KG
11365
946

XXII

Discovery of New Variables.

Cont. in Bk. 40 H.S.L.

KG 11365.945

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Discovery of New Variables.

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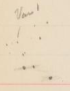
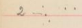
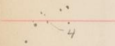
Thursday, February 21, 1907

Map of the Sky 3^h $+60°$
Examination for Variables

Plate AC 8088 superposed with D 12556 = AC 5369







Var	Br	H	
1	8088 7940 7212 [9.	5369 ~~7688~~ 7069 ~~7686~~ 8183	< 11.
2 (TX Cass.)	8088 7940 5480 6754 6761 6809 6916 5300 5402 [8.0]	5369 6047 [8.5] 3932 3193	
	Algol Type?		
3	8088 [8.] (6047)	5369 [9.] 6809 6916 7940 8183 7212	
~~4~~	~~8088 [7.5] 536~~	5945	
4	8088 [7.5] (5369)	6746 [10.] 6809	
× 5	8088 7940 [9.] 6746 6761 4419	5369 3917	

Probably variable, but very slight. Susp. but

Var. No. 1 = X Camelopard, discovered by L. Ceraski in 1903.
1900 Pos. 3^h 32.6^m $+74°$ $56'$ 8.0^{max} $13.^{min}$

No. 4 = RW Cassiopeiae L. Ceraski 1905 013057

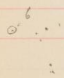
On Plate AC 8088 superposed with D 12556, were ~~susp~~ discovered Nos 1–5, of which ~~one~~ two is known and one suspected.

Total ~~3~~ 2 new
1 susp.
~~1~~ 2 known

Friday, March 1, 1907

Map of the Sky 3^h, $+60°$

Plate AC 6809 superposed with D 12556 = AC 5369



Var	Br	H
× 6	5639 3887 [8.] 3849 5300 6761	6809 5945

Image perhaps defective on ~~AM~~ AC 6809. Faintness doubtful on AC 5945. Slight changes appear to take place on other plates, but these may be due to changes in the appearance of the image resulting from the close proximity of two eleventh magnitude stars. Do not announce, but watch.

Var	Br	H
7	5369 [8.] 6916 (5219) 5300	6809 [8.8] 5945 6047 6664 6718 5176
~~8~~	~~5369 [8.5] 5402~~	~~6809 [9.2] (3489) 7940~~

Region of this star marked on one plate. Probably known U Persei. Drop Number.

On Plate AC 6809, superposed with D 12556 = AC 5369 were discovered Nos. 6 and 7 of which No. 6 is suspected. Also the known variable, U Persei.

Total 1 new
1 susp.
1 known

Monday, March 4, 1907

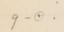
Map of the Sky 3h +60°

Plate AC 7940 superposed with D12556

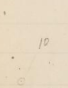
Rediscovered No. 7, U Persei, 2

Var Br H

X 8 7940 5219 3924 6718 6047 5369 6916 8088
Very uncertain. Susp. list.



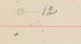
9 5369 8088 6809 6916 5945 7940 7189
6047 6664 6718 6732 7950
7181 7179
Examined on about 30 plates. Uniform except on AM 7940 and 7189. Evidently of Algol Type
Range from 8. about 0.8 magn



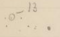
10 7940 6809 5480 7069 5369 8088 7189 7237 7322 6754 3887
6761
Range from 9. about ~~[illegible]~~ 0.6 magn

no. 2 ~~11 7940 6809 5369~~

11 5369 3924 8002 7364 8183 7940 6761 (6754) 7189 (7237)
5480 7069 3917 7322 8088
Varies from 9. about a magnitude



X 12 5369 7069 7322 7237 8002 7940 5480 5402 6809
6732
Probably slightly var. Susp. list



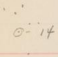
13 5369 5945 7181 3924 7940 6916 8002
Varies from 8. about 1.2 magn

Monday, March 4, 1907

Map of the Sky 3h +60°

Var Br H

X 14 5369 3924 7179 5945 7940 8002 5219 8183 3849
6732 5480



Varies from 8.5 about a magnitude. Never so faint, however, as on AC 7940 and changes on other plates are slight. Susp. list.

15 ~~5369~~ ~~7940~~ 8088 7322 7940 (3924)(7179) 6711
120, 1906
Ceraski
5917
Varies from 8. three or four magnitudes. Very striking

On Plate AC 7940 superposed with D12556, were discovered Nos. 8-15, of which Nos. 8, 12, 14 are suspected. ~~Also~~ No. 15 is 120, 1906; also rediscovered U Persei, and nos. 2 and 7.

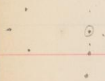
Total 4 new
3 suspected
4 known

Monday, March 11, 1907

~~Plate~~ Map of the Sky 12^h $+60°$

Plate A~~M~~C 3351 superposed with D 12557 = AM 7427

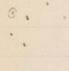
Var Br Ft



16 3351 1550 (3466) 7427 7432 1196 6178 7385

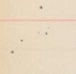
Varies from 8. about 0.7 magn. Per. prob. long

~~17 3351 defect 7427 7432 1196 1550 3466~~



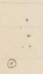
X 17 7427 3187 1196 7432 3351 2611 3737 3466

Doubtful. Susp. list.



18 7427 7432 3351 2534

R Urs. Maj. Range from 7. to < 11. Per. known



19 3351 1550 3466 7427 1196

Range from 8. about a magnitude

20 7427 (6178) 3351 (7066)

Range 9. to less than 12

U Urs. Min.

On Plate A~~M~~C 3351 superposed with D 12557 (= A~~M~~C 7427) were discovered Nos 16 – 20, of which no. 17 is suspected, No. 18 is R Ursae Majoris, and No. 20 is U Ursae Minoris

Total, 2 new
1 susp.
2 known

Friday March 15, 1907

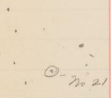
Map of the Sky 12^h $+60°$

Plate A~~M~~C 3466 superposed with D 12557

Nos 18, 19 rediscovered

Var Br Ft

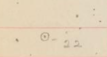
X 21 7427 (7066) 1550 6178 3466 (2475) (7385) (7545) X
2534 1196 800 3187 3680
8048 7594 etc.



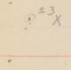
Range from 8. about 0.4 magn.

Seems to be a star of the Algol Type. Interesting at this distance from galactic equator. Keep on susp. list for the present, on account of small range

22 7427 2611 ≥ 1550 3466 7385 3737 36$\overset{0}{8}$8 3187 800 2475
7432 2534

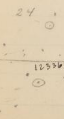


Varies from 8. about 1.3 magn. Period evidently very short (Plates 7427 and 7432 were taken on successive nights. Apparently of the "Antalgol type.



X 23 3466 1550 (1196) 3187 7427 7066 (6178) 2534 7432
1550 3351 7066 I15$\underline{29}$4

Varies from 8. about 0.5 magn. Keep on susp. list on account of small range



24 7427 7385 3466 2611 (3737)

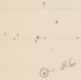
123366 – Draconis Varies from 9. to < 12. Period prob. long

25 7427 (3187) 3466 36$\underline{8}^{0}$

S Urs. Maj. Varies from 8.5 to < 12 Prob. long period

Friday, March 15, 1907

Map of the Sky 12^h $+60^\circ$



Var Br Ht

26 3466 800 7427 2475

Vares from 8.5 about 1.5 magn

Z Urs. Maj.

~~27~~

On Plate A~~M~~C 3466 superposed with D 12557 were discovered Nos. 21-26, of which nos. 21 and 23 are suspected. No. 24 is known, - Draconis and No. 25 is S Ursae Majoris, and No. 26 is Z Ursae Maj. Nos 18 (R Ursae Maj) and 19 were rediscovered.

Total, 2 new
2 susp.
5 known.

Friday, March 22, 1907

Map of the Sky 12^h $+60^\circ$ Plate $^6_3$

2 Plate A~~M~~C 6178 superposed with D 12557 = A~~M~~C (7427

Var. Br Ht

× 27 6178 [9.5] 2534 3187 7427 [10.0] 1550 (3737) 2475
3680 7066 7432 1196

Var. prob. real - Difficult - susp list

× 28 7066 1196 [7.5] 3737 7432 [8.0]

Uncertain - susp. list

29 6178 800 1196 3737 8048 7247 7432 7066 3187 7545

Varies from 9, about 0.8 magn

~~30 7432 800 2475 2534 6178~~

Im. defect. on Plate 6178

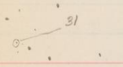
30 7247 7432 [9.4] (2475) 6178 1550 [10.0] 2534 3680

Saturday, March 23, 1907

Map of the Sky 12^h +60° (Plate $\overset{6}{5}$)

Var Br H

30 7427 [9.5] 1550 2534 3187 6178 [10.5] ~~8107~~
3680 3737 7066 1196 800 6229 (6050 extr. poor) 4884 [10.5]
6275 6105 7475



Algol type - interesting

~~32~~

On plate A~~M~~C 6178 superposed with D 12557 were discovered the known variables S Ursae Majoris, Nos 18 (= R Urs. Maj.) 22, 20 = U Urs. Min

New (?) variables 27 to 31 of which nos. 27 and 28 are on the suspected list.

In all, 3 new
2 susp.
4 known

Saturday, March 30, 1907

Map of the Sky 12^h +60° (Plate 6)

Plate AC 2534 superposed with D 12557 = A~~M~~C 7427

Rediscovered S Ursae Majoris 18 (R Urs. Maj.) 20 (U Ursae Minoris) 24 (-Draconis) 26 (Z Urs. Maj) Nos. 19, 22 , T Ursae Maj.

Var Br H

32

Monday, April 1, 1907

Map of the Sky 12h +60° (Plate 6)

Var	Br	Ft
32	7427 [9.0] 6050 6275 3680 7432 7385 6229 [8.8] 5560	2534 [9.7] (2611) (2066) 2475
	Period probably long	
T Urs. Majoris ~~33~~	~~2534 [7.4] 3351~~	~~7427 [< 11.6] 3466~~
~~33~~	~~2534~~	~~7427 7432 2475~~
	Def. on AM 2534	

On Plate AC 2534 were re-discovered S Ursae Majoris, T Ursae Majoris, R Ursae Majoris, U Ursae ~~Majoris~~ Minoris, 123366 - Draconis, Z Ursae Majoris, Nos 19, 22 and 32, which is Y Ursae Majoris. No new, or suspected variables.

Total 0 new
0 susp.
9 known

Thursday, April 4, 1907

Map of the Sky 3h +60° (Plate 3)

Plate AC 4619 superposed with D 12556 (= AC 5369

Rediscovered U Persei, No. 7, 11

Var	Br	Ft
33	5369 5402 [8.8] 5219 7940 3959 [8.6] 3849	4619 [9.5] 5176 4555 4426 6807 3937 3932
	Period apparently short Estimates superseded - See page 16	
34 34 T Camelopardali	4619 [9.] 6047 Period app. long	5369 [< 11.0] 3790 6754 6746
R Z Cassiop. 35	4219 [7.] 8002 6916 6761 6047 6732 Algol Type	5369 [8.] 6718

On plate AC 4619, superposed with D 12556 = AC 5369 were discovered Nos. 33-35, of which No. 34 = T Camelopardali and No. 35 = R.Z. Cassiopeiae. Also rediscovered U Persei, Nos 7 and 11.

Total 1 new
0 susp
5 known

Saturday, April 6, 1907

Map of the Sky

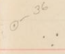
Estimates of Magn. of new Variables

Var			
2	8088 [8.8]		5369 [9.4]
3	8088 [9.3]		5369 ~~8088~~ [10.0]
4	8088 [9.~~4~~0]		5369 [10.0] [6809] 11.4]
5	8088 [10.5]		~~8088~~ 5369 [11.0]
6	5369 [9.9]		6809 [10.5]
7	5369 [8.6]		6809 [9.2]
8	Difficult. Prob. not var.		
9	5369 [8.~~5~~2]		7940 [9.0]
10	7940 [10.7] 5480 [10.6]		5369 [11.2]
11	5369 [9.5]		7940 [10.5]
12	5369 [10.3		7940 [10.5]
13	5369 [9.2]		7940 [10.1]
14	5369 [9.~~7~~2]	5480 [9.0]	7940 [10.0]
15	Known		
33-16	~~4619 [9.8]~~ 3959 [9.0]		5369 [10.~~5~~0] 4619 [10.0]
17	Diff. - Prob. not var.		
18	Known		
19	3351 [8.3]		7427 [9.0]
21	3351 [7.5]		3466 [9.0]
22	3351 [9.0]		3466 [9.4]
23	~~7427~~ 3466 [7.8]		~~3466~~ [7427 [8.2]
27	see page 11 and following pages for this and following variables		
Apr. 11, 1907 29	6178 [8.8]		7427 [9.6]
16	3351 [8.2]		7427 [9.0] 2534

Wednesday, May 1, 1907

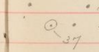
Map of the Sky Plate 9 21h +60°

Plate AC 4353 superposed with
D 12558 = AC 6715



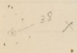
Var	Br	Ft ~~4353~~
× 36	6715 4091 4258 4067 3807 5073	4353

About 40 plates examined. Uniformly bright except on AC 4353. About ½ magn. fainter than normal magn of about 9. Appears to be var. Sup. list.



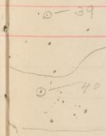
Var	Br	Ft
× 37	4353 7851 5733	6715 3484 6797 4951

Varies about ½ magn. from 9. Sup. list.



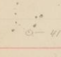
Var	Br	Ft
× 38	6715 6507 [9.5] 4111	4353 5294 [10.0] 3018

Almost certainly variable but too difficult for AC plates. Look up on I plates



Var	Br	Ft
39	6715 3018 3838 [9.2] 200949, 283, 1904, Fleming	4353 5733 4111
~~40~~		On 4353 [10.0]
40	4353 [9.0] 3838 4951	6715 [10.0] 5294 6507

23, 1907



Var	Br	Ft
41	6715 [9.5] 4245	4353 [10] 6507 3838 6797 5545 5089 [10.2]

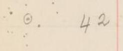
Certainly variable

T Ophi re-discovered

Saturday, May 4, 1907

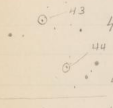
Map of the Sky, Region 9 21h, +60°

Var	Br	H
42	$\overset{6715}{4353}$ 6797. 3807	$\overset{4353}{\cancel{6715}}$ 4969 5029 5073
	On 6715, 8.2	On 4969, 8.8

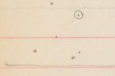


Red star. Suspected by Backhouse, & by M. & K.

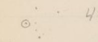
The image of the variable usually has a distended appearance, being larger than the adjacent images even when it is faint.



Var	Br	H
43	4353 [8.3] 4969 4067	6715 [9.0] 5029 3807 5172
44	6715 [8.8] 5029 3807	4353 [9.6] 4969 (4067) 5172
45	4353 4067 [8.7] 5029 4069 4258 4091	6715 3807 [9.6] 5172 5284



Period probably long. RU Cygni

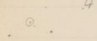


Var	Br	H
46	6715 5073 [9.2] 4146	$4\overset{3}{\cancel{2}}5\overset{3}{\cancel{8}}$ 5165 3912 [9.8] 3818

Range prob. larger than estimates indicate.

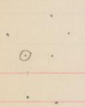
Var	Br	H
X47	6715 6562 6546 6496 6797 3912 5073	$4\overset{3}{\cancel{2}}5\overset{3}{\cancel{8}}$ 4146 (poor)

Probably not variable. Very faint.



Var	Br	H
48	6715 [9.0] 6797 [8.8]	$4\overset{3}{\cancel{2}}5\overset{3}{\cancel{8}}$ [9.8] 6583

X Z Cygni



Var	Br	H
49	6715 [9.4] 5165 6546 6496 6797 5073 3818 5089 [9.3] 4969 ~~4258~~ 4091 4067 etc etc	$4\overset{3}{\cancel{2}}5\overset{3}{\cancel{8}}$ [10.0] 2882

Apparently of the Algol Type

Var	Br	H
δ Cephei 50	6915	4353

Very bright app. var.

Map of the Sky Region 9 21h, +60°

On Plate AC 4353 superposed on D 12558 = AC 6715, were discovered Nos. 36–50, of which Nos. 36, 37, 38, 47 are on the suspected list. No. 50 is δ Cephei. Also re-discovered T Cephei.

No. 45 is RU Cygni No. 40 is 23, 1907 (Ceraski)

Total ~~10~~ 8 new
~~2~~ ~~7~~ 4 known
4 suspected

No. 39 is 283, 1907 discovered by Mrs. Fleming

No. 42 is a red star which has already been suspected by Backhouse & by Müller – Kempf.

No. 48 is X Z Cygni (Ceraski)

Revised Total, 5 new
6 known + 1 previously suspected
4 suspected

Nos 39, 42 and 48 were announced in Circular 13 and given Harvard Nos. 2974, 2982 and 2973, respectively. They are to be removed from list of Harvard variables, the others renumbered and the figures for the Region 9 in Table I of Circular 130 altered.

Monday, May 6, 1907

Map of the Sky Region 9, ~~22~~ 21^h, +60°

Plate AC 3818 superposed with D 12558 = AC 6715

Re-discovered Nos 40, 42, 45, 48

⊙ Var. Br Ft
51 3818 [5.?] 3838 5733 671$\overset{5}{3}$ [5.5?] 4969 4258 4091 [6.5?] 7851
(3018) 4951 4245

Almost certainly variable, but too bright to be seen easily. If not known, look up on AI plates

---

Tuesday, May 7, 1907

Map of the Sky Region 9 21^h +60°

Examination of AI plates for Variable 51

Var Br Ft
51 1728 2533 2591 2586 285 AI 1573 (1590) (4254) 4228 (4243)
1718 1242 1255 4016 1776
1256 1247 1245 1243 1796
1787 (1261) 773 318 258
5387 5375

Certainly variable by about 0.6 magn. Period probably long.

x 52 6$\overset{7}{9}$15 [8.3] 3912 6583 6562 3818 [8.9] 6546 6946 6797 4969
3807 7807 5172 4258 4067 7851
4353 5089

Almost certainly variable but do not announce, as range is prob. smaller than above meas estimates would indicate.

x 53 6$\overset{7}{9}$15 5029 [10.4] 4353 3818 [10.8] 5172 5089 5545
6562

Slight. Do not announce

54 3818 [8.6] 4067 4969 6715 [9.3] 4091 4258 5284
5073 5029 6583 5172 6797 6546

55 3818 [8.9] (5073) (5165) 6715 [9.6] 4091 4067 [9.8]
5029 3807 3600 6562 6595 6546

Map of the Sky Region 9 21^h, +60°.

On Plate AC 3818 superposed on D12558 = AC6715 were discovered Nos. 51-55, of which Nos 52 and 53 are suspected. Shall No. 51 be announced? Bright, small range, difficult, but seems to be certainly variable.

Rediscovered Nos. 40, 42, 45 = RU Cygni, 48

Total
3 new.
4 known
2 suspected.

Tuesday, May 7, 1907

Map of the Sky Region 9 21^h +60°

Plate AC 5089 superposed on D 12558 = AC 6715

Re-discovered Nos 42, 48.

Var.: Be   H

No new variables discovered. This plate did not prove as good as was expected. Try AC 5545 in its place.

On Plate AC 5089 superposed on D12558 (= AC6715) were discovered no new variables. Rediscovered Nos. 42, 48.

Total,
0 new
0 suspected
2 known

Wednesday, May 8, 1907

Map of the Sky Region 9 21h, +60°

Plate AC 7807 superposed with D 12558 = AC 6715

Rediscovered T Cephei, Nos 45 = R U Cygni, 46

No new variables.

On Plate AC 7807 superposed on D 12558 (= AC 6715)
were discovered no new variables.
Rediscovered T Cephei, R U Cygni, and No. 46

Total 0 new
0 suspected
3 known

Wednesday, May 8, 1907

Map of the Sky Region 9 21h +60°

Plate AC 5545 superposed on D 12558 = AC 6715

Re-discovered Nos 40, 44, 45 (= R U Cygni)

Var	Be	Ht
56	5545	6715

This is B T Cygni

No new variables

On Plate AC 5545 superposed on D 12558 (= AC 6715)
were discovered no new variables.
Re-discovered R U Cygni, R T Cygni, Nos. 40 and 44

Total, 0 new
0 suspected
4 known

Friday, May 10, 1907

Map of the Sky Region 9 21^h $+60^\circ$

Variable 38 Examination on I plates

I 1540
6971
9709
13367
16009
18558
21600
25973
29310
29510
32024

Examined on the above plates this star shows no evidence whatever of variability. Apparent variation on AC plates probably due entirely to the fact that the image was very faint and poor on them. Do not follow further

Monday, May 13, 1907

Map of the Sky Region 12 4^h $+30^\circ$

Plate AC 643 superposed on D 12559 = AC 5491 Nov. 7, 1904

Var	Br	Ft
57	5491 [9.2]	643 [< 11.0] 5813 5470 5527

There seems to be a real image and yet no trace of the object can be found on plates taken within a week. Is it a moving object? Not elongated.

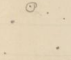
Wrong. See Plates AC 5527 (Nov. 14), and 3190 (Nov. 4) AC 5479 (Oct. 30)

The Asteroid Nysa was in opposition Nov. 30, 19— Magn. 9.0 RA = $4^h 26^m.9$, Dec. $+15^\circ 30'$

This is probably Nysa.

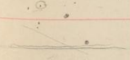
The approximate position of the object is $4^h 41^m$ $+15^\circ 59'$ (1900)

On Plate AC 5625, Nov. 28, 1904, the object is seen in RA $4^h 23^m$ Dec. $+15^\circ 20'$ (1900), which is not far from the position of Nysa. Measure on AC 5625



Var	Br	Ft
58	643 [9.5] (5625)	5491 [11.5?] (5387)

R V Tauri



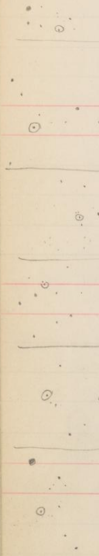
Var	Br	Ft
59	5491 [9.6] 5625 5457	643 [10.6] 121 5387

Period probably long.

Var	Br	Ft
60	5491 [8.6] 121 5457 1128	643 [9.6] (5387) 5813

Monday, May 13, 1907

Map of the Sky Region 12 ~~$4\frac{1}{2}$~~^{h} +30°



Var	Br	H
61	5491 [9.1] (5457) 5625	643 [<11.5] 5813 5387
	Period probably rather short.	R Persei
62	5491 [7.5] 2900 (5653) (3327) 2113	643 [8.2] 2966 (6090) 8017 5457 2832 1011 142 (121) 5521 5813
	R X Aurigae	2379 (5387) 8220 7911 2155 6785
	Is this variable of the "antalgol type"? Range prob. somewhat greater than estimates indicate	
63	(5491] 8017 [8.5] (2832)	643 [9.8] 2379
64	643 2379 5813 [10.2]	5491 1128 5457 [11.0?]
	The following star of a pair	
× 65	~~643 1128~~ 5491 5457 5625 2900	~~5491 6090 [10.0] 2900 5625~~ 643 1011 121
	Very uncertain. Probably varies about ½ mag. from max. 9.5.	
66	643 [8.5] 5813	5491 [9.2] 6090 [10.5]

On Plate AC 643 superposed on D 12559 (= AC 5491) were discovered Nos 57-66, of which No. 65 is on the suspected list. No. 57 is an asteroid (Nysa) 58 = R V Tauri, 61 = R Persei, 62 = R X Aurigae

Total
5 new
3 known
1 suspected
1 asteroid.

Tuesday, May 14, 1907

Map of the Sky Region 12 4^h +30°

Plate AC 6785 superposed on D 12559 = AC 5491

Rediscovered Nos 57, 61, = R Persei 62 = R X Aurigae, Jupiter

Var	Br	H
67	5491 [10.0] 643 5653 5627 2379 8017 5387 8220 5470 3950	6785 [10.6] (2900) 1101 7911 3148 2241 252
68	5491 5387 2900 5457 1011 1128 2966 2832 [8.0]	6785 5653 5625 142 [9.0] [On 6785, 8.5]. 3327 1178 1245 8220 [9.4]
× 69	5491 [3327 6090 142 2379 [8.3] 5457 1245	6785 [8.8] 1178 5521 2900 [9.0] 1178
	Range probably smaller than estimates indicate. Seems to be certainly variable, but do not announce until it has been measured up.	
× 70	~~6785~~ 5491 [9.2] 3327 1245 1178 643 8220 8044 7911 7997	~~5491~~ 6785 [10.0] 5653
	Probably of the Algol type. Range smaller than estimates indicate. Seems to be really variable, but do not announce at present	

On Plate AC 6785, superposed on D 12559 (= AC 5491) were discovered Nos. 67-70, of which Nos. 69 & 70 are suspected. Rediscovered Jupiter, Nysa (?) R Persei, R X Aurigae, ~~Ro~~

Total
2 new
2 known
2 suspected
Also one planet and one asteroid.

Wednesday, May 15, 1907

Map of the Sky Region 12 4^h +30°

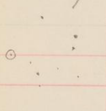
Plate AC 7997 superposed on D 12559 (= AC 5491)

Rediscovered Nos 57 (asteroid) 58 (RV Tauri),
61 (R Persei) 66

F

Var Br Ft

~~71 5491 [9.8] 7997 [< 10.6] 5527~~
Defect on AC 5491



× 71 7997 3327 5491 1178
Range apparently not more than half a magnitude. Too difficult for AC plates – look up on I plates
Do not announce.

On AC 7997 superposed on D12559 (= AC5491) were discovered no new variables – One suspected variable (No. 71). Rediscovered RV Tauri, R Persei, No. 66, and Nysa (?)

Total 0 new
3 known
1 suspected
1 asteroid

Thursday, May 16, 1907

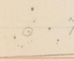
Map of the Sky Region 12 4^h + 30°

Plate AC 2155 superposed on D12559 (= AC 5491

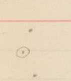
Rediscovered No. 57 (Nysa?) 62 (RX Aurigae)
66, ~~64~~

Var Br Ft

72 2155 [8.7] 2154 2086 5491 [< 11.0] 8220 7974 5387 2900
2125 5625 This is U Arietis

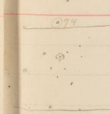


73 5491 [9.5] 2900 [9.3] 2155 [10.0] 8044 7911 5625
RW Aurigae Range prob. greater than est. indicates

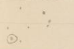


74 2155 5625 2900 (7911) 5491 (~~5387~~) 5457 2379 [8.0]
[On 2155, 7.4] 643 8220 6785 3327 1245 2113
1178 (5387) 5521
Range small, but certainly variable.

