KG
11366
188

1920phae.proj.1190w

Ida E. Woods.
Book 12.
Examination of AM & AC Plates.

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XG11366.188

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T Pyxidis, page 129

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Harvard College Observatory.

Ida E. Woods. Book No. 12.

Continuation of Book 9.

Examination of Plates for Novae and other Interesting Objects.

AM and AC Plates
taken in Milky Way, (Southern).

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KG 11366.188

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1920phae.proj.1190w

To confirm

page 61

~~89~~

104

~~124~~

~~137~~

~~151~~

161

~~214~~

~~219~~

~~133~~

~~146~~

~~23~~

~~24~~

~~27~~

~~29~~

~~37~~

~~49~~

61

89

New

c 199

133

146

161

199

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2

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47 Regions.

Regions examined for Novae, Variables, and Other Interesting Objects.

Index, Bk. 12.

−15°	5h	
	6	122
	7	
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	9	
	10	126, 168
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	18	12, 216
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	20	184, 218
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	9	
	10	60
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	12	118, 144
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	9	
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	13 30	58
	15	110
	16 30	22, 26, 36, 54, 194
	18	188
−75°	10	48
	12	100
	14	112

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1920phae.proj:1190w

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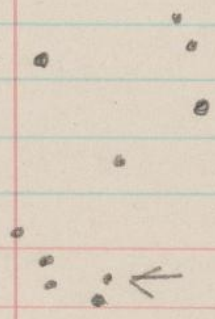
1920phae.proj.1190w

Regim 16 00 -15

continued from
Blk. 9, page 219. Plates 14923 and 13006.

N on 13006

probably defects



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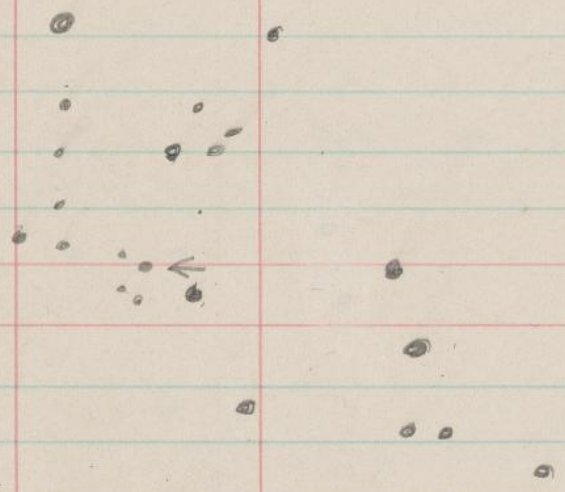
1920phae.proj.1190w

N on 14923

155323

Ident. by B 28456

– Scorpii



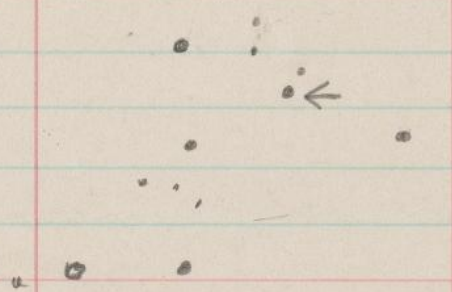
Mackie
1917

Seen on one 14923 very ft. on 13006

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1920phae.proj.1190W

N on am



Var. 152726
S V Librae
$15^h 27^m.7 - 26° 51'$ (1900)

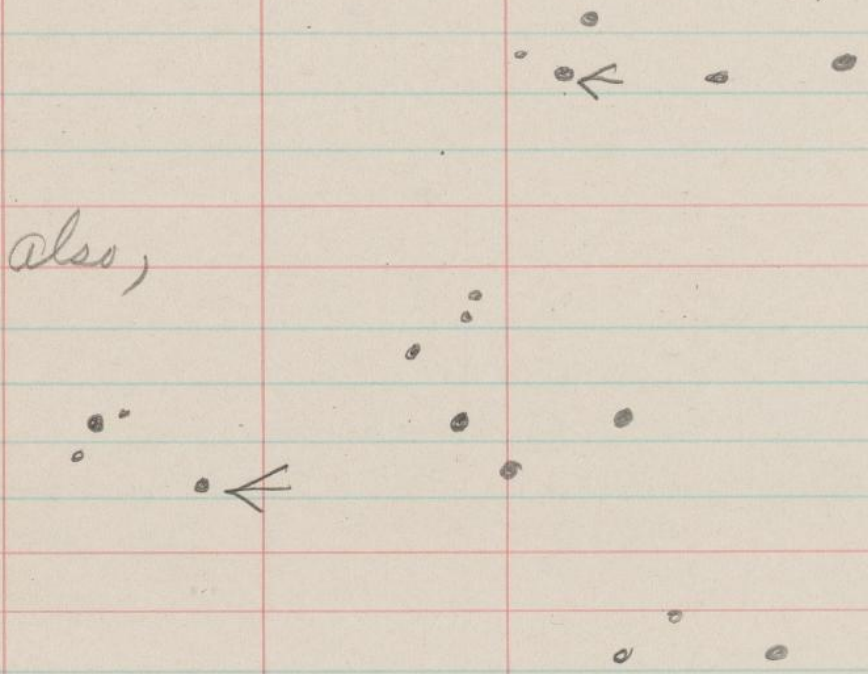
(Iden. only by Catal. Look up exact iden.)

Leavitt

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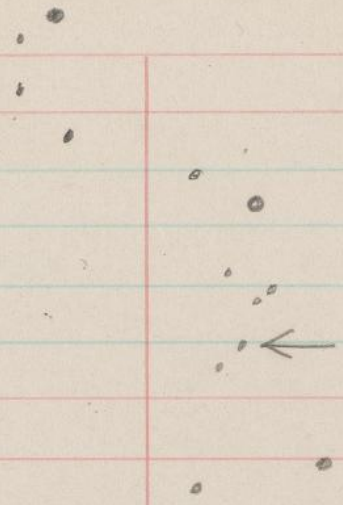
1920phae.proj.1190w

Extra stars near Number edge.



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1920phae.proj.1190W



N on 13006

Var.

150601

-1° 3036

γ Serpentis

Leavitt

1908

$15^h\ 8^m.8 - 1°\ 3'$ (1900)

may be a little change.

br.? m 14923

14815 ?

fr. on 13006

AC 18828

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1920phae.proj.1190w

Monday, March 1, 1920.

Examination of AM and AC Plates.

Region $18^h\,00^m - 15^\circ$

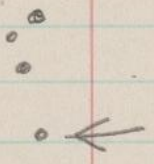
AM	14886	August 2, 1919,	Exp. 60m
	10723	June 21, 1915,	Exp. 60m
	(10723 superposed on 14886)		

In north half of plate 10723 is not very good, does not show faint stars.

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1920phae.proj.1190w

14886 might be repeated with good late plate. Shows fainter stars than comparison plate.



Nova
D. E. W. 1919.

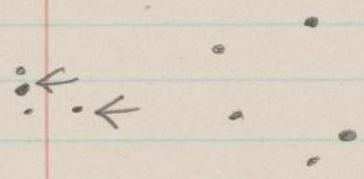
182529 Nova Sag., 5.

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1920phae.proj.1190w

Stars near Number end of plate.

N on 10723



Not seen on 14886.

Not seen on 10661, June 11, 1915

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1920phae.proj.1190W

Tuesday, March 2, 1920.

Examination of AM and AC Plates.

Region $14^h\ 00^m$ $-45°$

AM 14879 August 1, 1919, Exp. 69m
13805 April 2, 1918, Exp. 60m
(13805 superposed on 14879)

Several plates were ex. None good enough to compare - 1915 was year desired.

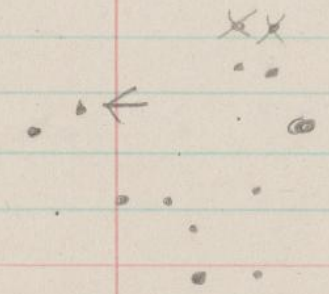
Variables would not be readily noticed on such different plates.

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1920phae.proj.1190w

Repeat 14879. Comp. Pl. is
not nearly as good as needed & comp. with
1919 plate.

✓
Shown to
Prof. Bailey.



Notice position of this star on the
two plates. Probably due to defective
film? Slightly displaced.
Am 13260 agrees with 14879.

Not an
asteroid.

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1920phae.proj.1190w

h on 13805

Var.

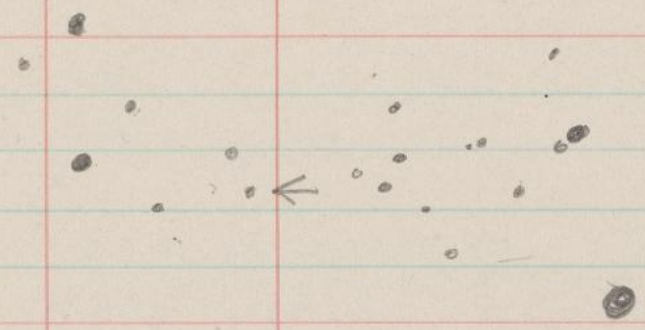
140959

R Centauri

$14^h 9.^m4$ -59° 27' (1900)

br. on 14879 fn. on 13805

(See print)

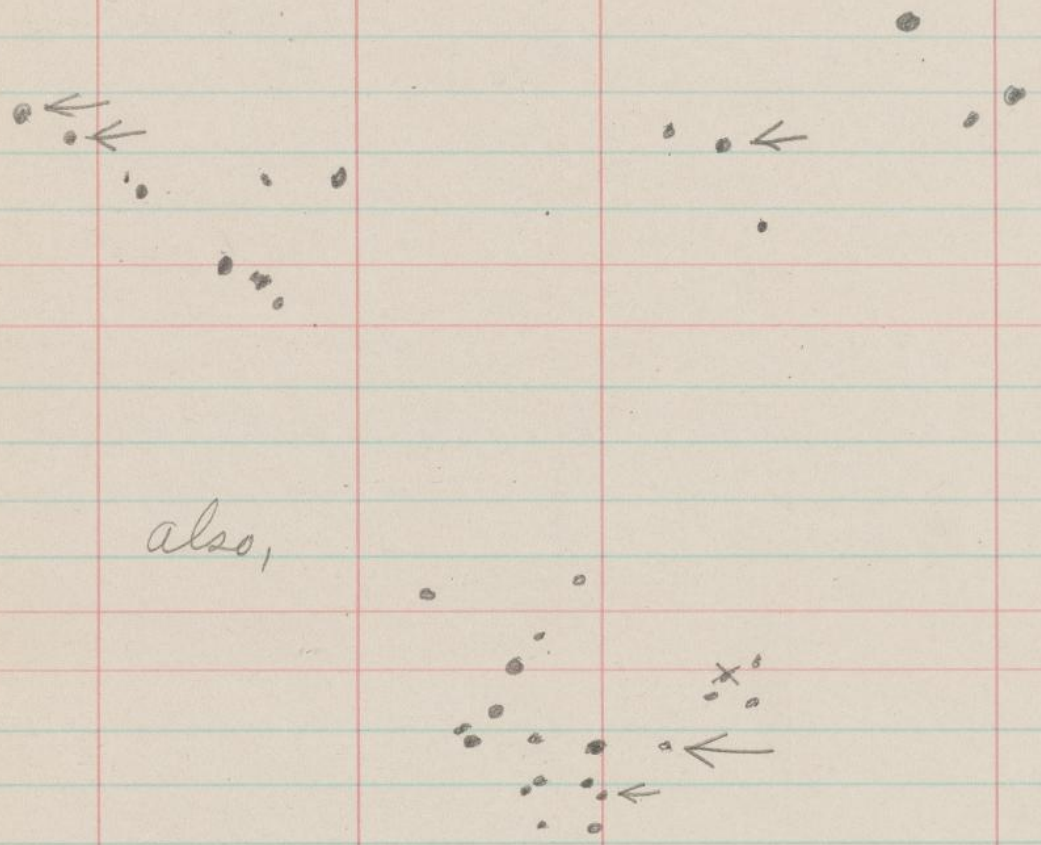


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1920phae.proj.1190W

Stars near number edge of plate.
See also, below.

Nov 13805



also,

See, also, plates of this region, which were examined for another object and were found to show other stars near edge of plate
Nov 11912, 13251, 13323, 13532, 13334, 12346, 12347, 14362, 14034, 10979

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1920phae.proj.1190w

N on 148,79

~~dou~~ pre.

N comes.



probably due to being near edge of film. The stars outside this show but the nearby stars seem defective.

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Friday, March 5, 1920.

Examination of AK & AC Plates.

Regin $16^h\ 30^m$ $-60°$

AK 14945 August 22, 1919, Exp. 62^m
12995 April 13, 1917, Exp 58^m
(14945 superposed on 12995)

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1920phae.proj.1190w

✓

Var.

CDM -51° 10438

16 33 33.7 -51 31.4 (1875)
10

Nov 12995

2 dem. B25740

Plates exc. 12995 are 17h -45°

No variation proved. Probably defective film. (Miss Leavitt saw this)

br. on 12995	on 6198	fr on 14945
2615	6239	
2636	6287	
2655	7209	
2691	8913	
2751	10602	
2825	11155	
2832	13005	
2897	No evidence of var.	
3058		
3112	13005 is plate of	April 14, 1917
3405	12995	April 13, "
3420		
3434		
3573		
3575		
5063		
5104		
5575		
5607		

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1920phae.proj.1190w

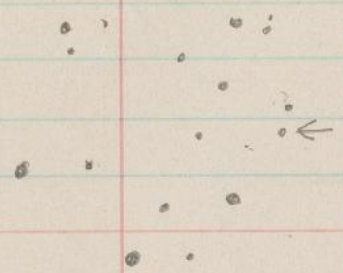
24

N or 14945

Irreg. center.

2den. B19364

Var.



CPD-65° 3046

15h 13m 18.0s -65° 10.4

9.5

?

br., or at least larger, on 12995

ftr. on 14945

See 6961

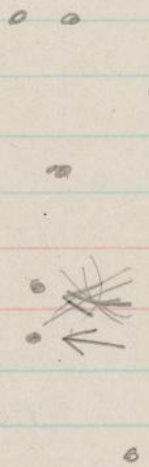
No evidence of variation. Photographic effect, only. (Miss Leavitt saw this)

Br.		
5489		6373
*5579		6461
5551		6855
5623		6887
5663		6910
5739		6961
5976		
6002		
6034		
6086		
*6125		
6154		
6168		
6243		
6258		
6329		
6333		

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1920phae.proj.1190w

Extra star near N. limb edge.



On 12995
Not on 14945
" " 14890

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1920phae.proj.1190w

Big Blizzard.

Saturday, March 6, 1920.

Examination of AM & AC Plates

Region $16^h\ 30^m$ $-60°$

AM 14890 August 4, 1919 Eff. 61^m
10393 April 6, 1915 Eff. 30^m
(14890 superposed on 10393 / 10393 14890)

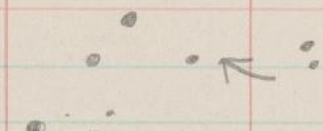
10393 only 30^m eff. but is 2.5 and other plates that were examined do not show as faint stars.
14890 is an especially good plate.

This is same region as page 22, but dates are different.

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N on 14890



Not a Nova

Idem By B 13528

Var.?

Br. on 14890 Ft. on 10393

17 8 - 57 14945 Aug. 22, 1919.

Not known var. 14502

10966

10200 Oct. 17 1914

10221 Oct. 23 1914

10260 Nov. 4, 1914

15474 Sept. 9, 1920

12995 Apr. 13, 1917

List N plates examined, see Bb. 15, p. 83.

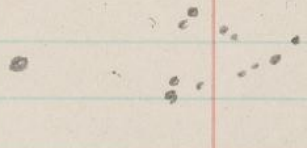
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1920phae.proj.1190w

28 ✓

Nan 10393

Comet?
Neb.?
or Defect?



Assumed to be defect.

On 10393
This is the plate which does not show the faintest objects

Not on 14890.

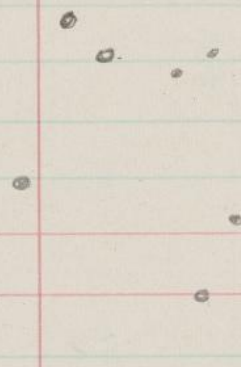
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1920phae.proj.1190w

N on 10393
near center

Appar. 1900
16 32 -59.5

Region mkd on
B 13528



Seen on 10393

Not seen on 11890
10443 Apr. 19
1915

Seen, different position,
10489, Apr. 24.
If this is a moving object, why not seen on
10443, Apr. 19 ?

