.9		Nov. 1, 1922	23360
25261	8.1		May 22, 1923	23562
25288	cl W	Probably 11.5	June 20, 1923	23591
25295	8.9		June 30, 1923	3601
25316	—	cl W	Probably fr. Aug. 8.	
25326	11.5? cl W	Images are overlapping	Aug. 8, 1923	23640

get est.

AC Plates

ac	25353	12.3	UW	Aug. 22, 1923	3654
	25376	Tor pen			
	25360	41.3	clw	Aug 31 '23	3363
	25377	11.8	Pan	Sept 13	3676
	25386	104	clw	Sept 17	3680
	25415	122	clw	Oct 29	3722
	25421	120	clw	Nov. 1	3725
	25452	8.6	clw	Nov. 12	3736
	25483	11.7	clw	Images mixed Dec 3	3757
Insert 80	25529	11.8	clw	Dec. 26	3780
	26972	11.5		2425540	
	26980	11.5		2425544	
	27098	11.7		25596	1928
	27446	8.0 about		25741	1929 85
	27477	11.3		25757	
	27529	41.3 Tor pen		5774	
27570	27595	Tor pen			
	27570	8.0 of right star		5797	
	27546	Tor pen			
	27602	11.4		5807	
	27633	11.0		5820	
	27658	11.5		5826	
	27665	12.7		5834	
	27681	41.3		5841	
	27699	41.3		5848	
	27711	12.6		5852	
	27723	41.3		5858	
	27747	8.2		5874	
	27756	8.0		5876	

Plotted

25563	8.62	cl. W	insert in p 82	June 26, 1924	23963
25569	<11.3	rarely seen	July 7		3974
25673	9.9		Oct 29		4088
25601	<11.0		July 21 1924		3988
25980	—	cl. W			
25935		cl. W & muddled			
25987	11.5		Aug. 1-2 1925		4364
26001	11.8 <11.3		Aug 17-18 1925		4380
26055	<11.3		Sept. 25-26, 1925		434419
26069	dark est?				
26130	<11.3		Nov. 10-11, 1925		4465
26372	<11.3		June 30, July 1, 1926		4697
26380	8.7		July 12-13 1926		4709
26478	11.7		Oct. 15-16 1926		4804
26533	11.2		Nov. 11-12 1926		4831
2					

Plotted

✓

27779	11.4		2425889
27791	11.4		5892
27823	12.6		5896
27850	12.7		5908 1929
28303	11.4		26093 1930
28327	Tor		-
28412	<11.3	Probably 11.6	26158
28465	8.8		26188
28476	10.3		26190
28567	12.3		26224
28600	8.8		26232
28604	9.6		6238
28613	10.3	broken	6239 1930
28668	<11.3		6254 1930
28727	8.6	Oct 22-23	6272
28747	<11.3	Nov 1-2	6282 1930
28749	<11.5		6282

✓ 117 ~~3962~~ check

AY Plates 21 + 45

Class

55	black	Apr. 26 1924	L	23902	
? — 117	~~11.3~~ best if possible	June 25	W	3962	Images too mixed
177	9.4	July 29	W	3996	
130	9.5	July 10		3977	
145	black		W		
196	black	Aug 15	W		
221	probably 10.8	images mixed	W	Aug 28 4026	
245	black	Sept. 10	W	4039	perhaps
ext? 341	br	Oct 26	W	4085	perhaps 9.2 μ
357	black	Nov 10	W		
? 386	< 11.3	Nov. 26	W	4116	
400	black	Dec. 4 1924	W	4124	
629	11.2	May 17 1925	W	4288	
663	black	June 12-13	W	—	
694	black	July 3-4	W	—	
? 711	prob. med. m.	July 18-19	W	24350	about 10.5
743	probably 11.4	Aug 16-17	W	4379	
793	ft	Sept 21-22	W	4415	
823	ft	Oct 7-8	W	4431	
859	N S	Nov 9-19	W	4464	
914	12.3	grad.	W	Dec. 19-20 1925	4504
1100	probably 9.8		W	July 17-18 1926	4714
1112	N S		W	Aug 15-16	4743
1129	8.8		W	Sept 7-8	4766
1159	black, many images	< 11.3	W	Oct. 4-5	4783
1194	difficult	< 11.3	W	Oct. 26-27 1926	4815
1206	12.0	Nov 1-2	W		4821
1253	10.3		W	Nov. 27-28	4847