75 2155 [9.0] 2900 5653 5491 [10.0] 5625 5387. 5457



76 5491 1245, 2113 3327 8220 2155 1178 [11.0]
6090 5653 2832 5813 142 RW Persei
On 5491 [9.0] Evidently ~~On 1178 [~~ of the Algol Type



77 2155 [7.5] 2832 5 ~~5491 1178~~ 5491 [9.5] 8220 6090 5653 5813
Nova Persei.

On Plate AC 2155 superposed on D 12559 (= AC 5491 were discovered Nos. 72-77 and Nos 57 (Nysa) 62 (RX Aurigae) and 66 were Rediscovered. Nos 72, 73, 76, 77 are known variables (see above).

Total, 2 new
6 known
0 susp. 1 asteroid.

Friday, May 17, 1907

Map of the Sky Region 12
Examination of No. 74 on A I plates.

Var	Br	Ft
74	AI 1998 [7.5] 1810 1891 4187	AI 5486 [8.0] 818 5343 5320 2108

Wednesday
Friday, May 2$\overset{2}{4}$, 1907

Map of the Sky Region 21. 22^h $+\overset{3}{1}0^\circ$

Plate AC 1014 superposed on D 12679, (= AC 5446

Var	Br	Ft
78	5446 [7.] 668 Period app. long. Prob. known	1014 [11.] 4404 (4267) SS Cygni
79	5446. [9.5] (2879) 2853	1014 [< 11.0] 3801 (4211)
80	5446 [9.5] 2289 6547 R R Pegasi	1014 [11.0] 668 4267 4404 6708
~~81~~		

On Plate AC 1014 superposed on D 12769 (= AC 5446) were discovered Nos 78 - 80. No suspected variables. No. 78 is SS Cygni and No. 80 is RR Pegasi

Total, 1 new
2 known
0 suspected

Monday, May 27, 1907

Seq. for RT Pegasi

Map of the Sky Region 21, 22^h +30°

Plate AC 2593 superposed on D 12679 (= AC 5446)
Rediscovered Nos. 78, 80

Var	Br		Ft
81	2593 [10.] 1014 4002 4387		5446 [11.] (7582)
	6743 5225 5463		8129 AM 4316
	AM 3153 3212		

Evidently of the Algol type
Bright on about 60 plates

Var	Br		Ft
82	2593 [10.] 4041 2679		5446 [11.] 5225 5090

Period probably long
215122, – Pegasi

Var	Br		Ft
83	2593 1843 6629 [10.] 6743		5446 5090 5225 [11.] 1106
	7852 4387 6894 6708 7889		
	4404		

Variation prob. somewhat smaller than est. indicate.

Var	Br		Ft
84	5446 2015 5090 [8.5]		2593 [8.8] (4041) (4211) (2679)
	3801 [8.2] (1803) 1106 6743		$\underset{2631}{7852}$ [9.2 in. poor def.] 7779 7810 2511

Apparently already suspected, as the star is marked with an arrow on Plate I 18856 = AC 2631

Suspected by Mrs. Fleming. See her Book *13, page 162
DM +34° 4597 21^h 59^m.4 +34′.6 (1855) 8.5
~~21~~

A.C. 6743 5446 2593 3801 show that star is variable.
L. W. W. May 27 1907

Tuesday, May 28, 1907.

Map of the Sky Region 21, 22^h +30°

Var	Br		Ft	
85	2593 ~~5446~~ [8.6]	4002 [8.2]	5446 ~~2593~~ [9.4] 5225	5279 5194
	6708 2511 6789	2578 (?)		

Period probably long. VY Cygni

Var	Br		Ft	
86	5446 ~~2593~~ [8.4]	1881 4267	2593 ~~5446~~ [9.$\frac{2}{8}$] (6708)	7235 (very poor)
	6547 1014	4002 4041	& 2865	
	6894 8051	4404 2631		
	2511 6989			

Evidently of the Algol type. Faint on very few plates.

Var	Br		Ft	
87	2593 [8.5]	2511	5446 [9.5] 2883 < 10.0	2865 4257

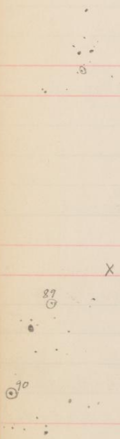
W Y Cygni (?)

On Plate AC 2593 superposed on D 12679 (= AC 5446) were discovered Nos. 81–87. No suspected variables. Re-discovered Nos. 78 and 80 (SS Cygni and RR Pegasi) No. suspected variables. Nos. 82, 85 and 87 are the known variables, 215122, – Pegasi, VY Cygni and W Y Cygni. No. 84 was previously discovered by Mrs. Fleming, but on the plates examined by her, the range was considered too small to justify announcement.

Total, 3 new
1 confirmed
5 known
0 suspected.

Thursday, May 30, 1907

Map of the Sky, Region 21, 22^h $+30°$



Var	Br	H
88	5446 [9.0] 2679 4241 6743 3801 7852 4404 6894 6788 1106 6757 6798 6805	6789 [10.2] (5279) I 33472

Evidently of the Algol Type. Range probably larger than estimates indicate. AC 6789 was taken Oct. 6, 1905 and I 33472 was taken on the same date. AM 3929 and AC 6798 taken Oct. 5 and Oct. 7 respectively, show the variable of normal brightness.

Var	Br	H
× 89	6789 [8.7] 4002 6757 4387 4041 6708	5446 [9.3] (6547) 4267 5090 7852 3801

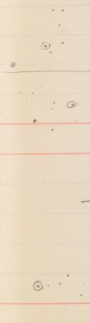
Seems to be certainly variable, but range is small and observation difficult. Do not announce.

Var	Br	H
90	6789 [7.] 4241 6743 6629~~[?]~~ 6629 4404	5446 [7.5?] 7852 [7.8] 7889 ~~[illegible]~~ 8051

Period probably long.

Friday, May 31, 1907

Map of the Sky Region 21, 22^h $+30°$



Var	Br	H
91	6789 [7.3] 6757	5446 [8.3] 4267
92	6789 [8.0] 4002 6547 6794 5090 (6743)	5446 [8.9] (4267) 6757 (4387)

VZ Cygni Period short

Var	Br	H
~~93~~	~~6789 [6.] 4387 5279~~ 2883 2578 3942 6709 AI $\overset{\text{Dec. 6}}{1776}$ 1256 4016 ~~1718~~ 2533 1255 1245 1243 5339	5446 [6.7] 6798 (3018) 2664 (6738) AI 4243 4254 4294 $\overset{\text{Nov. 25}}{1718}$

This bright star is certainly variable, but do not announce unless confirmed. Period perhaps rather short, as the full difference in brightness is seen on plates taken Nov. 25 and Dec. 6, 1903.

This is the same as No 51. Position given to Professor Pickering to observe.

On Plate AC 6789, superposed on D 12769 (= AC 5496), were discovered Nos. 88-92, of which No. 89 is suspected. Rediscovered Nos. 51, 78 (SS Cygni). No. 92 is VZ Cygni.

Total, 3 new
3 known
1 suspected

Saturday, June 1, 1907

Map of the Sky, Region 21, 22^h +30°

Plate AC 8004 superposed on D 12679 (= AC 5446

Var Br H

93 8004 [8.8] (4002) 7852 7889 5446 [9.6] 4211 6629

× 94 8004 [9.5] 7889 6894 2631 5446 [10.2] 8051

Probably variable, but difficult. Susp. list

× 95 8004 [7.] 6581 6497 6400 5594 AI (1255) 4294 5446 [7.5] 6434 5421 5399 AI 1242 1573 1718

Almost certainly varies at least 0.5 magn. Difficult, do not announce.

× 96 5446 7918 5519 [7.] AI 1225 1573 1242 8004 5829 6434 AI 1718

Probably varies but difficult. Announce this and no. 95 as suspected

Rediscovered Nos. 79, 80, 81, 83, 84, 78, 51, 92

On Plate AC 8004, superposed on D 12679 (= AC 5446) were discovered Nos 93 – 96, of which Nos 94 – 96 are suspected. Also Nos. 79, 80 (RR Pegasi), 81, 83, 84, 78 (SS Cygni), 51, 92 (VZ Cygni)

Total 1 new
3 suspected
8 known

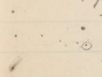
Tuesday, June 4, 1907

Map of the Sky, Region 48 – 6^h, −60°

Plate AM 712 superposed with D 12375 (= AM 390)
The position is thinner than is desirable. D 12377 from the same plate is better, except that it is covered with stubble defects, apparently due to dust.

Var Be H

R Reticuli - 6-25-26

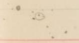

97 712 [8.8] 630 692 [8.0] 705 (1070) 3909 [<11.5] 338 3980 742

Period apparently long

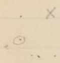
98 712 [9.5] 705 695 1070 [9.1] 3909 [<11.5] 742

Marked on print from D 11497. Large Mag. Cloud

Period probably long.

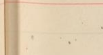

99 712 [8.8] 1552 (1070) 3909 [<11.5] (742)

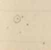
Period probably long.


× 100 712 3376 3181 3909 152 2250

Very difficult, doubtful. Susp. list

101 712 [9.5] 4040 1070 3909 [10.5] 3166 2461 2379 3848


102 3909 152 [8.5] (1552) 692 3980 338 [8.2] 712 [9.3] 1070 [9.3]

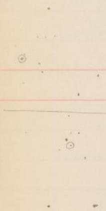

× 103 712 1713 [10.0] 1681 3931 3909 4040

Prob. slightly variable. Susp. list

Wednesday, June 5, 1907

Map of the Sky, Region 48, 6^h -60°

Var Br Ft



X 104 712 3909 630 3980 4040 3951 1681 1713[9.6]

Seen bright only on 1550 152 AM 712 out of about 20 plates. Image somewhat defective on AM 712, though star appears to be really brighter than normal. Susp. list.

105 712[9.3] ~~23~~79 (3848) 152 3909[11.5] 3166 2461 3363 742 2379
S Pictoris

On Plate AM 712 superposed on D12375 (= AM 3909) were discovered Nos. 97-105, of which Nos. 100, 103, 104 are suspected. No. 105 is S Pictoris

Total, 5 new
1 known
3 suspected

Thursday, June 6, 1907

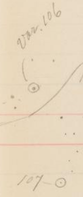
Map of the Sky Region 48 6^h -60°

Plate AM 3009 superposed on D 12375 (= AM 3909)

Var Br Ft

X 106 3009 2250 3909 742 3888 1713 2461

This star always has an image larger than the others, and slightly. It may be double, and the apparent changes in brightness may be due to differences in the photographic image. Susp. list

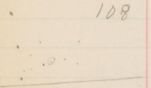


107 3909[10.0] 3166 1791 3009[10.8] 2379 3848
(2461)

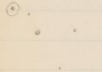
Friday, June 7, 1907

Map of the Sky Region 48. ~~12~~ 6^h -60°

Var Br H

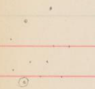


108 3909[9.2] 630 3951 2379 3009[11.0](338) 1070 2250



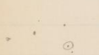
x 109 3909[7.] 1791 2379 1713 3009(Em. post. definition) 3166[7.4]
4635 3980 705 1070 692

Variation probably real but very slight
Do not announce. R Doradûs



110 3009[9.0] (3888) 1681 3909[9.8] 630 [<11.0] 3980 338
1713 3951

Period probably long



111 3909[9.] 2250 1552 1713 3009 [10.] (3030) 2979 (3097)
1681 3951 4040 3888 1070
630

Phase of minimum apparently brief in comparison with that of maximum

In Plate AM 3009, superposed on D 12375 (= AM 3909) were discovered Nos. 106 - 111, of which Nos. 106 and 109 are suspected. No variables rediscovered. No. 109 is the known variable, R Doradûs.

Total, 4 new
1 suspected
1 known

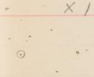
Thursday, June 20, 1907

Map of the Sky Region 48 6^h, -60°

Plate AM 4151 superposed on D .12735 (= AM 3909)
~~No variables~~ re-discovered no. 107

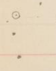
Var Br H

~~112 3909 712 3980 415(3009)~~ not variable

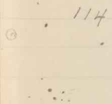


x 112 3909[9.3] (630) 338(2250) 4151 [9.8] 152 1681 1713
2379

Variation slight. Do not announce



113 3909[10.5] 3980 3951 4151[11.5](4040) 3888
(3848) 3376[10.0]



114 3909 [8.5] 2250[8.0] 4151 [9.2] 3181 [9.5] 3166 2461[10.0]
2379 1791

R Pictoris

115 3909 2363 2379[8.8] 4151[9.5] 1713 1681 (1552) 630
1791 2250

On Plate AM 4151 superposed on D 12375 (= AM 3909) were discovered Nos. 112 - 115, of which No. 112 is suspected. Also re-discovered No. 107. No. 114 is R Pictoris.

Total, 2 new
2 known
1 suspected

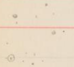
Friday, June 21, 1907

Map of the Sky, Region 48. 6², -60°

Plate AM 4675 superposed on D 12735 (= AM 3909)

Re-discovered Nos. 102, 107, 109, 114

Var	Br	H
116	3909 1791 [9.5] 1681 3072	4675 2250 742 [10.6] 1552 3376 3980 4040 2379



Variation on the two plates originally compared, is slight.

Var	Br	H
× 117	3909 4040 3072 2363	4675 (3166?)

Image probably defective on AM 4675 Probably not var. Do not announce

Var	Br	H
× 118	3909 3181 3166	4675 3376

Probably slightly variable, but difficult. Do not announce.

~~119~~

Saturday, June 22, 1907

Map of the Sky, Region 48 6² -60°

Var	Br	H
119	3909 [9.4] 3951 3166 (3181) 3072 2379 3980 3848 2461 152 1681 1552 742 3870 2979 3870	4675 [10.5] 3888 (4694?)

Evidently of the Algol Type

On Plate AM 4675, superposed on D 12735 (= AM 3909) were discovered Nos. 116 - 119, of which Nos. 117 and 118 are suspected. Also rediscovered Nos. 102, 107, 109 (= R Doradûs) and 114 (= R Pictoris)

Total, 2 new
2 suspected
4 known

Friday, June 28, 1907

Map of the Sky. Region 51 15^h −60°

Plate AM 815 superposed on D 12740 (= AM 2711)

Var Br H

× 120 815 2711

This very bright star is suspected of variation but there are not enough bright stars near it to confirm this. The star seems sometimes to be as bright as the two stars a degree north of it and sometimes fainter. Susp. list

121 2711[7.2?] 3457[7.0?] 815[8.0] 3783 2802 775
3498 848 (7+5)

Period apparently rather short

S Triang. Austr.

× 122 2711[8.4] 745 775 2802 815[9.0] 4302
3498 2113 3344 27

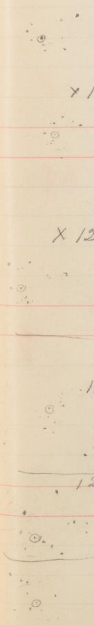
This variable is apparently of the Algol type. On multiple-image plate AM 405-2, the last two images show a sudden fading of light. ~~On multiple image plate AM~~ 2640 ~~the middle images seem to be fainter than those at the sides, thus the whole plane is represented~~

Difficult to observe. Do not announce in Table, but give position and date of observed faintness.

Friday, June 28, 1907

Map of the Sky Region 51 15^h −60°

Var Br H



~~123 815 4302 [10.2] 4402 2711[11.0]~~
~~2626~~ 1249

Image defective on AM 2711

123 815[7.6] 1413[7.2] 2711[7.8] 1453[8.0] 1971 2555
1434 (2483)

R Triang. Austr.

× 124 815 2626 2711 525 4302 4402

Variation probably real but not more than 0.3 or 0.4 magnitudes; about the 10th magn. at maximum. Do not announce.

× 125 815[9.7] ~~3448~~ 3498 937 2717[10.2] 2113 3457 4302 398
3841 2090 3344 3001 525
1936 454 2090

Seems to be really variable, but is difficult. Susp list.

126 815[9.8] 3783 3498 2113 2717 [10.6] 937 (1936)
1050 1235 1249 2626

Probably of the Algol type

127 815[10.0] 27[9.8] 1469 2717[10.5] 398 3344 4402±
1249[9.6]

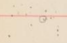
128 2717 [10.0] 848[9.8] 2590 2555 815[10.5] 775 1434 1412
Rediscovered H1304, H1301

Saturday, June $\overset{29}{30}$, 1907

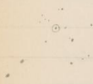
Map of the Sky. Region 51 15h -60°

Var Br Ft

129 2711 [9.5] 1413 1434 815 [10.5] 1971 [11.5]
2483 [9.2] 2555 [8.0]
Period R Normae



130 815 3498 [9.8] 3457 937 2711 2802 [10.5] 2113 [10.8] 2090



131 815 [9.9] 454 1936 1249 1469 2711 [10.6] (2113) (2802) 745
4402 3001 3498 848 725
Brightness uniform on about 25 plates.
Perhaps of the Algol type.

On Plate AM 815, superposed on D 12740 (=AM 2711) were discovered Nos. 120 - 131, of which nos. 120, 122, 124, 125 are suspected. Rediscovered H 1301 and H 1304. Nos 121, 123 and 129 are the known variables, S Triang. Austr., R Triang. Austr., and R Normae, respectively

Total, 5 new
4 suspected
5 known

Tuesday, July 2, 1907

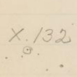
Map of the Sky Region 51 15h -60°

Plate AM 1284 superposed on D 12740 (=AM 2711)

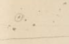
Rediscovered Nos. 126, 127, 128, $\overset{R\ Normae}{129}$, H1301, susp. var 18 (Map of Sky 15h, -60°)

Var Br Ft 1284 [10.0] 1924 2483 775

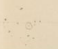
[18] 2711 [9.4] (2555) 2802 3498
3001 2649 2777
Rather difficult to measure on most plates, but certainly variable. Period probably long. In Book XIII, p 144 the original observation gave this variable as bright on AM 2738. Remove from suspected list.



X. 132 1284 [9.8] 2090 2711 4302 [10.2] 3841 1050
Slight, Do not announce



133 2711 [9.7] (2590) 745 1284 [10.5] (2555) 1413 1434 1453 1924
2802



X 134 $\underset{1050}{2711}$ [10.5] 2802 2113 3457 1284 [11.0]
B 9877 32574 25011 B 20239 [11.2]
Probably a variable of the Algol type. Do not announce, but be sure to measure up.

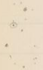
X 135 2711 [10.5] 3533 1284 [11.0] 3837 3698
Variation slight. Do not announce

Tuesday, July 2, 1907

Map of the Sky, Region 51 15^{h} -60°

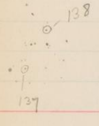
Var Br H

136 2711 [10.0] 1936 1050 1249 1284 [11.0] 2626 3001
1469 4402 3344 4302 27 2090
1239



Possibly of the Algol type

137 1284 [10.2] 2090 4302 3001 (2711) 454 1235 [11.0] 3841 (4402)
2113 3498 2802 2590 (745) 1453
1436
Period app. short



138 2711 454 4302 3344 [9.2] 1284 1235 3841 2090 3001 [10.0]
4402 1936 937 2113 2802 1249 398 3498 2590 2483
745 1413

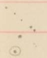
Wednesday, July 3, 1907

Map of the Sky Region 51 15^{h} -60°

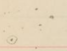
Var Br H

x 139 1284 [10.2] 1453 1924 1434 2711 [11.0] (745) (775) (2802) 3344 (poor)
2555 1413 1971 3498 2113 1050 3841 (poor)
Almost certainly variable, perhaps of the Algol type. Difficult. Do not announce

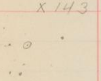
x 140 1284 [9.8] 1235 3841 2711 [10.2] 1050
Slight. Do not announce. Im. on a 2711 is perhaps defective.



141 1284 [7.8] 2802 3783 2711 [8.4] 3498 3457 [8.6] 937 1936
2113 398 1050 2626 1249 1971 1434 1469
1924 1453
Period short



x 142 1284 [8.5] 1434 1469 1453 2711 [8.8] 1413 398 937 3457 [9.2]
3498 4402
Doubtful, Do not announce



x 143 2711 [10.2] 3344 454 1284 [10.8] 1235 398 1249 1258
3841 3001 4402 2626 [10.0]
2483 2555
This star seems to be variable, but is difficult to observe. The image is hazy, but shows no sign of being double on Bache plates. Do not announce

Wednesday, July 3, 1907

Map of the Sky, Region 51. 15h, -60°

On Plate AM 1284, superposed on D 12740 (= AM 2711) were discovered Nos. 132-143, of which Nos. 132, 134, 135, 139, 140, 142, 143 are suspected. Rediscovered Nos 126, 127, 128, 129 (= R Normae) H 1301 and suspected variable numbered 18 in the list of those discovered on the Map of the Sky, Region 50 (12h, -60°).

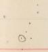
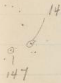
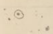
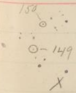
Total, 5 new
+1 confirmed
7 suspected
5 known

Friday, July 5, 1907

Map of the Sky, Region 51 15h, -60°.

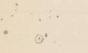
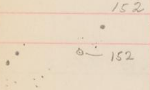
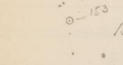
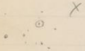
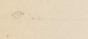
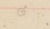
Plate AM 3698 superposed on D 12740 (= AM 2711)

Rediscovered [18] Map of sky reg. 50, H 1301, Nos. 126, 141, 131, H 1304

	Var	Br	Ft
	× 144	3698 [10.5] 3646 2626 B 19321 31643 16361 23476 25118 27662	2711 [10.8] 1971 1249 2113 2802 B 6282
		Probably visible. Difficult. Do not announce	
	145	2711 [9.4] 2090 27 4302 1235 [8.0] 150464 – Innes. Austr.	3698 [10.5] 3841 525 2802
	× 146	3698 (454) (2483) 1924 1453 3533	2711 2802 3001 2626 225 3841 27 2090 4402 1235 1050 1249 2590
		Variation slight, though probably real. Susp. list	
	147	1249 [10.5] (1413) (1453) 3533 3457	3698 [11.2] 2711 [11.5] 2590 1924 1971 2555 1936 2113
		Found while examining No. 146.	
	148	2711 [8.7] 3783 2626 3001 2802 [~~9.5~~] 454 2090 1936 1249 2555 2590 2483	3698 [9.5] 1235 4302 1434 1453
	149	3698 [10.0] 2590 2555 2113 [9.5] 2090	2711 [11.0] 3646 1924 1453 1434 3532 [11.5]
		Period probably short	
	× 150	3698 [10.8] 3646 1453 1249 4402	2711 [11.3] ~~3646~~ 2590 1434
		Difficult. Do not announce	

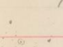
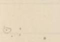
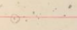
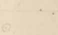
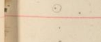
Saturday, July 6, 1907

Map of the Sky Region 51 15h -60°

	Var	Br	Ft
	151	3698 3841 [9.2] 3783 3646 2483 1235 4402	2711 [10.0] 2626 2590 4302 2113
	152	3698 [10.3] 3837 1971 1434 1453 1924 4302 2090 3841	2711 [10.9] 2555 937 4402 2802 [11.1]
	153	1936 1050 1249 1413 [10.0] 1434 2555 1453 2090 2801	2711 27 [10.6] (2626)
		Perhaps of the Algol type	
	× 154	3698 3841 [9.5] 27	2711 3344 775 3783 2626 3001 [10.5] 2590 2483 1235 2802
		Range probably estimated to great. Unusually faint on most plates. Variation probably real, but not established. Suspected list	
	155	3698 [10.3] 3646 [9.8]	2711 [11.1] 3783 2626 2113 [<11.5]
	156	3698 [7.5] 3457 R Centauri	2711 [11.5] 937
	× 157	2711 25~~55~~90 [9.8] ~~1938~~398	3698 [10.5] 2555 1453 3837 1971
		Prob. var. Susp. list	
	~~158~~	~~2711 [10.3] 1934 1971~~	3698 [11.5] ~~19~~ Im. Definition.
	× 158	3698 2128 3544	2711 2802 2598 2806
		Variation very slight, though probably real. Sup. list	

Saturday July 6, 1907

Map of the Sky, Region 51

	Var	Br	Ft
	159	3698 1235 [10.0] W Normae	2711 2590 [11.0] 2555
	160	3698 [10.8] 2555 2802 2090	2711 [11.0] 4402 4302
	161	3698 [9.8] (1971) 145254, - Lupi	2711 [10.8] 1413 [<11.5] 3533 1971 1434
	× 162	1971 [8.2] 1434 1050	3837 [8.6] 2555
		Difficult Sup. list	
	163	2711 [10.3] 1469 1453 1936 398 1050 1249 3533 1235 2555 2802 4402 2090 3457	3698 [11.1] 4302
		Apparently of the Algol type	
	164	3698 775 (525) 2626 [8.6] 3001 454 3841 27 3457 4402 2555	2711 3646 [9.3] 2113 4302 2802

On Plate AM 3698, superposed on D 12740 (= AM 2711), were discovered Nos. 144-164, of which Nos. 144, 146, 150, 154, 157, 158, 162, are suspected. Rediscovered H 1301, H 1304, No [18] Map of Sky Reg. 50, Nos. 126, 131, 141. Nos 145, 156, 159, 161 are the same as 150469 - Triang. Austr., R Centauri, W Normae, 145254 - Lupi.

Total 10 new
10 known
7 suspected

Wednesday, July 10, 1907

Map of the Sky. Region 51 15h -60°

Plate AM 4147 superposed on D 12740 (= AM 2711

Rediscovered Nos [18] H1301, H1304, Nos 121 126, 127, 128, 131, 139, 142, 145, 152, ~~157~~ 156, 157, 159, 160
Of these, Nos 139, 142 and 157 are on suspected list; look up farther.

Var Br H

✓ # 165 4147 [10.5] 3533 (2555) 2717 [10.9] 1971 1413 1936 1249 [11.2]
4402 1235 2090 4302 2113 4431 3646
Variation probably real, but slighter than estimates would indicate. Do not announce. See p. 59

~~166 2717 4431 [10.5] 2113 4147~~
~~4302 [10.5] 2802 2555 1235~~
Not variable

166 2717 [9.5] 1924 398 3837 4147 [10.4] 4431 3841
H1263 1434 1971 3533 1413 2483 1469
2555 4402
Apparently of the Algol type.