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Nr 10393

Var.

Idem.

B. 41337

Not a Nova -

153654

Br. 10393 Not seen on 14890

T Normae, 10454 Apr. 20, 1915 -55° 11874

15h 36.7 -54° 40' 10443 April 19, 1915 -60° 10200

(1900) 10489 Apr. 24, " -60° 13288

(see print)

Innes

1899

"

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1920phae.proj.1190w

N an 10393

~~Not seen on 10200 Oct. 17, 1914~~
~~13288 June 16, 1917~~

180363

R Paronis

Iden. B44903

$18^h 3.3^m -63° 38' (1900)$

(Verified by print)

Br. 10393
10443
10489

Ft. on U.S. on
14945
14811
12995

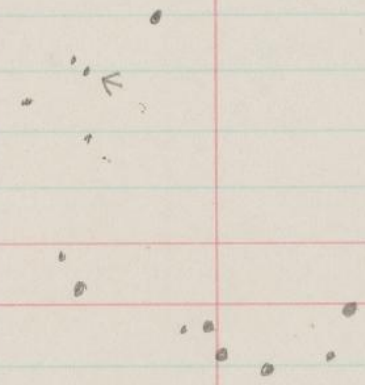
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1920phae.proj.1190w

N of 14890

Var.
160561
Y Insang. Austr.
h m
16 5.3 -61° 50'
(1900)

Idem. by B 33628.



Leavitt
1907

Br. 14890
14945

Fr. 10393
14811
12995 (N. S.?)

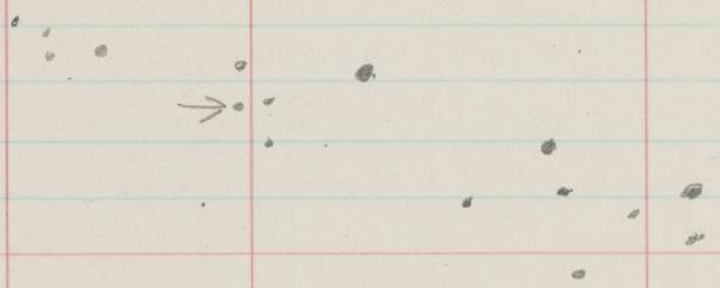
To be confirmed by identity with Miss L.'s star. (taken from pos. only)

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1920phae.proj.1190w

Nan AM 10393

?



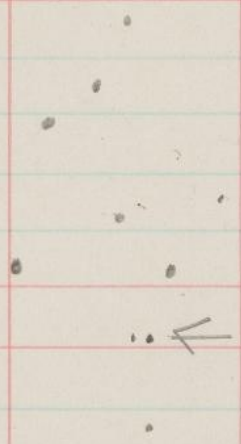
Defect?

Assumed to
be defect. Seen on 10393
Not seen on 14890
" " " 14945
" " " 14811
" " " 10489 Apr. 24, 1915
" " " 10443 Apr. 19, "

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Eight stars near Number edge of Plate.



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Monday, March 8, 1920.
and Tuesday, March 9, 1920.

Examination of aH & aC Plates.

Region $16^h\ 30^m$ $-60°$

aH 14811, June 28, 1919, Exp. 60^m
11874, June 2, 1916 Exp. 60^m
(11874 superposed on 14811)

This is same region as plates exam. on pages 22 and 26, but dates are widely separated.

There are many small defects on one or both these plates. These have not been marked as possible stars but many have been specially examined.

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1920phae.proj.1190w

Confirmed by Miss Leavitt, February 22, 1921.
Long Period? — New Variable — Range perhaps three mags.

New Var?

R on 11874

Plates exam
Feb. 19, 1921.

Defect?

Ident. as
B 20486

17 40 −58.6 (1900)

This object looked
B/ and suspected Br. 14811 Ft. 11874
of being a
Nova — Does not seem like defect.
February 19, 1921.

Br.	14776	June 19, 1919	13288	June 16 1917
Br.	14854	July 21 "	13294	" 17 "
Br.	14864	July 24 "	13484	Aug. 8 "
Br.	14808	June 26, "	13501	Aug 12 "
Br.	14880	Aug. 1 "	14054	June 11 1918
	14951	Aug 25	14060	June 12 "
			14502	Oct. 7 "
			14945	Aug. 22 1919
	14881	Aug. 1 1919	R S 14934	Aug 20 "
	14855	July 21 "	14678	May 3 1919
	14791	June 23 "		

Not C.P.D star.
Not known.

Poor pl. Star
possibly seen

Too poor

Estimate of Range:—
Sequence of R W Arae — B 31949 Bls. 45:105
and 14816 var bet. k & l = 10.5
B 31949 var. N.S.
t of R W Arae Seq. = at least 1
var. < 13.5

Continued, Bk. 15, page 90.

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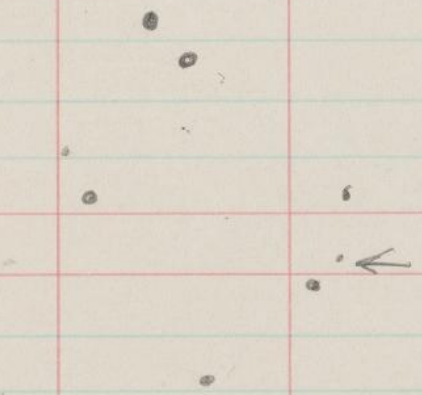
1920phae.proj.1190w

38 ✓

Nova? or
Var? or
Defect?

Probably defect
~~Shows motion~~.

N on 11874
near center.



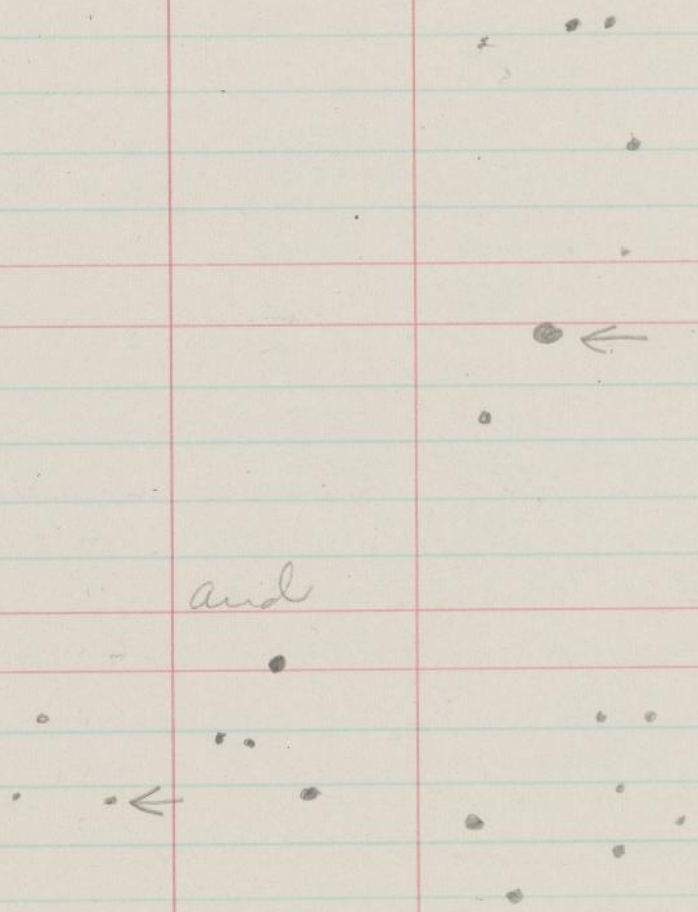
Seen on 11874

N.S. on 17811
10393
11840 May 28, 1916
11846 May 28, "
11867 May 30, "
11888 June 3, "
11891 June 4, "

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1920phae.proj:1190w

Extra stars near Number edge of plate.



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1920phae.proj.1190w

quick upper end

Tuesday, March 9, 1920.

Examination of AH & AC Plates.

Region $13^h\ 00^m$ $-45°$

AH 14853, July 21, 1919, Exp. 65^m
11683 May 8, 1916, Exp. 60^m
(11683 superposed on 14853)

14853 has a large piece broken off, piece is in south following section. Piece is at present missing.

"

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1920phae.proj.1190w

N on au 14853

Nova?
or Var?

Outer, prec.

Not a Nova.



14441
X Centauri
11h44.1-41° 12'
(1900)
Fleming
1895

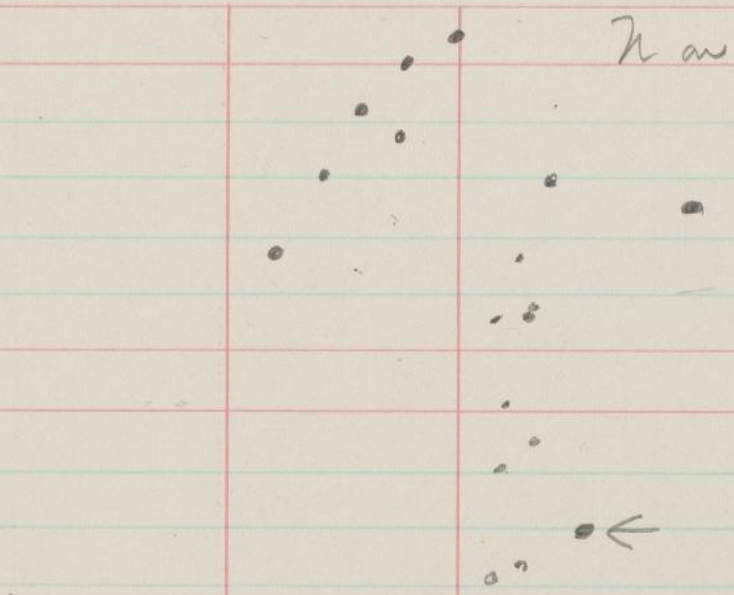
Bright on 14853
Not seen on 14713 (12h-30°) May 22, 1919.

Identified by B 30030 and this plate was found with this object marked and bright.

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1920phae.proj.1190w

Extra stars near Number end of Plate.



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1920phae.proj.1190w

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1920phae.proj.1190w

Thursday, March 11, 1920.

Examination of AM & AC Plates.

Region $19^h 00^m$ $-45°$

AM 14740 May 31, 1919, Exp. 73m
~~12144 July 5, 1916, Exp. 60~~
(12144 ~~superposed on 14740~~)
11690 May 9, 1916, Exp. 54m
11690 superposed on 14740)

12144 rejected as comp. plate.

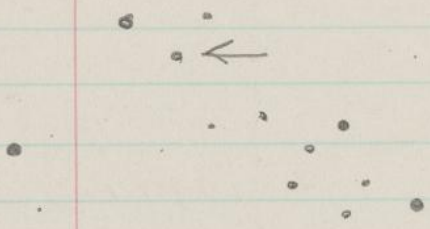
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190W

See object on 11833

N on 11690

Nova or Var.?



Iden. by B17838

Not a Nova.

201139

RT Sagittarii
20h 11.1m -39° 25'
(1900)

N. S. on 14740
Br. on 11690
Ft. on 12144 July 5, 1916
Ft. on 11862 May 29, "
Br. 11817 May 26, "
Ft. 11833 May 27, "
Ft 11849 May 28, "
N. S 11450 Nov. 13, 1915
Ft. 11806 May 25, 1916

(see print)

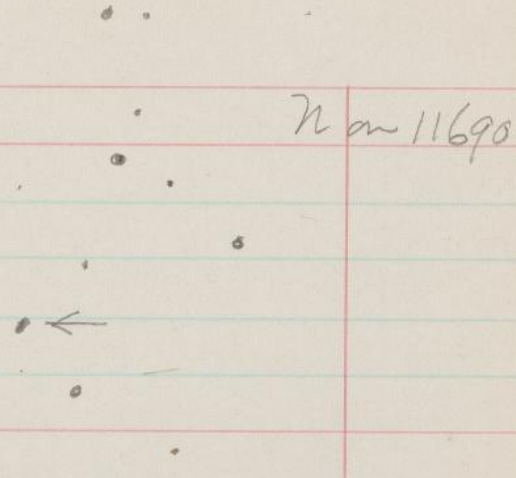
Bright on 2990 Aug. 31, 1904

Found marked on B17838

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1920phae.proj.1190w

Extra star near number edge.



N on 11690

Not on 14740

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1920phae.proj.1190w

N on 14740

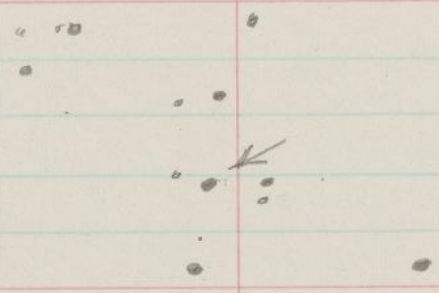
19 10 -33 ?

upper section, center

Iden. by B 22747

Nova?

or Var.?



191033

RY Sagittarii N. S. on 11690

Seen on 14791 June 23, 1919 Bright

$19^h\ 10.0^m$ $-33°\ 42'$ " " 14792 June 23, " "

(1900)

Found already marked on B 22747

(See print)

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1920phae.proj.1190w

Friday, March 12, 1920.

Examination of AM & AC Plates.

Region $10^h\ 00^m$ -75°

AM 14737 May 31, 1919, Ef. 60m
AM 6913 May 7, 1910, Ef. 64m
(6913 superposed on 14737)

6913 has following, south, corner missing. Several plates were examined, and this seemed best for comparison plates.

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1920phae.proj.1190w

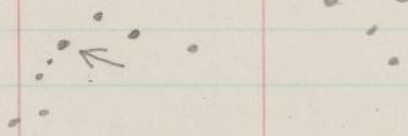
grnd pl. = 12886
6081

Apparently New

See additional plates: 15: 116.

Nav 14737
Iden. by B 13520

Var.?



10 20.9 -59.7
(Approx. 1900)

C.P.D.
-59° 2101
h m s 10 20 1.0 -59° 33' 3 (1875) Auw 10545
0 53. - 7.6
10 20 54.0 -59 40.9 (1900)

Br. 6913 / ~~14737~~
m B 13520
12886 plates at -60
12902
~~Br. 10545 May 5, 1915~~
~~Ft. 1165~~
12916
faints 13198
13785
9739
9780
6058
* 6081
* 6090
6850
6948
** 7347
* 7362
12681
12792
12847
12977

ft. 14737
ft? B 26857 Too poor -
* Auw 11654
* 11890 ? Defective ?
* 5942
ft? 13016
ft? 11896
ft? 12059
Little proof of ~~faintness~~ of this star but plates that show it faint seem to be all right.
? ft. 11648

Br. 12989

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1100w

50

Nova or var. ?

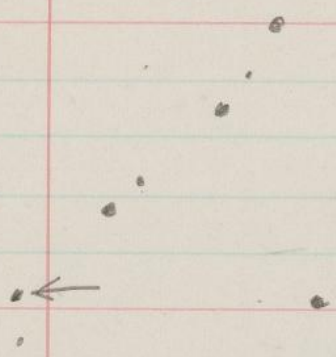
R Carinae

$9^h 29.7^m - 62° 21'$

(see print)

N on 6913

2 dim. on B 18317



br. 6913
5942
6090
very br. 6948

ft. 14737
6058
ft? 6081

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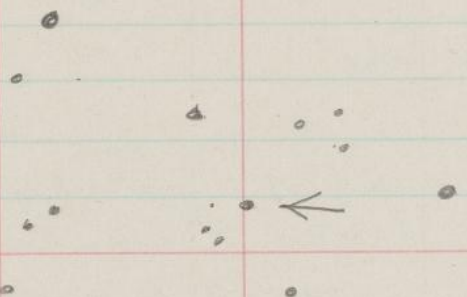
1920phae.proj.1190w

Continued on page 154.

Nova 14737

var. or Nova ?

Iden. on B21311



S Ophiuchi

17h 24m.0 -86° 46' (1900)

(see print) Br 14737 N. S. 6913
Br. 14720 May 23, 1919
Ft. 14774 June 19, 1919

Too Poor. 14595 Mar. 31, 1919
Br. 14630 Apr. 23, "
Br. 14640 Apr. 25, "
14680 May 4, "
N.S. 10545 May 5, 1915
10837 July 18, "

Probably not a Nova

Seen Br. on 12887, Mar. 23, 1917.

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1920phae.proj.1190W

March 12, 1920.