✓

1452	about 12.0	Apr. 30-May 1 1927	5001
1470	< 11.3	May 28-29 1928	5029
1474	too black	W June 2-3	5117
1526	11.0	July 24-25	5086
1542	11.0	425096 W Aug 3-4	2425096
1558	11.1	425103 W	5103
1598	12.0	2425129 CW Sept 5	5129
1621	12.0	5136 CW Sept 12	5136
1713	8.0	5165 W Oct 11	8.5 pl.
1734	8.9	5169 W	
1744	11.1	5173 W	
1784	< 11.3	5182 W	
1800	12.2	5185 W	
1831	< 11.3	5194 W	
1914	11.8	5227 W	
1920	12.0	5229 W	pl. ✓

22^h+30

20227	about 116	June 23 1918	21768	1768
20369	<11.0	Aug 15 "	21821	
20391	<113	Aug 19 "	21825	
20490	Torizon			
20575	<110	Oct 7 "	21874	
20889	<110	Dec 30 "	21958	
21451	120	May 18 1919	22097	
21871	112	Oct 31	2235	
21943	Torizon			
22946	<113	Oct 7 1920	22392605	
23116	<113	Dec 8 "	2667	
23135	<11.0	Dec 15 "	2674	
23654	8.6	Apr. 25 1921	2805	
23766	<11.0	June 5 "	2846	
23790	<11.0	June 12 "	2853	
23816	<110	June 21 "	2862	
23910	<110	Aug 4 "	2906	
23948	<110	Aug 14 "	2916	
23995	<11.0	Aug 22 "	2924	
24274	perhaps 117	Oct 21	2984	
24433	112	Dec 6 "	23030	
24502	<110	Dec 20 "	23044	
24531	<113	Dec 29	23053	
24815	<110	July 25 1922	23261	
24828	C' NS	Probably <113	Aug 14	3281
24843	Torizon			
24858	C' 8.9	Sep 10 1922	3308	
24865	Pav	26 Sept 13	3311	

24930 C'	8.5	Oct 21 1922	23349	8.0 μ
24967 C'	about 12.5	Nov. 9 "	3368	
25001 C'	10.0	Nov 28	3387	
25023 C'	11.6	Dec 9	23398	
25289 W	N S	June 26 1923	3597	
25303 W	Fl.	July 8	3609	
25313 W	N.S < 10.6	July 16	3617	
25322 W	torpor			
25354 W	about 11.5	Aug 22	23654	
25366 W	Pen			
25381 W	11.5?	Sept 14	~~3312~~ 3677	
25403 W	< 11.3	Oct 26	23719	
25422 W	11.6	Nov 1	3725	
25462 W	11.5	Nov 19	23743	
25566 W	9.7	June 30 1924	3967	
25581 W	< 11.3	July 14	23981	
25598 W	< 11.0	July 20	3987	
25616 W	seen, torpor to lat			
25709 W	8.2	Dec. 14	4134	8.0 μ
25725	< 11.0	Dec 22	4142	
25950 W	torpor			
25984 W	< 11.0	July 30 1925	4362	
25999 W	N S			
26023 W	8.5	Aug 28	4391	8.5
26062 W	< 11.3	Sept 28	24432	
26075 W	< 11.3	Oct 5	24429	
26117 W	< 11.0	Nov 4	4459	
26362 W	about 11.0	June 20 1926	24687	

UC 26374 W	<10.6	July 3 1926	24700
26383 W	9.2	July 16	4713
26421 W	8.7	Sept 3	4762
26426 Pan	9.1	Sept 8	4767
26462 W	<11.0	Oct 4	4793
26500	<11.0	Oct 23	4812
26502 Pan	<11.0	Oct 25	24814
26506 W	<11.0	Oct 26	4815
26518 W	<11.0	Nov. 1	4821
26538	Terjan		
26539	8.7	Nov 23	4843
26560 W	11.2	Dec 4	4854
26566 W	11.5	Dec 6	4856
26580 W	<11.0	Dec. 14	4864
26636 W	<11.0	Jan 8 1927	4889
27022 L	12.0	Nov 7 1928	25558
27054 L	8.8	Nov 22	25573
27071	9.8	Dec 5	25586
27099	12.0	Dec 18	25599
27127	<11.0	Dec 22	25603
27193	11.8	Jan 8 1929	5620
27465	<11.0	May 16	25748
27534	<11.0	June 16	25779
27555	<11.0		25793
27566	8.2		25796
27586	10.8		25803
27608	<11.3		25808
27657	<11.3		5826