167 4147 1924 [9.8] 398 1469 2717 3837 1434 1971 3533 1413
2555 2090 4302 2113 4402 1249 [10.5] 1235 3457 27

x 168 4147 [10.6] 4402 2113 2090 2717 [11.1]
Slight. Do not announce.

~~169 4147 2590 1249 2717 Im. defective~~

169 2717 [8.7] 3646 3001 1050 4147 [9.5] 3783 3498 2113 1235 1249
2483
Marked originally on AM 3698, and considered not variable

Thursday, July 11, 1907

Map of the Sky. Region 51 15h -60°

Var Br H

x 170 4147 3664 1235 1249 2802 [9.4] 2717 2555 [9.9] 3783
937 3841 3498
This star seems to be certainly variable, and of the Algol type. Range small. Do not announce. It was marked on plate AM 3698, but was then considered to be not variable.

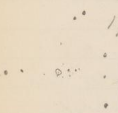
x 171 2717 1971 (1413) 1235 2483 4147 398 1949 3837 [10.8] 1434 3533
3457 2717 [10.3] 1936 3646 4431
Range small. Do not announce

172 4147 [4.7] 3498 3841 2711 52527 2259 2771 2864
1809 1847 3605
Plates superposed on D 12740
3457 2259 937 4302 (br) 2090 2802 2483 1249 1235 5646 2555
1469 1453 1936 1050 3605 1413 3583 1971 (br) 1434 3827 (br) 2113 (br?)
27 4431 (br?) 4402 (br?) 3841 (br?) 3344 3498 3753 2626 4215
Plates not underlined show no peculiarity when superposed. Independent examination of underlined plates, with others selected at random and mixed with them is given below
Br H
2113 1971 4431 (?) 2090 (?) 1434 3344 3783 3498
3837 (?) 4402 4302 3841 4215
Notice that in the independent comparison, the plates showing change when superposed were picked out in every case, and only one (2090) which did not show change was included. Have confirmed.

Thursday, July 11, 1907

Map of the Sky Region 51 15h -60°

Var Br H

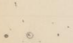


173 4147 [10.5] 4215 (4302) 2711 [<11.5] (4302) (4402) 1453
4188 4221

No trace of this star appears on about 50 AM plates taken before Jan. 1, 1906

The above chart is drawn from A 2514 exp. 60m, June 29, 1897, on which the variable is exceedingly faint (magn. 14/15?) Variable marked on A 2514

Notice that this star was constantly
174 visible on AM plates between January and July, 1906, that is, it was as bright as the magnitude 11.5 for 6 months. Is it a nova?

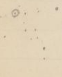


174 2711 [9.5] 2483 2802 1235 4147 [10.5] (2259) 1924 (3457) 2090
2626 27 454 1971 4431 3837 3344
3498 1413 1453 1469 1936

Bright on about 40 plates. Perhaps of the Algol type

175 4147 [10.0] 2113 525 454 2626 2711 [11.4?] 2460 398
1924 1971

Uniformly bright on about 50 plates. Apparently of the Algol type.



176 2711 [10.0] 1924 [9.5] 2483 4147 [11.0] (1971) 2802 1235 1249 2259
4215 4402 939 1413 (1453) 1469 1936 4302

Period apparently short

U Normae

Thursday, July 11, 1907

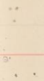
Map of the Sky Region 51 15h -60°

Var Br H

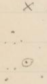
177 4147 [7.5] 4402 (4215) 2711 [8.8] 4431 4302 1469 (1453)

Period apparently short

U Triang. Austr.

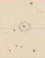


178 4147 [10.5] 2483 398 2711 [11.5] 1971 1924 2802 (3457)



× 179 2711 [8.0] 1413 1453 1235 4147 [8.7]
1469 27 454 2113 2090 4434

Seen faint only on AM 4147. Do not announce



180 4147 [9.2] 4215 1971 1924 2711 [10.0] 4402 4431 2802 1453 1050
3533 525

Image often appears hazy and larger than those of adjacent stars. Double?

× 139 4147 1050 2711

Keep on suspected list

× 142 4147 [8.5] 1469 2711 [8.8] 3457

Keep on suspected list but announce as suspected. Almost certainly variable.

× 157 2711 4147

Keep in susp. list

165 (B1849 8) (27159) ~~29627~~ B9308 [11.3] 21473 (29755) 27625
35621 [10.5]

Certainly variable. This star was noticed to be faint on B9308, when identifying position

Thursday, July 11, 1907

Map of the Sky 15h −60° (Region 51

On Plate AM 4147 superposed on D 12740 (= AM 2711) were discovered Nos. 165 – 180, of which Nos. 168, 170, 171, 179 are suspected. Rediscovered No. [18] (Map of Sky Reg. 50) H 1301, H 1304, Nos. 121, 126, 127, 128, 131, 139, 142, 145, 152, 156, 157, 159, 160. Of these, Nos. 139, 142 and 157 are on the suspected list. They were looked up further, but although all three probably vary, all are difficult, and they will remain on suspected list.
Nos 121, 145, 156, 159 are the known variables, S Triang. Austr., 150469, R Triang. Austr., and R Centauri, T Normae
Of the newly found variables, Nos 166, 176, 177 are the known variables H 1263, U Normae, U Triang. Austr.

Total, 9 new variables
+~~6~~7 known
4 susp
also 3 susp. re-discovered but not added to list

Saturday, July 13, 1907

Variable 172 examined on Multiple-Image Plates

AM 485
b 3, 0c, 2d, 2e
all images the same

AM 2640
b 4, 0c, 1d, 3e

AM 467
b 4, 1d, 1e

AM 452
b 4, 0c, 2d

AM 2665
b 5, c1, 1d

AM 4251
b 3, 1c, 3d, 5e
certainly bright on this plate

AM 3490
b 2, 2c 4d 5e

AM 1240
b 5, 0c, 1d, 3e

None of the above plates show changes in the succession images

Saturday, July 13, 1907.

Variables 180 and 42 examined on B plates

Var	Br		H	
190	(35585) 32021	31609 22891	31800 (32585) 30536 (11359)	
	(21897) (15812)	25965		

Re-examined, because image often appears hazy on AM plates. Always clear on above B plates. No evidence that star is double. Range small, not more than half a magnitude, but certainly real.

42 I23521 29347 4660 I9328 18762

Image always clear and sharp on the above plates. No evidence that the star is double. Range on above plates small, but variation conspicuous on AC plates.

Monday, July 15, 1907

Examination of Plates for No. 173 (Nova?) 144059 ~~144862~~

On the following plates, a faint object (magn. 14.5) is seen in the position of the suspected Nova.

	Date	Exp. m			
B9371			B27812	July 5, 1901	60
B13179?	May 7, ~~1907~~ 1897	10	B31348	Feb. 20, 1903	60
B25725?	July 5, 1900	10	B31826	May 19, 1903	61
B25738	July 20, 1900	61	A 2514,	June 29, 1897	60
B26976	Feb. 26, 1901	60			

On the following plates, no object was seen in the position of the nova, which was fainter than 13.5

Plate No.	Date	Exp. m	Plate No.	Date	Exp. m
B3482	June 10, 1889	10	B14283	August 2, 1895	10
B3916	July 30 1889	60	B14285	August 3, 1895	10
B6438	June 27, 1891	10	B15296	Jan. 10, 1896	13
B6442	June 27, 1891	10	B15642	April 23, 1896	10
B9365	May 4, 1893	10	B15925	May 19, 1896	23
B9660	June 23, 1893	10	B16186	June 6, 1896	11
B9971	July 26, 1893	9	B16350	June 15, 1896	10
B11201	May 21, 1894	10	B16871	July 17, 1896	16
B11411	June 14, 1894	23	B17113	August 13, 1896	16
B11785	August 10, 1894	13?	B17287	August 31, 1896	28
B12796	Jan. 24, 1894	10	B18347	Jan. 21, 1897	25
B12946	April 8, 1895	10	B18680	March 24, 1897	10
B13483	June 1, 1895	10	B18834	April 20, 1897	11
B13525	June 3, 1895	10	B19049	May 10, 1897	12
B13966	July 8, 1895	10	B20119	Aug. 19, 1897	2

Monday, July 15, 1907

Variable (Nova) 173 144059 Cont.

Plate No.	Date	Exp. m	Plate No.	Date	Exp. m
B21241	April 18, 1898	12	B25717	July 5, 1900	13
B21883	Aug. 23, 1898	10	B27426	May 27, 1901	10
B21979	Sept. 17. 1898	10	B 30144	June 24, 1902	10
B22524	April 7. 1899	7	B 30398	July 15, 1902	11
B22547	April 8 1899	10	B 32214	July 15, 1903	12
B22881	May 20, 1899	10	B 34274	July 2, 1904	10
B23441	July 13, 1899	10	B35747	April 1, 1904	10
B23845	Aug. 15, 1899	10	B 36369	July 10, 1905	10
B24891	March 26, 1900	60	B 36763	Aug. 21, 1905	10
B25234	May 7, 1900	10			

No. of plates on which object was fainter than magn. 13.5 is as follows:— In 1889, 2; 1891, 2; 1893, 3; 1894, 4; 1895, 6; 1896, ~~8~~ 10; 1897, ~~5~~ 8; 1898, ~~3~~ 4; 1899, 5; 1900, 3; 1901, 1; 1902, 2; 1903, 1; 1904, 2; 1905, 2.

On eight B plates and one early A plate, it is seen as a faint object of about the magnitude 14.5.

Tuesday, July 16, 1907

Variable 173 examined on Bruce Plates

A1801 May 29, 1896
< 14

A1800 May 29 1896
< 14.

A2395 June 2, 1897
< 13.5

A2694 Sept. 3, 1897
< 13.5

A5307
Off edge

A 3133 June 28, 1898
< 13.5

A2641 Aug. 14, 1897
15.0

Wednesday, September 11, 1907

Map of the Sky, Region 15 (10^h $+30°$)

Plate $\overset{C}{\text{AM}}$ 2160 superposed on D 12719 (= AC 8112)

not enlarged

Var	Br	Ft
181	2160 [7.] R Leonis	8112 3685 (11.)
182	8112 [9.5] 1102 V Leonis	2160 3234 [11.0]
× 183	2160 2514 7232 [10.0]	8112 6084 [10.5] 6146 ~~2514~~
	Variation slight. Do not announce. Probably real.	
× 184	2160 5530 3465 3350 2339 2195 661 600 205 8356 6146 6084	8112 2514
	~~see page 67~~ ~~Do not announce~~; perhaps of the Algol type, but variation is slight (about 0.5 magn)	
185	2160 [9.5] 6257 2514 7232 6146	(8112) 4521 [11.0] 865
	Apparently of the Algol type	
186	8112 5530 2339 8356 6146 [9.0] See next page.	2160 7232 2514 [9.8] 4521
187	2160 [9.0] 6146 205	8112 [10.5] 4521 8356
× 188	8112 8356 (4521) (1102) 2514 5530	2160 205 6146 6084 6257 661 2195 2335 3350 3465
	Variation 9.5 to 10.0. Seems to be real, but observation is rather difficult. Do not announce.	
189	8112 [9.0] 5530 R Leonis Minoris	2160 [10.5] 3465 3350 2339

Wednesday, Sept. 11, 1907

Map of the Sky, Region 15

Var	Br	Ft
~~190~~ × 184	7041 7208 7281 7310 146 201 AM 442 3663 4075 AC 5912 3382	1264 3245

Evidently of the Algol type. ~~Announce~~

See Page 68. While this star seems to be almost certainly variable, it is very difficult to observe. Keep on susp. list, but be sure to measure up later.

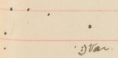
On Plate AC 2160 superposed on D 12719, were discovered Nos. 181–189, of which Nos 183, 184 and 188 are on the suspected list. No. 181 is R Leonis. Nos. 182 and 189 are V Leonis, and R Leonis Minoris, respectively.

Total, ~~4~~ 3 new variables
3 known
~~2~~ 3 suspected

Var. 186 There is a faint star (12.5) about 0'.6 distant from the variable in a north preceding direction.

On ~~B~~ I 8234 and I 28486 another star comes out still nearer the variable and almost directly north of it.

On further examination, it appears that it is this northern star which varies. The faint star near it, if variable certainly does not come out on AC plates examined, as variable.



Monday, March 21, 1909.

The images on I 8234 and I 28486 are double. There is but one star in pos. of var. Faint star not observed by H.S.L.

Thursday, September 12, 1907

Map of the Sky Region 15 (10^h +30°)

Plate AC 2514 superposed on D 12719 (= AC 8112)

Rediscovered Nos. 181, 182, 185, 186, 187, 189

Var	Br	Ft
190 T Leon. Min	8112 [9.5] 3234 6084 4521 6146 205 2160 3465 2339 1102	2514 [10.5] ~~1102~~ (8060) 5570 [11.5]
	Apparently of the Algol type	
S Leonis Min. 191	2514 [9.3] 1102 7232 [8.8]	8112 [10.5] 3234 6084 [< 11.0] 4521 6146 (205) 2160 6257
Re-examined 184	8039 8147 8187 8226 8248 7209	7546?

Almost certainly variable, but difficult. Do not announce but be sure to measure later.

On Plate AC 2514 superposed on D 12719 (= AC 8112) were discovered Nos 190 and 191. Rediscovered Nos. 181 (R Leonis) 182 (V Leonis) ~~184~~, 185, 186, 187, 189 (R Leon. Min) No. 191 is S Leonis Minoris.

Total, 2 new
7 known
0 suspected

Thursday, September 12, 1907

Map of the Sky Region 15 (10^h ± 30°)

Estimates of magnitudes of Nos 181-189 compared with provisional sequence

Var			
183	On 2160 [9.6]	On 8112 [10.4]	
184	8.9	9.5	
185	9.60	9.5	On 4521 10.6
186	10.4	9.8	
187	9.0	9.8	
188	9.7	9.3	

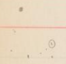
Saturday, September 14, 1907

Map of the Sky, Region 15 10^h, +30°

Plate $\text{A}\overset{C}{\text{M}}$ 6257 superposed on D 12719

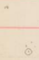
Vo Re-discovered Nos. 181, 182, 187, 188, 189

Var Br H



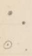
× 192 8112 $\overset{5}{8}$777 5741 4521 3234 6257 5809 7495 (pon) 865 6318
5842 5974 281 661 6146

Probably a variable of the Algol type, but changes are slight and observation difficult. Do not announce.



× 193 6257 [9.7] 8060 2339 3350 8112 [10.2] 7032 [10.5] 3 234

Variation doubtful. Do not announce.



194 8112 6257
R 30117 8381 [11.0] 8393 R 33976177 24244 [11.8]

Much too faint to be observed on AC plates. Discovery must be regarded as accidental.

~~195 8112 1102 6257 6084 205 [10.3]~~
Not variable

On Plate $\text{A}\overset{C}{\text{M}}$ 6257, superposed on D 12719 (= AC 8112) were discovered Nos. 192-194, of which Nos. 192 and 193 are suspected. Re-discovered Nos. 181 (R Leon.), 182 (V Leon.), 187, 188 and 189 (R Leon. Min.) No. 188 is a suspected variable.

Total, 1 new
4 known
2 suspected
1 suspected, rediscovered

Tuesday, September 17, 1907

Map of the Sky, Region 15 10^h, +30°

Plate $\text{A}\overset{C}{\cancel{\text{M}}}$ 7232 superposed on D 12719

Re-discovered Nos. 181, 184, 185, 186, 189, 191, 194
W Cancri

Var Br H

× 195 $\overset{72}{\cancel{8112}}$ [10.0] 8215 8158 $\overset{7232}{\cancel{8112}}$ [10.6] 3465 2339 6318
1002 2504 5570 (6084) 2160

Variation not well established, though probably real. Do not announce

On Plate AC 7232, superposed on D 12719 (= AC 8112) was discovered No. 195, which is suspected. Re-discovered Nos. 181 (R Leon.) 184 (susp.), 185, 186, 189 (= R Leon. Min.) 191 (S Leon. Min) 194, and W Cancri.

Total, 0 new
7 known
1 suspected
1 suspected rediscovered.

Friday, September 20, 1907

Map of the Sky, Region 18. 16^h, +30°

Plate AC 6252 superposed on D 12682 (= AC 3724)

Var Br H

196 6252 [10.0] 4000 7389 8505 3724 [10.8] (5038) 1287
8326 8268 1916
AM 3749 2617
AC 6053 2622 2672 2728 7420 8361 2769 AC 1855 8454 8644 AM 120 2764 2654
Seems to be of Algol type, or very short period - See page 87

197 6252 [8.5] 3724 [11.5] 1813 1916 (1287) 8448
Although the variable does not appear as bright as on AC 6252 on the plates examined, it shows marked changes on these plates.

W Herculis

× 198 6252 1813 3724 6625 6639 7956
This star (about magn. 9) seems to be slightly variable, with a range of not more than three tenths of a magnitude. Do not announce.

✱ 199 6252 8326 (8448) 4000 ~~[9.5]~~ 3724 5038 8505
~~Varies from 9.0 to 9.5, Difficult, Do not announce~~

199 ⊙ - 200 200 3724 [9.5] 8505 [9.0] 8479 6252 [11.5] (7389) 4000

RU Herculis Period probably long

199 7707 [8.8] (8547) 8575 8505 [9.4] 8479 8515
Certainly variable. Announce See also page 87

201 6252 [10.0] (8268) 8326 3724 [<11.0] 5038 8505

202 6252 [8.5] 8479 7389 3724 [9.6] 7707 (7504)
S Coronae

203 6252 [10.2] 8505 8448 3724 [11.0] (7389) 8575

204 6252 155229 - Coronae 3724

Friday, September 20, 1907

Map of the Sky Region 18

Var Br H

205 6252 - 3724
R Coronae

206 3724 6252
W Coronae

Saturday, September 21, 1907.

Map of the Sky Region 18 16h +30°

Var Br H

~~x~~ 207. 3724 3727 6252)

⊙ – AC 3727
⊙ – AC 3724

This appears to be a moving object of about the tenth magnitude. In the two days (June 16 - June 18, 1903) between the dates of the two plates AC 3724 and AC 3727 it has moved about 0.8 mm north west, or about 8'. Position about 16h 10m, +30°.

The asteroid Ahnugaia (magnitude 11.7) came to opposition May 29, 1903 in position RA = 16h 20m.4, Dec. +22°.8 Δα +1.0m Δδ +7'. This seems to be far from the position of the object seen, and is, besides, too faint.

Of course there is a possibility that the objects on the two plates are both defects.

x 208 3724 8505 8268 [9.6] 8326 6252 7389 7504 [10.2] 1829 1813

⊙ Almost certainly variable, but difficult. Do not announce.

Monday, September 23, 1907

Map of the Sky, Region 18 16h +30°

Var Br H

209 6252 8326 7389 [9.6] 3724 8505 5038 4000 [10.6] 8479
~~4000~~ 7704 8575 5038

210 6252 [8.4] (7389) 8448 3724 [9.7] 8575 7707 8479 8268

On Plate AC 6252, superposed on D 12682 (= AC 3724) were discovered Nos. 196 - 210, of which Nos. 198, 208 are on the suspected list. Nos. 207 is not a variable, but probably a moving object. Possibly a defect. Nos. 197, 200, 202, 204, 205, 206 are the known variables, W Herculis, RU Herculis, S Coronae, 155229 - Coronae, R Coronae, and W Coronae.

Total, 6 new
6 known
2 suspected
1 moving object?

Tuesday, September 24, 1907

Map of the Sky Region 18 16h +30°

Plate AC 7389 superposed on D 12682 (= AC 3724

Rediscovered R Coronae, S Coronae, W Coronae, Nos 201, 207, 208, 210.

Var Br H

x211 7389 8448 1287 [9.4] 3724 3727 1916 1829 [9.9]
Variation seems to be real, but small. Do not announce

On Plate AC 7389, superposed on D 12682 (= AC 3724) was discovered No. 211, which is on the suspected list. Re-discovered R Coronae, S Coronae, W Coronae, Nos 201, 207, 208, 210. Of these, No. 207 is probably a moving object on AC 3724, and No. 208 is on the suspected list.

Total, 0 new
5 known
1 suspected
1 suspected re-discovered
1 moving object (?)

Thursday, September 26, 1907

Map of the Sky, Region 18 16h +30°

Plate AC 8505 superposed on D 12682 (= AC 3724)

Re-discovered R Coronae, and Nos. 202, 202, 203, 211.

Var Br H

212 8505 [8.5] 4000 (7504) 3724 [10.5] 8268 8326
R Serpentis

213 8505 (8326) 8479 [9.4] 3724 7389 8268 4000 [11.0]
X Coronae Borealis

x214 8505 5038 [8.6] 3724 8268 [8.8] 8326
Probably there is a real but extremely slight variation. Not more than 0.2 magn. on plates examined. Do not announce.

x211 Re-examined as independent discovery was made on this plate. Change very small. Do not remove from susp. list.

On Plate AC 8505 superposed on D 12682 (= AC 3724) were discovered Nos 212-214, of which Nos. 212 and 213 are the known variables R Serpentis, and X Coronae Borealis, No. 214 is suspected. Rediscovered R Coronae, RU Herculis, S Coronae, and Nos. 203 and 211, the latter being suspected.

Total, 0 new
6 known
1 suspected
1 suspected re-discovered

Monday, September 30, 1907

Map of the Sky, Region 18   16h, +30°

Plate AC 4000 superposed on D12682 (= AC 37

Rediscovered Nos. 213, 214, and W and R Coronae. No 214 is suspected.

Total 0 new
3 known
1 suspected re-discovered

~~Wednesday~~ Thursday, October 3, 1907

Map of the Sky, Region 27   10h   0°

V   Plate A$\overset{M}{\text{C}}$ 1946 superposed on D 12674 (= AM 4046)

Var	Br	Ft
215	1946 [9.0] 4068 x 2553	4046 [10.0] 1172 [11.5]
~~216~~	AC 7209 7190 AM 3394	

Twenty-five plates examined. Evidently

~~216~~ of the Algol type, and very striking. Plates AC 7209 and AM 4046 were both taken on Jan. 25, 1906, the former at S.T. 11h 48m, the latter at 9h 12m.

~~216~~

Friday, October 4, 1907

Map of the Sky, Region 27 10h 0°

Var Br Ft

216 1946 [9.] 7209 305 4032 4046 [10.] (4031)
2553 1931 470 AC 2300 (2586) 3402
AC 1061 3131 ~~3402~~ 4880
AM 1369 829

Range about 0.5 magn. Do not announce, but be sure to measure up. Period short, and perhaps of the type of β Lyrae, as magnitude does not appear to be constant when near maximum.

217 4046 1946

Moving object. In the two hours intervening between Plate AM 4046 and AC 7209, the object moved perceptibly in a north-west direction. On Plate ~~AM~~ AC 7208, taken on the same night as AC 7209, the position is the sensibly same, but the trail is sharply defined, as it is well placed in the centre of the plate

Also identified on Plate AM 4075, taken January 30, 1907. The approximate positions are, on Jan. 25, 9h 14m, +12.5 and on Jan. 30, 9h 8m, +13.5

The asteroid Hebe (Magn. 8.9) ~~should~~ came to Opposition on Feb. 3, 1906 in RA = 9h 5m.6, and Declination +14° 42′. Δα = −0m.9 Δδ = +10′.
This object is doubtless Hebe

Friday, October 4, 1907

Map of the Sky Region 27 10h 0°

On Plate AM 1946, superposed on D 12674 (= AM 4046) were discovered Nos 215–217. No. 216 is on the suspected list, and No. 217 is the asteroid, Hebe

Total, 1 new
0 known
1 suspected
1 asteroid

Monday, October 7, 1907

Map of the Sky, Region 27 10h, 0°

Plate AM 2594 superposed on D 12674 (= AM 4046)
re-discovered Hbc

Var	Br	Ft
x 218	2594 2553 3285 [10.2] 7209	4046 [11.] 1931
	Variation doubtful. Do not announce	
x 219	4046 4032 7209	2594 470 2707 2553 1946 AC 6249
	seems to be really variable, but faint and of small range. Do not announce	
220	2594 [9] 470 [8.] R Leonis	4046 [10.5] 1946 [11.5] 4031

On Plate AM 2594, superposed on D 12674 (= AM 4046) were discovered Nos. 218–220, of which Nos 218 and 219 are suspected. No. 217, Hbc, re-discovered. No. 220 is R Leonis, and the same as No. 181, as it was also rediscovered in the study of Region 15, at 10h, +30°.

Total, 0 new
2 susp.
1 known
1 asteroid

Tuesday, October 8, 1907

Map of the Sky, Region 27 12h, 0°

Plate AM 3285 superposed on D 12674 (= AM 4046)

Rediscovered Nos. 215, 216, 217 (Hbc) 218, 220 (R Leonis)

Var	Br	Ft
221	4046 [10.2 AC 7326 4842 8147	3285 [< 11.5] 4031 AC 7506
222	4046 R Sextantis	3285
x 223	4046 3338 4031 470	3285
	Uniform on about 20 plates. Image probably defective on AM 3285, though it may be a variable of the Algol type. Do not announce	
x 224	3286 [9.5] 2707	4046 [10.0] 1931
	Variation slight, though probably real. Do not announce.	
Ŧ 225	4046 4032 [10.5] AC 7209	3286 [11.0] ~~4032 [10.5]~~ AC 4812
	Var. slight, though prob. real. ~~Do not announce~~ See p. 84.	
	094501 – Sextantis	
226	3286 [9.5] 2707 305 [9.2] 1931 4032 3338 7209	4046 [10.0] (2552) 470 AC 3152 7508
	Variation somewhat smaller than above estimates indicate, but certainly real	

Tuesday, October 8, 1907

Map of the Sky Region 27. 10h, 0°

Var	Br	H
~~227~~		

On Plate AM 3285, superposed on D 12674, were discovered Nos. 221-226, of which Nos. 223, 224 ~~and 225~~ are on the suspected list. No. 222 is R Sextantis.
Rediscovered Nos. 215, 216 (susp.), 217 (Hebe), 218 (susp.), 220 (R Leonis) No. 225 is 094501, -Sext.

Total, ~~3~~ 2 new
2 suspected
~~2~~ 4 known
2 susp. rediscovered
1 asteroid

Var.	Br	H
225 094501 - Sextant.	B29738, 27462 29499 28933	B31491 29148

Variation marked, with range from about the 10th to about the 11th magnitude
Announce

X 218	B11041	B35500 30090

Var. slight. Do not remove from Susp list

Wednesday, October 9, 1907

Map of the Sky Region 10h 0°

Plate AM 3492 superposed on D 12674 (= AM 4046)

Rediscovered Nos. 215, 220 (R Leonis), 221, and the asteroid Hebe.