Examination of AC & ASH Plates -

Region $10^h 30^m$ $-60°$

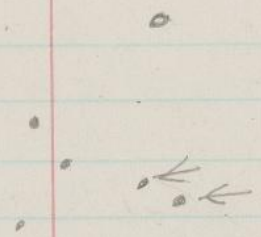
AC 14784 June 22, 1919, Eff. 44^m.
11487 December 11, 1915, Eff. 65^m
(14784 superposed on 11487)

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Extra stars near Number edge.

N. on 11487



Not seen on 14784.

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1920phae.proj.1190w

March 12, 1920.

Examination of AM & AC Plates

Region $16^h 30^m$ $-60°$

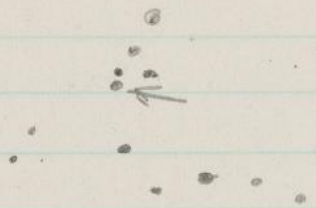
AM 14776 June 19, 1919, Eff. 71m
10966 August 9, 1915, Eff. 60m
(10966 superposed on 14776)

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1920phae.proj.1190w

N en Ann 10966

Nova
Var.
or Defect
?



Zolenberg B16434

164844 Br. 10966

R S Scorpii
16h 48m.4 -44° 56' (1900)

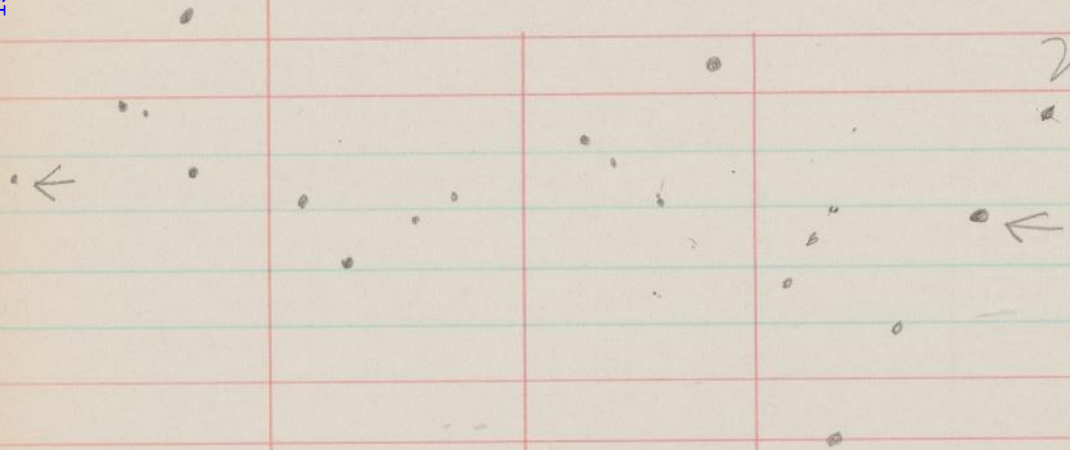
(See print)

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Extra stars near number edge —

Nov 10966



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1920phae.proj.1190w

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1920phae.proj.1190w

March 12, 1920.
and Monday, March 14, 1920.

Examination of AM & AC Plates –

Regin

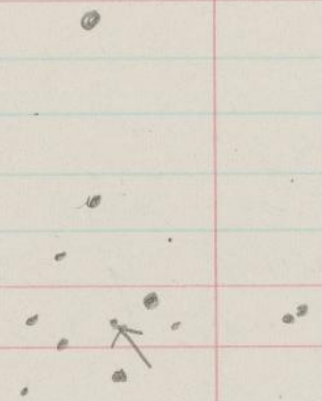
Ame ~~14806~~
13h30m -60°.

Ame 14806 June 26, 1919, Eff. 78m
13003 April 14, 1917, Eff 60m
(14806 superseded by 13003)

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1920phae.proj.1190w

Defective image, (Defect over star)



Confirmed by Miss Leavitt.

Seen, guide a faint star, m = 14806
a defect in this spot, no (or faint) star, m 13006

This star belongs to region, is in AM 12992,
April 13, 1917.

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1920phae.proj.1190w

Monday, March 14, 1920.

Examination of AN & AC Plates.

Region $10^h 00^m$ $-45°$

and 14742 June 1, 1919, Exp. 64m
10448 April 20, 1915, Exp. 60m
(10448 superposed on #742)

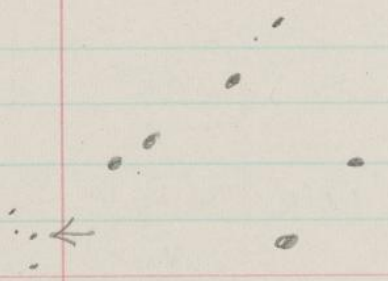
See several faint, nebulous defects (?)
Might any one be Comet?

"

1920phae.proj.1190w

Var.?

092962



R Carinae
$9^h\ 29^m.7 - 62°\ 21'$ (1900)

(Verified by print) br. 10448
10466
10409

ft. a defective image,
14742

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1920phae.proj.1190w

Monday, March 15, 1920.
and Tuesday, March 16, 1920.

Examination of AK & ac Plates -

Region $17^{h}\,00^{m}$ -30°

ac 14807 June 26, 1919, Exp. 60m
10427 April 17, 1915, Exp. 69m
(14807 superposed on 10427)

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1920phae.proj.1190w

Nova or Var?

R R Scorpii
165030

Nova 10427
See B 23690



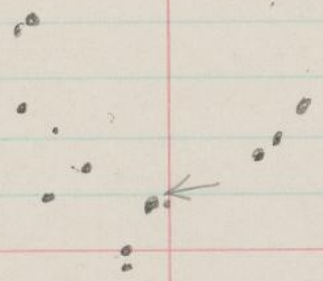
br. 10427

Diff ft. on 14807.

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1920phae.proj.1190w

Not on Ann 10427



Probably Defect.
Comet or Defect?

Miss Leavitt saw this object. ✓

Nebulous object on 10427, not on 14807.

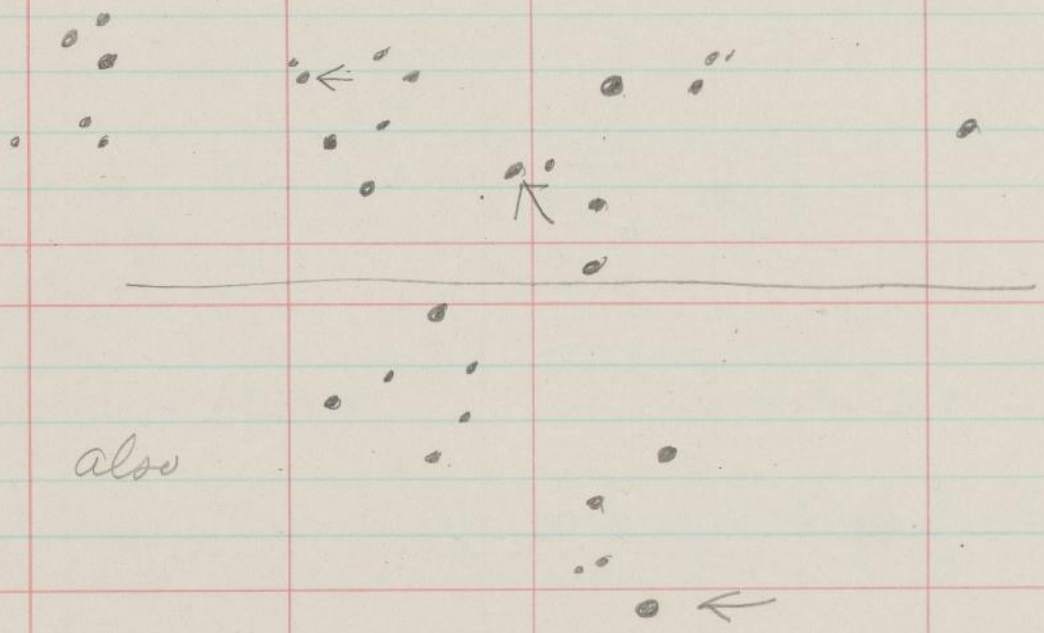
Not on Ann 10462, April 21, 1915.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Extra stars near Number edge of plate.

N on 10427



also

not seen on 14807.

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1920phae.proj.1190w

Wednesday, March 17, 1920.

Examination of AM & AC Plates.

Region $14^h\ 00^m$ $-45°$

AC 14749, June 2, 1919, Exp. 61m
AM 11912, June 7, 1916, Exp. 60m
(11912 superposed on 14749)

N.B. Bright defect? South of center on 14749.
Comet? or defect

Time, about 35 minutes.

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1920phae.proj.1190w

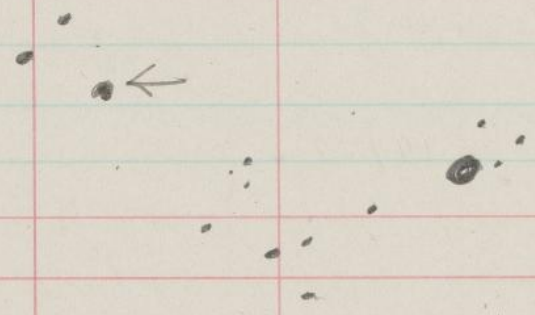
N on 14749
South of center.

140959

R Centauri

$14^h 9.4^m -59° 27'$
(1900)

(see chart)



Identity
B10885

Br. on 14749

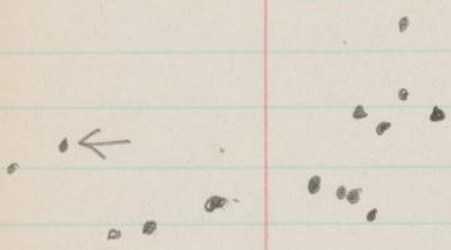
ft. on 11912

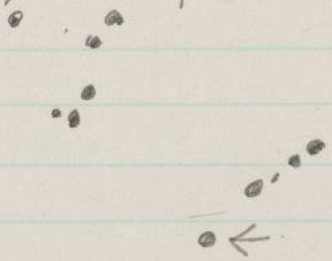
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Extra stars near Number edge.

Nov 11912





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1920phae.proj.1190w

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1920phae.proj.1190w

another Blizzard.

Saturday, March 20, 1920.

Examination of AH & AC Plates.

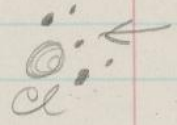
Region $14^{h}\,00^{m}$ $-45°$

AH 14777 June 20, 1919, Exp. 62m
13251 June 11, 1917, Exp. 67m
(13251 superposed on 14777)

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1920phae.proj.1190w

h on 14777
prec. centre.



Dodw. Cy B 24810

$13^h\ 20^m$
-46.9 =
ω Centauri)
Var. No. 1.
Brightest var, Br. 14777
in Cluster".)

N.S. 13251
12341
Ft. 14749
Ft. 11912

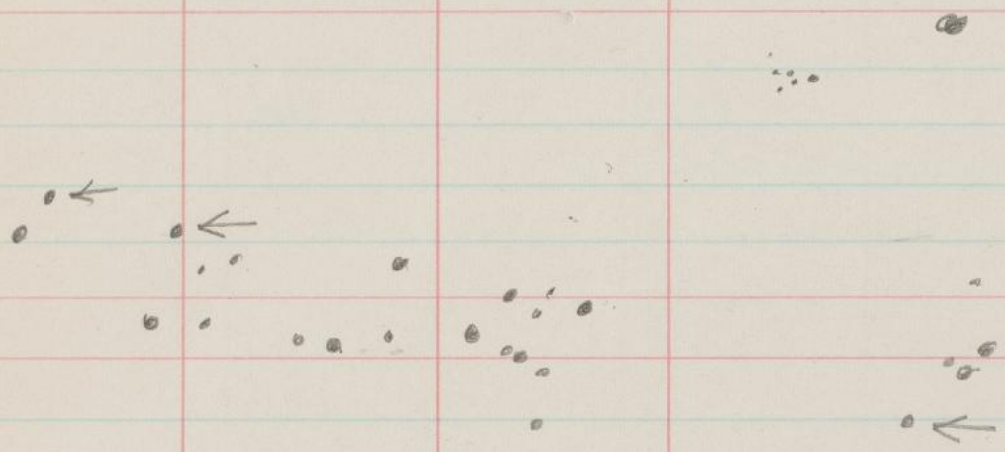
See H. A. 38,
page 133,
bottom Remarks.

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1920phae.proj.1190w

Extra stars near number edge —

Nov 13251



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1920phae.proj.1190w

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1920phae.proj.1190w

Monday, March 22, 1920.

Examination of AH & AC Plates

Region $13^h\ 00^m$ $-45°$

AH 14739, May 31, 1919, Exp. 69^m
12906, March 26, 1917, Exp. 60^m
(12906 superposed on 14939)

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1920phae.proj.1190w

N on 14739

13

Delin. by
B 18782

Not a
Nova.

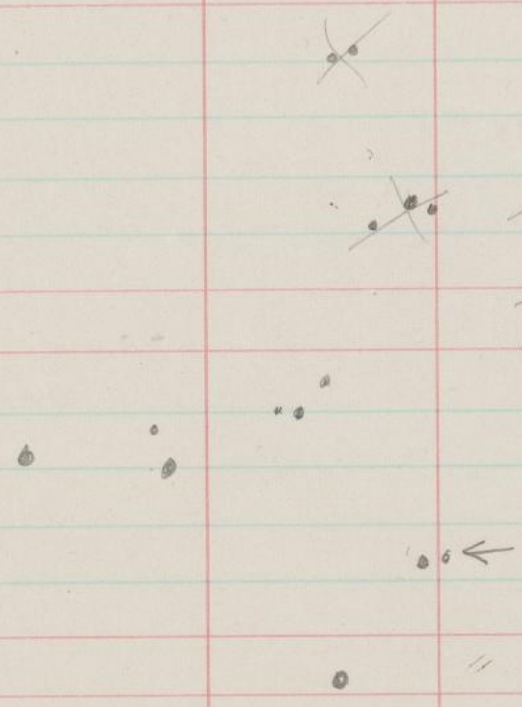
133926 Br. 14739
14777
10363

Fl. on N. S. 12906

Woods

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1920phae.proj.1190w



N on B 18782

(drawn to scale of B plate)

134327

W Hydrae

13h

-27° 9429

Noticed in Iden. star on page 75. Diff. bet. Cam 12906 and B 18782

Later, check Iden. No chart.

1889

Sawyer

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1920phae.proj.1190w

Nova? or
Var?
122854
H Centauri.

Bs. 14739
12h 28m.0 −54° 6' | 14749
(1900)



N.S. 12906

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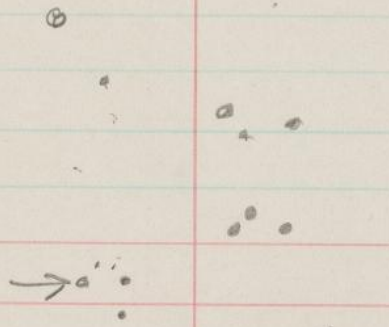
1920phae.proj.1190W

Nov 12906

Defect?

Probably defect ✓

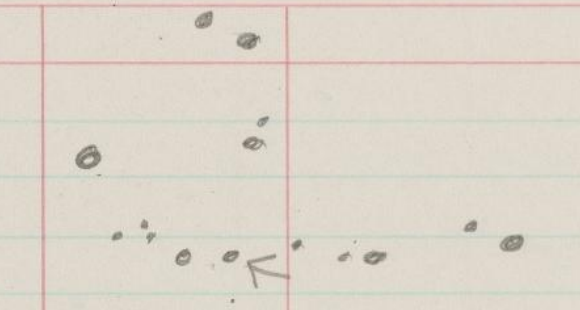
S of center



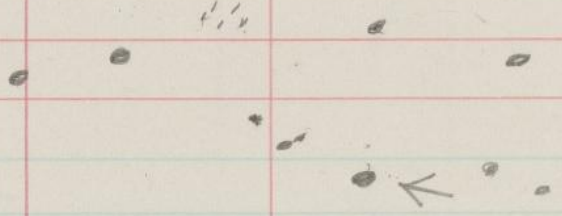
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Extra stars near Number edge.



also



John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

80

✓

Undoubtedly defective

Nov 12906
Iden. by B25224

Maybe
defective
image on 14739

12h 27.6 -45.0
(approx. 1900)

Br. 12906

Ft 14739

Miss Leavitt
Saw this object ✓

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1920phae.proj.1190w

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

Tuesday, March 23, 1920.

Examination of AM & ac Plates.

