



Plate	exp. in	mag.
A.I	60	19.7
ac	60	11.5
L	10	12.4
L	60	13.3 -
I	10	14.0
I	60	15.0
b	10	14.4
b	60	15.6
ma	60	16.8 <i>ist</i>
mb	10	15.0
mb	60	16.5
H	60	16.5
Yerkes	45	17.7
Le. rous.	60	18.9 <i>ist</i>
Mt. Wilson	40	19.1
Mt. Wilson	240	21.0 <i>ist</i>

October 16, 1910

AC 720, taken <sup>6<sup>h</sup> + 30<sup>m</sup></sup> Feb. 18, 1900, exposure  
in D = Aa

A very rapid survey was made to detect  
anything in the negative not on the positive.

Several objects were marked which were  
found previously in my examination of  
this U.S. No. 100. <sup>other</sup> ~~one~~ <sup>was</sup> ~~was~~ attached. One  
marked like of Aurigae.

The other is, <sup>marked as 24684</sup> +23° 12' 43" 6<sup>h</sup> 3<sup>m</sup> 7.5<sup>s</sup> +23° 14' 17.3<sup>s</sup>  
This fainter than normal on AC 720,  
also on AC 8802, and AC 8913.

No decided change seen on about 20 other  
plates examined.

To be looked up on 1 plate.  
Sp. is 2nd up on 19793

See p. 6.



October 25, 1910

18<sup>h</sup> - 30<sup>o</sup>Am 7063 superseded  
= Am 4386Rapid survey to detect novae  
or asteroids11 objects marked  
They prove to be already marked  
by me except  
184916 known

Nova Sep. 20.2

~~Nova Sep. 20.2~~

This was discovered by me in earlier exam of region.

164836 known

The others were already found in  
my examination of this region

October 25, 1910

Am 6457

Aug. 12, 1909

No. 6457 re-discovered

- 17<sup>h</sup> 49.78<sup>m</sup>17<sup>h</sup> 50.57.0 - 17 23.0 (1855) 9.7<sup>m</sup>I dub. by A. P. C. just independently by A. D. W.  
marked in B 4027  
new.  
No. 136Apparent, 1900 16<sup>h</sup> 59.8 - 26 30

new on B 19723

No. 137

Object at apparent 1900

19<sup>h</sup> 9<sup>m</sup> - 31 0 28.00

Certainly an image, not a defect.

This is taken on Am plates taken in Sept 1909  
Found on B Aug. 23, 1909,  
Ceres. in position 19<sup>h</sup> 42 - 31 00  
An asteroid.



October 25, 1910

no. 136

-17° 49' 78"

Missing on Am 6454  
 Matched on B34027.  
 Examination of additional plates.

Am	5640	Rev.	Am	1437	Rev.
	5683	Rev.		1461	Rev.
	5712	Rev.		1487	Rev.
	5820	Rev.		1528	Rev. probably
	5854	Rev.		1543	Rev.
	6011	Rev.		1917	Rev.
	6114	Rev.		1952	Rev.
	6136	Rev.		1960	Rev.
	6170	Rev.		2109	Rev.
	6228	Rev.		2129	Rev.
	6338	Rev.	Sp. Triebhut captures of fainter than onset		
	6343	Rev.		2147	Rev. very ft.
	7033	Rev.		2244	Rev.
	7064	Rev.		2261	Rev.
	6347	Rev.		2572	Rev.
	6374	Rev.		2659	Rev.
	6613	Rev.			
	1236	Rev.	Ft. on 2147, 6338, missing		
	1252	Rev.	~ 6454		
	1278	Rev.	Normal on 35 other plates.		
	1414	Rev.	Algal type.		
	1422	Rev.	Sp. on B1335, 1st type. Only hydro-		
			lute seen.		

October 25, 1910

-26° 11' 880. 16 58 20.5 - 26 24.6 (1895) 7.2  
 checked 4.9.23 140 16 59.8 - 26 26 (1900) 7.8  
 7.8 - 26 30' 1.900 affix.  
 7.48, photo. neg. in  
 vol. 54.

no. 137

Brighter on Am 6454  
 Examination of additional plates.

Am	5640	ft.		
	6374	Rev.		
	6347	ft.		
July 6, 1910	7084	ft.	Examination of 7084 + 7033	
June 25, 1910	7033	Rev.	Shows variation of ob. oval of magne.	
	6343	Rev.		
	6170	Rev.		
	6136	Rev.		
	6114	Rev.		
	6011	Rev.		
	5854	Rev.		
	5820	Rev.		
	5712	Rev.		
	5683	Rev.		
	6228	ft.		
	5543	very bright		
	5622	ft.		

Variability - confirmed by L.D. W. on Am 5543, 6374  
 5712, 6347, 5622, 7033, 6228, 7084  
 Sp. on B10140, 2nd type, probably 2 -

October 25, 1910

+23° 12' 43" (See p. 1)  
 6<sup>h</sup> 3<sup>m</sup> 1.8 +23° 14.1 7.3

marked on 24682. See p. 1.  
 Confirmation of variability.

AC 7948 5540, 8882 8913, 7230 &  
 720 examined by Miss Wells. She  
 thinks it is certainly variable, but  
 would like to see more <sup>in general 2</sup> faint plates.

Mr. Wells  
 Please confirm  
 variability of  
 star marked  
 138?

A.P.C.

Yes of course  
 but I wish  
 there were more  
 faint ones.

March 22, 1911

175217	No	136	Ac 756	Bv
Am 508	Bright		Ac 409	Bv
No. 136.	Am 6368	Bv.	Am 6445	Bv.
	Am 6422	Bv. very poor plate		
	<del>Am 7019</del>		Am 6453	faint
	Ac 301	Bv.	Am 6475	Bv.
	Am 5027	Too poor	Am 6997	Bv.
	Ac 343	Bv.	Am 7039	Bv.
	Am 5105	Bv.	Am 7083	Bv.
	Ac 2412	Bv.	Am 7102	Bv.
	<del>Am 5989</del>	Too poor	Am 7147	faint invisible
	Ac 2520	Bv.	Am 7183	Bv.
	Ac 6061	Too poor	Am 7217	Bv.
	Ac 6140	" "	Am 7226	Bv.
	Ac 6234	Bv.	Am 7250	Bv.
	Ac 6261	Bv.	Ac 233	Bv.
	Ac 6281	Bv.	Ac 2577	Too poor
	Am 6015	Bv.	Ac 2572	Bv.
	Am 6035	Bv.	Ac 2658	Bv.
	Am 6068	Bv.	Ac 2686	Bv.
	Am 6124	Bv.	Ac 3526	Bv.
	Am 6173	Bv.	Ac 3538	Bv.
	Am 6206	faint	Ac 3676	Bv.
	Am 6223	Bv.	Ac 3682	Bv.
	Am 6264	Bv.	Ac 3723	Bv.
	Am 6278	Bv.	Ac 4746	Bv.
	Am 6320	Bv.	Ac 4827	Bv.
	Am 6393	Bv.	Ac 4905	Bv.
	Am 6416	faint	Ac 4948	Bv.
			Ac 4958	Bv.

Am 47

Acbr

+23° 1243

6<sup>n</sup>

marked in 12468

Confirmation

Ac 7948 55

720 maximum  
thinks it is  
would det

206' 21' long  
197' 1' high  
30' x  
the  
cut  
with plates

08-81  
est. 1981

March 22, 1911

175217

No. 136.