8.0 pl
7.5

✓

27677	<11.0	425840	
27704	<11.0	25849	
27727	11.5	25866	
27760	8.2	5878	8.4 pl
27769	8.6	5880	8.6
27787	11.2	5890	
27843	<11.0	5904	
27870	10.3	5921	
27877	8.0	5922	8.0
27885	8.6	5925	
27913	11.4	5937	
28380	8.2 ¹⁹³⁰ June 15	6143	8.2
28421	<11.0 July 5	6163	
28477	9.87	6190	
28510	<11.0	6201	
~~28556~~	~~<11.0~~	~~6219~~	
28527	<11.0	6213	
28538	<11.3	6215	
28556	<11.0	6219	
28590	9.8	6230	
28601	8.9	6232	
28617	10.7	6240	
28642	11.5	6250	
28769	<11.3	6288	
28772	11.5	6291	
28865	8.5	6329	

✓
ac 22+45°

ac 19653	11.5	Jan 10, 1918	21604	
20132	<11.0	May 15	21729	
20264	<11.0	July 12	21787	
20276	<11.0	July 15	21790	
20303	<11.0	July 21	21796	
20319	<11.0	July 27	21802	
20466	8.2	Sept 7	21844	8.2 —
20507	10.5	Sept 15	21852	
20546	about 12.0	Sept 29	21866	
20629	<11.3	Nov 1	21899	
20668	8.0	Nov. 10	21908	8.2 pl
20735	11.5	Nov. 26	21924	
20901	<11.3	Jan 4 1919	21963	
21429	8.6	May 6	22085	
21452	<11.0	May 18	22097	
21621	10.9	July 23	22163	
21785		Sept 5 cracked	2207	
21810	10.5	Sept 18	2220	
21975	10.7	Nov 8	22271	
22009	12.7	Nov. 20	22283	
22027	<11.3	Nov 24	2287	
22221	8.2	Jan 10 1920 broken shield	4686 2234 ³	
22251	8.0	Jan 14	2338	8.0
22734	<11.0	July 13	2579	
22763	TV fm			
22776	defect in glass in pos. of var.			
22847	8.0	Sept 2	22570	7.8 pl
22892	<11.3	Sept 21	2589	

92

✓ 28664
~~23053~~
~~23044~~ } HB.

23053 ⁴⁴	<11.3	Nov. 12 1920	22637
- 23053	8.0	Nov. 12	2641 8.0 v
24091	8.0	Sept 13 1921	2946
24152	9.5	Sept 26	2959
24166	Torfun		
? - 24372	12.0	Nov 10	3004
- 28664	8.6	Oct 23	2986 -
- 23322	<11.0	Jan 24 1921	22714
- 25667 Pan	8.8	Oct 24 1924	24083
- 26040 Pan	<11.3	Sept 21 1925	24415
- 25664 L	8.8	Oct 23 1924	24082
- 23567 L	<10.6	Mar 25 1921	2774
28940 L	Torfun	Jan 2 1921	26344
23567	<10.6		
- 23733	<11.3	May 27, 1921	2837
24050	Torfun	Sept 2	