Var	Br	H
·227	4046 [8.5]	3492
	AC8248 14181 87 8147 4842	AC6249 [9.5] 8039

See also page 88.

X 228	4046 [9.5] 305 7209	3492 2707 [10.2] 1931 470 3338

Variation doubtful. Do not announce

On Plate AM 3492, superposed on D 12674 (= AM 4046) were discovered Nos. 227 and 228, of which No. 228 is suspected. Re-discovered Nos. 215, 220 (R Leonis), 221, and the asteroid Hebe.

Total 1 new
1 suspected
3 known
1 asteroid

Wednesday October 9, 1907

Re-Estimate of Brightness of Variables in Map of Sky Region 27.

Var	Br		H	
215	AM 1946 [9.0]		AM ~~1946~~ 4046 [10.5]	1172 [11.5]
x 216	AM 1946 [9.3]		AM 4046 [9.8]	
x 217	Hebe			
x 218	2594 [10.3]		4046 [10.8]	
x 219	4046 [10.0]		2594 [10.5]	
221	4046 [10.0]		328~~6~~5 [<11.5]	
x 22~~2~~8	4046 [9.8]		3285 [~~9~~10.5]	
x 224	3285 [9.5]		4046 [9.8	
226	3285 [9.1]	305 [8.9]	4046 [9.6]	
227	4046 [9.1]		3492 [9.5]	6249 [9.8]
228	4046 [10.5]		3492 [10.8]	

Tuesday, October 15, 1907

Map of the Sky Region 18.

Variable 196

This variable is rather difficult to trace on account of its small range. It has been examined on about 40 plates in region 17h and +15°, so that it is near the centre of the plate. Two multiple image plates show the variation clearly. On Plate AM 858, June 19, 1901, the last six images show it growing markedly fainter. On Plate AM 3658, June 23, 1905, it is fainter than normal throughout, reaching minimum at about the sixth image. It is therefore certainly of short period and probably of the Algol or β Lyrae type. While the star is near maximum on the majority of plates, it is frequently seen to be somewhat fainter than maximum.

199 On 7707, ~~9.6~~ 8.8 On 8515, ~~8.8~~ 9.~~8~~7

This variable is near RU Herculis. It is fairly bright on Plate AM 8448, Apr. 20, 1907, but is fainter on 8463, Apr. 24, very faint on AM 8515, May 22, bright on AM 8547, June 12, also on 8575 + 8587, June 28 and July 3. The period can, therefore, exceed 3 months, and may be shorter.

~~Tuesday~~ Wednesday, October 16, 1907

Map of the Sky, Region 27

Var ac Br ac ff
227 7055 7209 7326 7437 7506 5647 5817 5895 5910 5973 6182

Range as observed pp 85, 86. Variation well seen, though small. Period probably long, though possibly irregular. The variable is bright on the majority of plates, but seems to have been continuously faint between Dec. 1904, and ~~February~~ 7 March, 1905

226 7437 7209 6352 7121 7055 6342 5973 (5910) 5895
7326 5817 4842 4888 4558 5647 4723 4255 2518 144 249
2984 am 4696 2574 6249 318 470
AM 1946 3285 305

Range small. Period probably short. Difficult to observe, but certainly variable.

Thursday, October 17, 1907

Map of the Sky Region 36 4^h, -30°

Plate AM 2258 superposed on D 12683 (= AM 1802) Sequence for W Eridani.

Var Br ff
⊙: 229 1802 [8.5] 4029 4066 2258 [<11.0] 2298 3979 2389 236

Period probably long. An eleventh magnitude star follows the variable by about 1'.5

Discovered in June 11, 1908 by Mrs. Fleming from spectrum (Md 9) on A 8551, November 13, 1907

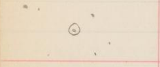
Position precedes that announced in Circular 135; The position in the Circular is that of the following star which is mentioned in the remarks.

See Miss Walker's Book

Friday, October 18, 1907

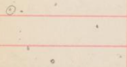
Map of the Sky Region 36 4^h $-30°$

Var Br H



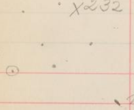
x230 2258 1802

Examination of about 20 plates shows an apparent variation of about 0.3 magn. The image is frequently long and hazy. On Plate AM 637, isochromatic, it appears very bright, and is probably a red star. Do not announce.



231 1802 [2370 [9.0] 3979 3143 2258 [9.7] 2298 (4029)
3287 2389 3887 3186 [8.8] 2284 1578
3180

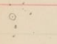
Period probably long Edge of plate. Estimates difficult



x232 2258 [8.4] 1802 [10.5] 1784 1532 [< 11.0] 4066 297
2972 2365 2284

Edge of plate. Estimates uncertain.

The object observed on Plate AM 2258 does not quite coincide with the position of the star observed on other plates. It is probably a defect, although it is just possible that it is a moving object. Do not announce.



233 2258 (1578) 1532 3887 [10.1] 1802 [11.0] (2284) 1067 2972 4066
3287 1784 2365 3180 3186 [$11.\overset{2}{5}$] 3143

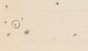
Variable sometimes has a slightly hazy appearance Is it double? T Fornacis

~~234 This star shows about 0.3 magn. variation on the plates~~

Friday, October 18, 1907

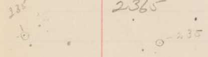
Map of the Sky, Region 36 4^h $-30°$

Var Br H



234 2258 [8.8] (1578) 4066 1802 [9.6] 4029 3287 3143 2284
297 2367 1067 2972 1784

Period apparently short An 11th magn. star precedes by about 1.5



235 1802 [8.9] (3180) (3186) 2258 [<11.5] (3887) (1784)
2365 B27341 [13.0]

A 13th magnitude star is south of var. about 1.5

On Plate AM 2258, superposed on D 12683 (= AM 1802, were discovered Nos. 229 - 235, of which No. 230 is suspected, and No. 232 is probably a defect. No. 233 is T Fornacis.

Total, 4 new
1 suspected
1 known
1 defect or moving object.

Saturday, October 19, 1907

Map of the Sky, Region 36 4^{h}, $-30°$

Plate AM 2930 superposed on D 12683 (= AM 1802)

Rediscovered Nos. 229, 231

Var	Br	H
236	2930 [8.0] 2972 (3887) (2365)	1802 [<11.5] 3186 (3040) (3063)
	Columbae Period probably long	
X 237	2930 [9.3] 2972 3063 1784	1802 [10.0]
	Seen faint only on AM 1802, out of about 35 plates. Image on that plate appears somewhat hazy and may possibly be defective. The star may be of the Algol type. Do not announce	
238	1802 [8.$\overset{4}{8}$] 1067 1532 (1578)	2930 [9.1] 2298 2284 279 2365 2972 323 1485
	Observation rather difficult, but variation certain	
239	1802 [8.7] (3180) 178$\overset{4}{8}$	2930 [<11.5] 4066 3040
	Period probably long T Eridani	

Wednesday, October 23, 1907

Map of the Sky, Region 36 4^{h} $-30°$

Var	Br	H
240	2930 [9.6] (3063) (1485) 2972 (3781)	1802 [<11.0] 3186 3887
241	2930 ~~3186~~ 1485 2972 3781 2258 1532 On 2930 [9.7]	1802 3186 [10.$\overset{5}{7}$] 2365 3287 4029 ? (2m poss def.) 2389

On Plate AM 2930, superposed on D 12683 (= AM 1802) were discovered Nos. 236 – 241, of which No. 237 is on the s
ued Nos. 229, 231.
Nos. 236 and
i, respectively.

0° to 5°   78.5 sq degrees
0° to 10°   314.2 " "
0° to 15   70$\overset{6}{7}$.9 " [illegible]
Entire plate 30 × 40 = 1200

0° to 5°	78.5
5 to 10	23$\overset{5}{6}$.7
10 to 15	39$\overset{2}{3}$.7
	70$\overset{6}{7}$.9

Remainder of plate 493

Saturday, October 19, 1907

Map of the Sky, Region 36 4^h, −30°

Plate AM 2930 superposed on D 12683 (= AM 1802)

Rediscovered Nos. 229, 231

Var	Br	Ft
236	2930 [8.0] 2972 (3887) (2365)	1802 [<11.5] 3186 (3040) (3063)
	Columbae Period probably long	
X 237	2930 [9.3] 2972 3063 1784	1802 [10.0]

Seen faint only on AM 1802, out of about 35 plates. Image on that plate appears somewhat hazy and may possibly be defective. The star may be of the Algol type. Do not announce

Var	Br	Ft
238	1802 [8.$\overset{4}{8}$] 1067 1532 (1578)	2930 [9.1] 2298 2284 279 2365 2972 323 1485

Observation rather difficult, but variation certain

Var	Br	Ft
239	1802 [8.7] (3180) 178$\overset{4}{0}$X	2930 [<11.5] 4066 3040

Period probably long

T Eridani

Wednesday, October 23, 1907

Map of the Sky, Region 36 4^h −30°

Var	Br	Ft
240	2930 [9.6] (3063) (1485) 2972 (3781)	1802 [<11.0] 3186 3887
241	2930 ~~3186~~ 1485 2972 3781 2258 1532 On 2930 [9.7]	1802 3186 [10.$\overset{5}{7}$] 2365 3287 4029? (2m poor def.) 2389

On Plate AM 2930, superposed on D 12683 (= AM 1802) were discovered Nos. 236 - 241, of which No. 237 is on the suspected list. Re-discovered Nos. 229, 231. Nos. 236 and 239 are T Columbae and T Eridani, respectively.

Total 3 new
$\overset{4}{x}$ known
1 suspected

Wednesday, October 23, 1907

Map of the Sky, Region 36 4^h −30°

Plate AM 3830 superposed on D 12683 (= AM 1802)
Rediscovered Nos. 235, 237, 238, 239, 241.

Var Br Ft
242 1802 3830
R Coeli

~~243~~

Thursday, October 24, 1907

Map of the Sky, Region 36 4^h −30°

Var Br Ft
× 243 1802 2370 3979 2284 3830 4029 3287 3143 1532
1578 2365 3186

Varies from about magn. 9.5 to 10.0 Very difficult and somewhat uncertain. Do not announce.

244 3830 [9.3] 2258 2365 1802 [10.0] 1784 3040 3255
3781 3881 2972 3063
4701 4643 3227

Probably of the Algol Type. Bright on about 30 plates.

245 1802 [~~9.7~~ 10.0] (4046) 279 1067 3830 [10.9] 2389 3979
2284 3287 4029 2370
2298 3887

Bright on about 25 plates. Probably of the Algol type.

On Plate AM 3830, superposed on D 12683 (= AM 1802) were discovered Nos. 242 - 245, of which No. 243 is suspected. No. 242 is R Coeli. Rediscovered Nos. 235, 237 ([illegible]) 238, 239 (T Eridani), 241.

Total, 2 new
5 known
1 suspected
1 susp. re-discovered.

Monday, October 28, 1907

Map of the Sky, Region 36 4h − 30°

Plate AM 4636 superposed on D 12683 (= AM 1801)

Re-discovered Nos. 229, 231, 234, 235, 238, and 239 (= T Eridani).

Var Br H

246 4636 1802
T Leporis

In Plate AM 4636 was discovered No. 246 (= T Leporis). Nos. 229, 231, 234, 235, 238 and 239 (= T Eridani) were re-discovered.
Total on Plate 0 new
7 known
0 suspected

Tuesday, October 29, 1907

Map of the Sky Region 42 16h − 30°

Plate AM 1452 superposed on D 12673 (= AM 4392
Sequence for RR Scorpii

Var Br H

247 1452 [8.0] ~~3809~~ 3390 4392 [~~10.8~~ <11.5] 3809 904 807 4561
2677 2570 [7.5] 1950 4202
1925 4079 2550
RS Scorpii
Period apparently long.

X 248 4392 4294 4378 4612, 1452 1276
4174 4249
Bright on about 30 plates. Near edge on 2 plates on which it appears faint and this may be cause of apparent change. Variation probably real, however, and of the Algol type. Do not announce

249 4392 [9.9] 1452 [10.4]
RZ Scorpii

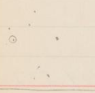
250 1452 [10.7] 799 3623 [10.5] 4392 [11.4] 1909 4534 4378 4294
B 11894 (24981) 30296 B 23654 5243 10212 10026
A star of magn 11.5 is north 0'.5.

251 1452 [11.0] (4294) 4202 [10.8] 4392 [11.6] 4534 4378 4561 [<11.6]
~~A star of about the magnitude 11.5 is north 0'.5~~ B 10212 10026 [9.8] (B 30296)
R Lupi

Wednesday, October 30, 1907

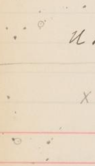
Map of the Sky Region 42   16h, −30°

Var   Br   Ft



252 4392 [10.9] ~~(2600)~~ ~~(3623)~~   1452 [<11.5] 1909 4561 2600 3623
4378 [10.8] 4294 [10.2]
(4202)

Period probably long

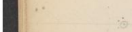


253 1452 4561 2556 2570 4534   4392 807 904 4079 1950 2486
U Lupi   On 1452 [10.7]   1276 [<11.4]
~~Preceded~~ followed by a 10th magnitude star, south 1.5 and by an 11th magn star, south 1.5

x 254 1452 2677 [10.4]   4392 1950 2486 2570 4202 4294 [10.9]
4534 1276

Variation seems to be real but small. Do not announce.

Rediscovered No. 2 of Cluster NGC 6121 = H 1114 Circ. 90



255 1452 [10.2] 4202 4561 807   4392 [11.6] 4079 [<11.6]
904 2556 3390

Evidently of the Algol type. Brightness constant on about 20 plates.

256 4392 [10.4] 1925 1950   1$\overset{45}{54}$2 [<11.5] 3809 2486
S Librae   Period probably long

257 4392 [10.0] (4294) 4378   1452 [10.6] 2570 [11.1] (2677) 2556 904
3390 [11.3] 4561   B 19145 [<~~11.5~~ 12.]
Z Scorpii   Period probably long

On B 19145 a 12th magnitude star precedes the variable about 1'5 and is south about 1'5.

Wednesday, October 30, 1907

Map of the Sky Region 42   16h −30°

On Plate AM 1452 superposed on D 12673 (= AM 4392) were discovered Nos. 247–257, of which Nos 248, 254 are suspected. Also found H 1114 (in NGC 6121, Circular 90). Uranus found on plate AM 4392. Nos. 249, 251, 253, 256, 257 are RZ Scorpii, R Lupi, and U Lupi, ~~respectively~~ S Librae, and Z Scorpii respectively. No. 247 is RS Scorpii.

Total ~~4~~ 3 new
6 known
2 suspected
1 planet (Uranus)

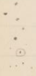
Thursday, October 31, 1907

Map of the Sky, Region 42   16h -30°

Plate AM 1972 superposed on D 12673 (= AM 4392)

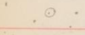
Rediscovered Nos. 247, 249, 252, 255, $2\overset{5}{\wedge}7$

Var	Br		Ft
X 258	4394 4378 ~~4202~~ 2486		1972 4294 2570



Variation slight and doubtful. Do not announce. May be of the Algol type

X 259 $\overset{4392}{\cancel{1972}}$ [10.3] 4079 3809 (1779) $\overset{1972}{\cancel{4394}}$ [11.0] (1950) 2677 4534 2570 2556

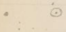


Variation seems to be real but observation is difficult. Do not announce. An 11th magn star is south 0.5.

X 260 1972 4294 [10.3] 4561   4392 [10.9] 4534 2600

Variation not assured. Perhaps of the Algol type. Uniformly bright on about 20 plates

261 4392 [8.7] 643 1276 1909 2600 1972 [10.0] (3623) (3809) ($\overset{56}{4551}$) (807) 4534 4079 4378 2486 1925 1950



Perhaps of the Algol or β Lyrae type. Brightness nearly uniform on most plates.

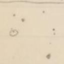
262 1972 [10.5] 4079 2486 4392 4534 [11.2] (~~3809~~ ....) 4378 2390

ST Scorpii

Northern star of a pair and prec. Southern star 11th magn.

An 11th magn star is slightly south and follows the variable by about 0'.75

263 1972 1950 [9.6] 1925 4392 4202 [11.3] 4294



Period probably long

Friday, November 1, 1907

Map of the Sky Region 42   16h -30°

Var	Br		Ft
X 264	1972 [9.8]		4394 [< 11.0] 4294 4202 1950 1920

This is probably a moving object. On Plate AM 1990 taken June 2, 1903 a decided trail is seen about 47' preceding and about 13' north of this object. It is about 1' long and elongated in the right direction to have moved from the position on Plate AM 1972 (May 29, 1903). It is quite possible, however, that this is a defect. No other good plates are available for the search.

~~265~~ Position 17h 0m -25°.0. The only asteroid coming to opposition near this time is Ariadne, Magn. 8.9. June 6. 16h 58.9m -23° 55' Δα 1m Δδ +4'. Possibly though not certainly the same ~~Must be same, as no other object is seen~~ uncertain on account of nearness to edge of plate

On Plate 1972 superposed on D 12673 (= AM 4390) were discovered Nos. 258-264, of which Nos. 258, 259, and 260 are suspected, while No. 264 is probably a moving object (Ariadne?). Re-discovered Nos 247, 249, 252, 255, 257. No. 262 is ST Scorpii.

Total,
2 new
6 known
3 suspected
1 moving object? (Ariadne?)

Monday, November 4, 1907

Map of the Sky Region 42 16^h, $-30°$

Plate AM 2744 superposed on D 12673 (= AM 4392)

Rediscovered Nos. 247, 255, 257, 260, 265/R (RS Librae) 249 (RZ Scorpii) and 266 (RR Scorpii.

Var	Br	H
265	2744 RS Librae	4392
266	2744 RR Scorpii	4392

x 267 2744 799 1276 1452 [10.6 4392 643 (im. def?) 3809 2719 [11.0]

Variation seems to be real and is easily seen because the variable is the central of stars of a line of 3. Sometimes conspicuously brighter than the other two and sometimes equal to them. Do not announce, as the observed range is very small

268 4392 [10.5] 4378 1909 (1990) 2744 [<11.5] 4294 4202 2719 4534 3623

Period probably long

RR Ophiuchi

x 269 2744 [7.] 2717 4392 [<11.5]

Approx. pos. June 12, 1904, $16^h 50^m$, $-21°.3$. On Plate 2717, June 6, 1904, position about $16^h \overset{54}{\cancel{46}}$, -21.3.

Ceres was at opposition June 6, 1904, mag. 7.5.

Ra. = $16^h 55^m.6$ Dec. = $-21°.2$ $\Delta\alpha = 1^m$ $\Delta\delta = -2'$

The object, therefore, is Ceres

Monday, November 4, 1907

Map of the Sky, Region 42 16^h $-30°$

On Plate AM 2744 superposed on D 12673 (= AM 4392) were discovered Nos. 265 - 269. Nos. 265 and 266 and 268 are the known variables, RS Librae and RR Scorpii and RR Ophiuchi. No. $2\overset{6}{\cancel{4}}7$ is suspected. No. 269 is the asteroid Ceres. Also rediscovered Nos 247, 249 (RZ Scorpii), 255, 257, 260.

Total on Plate
0 new
$\overset{5}{\cancel{7}}$ known
1 suspected
1 asteroid (Ceres)
1 susp. re-discovered

Wednesday, November 6, 1907

Map of the Sky Region 42 16h −30°

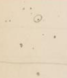
Plate AM 3447 superposed on D 12673 (= AM 4392)

Re-discovered Nos. 247, 249 (= RZ Scorpii 252, 255, 256, 257, 263, ~~[illegible]~~, 266 (RR Scorpii)

Var	Br	H
270	4392 [8.6] 3596 3500 3686 2719 4202 1972 3447 (Class C throughout 4209 (Class C. Are last 4 mm. fainter?) 2069 (Class C, throughout) 1299 Class C " 3623 4534 4378 1276	3447 [10.0] (2486) (4294) 1909

Apparently of the Algol type – though brightness may not be quite constant at max.

x 271	3447 [9.0] 3809 (1276) 3686 3596 3390 904.	4392 [9.7] 643 799 4378 4534 (3623) 1972 1909 2556



Difficult. Seems to be really variable. Do not announce.

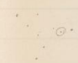
272	3447 [10.0] 2486	4392 [<11.5] 3596 (3500) 3686 2719 4202 4294 (1909) 1972 3623
273	3447 [10.6] 4294 3623	4392 2719 [<11.5] 4202 1909 1972

— Scorpii 162131

Wednesday, November 6, 1907

Map of the Sky Region 42 16h −30°

Var	Br	H
274	~~3447~~ 4392 [10.3] 2600$^{\text{May 3, 04}}$ 1972 1909 4534 4378 4294 4202 2719 2486 3596	~~4392~~ 3447 [11.2] ~~4378 [<11.5]~~ ~~4534~~ (3623?) 3686 [<11.5] 3500 2615$^{\text{May 5, 04}}$



Brightness uniform on about 20 plates. Probably of the Algol type. Notice several minima in 1905.

Thursday, November 7, 1907

Map of the Sky, Region 42 16h -30°

Var	Br		H
275	3447 1909 (?im. poor) 3809 (?)		4392 [11.5] 2744 3500 3596 2719
see below	[On 3447, 10.9] 3390		4294 4378 3623 2677

Seems to be really variable, but is too faint to be confirmed on these plates

~~Do not announce.~~ see below (Astr. of magn 9.5 precedes) 1.5

276	4392 [10.6] 799 [10.0]		3447 [<11.5] 1276 1972 1909 3623
RR Librae	4534 4378		4294 4202
	A S		
275	(B9388) (12865) 32338 32460 32497		B30295 29372 34124

Certainly variable. Announce

On Plate AM 3447, superposed on D 12673 (= AM 4392) were discovered Nos. 270-276, of which Nos. 271 ~~and 275 are~~ is suspected. Re-discovered Nos. 247, 249 (= RZ Scorpii), 252, 255, 256, 257, 263, and 266 (= RR Scorpii). Nos 273 and 276 are — Scorpii (162131) and RR Librae, respectively

Total ~~3~~ 4 new
10 known
~~2~~ 1 suspected

Friday, November 15, 1907

Examination of Bruce Plates 14h 50m -12°.5

Plate A 4325, April 23, 1900, exp. 85m superposed on A 4403, May 25, 1900 exp. 60m

These two plates are readily comparable. Time occupied, about 1½ hours. Four objects were marked, of which one is not variable, one is perhaps an asteroid, and the other two as faint as magn. 15 are faint objects, marked on Plate A 4325

No. of stars in squares 4 mm on a side

6	3	1	1	0	0
1	0	2	3	2	5
1	0	5	0	2	2
0	0	2	6	2	1
4	3	1	2	1	0
2	1	1	1	1	2
3	4	2	5	0	0
17	11	14	12	8	10

42) 72 (1.7
42
300
294

Average 1.7 to 16 square millimeters
Region examined ~~is~~ covers about 30° square degrees
Therefore, the probable number of stars passed in review is about 11,475

The objects marked were looked for on the following plates, but were too faint for observation

B 25503, 34062, 25168, I 30312, A 557 A 602 A 7406 & A 5916

Friday, November 15, 1907

Examination of Bruce Plates 14h 50m −15°

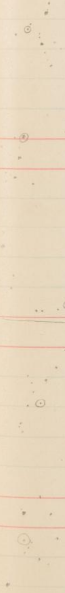
Plate A 602, 14h 50m −15° 5, May 3, 1894 Exp 57m superposed on A 5916, 14h 55m − 115°, June 7, 1902 Exp 125

These two plates fairly comparable. A cursory examination revealed no interesting objects.

Wednesday November 27, 1907

Map of the Sky Region 24 4h 0°

Plate AM^C 5695 Sequence for 034601 − Eridani superposed on 12919 (= AM^C 2378)



Var	Br		H
277	5695		2378
	034601	− Eridani	
278	5695 (8152)	7976	2378 6870
	AM 624 [9.5]	636	AM 147 [<10.5]
279	5695 [8.5]	7976 6873 Oct. 22 '05	2378 [9.5] 6870 Oct. 21 '05 8152 8201
	AM 3879 4043 2986 621		AM 636
	147		
	Period app. short		
280	2378 [9.0]		5695 [10.0] 6873
	AM 1109 1579 [8.7] 1533 [8.0]		
	W Orionis		
~~281~~			
x 281	5695		2378 [10.2
	AM 642 [9.8] 636 4043		AM 621

Certainly variable, but do not announce, on account of small range. Period apparently short

282	2378 [9.0]		5695 [9.5] 6873
	AM 4043 621 [8.8] 642		AM 3879 [2986 1533 1579
	1109		

Friday, November 29, 1907

Map of the Sky, Region 24 4^h 0°

Var Br H

x 283 5695 1093 2378 5556
AM 621 636 2986 4043 AM 3879
Variability not assured. Apparently varies 0.3 or 0.4 magn. from 10.0

x 284 5695 5686 [9.5] 2378 5556 6873 [9.8]
AM 3275 3879 636 621 642 AM 2986 1109
Seems to be really variable, but do not announce, as range is small.

285 5695 [8.5] 5686 5556 2378 [11.5] (6873) (6870)
AM (147) AM 1579 1109 2369 (642) (621) 2986
R Tauri Period prob. long.

x 286 5695 [9.] 2378
Moving Object seen also on AC 5686 (Dec. 8, 1904) and AM 3275 (Dec. 7, 1904) Date of AC 5695 is Dec. 9, 1904. Apparently this is the Asteroid Nysa which came to opposition Nov. 30, 1904 RA 4^h 26^m.9, Dec. +15° 30′ Δα = 1.^m1 Δδ = −1′

287 5695 [9.5] 5686 ~~5556~~ 7976 2378 [10.5] 7976 5556
AM ~~3977~~ 4043 [9.0] ~~2956 636~~ 636 2956 3879
AM 1109
U Arietis.

Map of the Sky. Region 24. 4^h 0°

On Plate AC 5695, superposed on D 12919 (= AC 2378) were discovered Nos. 277-287, of which Nos. 281, 283 and 284 are on the suspected list. No. 286 is a moving object, apparently the asteroid, Nysa. Nos 277, 280, 285, and 287 are the known variables 034601 - Eridani, W Orionis?, R Tauri, and U Arietis.