No	136	Ac 756	Br
Am 508	Bright.	Ac 409	Br
Am 6368	Br.	Am 6445	Br.
Am 6422	Br. very poor plate		
Am 7019		Am 6453	faint
Ac 301	Br.	Am 6475	Br.
Am 5027	too poor	Am 6997	Br.
Ac 343	Br.	Am 7039	Br.
Am 5105	Br.	Am 7083	Br.
Ac 2412	Br.	Am 7102	Br.
Am 5989	too poor	Am 7147	faint invisible
Ac 2521	Br.	Am 7183	Br.
Ac 6061	too poor	Am 7217	Br.
Ac 6140	.. ..	Am 7226	Br.
Ac 6234	Br.	Am 7250	Br.
Ac 6261	Br.	Ac 283	Br.
Ac 6281	Br.	Ac 2577	too poor
Am 6015	Br.	Ac 2582	Br.
Am 6035	Br.	Ac 2658	Br.
Am 6068	Br.	Ac 2686	Br.
Am 6124	Br.	Ac 3526	Br.
Am 6173	Br.	Ac 3538	Br.
Am 6206	faint	Ac 3676	Br.
Am 6223	Br.	Ac 3682	Br.
Am 6264	Br.	Ac 3728	Br.
Am 6278	Br.	Ac 4746	Br.
Am 6320	Br.	Ac 4827	Br.
Am 6393	Br.	Ac 4905	Br.
Am 6416	faint	Ac 4948	Br.
		Ac 4958	Br.

Br. 17



October 31, 1910

18° - 30°

Very rapid survey of plates superposed  
on position <sup>D1222</sup> defect. No. 3.  
July 26, 1899 Am 15. Images disturbed & circles different.  
Nothing found except segments.  
Known variables 181916 = <sup>Aug 4, 1899</sup> found  
earlier by me, shows a large  
range.

Sept. 6, 1899 Am 137. Found No. 3.  
In this region, I have already superposed

July 1, 1903 Am 2085  
July 1, 1907 Am 4954  
Aug. 4, 1904 Am 2916  
1906. Am 4311

} carefully

Aug. 12, 1909 Am 6457  
Am 7063

Hastily, for objects of large range.

The position is D1222 from  
July 11, 1906 Am 4388

Nov. 1, 1910

18° - 30°

Am 137 Sept. 6, 1899.

No. 138' Object near No. 35.  
Object on Am 137

Int-m

Am

33

538

802

808

817

1028

1043

1236

1252

1414

1422

1437

1461

1470

1487

1528

1543

1917

1952

1960

2109

2129

2244

Am 2261 not seen, very faint

Am 2592 not seen

Object 181525 very faint on Am 2592

Am 2639 not seen

Am 2713 " "

Am 2746 " " shows very faint stars

May 28, 1901

Am 2746 is excellent  
of the Milky Way +  
"Coral-Lark"

Am 2756 not seen

Am 2797 " "

Am 2836 " "

" 2854 " "

" 2959 " "

1487 not seen, but shows very faint stars

1528 " " poor plate

1543 " " plate too poor

Am 3002 not seen

" 3392 " "

" 3442 " "

" 3496 " "

" 3537 " "

" 3625 " "

Plate very poor 181525 from Am 2592

Nov. 1, 1910

Am 3625	not seen	Am 6343	not seen
" 3802	" "	" 6618	" "
" 3883	" "	" 6592	" "
" 4269	" "		
" 4339	" "	B 4395	Imporr.
" 4365	" "		N.S. & < 10
" 4388	" "		
" 4527	" "	B 5245	No trace
" 4539	" "		of the object, certainly
" 4562	" "		< 13
" 4620	" "		
" 4804	" "	B 6135	No trace of object
" 4920	" "		< 11
" 4931	" "		not on
" 5013	" "	Am 6972	
" 5024	" "	" 7014	
" 5090	" "	" 7023	
" 5114	" "	" 7085	
" 5340	" "	" 7040	
" 5390	" "	" 7116	
" 5444	" "	" 7163	
" 5576	" "	" 7257	
" 5640	" "		
" 5683	" "		
" 5820	" "		
" 5854	" "		
" 6011	" "		
" 6114	" "		
" 6136	" "		

plains very faint

Alph. variable 181525  
is faint on Am 2572, Am 3625

Nov. 1, 1910

Further search of star which is brighter  
on Am 137.

B 13462 sp.  
Not seen

B 4355 sp.  
Not seen

B 13245 sp.  
Not seen < 10.5

B 4399 sp.  
Imporr. < 10

B 14045  
No trace < 13

B 4745  
Not seen < 12.5

B 13580  
No trace < 13

B 15834 May 2, 1896  
Slight trace of a  
star near position.

B 14176 sp.  
No trace although  
very ft. apparent  
spectra char.

B 16164 Not seen  
< 11

B 14207 sp.  
Not seen < 10.5

B 17086 sp.  
Not seen < 11

B 14252 Not seen

B 17092 sp.  
Not seen < 10

B 14354 sp.  
Not seen ft. adf.  
Spectra uncertain

Nov. 1, 1910

Cont. of preceding

B. 7097 Sp.  
Intersect L 10.5B. 7440  
IntersectB. 7657  
A very ft. object  
also near. about 13-14.B. 7834  
Intersect L 11B. 8472  
Intersect L 11.

November 8, 1910

18<sup>h</sup> - 30<sup>o</sup>

Am 461

Mag 8, 1908.

Superposed very hastily.  
Images very large and distorted.  
Nothing focused.



November 9, 1910

Estimates of var. No. 138, apparently  
a horizon

B21918 Sequence marked.

var.  $\eta, S < 14$ 

B6135

B22744

var.  $\eta, S < 11$ var.  $\eta, S < 12$ 

B27408

B32354

var. 12.7

var.  $\eta, S < 13$ 

B25746

B20451

var. 12.0

var.  $\eta, S < 12.5$ 

B23756

B4395

var. too faint to estimate

var.  $\eta, S < 9.5$ 

near position

I 25598 ft.

B3739

700 ft.

not coming

B40363

B9858

var.  $\eta, S < 11.5$ var.  $\eta, S < 12.7$ 

B19575

B25345

var.  $\eta, S < 13$ 

var. 12.0

B16834

B3488 ft.

var.  $\eta, S < 12$ var.  $\eta, S < 9.5$ 

B5245

A 471 too poor

var.  $\eta, S < 13$ 

var.

B21579

Am 87

var.  $\eta, S < 11$ var.  $\eta, S < 11.4$ 

I 25299

Am 137

var. 11.9

~~var.  $\eta, S < 10.6$~~ 

B24376

9.4

var. 10.5

November 9, 1910

I 24710 Plate very poor

var. 11.5

Am 68

var.  $\eta, S < 9.5$ 

A 377

var.  $\eta, S < 9$ 

Am 46 too poor

Am 63 too poor

Am 204

var. seen but too poor to estimate

Am 75

var.  $\eta, S < 15.6$ 

Aug. 7, 1899

Aug. 23, 1899

Am 104

var.

8.7

Aug. 25, 1899

Am 116

var. 8.8

Apr. 11, 1900

A 4297

11.8

A 4340

12.0

A 4331

12.0

A 4293

12.0

A 1537

very narrow edge  
between or may be  
a faint object of  
10m or so,

A 288 2811

not cor.

B 27666 not coming

B 28156

var. 13.2? Images very poor

B 28160

var. 13.1

B 27215 too poor

B 28223 too poor

B 28523

var.  $\eta, S < 11.5$ 

B 28621

var. 13.3

B 28656 not coming

var.

B 27734

var.  $\eta, S < 11.5$ 

B 29255 not coming

B 26491

var. 12.2

B 27155 not coming

B 27446

var.  $\eta, S < 10.5$

November 10, 1910

B27750

var. 11.8 &lt; 10.6

B25123 not coming

var.

B25197 Images long

var. ~~12.0~~

B25390

var. 12.0

B25823 not coming

var.

B25879

var. 12.2

B26116

var. 12.3

B26473

var. 12.2

B26256

var. not coming

B26387

var. 12.3

B26432 not coming

var.

B26461

var. seen for hours to measure.

B26472

var. 12.2

B26483

var. 12.2

B24891

For hour

B25593 not coming

B26569 for hour

A 3807

var. 15.4

Arranging the faint object  
to be left variable.