AY 22 +30

106 W rny black

AY 137 W < 11.3 July 13, 1924

2002²3980

169 W July 25

3992

185 W 9.5 Aug 3

24001

208 W 11.2 Aug 18

4016

213 W < 11.3 Aug 21

4019

227 W Image corrected by c 8.5082 Aug 30 4028

235 W " " " Sept 4 4033

259 W " " " < 11.3 ft Sept 25 4054

298 W 11.2 Oct 14 4073

318 W < 11.3 Oct 19 4078

324 W < 11.3 Oct 20 4079

334 W 8.5? Oct 24 4083

380 W 11.5? Nov 19 4109

406 W 9.7 Dec 9 4129

666 W Tcr blue

695 W 11.5 July 3 1925 4154 335

707 W 9.3 July 14 4165 4346

742 W < 11.2 Aug 15 4378

755 W Images corrected by c ft Aug 22 4385

773 W 8.2 Aug 29 4392 8.2

797 W < 11.3 Sept 22 4416

(881 W perhaps 11.3 Nov 20 4475

800 W 10.1 Sept 23 4417

1106 W < 11.0 Aug 8 1926 4736

1149 W 11.4 Sept 14 4773

1479 W 8.2 June 5 1927 5037 8.2

1523 W 11.5? July 8 5040

AY 1554	11.3 W Aug. 9 1927	2425102
1577	8.5 W Aug 24	25167
1606	11.4 W Sept 8	2425132
large image full print 1625	11.5 W Sept 15	25139
1662	11.5 W Sept 28	25152
1680	11.2 W Oct 4	25158
1686	not iden	
1722	8.6 W Oct 13	25167
1735	9.6 W Oct 15	25169
1753	very black	5176
1849	9.2	5199
1855	8.9	5201
1915	11.5	5227
1933	9.3	5232
1952	10.2	5239
	8.5	

ac 21 + 30		Remains	
ac 19659	<11.0 Jan 11 1918		
20145	<11.0 May 17		
20270	Torjon		
20464	Torjon		
20526	11.3 Sept 22		
20543	probably 11.2 Sept 29		
20660	8.0 Nov 8	21906	8.0
20764	<11.0	21928	
20913		Slide 4625	
21608	Torjon		
21800	8.5 Sept 13 1919	22215	8.5
21832	<10.6 Sept 26	2228	
22546	<10.6 Mar. 29 1920	2413	
22664	<11.0 May 30	2475	
22714	Torjon		
22845	8.2 Sept 2	22570	8.0 pl
22900	<11.3 Sept 22	2590	
23074	<11.0 Jan 8 1921	2646	
23271		2698	
23674	Torjon		
23873	" "		
24105	8.0	23949	8.0
24123	8.0	23955	8.0
24355	<11.0	22999	
25251	10.5 May 13, 1923	23553	
25252	10.9 May 13 "	23553	
25300	<11.0 July 6 "	3607	
26457	<11.0 Oct 1 1926	4790	
29235	Torjon		
29257	<11.0 May 7 31	26479	

ax $\begin{matrix} 32 \\ 21 \end{matrix} + 30$

Most of these are very
black

108

ax 143 Var not iden. with certainty

151

199

207

257

314

362

371

21 + 43

Too poor -

121

146

156

173

197

203

212

AI 21^h + 30°Plates recorded only if Var
slurs. Negative results are little
value.

Remain.

AI 17161	<10.3	May 16 1918	21730	
17564	<10.3	Sept 21. 1918	1858	
17575	<10.3			
"	<11.0	Sept 22 1918	1859	
17579	<10.3	Sept 24, "	1861	
17731	8.0	Nov. 10, "	1908	8.2
18444	Too poor			
18475	8.2	April 26, 1919	2075	8.5
18492	8.0	April 30, "	2079	8.2
18554	<10.3	May 25, "	2104	
18594	<10.3	June 12, "	2122	
21893	<11.0	July 28, 1922	3264	
22030	10.5	Oct 13, 1922	3341	
ft. 22095	<10.6	Nov. 9 "	3368	
22666	<11.0	Aug 17 1923	3649	
22799	<11.0	Oct 9 "	372	
22835	<11.0	Oct 27 "	3720	
22599	<11.0	Oct 5 1924	4064	
23632	<10.6	Oct 16 "	4075	
23733	<11.3	Nov 19 "	4109	
23756	97	Dec 1 "	4121	
24127	<11.0	July 3 1925	4335	
21965	11.2 perhaps	Sept 18 1922	3316	
22030	10.5			
24227	8.9	Aug 27 1925	4390	
24255	<10.6	Sept 19 1925	4413	