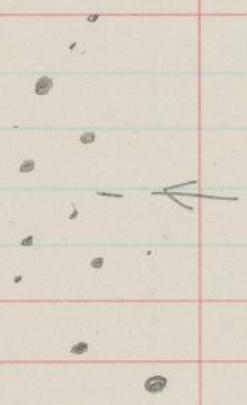
Region $15^h\ 00^m$ -30°

AM 14786 June 22, 1919. Exp. 67m
13814 April 3, 1918, Exp. 60m
(13814 superposed on 14786)

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

R on 14786



Trail
or Defect?

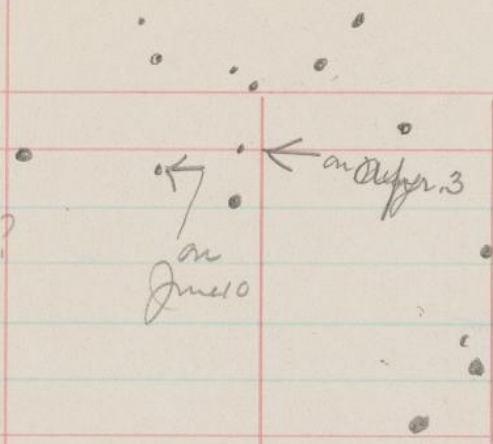
$15^h\ 4^m - 18.1^\circ$
(1855)

This is on 1919 plate which is not supposed to have trails of South Pole.
Not seen on 14745, June 1, 1919.

Not seen on 14795 June 24.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190W



N a = 13814

near center

Moving object?

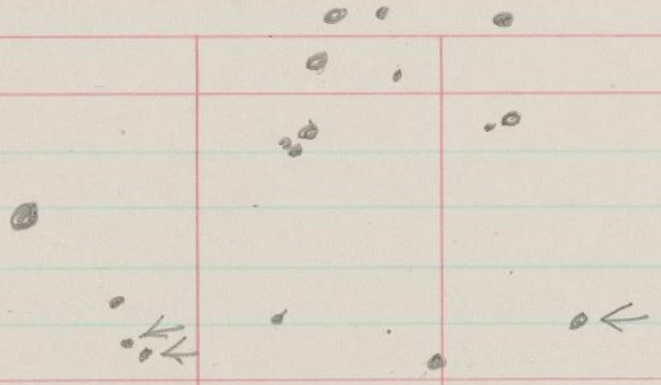
Is not time from Apr. to June a long interval?

Ann 140 46 = June 10, 1918

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1920phae.proj.1190w

Ellis stars near Number edge.



Dec 13814
not on 14786

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1920phae.proj.1190w

March 23, 1920.
and Wednesday, March 24, 1920.
Examination of AM & AC Plates.

Region $15^h\ 00^m$ -30°

AM 14745 June 1, 1919, Exp. 37 m
14046 June 10, 1918, Exp. 67 m
(14745 superposed on 14046)

Many defects on both plates.

Time:- abmt 40 min.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

151822 RS Lib

Nova 14745

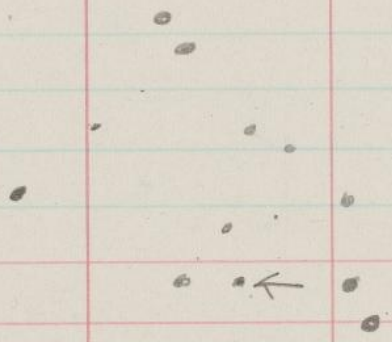
Var. or

Nova?

Iden. by B19766

$15^h 16^m$ -22.4

(1855)



151822 Br. Ft. or N.S. on

RS Librae 14745 14046

14786 June 22, 1919

14787 " 22, "

$15^h 18.5$ $-22° 33'$

(1900)

(See print)

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1920phae.proj.1190w

88

Nan 14046

Var.

Identical with B30475

135230

TW Centauri

Br.

$13^h 52.0^m$ $-30° 34'$ (1900) 14046 (already marked)

Ft. or N. S.

14745

13814

Fleming (1910)

Verified by original plates, B40614, Sf.

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1920phae.proj.1190w

✓

Probably defect on star. Shown to Miss Leavitt.

Var. or defect?

N on 14745

Iden. on B 16483

CDM -41° 9121

(1875)
$14^h\ 37^m\ 45.2$ $-41°\ 16'\ 5$ 9.3)
1.6 −6

$14^h\ 39^m.4$ $-41°\ 22'$ (1900)

Not a known var.

Bu. 14046

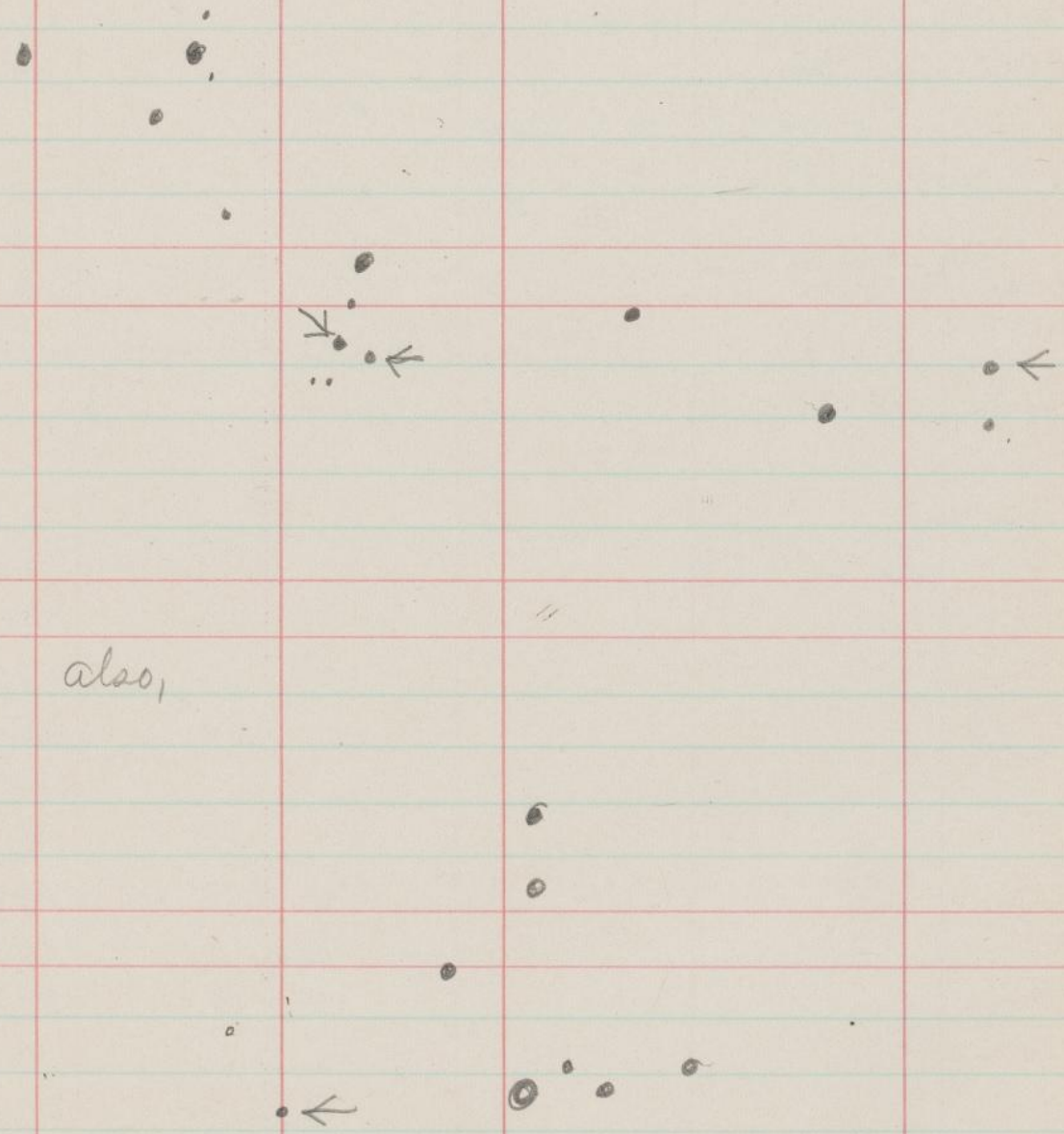
F to on 14745
13814
12124
12239
14879
14786
April 30, 1918 − 13927 −45
May 2, 1418 − 13940 −45
May 18, " 13992 −45
June 6, " 14034 −45
July 2, " 14131 −45
June 2, " 14015 −30
June 6, " 14035 −30

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1920phae.proj.1190w

Effria stars near Number edge -

Nov 14046



also,

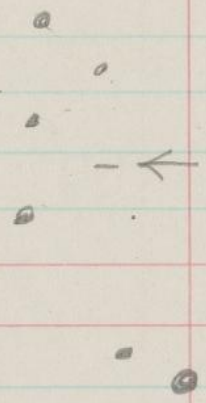
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190W

See Nov AM 14786

Moving object
or defect?

$15^h 4^m$ -18.1°
(1855)



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1920phae.proj.1190w

Complete
Centrals
later

Wednesday, March 24, 1920.

Examination of Ant & Ac Plates

Region $16^h\ 00^m$ -45°

Cells 14783, June 21, 1919, Eff. 60^m
12284, August 1, 1916, Eff. 60^m
(12284 superposed on 14783)

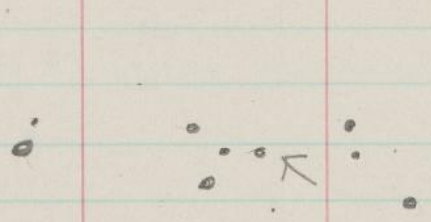
Time, about 50 minutes.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

N on 12284

Var. or Nova - ?



Diden. by B 21131

153654

T Normae

Br. 12284

$15^h 36.4^m$
$-54° 40' (1900)$

12115 July 2, 1916
12135 July 4, 1916

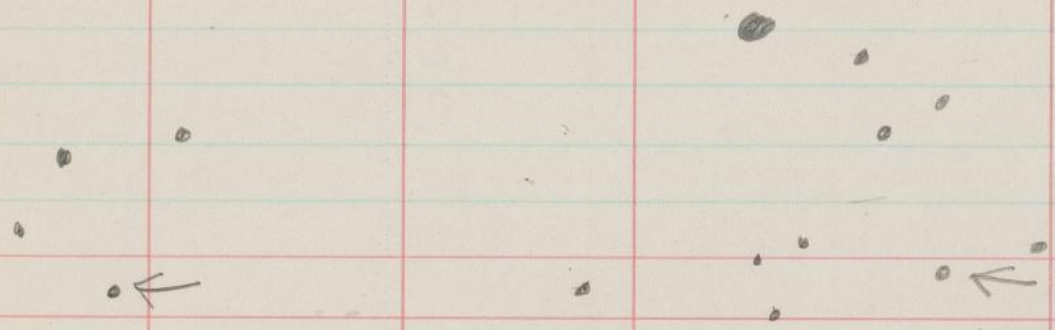
(see print)

Ft. on N.S on 14783
N.S 11633
Ft. 12381 Aug. 27 1916
N.S. 10966 Aug. 1915
N.S 14783 June 1919
N.S 11867 May 1916
N.S 11891 June 1916
Ft. 11954 June 11, 1916
Ft? 11942 June 10, "
~~12115~~

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1920phae.proj.1190w

Nov 12284



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1920phae.proj.1190w

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1920phae.proj.1190w

Wednesday, March 24, 1920.

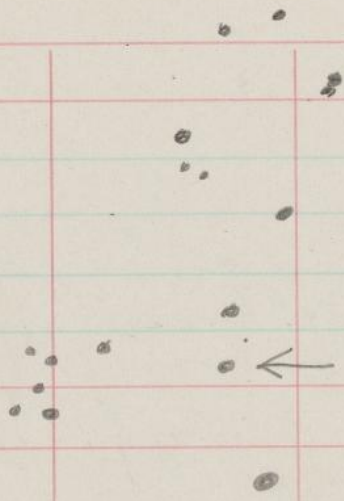
Examination of Aul & Ac Plates.

Region $12^h\,00^m\,-60°$.

Aul 14735 May 30, 1919, Exp. 64m
6101, May 9, 1909, Exp. 60m
(6101 superposed on 14735)

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1920phae.proj.1190W



Nan 14735

Var.

12 2854

N Centauri

$12^h 28^m.0 - 54° 6'$

(1900)

(Confirmed by print)

Br. 14735

14717

14743

7444 (1911)

N.S. 6101

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1920phae.proj.1190w

Nav 6101
near center

115058

W Centauri
$11^h 50^m.0 - 58° 42'$
(1900)

Sem 6101
7444

Rayft. 14735

(Confirmed by print)

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1920phae.proj.1190w

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1920phae.proj.1190w

Thursday, March 25, 1920.

Examination of Arc & Cc Plates.

Region $12^h\,00^m$ $-75°$

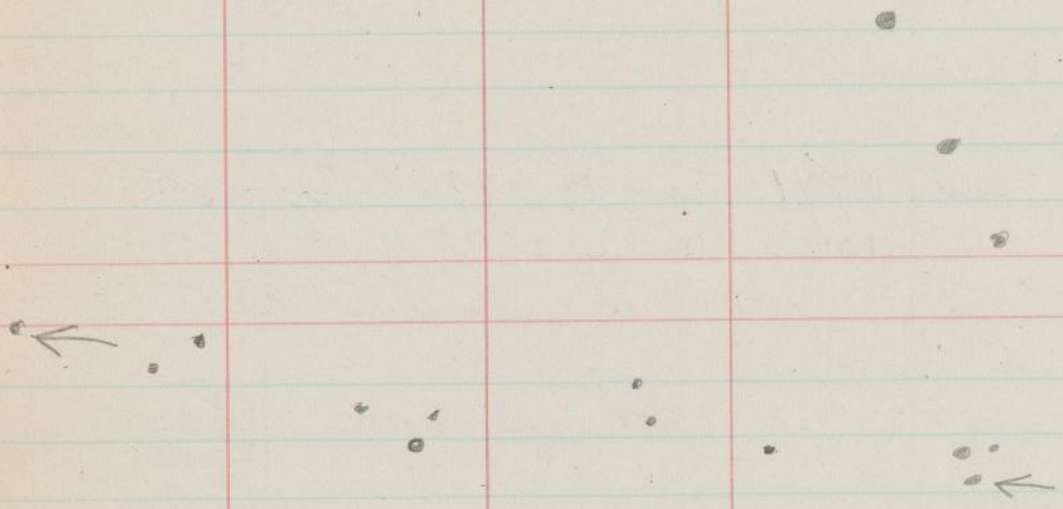
Arc 14774 June 19, 1919, Exp. 63m
12978 April 12, 1917, Exp. 60m
(14774 superposed on 12978)

On 12978, at center is a segment marked. Effort has been made not to interfere by lines, etc., with this region.

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1920phae.proj.1190w

Extra stars near number edge.



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1920phae.proj.1190w

Thursday, March 25, 1920.

Examination of AM & AC Plates.

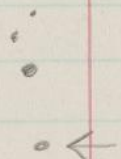
Region $18^h 00^m$ $-45°$

AM 14791 June 23, 1919, Exp. 65 m
11073 August 29, 1915, Exp. 60 m
11073 superposed on 14791

North section of Comp. Pl. very poor for Comparison

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1920phae.proj.1190w



Nova of
1919
DEW.
rediscovered

182529 Nova Sag. No. 5.

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1920phae.proj.1190w

See Bk. 11, page 14 for additional plates exam.

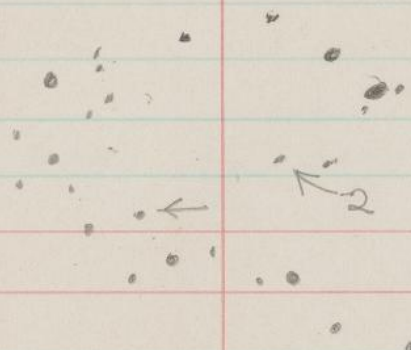
Shown to Prof. Bailey
" " Miss Leavitt

Var.

New?

Algol?

Nov 14791
near center
Identified by B 13004



appears 1900
17h 39m.5 -44°.5

Br. 14791 Confirmed by B 13004

C.D.M. -44 12057
17 37 39.6 -44 26 9.2 *
1.50 - 0.9

Ft. (N.S.?) 11073

17 39.5 -44 28 (1900)

Note also star
Mbd 2 Slight change ?