November 10, 1910

21<sup>h</sup> 15<sup>m</sup>

Search for spectrum of Nova

Sept. 10, 1896. A 2063 sp. J L seen but  
no trace of the Nova.Sept. 24, 1896. A 2093 sp. J L but no trace  
of the Nova.

A 2107, not coming

Can not find any sp. plate  
during time of outburst.

November 10, 1910

X 9918 Aug. 10, 1899

Nova Sagittarii No. 3. (L. Bulletin 431)

Nova Sagitt.

X 9997

X 10258

X 10263

X 10267

X 10270

X 10275

X 10280

not coming

ac 474 Too poor

not coming

ac 258 Too poor

too

ac 866 Too poor

Aug. 1899 B 23787 not coming

B 30595

var.  $\eta$ ,  $\lambda$  < 10.5

B 29255 not coming

var.

B 29531

var.  $\eta$ ,  $\lambda$  < 12.2

B 29904

var.  $\eta$ ,  $\lambda$  < 10.4

B 30321

var.  $\eta$ ,  $\lambda$  < 14

B 30593 not coming

var.

B 30866

var.  $\eta$ ,  $\lambda$  < 12.5

ac 297

var.  $\eta$ ,  $\lambda$  < 10.5

Region 80 far from

center of the Plate

19-15° miles to examine

more

November 11, 1910

Nova Sag. No. 3.

ac 3800, 3863, 3804, 3805, 3806,  
3807, 3808, 3809

taken Aug. 3, 1899

show a very faint star in approximate position of the nova, of about 16 magn.



# Sequence for Nova Sagittarii, No. 3.

(Copied from sheet)

2 =	C.D.M. -26° 13068	18 13 27.0 - 26 8.1
	C.P.D. -26° 6410	18 13 26.5 - 26 8.3 mag. 7.4
a' =	C.D.M. -26° 13081	18 14 34.2 - 26 28.2
	C.P.D. -26° 6414	18 14 34.0 - 26 28.3 mag. 8.1
b =	C.D.M. -25° 13031	18 12 59.2 - 25 31.3 mag. 7.0
	C.P.D. -25° 6476	18 12 59.4 - 25 31.3 mag. 8.1
c =	C.D.M. -25° 12983	18 10 18.7 - 25 8.1
	C.P.D. -25° 6454	18 10 17.9 - 25 7.4 mag. 8.5
d =	C.D.M. -24° 14189	18 12 28.2 - 24 59.9
	C.P.D. -24° 6354	18 12 28.5 - 24 59.6 mag. 8.6
e =	C.D.M. -25° 13025	18 12 39.1 - 25 5.6
	C.P.D. -25° 6474	18 12 39.4 - 25 5.6 mag. 9.1
f =	C.D.M. -25° 12991	18 10 40.4 - 25 9.4
	C.P.D. -25° 6458	18 10 40.4 - 25 9.6 mag. 9.4
g =	C.D.M. -25° 13022	18 12 23.7 - 25 15.4
	C.P.D. -25° 6472	18 12 24.4 - 25 15.9 mag. 9.6
h =	C.D.M. -25° 13011	18 11 57.5 - 25 15.4
	C.P.D. -25° 6467	18 11 56.9 - 25 15.0 mag. 10.0
i =	C.D.M. -25° 13020	18 14.9 - 25 15.4
	C.P.D. -25°	

Vol 71  
Adopted  
mag.

Sequence was measured by E. F. L.  
At first, no plate was found having pro-  
motion comparison, but later B14045  
approach plate was found. This shows  
the comparison of star c photometric  
mag. 18.80. Thus it seems that this plate  
should show stars at least of 13.80 mag.  
After Miss Seland had made measures  
I asked her to measure a and comp.  
c and comparison in this plate (B14045)  
This gave me two additional points  
for getting the magnitudes.

Identified by A. J. C. Checked by L. D. M.

November 12, 1910

Measures of position of Nova Sagittarii

No 3 Marked on A 4340

Begin on extreme edge of plate. Images elongated.

	X	Y	X	Y	Mean X	Mean Y	Diff X	Diff Y	Uncor. Diff X
Nova	9.90	10.90	9.91	10.91	9.91	10.91			
l	17.45	12.28	15.46	12.28	15.46	12.28	+5.55	+8.49	+24.54
g	11.99	8.92	12.00	8.93	12.00	8.93	+2.01	-1.87	+9.25
h	5.88	9.87	5.95	9.80	5.86	9.84	-4.05	-0.95	-17.82
X	1.58	1.88	1.59	1.80	1.59	1.84			
Mean			9.92	10.90					

l = C.P.D.	-25° 64' 74	18° 12' 39.4	-25° 5' 6	1104	4416
g =	-25° 64' 72	18° 12' 24.4	-25° 15.9	1106	4424
h =	6467	18° 11' 56.9	-25° 15.0	1106	4424
X =					

18	12	39.4	-25	5.6	18	12	24.4	-25	15.9
		+24.5		+8.5			+9.2		-1.9
18	12	14.9	-25	14.1	18	12	15.2	-25	14.8

18	11	56.9	-25	15.0
		-17.9		-1.0
18	12	14.8	-25	14.0

Mean position Nova 1875

18	12	15.0	-25	14.0 (1875)
18	13	17.5	-25	13.5 (1900)

November 12, 1910

Nova Sagittarii No 3, measure of spirit star at  
Plate A 3500 approximate position of the Nova

	X	Y	X	Y	Diff X	Diff Y	Uncor. Diff X
Nova	+1.65	+0.60					
l	+7.15	+9.32	+7.20	+9.35	+5.55	+8.75	+24.56
g	+3.75	-1.12	+3.80	-1.15	+2.25	-1.69	+9.70
h	+2.42	-0.35	+2.45	-0.40	-0.75	-0.92	-17.87
Mean Nova	+1.60	+0.55	+1.60	+0.55			
Mean Nova	+1.62	+0.57					

18	12	39.4	-25	5.6	18	12	24.4	-25	15.9
		+24.6		+8.8			+9.7		-1.7
18	12	14.8	-25	14.4	18	12	14.7	-25	14.2
18	11	56.9	-25	15.0					
		-17.9		-0.9					
18	12	14.8	-25	14.1					

Mean position Nova 1875 18° 12' 14.8 -25° 14.2

A.D.R.

November 14, 1902

A5960 June 14, 1902.

When looking for Nova Sag. No. 3 on this plate I noticed that a star south of component C is much brighter than normal at least, the configuration seemed to be different.

They vary in <sup>apparently</sup> the position of component of a close double star.

I do not see the object on the following plates near the date.

A2605 June 29, 1902. Plate broken. Does not show star.

Am 141X M.S. L.M. 1384. " is ft star seen.

Am 1336 <sup>in general</sup> fainter than C, which is very pink clear.

Am 1297 " " " " " "

" 1352 " " " " " "

B29904 broken.

B30321 star seen, but very faint.

A1837 faint. A7327 faint

A7359 " A8434 "

A7332 " A8876 "

A3358 " A9370 "

A2605 " A9640 "

June 11, 1902

June 2, 1902

May 29, 1902

July 9, 1902

November 16, 1902

Nova Sag. No. 3 not seen or seen of normal magn. if we assume the faint star to be the Nova.

The following plates

Am A7327, 8434, 8876, 9370,

9640, 7359, 7332, 3358, 2605.

Assuming the faint star is the Nova, no fainter is seen on these plates.

Plates wanted

near June 14, 1902,

Limits B30073

17.8 to 18.6

-19° to -31°

I. B. B no

AC 19°-15° to 26.55

Am 19°-15° to 30°

18°-30°

B29904 broken.

A2605

15.6

A3358

M.S. L15

On 15 plates (including 10 taken on Aug. 3, 1899) before the appearance of this Nova show a faint star of 15 m or so in the approximate position, no variation is seen in this star. 5 plates taken after the disappearance of show the same star with no change in brightness.