24814	8.8	July 14 1926	24871
24844	<11.0	July 3 "	4731
24866	105	Aug 29 "	4757
24900	104	Sept 11 "	4770
24933	<11.0	Oct 1 "	4790
24961	<11.0	Oct 11 "	4800
25188	<11.0	Dec 29 "	4879
25213	<11.0	Jan 8 1927	4889
25739	<11.0	Sept 24 "	5148
25774	<11.0	Oct 4 "	5158
25828	perhaps 10.2	Oct 15 "	425169
26521	8.2	July 24 1928	25452 8.0
26746	<11.0	Oct 31	25551
26778	<11.0	Nov 13 1929	25564
27265	<10.3	May 30 1929	25762
27326	<10.6	June 30	25793
27355	<10.3	July 11	25804
27423	<10.6	Aug 2	25826
27751	<10.6	Dec 5	5951
15	10.8 perhaps		
28737	9.6	Dec 13 1930	6324

AI 22+30

Remains.

~~15158~~	10.8 perhaps	Oct 5, 1916		
23587	<11.0	Oct 2, 1924	4052	
23652	11.2	Oct 22 "	4081	
23689	10.6	Oct 30 "	4089	
24168	<10.6	July 29 1925	4361	
24218	10.3	July 24 "	4387	
24246	9.5	Sept 8 "	4402	
2421	~~10.2~~			
24276	<9.4	Sept 25 "	4419	
24317	<11.0	Oct 7 "	4431	
24407	8.5	Nov 16, "	4471	
24551	8.5	Jan 19, 1926	4585	
24765	<11.0	June 11, "	4678	
21887	<11.0	July 21, 1922	3257	
21954	9.1	Sept 13 1922	3311	
22047	8.2	Oct 20 "	3348	8.0 pl.
22167	10.4	Dec 6 "	3395	
22654	<11.0	Aug 13 1923	3645	
22856	<11.0	Nov 2 "	3726	
	9.3			
24885	9.3	Sept 7 1926	4766	
25025	<11.0	Oct 28 "	4787	
25061	11.2	Nov 11 "	4817	
25232	<11.0	Jan 24 1927	4905	
25578	<11.0	June 30 "	5062	
25605	11.1	July 24, "	5086	

25666 8.2 or 8.5 Aug 19, 1927 5112
 25725 <11.0 Sept 17 " 25141
 25759 <11.0 Sept 29 " 5153
 25808 perhaps 8.0 Oct 11 " 5165

surrounding stars do not show probably not real but defect?

25943 8.5 Nov 15 425200
 26514 8.2 July 20 1928 25448
 26576 <11.0 Aug 14 1928 5473
 26767 <11.0 Nov 9 " 5560
 26800 8.2 Nov 23 5574
 26860 <11.0 Dec 15 5596
 26963 <11.0 Jan 7 1929 5619
 27410 <11.0 July 30 " 5823
 27492 <10.3 Aug 26 " 5850
 27559 8.0 Sept 24 5879
 27598 <11.0 Oct 9 5894

~~27566 78 July 3 5796 = ac~~

✓

AI 21 + 45

Insert 1106

mag 8.2

20890	<11.0	Aug. 4, 1921	2906
20914	<11.0	Aug 9, "	2911
20929	<11.0	" 15, "	2917
20960	<11.0	" 21, "	2923
20974	<11.0	" 23, "	2925
20989	<106	" 25, "	2927
21000	<11.0	" 27, "	2929
21147	<11.0	Oct. 2, "	2965
21155	about 11.6	" 4, "	2967
21170	<11.0	" 6, "	2969
21180	<11.0	" 8, "	2971
21190	<11.0	" 10, "	2973
21236	<11.0	" 21, "	2984
21270	<11.0	" 26, "	2989
21375	10.8	Dec 6, "	3030
21397	Probably seen - too faint to est.		
21432	<11.0	Dec 19 1921	3043
21470	<106	Dec 29,	3053
21909	<11.0	Aug 13 1922	3280
22588	<11.0	July 10, 1923	3611
22658	<11.3	Aug 15 "	3647
23592	11.2	Oct. 3, 1924	4062
23722	11.4	Nov. 17, "	4107
24221	9.6	Aug 25, 1925	4388
24236	8.0?	Aug 29, "	4392
24688	<11.0	Apr. 20, 1926	4748
24916	mag 8.2	Sept 18, "	4777
25068	about 10.8	Nov. 12 "	4832