Total, 3 new
4 known
3 suspected
1 asteroid

Tuesday, December 3, 1907

Map of the Sky Region 24 4h 0°

Plate AC 6767 superposed on D 12919 (= AC 2378)

Rediscovered Nos. 279, 282

Var	Br		H
~~288~~			

No new variable

On Plate AC 6767, superposed on D 12919 no new variables were discovered. Rediscovered Nos 279 and 282.

Total 0 new
2 known
0 susp.

Tuesday, Dec. 3, 1907

Map of the Sky Region 24 4h 0°

Estimate of Number of Stars on Plate AC 2378, from which contact plate was made

Calling Centre of plate 0°

Area of Circle 0° to 5° = 78.5 sq. degrees
0 to 10 = 314.2 " "
0 to 15 = 706.9 " "

Entire plate approx 30° × 40° = 1200 sq. degrees
0° to 5° = 78.5 sq. degrees
5° to 10° = 235.7 " "
10° to 15° = 392.7 " "

Remainder of plate 493 sq. degrees

Estimate each time the no. of stars in 9 sq millimetres in eye piece ruled in millimetres, or about $\frac{1}{4}$ sq. degree

0° to 5°		5° to 10°			10° to 15°			
2	4	6	6	11	7	4	5	3
7	7	2	5	4	6	2	3	6
2	5	5	8	8	8	7	4	2
12	6	2	8	7	5	5	1	2
5		7	6	6	5	3	1	2
9		2	7	5	5	3	5	5
7		11	4	5	4	5	1	2
4		11	5	12	5	4	1	7
3		5	6	6	8	3	5	4
7		6	5	2	9	1	2	3
7		7	6	2	3	2	3	3

15 ⌊87
5.8
4
23.2
to a square degree

78.5
23.2
1570
2355
1570
1821.20

235.7
24
9428
4714
5656.8

33)198(6.0
198
4
24.0 per sq degree

392.7
16
23562
3927
6283.2

44)176(4.0
176
4
16

~~Tuesday~~ Wednesday December 4, 1907

Map of the Sky 4h 0° Region 24

Continuation of Count of Stars.

Region outside circle 15° in diameter.

4	5	6	2	5	4	2	0
1	1	4	5	6	2	0	0
1	3	4	5	2	2	0	0
0	3	2	7	6	6	3	0
1	0	3	8	0	2	2	3
4	3	5	6	0	1	1	1
5	3	5	4	0	5	3	1
2	5	2	7	2	0	0	2
5	3	2	3	2	1	1	2
5	3	3	4	3	2	0	1
28	29	30	51	20	41	12	10

$49\frac{3}{10}$

4930

80|199

2.5

4

10.0 to a square degree

No. within 5° of centre	1821	23.2 to a sq. degree
" between 5° and 10° from "	5657	24.0 " " " "
" " 10° " 15° " "	6283	16.0 " " " "
" on remainder of plate	4930	10.0 " " " "
	18691	

Total within 15° of centre	13,761
" outside " " "	4930
	18,691

Thursday, December 5, 1907

Map of the Sky Region 24 4h 0°

Plate AC 8045 superposed on D 12920 (= AC 2378)

Re-discovered Nos. 282, 287

Var	Br	Ft
x 288	8045 [7.7] ~~32~~6876 (6873) AM (3275) (3879) (2369) (621) AC 7976	2378 [8.4] 6767 5686 8152 6791 2986 4043 720 147 642 636

Variation of about half a magnitude, probably in short period seems certain. Do not announce, but give to Professor Wendell for confirmation.

Var	Br	Ft
289	8045 [9.6] AC 150 AM 185	2378 [10.6] 7976 1093 5536 6791 AM 636 642 147 621 ~~7976~~ 2369 3879 3275 3934 AC 6870 6873 2949 AM 2153

Range as shown on majority of plates is less than a magnitude, but on the plates indicated there were very bright maxima.

Var	Br	Ft
x 290	2378 ~~8045~~ 150 [9.0] AM ~~3275~~ 1109 2153	8045 ~~2378~~ 6791 [9.5] AM 3879 72 1579 185

Variation seems to be real, but small. Do not announce

On Plate AC 8045, superposed on D 12920 (= AC 2378) were discovered Nos. 288-290, of which Nos 288 and 290 are suspected. Rediscovered Nos. 282 and 287 (U Arietis)-

Total, 1 new
2 known
2 suspected

Friday, December 13, 1907

Map of the Sky, Region 24 4^h 0°

Plate AC 9061 superposed on D 12919 (= AC 2378)

Re-discovered No. 277

Var	Br	F
291	2378 8045 5695 AM 3879 147 2369 1093 1109 AM 234 358 590 1600 1627 [On 2378, 9.0]	9061 7836 AM 229? 1615 1761 [On 9061, 9.8]

Apparently of the Algol type, or related to it. Bright on about forty plates

292	9061 7836 6870 5686 5506 AM 1579 [9.9] 2153 3275	2378 [10.8] AM 72

On most of the above plates, the variable is of medium brightness. Variation probably in long period, or at least, continuous

293	2378 1506791 AM 636 3275 [8.8] 2153 AM 2956 185 4043 72 1579	9061 [9.5] 7836 AM 2369 [9.8]

Apparently of the Algol type

On Plate AC 9061, superposed on D 12919 (= AC 2378) were discovered Nos. 291 – 293. Re-discovered No. 277 (034601 - Eridani)

Total 3 new
1 known
0 suspected

Saturday, December 14, 1907

Map of the Sky, Region ~~24~~ 36 4^h -30°

Estimate of Number of Stars on Plate AM 1802 from which contact plate used in discovering variables was made. For general method of count, see page ~~107~~ 113. Modified by dividing plate into quarters by lines north & south, and east and west. Then in central circle ~~[illegible]~~ count – 8 ~~12~~
section 5° to 10° " 24 ~~36~~ 40
" 10 to 15 " 60
remainder of plate " 48 ~~72~~

Divide each of above sets equally among the four quarters of the section.

Central Section 0° to 5°

n. f	s f	s p	n. p.
~~10~~ 6	7	5	10
3	8	5	5
6	8	4	10

3⌊15 5.0 × 4 = 20.0
3⌊23 7.7 × 4 = 30.8
3⌊14 4.7 × 4 = 18.8
3⌊25 8.3 × 4 = 33.2
12⌊77 6.4 × 4 = 25.6

78.5
25.6
4710
3925
1570
2009.60

Section 5° to 10°

n. f	s f	s p	n. p.
4	11	5	7
6	4	5	7
8	8	9	4
6	7	13	5
7	3	2	8
13	2	2	3
4	8	6	7
14	5	8	5
6	3	5	6
9⌊68 7.6	9⌊57 5.7	9⌊55 6.1	9⌊52 5.8

235.7
25.2
4714
11785
4714
5939.64

36)226(6.3
216
100
108

6.3 × 4 = 25.2

Saturday, December 14, 1907

Map of the Sky Region 36 4h −30°

Count of Stars continued

Plate AM 1802

Region 10° to 15°

N f	S f	S p	N p
6	10	7	2
4	12	5	1
10	10	9	5
9	7	9	5
12	6	5	5
5	7	6	3
10	7	1	6
7	3	1	5
7	8	4	3
6	5	5	4
10⌊76 7.6	75 7.5	52 5.2	39 3.9

392.7
24.2
7854
15708
7854
9503.34

40⌊242
6.05
4
24.2

Remainder of Plate

5	2	3	4	3	2	3	3
3	4	5	5	0	1	3	6
3	6	4	3	1	0	4	2
2	12⌊45 3.8	4	12⌊46 3.8	2	12⌊15 1.2	1	12⌊21 1.8
6		4		1		3	
5		8		1		1	
4		2		3		1	
1		1		1		0	
4		3		0		0	

48)127⌊2.65
96
310
288
220
240

2.65
4
10.60

493
10.6
2958
493
5225.8

Map of the Sky Region 36 4h −30°

Count of Stars

Within 5° of centre	2010	25.6 to sq. degree	n.f 20.0	s.f 30.8	s.p 18.8	n.p 33.2
5° to 10° dist from "	5940	25.2 " " "	30.4	22.8	24.4	23.2
10° to 15° " " "	9503	24.2 " " "	30.4	30.0	20.8	15.6
Remainder	5226	10.6 " " "	15.2	15.2	9.8	7.2
Total	22,679					

Total within 15° of centre, 17,453
" outside " " " 5,226

Saturday, December 14, 1907

Map of the Sky, Region 42 16h −30°

Count of Stars Plate AM 4392

Region 0° to 5°

nf	sf	sp	np
9	10	14	4
5	5	9	6
8	10	4	7
3⌊22 7.3	3⌊25 8.3	3⌊27 9.0	3⌊17 5.7

78.5
30.3
2355
2355
2378.55

12⌊91
7.58
4
30.32

Region 5° to 10°

5	15	6	2
3	7	7	5
2	5	1	8
4	4	13	2
7	6	1	8
7	6	6	4
6⌊28 4.7	6⌊43 7.2	6⌊34 5.7	6⌊29 4.9

314.2
22.3
9426
6284
6284
76066.66

235.7
22.3
707.1
4714
4714
5256.11

24)134(5.58
120
140
120
200
192

5.58
4
22.32

Region 10° to 15°

4	3	5	2
1	2	9	1
2	7	11	5
3	10	17	3
3	7	9	3
2	19	10	1
8	3	2	5
9	11	5	5
15	6	0	5
19	5	5	1
10⌊66 6.6	73 7.3	7$\overset{3}{\cancel{8}}$ 7.3	31. 3.1

392.7
24.3
11781
15708
7854
9542.61

40⌊243
6.08
4
24.32

Saturday, December 14, 1907

Map of the Sky, Region 42 16h − 30°

Count of Stars continued AM 4392

Remainder of plate

N.F.	S.F.	SP	NP	
6	~~8~~ 5	1	~~3~~	7
0	7	5	~~4~~	1
2	2	6	~~2~~	2
1	7	4	~~5~~	0
0	12	2	~~2~~	1
1	5	3	~~4~~	1
1	8	7	~~3~~	3
3	4	3	~~1~~	2
4	5	3	~~4~~	2
4	10	9	~~2~~	1
2	6	3	~~6~~	5
3	10	2		7
12⌊21 1.8	12⌊91 7.6	12⌊48 4.0		12⌊32 2.7

49 3
4.0
1972.0
4
7888.0

48)192(4.0
192 4
16

Count of Stars

within 5° of centre	2379	30.3 to a sq. degree	n.f ~~7.2~~ 29.2	s.f ~~30.4~~ 33.2	sp ~~22.8~~ 36.0	np 22.8
5° to 10° from centre	5256	22.3 " " " "	18.8	28.8	22.8	19.6
10° to 15° " "	9542	24.3 " " " "	26.4	29.2	29.2	12.4
Remainder of Plate	7880 ~~1972~~	16.0 ~~4.0~~ " " " "	7.2	30.4	16.0	10.8

25057
~~19,149~~
1,

Total within 15° of centre, 17,177
" outside " " " 7880
~~1972~~
25057

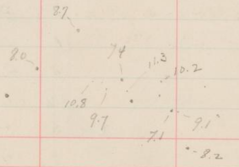
Friday, February 21, 1908

Map of the Sky Region 30 16^h 0°

Plate AM 2287 superposed on D 12979 = AM 3504
Time occupied in superposition 2^h 30^m
The negative shows more stars than the positive

Var	Br	Ft
~~294~~		

Sequence for V Serpentis used down to 9.7. For magn. 10.2 is substituted, 10.8, and for 10.7 is substituted 11.8. Additional star, 10.2

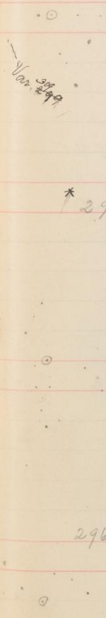


Saturday, February 22, 1908

$\frac{22}{10}$ 45 Map of the Sky Region 30 16^h 0°

Var	Br	Ft
294	2287 1910 4988 4810 1951 2092 896 1020 1250 1446 3478 3534 4952	3504 2557 4554

AM 1292 multiple image normal except 2 first images, which appear to be faint.
AM 1964 First images certainly faint
On 2287, 10.5 On 4554, 11.2
Evidently of the Algol type. Bright on about 30 plates



*295	2287 2114 [9.2] 2092 1951 [8.9] 1910	3504 1250 [< 11.4] 4810 1446 (2599) (2644) (2720) (2786) (2945) (3041) 3391 ($3\overset{399}{478}$) (3534) 4952

This star appears to be near maximum brightness from May to September, 1903. In 1904, during the same months it was very faint and growing fainter. In 1905 it is just visible on the best plates. Period apparently long but the prolonged maximum suggests a Nova. Not seen at all on other plates than those taken in 1903, 1904, + 1905.

Bache plates taken in 1899 do not show the object, which was < 14.0 magn.

296	3504 [10.2] 3534 2786 2720 [10.0] 2644 [$9.\overset{4}{8}$]	2287 [< 11.0] 2945

Period apparently long

On A 3855, August 17, 1899, an object is seen of the same position and of the same magnitude as that on A 7701 described below

*295 On A 7701, May 28, 1906, Exp. 120^m the star is seen and is of about the ~~fifteenth~~ magnitude 14.5 July 9, 1908. Position coincides with that measured on B plate when bright.

Saturday, February 22, 1908

Map of the Sky Region 30 16h 0°

~~Var~~ ~~B~~

Var Br H

297 2287 2268[9.5] 2118[9.3] 3504 [<11.3] 3478 1937

Period probably long

R Serpentis

0 45

On Plate AM 2287 superposed on D12979 (= AM 3504) were discovered Nos. 294 - 297. Also marked the planet Mars. No. 297 is the known variable, R Serpentis.

Total 3 new
1 known
0 susp.
1 planet

Tuesday, February 25, 1908

23 30 Map of the Sky Region 30 16h 0°

Plate AM 2557 superposed on D12979 (= AM 3504)
Re-discovered No. 296 and Mars.

Var Br H

298 2557 [9.6] 2114 2092 3504 [10.6] 4810 1250
1951 4988 12b81 1279 1292

Usually bright and of nearly uniform magnitude. ~~Perhaps~~ Probably of the Algol type. Max maximum and shows no change on the following multiple-image plates:- AM 2136, 2735, 1292, 1964, 4902, 857, 476, 481 AM 1296, 2065, 4243

299 3504 1250. ~~1277~~ 1261[9.5] 2557 1446[10.0] 1910[10.2] 1420 4988
4810 1951 4952

Although the range of this star is small it is very well seen near maximum and minimum.

300 3504 [9.4] 1446 4988 2557 [10.0] 1910 1951 3818 [10.2]
4810 2114 4952 (4401) 4302 4554

1 00

Tuesday, February 25, 1908

2 30

Map of the Sky Region 30 16h 0°

Var	Br	H
301	2557 1951 [10.2]	3504 [10.8] 2114 [11.2]. 4810 2092 (4988)
302	2557 1446 1951 [9.8] 2114 1261 1250	3504 1910 [10.9] 4988 [11.1] 2092 4810 1279

An eleventh magnitude star precedes by about 1' (4s). Period probably short

Var	Br	H
X 303	3$\overset{5}{3}$04 [9.7] 1420 (4988) 2114 1951 3818 3881	2557 4810 [10.2] 4303 4401 [10.3] 4554

Seems to be certainly variable but do not announce at present, as range is very small. Do not fail to measure up.

Var	Br	H
304	3$\overset{5}{3}$04 1446 [9.5] 2092 4988 [9.3] 1420	2557 1910 [10.1] 1951
305	3$\overset{5}{3}$04 [10.2] 4952 [10.1] 4401 4303 4988 2114	2557 4810 [10.9] 3818
306	3$\overset{5}{3}$04 4401 3881 795 2268 [9.8] 3534 3391 3399	2557 1261 1446 1910 1951 2092 [10.6] 4988 4952 2118
307.	3304 4952	2557 1261 1446 1951

U Herculis

Range from 9.0 to < 11.2

3 45

Tuesday, February 25, 1908

Map of the Sky Region 30 16h 0°

On Plate AM 2557, superposed on D 12979 (= AM 3504) were discovered Nos. 298 - 307, of which No. 303 is suspected. Re-discovered No. 296 and Saturn. No. 307 is the known variable, U Herculis.

Total
8 new
2 known
0 suspected
1 planet

Time occupied in superposing 2h 30m

Friday, March 6, 1908

Map of the Sky Region 30 $16^h\ 0^\circ$

4 30

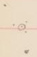
Plate AM 4401 superposed on D 12979 (= AM 3504)

Re-discovered Nos. 296, 297, 303

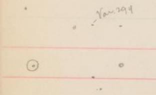
Time occupied in superposition, $2^h\ 30^m$

Var	Br	Ft
X 308	4401 1910 1951 2092	3504

Slight



Var	Br	Ft
309	3504 [9.4] 4303 4554 [9.7] 1420 2114 486 2092 — 1910 857 throughout 1964 4902	4401 [9.9] 4988 [10.0] 1951



On AM 2735 (multiple-image) the variable was faint at the beginning, and rapidly reached normal brightness

Apparently of the Algol type

5 30

Saturday, March 7, 1908

Map of the Sky Region 30 $16^h\ 0^\circ$

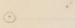
Plate AM 4401, superposed

Var	Br	Ft
X 310	3504 1261	4401 3687 ~~6340~~ 1446

Probably not variable. Certainly slight. Has apparently been suspected before, as position is marked on some plates. Do not announce

Var	Br	Ft
X 311	3504 3687 3654 2114 1910 1420 2735 1292 4902 315 3514	4401 ~~4554~~ 4952 2566 throughout

Probably slightly variable (8.5 to 9.0) Difficult. Possibly of the Algol type



On Plate AM 4401, superposed on D 12979 (= AM 3504) were discovered Nos. 308 – 311, of which Nos 308, 310 and 311 are suspected. Re-discovered Nos. 296, 297 (R [illegible]) and 303 (susp.)

Total 1 new
2 known
3 suspected
1 suspected re-discovered.

Tuesday, March 10, 1908

Map of the Sky Region 30 $16^h 0^\circ$

Plate AM 4952 superposed on D 12979 (= AM 3504
[illegible] 38
Time spent in superposing, $2^h 45^m$.
Re-discussed Nos. 294, 297, 299, 300, 311 Also Mars.

Var Br H 3504 [<11.0]

312 4952 [10.0] 4998 (9.0) AC 243
RU Librae? Yes

x 313 3504 4810 2114 3687 4952 896
AC 6332
Variation doubtful. Do not announce

x 314 4952 1952 2092 4988 3504 3687 3624 3667 4810
Range 10.0 to 10.5
B 19058, ±18835 B 29700 24845
Variation slight. Do not announce

x 315 4952 [9.5] 4988 (2092) 3504 [10.2] AC 243 216
2287 ~~AM~~ 1420 4554
Difficult though probably variable
Do not announce

x 316 4952 [10.2] 4988 (2092) 3504 [<11.0] 3654 ~~A~~
AC 243 AM 2287 3399 4401 4303
AC 2548
Almost certainly variable, but unfavorably placed for observation. Do not announce unless confirmed on I plates.

Wednesday March 11, 1908

Map of the Sky. Region 30 $16^h 0^\circ$

Var Br H
SS Ophiuchi 317 3504 [9.6] 2557 4952 [<11.0] 4988 3687 (3624) 4401
Period probably long

x 318 4952 4810 3504 3399 4303 4554 3858 2287
4988 [10.5] 3667 3687 [11.0]
This star is certainly variable, but the range observed is so small that it is not to be announced at present.

x 319 3504 [9.0] 3687 4988 4952 [10.0]
574 3624 3654 3667
2114 4401 2557
Normal on about 40 plates, including a dozen Clyde C. Image has no appearance of being defective on AM 4952 Do not announce
~~320~~

~~320 2114 [10.0] 3504 [<11.0]~~
Asteroid? Rapidly moving object Not near opposition. Found on AM 2114

x 311 Re-examined on AC plate - multiple image
4254 3653 1301 318 2566 throughout
On AI Plates 2138, 2155, 2164, 2095, 2044, 2003, 2295, 2286, 2254, 3789, 3763, 3825, 5691 there seems to be a slight variation of less than half a magnitude A very suspicious object.
Variable 319 was also examined on the above AI plates, but no change was found.

Map of the Sky, Region 30. 16h 0°

On Plate AM 4952 superposed on D 12979 (= AM 3504) were discovered Nos. 312 - 319, of which Nos. 313, 314, 315, 316, 318, 319 are suspected. Re-discovered Nos. 294, 297 (R Serpentis), 299, 300, and 311 (susp.) No. 312 is R U Librae No. 317 is SS Ophiuchi

Total ~~1~~ 0 new
~~5~~ 6 known
6 suspected
1 suspected re-discovered.

Saturday March 14, 1908

Map of the Sky, Region 30 16h 0°

Count of Stars. For method, see page 117

Plate AM 3504

Central section, 0° to 5° from centre

nf	sf	sp	np
6	4	5	3
6	7	1	4
5	5	4	5
3⌊17 5.7	3⌊16 5.3	3⌊10 3.3	3⌊12 4.0

12⌊55
4.6
4
18.4 33

78.5
18.4
3140
6280
785
1444.40

Section 5° to 10° from centre

nf	sf	sp	np
6	4	4	7
~~6~~ 5	9	2	7
9	4	1	3
2	1	5	4
5	2	3	4
7	4	6	4
6⌊34 5.7	6⌊24 4.0	6⌊21 3.5	6⌊29 4.8

24⌊108
4.5
4
18.0

235.7
~~314.2~~
18
18856
2357
4242.6

Section 10° to 15° from centre

nf	sf	sp	np
2			
4	4	5	2
4	5	7	3
5	5	10	2
0	2	4	3
3	5	3	2
0	0	3	1
6	5	4	2
10	2	5	5
3	8	4	2
10⌊37 3.7	9⌊36 4.0	9⌊45 5.0	9⌊22 2.4

392.7
14.3
11781
15708
3927
5615.61

37⌊140
3.8
4
15.2

37)140(3.57
219
210
185
250
259
4
14.28

Saturday, March 14, 1908

Map of the Sky, Region 30 16h 0°

Count of Stars Cont.

Region outside circle 15° from centre

n f	s f	s p	n p
3	2	1	1
0	2	1	0
0	0	3	2
0	2	3	0
2	2	1	0
3	1	1	2
2	1	2	0
0	1	3	0
0	3	1	0
0	1	2	2
3	1	1	2
1	4	0	4
12)14	12)20	12)19	12)13
1.2	1.7	1.6	1.1

493
5.5
2465
2465
2711.5

48)66
1.3
4
~~5.2~~
5.50

Count of Stars

Within 5° of Centre	1444	18.4 to sq. degree	nf ~~5.7~~ 22.8	sf. 21.2	sp. 13.2	np 16.0
5° to 10° from Centre	4243	18.0 " "	22.8	16.0	14.0	19.2
10° to 15° " "	5616	14.3 " "	14.8	16.0	20.0	9.6
Remainder of Plate	2711	5.5 " "	4.8	6.8	6.4	4.4

Total within 15° of Centre 11,$\overset{3}{2}$03
" outside " " . 2,711
14014

Tuesday, March 24, 1908

Map of the Sky, Region 30 16h 0°

The three variables re-discovered (RU Librae, R Serpentis and U Herculis are all outside of the circle 15° square. The new variables 298, 296, 301, 306, and 311 (susp.) are also outside of this region. Of the 13 new variables, therefore, 9 are within 15° of centre and 4 are more than 15° distant. Total known within 15° 6 (catalogued + 9 (new = 15

15) 11303 (754 One variable to every 754 stars
105
80
75
53
60

Known variables outside 15° which might be found on plate are 164715, S Herculis and 162816, S Ophiuchi, besides the three found and the 4 new ones

$\overset{9}{\cancel{8}}$) 2711
~~452~~
301
One variable to every $\overset{301}{\cancel{452}}$ stars

Of those actually found by H.S.L., 9 are within 15° of centre and 7 are more distant.

9) 11303
1256
One to 1256 stars

7) 2711
387
One to 387 stars

Thursday, April 2, 1908

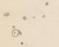
Bruce Plates at 18h 50m Dec. = −12°.5

Region of Nova Sagittarii

Plate A 2845 superposed on D 1304~~3~~9 (–A 5712)

Time spent in superposing, 2 hours.

Centres differ by more than a degree; both in R.A. and Dec.



Var	Br	H
x 3~~12~~20	5712 [13.0]	2845 [14.3] 409, B32341, 32278 23759 30495

Seems to be certainly bright on A 5712 but do not announce without looking up further.

~~3~~21 ~~5712 2845~~

Tuesday, April ~~8~~7, 1908

Bruce Plates at 18h 50m −12°.5

not magnified

Var	Br	H
32~~2~~1	5712 [14.0] B32341 23759 25827 23414 ~~30289~~ 36435	2845 [~~13.8~~ 15.2] B32278 (in. poor. definition
320	B36435	

The variable appears very bright on this plate

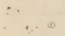
Variables 320 and 321 are both very near the edge on Plate 2845. They are rather difficult to discern on B plates, even of long exposure. Do not announce as certainly variable but give positions and facts in Circular.