Br. Am 4174
Ft? Am 4961
Ft. 5034

Br. on 10640 June 6, 1915
Br. on 11078 Aug. 31, 1915
Br. on 10605 June 2, 1915
Br. " 10623 June 4 "
Br. " 10632 June 5, "
Br. " 10640 June 6 "
Br. 10662 June 11 "
Br. 10717 June 20 "
Br. 10736 July 1 "
Br. 10741 July 2, Poor pl
Br. 10929 Aug. 1 "
Br. 11111 Sept. 9 "
Br. 11145 Sept. 13 "
Br. 11155 Sept 14 "
Br. 11316 Oct. 5 "
Br. 10628 June 4, "
Br. B 13004 Apr. 10, 1895
Br. B 22028 Oct. 12, 1898

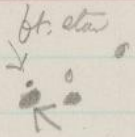
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

10736 good pl

Nova 11073

preceding center.



Nova?

or Var

Not a moving obj.

Br. 11073

ft. or N.S. 14791

N.S on 10640, June 6, 1915

164844

RS Scorpii

$16^h 48.4 - 44° 56'$

(1900)

(See chart)

N.S.	10605 June 2, 1915	
N.S	10624 June 4, 1915	
Ft	10690 June 17, "	
Ft	10736 July 1, "	
Nucl?	10717 June 30 "	
N.S.	10741 July 2 "	Poor plate
N.S	10662 June 11, "	
Ft.	11316 Oct. 5 "	
Br.	11111 Sept. 9, "	
Br.	11000 Aug 15 "	

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1920phae.proj.1100w

06

✓

λ on 11073

Probably defect

Confirmed by Miss Leavitt
Has defect

W. S. on 14791

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1920phae.proj.1190w

✓

Probably
a defect.
Confirmed
by Miss Leavitt
has defect.

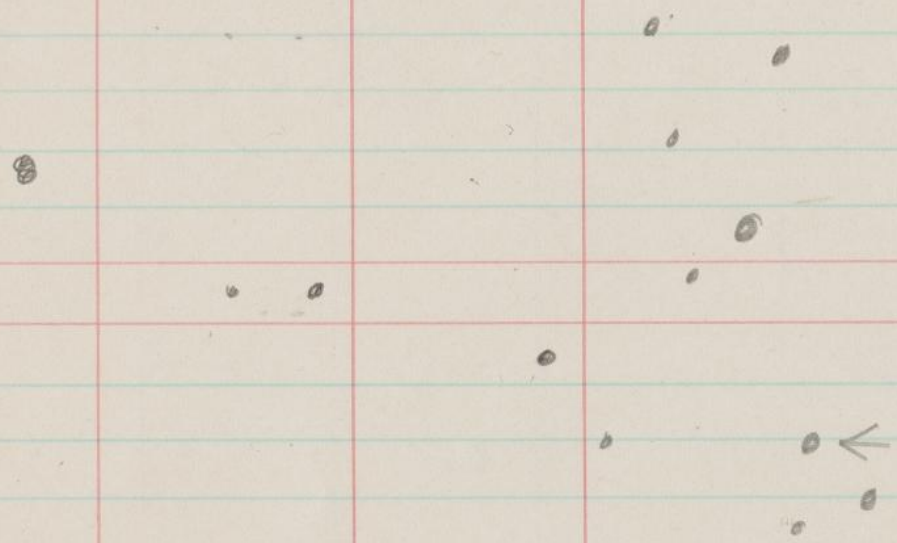
Page
o – 106

Bu. 14791

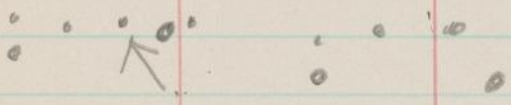
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

2 Eftsa stars near Number 1dyo:



Also,



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1920phae.proj.1190w

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1920phae.proj.1190w

Saturday, March 27, 1920.

Examination of AM & AC Plates.

Region $15^h\,00^m$ $-60°$

AM 1473 2 May 29, 1919, Exp. 65m
9432 September 8, 1913, Exp. 58m
No objects
9432 suf –

No objects of interest were found)

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1920phae.proj.1190w

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1920phae.proj.1190w

Monday, March 29, 1920.

Examination of Arc & Oc Plates.

Region $14^h\,00^m$ $-75°$

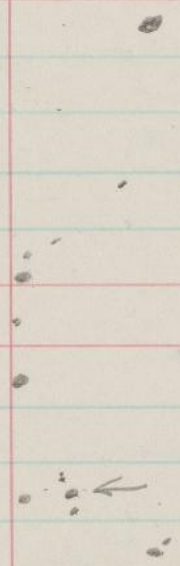
arc 14720 May 23, 1919, Exp. 61m
11866 May 30, 1916, Exp. 75m
(11866 superposed on 14720)

1916 has already been examined by Max 1916 (see page 186, Bb7) but no good plates of 1916 was found, comparable with 1919 plate, so 1916 was repeated.

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1920phae.proj.1190w

Dyeet?



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1920phae.proj.1190w

Var.

113966

RT Muscae

$11^h\,39^m.8$ $-66°\,45'$

Leavitt
(1906)

Br. 11866

Ft 14720

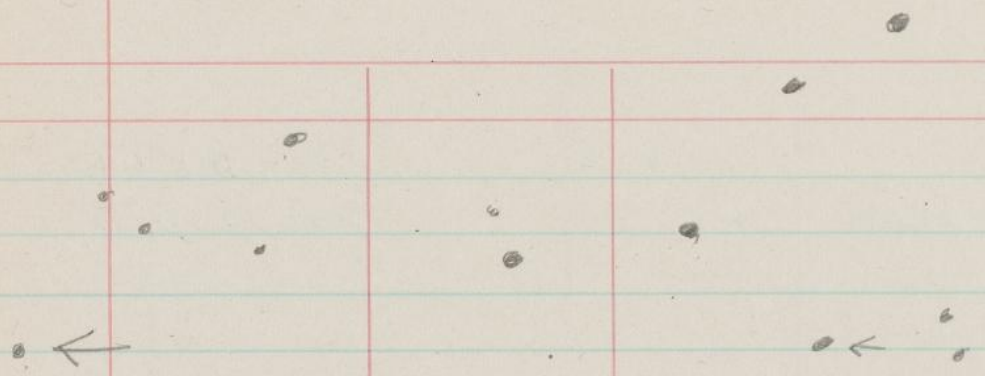
Nova ant 11866
Prec. center

Iden. by B 21613

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1920phae.proj.1190w

2 Extra stars near number edge.



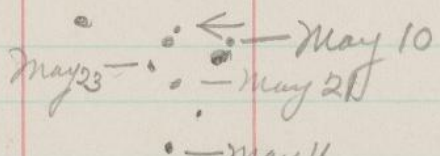
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190W

N or 11866
near center

May be defect.

Moving object ?



B. 11866 N.S. or 14720

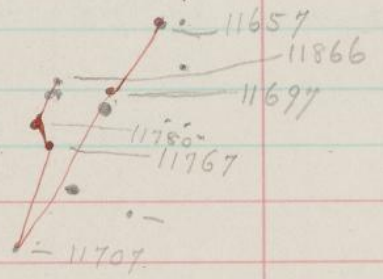
N.S. 11607 Apr. 5, 1916
11621 Apr. 6, "
11657 May 1, "
11697 May 10, 1916. Object seen near
11707 May 11, " " " "
11767 May 21 " " " "
11780 May 23, " " " "
N.S. 11869 June 1, 1916

11657 Object found later.

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1920phae.proj.1190W

Same as page 116



11657	May 1
11697	May 10
11707	May 11
11767	May 21
11780	May 23
11866	May 30

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1920phae.proj.1100w

Tuesday, March 30, 1920.

Examination of AM & AC Plates.

Region $12^h\ 00^m$ -45°

AM 14743 June 1, 1919, Eff. 63^m
7437 June 8, 1911, Eff. 60^m
(7437 superposed on 14743)

(1911 plate, ~~spotted~~ defects on plate
many of these on glass side – dry nibs,
probably)

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1920phae.proj.1190w

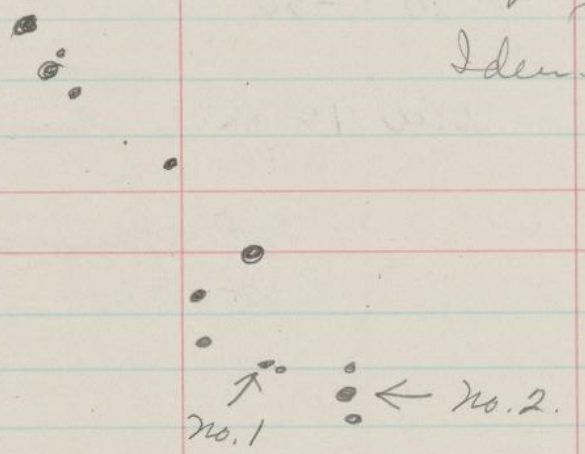
{Identify later by Cat.
{Var. St. Cat., only, exam. at present}

2 Vars.

Nov 7437.
in Grec, south corner.
Iden by B 12834

Two Variables.

10 4057
η Carinae
h m
10 40.6 -57° 3'
(-56° 3737)
Leavitt
1906



10 42.57
S Carinae
10h 42.1m -57° 11'
-56° 3777
Cannon
1909

No. 1 Var. on 7437
No. 2 " " "
both Var. on 7436

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1920phae.proj.1190w

Region $17^h\,30^m$ -30°

Ame 14782 June 21, 1919.

Not examined, because
Ame 14807, June 26, has
been examined, page 62.

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1920phae.proj.1190w

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1920phae.proj.1190w

Thursday ~~March~~ April 1, 1920.

Examination of AM & AC Plates

Region AC 6 $\frac{h}{00}^m$ – 15°

to

AC 22513 March 18, 1920, Exp. 60m

19454 November 12, 1917, Exp. 58m

(22513 superposed on 19454).

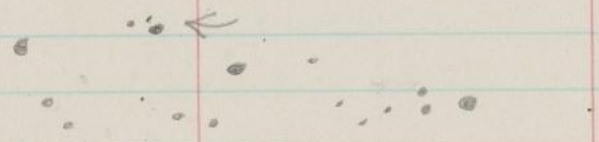
Southern part of 22513 shows no stars.

"

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1920phae.proj.1190w

Probably defect



Be. 19454

N.S 2-2513
N.S: am 19376 Nov. 2, 1917.
19575 Dec. 10, "
19296 Oct 16, "
am 13762 Dec 13, "

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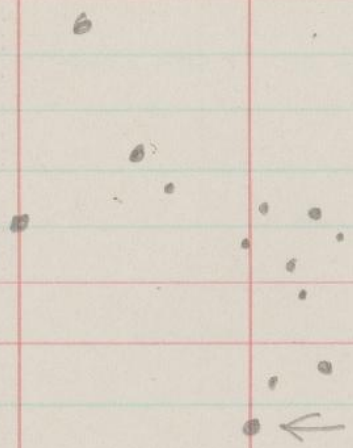
1920phae.proj.1190W

061702

V Monocerotis

$6^h 17.^m7 - 2° 9'$
(1900)

(See print)



Br. Ac 19454 N.S. 22513
Ac 19376 Nov. 2

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1920phae.proj.1190w

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1920phae.proj.1100w

Very dark, heavy showers.

Monday, April 5, 1920.

Examination of AM & AC Plates.

Region $10^h\ 00^m$ -15°

AC 22540, March 28, 1920, Exp. 54m
AM 11625, April 8, 1916, Exp. 64m
(11625 superposed on 22540)

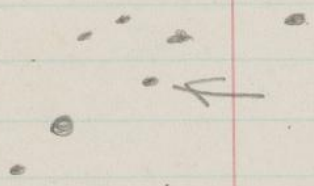
John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

1920phae.proj.1190w

✓

Assume defective film.

N. on AN 11625



Var. or defect.

h m °
9 20 -21.5
(1855)

Not known var.

Br. AN 11625 N.S. 22540
Br. 11521
13063 Apr. 29, 1917
22058 Dec. 2, 1919

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1920phae.proj.1100w

28

See H.B. 716

$9^h\ 1^m - 32^\circ 10'$ Near Number edge, but showing on
~~(1855)~~ (1900) 1920 plate, not on earlier pl.

~~Nova a~~

Stars plotted as shown on 11625
Many of these do not show on HC 22540.
Suspected star is only on 22540

Ident.

See B 22799

See Ann 14040 region in center of pl.

Not a Planet.

Miss Leavitt requested a card for plates. Put in April 5

	N.S. on 14800,	June 25, 1919.
	N.S. AC 22018	Nov. 20, "
	N.S. AC 22058	Dec. 2, "
	N.S. AC 22150	Dec. 25, "
	22218	Too poor
	N.S. 22257	Jan. 14, 1920
	N.S. 22317	Jan. 28, "
	N.S. 22456	Feb. 27, "
	22466	Mar. 1, " Too poor

0900 31

~~T Pyxidis~~

$9^h\ 0.5 - 31^\circ 59'$ (1900) Miss Leavitt 1913

Sequence & var. bright one B 29314

Same obj. seen? on AC 22504, March 10

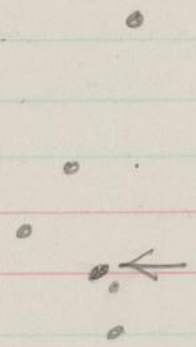
continued on page 130.

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1920phae.proj.1190w

1 Extra star near Number edge -

N on 11625



Not seen on 22540

HARVARD COLLEGE OBSERVATORY

BULLETIN 716

April 9, 1920.

The star T Pyxidis, R. A. $9^h\ 0^m\ 32^s$, Dec. $-31°\ 58'.7$ (1900), was discovered by Miss Leavitt on photographs made in 1902. See H. C. 179. Its magnitude at that time was 7.4. At first, it was thought to be a nova. Not until an examination had been made of four hundred photographs of the region was it again found bright on a photograph made in 1890. Between these dates it was of about the fourteenth magnitude. These observations indicated a period of twelve years, and in 1914 a careful investigation was made, but apparently no maximum occurred. Recently, Miss Woods, while engaged in the systematic search for novae, again found this star at maximum, after an interval of eighteen years. These three maxima, 1890, 1902, and 1920, are all that have been found, although an extended search has been made. From a photograph obtained last night, the star appears to have the early form of nova spectrum. Its magnitude at the present time is about 7.

A communication received at this Ob[illegible]

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1920phae.proj.1190w

See Var. on 317.

785 out of focus, good images.
2560 good ℓ — not ⌀ center —

Continued from page 128.

$9^h\ 01^m\ -32.0^\circ$

Plates at $8^h\ 00^m\ -30^\circ$

Nova(?) not seen, except on plates in May 1902.

N. S.	Aue 317	Nov. 27,	1899
	382	March 10,	1900
	397 721	March 28, Nov. 11,	" "
	723	Nov. 20,	"
	735	March 25,	1901
	1113	Nov. 12,	"
	1160	Mar. 12,	1902
Bright	1231	May 2,	1902
"	1291	May 29,	"
N.S.	1581	Sept. 26,	1902
	1707	Nov. 24,	"
	1786	Jan. 3	1903
	1798	where is plate?	
	1832	March 5,	1903
	1896	May 4,	"
	1932	May 14,	"
	1957	May 19,	"
	2371	Nov. 16,	"
	2387	Nov. 19,	"
	2451	Jan. 14,	1904
	2479	March 14	"
	2560	April 20,	"
	2593	May 3,	"

Two plates show it, so it is confirmed.

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1920phae.proj.1190w

9^h $\overline{1}$ $-32.0°$

Noral?) not seen. Plates at $8^h-30°$

Aud	3098	Sept. 30, 1904
	3160	Oct. 30, "
	3193	Nov. 4, "
	3222	Nov. 11, "
	3281	Dec. 8, "
	3298	Jan. 8, 1905
	3340	Jan. 23, "
	3367	March 6, "
	3501	May 9, "
	4089	Jan. 1, 1906
	4045	Jan. 25, "
	4118	Feb. 17, "
	4159	March 29, "
	4198	May 4, "
	4237	May 15, "
	4669	Nov. 8, "
	4735	Jan. 3, 1907
	4744	March 16, "
	5223	Oct. 17, "
	5254	Nov. 13, "
	5276	Too poor —
	5291	Jan. 30, 1908
	5334	Too poor —
	5379	April 9, 1908
	5445	May 8, "
	5904	Nov. 18, "

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1920phae.proj.1100w

See 6013 faint?
" 6767 region marked —
8137 " "
$9^h\ 1^m - 32.0°$

Nova(?) not seen — Plates at $8^h - 30°$

× 6013 March 30, 1909.
a faint star — probably not in exact position. — is this the star?