8.2

AI

Using star = 8.2

25168	<11.0	Dec. 22 1926	4872	
25606	11.1	July 24 1927	5086	
25696	<11.0	Sept 8 "	25132	
25781	11.2	Oct 5 "	5159	
25789	<11.0	Oct 6, "	5160	
25951	8.5	Nov 16 "	5201	✓
26535	8.5	July 29, 1928	5457	✓
26559	<11.0	Aug 11 "	5470	
26570	<11.0	Aug 13 "	5472	
26639	9.6	Sept 21, "	5511	
26793	8.0	Nov 22 "	5572	or 7.8
26889	<10.3	Dec 22 "	5603	
26971	<11.0	Jan 8 1929	5620-0?	
27449	<10.3	Aug 16 "	5840	
27488	<11.0	Aug 25 "	5849	
27497	<11.0	Aug 28	5852	
27528	<10.3	Sept 15, "	5870	
27544	8.2	Sept 20 "	5875	or 7.8
27554	8.2	if right star? Sept 23	5878	8.2
27565	8.5	Sept 25, 1929	5880	8.8
27798	8.2	Dec 31 "	5977	✓
27826	9.3	Jan 7 1930	5984	

✓

AI 21^h +45°

Insert p. 104

19863	<10.6	Aug 9, 1920	22546
19868	<11.3	Aug 19, "	2556
19951	<11.0	Oct 2, "	2600
19963	<11.0	Oct 6, "	2604
20016	<10.6	Oct 22, "	2620
20117	~~10.6~~ <10.6	Dec 8, "	2667
20122	<11.0	Dec 11, "	2670
20617	<11.0	Apr. 12, 1921	2792
21007	<11.0	Aug 29, "	2931
21147	11.4	Oct 2, "	2965
21155	<11.0	Oct 4, "	2967
21170	11.5	Oct 6, "	2969
21180	<11.0	Oct 8, "	2971
21190	<11.0	Oct 10, "	2973
21236	<11.0	Oct 21, "	2984
21270	<11.0	Oct 26, "	2989
21375	10.7	Dec 6, "	3080
21397	<10.6	Dec 8, "	3082

comp. St
 ✓ 82 see marked 19298

AI 22+45

19240	<11.0	Dec 29, 1919	222 ³²² ~~267~~
19298	8.0	Jan 10, 1920	2334
19314	7.8	Jan 12, "	2336
19259	<10.3	Jan 2, "	2326
19328	8.1	Jan 14, "	2338
19707	8.2	May 16, "	2461
19721	<11.0	May 26, "	2471
19789	<10.6	July 8, "	2514
19827	10.9	July 21, "	2527
19833	<11.3	July 25, "	2531
19845	<11.0	July 27, "	2533
19882	8.1	Sept 1, "	2569
19897	8.0	Sept 3, "	2571
19918	<11.2	Sept 19, "	2587
20038	<10.6	Nov 3, "	2632
20062	8.5	Nov 12, "	2641
20082	9.0	Nov 17, "	2646
20265	9.5	Jan 13, 1921	2703
20347	8.0	Jan 27, "	2717
20674	<11.0	May 11, "	2821
20872	<11.0	July 27, "	2898
25642	<11.0	Aug 9, "	
20878	<11.0	July 31, "	2902
21018	<11.0	Sept 1, "	2934
21026	<11.0	Sept 3, "	2936
21055	<11.0	Sept 9, "	2942
21067	7.6	Sept 14, "	2947
21092	8.0	Sept 22, "	2955

V

21111	8.3	Sept 24, 1921	22957
21129	10.2	Sept 27, "	22960
21178	<11.0	Oct 7, "	2970
21316	<11.0	Nov. 4, "	2998
21347	<11.0	Jan. 19, "	3013
21359	8.9	Apr. 25, "	3019
22693	<10.6	Aug 30, 1923	3662
22955	<10.6	Dec 14, "	3768
24839	9.5	July 26, 1926	4723
25642	<10.6	Aug 9, 1927	25102
25647	<11.0	Aug 10, "	5103
25830	9.5	Oct 15, "	5169
25898	<11.0	Nov. 2, "	5187
26593	<11.0	Aug 20, 1928	25479
26708	<11.0	Oct 20, "	25540
26881	<11.0	Dec 21, "	5602
26952	<11.0	Jan 4, 1929	5616
27483	<11.0	Aug 24, "	5848