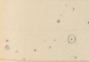
~~322~~

magnified

Var	Br	H
X 322	5712 [14.8]	2845 [<15.8]

About magn. 14.8 on A 5712. Not seen on 2845 or 4091 or on any B plate. Seems to be a real star image on A 5712. Do not announce

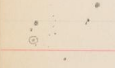
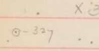
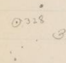
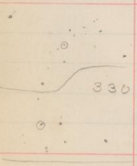
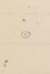




Var	Br	H
323	5712 [14.0] 4091 [12.0]	2845 [15.4] (32278)
324	5712 [12.1] 4091	2845 [15.2] B30289 32341 23759 30495

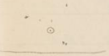
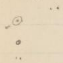
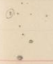
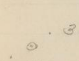
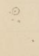
Wednesday, April 8, 1908

Bruce Plates at 18h 50m −12°.5

	Var	Br	H
	X 325	5712[14.0]	2845[<15.0] 4~~712~~091[15.5] B23759 B32278
		Variation seems to be real but there are not enough plates to confirm. Announce as suspected.	
	326	5712[10.0] B32341 32278	2845[13.2] B23759[14.0] B23281
	x 327	2845[15.0]	5712[15.9] B23759
		This object has a hazy appearance & may be nebulous. Do not announce.	
	328	2845[13.4](4091) B32278	5712[15.0] B23759 32341
	329	2845[15.0] B32278 32341 23759	5712[15.8] 4091[<16.0]
	330	5712[14.4] B23759	2845[15.4] 4091 B32341 (32278)
	X 331	2845[14.2]	5712[15.5] 4091 B32278 23759 32341
		Variation seems to be real, but there are not enough plates to confirm. Announce as suspected	

Wednesday, April 8, 1908

Bruce Plates at 18h 50m, −12°.5

	Var	Br	H
	332	5712[14.7] (B32278)	2845[15.8] 4091[<16.0] B23759
	333	5712[13.3] (B32278) 32341	2845[<15.8] 4091[16.0?)
		Apparently known.	Marked on B32341
	334	5712[12.0]± B23759	2845[<15.8] 4091[16.0 out, seen in. perhaps defective. B32278 32341
	335	2845[14.0] 4091 B32278 32278 23759	5712[15.0] B32341
	336	2845[13.6] B32278	5712[15.5] 4091 (B23759)
	~~337~~ x *337	2845[13.7] B23759	5712[14.5] B32341 B32278
		Perhaps already known.* pro. marked on one plate, Do not Announce announce	
	338	2845[13.7] B23759	5712[14.6] B32341 B32278
	339	~~2845~~ 5712[15.0] B23759[14.8]	~~5712~~ 2845[15.8] 4091 B32278

* Var. marked near 337 is Dm −10° 4876 Magn. 9.0 Found by Mrs. F marked on B38112 Mc od. See Mrs. F's Book 17, 189. Brightest star in chart drawn for 337.

Wednesday, April 8, 1908

Bruce Plates at 18h 50m -12°.5

Var	Br		Ft
340	2845 [13.5] 4091		5712 [14.5]
			B23759 32341 32278

No. 333 is ST Sagittarii

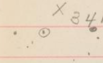
On Plate A 2845, superposed on D 1304$\overset{9}{3}$ (= A5712) were discovered Nos. 320 - 340, of which Nos. 320, 322, 325, 327, 331, 337 are suspected. Most of the suspected variables are almost certainly variable, and are to be announced in a separate table. On account of the faintness of these variables there are only a few plates upon which they can be observed.

Total on plate 14 new
1 known
6 suspected

Wednesday, April 15, 1908

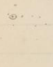
Bruce Plates at 18h 50m -12°.5

V Plate A4091 superposed on D1304$\overset{9}{3}$ (= A5712)
Re-discovered Nos. 323, 325, 328, 330, 332, 333, 326



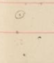
Var	Br	~~Ft~~	Ft	
x 341	5712 2845 [15.0]		4091 [15.7	
	B32278 32341			

This star appears to be unquestionably faint on A 4091 and is, perhaps, of the Algol type. Do not announce, as there are not enough plates for confirmation.



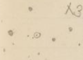
Var	Br		Ft	
$\overset{3}{3}$42	4091 [15.$\overset{4}{5}$]		5712 [$\overset{n.s.}{<}$16.$\overset{2}{0}$]	2845 n.s.
	(B32278) seen, but ft.		B23759	

Estimates of magnitude very difficult, as var. is in corner of plate. Certainly varies more than a magn.



Var	Br		Ft
x 343	5712 [15.2] 2845		4091 [15.7]
	B32278 32341 23759		~~B23759~~

Seems to be really faint on A 4091. Too few plates to confirm. Do not announce



Var	Br		Ft
x344	4091 2845 [15.2]		5712 [15.8]
	B32278 23759		

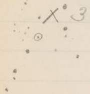
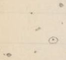
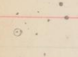
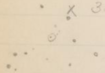
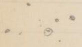
Seems to be really ft on A5712 Do not announce

Var	Br		Ft
x 34$\overset{5}{4}$	5712 [14.8]		4091 [15.8]

Faint on all B plates Certainly bright on A5712
Do not announce

Friday, April 17, 1908

Bruce Plates at 18h 50m, -12°.5

Var	Br	Ft
X 346	4091 [15.2] 2845 B 32341 Variation seems to be certainly real, but cannot be confirmed on acc't of faintness	5712 [15.8]
x 347	4091 [15.2] 2845 Too faint to confirm	5712 [< 16.0]
x 348	4091 [13.6] Too faint to confirm	5712 [14.0] 2845
x 349	4091 [15.0] Too faint to conf.	5712 [15.6] 2845 B 23759 32341
x 350	5712 [15.0] B 32278 Too faint to confirm	4091 [15.5] B 23759
x 351	5712 [15.0] Too ft to confirm	4091 [15.8]
352	4091 [15.2] B 32278 Variation of about the same appearance as those on this page, but well confirmed	5712 [16.0] B 30495 30289 23759

Friday, April 17, 1908

Bruce Plates at 18h 15m -12°.5

Var	Br	Ft
353	4091 [13.4] 2845 B 23759	5712 [14.2] B 32278 32341 30289 30495
X354	4091 Nova Sagittarii	5712
~~255~~	~~5712 [13.0]~~	~~4091 [< 16.0]~~

Monday, April 20, 1908

Bruce Plates at $18^h 50^m$, $-12^\circ.5$

Var	Br	Ft
355	4091 [13.9] B32278 30287	5712 [n.s.] <15.8 2845 (B23759)
x 356	4091 [14.3]	5712 2845 [15.0] B32278 30495 23759
	Seems to be really bright on A4091 Do not announce	
x 357	4091 [14.8	5712 2845 [15.3 B32278 23759
	Too faint to be well observed	
x 358	4091 [13.5] 358 B23759	5712 [14.2] 2845 B32278
	Variation doubtful	
359	4091 [15.2 B32278 B23759 [12.0] striking	5712 [<16.0] 2845 B32341
~~360~~	~~4091 [15.2]~~ This is no 326	~~5712 [<16.0] 2845~~
~~360~~	~~5712 [11.5]~~	~~4091 [<16.0]~~
360	4091 [15.2] B33278 (32341)	5712 [<16.0] 2845 B23759
x 361	4091	5712 2845 B32278 23759 30495
	Doubtful. Do not announce	
362	4091 2845 [12.8] (B32278) 23759 [10.5]	5712 [15.8] ~~23759~~ 30495

Tuesday, April 21, 1908

Bruce Plates at $18^h 50^m$; $-12^\circ.5$

8N

Var	Br	Ft
363	4091 [15.0] B32341 32278 [15.0]	5712 [15.8] 2845 B30495 23759
364	5712 [15.2] B23759	4091 [<16.0] 2845 B32341 32278 30495
366 365 365	4091 [15.2] B32278	~~4091~~ 5712 [15.6] 2845 [<15.9] B30495 23759
x 366	B32341 [14.0]	4091 [<16.0] 5712 [seen, 16.0] 2845 B23759 (seen) 30495 23278
Prismatic Companion	No. 366 was noticed while examining No. 365 It is seen bright only on B32341, but seems to show fluctuations on other plates – Second list	
x 367	4091 [14.8]	5712 [<15.8] 2845 B32341 32278 30495 23759
	Certainly bright on A4091; not certainly seen on any other plate. A 16th magn. star is south 0.05′ Second list	
368	4091 [14.4] B32341 32278	5712 [<15.8] 2845 B23759 30495
369	5712 [15.0] 4C 2845 B30495 [14.5]	4091 [<16.0] B32278 32341

Bruce Plates at 18h 50m −12°.5

Var	Br	Ft
X 370	4091 [15.2] B32278	5712 [<15.9] 2845 B23759
	Variation seems to be real but obs. is diff. on B plates Second table. A 15th magn star follows 0'.1	
X 371	4091 [15.3] B32278	5712 [15.8] 2845 B23759 32341
	Variation prob. real. but obs. diff. on B plates. Second table	
X 372	4091 [15.5] 2845 B32278 (?)	5712 [15.9]
	Too ft for obs. Seems to be var. Second list	
X 373	4091 [15.2] Second list Var. seems to be real	5712 [16.0] 2845 B32278 B23759 (seen)
374	4091 [15.0] B32341 [14.5] 32278	5712 [15.7] 2845 [n.s. <15.8] B23759
375	4091 [15.0] ? B32278 32341	5712 [15.8] 2845 (B23759)
376	4091 [14.5]	5712 [<15.5 B30495

Bruce Plates at 18h 50m, −12°.5

On Plate A 4091, superposed on D 1304~~8~~9 (A 5712) were discovered Nos. 341–376. Nos. 323, 325, 328, 330, 332, 333, Known 57, 326, were re-discovered.

Nos 341, 343, 344, 345, 346, 347, 348, 349, 350, 351, 356, 357, 358, 361, 366, 367, 370, 371, 372, 373 are suspected. They are almost certainly variable and are to be announced in a separate table.

No. 354 is Nova Sagittarii

This region is unusually interesting. The number of variables found is large when it is considered that only three plates were compared and that their centres were so far apart that not more than 30 sq degrees were covered. Moreover these images were nearly incomparable over a large part of this area. The contrast is great with the region of the great spiral nebula in Cygnus or even the Nebula of Carina. The large number of suspected variables and small fluctuations suggests the Magellanic Clouds.

Total on Plate 15 new
~~2~~ 7 known
20 suspected

Thursday, April 30, 1908

Map of the Sky Region 33 22^h 0°

Sequence of V Pegasi Plate AM 2758 superposed on D 12980 (= AM 3851)

Var Br Ft

377 3851 [9.8] 1473 4965 5117 2758 [10.5] 805 (1515)
Bright on about 16 out of 20 plates examined
Probably of the Algol type

378 2758 [10.6] 1525 3899 3741 3851 [11.3] 1504
~~Variability doubtful~~
Bright on about 30 plates Apparently of the Algol type

×379 3851 1473 etc 2758 1504 1328
See No. 483 Difficult seems to show changes amounting to about 0.3 magn. Image often smaller than those of surrounding stars. Type IV? Look up. Do not announce

×380 2758 [10.5] 3851 [<12.0] 1473 4965 805 1425
Moving object. Probably an Asteroid. Seen on Plates AM 2728 (June 7, 1904) and AM 2773 (June 23, 1904)

Tuesday, May 5, 1908

Map of the Sky Region 33 22^h 0°

Var Br Ft

381 3851 [9.2] 2728 3741 3899 2758 27~~28~~73 [10.2] 5006
4341 4984
Period evidently short. Seems to be nearly uniform on plates showing var. Bright. Possibly of the Algol type. Shows no change on AM 1054 Multiple-min.

×382 2758 4984 etc etc 3851 1473 5117 1566
4965 805 1425 1456
Variation seems to be real but small 9.5 to 10 Do not announce

383 3851 3899 [10.8] 5006 2758 3741 [12.0] (3626) 3723
4984
Period probably long

×384 3851 623 1473 2728 2758 1566 2773
Variation slight; 10.0 to 10.3 Do not announce

×385 3851 1525 1566 5117 [11.0] 2753 623 4965 [<12.0] 2728
RR Aquarii Known Var 210903

×386 2758 [9.5] 3851
Moving object - Probably asteroid

387 2758 [10.0] (5117) 1425 (1525) 3851 [11.0] 4965 2773 3722 3899
1473 (2728) 3741
Period apparently short; Br 3741 Ft 3723 Br 2758 2728 [illegible] 2773
A 12th magn star follows about 1.5.

388 2758 [10.7] 3723 3741 3851 [11.7] 2773 3899 4948

Wednesday, May 6, 1908

Map of the Sky Region 33 22h 0°

Var	Br	H
~~389~~	~~3851 [11.8]~~	~~2758 [13.2]~~
~~389~~		

On Plate AM 2758, superposed on D 12980 (= AM 3851) were discovered Nos. 377–388, of which Nos. 379, 382, and 384 are suspected, Nos. 380 and 386 are moving Objects. No. 385 is the known variable 210903. The Planet Saturn was also found

Total on Plate 6 new
3 suspected
1 known
2 moving objects.
Saturn

Thursday, ~~February~~ May 7, 1908

Praesepe DM + 20° 2149
Examination of Plates for Variability.

The images of this star are about a magnitude and a half fainter than normal on Iceland Spar Plate C 9108. The star is near the edge of the field but the images do not have the appearance of being in any way affected by this fact. They are similar to other star images and their relative brightness with regard to each other is normal.

An examination of all AC and AM Plates in Boxes at 9h, −15° and 8h −30° failed to show any change in the star suspected. About 300 plates were examined.

It is probable that the images on Plate C 9108 are affected by their nearness to the edge of the field though it is not impossible that it is an Algol variable subject to very rare eclipses.

Tuesday, May 12, 1908

Map of the Sky, Region 33   22h 0°

Plate A$\overset{M}{\cancel{C}}$ 2277 superposed on D12980 (= AM 3851)

Var Br Ft

389 3851 5106 [11.0] 1525 (4984) 2301 4536 4614 4659   2277 [<12.0] (3899) 2728 5717 623 1307 983 4$\overset{5}{\cancel{2}}$64 AC 7817 (Sept. 17) AM 4557

AM 4$\overset{536}{\cancel{614}}$ Aug. 25, 1906 AM 4614 Oct. 9, 1906

Period not more than 2 months

×390 2277   3851

Known, 215605

×391 2277 [11.0] 1566 623 1525   3851 [<12.5] 1425 3899 1456

T Pegasi

Period probably long

Known, 220$\overset{04}{\cancel{7}}\overset{12}{\cancel{14}}$

On Plate AM 2277, superposed with D12980 (= AM 3851 were discovered Nos. 389–391 of which Nos. 390 and 391 are the known variables V Pegasi and $\overset{T}{\cancel{RS}}$ Pegasi Nos. 378, 381 and 385 were re-discovered

Total 1 new
5 known
0 susp.

Friday, May 15, 1908

Map of the Sky, Region 33   22h 0°

Plate AM 3177 superposed on D12980 (= AM 3851)

Var Br Ft

392 3851 [9.2] 1456 3899 7147 4984   3177 [9.9] (3723)

AM 1055. Variable of normal brightness on first exposures – grows faint and is brighter at end. Light diff. about 0.5 mag. Have Mrs. Fleming confirm.

AM $\overset{4588}{\cancel{4579}}$ shows precisely the same changes as AM 1055 AM 4581 shows Var. faint near end of exp. AM 2932 shows no change throughout Variation seems to be certain, but it will be difficult to measure up on account of small range – AM 1054 normal throughout AM 4581 Sept. $\overset{17}{\cancel{21}}$, 1906 min $\overset{.781}{\cancel{.667}}$
AM 4588 Sept. 21 " " .667

Algol type

393 3851 [10.0] 1425 1456 1525 4341   3177 [10.8] 1054 throughout 623 805 3626 [11.2] 3723

On Plate AM 3177 were discovered Nos 392 and 393
Re-discovered ~~Nos~~ 385 = RR Aquarii

Total $\overset{3}{\cancel{2}}$ new
1 known
0 susp.

Thursday, May 21, 1908

Map of the Sky, Region 33 22^h 0°

Plate AM 4965 superposed on D 12980 (= AM 3851)
Re-discovered Nos. 378, 382, 385

Var Br Ft

394 49$\overset{65}{56}$ [11.] 1425 4984 3851 [12.5] 5117 1525 3722 (3899)
Period perhaps long.

395 4965 [11.0] 5006 4984 3851 [< 12.5] 5170 (5099) 3899
A 12th magn star precedes 1.'5.

× 396 4965 [11.5] 3851 [< 12.5] 1525 5117
Apparently an asteroid. An object of the same magnitude is south of and preceding the position about 15' distant, on Plate AM 4981 taken July 9, 1907. AM 4965 was taken July 2, 1907

397 4965 [10.5] 4934 (1566) 3851 [11.2] 4341 [11.5] 3626 1473
5006 4679

Friday, May 22, 1908

Map of the Sky, Region 33 22^h 0°

Var Br Ft

× 398 3851 [10.5] 4965 [< 12.
A moving object. Seen on AM 3865, Sept. 8, 1905, two days later than AM 3851, about 0.°6 preceding position on latter plate. Very rapid motion. Is it a comet? Makes a perceptible trail. Seen also on Plates I 33309 and B 36936. On Sept 5 RA = 22^h 38^m Dec. = −2.°9 On Sept. 8 22^h 35^m −2.°8

Klio

399 3851 [11.5] 5117 [11.0] 4965 [< 12.5] 3723
(1525)

~~400~~ On Plate AM 4965, superposed on D 12980 (= AM 3851) were discovered Nos. 394–399, of which Nos. 396 and 398 are moving objects. The former is probably an asteroid and the latter a comet. Nos. 378, 382, 385 were re-discovered. Saturn also noticed.

Total, 4 new
2 known
1 susp. re-discovered
0 susp
2 moving object
Saturn

Saturday, May $\overset{23}{30}$, 1908

Map of the Sky Region 33 $22^h 0^\circ$

Count of Stars. See Remark foot of p. 157.

Plate AM 3851

Central Section 0° to 5° from centre

n f	s f	s p	n p
3	6	9	12
7	11	8	9
7	9	10	8
3⟌17 5.7	3⟌26 8.7	3⟌27 9.0	3⟌29 9.7

12⟌99 8.25
4
33.00 to sq degree

78.5
33
2356
2355
2590.5

Section 5° to 10° from centre

n f	s f	s p	n p
7	10	10	12
7	6	14	12
4	10	13	13
6	4	13	13
9	7	10	10
5	11	9	9
11	14	10	7
8	9	16	9
8⟌57 7.1	8⟌71 8.9	8⟌95 11.9	8⟌85 10.6

~~235.7~~
~~9.63~~
~~7071~~

235.7
38.5
11785
18856
7071
9074.45

32)308(9.66 3
288
200
192
280
192
94

4
38.52

Section 10° to 15° from centre

n f	s f	s p	n p
6	2	3	10
4	7	8	13
7	3	9	8
11	7	8	6
3	8	13	6
7	7	6	11
8	7	11	15
6	1	11	8
7	3	6	11
6	6	8	7
10⟌65 6.5	10⟌51 5.1	10⟌83 8.3	10⟌95 9.5

392.7
29.4
15708
35343
7854
11545.38

40⟌294
7.35
4
29.40

Saturday, May 23, 1908

Map of the Sky Region 33 $22^h 0^\circ$

Count of Stars

Plate AM 3851.

Regions more than 15° from centre.

n f	s f	s p	n p
2	3	6	5
6	1	6	4
8	3	2	2
3	5	3	1
3	4	8	4
9	5	3	1
4	5	4	4
6	3	4	4
2	4	2	7
9	4	0	1
6	3	1	7
4	3	3	3
12⟌62 5.2	12⟌43 3.6	12⟌42 3.5	12⟌43 3.6

493
15.8
3944
2465
493
7789.4

48)190(3.96
144
460
432
280
288

4
15.84

Count of Stars

Within 5° of centre	2590	33.0 to sq degree	n.f. 5.7	s.f. 8.7	s.p. 9.0	n.p. 9.7
5° to 10° from centre	9074	38.5 " " "	7.1	8.9	11.9	10.6
10° to 15° " "	11545	29.4 " " "	6.5	5.1	~~9.5~~ 8.3	9.5
Remainder of Plate	7789	15.8 " " "	5.2	3.6	3.5	3.6

Total within 15° of centre 23209
" outside " " " 7789
30998

* Toward the end of above observations I found that reticule was in bad focus. Many defects in reticule may be included in above set. Repeat another time

Tuesday, May 26, 1908

Map of the Sky, Region 33 22h 0°

Plate AM 821 superposed on D 12980 (= AM 3851)

This plate was the first superposed for this region. After a few images had been marked, it seemed to be rather poor and was not finished. In taking averages for the region therefore, this plate is to be omitted, and only the four already recorded used.

Rediscovered No. 381

Var Br Ft

~~399~~ 821 3851

400 [9.8] 805 4588 (5117) [12.0] 3626 3660 3723 3899
5128 4341 4965 (seen) 5006 (seen)

Period probably long

401 3851 5006 [9.9] 4984 821 5117 [10.6] 805 5128
4.965 [9.8] 3899 3723 3660 1473 1456
1525

On Plate AM 821, superposed on D12980 (= AM3851) were discovered Nos. 400 and 401. No. 381 was re-discovered. Saturn was also noticed.

Total 2 new
1 known
0 sus
Saturn

Wednesday, May 27, 1908

Map of the Sky Region 33 22h 0°
Count of Stars.

Plate AM 3851

Central Section 0° to 5° from centre

n.f	s.f	s.p	n.p
10	6	6	8
10	8	15	6
8	10	12	13
3⌊28	3⌊24	3⌊33	3⌊37
9.3	8.0	11.0	~~12.3~~ 9.0

12⌊122 ~~10.2~~ 9.33 40.68 37.32 sq. degree

78.5
37.3
2355
549.5
235.5
2928.05
78.5
40.7
549.5
3140
31949.5

Section 5° to 10° from centre

12	9	13	4
7	7	10	5
4	7	9	7
9	9	3	6
7	5	8	10
9	9	5	9
5	9	6	3
5	11	11	5
8⌊58	8⌊66	8⌊65	8⌊49
7.25	8.2	8.1	6.1

sp np st

235.7
29.8
18856
21213
4714
7023.86

32)238(7.44
224
140
128
120
29.76 to sq degree

Section 10° to 15° from centre

n.f	s.f	s.p	n.f
9	5	7	5
8	5	5	7
5	6	3	8
8	4	6	7
5	6	6	9
8	4	5	9
6	7	5	7
6	4	5	9
4	5	4	5
4	6	4	10

6.3 5.2 5.0 7.6

392.7
24.1
3927
15708
7854
9464.07

40⌊241
6.02
4
24.1

Wednesday, May 27, 1908

Map of the Sky Region 33 22h 0°

Count of Stars Continued
AM 3851

Region more than 15° distant from centre of plate.

n f	s f	s p	n p
5	2	6	4
0	4	5	5
6	3	2	5
6	3	2	4
0	5	3	8
2	3	4	7
3	2	4	4
2	2	1	3
4	1	6	4
8	2	2	3
7	4	4	2
11	6	4	7
12)45	12)37	12)43	12)56
4.0	3.1	3.6	4.7

493
15.2
986
2465
493
749.36

48)183(3.8
144
390
384

4
15.2

Count of Stars

Within 5° of Centre	~~3195~~ 2928	40.7 to sq degree	n.f. 37.2 9.3	s.f. 34.8 8.7	s.p. 44.0 11.0	n.p. 36.0 ~~12.3~~ 9.0
5° to 10° from "	7024	29.8 " " "	28.8 7.2	24.4 6.1	32.8 8.2	32.4 8.1
10° to 15° " "	9564	24.1 " " "	25.2 6.3	20.8 5.2	20.0 5.0	30.4 7.6
Remainder of Plate	7494	15.2 " " "	16.0 4.0	12.4 3.1	14.4 3.6	16.8 4.7

Total within 15° of Centre 19516
outside " " " 7494
27010

Tuesday, October 27, 1908

Map of the Sky, Region 39 10h −30°

Plate AM 1419 superposed on D 13004 = AM 3570 Sequence for y Hydrae. Magnitudes as in Vol. 47 for brighter stars, but faint stars as follows. h = 10.4 k = 10.7 l = 11.2 m = 11.8

Var	Br	H
402	1419 [9.5] 1898 1945	3510 [10.2] 4677 1788 2642 [10.4] 2741 [10.7] (3299) 1715

Per. prob. long.

403 3510 [10.2] 4805 5437 1419 [11.0]
3299 2741 2642

Continued p. 162

Wednesday, October 28

Map of the Sky Region 39   10^{h} -30°

Var   Br   H

403 (cont)   am 4098 4133 4185 4225   4352) 5400 (2m dif?)
4287 3320 (good)   4076 [n.s. < 12.0]

An $\overset{11}{\cancel{12}}$th magnitude star is south of and preceding the variable at a distance of about 3′.

This star appears to be of the algol type. Faint on 4 out of about 40 plates examined.

See also page 205.

404   1419 [7.5] 1380 [7.0]   3510 [<12.0] 1898
1294 [>7.0] 1173 [7.5] 1185 [7.0]   1144 [n.s. <12.0] 1630 [seen, 12.0?]
1197 [7.0] 1217 [>7.0] 1316 [7.0]

Probably a Nova. Get out spectrum plates

× 405 $\overset{510}{3690}$ 1144 [9.7]   1419 791 1715 1788 [10.5]

Difficult. Probably varies slightly. Do not announce

√ ×. 406   3510 [10.0] 1945   1419 [10.5] 1788 [10.6]

Difficult. Do not announce

Confirmed on B plates; see page 191

√ × 407 $\overset{1419}{\cancel{3510}}$ [9.1] 791 $\overset{3510}{\cancel{1419}}$ [9.6]

408   1419 [8.5]   3510 [<12.0]
see page 164

Friday, October 30, 1908

Map of the Sky, Region 39   10^{h} -30°

Var   Br   H ~~3532~~

√ × 407 cont   4200 4030 3377 4069 3476   3532 5381 5309
32$\overset{2}{\cancel{2}}$3 4677

Probably a variable of the Algol or β Lyrae type. Does not seem to be constant in brightness when near maximum. Range small. Do not announce at present, but measure up with other variables

Announce. See page 207

Saturday, October 31, 1908

Map of the Sky. Region 39 10h −30°

Var Br Ft

408 1419 [8.5] 1282 [9.0] (3223) 3510 [<12.0] 4200 2112 3457 3476 3532
(4030) 4805 4819 4874 [7.7] 4766
Period probably long

409 1419 [9.5] 4030 [9.3] 4805 3510 [<12.0] 3532 3476 3457 2112
4200
Period probably long.

X 410 3510 4200 4030 4819 1419 2112 3476 4677
Variation slight though probably real. ~~Do not announce~~ See next page

X 411 1419 [9.3] 4805 3510 [<12.0]
Film seems to be defective on AM 3510. The star shows no perceptible change on about 20 plates and is probably not variable

Y Hydrae X 412 1419 3510
Known Change slight on these 2 plates. Known, 094622

413 3510 [9.4] 3532 3451 3476 1419 [<12.0] 1898 1922 791 380
2722? 2741 5437 3223 2477 4677 4805
Probably a variable of long period

X 414 3510 [10.0] 3299 380 791 1419 [<12.0]
1898
Examined on about 60 plates. Faint only on AM 1419 Do not announce
Does not appear to be defective on AM 1419: ~~Do not~~ Mention in Circular?