A9370

15.6

A9640

M.S. broken

L15





Regini 18<sup>h</sup> - 30<sup>h</sup>

Superficial plates to be  
 July or August, 1900  
 Can not be taken for h. to mch.?

Oct. or Nov. 1900

April  
 Feb. or Mch. 1901

May or June 1901

Am 817, May 1901  
 Found Nova Cap. No. 4.  
 August or Sept. 1901

Dec. 1901 or Jan. 1902

Mch. or Apr. 1902

Am 127, May 27, 1902

2 old ones found

June or July 1902

Am 1414, July 1902  
 Found Nova Cap. No. 2, 17437a, 17433, Iris?

Sept. or Oct. 1902

Dec. 1902 or Jan. 1903

Mch. or Apr. 1903

July 1903 Am 2085 superficial

Sept. or Oct. 1903

Regini 18<sup>h</sup> - 30 (cont.)

Mch. 1904

✓ July 1904

Am 2916 Aug. 4, 1904 superficial.

Sept. or Oct. 1904

Mch. or Apr. 1905

Am 3537, May 13, 1905 - 5 hours, 1 new?

July 1905

Sept. 1905

Am 3583, Sept. 16, 1905 - nothing new.

April 1906

✓ July or Aug. 1906

Am 4311, 17438

Nova Serpion, No. 2.

Oct. 1906

April 1907

✓ July 1907

Am 4904 superficial

Sept. or Oct. 1907

April 1908

18<sup>h</sup> 30°Region 18<sup>h</sup> 30° (cont.)

June or July, 1808

Am 5716, June 18, 1808. Nothing found.

Sept. or Oct. 1808

Am 5712 Aug. 2, 1808. 7 human hairs found, no hair on.

March or April 1809

Am 6011 Feb. 29, 1809. very poor magnification nothing found.

June 1809

Am 6014 May 11, 1809, no duplicates found.  
+ Mr. Say.

Aug. 1809

Sept. 9 Am 6454 (2 new rats &amp; Ceres)

Am 6613 Sept 21, 1809. Ceres found

Oct. 1809

Apr. 1810

Am 7063 Inverse Say, no. 2, rediscovered

Aug. 1810.

Am 7185. many defects in position.

3 old rats.

no R. M. hairpin

~~no new ones~~



November 16, 1910.

Examination of plates to confirm  
new variable of function 65960,

B 28621 <sup>slight</sup>  
^ barely seen

November 16, 1910

Estimates of sequence for Alfol var.  
Sp. 135  
Sep.  
1711

a = 8.6  
b = 8.9? *image of b defective?*  
c = 9.4  
d = 9.7  
e = 9.9  
f = 10.0 ft.  
g = "  
h = "  
i = "  
j = "  
k = "

Ac 7962  
9.5

Am 289  
f 2 v  
10.1

Am 6724  
10.0

November 22, 1910

Mora leg m. 3

B 3580 1895 June 4  
n.s.  $\angle 13$

B 9854 1893 July 21  
n.s.  $\angle 13.5$

B 9853 1893 July 21  
n.s.  $\angle 13.5$

B 9784 1893 July 12

very faint object above mean  
position of near star. If this is  
really the object it seems to  
be fainter than in A 3007,

B 6135 1891 May 30  
n.s.  $\angle 10$

4124 n.s. 1889 Sept 2  
43

November 22, 1910

The plates on preceding page  
were all examined for this object  
found bright in A 960 but  
it is either unseen or very  
faint.

6" + 30°

November 26, 1910

Region 6" + 30°

Contact made from AC 9881, Nov. 4, 1908 = D14930  
Superfused

Oct. 17, 1910

AC 12053

AC 1405, 7 Lamin found

Three plates are very poor for  
superfusing they do not show  
th. plates toward the margins  
are very porous shape

Nov. 25, 1900

AC 12.151 superfused (Nov. 30, 1911)  
R. X. Amps. 0.50640, R. W. Lem. found.  
Also one neurone.~~12.156 (2) 0.506 + 3.185 (1800)~~

No. 140

Single hyaline on position

Sp. the on I 31374. Ident. on I 20267.  
+ 33° 1290, 6" 7" 42.2 + 33° 15" 9.7  
21290, 21879, 404, 5645, 44205, 8348, 5665  
36374, 20267, 24028, examined by L.D.W.  
who said make "the only plate that shows change  
really, as I 20267, I think". L.D.W.  
Agreement - conf. by A.M.C. See notebook I, 6,  
Also conf. by L.D.W. to almost a magnification,  
see catch on opp. page

6" + 30°

Jan. 12, 1911

AC 12251 superfused in D14930 = AC 9881.  
Dec. 30, 1910 + 33° 1290 red's covered,Also a minor object found, probably  
a minor platelet

6 45.8 + 32 50 (1855) on AC 9881

6 45.4 + 32 51 (1855) on AC 9881  
Nov. 4, 1908  
Nov. 2, 1908

6 44.5 + 32 52 Oct. 30, 1908

Increasing R.A. Decreasing Dec.  
Probably Ennomus.Miss Steele please look  
at this object marked  
Nov. 7, on AC 9881  
Vaindella congregate  
L.D.W.

AC 9881 13u.	+ 33° 1290
AC 3498 13u.	
AC 10084 13u.	
AC 11288 13u.	
AC 10082 13u.	
AC 3496 14.	
AC 8048 14.	
AC 9056 14.	
AC 9166 14.	
AC 1119 14.	

No. 140.

cont. up 77.



18<sup>h</sup> - 30<sup>0</sup>

Search for new stars.

January 18, 1911

Am 7195 superposed on D  
= Am 4620.<sup>3</sup>  
1 of my variables rediscovered.1 found, which appears to be new.  
This faint on Am 7195, also on  
Am 36, 5640, 5683, 6170,  
Dag. Am 2916, 3883, 1960, 2109.  
Fth. on Am 7163.  
Marked on B

This turns out to be my var. 118.

18<sup>h</sup> - 30

Feb. 10, 1911

m. May 13, 1905  
Alp 3537 superposed on D 16722  
5 km var.1 that may be a new Alp.  
Faint on Alp 3537 but of normal  
mag. on 26 other plates.

Identify &amp; confirm

Marked on B 32544.  
Sp. on B 14158.No variation on any Am plate at hand.  
Look in box down stairs. The faintness  
on Alp 3537 is not very striking and  
may be due to defective mag.Am 3883, Sept. 16, 1905 superposed.  
Nothing new found.

$18^{\circ} 0'$ 

Am

18h - 30°

Dec. 3, 1910

Nova Sagittarii, No. 3

Examination of additional plates.

B33487  
Interr.B33681  
N.S. < 13Star bright on A5960  
also N.S. < 13B33786  
Nova 15.6

A5960 star 14.0

A33858  
Nova N.S. < 12.5

A5960 star N.S.

B34250  
N.S. < 12.5  
A5960 N.S.B34004  
~~Interr.~~B35851  
Too poor.  
Nova N.S. < 12  
A5960 N.S.B36047  
Too poor.  
Does not show ft. stars.B36085 & B36385  
Too poor.  
Does not show ft. stars.B31576  
Nova N.S. < 13.5  
A5960 star N.S.B31685  
~~Star~~ plates neither seen

Dec. 3, 1910

B32309  
This plate shows very  
ft. stars.  
Nova 15.6

A5960 star 15.0

A32354  
Nova N.S. < 15

A5960 barely seen

B32490  
Nova 15.6  
A5960 15.0B32627  
Poor.  
Neither seenB3214  
Poor. Neither seenB3215  
Interr.B3216  
Neither seen < 13.5



18<sup>h</sup> - 30<sup>o</sup>

Dec. 3, 1910

A.M. 817 superseded on D  
= Am 4620.No. 139  
None seen  
Met.(Am 417 was found badly scratched. A number of fractures were made.)  
An object found on the negative, when the position. I thought at first it was a defect but it is an Am 802 & 808, taken May 22 and May 27, 1901.Also on B27750, June 25, 1901  
and B27438, May 27, 1901.  
Looked for on Am 2682, 18020  
August 13, 1907. A faint star appears very near the position, but apparently not the variable. For I think I see a trace of this star on B27750, s.p. the variable - appears pos. 18.0.1 - 27.20 (1901)Not on B21918, B34004, B3689 (faint)  
Not known. Maybe a nova.  
Too dark now to look up minor plates.Not on B33216, B33214, B32649  
B31576, B33321, B34623,

December 4, 1910

Search for star found on Am 417  
Not on Am 3824 < 12 May be a nova.