N. S. 6064 April 25, 1909.
6712 Oct. 23, "
6760 Nov. 5, "
region marked 6767 Nov. 8, "
6816 Dec. 11, "
6881 April 16, 1910
7392 April 17, 1911
7397 Apr. 26, "
7976 Dec. 20, "
8036 March 30, 1912
8046 April 8, "
8098 Too poor —
8132 April 27, 1912
region mkd 8137 May 4, "

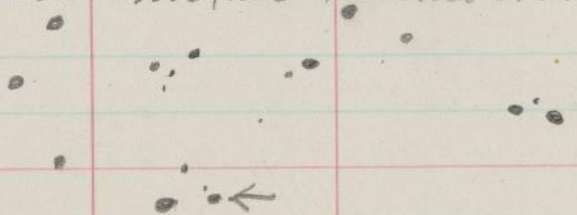
0900 31 Region found marked — Plate was obtained on which sequence of T Pyxidis was marked — Same star — Sequence mkd on B 29314.

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1920phae.proj.1190w

Tuesday, April 6, 1920.

In examining plates for T Pyxidis, I noted variation in an unmarked star



Var. apparently Not known.

8h 49.4m -34° 4' (Approx. 1900)

Region plotted from Arc 1932. Iden. on B 22799

Br. arc 1932
N. S. on arc 317
and other plates.

See iden. on page 137.

Continued on page 136

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1920phae.proj.1190w

Wednesday, April 7, 1920.

Examination of AW & AC Plates.

Region $16^h\ 00^m\ -15°$

AC 22537 March 27, 1920, Exp. 60m
AW 14803 June 25, 1919, Exp. 59m
(22537 superposed on 14803)

This 1919 plate is in recent shipment but is compared with 1920 AC plates as there is nearly a year between dates.

Southern part of AC 22537 too poor for comparing, except brightest stars.

No objects of interest noted —

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1920phae.proj.1190w

Continued from page 133.

New Var. 8 h 49 m -34.4 (Approx. 1900)
-34 5361

Shown to Prof. Bailey Confirmed
" Miss Leavitt "
Marked on 317
* = For proof.

~~265~~

*	H. S.	317	Nov. 27, 1899
	N. S.	382	March 10, 1900
	Br.	721	Nov. 17, "
	Br	723	Nov. 20, "
	N. S.	735	Mar. 25, 1901
	Br.	785	May 14, "
	Br	1113	Nov. 12, "
	Br.	1160	Mar. 12, 1902
*	Br.	1581	Sept. 26, "
*	Fk	1707	Nov. 24, "
*	Br.	6816	Dec. 11, 1909
*	Br	1932	May 14, 1903

C.D.M. -34 5361 —— After reduction, estimates of range, etc., were made, it was found that this star had been found earlier to be variable by Mrs. Beach, but not cut in Catalogue.

April 5, 1921.

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1920phae.proj.1190w

Watch, also, if any change in C.D.M. -34°5355 — 8.7 in Cat., very ff. on B22799 on page 138

Var. $8^h 49^m$ -34.4

-34 53 74
-34°5364
— Var. = -34°5361

Identification checked by Miss Walker

C.D.M. -34°5361 $8^h 48^m 26^s.5$ -34° 20'.6 8.0 (1875)
+1.0 −6
$8^h 49^m.4$ -34° 27' (1900)

New Conf. by Miss Walker.

Estimates of Range:
Seq. 27 Ks 0, B 49645 — Bh 34:106
48:122 = means

and 1932, var. a little brighter than star 3, assume.1
V = 8.55

Seq 6816, 1902, etc. visit star 3 or Comp. seq. a little fainter than 4? Is this photographic?

and 317, var. N.S. Star 5 = .1, 6 N.S. V < 10.44
1707 var. = .7? V = 11.08?

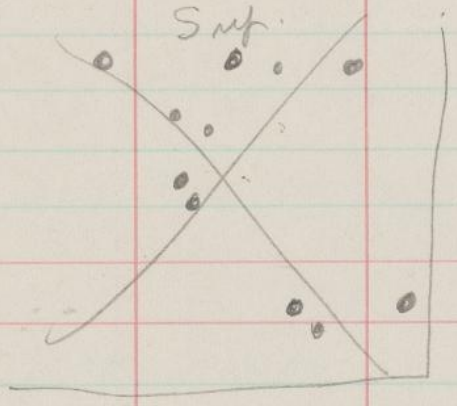
3 8.65
4 9.84
5 = 10.34
6 = 10.91
7 = 11.08

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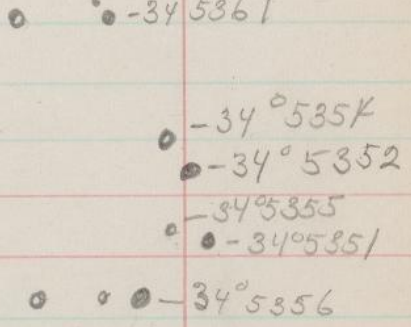
1920phae.proj.1190w

Var.?

CDM -34 5355



Nova B 22799



-34 5352 = Magn. 9.0
5354 = Magn. 8.5
5355 = " " 8.7
5356 = " 8.6

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1920phae.proj.1190w

Saturday, April 10, 1920.

Examination of AH & AC Plates.

Region $14^h\ 00^m$ $-30°$

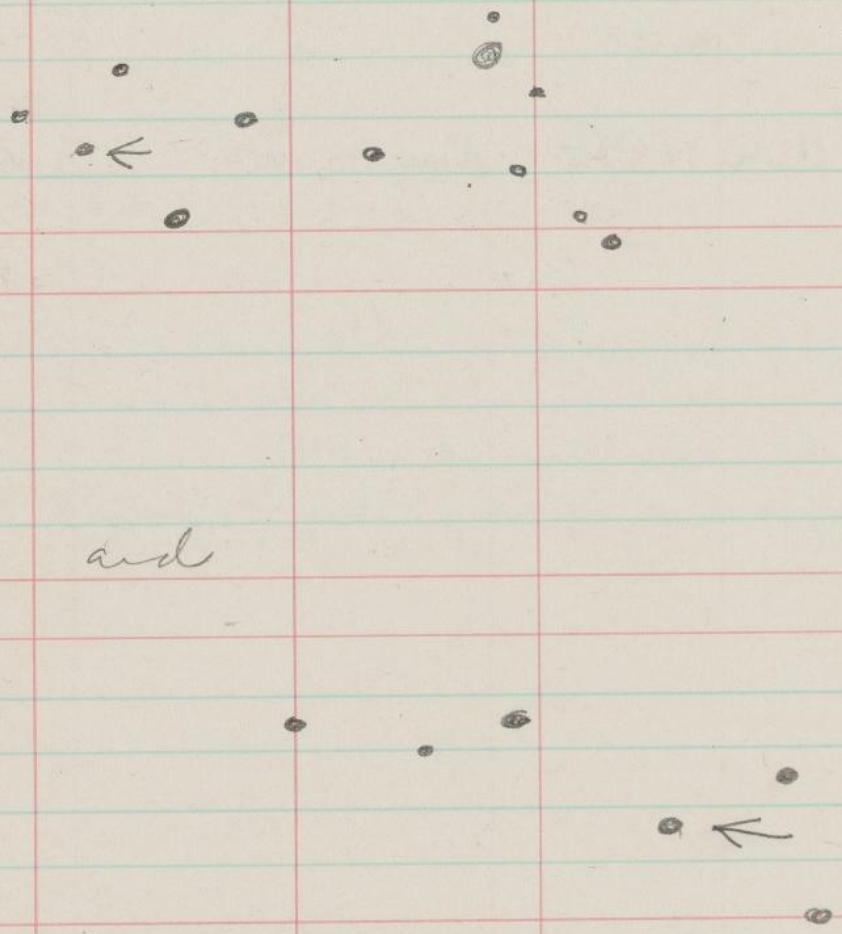
AH 14715 May 22, 1919, Eff. 60m
11708 May 11, 1916, Eff. 60m
(11708 superposed on 14715)

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1920phae.proj.1190w

2 Extra stars near Number edge of plate.

N on 11708



and

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1920phae.proj.1190w

Reject

April 10, 1920.

Examination of AM & AC Plates -

Regin $10^h\ 00^m$ $-30°$

AM 147 ~~77~~ 3/4 May 30, 1919, Expo. 68m

In selecting comp. plate, I found plate is wrongly made out at $10^h - 30°$, should identify at $11^h - 30°$. This regin is not one of "Milky Way" Regions.

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1920phae.proj.1190w

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1920phae.proj.1190W

April 10, 1920.
and Monday April 12, 1920.

Examination of aw & ac Plates -

Region $12^h\ 00^m$ $-45°$

aw 14805 June 26, 1919, Exp. 61m
13811 April 3, 1918, Exp. 60m
(13811 superposed)

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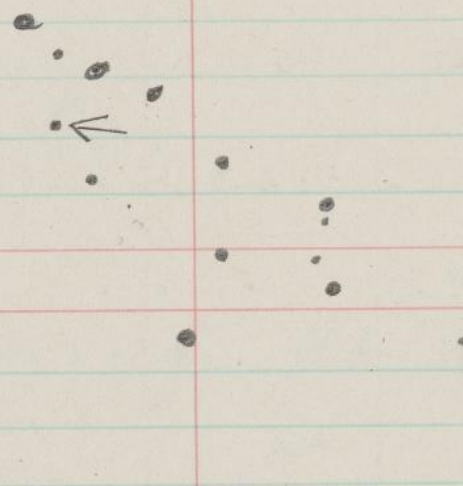
1920phae.proj.1190w

✓

Known

N on 13811

Iden by B24815



- Centauri

CPD -34° 8125

h m s ° ' "
2 17 36.3 - 34 56.8 (1875) 8.6

1.3 - 7.8

12 18.9 -35 4.5 (1900)

Cannon 1914 Bd. 13811

Fth. ~~13811~~ 14805

Fth. B24815

Obsd by Cat. & Iden.

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1920phae.proj.1190w

146

Confirmed by Miss Leavitt February 17, 1921.

April 12, 1920.

5421 = 13962 = 2 alum faint stars

See Bk. 14, p. 36. same star independently discovered, Var. confirmed.

Apparently New

Bk 14, p 36 = Est. of Range.

N on Am 14805

Var.

Iden. by B 13255

C.P.D. -52° 5714

12 29 10.1 -52 54.7 9.2 m (1875)
+1 22.3 -8.3

12 30 32.4 -53 3.0 (1900)

Confirmed

Br. 14805 "

** ~~13969 May 9, 1918~~

* 11812 May, 1915

N.B. ~~are these two stars on 13969~~ 13969 above star faint. brighter obj. close is assumed to be defect.

13962, May 8, 1918

13974 May 10, "

* Ft. 13811

Ft. 13805 Apr. 2 1918

Ft 13811

" 13946

" ~~13963~~

" 5415 Apr. 1908

5416 " "

* 5421 " "

10801 July 1915

10830 July "

Brighter 10846 July "

~~* Ft~~ 12224 July 1916

13969

13962 not Mic.

For proof: Br. ~~*13969~~ 14805 11812

Ft 5421 *12224 13811, 13969

For estimates of magn., see Bk. 14: 36

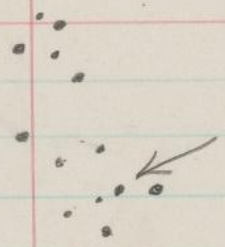
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1920phae.proj.1190w

V

Known

Nova?
Var?
or
Defect?



N on Ark 13811

Iden. by B13255

Bu. 13811

N.S. 14805

NW Centauri

$12^h 37.9 - 53° 59'$

(See print)

13932	May 1, 1918.	Fb.? 18805 Apr. 2, 1918
13946	May 4, "	
13963	May 8, "	
13969	May 9 "	

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1920phae.proj.1190w

✓

N on 14805

Nova or
Var.
?

Iden. by B18564
(found already
on bód.)

114441
X Centauri

$11^h 44^m.2$ $-41°\ 12'$ (1900)

(see print)

Br. 14805

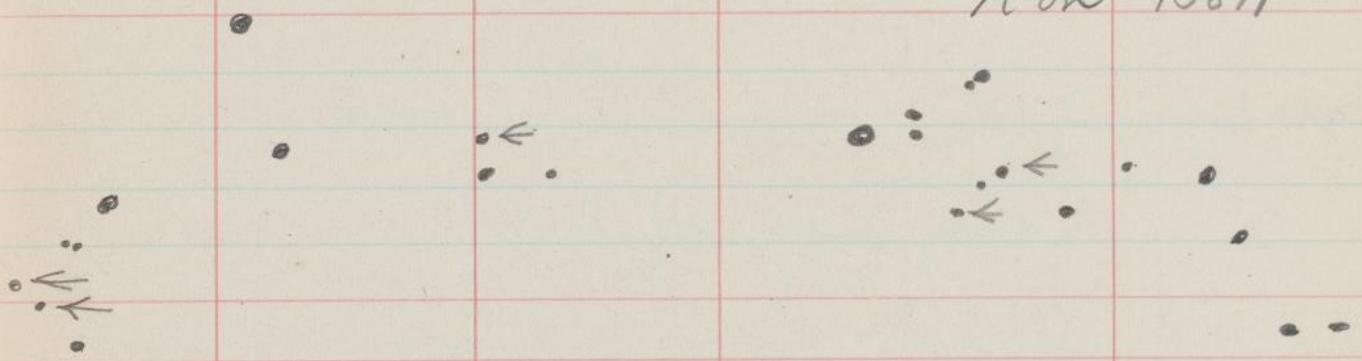
N.S. 13811

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1920phae.proj.1190w

5 Extra stars near Number edge of plate

Nov 13811



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1920phae.proj.1190w

Tuesday, April 13, 1920.

Examination of AM & AC Plates.

Region $11^h 00^m$ $-45°$

AM 14724 May 26, 1919, Eff. 62^m
5309 February 20, 1908, Eff. 60^m
(5309 superposed on 14724)

(no plate of 1915 was found for comp.)

Many defects on these plates.

Time, about 1 h.

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1920phae.proj.1190w

√

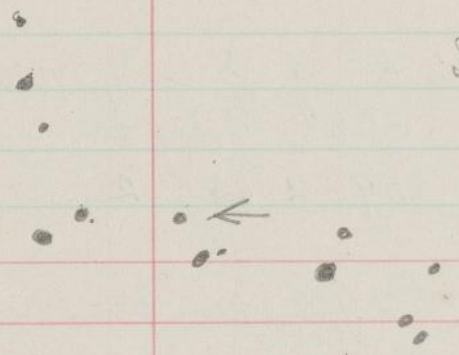
Not proved to be var.

Nov Aur 5309

Not known var

Iden by B 18452

CDM - 36° 7557



$11^h 51^m 40.0^s - 36° 46'.4$ 89 (1875)

Apparently no change. only the difference between the plates.

Bu? 5309

Ft. 14724

Is this a var. or a defect superposed on star image? Looks a little different in shape -

Ft. 4015	Dec. 5,	1905
Ft 4076	Jan. 30,	1906
Ft 4098	Feb. 3,	"
Ft. 4133	March 17,	"
Ft. 4185	April 28,	"
Ft. 4225	May 12,	"
Ft. 4287	June 11,	"
Ft 4352	June 29,	"
Ft 4720	Dec. 12,	"
5325	Too poor	
Ft 5381	April 9,	1908
Ft 5400	April 23,	"
Ft 5432	May 6,	"

(over)

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1920phae.proj.1190W

Cont.

Ft. Aph 5539 June 7, 1908. (at -45°)
Ft. 5681 July 25, "
Ft. 5932 Dec. 21, "

Ft. 5292 Jan. 30, 1908 (plates at -30°
Ft 5353 April 1, "
Ft. 5447 May 8, "

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1920phae.proj.1190w

Continued from page 51.

Regim $10^h\ 00^m - 75°$

N.S.

11519 Mar. 2, 1916.
11654 May 1 "
11770 May 22 "

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1920phae.proj.1190w

Thursday, April 15, 1920.

Examination of AM & AC Plates.

Region $11^h 00^m -45.0^\circ$

AM 14717 May 23, 1919, Eff. 61^m
5432 May 6, 1908, Eff. 61^m
(5432 superposed on AM 14717)

Faint stars are not good enough on
Comp. plate to detect any variation.

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1920phae.proj.1190w

Nova or Var.?