Monday, November 2, 1908

Map of the Sky Region 39 10h −30°

On plate AM 1419 superposed on D 13004 = AM 3510 were discovered Nos. 402-414, of which Nos. 405, ~~406~~, ~~407~~, ~~410~~, 411, ~~412~~ and 414 are suspected. No. 412 is the known variable 094622, ~~S Antliae~~ Y Hydrae

Total 9 ~~7~~ ~~8~~ new
1 known
3 ~~5~~ ~~4~~ suspected

Br Ft
410 B 28882 [9.2] B 26787 22839 (26979) On B 26787 [10.0]
Certainly variable. Announce. Noticed bright on B 28882 when marking for identification; see also page 167.

100229
10 2 14 −29 35.1 (1900) HC 179
H 3356
Per. J.D. HC
Max. Min.
Br. 9.3 Obs.
Ft. <12.0 Comp. Stars on meas.
L 2840 No. 409 Ident.

Saturday, October 31, 1908

Map of the Sky. Region 39 10h -30°

Var Br It

408 1419 [8.5] 1282 [9.0] (3223) 3510. [<12.0] 4200 2112 3457 3476 3532
(4030) 4805 4819 4874 [7.7] 4766
Period probably long

409 1419 [9.5] 4030 [9.3] 4805 3510 [<12.0] 3532 3476 3457 2112
4200
Period probably long.

X 410 3510 4200 4030 4819 1419 2112 3476 4677
Variation slight though probably real. ~~Do not announce~~ See next page

X 411 1419 [9.3] 4805 3510 [<12.0]
Film seems to be defective on AM 3510. The star shows no perceptible change on about 20 plates and is probably not variable

y Hydrae X 412 1419 3510
Known Change slight on these 2 plates. Known, 094622

413 3510 [9.4] 3532 3451 3476 1419 [<12.0] 1898 1922 791 380
2722? 2741 5437 3223 2477 4677 4805
Probably a variable of long period

X 414 3510 [10.0] 3299 380 791 1419 [<12.0]
1898
Examined on about 60 plates. Faint only on AM 1419 Do not announce
Does not appear to be defective on AM 1419: ~~Do not a~~ Mention in Circular ?

Monday, November 2, 1908

Map of the Sky Region 39 10h -30°

On plate AM 1419 superposed on D 13004 = AM 3510 were discovered Nos. 402-414, of which Nos. 405, ~~406~~, ~~407~~, ~~410~~, 411, ~~412~~ and 414 are suspected. No. 412 is the known variable 094622, y Hydrae ~~[illegible]~~

Total 9 ~~7~~ 8 ~~6~~ new
1 known
3 ~~5~~ 4 ~~2~~ suspected

Br It
410 B 28882 [9.2] B 26787 22839 (26979) On B 26787 [10.0]
Certainly variable. Announce. Noticed bright on B 28882 when marking for identification; see also page 167.

Tuesday, November 3, 1908

Map of the Sky Region 39 $10^h - 30^\circ$

V Plate AM $2\overset{5}{\cancel{4}}64$ superposed on D 1304 (= AM 3510)

Var Br H

415 $2\overset{5}{\cancel{4}}64$ $\overset{\text{Jan. 5}}{1794}$ $[9.\overset{5}{\cancel{8}}]$ 1630 $\overset{\text{Dec. 9}}{1755}$ (8.0?) 3510 $\overset{\text{Dec. 3}}{1733}$ $[\overset{10.5}{\cancel{11.0}}]$ 1380 $\overset{\text{Jan. 16}}{1804}$ $\overset{\text{Dec. 5}}{1742}$

Estimates of brightness made on AM 1755 and 1733, which are at $9^h, -45^\circ$ with var. near center. Range probably greater than indicated above. Period short. AM 1733 Dec. 3, 1902 AM 1742 Dec. 5, 1902, AM 1755 Dec. 9, AM 1794 Jan. 5, 1902, AM 1804 Jan 16

~~X Hydrae~~
084047 H.C. 151
Found by A.J.C.

~~416~~

Wednesday, November 4, 1908

Map of the Sky Region 39 $10^h - 30^\circ$

Var Br H

× 416 3510 [9.0] $345\overset{1}{\cancel{7}}$ 3476 3532 403, 2441 2477 $2\overset{5}{\cancel{4}}64$ [<12.0] ~~(4129)~~

Film probably defective on AM 2564, though it appears nearly normal. The object is of constant brightness on about 60 plates examined. Do not announce. Possibly of Algol type.

417 2564 3299 1898 1922 [9.2] (380) 1945 3510 1804 [on 3510, 10.2] 791 3283 2800 2741 (2722)

Period probably ~~long~~ short – Oct. 30, 1912.

410 ~~418~~ 3510 [9.5] $\overset{\text{June 12}}{2741}$ [9.2] $(\overset{\text{May 7}}{1922})$ 2564 [10.3] (5437) $\overset{\text{May 16}}{1945}$ $\overset{\text{June 7}}{2722}$ 380 $\overset{\text{July 2}}{2800}$ 3283 791 3451

Period evidently short and maximum brief. Usually nearly uniformly faint.

× 418 2564 2521 2642 [10.5] 3510 [11.2] 4805

The southern star of a close pair by 0'.5. Too difficult for AM plates. Look up on B plates. Small on B plates – Probably real, but do not announce

Br. B 27386 H B 15841 22671

× 419 3510 [9.4] 1898 3299 2564 [10.0] 4874 5437 2722 1794

Doubtful Do not announce

× 420 3510 [9.0] 3527 3555 [8.5] ac 2059 2564 [< 11.0] 4805 4677 2642 5437 2503 [12.5]

X Hydrae Known, 09 3014

Wednesday, November 4, 1908

Map of the Sky Region 39 10h - 30°

Var	Br	Ht
x 421	3510 1922 1898 1794 791 380 4677 1885	2564 2595 2112) 2477 4874 2642 $\overset{ac}{4848}$ 2426 2434

Variation slight, but probably real 9.0 - 9.4
Do not announce

On Plate AM 2564, superposed on D 13004 (= AM 3510) were discovered Nos. 415 to 421, of which Nos. 416, 418, 419 and 421 are suspected. Nos. 407, 410, and 413 were re-discovered. No. 420 is the known variable 093014. No. 415 also known a.J.C. HC151

Total ~~2~~ 1 new
~~4~~ 5 known
4 suspected

Thursday, November 12, 1908

Map of the Sky Region 39 10h - 30°

Plate AM 4106 superposed on D 13004 (= AM 3510)

Re-discovered Nos. 407, 411, and 421

Var	Br	Ht
~~422~~		

Friday, November 13, 1908

Map of the Sky Region 39 10^h, $-30°$

Var Br Ft

422 3510 [9.5] 5437 791 [9.0] 2477 [9.2] 3283 — 4106 1794 1898 1922 2112 2642 [9.8] 4874 2722 [10.0] 2741 2800.

Period probably long. On the plates on which the variable was originally discovered difference is small

x423 3510 [9.1] 1945 [9.0] 1144 1788 — 4106 [9.5] 4874 2642 2112 1898 1922 3299 1715 4158

Variation slight, though probably real. Do not announce. There is a double star about 1.5 south

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Saturday, November 14, 1908

Map of the Sky Region 39 10^h, $-30°$

Var Br Ft

424 4106 — 3310

Known Var 103039 U Antliae

425 3310 — 4106

Known Var 092936

x426 3310 1898 1922 2112 [8.9] — 4106 [9.4] (3377)

Examined on about 40 plates. Certainly faint only on AM 4106. Image excellent on the latter plate. Perhaps an Algol variable with rare eclipses. Do not announce

x 427 3510 [9.6] 3299 5437 4158 — 4106 [10.1] 2595 (1945) 2722 [10.2] 2642 4874 2741

Variation seems to be real, but slight. Do not announce

x 428 4106 [9.1] — 3510 [9.6] 2800 2388

Does not show change on two plates. Image appears good on AM 4106 and certainly bright. Do not announce.

429 4106 [9.4] 1715 [9.5] 2477 4158 3283 5437 2642 — 3510 [9.9] 1788 [10.4] (2388) 4874 791

Monday, November 23, 1908

Map of the Sky Region 39 10h, -30°

Var	Br	F	H
X 430	3510 [9.7]	1898 [9.6]	4106 [10.1] 1945

Probably slightly variable. Do not announce

On Plate AM 4106 superposed on D 13004 (= AM 3510) were discovered Nos. 422-430, of which Nos. 423, 426, 427, 428 and 430 are suspected. Nos. 424 and 425 are the known variables, 103039 U Antliae and 092936 T Antliae. Nos. 407, 411 (Per. Def. Susp.) and 421 Susp. were re-discovered

Total
- 2 new
- ~~5~~ 3 known
- 5 suspected
- 2 susp. re-discovered

Thursday September 8, 1910

Map of the Sky, Region 39 10h, -30°

Count of Stars. Plate AM 3510

Central Section. 0° to 5° from Centre

n f	s.f s.f	s.p.	n.p.	
				78.5
				61
14	15	18	10	785
11	22	10	11	4710
16	22	19	15	4788.5
3⌊41	59	47	36	12)183
137	19.7	15.7	12.0	15.25 4
548	78.8	628	480	61.00 to sq. degree

Section 5° to 10° from Centre

nf	sf	sp	np	
8	13	16	11	
17	12	12	13	
8	18	19	13	235.7 15.8
17	14	15	20	18856
16	19	24	17	11785 2357
15	~~19~~	17	16	3724.06 4
11	20	27	8	14896.24
12	15	18	19	
10	16	33	20	
9⌊114	138	181	13.7	36⌊570
1.27	15.3	20.1	15.2	15.84 4
50.8	61.2	80.4	60.8	63.36

Thursday, September 8, 1910

Map of the Sky Region 39 10^h −30°

Count of Stars Cont.
Plate AM 3510

Section 10° to 15° from Centre

nf	sf	~~sp~~	sp	np
5	8		26	6
4	4		19	11
8	12		14	14
11	9		16	5
7	10		14	12
14	12		12	7
9	11		20	5
9	16		15	14
12	22		19	4
3	13		16	12
8	13		20	9
11	21		19	14
11	24		18	3
1	17		5	13
11	22		17	11
15 | 123	214		250	140
8.2	14.3		16.7	9.3
32.8	57.2		86.8	37.2

392.7
48.5
19635
31416
15708
19045.95

60 | 727
12.12
4
48.48

Thursday September 8, 1910

Map of the Sky Region 39 10^h −30°

Count of Stars Cont.
Plate AM 3510

Region more than 15° from centre.

n.f.	sf	sp	np
4	9	12	2
6	5	7	4
4	9	8	1
2	9	19	5
2	7	6	4
0	13	9	3
2	8	8	2
2	3	9	3
1	8	9	0
3	9	10	4
2	17	22	8
5	11	14	3
7	15	23	5
3	~~4~~ 14	12	3
5	10	7	1
15 | 48	147	185	48
3.2	9.8	12.3	3.2
12.8	39.2	49.2	12.8

493
28.5
2465
3944
986
14050.5

60 | 428
7.13
4
28.52

Count of Stars

			n.f.	s.f.	s.p.	n.p.
Within 5° of centre	4788	61.0 to sq. degree	54.8	78.8	62.8	48.0
5° to 10°	14896	63.3 " " "	50.8	61.2	80.4	60.8
10° to 15°	19046	48.5 " " "	32.8	57.2	86.8	37.2
Remainder of Plate	14050	28.5 " " "	12.8	39.2	49.2	12.8

Thursday, September 8, 1910

Map of the Sky Region 39 10^h -30°

Discovery of Variables

Plate	New Var.	Total found	Propor. New.	All	Prob. No.	Propor. Found	Prob. No Unknown	Propor. Unknown
AM 3510								
1419								
2564								
4106								
5374								

Within 15° of Centre

Plate								
510 ~~3814~~								
1419 ~~2087~~								
2564								
4106								
5374								

Distribution of Variables

Region	No. Stars	No. Var. Known	Proportion	No. Var. Found	Proportion	Prob. No.	Proportion
Within 5° of Centre	4788						
5° to 10°	14896						
10° to 15°	19046						
Remainder	14050						
0° to 15°	38730						
Entire Plate	52780						

Friday, August 26, 1910

Map of the Sky, Region 45 22h – 30°

Sequence for T Piscis Austrinus

Magnitudes as in Vol. 47 for a, b, c

a = 9.0 e 9.6 f 10.0 g 10.4 h 10.7 k 11.1 l 11.4 m 11.8 n 12.0 o 12.5

Plate AM 2087 superposed on D 12675 = AM 3814

Var	Br	H
431	3814 9.5 ~~(2087)(11)~~	2087 (10.9) 4247 5083 (n.s 11.5) 6357

An 11th magn. star is north preceding about 1'.

(4556) 4560 4622 4822 4395 4435 4516 (4672)

Known. S Monocerotis Sept. 4, 1910

Is this identification correct? S Mon. Not found variable by Pickering + Wendell. See H.A. 55, 1, 70

Is this S Microscopii? Yes

Period apparently long. Next max. 3814 (Aug. 19, 1905) Also 4560 (Sept. 10, 1906) Maximum seems to be brief. ~~Period about 385 days, or divisor thereof~~

Bright 4822 (May 10, 1907, 1548 (Sept. 20, 1902) 1668 (Nov. 3, 1902) 2749 (June 15, 1904) 2809 (July 5, 1904 (2859) July 21, 1904

The period is (evidently) short, as the variable was near maximum on June 15 and July 5, 1904, while in other years the variable was faint a few days before and after maximum. Bright also on AM 2704, 2779, and 2840 (June 3, June 23, and July 17, 1904. Perhaps brightness was continuous during this period in 1904. An interesting object.

432	Known 221938	T Gruis
433	Known 221230	R Pisc. Aust.
434	Known 221722	RT Aquarii

Friday August 26, 1910

Map of the Sky Region 45 22h – 30°

Var	Br	H
X435	3814 (7.5) 4228 4315 3705	2087 (10.5)
	3833 (multiple im throughout)	
	5124 " " "	
	5769 " " "	
	10.56 " " "	

Image probably defective on AM 2087. The star shows no change on about 50 plates

Var	Br	H
436	3814 (9.6) 1290 1281 933	2087 (10.2) 1062 (< 11.0) 1052 5787
	616 (9.2) 5079 5647	

On Plate AM 2087 superposed on D 12675 (= AM 3814) were discovered Nos. 431 – 436. No. 435 is probably defective on AM 2087 and not variable. Nos. 432, 433 and 434 are the known variables T Gruis, R Piscis Austrinus and RT Aquarii. No. 431 is the known var. S ~~Monocerotis~~ Microscopii.

Total ~~2~~ 1 ~~known~~ new

~~3~~ 4 known

1 susp. (prob. not var.)

Friday, August 26, 1910

Map of the Sky Region 45. 22^h -30°

Plate AM 4247 superposed on D12675

Var	Br	Ft
437	Known 221948 R Gruis	
438	Known 214247 S Gruis	
X 439	3814 (9.2) 5787 6418	4247 [9.8] 5134 182 165

Examination of about 30 plates shows slight fluctuations in brightness which are probably real. The evidence, however, is very uncertain. Do not announce

Announce See p. 210 X 440 4247 165 175 182 290 3814 483 6668 6617 6400 [10.5]
~~6617~~ 139 [10.0] 6349 5134

There seems to be a certain variation of about half a magnitude. Do not announce at present, but be sure to measure up.

On Plate AM 4247 superposed on D12675 (= AM 3814) were discovered Nos. 437-440, of which Nos. 439 ~~and 440 are~~ is suspected. Nos. 437 and 438 are the known variables 214$\overset{2}{5}$47 and 221948, R Gruis and S Gruis. Nos. 431 (Saturn) and 436 were re-discovered. Saturn was marked.

Total ~~2~~ 1 new
4 known
1~~2~~ suspected
Saturn

Friday, August 26, 1910

Map of the Sky Region 45. 22^h, -30°

Plate AM 5083 superposed on D 12675

Var	br	ft
441	5083 5079 5314	3814 4247 2779

On AM 5124, multiple image, the variable is constant during first part of exposure, then suddenly grows fainter and recovers. Algol Type?

AM 2949 again grows faint Exp 571^m 1-3 ft 4 normal 14- ~~9-11~~ 11-13
3833 changes 516^m 18 exp. exp 1,2 ft 7,8 brightest 13 ft 16-18 normal
5769 changes 424^m
14 images 1-8 normal 10 faintest 1~~1~~2 [illegible]
13 and 14 normal

Min. 8-12 not more than 2^h-

Apparently an Algol Variable or possibly β Lyrae type, with period of less than a day

AM 5124 Exp. 496^m 17 exp
1 slightly faint
4 faintest
11 brightest
17 rather faint

The period is probably not more than 8 hours
Range about 0.5 magn. from 9.5 to 10.0

Saturday, August 27, 1910

Map of the Sky, Region 45 22h, -30°

Var	Be	Ft
v ~~X~~ 442	3814 etc	5083 1065

Examination of about $\overset{6}{\cancel{2}}$0 plates shows this star to be of normal brightness. On AM 5083 and 1065 it shows a diminution of two or three tenths of a magnitude from its normal brightness, about 9.5. Near edge of Plate. Perhaps of the Algol type. ~~Do not announce.~~

35$\overset{8}{\cancel{5}}$8 6668

This is evidently an Algol variable, though the range is small, about 0.5 magn. Measure up and announce. Does not show change on 4 multiple-image plates.

See also page 190

Var	Be	Ft
x 443	5083 [9.5] 3659	3814 [10.0] (4684) (4622) 4576 2749

Variation probably real but very slight. Do not announce.

444 Known 221321 X Aquarii

447 Also 230330 Y Sculptoris (Marked on plate but thought not var. until identified.

On Plate AM 5083 superposed on D 12675 (= AM 3814) were discovered Nos. 441 - 444 and 447 Y Sculptoris, of which No. 443 is suspected. No. 444 is the known variable X Aquarii. Rediscovered Nos. 431 (S Micr.), 432 (T Gruis), 433 (R Pisc. Austr.), and 440 (~~susp.~~) ~~Sa~~ Saturn marked.

Total 2 new
6 ~~5~~ known
1 susp.
1 susp re-discovered
Saturn

Tuesday, August 30, 1910

Map of the Sky Region 45 22h, -30°

Plate AM 6351 superposed on D 12675 (= AM 3814)

Rediscovered Nos 431 (S Micr.), 432 (T Gruis), 437 (R Gruis), 441

Var	Be	Ft
445	3814 [9.6] (4863) 5079	6351 [10.6] (2749) 6391 6400 6349

Period probably long

Var	Be	Ft
446	3814 [9.0] 4315 4228 4395 4435 (4560)	6351 [9.8] 6349 6391 6400

Period probably long

On Plate AM 6351, superposed on D 12675 (= AM 3814) were discovered Nos. 445 and 446. Rediscovered Nos. 431 (S Micr.), 432 (T Gruis), 437 (S Gruis) and 441. Also marked Saturn.

Total 2 new
4 known
Saturn.

The known variables were marked on D 12675 and the 4 plates successively superposed. It was found that the known variables 210116, RS Capricorni 211345, T Indi and 222029 T Piscis Austrini showed variation though not discovered. In each case discovery would have been difficult.

Tuesday, August 30, 1910

Map of the Sky Region 45 22^h–30°

Count of Stars. Plate AM 3814
Made as before, except for numbers of regions. Make counts as follows.

Within 5° 3 in each quadrant
5°–10° 9 " " "
10°–15° 15 " " "

Remainder of plate
~~18~~15 " " "

Central Section 0° to 5° from centre

n.f	s.f	s.p	n.p.
7	7	7	5
4	4	8	8
4	4	4	6
3⌊15	15	19	19
5.0	5.0	6.3	6.3

12⌊68
5.67
4
22.48

78.5
22.5
3925
1570
1570
1766.25

Section 5° to 10° from centre

n.f.	s.f.	s.p.	n.p.
3	5	10	9
4	9	9	4
6	4	8	7
7	9	8	8
6	7	8	12
11	7	6	3
2	5	11	9
3	6	4	11
9	8	4	6
9⌊51	60	68	69
5.7	6.7	7.6	7.8

235.7
6.86
14142
18856
14142
1616.902
4
6467.608

36⌊247
6.86
4
27.44 to sq degree

Tuesday, August 30, 1910

Map of the Sky Region 45 22^h–30°
Count of Stars Cont.

Section 10° to 15° from centre

n.f.	s.f.	s.p.	n.p.
~~5~~ 6		4	3
~~5~~ 2	6	8	4
~~6~~ 3	1	7	6
~~4~~ 5	0	8	4
~~4~~ 8	4	6	6
~~7~~ 4	3	3	7
~~5~~ 6	4	6	3
~~4~~ 1	6	10	3
~~11~~ 3	5	8	11
~~11~~ 3	9	2	5
~~5~~ 9	10	4	7
~~5~~ 2	7	9	2
12⌊52	55	75	61
4.3	4.6	6.2	5.1

48⌊243
5.06
4
20.24

392.7
20.2
7854
7854
7932.54

Map of the Sky Region 45 22^h, -30°

Count of Stars Cont.

Regions more than 15° dist from centre

n.f	s.f	~~A~~ s.p.	n.p.
1	5	5	1
1	2	3	5
4	6	2	4
3	4	4	2
4	5	5	3
3	1	1	1
3.	1	3	3
1	1	4	4
0	3	3	5
0	3	1	0
3	3	2	0
7	1	5	2
2	4	3	1
3	5	4	1
0	4	2	4
15)35 2.3	42 2.8	47 3.1	36 2.4

4.93
10.7
3451
493
5275.1

60)160
2.67
4
10.68

Count of Stars

All Var	Rediscovered	New Var.				n.f.	s.f.	s.p.	n.p.
3	1	0	Within 5° of centre	1766	22.5 to sq. degree	~~5.0~~ 20	20.0	25.2	25.2
9(-3)	~~2~~ 3	5(-3)	" 5° to 10° " "	6468	~~20.2~~ 27.4 " "	22.8	26.8	30.4	31.2
11	0	3	10° to 15° " "	7933	20.2 " "	17.2	18.4	24.8	20.4
~~9~~ 10	2	1	Remainder of Plate	5275	10.7 " "	9.2	11.2	12.4	9.6
33(-3)	6	9(-3)							

Total within 15° of centre 16167
" outside " " " 5275
~~21842~~
~~21442~~
21442

Map of the Sky, Region 45. 22^h, -30°

Discovery of Variables

Plate	New Var.	Total found	Propor. New	All	Prob. No.	Propor. Found	Prob. No. Unknown	Propor. Unknown
Am 3814	.	.	.	~~25~~ 4	.	.	.	.
2087	~~2~~ 1	5		~~27~~ 5 6	~~42~~ 0	.12	~~15~~ 4	~~.36~~ 5
4247	0	4		~~27~~ 5 ~~6~~	~~27~~ 6	.15	0	.00
5083	2	6		~~27~~ 7 8	~~40~~ 39	.15	11	.28
6351	2	6		~~31~~ 29 8	~~44~~ 2	.14	~~13~~ 2	.30
All	~~8~~ 7 5	12		~~31~~ 29 0	~~50~~ 48	~~.24~~ 5	~~19~~ 8	.38

Within 15° of Centre

Plate	New Var.	Total found	Propor. New	All	Prob. No.	Propor. Found	Prob. No. Unknown	Propor. Unknown
3814	.	.	.	15	.	.	.	.
2087	~~2~~ 1	5		~~17~~ 6	25	.20	8	.32
4247	0	2		~~17~~ 6	17	.12	0	.00
5083	1	5		~~18~~ 7	22	.23	4	.18
6351	2	5		~~20~~ 19	30	.17	10	.33
All	5	9		~~20~~ 19	34	.27	14	.41

Distribution of Variables

Region	No. Stars	No. Var. Known	Proportion	No. Var. Found	Proportion.	Prob. No.	Proportion
Within 5° of Centre	1766	3	1 in 589	1	1 in 1766		
From 5° to 10° "	6468	6	" 1078	5	1 in 1294		
10° to 15°	7933	11	" 721	3	" 2644		
Remainder	5275	10	" 528	3	" 1758		
0° to 15°	16167	~~20~~ 19	" 808	9	" 1796	34	1 in 475
Entire Plate	21442	~~30~~ 29	" 715	12	" 1787	48	" 447

Thursday, September 1, 1910

Map of the Sky Region 39 $10^h, -30^\circ$
Continued from Page 172

Plate AM 5374 superposed on D13004 = AM 3510

Var	Br		H	
448	Known 095141			
	Rediscovered also Nos. 407, 408, 412, 413, 420, 424, 425			
X 449	3510 ~~5374~~		~~3510~~ 5374	
	Variation slight. Do not announce. Possibly of the Algol type.			
450	3510 4030 3451 3377 2521 3342		5374 3532 3476 3316	
	Period short, Var. about a magn. max. about 8.0			
451	5374 (2800)	(2521) 5363 10.0 - 30	3510 4030 3532 3476 2741	345~~7~~1 3377 changed Jan. 21, 1913
	Period probably long Variation about a magnitude - Maximum about 8.5 Get better magnitudes for 450 and 451			
X 452	3510 [$\overset{8.0}{7.5}$]	5363 5977	5374 [$8.\overset{5}{8}$]	
	Image probably defective on AM 5374 Do not announce.			
453	3510 [9.6] 2741 2595	2564 (1419) 2800 2521 4005	5374 [10.6] 4200	4129
	Period probably long			
~~X~~ 454	4069 3510 [9.8] 1419	4129 4805	5374 [10.6] (2595) 5363	? 1804
	~~Probably~~ Possibly of the Algol type		Do not announce unless more certainly confirmed	

Known 084146 - Velorum

Already susp.

Friday, September 2, 1910

Map of the Sky Region 39 $10^h, -30^\circ$

Var	Br		H	
454	This star shows changes of half a magnitude or more. The extremes are well illustrated on Plates AM 3510, 1419 (maximum) AM 5374, 5363 (minimum). For intermediate brightness see AM 2564, 2595. Have some one confirm.			
X 455	3510 [9.6] 1804 1833 2595 2741 4874		5374 [10.2] (5934) (1282) (3457) 2521 4200	
	Variation probably real, but difficult to observe. Do not announce			
X 456	3510 [8.0] 4766 3532 2441 380		5374 [8.8] 4874 3377 3225 2800 2741 2722 2595 4030	
	Variation slight, though apparently real. Do not announce. Do not fail to measure up.			