- ✓ Am 3883 "
- ✓ Am 4269 "
- ✓ Am 4339 "
- ✓ Am 7063 "
- ✓ Am 6136.
- ✓ Am 6170 < 11
- ✓ Am 5683 < 12.5 Good of irregularity
- ✓ Am 5648
- ✓ Am 5114
- ✓ Am 5013 < 12.5
- ✓ Am 3673 < 12.5 good plate
- ✓ Am 3393
- ✓ Am 3608
- ✓ Am 3458 < 12.5
- ✓ Am 3537
- ✓ Am 3123
- ✓ Am 2851
- ✓ Am 2713
- ✓ Am 1917
- ✓ Am 1672
- ✓ Am 2960
- ✓ Am 2109
- ✓ Am 2129
- ✓ Am 1528
- ✓ Am 1437
- ✓ Am 1252

Dec. 4, 1910

Am 1043 Nova Seq. hr. 4

A 4821-

Nothing seen in position of Nova.

B 27666

B 28205

28520

28656

29524

29525

30593

30594

30866

} not coming

B 28627 May be seen, but very faint

B 29255

M.S.

B 30513

M.S.

B 38824

M.S.  $\angle 11$  wedge

A 5966 star M.S.

 $\angle 13$ 

Dec. 12, 1910

Cont. of preceding

May 3, 1908

B 38984

Nova? M.S.  $\angle 11.5$ 

wedge

B 34623

No trace of Nova?

ft. star S. p. clearly seen

 $\angle 14$ 

not corr. A 5960 star

May 20, 1908

A 5960 star seen

This plate does

not appear to show

much fainter stars

than B 38824

June 18, 1908

Am 5976

Does not show A 5960 star

B 33759

Nova? M.S.

No trace of it

Plate shows very ft. star

 $\angle 13.5$  or  $14$ 

not corr. A 5960 star

B 33857

Nova? M.S.

 $\angle 12$  wedge

not corr. A 5960 star

A 33858

not corr. Nova?

A 5960 star M.S.

 $\angle 13$ 

B 34629

Class S.

Too poor for section

B 35686

No trace of Nova?

 $\angle 13.5$ 

A 5960 M.S.

 $\angle 13.5$ 

B 35781, B 35782

not corr. either

B 36432

near edge

Nova? M.S.  $\angle 11$ 

not corr. A 5960

Cont. on p. 52

Dec 7, 1910

Am 817.

Several objects marked.

(1) Brighter on positive.

2746, 4205, 1917, 1952, 1960, 1937, 1252, 1278, 3882, 3883  
 Br on 114-7063, 2916, 4954 2065  
 Sl. fl. on 4339, 4269, 2109, 2129,

Find 4358. Sl. fl. on this plate.  
 Mark on 15 plate. 1917, 1952,  
 1960, 1937, 1252, 1278, 3882, 3883

2. Brighter on negative.  
 Image may be defective.

Assumed to be defective since none  
 is seen on

Am 1917, 1952, 1960, 2109, 2129, 1538, 1252,  
 1278, 3882, 3883,

other objects are known.



December 8, 1910

Identification of sequence for variables or  
nova found in Am 817.

$\alpha =$  C. DM -  $27^{\circ}12'44.8''$   $24^{\circ}18'0''$   $24.4 - 27^{\circ}25.0$

C.P.D. -  $27^{\circ}06'16.0''$   $9.6$

$\beta =$  C.O.M. -  $27^{\circ}12'41.7''$   $17^{\circ}59'$   $23.9 - 27^{\circ}24.197$

C.P.D. -  $27^{\circ}06'13.6''$   $17^{\circ}59'$   $18.5 - 27^{\circ}24.4$

December 12, 1910

Cont. from p. 47  
Hory Sagittarii, No. 4.

Hora? not seen

B31684

Too near edges

A5960 star n.s.  
L 12.5

B31685

Not seen. Hora.

B31537

A5960 star n.s.  
L 10.5Hora? n.s.  
L 12.5

Not seen. A5960 star

B31948 near edge  
Hora? n.s. L 10.5{ B31491, B31602  
B31538, B31968  
Not seen. Hora.

Not seen. A5960 star

B31470

Hora? near edge.  
n.s. L 10.5

B32032

Hora n.s. L 13.5

B32309

Not seen. Hora.

B31576

Hora? not seen L 13.5  
Horn very ft. starA5960 star seen  
very ft. Probably normal  
as on other. A photo.

B31096

A5960 star n.s. or  
barely glimpsed.

Dec. 12, 1910

B32353

No trace of Hora.  
L 13

B33486

Horn seen near edge  
n.s. L 10.5

Not seen. A5960 star

Not seen. A5960

B32314

Horn? n.s. L 12  
near edge.

B33487

Not seen. either

A5960 star

barely glimpsed?

B33657

Horn? not seen.  
The extremely ft.  
star s. p. var. seen

B32144

Too near edge.

A5960 seen of normal  
~~B33657~~ Magn.  
which is extremely ft.

B32633 (60 mag.)

No trace of Hora.  
L 13.5-14.4

B33681

Horn n.s.  
A5960 star n.s.  
L 13

Not seen. A5960 star

B32649

No trace of Hora?

Not seen. A5960 star

December 15, 1910

180027

Nora Sag. No. 4

B26432  
No trace stars seen.  
L12A5960 stars  
not comingB26432  
Not cor. with starsB26483 + B26473  
Flare very ft. stars  
No trace of the flare  
that slightly e.p.  
clearly seen  
Nora L14A5960 stars  
very ft. normal.B26387  
Nora n.s. prop.  
L11.5

A5960 n.s.

B26432  
Nora n.s.  
L11A5960 stars  
Not cor.B26461 + B26472  
No trace of flare  
very ft. stars seen  
slightly e.p. seenA5960 stars  
Not cor.B26491  
n.s. L13.5A5960 stars  
very faint. normalB26116  
Nora n.s. L12A5960 stars  
n.s.

Dec. 15, 1910

Nora Sag. No. 4

B26256  
Not cor.B23412  
Not cor.B23495  
Not Nora  
n.s. L13  
Nora A5960 starsB23695  
Not cor. Nora.A5960 stars  
Not seen L13.B23696  
Near edges  
n.s. L12B23770  
Nora off edge.A5960 stars.  
If normal faintnessB23787  
Nora n.s. excellent spec.  
L14

Not cor. A5960 stars

B24009  
Near edges  
Nora n.s. L12B24376  
Nora n.s. L12.5A5960 stars  
Normally ft.B25123  
Nora n.s. L13A5960 stars  
NoraB25197  
No trace of flare  
L14  
A5960 stars  
Normally ft.



Dec. 15, 1910

Horra Sag. No. 4.  
 B2534  
 not corr. Horra.

A5960 slat  
 M.S. L12.5

B25387  
 Horra n.s.  
 near edge  
 L12.

not corr. A5960

B25746  
 not corr. Horra

A5960 slat  
 normally ft.

B25823  
 not corr.

B25824

Horra n.s.

L13

not corr. A5960 slat

Feb. 25, 1911

Horra Sag. No. 4

A8386.

Horra n.s.

ft. slat until well shown.

A3358 four plates  
 Horra n.s.  
 ft. slat s. n.s.

A2728 poor.  
 Horra n.s.  
 ft. slat s. n.s.