Nova on Am 5432

Iden. by B29077

114441
X Centauri

$11^h 44^m.2 - 41^\circ 12'$ (1900)

(see print) Br. 5432 ~~N.S. Ft.~~ 14717

	N.S. Ft.	4225	May 12, 1906
	" " Ft	4720	Dec. 12, "
	" " Ft	5325	March 22, 1908
*	Br.	5381	April 9, "
	Br	5400	April 23, "
	Br	5539	June 7, "
	Ft	5681	July 25, "
	N.S. Ft	5932	Dec. 21, "
	" "	5949	Feb. 1 1909
	Ft	6066	Apr. 25 "

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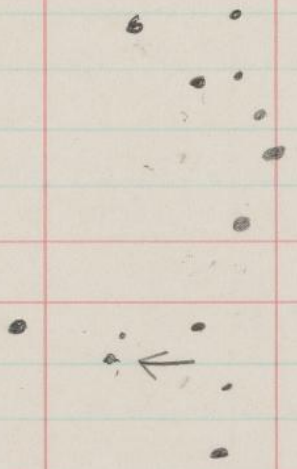
1920phae.proj.1190W

N on Aug 5432

Var.
NW Carinae
10 23 59

h m
10 23.2 -59° 10'

Idem by B13477



Leavitt
(1906)

Idem by marked
plate, B13860 [Br. 5432

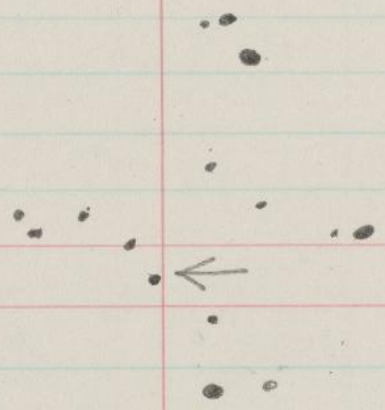
Ft. 14717

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1920phae.proj.1190w

var

095458



9 54.8 -58 23

Fleming
(1894)

iden. by orig. fl. = B 9374 (Sf.)

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1920phae.proj.1190W

Saturday, April 17, 1920.

Examination of AM & AC Plates.

Ro

Examining B plates of Nova Sag. No. 6
I noticed two stars near Region.
See page 161.

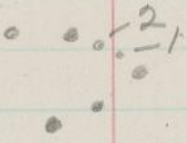
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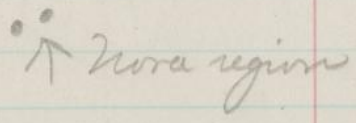
1920phae.proj.1190W

V

1 or 2
new variables.
?

N.





1 = See B 32353 This is prismatic comp. of bright star south, following.
2 = See B 41653 This star is prismatic companion of bright star South, following.

1 is near ~~C~~ DM - 32° 13811

Not a known Variable.

18h	1m	39.s0	-32° 6.'3	9.9 (1875) position of Cat. star mean -
	1.6		0	
18	3.2		-32 6.	(1900)

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1920phae.proj.1190W

Saturday, April 17, 1920.

Examination of AM & AC Plates.

Regim $14^h\ 00^m\ -45^\circ$

AM 14777, June 20, 1919, Exp. 62m

No one of plates that were examined for comp. plate was good enough to compare with 1919 plate.

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1920phae.proj.1190w

Use 14777 later

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1920phae.proj.1190w

Monday, April 19, 1920.

Examination of aM & aC Plates.

Region $14^h\,00^m$ $-45.^\circ0$

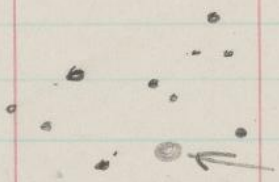
aM 14749 June 2, 1919, Exp. 61m
11868 June 1, 1916, Exp. 64m
(11868 superposed on 14749)

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1920phae.proj.1190w

N on Aul 14749

Comet or Defect ?



No trace of this on 14732, May 29, 1919 (15-60)
" " " " " 14757, June 4, " (14-45)
" " " " " 14739 May 31, " 13 45

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1920phae.proj.1190W

N on 14749

Var.

5 of centre, near edge

Iden. by B25738

140959

R Centauri

$14^h 9.^m4 - 59° 27'$ (1900) | Br. 14749

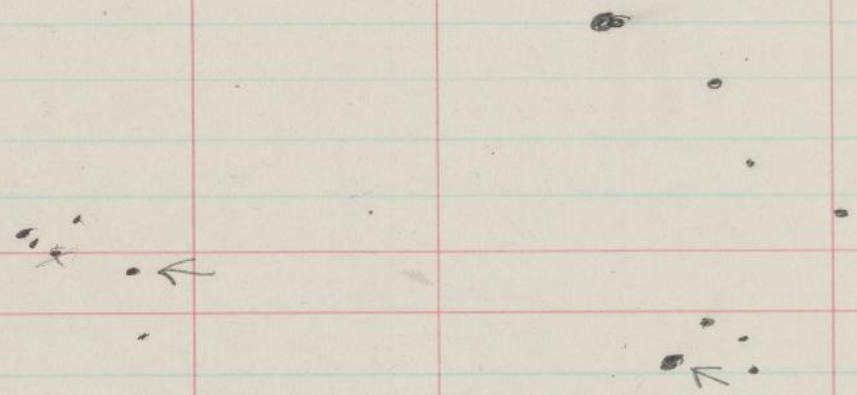
Ft 11868

(See print)

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1920phae.proj.1190W

2 Extra stars near number edge.



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1920phae.proj.1190W

Tuesday, May 11, 1920.

Examination of Am & Ac Plates –

Region $10^h\ 00^m$ $-15°$

Ac 22626 May 5, 1920 Exp. 66m
Am 8987 June 2, 1913 Exp. 54

(8987/22626 superposed on 22626/8987)

22626, images much elongated.

This pair of plates would not show any faint Nova or variable.

a poor set of plates for this region.
No objects of interest.

Time: about 35 m.

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1920phae.proj.1190w

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1920phae.proj.1190w

Friday, May 28, 1920.

Examination of Aull & Ac Plates.

Region $9^h 05^m - 32°$

ac 226·00 April 17, 1920, Ef. 38m

Plate probably taken for T Pyxidis.
Should exam. for objects but plate is
too poor for comparison. Any object
might be verified by these images.

Not examined.

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May 28, 1920.

Examination of AM & AC Plates.

Region $10^h\ 00^m - 30^\circ$

AM 14819 July 1, 1919, Eff. 60m
reject 8313 June 9, 1912, Eff. 61m
(14819 superposed on 8313)

8313 is not good enough for
comparisons with the 1919 plate.
12910 is better in quality and in date

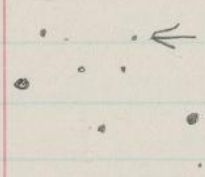
Used. AM 14819 July 1, 1919, Eff 60m
12910 March 27, 1917, Eff. 60m
(12910 superposed on 14819)

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1920phae.proj.1190w

Wash 14819

093014



X Hydrae

h m
9 30,7 -14° 15' Seen on 14819
(1900)

N.S. 1291 0

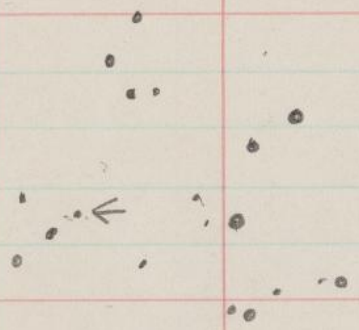
large range.

(see print)

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Nova Aql 2910



R R Hydrae

0940 23

$9^h 40.^m4$ $-23° 34'$ Seen on 12910 N.S. 14819
(1900)

(see print)

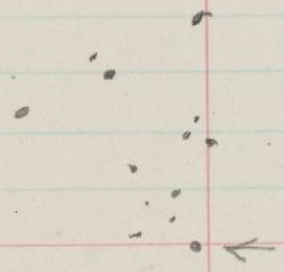
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1920phae.proj.1190w

N on 14819

Probably Defect ?

Assume Defect.



✓

Seen on 14819

N.S. 12910

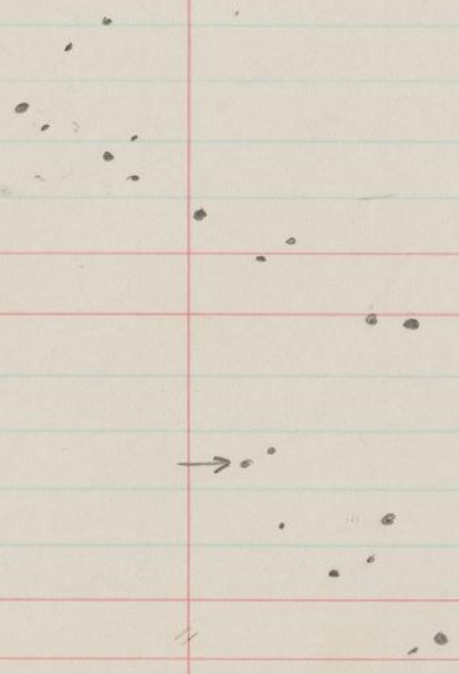
✓ Shown to Miss Leavitt

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1920phae.proj.1190W

Nova 12910

Nova?
104628
RS Hydrae
$10^h 46.6^m$ $-28°$ 6' (1900)



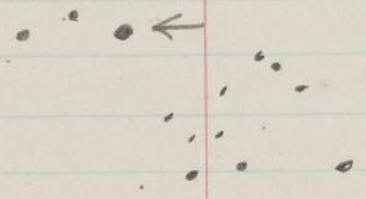
See print ✓

Seen on all 12910 N.S. 14819
12895
12903 6148 1909
12966 8313 1912
12990 13820 1918
13386 Too faint 14133 1918
13779 Mar. 8, 1918
13797 Apr. 1 "
very ff 13802 Apr. 2 "
" " 13832 Apr. 9 "

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Nova Aur 12910



092944

δ Velorum
$9^h 29^m.4 - 44° 46'$

Br. 12910

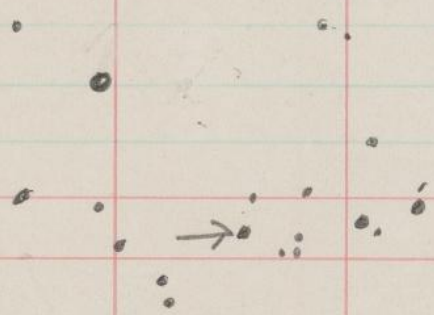
Ft. 14819

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1920phae.proj.1190w

Extra star near No. edge of plate.

Nova 1291 C



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Tuesday, June 1, 1920.

Examination of AM & AC Plates.

Regim $14^h 00^m - 3^\circ$

AM 14820 July 1, 1919. Ef. 65^m
6118 May 12, 1909. 120^m
(14820 superposed on 6118.)

1915 was year desired for comparison plate but no plate was found good enough for comparison with 14820. 6118 has been marked for an earlier comparison (for Harvard regim) but I think these marks will not be much disadvantage.

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132422

R Hydrae

h m
13 24.2 -22° 46' (1900)

Bc 14820 ft 6118

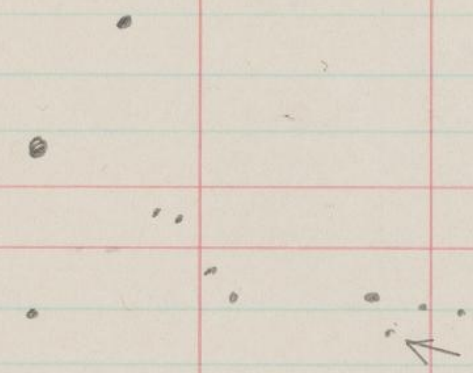
(see print)

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1920phae.proj.1190w

Defect?

Assume Defect



On 14820 not on 6118

Not on 14715, May 22, 1919.

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1920phae.proj.1190w

Thursday, June 3, 1920.

Examination of AM & AC Plates -

Region $20^h\ 00^m\ -15°$

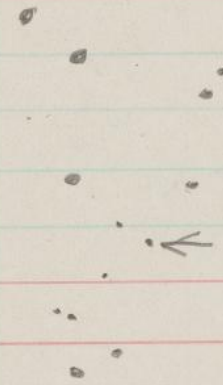
AM 14798 June 24, 1919, Eff. 58m
11329 October 6, 1915, Eff. 60m
(11329 superposed on 14798)

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1920phae.proj:1190w

204102
V Aquarii

h m
20 41.8 +2° 4' (1900)



11329
On ~~11767~~ N.S. on 14798
an 11278 Sept. 28
11007 Aug 16 very ft.
11066 Aug 28 ft
10977 Aug 11 N.S. Poor plate
11278 Sept 28 neu.

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1920phae.proj.1190w

Hebe.

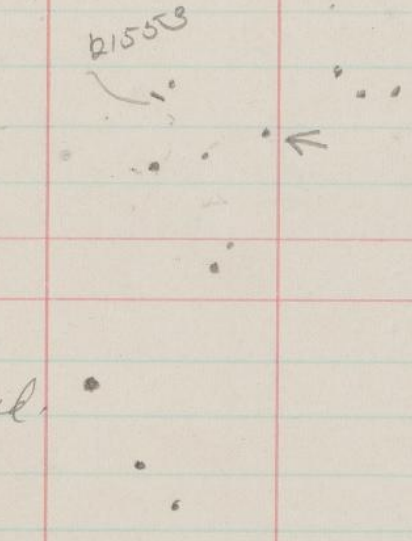
(approx. 1855)

19h 45.8 -7.5° June 22

19 44 -7.6° June 24

See Ephemeris for accurate positions, if needed.

21553



Seen on 14798 "

Ft. star close to object.

N.S. on Ft. on 21412 May 2, 1919

21553 June 22 "

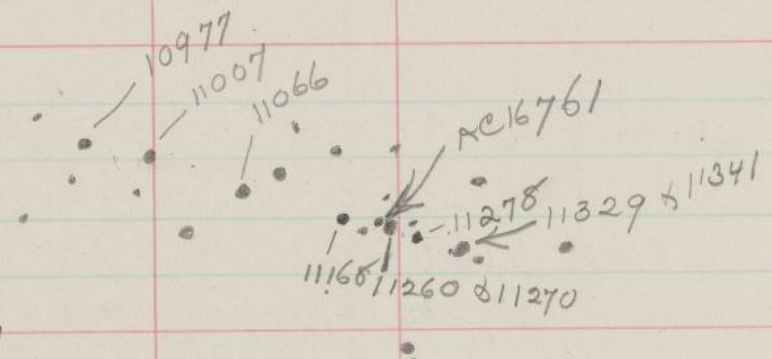
21568 June 29 " Poor plate

* but see object (see diagram above) on 21553. Defect or star?

Is this a moving object? Yes — Hebe —

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1920phae.proj.1190W



Moving Object

Uranus

see American Eph., 1915.

On 10977, Aug. 11, $21^h\ 1.5^m$ -17.°8 (1855)

On 11395, Oct. 27, $20^h\ 54.0^m$ -18.°2 (1855)

On 11329 Oct 6, 1915

On AC 16761 Sept. 22, 1915

" a.m. 11066 Aug 28

" a.m. 10977 Aug 16

10977 Aug 11

11341 Oct. 7

11278 Sept 28

11168 Sept 15 -30°

11260 Sept 26 -30

11270 Sept 27 -30

also 11307 Oct 4 -30

11330 Oct 6 -30

11349 Oct 8 -30

11395 Oct 27 -15

these images fall into same straight line, but I cannot plot in space above.

Planet ~~Asteroid~~ is abut equal in brightness to

D.M. -18° 5862 20 59 36.2 -18 2.1 7.2

H.A. 50, Magn. 6.03 Sp. A.

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1920phae.proj.1190w

Saturday, June 5, 1920. dark, very stormy.

Examination of aw & ac Plates.

Region $18^h\,00^m$ $-60°$

aw 14166 July 15, 1918, Eff. 74m
8914 May 15, 1913, Eff. 60m
(8914 superposed on 14166)

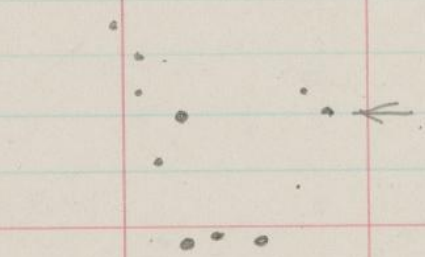
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1920phae.proj.1190w

✓

Defective film.

Var.



N on 14166
Iden. on B 29521

Is this due to defective film? Br. 14166 Ft. 8914

Probably defective film.

-53°9102
14h43.9 -53°16.0 9.1 (1875)

(If used, enable iden. again, carefully)
Iden. probably for statement of position, only)

? VI h ?