RH $21^h + 45^o$

1440	<11.0	Aug 24 1929	25848
1461	11.6	Aug 31 "	25855
1538	11.5	Oct 5, "	5890
2195	11.7	June 5 1930	26133
2209	7.9	June 15 "	6143
2238	11.8	June 27 "	6155
2255	11.5	July 4 "	6162
2282	11.6	July 17, "	6175
2285	Tor from		
~~2392~~	~~11.3~~	~~July 14~~	
~~2398~~	~~11.8~~	~~July 16~~	
2696	10.3	Dec 13, "	6324

MB young
magenta
center

224	12.8	Apr 19 1928	5356
314	12.0	June 10 1928	5408
346	<11.3	July 7, "	5435
380	8.0	July 25, "	5453
390	9.8	July 30, "	5458
412	12.8	Aug 12, "	5471
559	11.7	Sept 28, "	5518
1144	8.0	May 3, 1929	5735
1232	12.3	June 2, "	5765
1274	<11.3	ft stars too ft & blurred back	
1382	11.7	June 26, 1929	5789
1440	11.5	Aug 1, "	5825
1461	11.5	Aug 24, "	5848
		Aug 31, "	5855

MB ft star S

MB

21 + 45

2428	<11.0	Aug 17 1929	25841
2417	12.5	Aug 5 "	5829
2423	12.6	Aug 7, "	5831
2433	11.5	Aug 26, "	5850
2434	<12.5	Aug 26,	5850
2435	12.4	Sept 2, "	5857
2446	7.8	Sept 24 "	5879
2406	not core		
2415	<11.0	Aug 2, "	5826
2407	<11.0	July 31	5824
2392	11.3	July 14	5808
2398	11.8	July 16	5809
	10.3		
2427	<11.0	Aug 17	5841
2426	<11.3	Aug 17	5841

Liquids

51.34 22.1

+38° +48°

I Plates

Shorefrater S	I	43704	12.1	July 10, 1924	23977
		43781	12.5	July 17, "	3984
		43917	12.0	Aug 26, "	4024
		44048	11.5	Sept 27 "	4056
		44450	12.6	Aug 13, 1922	3280
		44451	12.3	Aug 13, 1922	3280
		44479	12.5	Apr. 15, "	3282
		44063	11.4	Sept 28 1924	4057
	T'	45572	11.2	Sept 14, 1926	4773
	T'	45627	12.5	Oct 1, "	4790
	T'	45628	12.4	Oct 1, "	4790
	T'	45629	12.6	Oct 1, "	4790
		46726	not com		
		46731	12.0	July 15 1928	5443
		46769	12.8	Aug 12 1928	5471
		46793	12.5	Sept 17 "	~~5507~~ 5497
		46808	11.4	Sept 9, "	5499
		46917	12.7	Oct 15 "	5535

No record is made of plates with
Var. just off N. edge.

RH 22 +30

When Var is seen, it is on extreme

north limit of filars

1187	perhaps 11.1	May 15, 1929.	2425747
1331	about 11.0	July 12, "	5805
1463	11.3	Sept 23, "	5857 ~~4444~~
1746	<11.3	Dec 11, "	5957
2228	10.6	June 22, 1930	6150
2234	about 11.0	June 25, "	6153
2286	11.0	July 21, "	6179
2293	10.3	July 24, "	6182
2300	8.2	July 29, "	6187
2343	<11.3	Aug 10, "	6199
2349	<11.3	Aug 11, "	6200
2383	11.6	Aug 20, "	6209
2408	<11.3	Aug 28, "	6217

RH 21^h +30

apparently no plates

AK examined

21 +43 too many images to
feel sure of iden.

✓
 MB 22+45 ($22^h 23^m + 45.7$)

MB 2393	11.4	July 14, 1929	5807
2524	9.8	Oct 11, 1930	6261
2686	11.6	Dec. 2, "	6313
2741	11.6	Dec 29, "	6340
	~~11.3~~		

MC Plates

earlier than
 1918
 Slide 4768

11816	8.5	Nov. 24, 1916	21192
12578	12.7	March 20, 1917	1308
17995	12.4	Oct. 5, 1921	22968

1917phae.proj.1179w