A5420 } ft. slat s. seen back  
 A2605 } no trace of the Horra

December 16, 1910

Regrind<sup>4</sup> + 45°  
Search for new stars.

D 14961 from AC 12072

June 7, 1908 AC 9525 superposed.  
Many defects on positive.

5K Cygni + 193056 found.

Also ~~stars~~ that appear like new variables.

(1)

Brighter on negative  
Marked on 15962  
Change slight. Confirm on 3 plates.  
+57° 2104 19° 55' 53.5 + 57 7.1 9.3  
a.m.c.

(2)

Absent on positive  
Marked on 12287  
+45° 2957 19° 45' 15.7 +48° 41.4 P.9  
May be also better confirm on AC plates.  
Probably defective film.  
See p. 60!

Confirmation of No. 1 on AC 9525  
= +57° 2104 on J 15962

AC 11037 Nov. 10, 1909  
superposed on D 14961  
Nothing found.

January 7, 1911  
 Confirmation of Jan. 2 m  
 Ac 1525. Masked out 1287.  
 Probably due to defect.  
 Absent in Ac 12072. Probably alcohol  
 type. Sp. 1st m

Jan. 10, 1911

Ac 302	Br.	Ac 1850	Br.
Ac 1783	Br.	Ac 1864	Br.
Ac 316	Br.	Ac 1878	Br.
Ac 340	Br.	Ac 1906	For poor
Ac 370	Br.	Ac 1966	Br.
Ac 342	Br.	Ac 1984	Br.
Ac 354	Br.	Ac 2030	Br.
Ac 391	Br.	Ac 2100	For poor
Ac 474	Br.	Ac 2578	Br.
Ac 577	Br.	Ac 2640	Br.
Ac 825	Br.	Ac 2664	Br.
Ac 830	Br.	Ac 2740	Br.
Ac 1064	Br.	Ac 2750	Br.
Ac 1597	Br.	Ac 2852	Br.
Ac 1583	Br.	Ac 2865	Br.
Ac 1619	Br.	Ac 2883	Br.
Ac 1628	For poor	Ac 2919	Br.
Ac 1625	Br.	Ac 2928	Br.
Ac 1641	For poor	Ac 2946	Br.
Ac 1642	Br.	Ac 2974	Br.
Ac 1684	Br.	Ac 3018	Br.
Ac 1732	Br.	Ac 3058	Br.
Ac 1753	Br.	Ac 3070	Br.

Jan. 7, 1911 cont. of preceding.

Ac 12011	Br.	Ac 12005	Br.
Ac 10787	Br.		
Ac 10809	For poor		
Ac 10814	Br.		
Ac 10821	Br.		
Ac 10829	Br.		
Ac 10839	For poor		
Ac 10879	Br.		
Ac 10896	Br.		
Ac 10946	Br.		
Ac 10956	Br.		
Ac 10977	Br.		
Ac 11002	Br.		
Ac 11011	Br.		
Ac 11045	Br.		
Ac 11051	Br.		
Ac 11083	Br.		
Ac 11097	Br.		
Ac 11134	Br.		
Ac 11157	Br.		
Ac 11162	Br.		
Ac 11189	Br.		
Ac 11501	Br.		
Ac 11728	Br.		
Ac 11730	Br.		
Ac 11774	Br.		
Ac 11788	Br.		
Ac 11874	Br.		
Ac 11947	Br.		

A close examination of  
 Ac 12672 shows that  
 the absence of this star  
 may be due to defective film.  
 Since, no more observations  
 will be made,



December 17, 1910

Observations of Nova Sagittarii Nov. 4.

Am 828  
10.5Am 957  
11.7Am 817  
10.4

Am 841

11.7?  
Slightly seen but  
images are very poorB27438  
10.4B27408  
11.8  
on edge.Ac 1500  
too near edge  
nothing seenB27750  
11.9Ac 1458  
n.s. < 10.5  
near edge

Apr. 11, 1901

B27155  
No trace of the star  
the star is barely glimpsed  
the star is < 10.5 = 1390Am 855  
10.3Am 802  
10.4Am 856  
much image  
too difficult.

Dec. 17, 1910

Am 956

n.s.  
Confusion of images.Am 854 mult.  
No trace  
but images too confused  
to identify.Ac 1715  
too poorAc 1722  
too poorAc 1686  
too poorAc 1780  
too poorAc 1658  
too poor.Ac 1840  
too poor.Ac 984  
n.s. < 11.9Ac 1475  
too poorAm 1028  
n.s. < 11.9Ac 1527  
too poor.Ac 1462  
n.s. too poor  
2.10Ac 1655  
too poorAm 835  
Slightly seen  
Images poor. 11.7?

Dec. 17, 1910  
Nova Sag. No. 4.

Am 850 — B9279  
n.s.  $\angle 10.5$  n.s.  $\angle 12.5$

Am 868 B9280  
n.s.  $\angle 11.7$  n.s.  $\angle 12$

Am 875 — B9592  
n.s.  $\angle 10.5$  n.s.  
very faint stars seen

Am 959 —  $\angle 14$   
n.s.  $\angle 10.5$  ft star s.p. seen

Am 1010 B9784  
n.s.  $\angle 10$  n.s.  $\angle 14.5$

B13536 B9853  
Interr. n.s.  $\angle 12.5$   
A5960 star normally ft. A5960 star normally ft.  
A5960 star normally ft. B23203  
n.s.  $\angle 14.5$   
very ft. stars near  
not no harm of Nov

B8713 B9855  
n.s.  $\angle 12.5$  n.s.  $\angle 14.5$   
A5960 star normally ft.

B9210  
n.s.  $\angle 12$  not seen

Dec. 17, 1910  
Nova Sag. No. 4.

B21703 B21225  
n.s.  $\angle 14.5$  n.s.  $\angle 11.5$

B21709 B21226  
n.s.  $\angle 12.5$  not seen  
A5960 star normally ft.

B22021 B19085 B19325  
n.s.  $\angle 12.5$  not seen

B22022 B19326  
n.s.  $\angle 13$  not seen  
A5960 star normally ft.

B22478 B27666  
n.s.  $\angle 13$  not seen

B22748 B28656  
n.s.  $\angle 13$  not covering  
A5960 star normally ft. B19448  
not covering

B21077 B19575  
n.s.  $\angle 12.5$  n.s.  $\angle 11.5$   
A5960 star normally ft.

B21078 B19576  
n.s.  $\angle 12.5$  not covering

December 17, 1910

Nova Sag. No. 4.

B19689

not covering

B18727

not covering

B18924

not covering

B17440

V.S. &lt; 12.5

B17443

not covering

B17444

not covering

B17651

V.S. &lt; 14

A 5960 star normally ft.

B18595

not covering

B14045

not covering nor

A 5960 normally ft.

B15834

&lt; 11.5 near edge

A 5960 star normally ft.

B16156

not covering

B16415

not covering

B16496

too near edge

B16499

not covering

B16571

not covering

B16580

B16883

not covering

B17073

V.S. &lt; 11.5

B13345

V.S. &lt; 13

B13346

not covering

B13535

not covering

March 2, 1911

B41370

not covering

Am 6338

&lt; 12

Am 5340

V.S. &lt; 11.5

Am 5854

V.S. &lt; 12.5

Am 6592

V.S. &lt; 12.5

Am 6422

V.S. &lt; 10

Am 6011

V.S. &lt; 11.5

Am 5390

V.S. &lt; 12

Am 5444

V.S. &lt; 11.5

1909

1908

1908

1909

1909

1909

1908

1908



gh + 300

Ac 12167 Dec. 2, 1910  
Contact with Jan. 16, 1911

Contact = D, 5052.

Ac 12284 Jan. 9, 1911  
superposed

2 maps found on pos. unknown.  
One is white bright & looks like  
the stars. No trace of it is seen  
on Ac 12284.  
The other is near & looks like a defect.  
Any plates bet. Dec. 2 & Jan. 9  
very approx. pos. 7.5 + 12.2

Not conf. Probably defects on plate

gh + 300

Ind. 9, 1911  
Ac 12341 Feb. 21, 1911.