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1920phae.proj.1190w

190 √

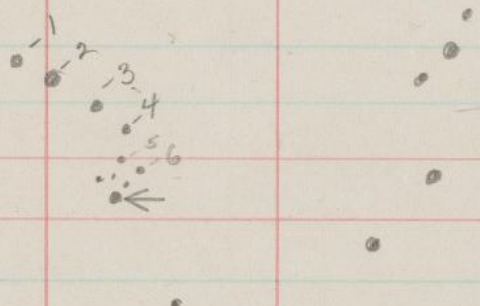
Defect -

Nova?

Probably defect.

N on 14166

Iden. by B 29521.



Seen by Miss Lewis √

Very starlike, but cannot be confirmed.

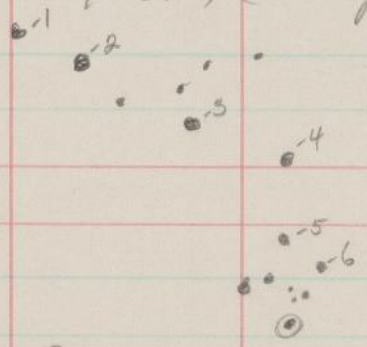
On 14166

N.S. 14060 June 12

N.S. on 8914

field on B 29521, (enlarged field of above).

⊙ = object on 14166, not showing on 29521



Nos. indicate same stars as above.

N.S. 14231 July 29, 1918
14262 Aug. 4, "
14268 Aug. 6 "
14261 Aug. 4 " obj. near position, probably defect

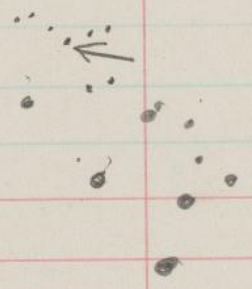
14127 July 1. 17h 45m
14148 " 12 "
14267 Aug. 6 "

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1920phae.proj.1190w

Defect

Nov 14166



Iden. by B29521.

seen ✓ by Miss Leavitt

On 14166

14066 June 12 does not show as ff. Stars as this obj.

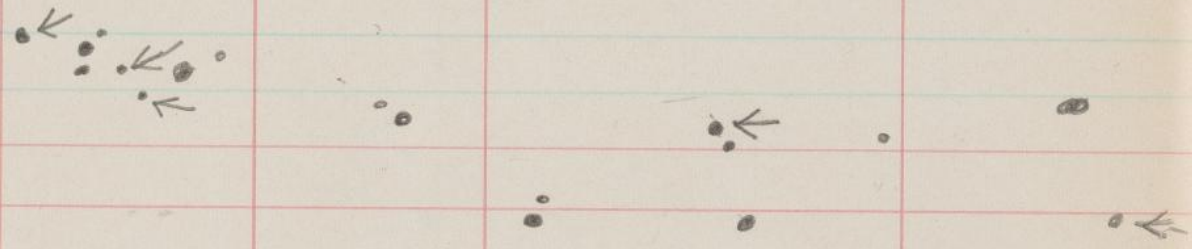
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1920phae.proj.1190w

6 Extra stars near No. edge of plate.

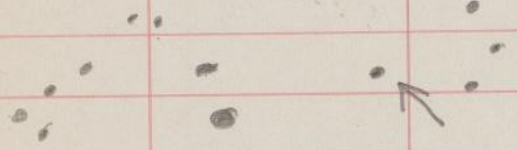
Is this extreme number of extra stars on one plate?

N on 14166



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Miss Carpenter
Mr. Goodrich

Wednesday, June 9, 1920.

Examination of aw & ac Plates.

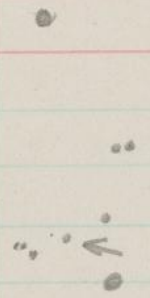
Region $16^h\,30^m$ $-60°$

aw 14060, June 12, 1918, Eff. 60m
12290 August 2, 1916, Eff. 60m
(14060 superposed on 12290)

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1920phae.proj.1190w

Probably Defect.



On 12290 Not seen 14060

~~N.S.~~

N.S. 12303 Aug. 4, 1916.
12308 Aug. 5, "

12281 July 28 " 15-45
12284 Aug 1 " 16-45

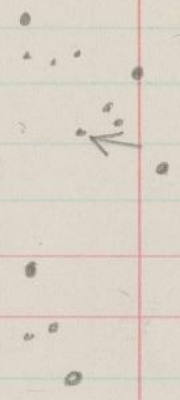
12239 July 22 15-45

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1920phae.proj.1190w

Later, this Region Sees 14126 excellent plate — Use for solar Comp —

Probably defect



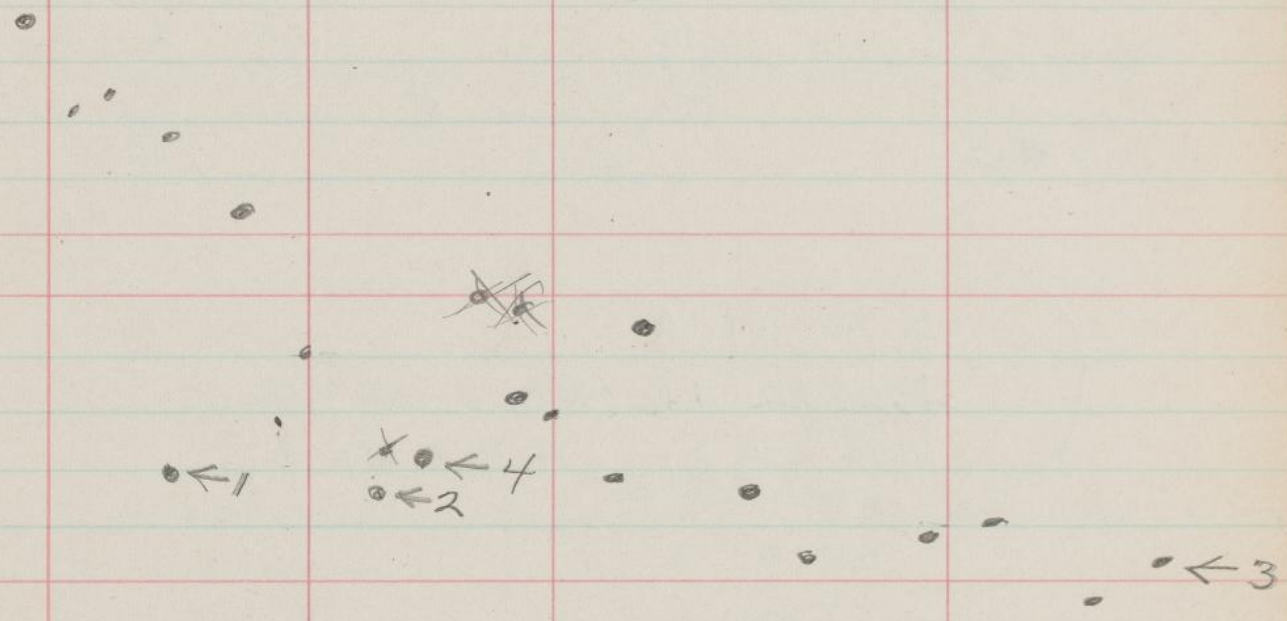
Seen on 14060

Not on 13984 May 17, 1918
14054 June 11, "

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4 Extra stars near No. edge of plate.



1, 2, 3 on 14060 not on 12290
4 on 12290 not on 14060

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1920phae.proj.1190w

Wednesday, June 16, 1920.

Examination of AM & AC Plates.

$6^h 00^m - 30°$

Region ← AM 8012, February 18, 1912, Exp. 64m
4729, December 17, 1906, Exp. 63m
(8012 superposed on #729)

Nov. 8, 1926
Spectrum A 5 Miss Cannon
on B 24622

1920phae.proj.1190w

Confirmed by Miss Leavitt, June 16, 1920.

Apparently new, ** ac 20741 if real variation.

	Br.	For	Ft.
See **	2418	proof.	7978
	3981	**	8012
	4116		
	4571	**	9448
	4729		9491
	5294		12898

N on 4729

* For proof
** Max. range?

Dfl. -20° 1314
6h 4m 44.1s -20° 11' 2" (1855)
9.4
(Reg. 2a. 1.9 D.0)
6h 6m 6s -20 11
(1900)

Ident. B 26544

** Br. 4729
12661 Oct 22 1916
8777 Dec. 1912
9476
9504
* 9538
1819 -15
* 2448 1904
3048 Sept 1904
* 3065 Sept "
× 3147 Oct "
** 4571 Sept 1906
4676 Nov "
3168 Oct 1904
** 2418 Dec 1903
2428 " "
3169 Oct 1904
* 3267 Dec "
3333 Jan 1905
3859 Sept "
** 3981 Nov. "

N.S.? 8012 or ray ft.

Seen by Prof. Bailey.

Algol?

Ident. did not agree. Not known.

* Ft. 7978 Dec 1911
* 9448
* 9491
12864? Feb. 1917
H144? March 1906
** 12898 Mar. 1917

ac 20791 Dec 6 1918?

See page 200

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1920phae.proj.1190w

Var. Cont. from page 199.

Br. Cent.

**4116 Feb. 17, 1906

**5294 Jan 31 1908

12880 Mar. 1918

~~12898~~

12872 Feb. 1917

14632 Apr. 1919

12661 Oct 1916

14596 Apr. 1919

AC 20635 Nov 2, 1918

20686 Nov 11, "

20741 Nov. 26 "

Feb. 25, 1921

Estimates of Range

Carte Mc 9924 Bb. 35 : 84

AM 2418 would give abnt same est. as 4571 but sequence is at extreme edge.

AM 12898 var 6 (5) (5) 7 = 10.3

AM 4571 var. 4 (2) (5) 5 = 9.2 4571 is chosen because seq. is near center of plate.

See Bb. 15, p. 94 Var. suspected.

Stw 4 = 9.16 6 = 10.11

5 = 9.54 7 = 10.41

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B plates covering region (partial list)

✓ 4339
✓ 12492
14889
✓ 17681
18072
✓ 20415
✓ 22208
22416
26544
✓ 27028
27052
27272
✓ 29207
32984
✓ 35112
42102
43608
49411
49470

ft. ?

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1920phae.proj.1190w

June 16, 1920.
and June 17, 1920. dark, stormy

Examination of AM & AC Plates.

Region $8^h\ 00^m$ $-30°$

AM 4039, January 1, 1906, Exp. 80^m
3501, May 9, 1905, Exp. 81^m
(4039 superposed on 3501)

Many images on plates that are presumably defects but were not looked up further.

No objects of interest.

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1920phae.proj.1100w

Thursday, June 17, 1920.

Examining Arc & Ac Plates.

Region $19^h 00^m - 30°$

Arc 14887 August 2, 1919, Ef. 61^m
12064, June 24, 1916, Ef. 60^m
(12064 superposed on 14887)

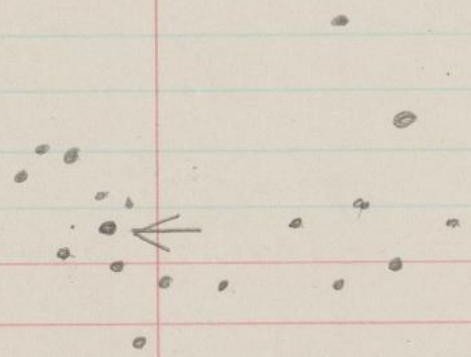
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1920phae.proj.1190w

14887 is much better than conf. pl.
Use again with some later good plate

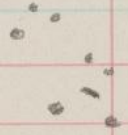
Nova or Moving Object?

Nov 14887



Hebe
1911-12 25 (Aug. 1)
In "Asteroids"

On AC 21656, Aug. 2, this is a trail.



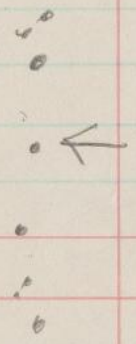
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1920phae.proj.1190w

206

Nova y 1919.

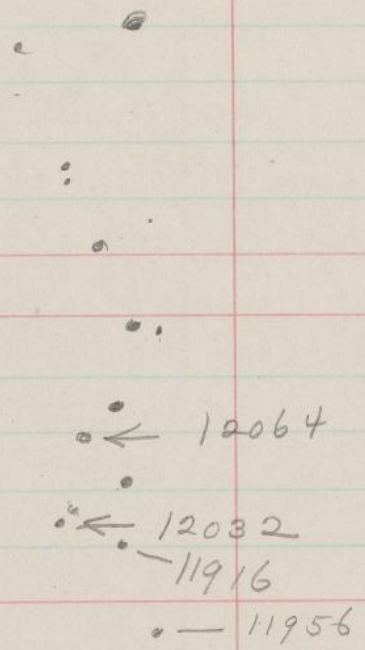
D. E. W.



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1920phae.proj.1190W

New 12064



11956	June 11,	1916
11916	June 7	1916
12032	June 20	1916
12064	June 24	
12127	July 3	not found

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1920phae.proj.1190w

Mildred B
Mrs. Cushing

Saturday, June 19, 1920.

Examination of AM & AC Plates.

Region $8^h 00^m$ $-30°$

13988, May 18, 1918, Eff. 32m
8947, May 26, 1913, Eff. 60m
(13988 superposed on 8947)

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1920phae.proj.1190w

Mystery — or Defect —
Cannot verify —

Nov 13988

Defect?
Miss Leavitt
thinks this to be
a star image.



See iden. by B1545

Not a Nova
var.
Not an asteroid.

Not an 13948, May 5, 1918.
" " 14008, May 31, 1918
" " 13930, May 1, 1918

8h 47m -36.°5 (1900)

Object is much like other star images.

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1920phae.proj.1100w

Monday, July 12, 1920.

Examination of Aw & Ac Plates.

Regim $6^h 05^m$ $-45°$

Aw 15054, October 30, 1919, Eff. ?
Aw 12837, December 21, 1916, Eff. 60^m
(15054 superseded by 12837)

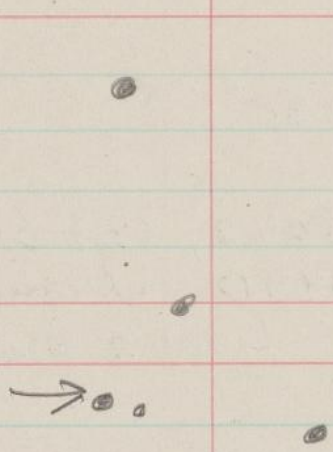
15054 is broken, but mended.

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1920phae.proj.1190w

Extra star near No. edge.

N. on 12837



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July 12, 1920.

Examination of AM & AC Plates.

Region $19^h\ 00^m$ -30°

AM 15042, October 21, 1919, Eff. 66m
AM 13480, August 6, 1917, Eff. 60m
(15042 superposed on 13480)

15042 corner missing. Plate damaged on edges by water.

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1920phae.proj:1190w

191033

RY Sagit.

$h\ m$
19 10.0 −33° 42′

(1900)

(See print)

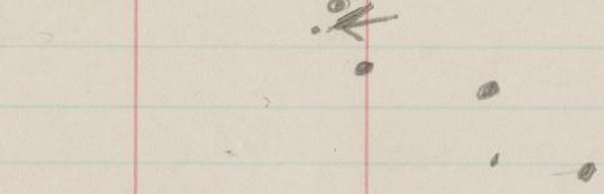
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1920phae.proj.1190w

~~Defect?~~

~~Comet?~~

Nov ~~14887~~
13480



Not in 15042

185537

20-45 Seen on Aug 14891, Aug. 4, 1919, Same field

R Cor. Austr. " " 13480 Aug. 6, 1917, ft-

$18^h 55^m.2 - 37° 6'$ " " 14887 Aug. 2, 1919 ft.

(1900)

(See print)

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Thursday, July 15, 1920.

Examination of Aml & Ac Plates -

Region $18^h\ 00^m$ $-15°$

Ab 22720, July 8, 1920, Exp. 67^m
Aml 11328 Oct. 6, 1915, Exp. 33
(22720 superposed on 11328)

Ac 22720 is very poor. Only a cursory exam. can be made - Need 11328 again.

Time, 30 min.

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1920phae.proj.1190w

~~* See later plates~~

N 22720

17 21 -20.9
appears
(1855)

not a Planet M.S. on AM 11328

Vesta

AM 15294 18-30, not yet read, covers this region.

See AM 15287 July 7, 1920, 18h-30°
(L' plate)

∴ -7.8 during in R.A.
" " Dec.

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1920phae.proj.1190w

July 24, 1920.

Examination of AM & AC Plates.

Region $20^h\ 00^m\ -15°$

AC 22745 July 16, 1920, Exp. 64 m
AM 10703 June 18, 1915, Exp. 34
(22745 superposed on 10703)

Time, about 20 minutes.

No objects of interest were found.

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