Ac 12341 superposed on D 15052 =  
Ac 12167.

A moving object found. Already  
marked on Ac 12341 (see p. 8)

W. Camm found

Star at 075116 (approx) fainter  
on position. A bright star. Probably  
not var.

Star at 072917 (approx) fainter  
on neg.

Also off on 12340

Bright on several others. Certainly variable.  
Also conf. by A.M.C. see his book 7, 12.  
Th. on D 20946, Br. on 10 other plates.  
Changes probably less than 1 mag.  
Not in D.M.

Mark on A plate & measure position.  
Number of plates in 8" + 30" field.

Sp. 1st light on D 24035. Only hyd. seen

Ac 12280 Jan. 7, 1911, faint  
11305, 11309, 11370, 11431, 11461, 11468, 11535,  
11605, 12072, 12189, 12307, 12314, 12350

$12^h + 0^0$ 

AC 11314 Jan. 16, 1918

Contact asked for Jan. 16, 1911

okom

AC 11018 Nov. 6, 1909  
Contact with Jan. 16, 1911



1h + 450

Ac 11254 Jan 7, 1910

Contact asked for Jan. 16, 1911  
Contact = 845054Ac ~~11254~~

superposed on D 10054 = Ac 11254

One new variable found. It is  
hybrid on Ac 11254.It identifies as + 50° 42'  
0<sup>h</sup> 18<sup>m</sup> 31.<sup>s</sup>9 + 50 28.7 8.2

No. 141

See A. M. C's Book I, 9 for  
confirmation of this variable. Several  
plates given also examined by me,  
and the observation were confirmed.

Marked on J 12035-

It is 34348, as G or near G.  
Probably a short period variable.also conf. by L. D. W. in Ac 8669, Ac 8997  
Ac 9129, Ac 11316, Ac 8706, Ac 8118  
Ac 12218, Ac 12026, Ac 12238. &  
almost no magnitudes.

1h + 450

Feb. 10, 1911

Ac 12288 Jan. 16, 1911

superposed on D 25054  
Centers do not match.  
Nothing found.~~11254~~

6<sup>h</sup> 0<sup>0</sup>

AC 12174, Dec 3, 1910

Contact asked for Jan. 16, 1911  
Contact = D 15051

Jan. 18, 1911 AC 12301 superposed on Jan. 23, 1911  
 Nothing new found.  
 I Monoc. found. Shows small rays  
 X Monoc. large rays  
 much brighter on Jan 18 than on Dec 3  
 S Monoc. found. Brighter on Jan. 18.

6<sup>h</sup> 43<sup>00</sup>~~Feb. 13, 1911~~

Jan 23, 1911 AC 12305 superposed very hastily on D 14930  
 Nothing found.

Feb. 18, 1911 AC 12333 superposed on D 14930  
 R X Gem. & J Sami found.

$12^h + 30^0$ 
January 25, 1911

On Jan. 12 285 <sup>Jan 10, 1911</sup> <sup>superposed</sup> on D

An image <sup>was</sup> formed which appeared  
blue red, <sup>was</sup> but <sup>was</sup> not on a plate  
taken Jan 7, 1911  
Another plate asked for.

Ac. 12310 taken Jan. 23, 1911  
does not show the object. If it was  
an asteroid, it has moved so that  
a hasty examination does not show  
it.





Feb. 27, 1911

Measure of faint star near Nova  
Sagittarii, No. 4.

Star	$\mu$	$\delta$	$\mu$	$\delta$	Mean $\mu$	Mean $\delta$	$\frac{\delta}{\mu} \times 4$	$\frac{\delta}{\mu} \times 4 \text{ sec} = 43.48$
a	8.98	5.97	8.97	5.97	8.97	5.97	-	-
b	1.85	3.20	1.90	3.15	1.88	3.18	-7.09	-2.77
c	12.01	1.90	12.02	1.95	12.02	1.92	3.08	-4.05
d	-0.65	7.10	-0.65	7.11	-0.65	7.10	-9.62	1.13
e	14.59	8.57	14.65	8.55	14.62	8.53	5.65	2.56
Star	8.97	5.96	8.96	5.97				

$$\sec - 27^{\circ} 27' 6'' =$$

$$\cos = .88733 \quad 1.127$$

$$\frac{1}{88733} \frac{1.127}{4.508}$$

$$\begin{array}{r} 1.127 \\ 88733 \overline{) 1.127} \\ \underline{88733} \\ 239370 \\ \underline{177168} \\ 622020 \\ \underline{532698} \\ 89322 \\ \underline{88733} \\ 5889 \\ \underline{5889} \\ 0 \end{array}$$

$$\begin{array}{r} a = 17 \ 58 \ 21.8 - 27 \ 28.8 \\ \quad \quad \quad 32.0 \quad \quad \quad 2.8 \\ \hline 17 \ 58 \ 53.8 - 27 \ 27.0 \end{array}$$

$$\begin{array}{r} c = 17 \ 58 \ 10.2 - 27 \ 26.0 \\ \quad \quad \quad 43.4 \quad \quad \quad 1.1 \\ \hline 17 \ 58 \ 53.6 - 27 \ 27.1 \end{array}$$

$$\begin{array}{r} b = 17 \ 58 \ 7.4 - 27 \ 30.4 \\ \quad \quad \quad 13.8 \quad \quad \quad 4.0 \\ \hline 17 \ 58 \ 53.6 - 27 \ 26.4 \end{array}$$

$$\begin{array}{r} d = 17 \ 58 \ 17.9 - 27 \ 24.1 \\ \quad \quad \quad 25.5 \quad \quad \quad 2.6 \\ \hline 17 \ 58 \ 52.4 - 27 \ 26.7 \end{array}$$

Star	a,	17 58 53.8	-27 27.0	+0.2
	b	17 58 53.6	-27 26.4	-0.4
	c	17 58 53.6	-27 27.1	+0.3
	d	17 58 52.4	-27 26.7	-0.1
		<u>17 58 53.4</u>	<u>-27 26.8</u>	
		17 58 53.4	-27 26.8	m

Mean pos. of star & for 1877-

Nova Sagittarii No. 4 appeared in nearly same R.A. as this star, and about 0.4 north, according to these measures. Superposition of B27750, showing the Nova, and B27750, showing the faint star, proves conclusively that the faint object does not coincide with the Nova, but is south of the position of the Nova. This faint star is seen in the sky best in plates, at about the limit of visibility, magn. 14.

$7^h + 15^0$

March 9, 1911

Contact from AC 12243 (Dec. 27, 1910)

AC 12340 (Feb. 21, 1911) superseded

A moving object found Rough position  
 $7^h 27^m + 21^0 25'$  Dec. 27, 1910  
 $7^h 19^m + 21^0 35'$  Feb. 21, 1911

A minor planet.  
Neptune

$\delta$  star found.  $+6^0 12.08$  (near  $\pi$  line) already found  
 on in Regius  $6^0 0'$   
 $+6^0 12.08$  is bright in negative.

AC 12349 superseded. 6

Star at rough pos. 061214  
 seems bright in negative  
 on in Dec 27, 1910 AC 12345. Same as the plate shown in <sup>chart</sup> except  
 that it Regius is little fainter. AC 12349  
 $\delta$  star.  $\delta$  can min. found

Bright star  
 $6^h 11.58^m + 14^0 40'$   
 (rough 100)  
 Sp. 165 and 30122  
 may be variable  
 but not certain  
 But in neg.



$18^h - 60^0$ 
May 6, 1911

Am 7251 Sept. 2, 1910, superposed on  
 D14464

U. Grae, S. Paronis, R. Paronis 4  
 164565 found,

also me that is fainter on  
 Am 7251 than on previous.

Maybe defective image on Am 7251.  
 This is near 162855, and about  
 16 24 - 55.  
 Look up,

Nov. 17, 1911

Search for Nova Persei No. 2 on  
recent plates.

MC 572, taken Sept. 14, 1910  
shows an image in the position of  
the nova as marked on J 2940.  
On MC 572, the ~~same~~ magn. is 12?  
Images not good for measuring on  
this plate. Have another taken to  
see if the nova has faded in mean

Nova Persei on MC 695

very ph. if seen.  
Marked on J 10369

October 12, 1914

Neur var. found on Mc 6443 taken  
Sept. 22, 1914      23      20<sup>h</sup>+75

Sp. shows H $\gamma$  & H $\beta$  highest. H $\gamma$ =10, H $\beta$ =50.

Confirmed on

Mc 6183      Sept. 10, 1914.  
Oct. 17      2      1, 18.

Mc 2927      Feb. 7, 1913  
Linn.      star field. sl. n. clearly seen.

Mc 5412 Linn.  
June 25, 1914.

Mc 4105      Seen, focus too poor to det.  
Oct. 22, 1913

Mc 4157      About = 20      Focus poor  
Oct. 27, 1913

Mc 2681      About = 24      Focus poor  
Feb. 10, 1913

Mc 4061      Oct. 21, 1914  
Seen at about mag. 10  
poor to det.

Oct. 12, 1914

Neur var. on Mc 6443 cont.

Mc 5822      Linn.  
Oct. July 3, 1914.



## List of Planets found on Plates.

Date of Plate	Plate No.	Planet	Opposition date	R
Sept 21, 1909	Am 6613	Ceres	July, 1909	
March 4, 1910	Ac 11435	Megessia	March 3, 1910.	
July 2, 1902	Am 1414	Eris	June 21, 1902	
July 3, 1902	Ac 17251	Eunomia		
Sept 4, 1903	Am 2257	Hauvika	Sept 10, 1903.	
Sept 14, 1903	Am 2272	Hauvika	" "	
Nov. 1, 1911	Ac 12699	Ceres		
" "	"	Neptune		

off. position  
probably in pos

17.508 - 21.48  $\Delta$  1.7  $\Delta$  1.7  
app. in Am. 414 = 17.508 - 21.39 (1902)  
It seems to me the R.C. should be printed after opposition

See Pl. 27, 35

Pl. 26, 59

" 27, 100

" " 100

Nov. 8, 1911

Object marked on A.C. 12699

Q 3206 Jovis.  
 4520 Jovis.  
 4871 Jovis.  
 7157 Jovis. 2 faint stars south of center is  
 seen on all plates.  
 9110 Jovis  
 12314 Jovis

This is Ceres.  
 Neptun. also complete  
 & Cancer, found

May 11, 1914

Plates of  $\gamma$  Cancri examined to determine  
 whether spectrum changes are accompanied  
 by variation. Early and late plates  
 certainly show that the star <sup>was</sup> fainter  
 in 1901 than in 1889-92

January 26, 1920

Am 11829 18<sup>h</sup>-30 May 25, 1916  
superfused in D. 12722 from Am 8588

A bright object found at lower  
right hand corner

Also in Am 11785 18-30 May 23, 1916  
best S. P. pos. of May 25

Am object and diff. pos. in

Am 13141 18<sup>h</sup>-30 May 15, 1917

On Am 11745 May 22, 1916 diff. pos.  
18<sup>h</sup>-30 " 11689 May 9 " "

On Am 1194K

18<sup>h</sup>-45

June 10, 1916

Am 11700 18-60 May 10, 1916

Am 11804 18-60 May 25 "

Am 13400 18-30 July 14, 1917

Am 11687 18-60 May 8, 1916

Am 13400 July 14, 1917 18-30

Tuesday, Jan. 27, 1920

Am 12235 July 21, 1916  
superfused in D. 12722

R V Sag found.  
R S Scipio found.

also one of my variables in Cygnus.  
Also bright star at bottom which  
is a reflection of same star.

3 old stars found.  
No new ones



Wed. Jan. 28, 1920

18<sup>h</sup>-30<sup>m</sup> Am 10146 sup. in D 12722  
 Sept. 18, 1814

1 old star found.  
 marked on Am

Also a bright object on D 12722

Planet  
 L.H.C. 137 Mars or Uranus?

12<sup>h</sup>-30<sup>0</sup> Map of Sky.

Tuesday, Feb. 3, 1920

Am 7612 supposed in D

1. Brighter in position.  
Room R Cabin

2. On pos. within ref.  
Room X Centauri

Several bright objects <sup>on Am 7612</sup> exactly  
like the stars near the edges from  
other defects.

12<sup>h</sup>-30<sup>0</sup>

Feb. 3, 1920

A casual inspection of Am 13937  
supposed on Am 12413 but negatives  
for purpose of comparing this method  
with that of a positive and negative  
was made several days ago.

One star was noticed blue fainter  
on Am 12213

This is -18° 35' 28" 12<sup>h</sup> 54<sup>m</sup> 11<sup>s</sup> - 18° 59' 5"  
mag. 7.8 Sp. Az. in H.D.  
See A.M.C. Book p. 92 for confirmation of  
this variable

Found on 4 plates out of 56,  
probably Alcyon appears

Similarly  
A on 8/371 on Am 9705  
1. Brighter on Am 8371  
Appears Dec 121625 hum

2. Same on Am 9705 but film is probably  
defective normal on 6 blue plates

3. Brighter on Am 8371  
Room R U Centauri

12<sup>h</sup>-30<sup>o</sup>

Wed. Feb 5, 1920

Am 14857 = Am ~~14857~~ 11663

5 Object on plate appears like a star  
 but on several others  
 known. X Centauri

1. Buphium 11633  
 known R. Corn

2. Defect  
 3. "

4. known S x cent.

5. known R. U. Cent.

6. Defect.



0<sup>h</sup>-30Feb. 22, 1920

Am 7837

objects marked some times ago

1

Franklin negative

-25° 16' 760

23 56.4 - 25 38 (1875)

23 57.7 - 25 30 (1900) Sept. 30, 1911

No. 191 Br. in Am 3987, fl. in Am 7837. Br. in 12240

amb. &amp; Microsc. fl. in 12240 Aug. 16, 1892

Rho 98-2 25 in position

10.7 Arkin C. Om.

Apr. 1875 23 52.4 - 40 10

Pulsating long period

No. 192

Main 6664, 5745

Bright in Am 7648 Aug. 3, 1890

Ft. in 7752 Sept. 14, 1911

" " 7786 19 "

Br. " 7806 21 "

7848 Oct. 2

7920 " 25 48 "

Slight  
change.

n.s. { 2377 6785 59411, 3957, 3895

12566, 11451

Am 13577 Sept. 8, 1917 mixed.

2105 July 6, 1893 "

18<sup>h</sup>-30<sup>h</sup>August 2, 1920Am 8624 Sept. 11, 1911 in  
D 12722 from Am 4388

Nothing found.

Am 7457 June 16, 1911  
in D 12722

Nothing found.

18°-30°

Saturday, August 14, 1929

Am 9203 July 12, 1913 m  
Am 10902 July 29, 1915Nothing found except a specimen  
object near bottom of 10902Urban Am 10973 taken Aug 10,  
1915Am 7402 Apr 26, 1914  
Am 11278 Sept 28, 1915

Nothing

Tuesday, Sept 26, 1920

Am ~~8423~~ 8423 July 8, 1912  
m Am 7792 Sept 20, 1911

One old sun. found

a.7.C. 17 34.4 -32 10  
no. 178 Brighton 8423

Thursday, Sept 30, 1928  
 Am 7457 June 16, 1911 refulposed  
 in D 12722.

3 known variables found.

X Sag  
 RR Benkei  
 170402. A.H. Benkei.



Variables	
Variable	Page
135	
136	3, 4
137	3, 5
138	9-12, 14-25, 32, 42
139	44, 47, 52-56, 62-66
140	34
141	74
142	69

190	107
191	110
192	111