On Plate AM 5374 superposed on D13004 (= AM 3510) were discovered Nos. 448-456, of which Nos. 449, 452 455 and 456 are suspected. No. 448 is the known variable 095141 (X Velorum) Rediscovered Nos. 407, 408, 412 (Y Hydrae), 413, 420 (X Hydrae) 424 (U Antliae), 425. T Antliae

No. 450 is Known 084146 - Velorum (Disc. by in)
No. 451 was suspected by W.P.F. in 1908

Total ~~4~~ 2 new
10 ~~8~~ known
4 suspected

No. 454 Variability confirmed on AM. 3510, 1419 2595 & 5374 L. D. Wells. Sept. 2 1910

Wednesday, September 14, 1910

Map of the Sky Region 45 22^{h} $\frac{-30^{\circ}}{-45^{\circ}}$

Variable 442

Plate AM ~~3814~~ 3032 ~~16~~ 18 exp

exp 1 $\star^{b}$ 4 v 2 $\star^{c}$
2 $\star^{b}$ 4 v 2 $\star^{c}$
3 $\star^{b}$ 4 v 2 $\star^{c}$
4 $\star^{b}$ 5 v 1 $\star^{c}$
5 $\star^{c}$ 1 v 3 $\star^{d}$
6 $\star^{c}$ 1 v 3 $\star^{d}$
7 $\star^{c}$ 2 v 1 $\star^{d}$
8 ~~$\star$ 3 v~~ $\star^{d}$ 1 v 2 $\star^{e}$
min. 9 ~~$\star$ 5 v~~ $\star^{d}$ 3 v 0 $\star^{e}$ 3 $\star$ not in seq.; double
10. $\star^{d}$ 3 v 1 $\star^{e}$
11 $\star^{d}$ 3 v 1 $\star^{e}$
12 $\star^{d}$ 2 v 2 $\star^{e}$
13 $\star^{d}$ 1 v 3 $\star^{e}$
14 $\star^{d}$ 1 v 3 $\star^{e}$
15 $\star^{c}$ 1 v 1 $\star^{d}$
16 $\star^{b}$ 4 v · 1 $\star^{c}$

8.4	b			0.00
		6 6 6 6 5	5.8	
8.6	c			.58
		4 4 3 2	3.2	
8.7	d			.90
		3 3 4 4 4 4	3.7	
9.2	e			1.27

Plate AM 4572 17 exp.
Shows no change

Wednesday, September 14, 1910

Var. 406 Suspected on AM Plates.
Found certainly variable on the following B plates

Br	Ft
B10928 15754	B22776 18424

Wednesday, May 22, 1912

Map of the Sky Region 15h, -90°

Plate AM 3606 superposed on D 14644 = AM 26~~56~~25

Var Br Ft

T Octantis 45~~6~~7 3606[10.0] 2656[11.2

Evidently known, as reg. is marked on some plates.

X 45~~7~~8 3606 [10.6] 2656 2157 On 2656 10.9

Variability very doubtful. Do not announce

The object marked is a defect

45~~8~~9 3606 [11.0] 2656[11.5?]

B30246 19409 19568 [10.5] B24367 n.s. < 14. 31354

4~~59~~60 3606[9.8] 4491 4999 14 2656[10.6] 1459 1958 1277 4963 4918

(5027) 4936 4947

459 460

U Octantis 46~~0~~1 3606 [10.7] 4491 1277 [10.0] 3234 2656 [<11.4] 4999 14 4963 4918

4936 4947 5027

On Plate AM 3606 sup. on D 14644, were discovered Nos. 456-460. No. 457 varies very slightly and is doubtful. Not to be announced

Nos. 457 and 461 are T and U Octantis.

Total 2 new
2 known
1 suspected

Friday, May 24, 1912

Map of the Sky 15h - 90°

Plate AM 1277 Sup. on D 14644

Var Br Ft

462 2656 [<8.6] (1958) 1277[~~8.6~~] 11.0 5578 14 4947 4936

4918

Period probably long. Known?

R Chameleon. 463 2656 [10.] (1958) 1459 1277[<11.] 4963 ~~1958~~ 4999 3606

4918 4936 14

Period prob. long.

On plate AM 1277, superposed on D 14644 = AM 2656 were discovered Nos. 462 and 463. Also No. 457, T Octantis, No. 463 is R Chameleon.

Total 1 new
2 known

Monday, June 3, 1912

Map of the Sky 15^h, −90°

Plate AM 4999 sup. on D 14644 = AM 26~~56~~25

Var Br Ft

X 464 2656 3606 4387 4991 4999 5020 4963 [11.1]
2656 [10.8] 4999 [11.0

Variation probably real, but difficult to observe. Do not announce, but measure.

Nos 457, 458 (defect), 463, 460, S Octantis marked

465 2656 1277 1459 1958 4999 3606 [<11.5] 4918
2656 [10.6] B 10881 < 13.0

X 466 4999 2656 1277 ~~3606~~ 1459 1958 4918
Seen bright only on AM 4999 and does not vary more than 0.2 magn. Do not announce

467 4999 [11.0] 4963 2656 [<11.5] 3606 1277
B18947 [11.0] B25644 37687 (seen)
59836 [<13.] 27172 [<13.5]

Period probably long.

468 4999 2656
S Octantis

Tuesday, June 4, 1912

Map of the Sky 15^h, −90°

Var Br Ft

~~X 469 4999 [11.0] 2656 [11.5]~~ 70
B18947 27172 30246 37687 19568

Prob. not variable. Shows no changes on B plates.

~~X 470~~ 69 4999 3606 1277 2656 ~~1277~~
~~Probably~~ The image on AM 2656 is defective

announce ~~X 471~~ 469 ~~70~~ 2656 1985 3606 ~~1277~~ 4999 1277
Look up on B plates.
AM 2609 B$\overset{3}{5}$-7671
B12499
Almost certainly variable. Measure, but do not announce until further looked up.
Probably of the Algol type.

B41341 (26286) 28407 15593
30537 42220 9162 (6294)
32621

Certainly variable. Range from 10.0 to 10.6 ?. Too near edge to estimate magnitudes with certainty

On Plate AM 4999 sup. on D14644 = AM 2656 are discovered Nos. 464–469. No. 468 = S Octantis. Nos 457, (T Oct.), 463 (R Cham.) and 460 are rediscovered. Nos. 464 + 466 susp.

Total 3 new
4 known
2 susp.

Friday, June 14, 1912

Map of the Sky 15^h, −90°

Plate AM 1459 superposed on D 14644 = AM 26^{25}

Var Br. Ft.

Rt

Re-discovered Nos 458 (defect) and 462.

~~470~~ None of the other objects marked are variable

Superpose another plate?

Omit AM 1459 from discussion.

~~Octa~~ South Pole

Plate B 29157 sup. on D 14717 = B 30246

~~470~~ Br Ft

√[11.5] √[13.0]

470 29157 23242 20781 30246 24367 (31354) (20426) 22764

26989 25041

Maximum must be very brief, as the majority of the plates show var. faint

X 471 29157 22764 30246 31354 24367

Seems to be really variable but with a range of only about 0.3 magn. About the 13th magn. Do not announce

On Plate B 29151 found S Octantis, and Nos. 470, 471, of which the latter is suspected.

Total 1 new

1 Known

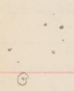
1 suspected

Thursday, June 27, 1912

South Pole

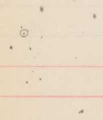
Plate B24367 sup. on D14717 = B30246

Var	Br		H
× 472	24367		30246 29157 20426 22764



Variation very small though probably real. It appears much brighter (0.3 magn.) on B24367 than on other plates. Do not announce.

473	24367✓ [12.] 32831✓ 3657		30246✓ [< $\overset{3}{14}$] 19568✓ 21778✓ 19409✓
	20426✓ [10.2]		23242✓ 25041✓ 31354✓ 22764✓



On Plate B24367, found Nos. 472 and 473, of which 472 is suspected. Also 493 (see p. 215)

Total ~~1~~ 2 new

1 suspected

Thursday, September 26, 1912

Count of Stars on Plate AM 2625
Map of the Sky, 15^h $-90°$

Central Section 0° to 5° from Centre

3^h to 9^h	9^h to 15^h	15^h to 21^h	21^h to 3^h		
10	11	12	11		78.5 38.3
6	9	11	9		2355 6260 2355
8	9	10	9		3004.55
3⌊24	29	33	29	12⌊115	
8.0	9.7	11.0	9.7	~~9.58~~ 9.58 4 38.32	

Section 5° to 10° from Centre

4	5	19	6		
2	10	7	4		
5	6	11	6		
7	5	7	7		
7	14	9	6		235.7 32
4	8	7	5		4714 7071
12	11	5	5		7542.4
12	16	4	9		
8	19	6	10		
9⌊61	94	75	58	36⌊288	
6.8	10.4	8.3	6.4	8.0. 4 32.0	

Map of the Sky 15h −90°

Count of Stars Cont.

10° to 15° from Centre

3^h to 9^h	9-15	~~15-21~~	15.21	21-3
1	9	~~8~~	16	4
3	1	~~12~~	12	4
0	2	~~13~~	9	5
2	7	~~6~~	7	2
0	3	~~7~~	7	2
1	4	~~4~~	2	4
4	9	~~8~~	7	0
4	6	~~4~~	7	4
1	3	~~8~~	6	2
1	14	~~2~~	4	2
2	7	~~5~~	3	0
3	9	~~4~~	4	2
4	11	~~9~~	6	1
3	4	~~6~~	6	3
8	12	~~1~~	9	6
15)37	111		105	41
2.5	7.4		7.0	2.7

60)294
4.9
4
19.6

392.7
4.9
35343
15708
1924.23
4
7696.92

All Radii. New

Count of Stars.

			3-9	9-15	15-21	21-3
Within 5° of Centre	3004	38.3 to sq. degree	32.0	38.0	44.0	38.0
5° to 10°	7542	32.0	27.0	41.6	33.2	25.6
10° to 15°	7696	19.6	10.0	29.6	28.0	10.8
Remainder of Plate	~~4981~~ 5010	$16.\overset{9}{8}$	·	16.8	17.2	·

Map of the Sky −90°

Count cont.

More than 15° from Centre

3^h to 9^h	9-15	15-21	21-3
	7	6	
	6	6	
	1	2	
	2	6	
	2	8	
	6	6	
	4	5	
	3	3	
	4	3	
	3	5	
	5	1	
	3	4	
	4	1	
	5	4	
	8	4	
	15)63	64	
	4.2	4.3	

30)127
4.23
4
$16.\overset{9}{8}2$

0.5 of 493 =
296.5
16.8
23720
17790
2965
4981.20
+0.1 29.65
5010.85

From 21 hours to 9h, the field is cut off and there are very few stars.

Saturday, September 28, 1912

Map of the Sky −90°

Plate AM 6611 superposed on D14644 = AM 2625

Centre at 18^h, +90° Redisd. 460, 464

Var Br H

B23188 × 474 6611 4491 6616 4356 4387 4918 2625 (1958 ?)
6413 2195 2766 1685

Probably not variable, though possibly of the Algol type. Change from 10.8 to 11.1

B26254 475 6611 [10.1] (1685) ~~4356~~ 6413 2625 ~~4356~~ [10.9] 2383 2139 2088 2530 4387
4918 6616 [9.9]

Period probably long.

B23188 26659 476 2625 [10.5] 6611 [11.3]

On AM 6611 superposed on D14644 = AM 2625, were discovered Nos. 474–481. Nos 460 (susp.) and 464 (susp) re-discovered. Nos. 474 and 479 doubtful. No. 481 almost certainly var. but not to be announced until more surely confirmed. 475

Total 5 new
3 suspected
1 known
1 already suspected.

Tuesday, October 1, 1912

Map of the Sky −90°

Plate AM 6611 Cont.

Var Br H 6616 4491 4918 (6413) 2766 1958

476 cont. 4387 2157 (1032) 1449 (July 10) 2088 2139 1943 1047 1430 (July 7) 1459

Period evidently short. Maximum probably very brief. Possibly of the cluster type.

B30484 17567 477 2625 (2139) 1685 6413 6611 1459 1449 1430 1277 1032 2088 1958
(4491) 2766 6616 4350 4387

On 2625 [10.0] on 6611 [11.3] On B30484 n.s. < 14.0

Period probably short [?!] These observations would give period about 272 days

B17567 478 6611 6413 4356 (1958) 2625 4491 (2088) 2139 (1032) 1047
1277 1430 (4387)

Range from about 10.8 to < 11.3

Note chart p. 204 Look up on B plates See p. 204

B30332 × 479 6611 1449 1430 2625 4387 (1277) 1176

Variation very doubtful. Do not announce. Apparent change about 0.4 magn. Max. 10.5. Perhaps of the Algol type. Measure

Announce
B30332 23548 × 480 2656 4491 1214 3042 6611 1300 1882 3400 3432
3113 On 2656 [10.4 On 6611 [10.8]

Variation certainly real, though small. Do not announce, however, unless a larger range is found.

See page 204

Thursday, October 3, 1912

Map of the Sky −90°

Further Observations of New Variables

Var	Br	Ft
477	~~B19389[11.1]~~ B26275, 40775 17567	B19389, 23548 29767 36117 30332 22939

This star probably has period of about 272 days.

Var	Br	Ft
478	B26275 [10.2] (40~~777~~775) (26659)	B19389 [11.1], 23548 29969 36117 22939 17567

Announce Range from 10.2 to 11.1

Var	Br	Ft
479	B19389, 23548	

Var	Br	Ft
480	B23548 [10.6] 29769 [10.5] 36117 40~~777~~775 30332	B19~~4~~389 [11.4] 26275 [11.2] ~~[19389]~~ 17567

Announce Range from 10.5 to 11.3

	Var	Br	Ft
B33951	X481	am 6611 B33951 [11.7] 39422 [11.6] 22887 26049	am 2625/1032 B6283? ~~1628~~ 20443 [12.1]

Certainly variable and probably of the Algol type. Do not announce on account of faintness and small range, but announce with others. Too difficult for am plates.

Monday, October 28, 1912

11 20 Variable 403 – Examination to find dates of Minimum

am 1419	11.0	
3223	>11.2	
2112	10.1?	
1922	10.0?	
4076	>12	
2562	10.1?	
1850	>11.5	
1341	10.8	
1169	>11.2	
5400	11.0?	Im. defective
4352	10.6	
~~2718~~		

B25055	10.7	
15583	10.7	
10659	10.7?	extreme edge
33258	12.5?	extreme edge
22806	>10.5	" "

Tuesday, Oct. 29, 1912

24766	10.3?	near edge
26997	12.1?	

Tuesday, Nov. 4, 1912

am 1419	11.5?	near edge, poor opt.
am 5400	11.0?	Im. defective. Possibly a defect covers position entirely.

On the following plates, the variable is at or near its normal brightness:–

am 2722
am 2595
am 2564
am 2521
am 2477
am 1833
am 1804
am 1794
am 1788
am 1715
am 1294
am 1282

am 1232
am 1144
am 791
am 779
am 4819
am 4805
am 4677
am 4240
am 4200
am 4158
am 4129
am 4106

am 4069
am 4030
am 3532
am 3476
am 2441
am 2388
am 1945
am 1898
am 6109
am 6099
am 5934
am 5437

am 5437
am 5374
am 4874
am 743
am 3451
am 3477
am 3299
am 3283
am 2800
am 2741
am 8340
am 8321

am 8313
am 7406
am 6965
am 6959
am 6923
am 6904
am 6900
am 6167
am 6153
am 6148
am 3353
am 3320

continued on P. 206.

	Continued from page 205.			B27299	B41278
October 30, 1912.	am3320	am6083	am1996	B15798	B9226
a 2968.	am3271	am6066	am3718	B24896	B21004
a8611.	am3821	am5949	am8316	B27018	B21023
a8623.	am2742	am5932	am2605	B21554	B21011
	am2699	am5539.	am3510.	B12871	B22672
	am2667	am5381		B12870	B22811
	am4287	am5309		B33363	B18447
	am4225	am4848	B22778	B24710	B24675
	am4185	am4765	B35985	B22640	B24993
	am4133	am4720	B35495	B21214	B26985
	am4098	am1987	B24945	B18747	B33114
	am4015	am1858	B24946	B16504	B31287
	am3628	am1824	B21049	B15713	B2$\overset{9}{8}$873
	am3573	am1814	B22413	B5296	B33207
	am3556	am1771	B22670	B5178	B31449
	am3528	am1750	B26682	B27135	B31588
	am3469	am1370	B26878	B26982	B29354
	am3439	am1223	B11172	B29331	B33093
	am441	am837	B29159	B29172	B33783
	am430	am750	B31255	B31279	B41269
	am360	am2516	B31860	B28880	B35665
	am5432	am2502	B29328	B21021	B38505
	am6901	am2493	B26904	B26789	B38563
	am6860	am2428	B27298	October 30, 1912	B38662
	am6202	am2403	B33354	B13682	B39973
	am6210	am2077	B28953	B13194	B~~5~~38507
	am6121	am2056	B15843	B9225	B38567
				B27046	B38587
					B40112.

Wednesday, November 5, 1912

Examination of Difficult variables

	406	407	456
~~#06~~	Am 3143 9.9	Am 1419 9.1	Am 3510 8.0
	8321 9.9	1804 9.1	5374 8.8
	8340 9.9	1794 9.2	2477 8.7
	6099 10.2	- 1786 9.6	2521 8.7
	6109 10.1	1715 9.1	2564 8.8
	6148 9.9	- 6167 9.4	2595 8.8
	6153 10.0	- 5381 9.9	3532 8.2
	6167 10.1	5432 9.1	3476 8.6
	1788 10.6	5539 9.2	5437 8.7
	1794 10.5	4848 9.2	1833 8.6
	1419 10.5	- 5309 9.9	6167 8.5
	Certainly Var.	Certainly Var.	1715 8.8
		Announce	1788 8.6
		Algol type	1794 8.6
		3510 9.8	1804 8.6
		3451 9.1	6153 8.6
		3476 9.1	6148 8.5
		3532 9.9	6109 8.7
			6099 8.5
			8340 8.7
			8321 8.8
			4805 8.7
			1945 8.5
			4766 8.5
			2112 8.7
			2388 8.6
			2441 8.7

Prob. varies slightly.
Do not announce

Saturday, November 30, 1912

Map of the Sky Region 45 22^{h} - 30

Plate AM 2917 superposed on D 12675 = AM 3814
(Fifth plate superposed because examination of other seems not to have been thorough.

Re-discovered Nos. 431, 432, 436, 438, 445, 210816 (R S Capricorni)
210714 (-Aquarii) 215828 (S Pisc. Austr.)

Var Br F

X 482 2917[10.5] 1472[10.6] 1937[10.6] 3814[11.0] [11798] 11.1] 11816 6633
1974 2103[10.7] 2253 2262
11959 11968 4247
Variation certainly real but small and difficult to observe. Do not announce

X 483 2917[10.5] 1974 2281 3814[10.9] 2148 1328 1357
Same as No. 379
1455[10.3] 1377 1598.
Variation small, though probably real. Do not announce.

484 2917 [9.5 approx] 3814[< 12.0]
20583$\overset{3}{\cancel{4}}$ Discovered by Mrs. Fleming in 1910

485 2917[10.0] 5083 2087 4247 3814[11.0] 1709 [< 11.5]
6351 3010 3150 2749 1472 1917
1974 1939 2103 2281 2262
1668 1418 1440 1455 1290 1281
2859 2131 2148 2253
Evidently of the Algol type.

486 3814 [10.8] 1974 1939 2103 2917[11.1] 2281[11.3] 2859 2148$^{\text{July 23}}$ 1290
2131$^{\text{July 15}}$ 1455 [10.7] 2087

Monday, December 2, 1912

Map of the Sky Region 45 Cont.

Var Br F

486 Further examination shows that this star is unquestionably variable, though the range is small. Best seen on MC 1455 and 2281 Period apparently short

487 2917 5083 4247[11.0] 3150 3814[11.8] 1472 1455
2749 2281 2103 2148 2131 1440
Perhaps of the Algol type. Brightness appears to be constant on about 20 plates

X 488 2917 1455[11.0] 3010 3814[11.6]
Variation doubtful. Seems to be faint on AM 3814, but images are faint and poor. Apparently normal on about 20 plates. Do not announce

~~489 2917[10.2] 3814[11.5 <12.2] 5158 3010~~
~~Defect on AM 2917~~

489 3814 [9.] 1974$^{\text{May 29}}$ 2063$^{\text{June 22}}$[9.0] 2917 [10.] 2960 2253 4516 4395
~~2202~~$^{\text{Aug. 13}}$ 1928$^{\text{May 17}}$ 2102 July 6 6351 4247 1939$^{\text{May 14}}$ 2148$^{\text{July 23}}$ 2087 2131
2138$^{\text{July 16}}$ 1903 2007[10.5] 2170 2213$^{\text{Aug. 17}}$ (2202)
2230 2302 2262 2342 1938 May 14
2086 2123$^{\text{July 14}}$

On AM 2166, July 31, 1903, the im. of the var. is exactly superposed on another star which it somewhat exceeds when at max. The images grow brighter and fainter, with [illegible], at about the middle of the exp.

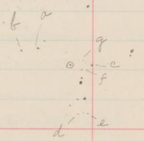
See page 211.

Friday, December 6, 1912

Map 45

Observation of Algol Var. No. 485

Am 4395	12.2? ✓	Am 3972	10.4 ✓
4516	n.s. < 11.9 ✓	3130	n.s. < 10.8 ✓
616	10.4 ✓	4622	10.4 ✓
4684	n.s. < 11.1 ✓	5092	F < 11.5 e ✓
2960	10.4 ✓	2868	n.s. < 11.8 e ✓
5079	11.5 ✓	3733	n.s. < 11.0 e ✓
1709	n.s. < 11.9 ✓	4275	n.s. < 11.0 e ✓
6466	11.5 ✓	5642	10.4 ✓
3850	10.3 ✓	4398	n.s. < 11.5 e ✓
4560	10.4 ✓	5159	F 11.7? e ✓
7049	11.3? ✓	6668	too poor ✓
7836	F < 10.9 ✓	6465	F < 10.8 e ✓
6418	10.4 ✓	4517	F < 10.8 e ✓
1496	F 10.8? e ✓	7135	F < 10.8 ✓
1982	F < 10.9 e ✓	3814	11.7 ✓
2317	n.s. < 12.0 e ✓		
2704	n.s. < 11.5 e ✓		
~~3972~~	~~10.4~~		



Prov. Seq

a 10.0
b 10.5
c 10.7
d 11.0
e 11.5
f 11.6
g 12.0

Observation of Susp. Var. 440

Am 3972	10.0	Am 6418	10.6	Am 2917	10.5
7836	10.2	4560	10.6	2087	10.5
7049	10.4	3850	10.8	6391	10.6
6466	10.2	1709	10.8	6400	10.6
616	10.2	5079	10.8		
2148	10.1	2960	10.6		
2131	10.1	4684	10.6		
5134	10.2	4516	10.6		
		4395	10.6		

Announce as Var.
10.1 to 10.6

Friday, December 6, 1912

Map 45

Observations of No. 489 (21044S Dec. Ld. see H.C. 152)

Am. 5765 Multiple im.

.10.2
⊙ .9.8 2

Comparison with following star mags. 9.2

Exp. 1	10.2
2	10.2
3	9.2
4	9.0
5	9.2
6	9.2
7	9.2
8	9.4
9	9.6
10	9.8
11	10.~~0~~2
16	10.~~6~~3
15	10.~~6~~3
14	10.~~8~~3
13	10.~~8~~3
12	10.~~6~~3

Am ~~5765~~ 3754 16 mags
Exp 1 and 2 and 3 near min.
~~Exp 3~~ 4 9.4
5 9.0
6 9.2
7 9.2
~~10~~ 8 9.6
12 10.0
15 near min.

Reject these estimates. See page 213.

Am 4500 Reject these est.
Exp. 18 near max See p. 212
1 near min.
9 near min.
16 faint
17 bz.

On am 996 grows bright about mid. exp. See p. 212
On 999 bright at beginning first im. near max. 9.0 last im. 10.2

Period apparently very short. Range large. Maximum extremely brief. Most interesting.

Friday, ~~November~~ December 6, 1912

Map 45 Var. $\overset{4}{\cancel{2}}$89 Cont.

AM 1056

Im. 2 9.6
3 9.8
4 10.0
5 10.2

Near edge images poor. certainly fairly bright at beginning

AM 2165

2 10.0

Others too poor

AM 999

1 $9.\overset{2}{0}$
2 9.4
last 10.2

Others too poor

AM 996

1 10.1
2 10.1
3-6 sup
7 9.5?
8 9.2?
9 9.5?
10 9.2?
11 9.5

AM 996 Cont.

Im. 12 9.5?

Remainder too difficult

Probably a maximum about the tenth im

AM 2225

Im 2 10.0
3-7 10.0
17 9.0
18 9.0?
16 9.2
15 9.8
14 10.0
13 10.1

Others superposed

AM 4500

Im 1 10.2
2 10.1
3-8 10.1
9-12 10.1
16 9.6
17 9.1
18 too ft.
15 9.9 ?

Saturday, December 7, 1912

Map 45 Var. 489 Cont

AM $37\overset{54}{\cancel{45}}$

Exp. 2 10.3
3 10.2
4 9.3
5 9.0
6 9.0
7 9.3
8 9.4
9 9.6
10 10.0
11 10.0
12 10.1
13 10.1
14 10.2
15 10.2
16 n.s.

This plate gives clear images well separated and is the only one of the multiple image plates examined on which good estimates were obtained

On Plate AM 2917 superposed on D 12675 = AM 3814 were discovered Nos. 482-489, of which Nos. 482, 483, and 488 are suspected. No. 484 is the known var. $20583\overset{3}{\cancel{4}}$ Disc by W.P.F., 1912
The known var. Nos. 431, 432, 436, 438, 445, RS Capricorni, 210714 - Aquarii, S Pisc. Austr.

Total, 4 new
9 known
3 susp.

No 483 is the same as No. 379, already susp on map 33.

Tuesday, April 29, 1913.

Var 490 This variable was found during the winter of 1913, when examining the magnitudes of the sequence of stars in Region K 45. This star was originally numbered 8, and was noticed to have been measured much fainter on MC 2282 than on MC 2317. Examination of a few AC plates by Miss Leland confirmed the variation. Miss O'Reilly examined it on a large number of AC plates, finding it of uniform brightness on about 300 plates, and faint on , thus showing it to be a variable of the Algol type. About 10.6 at maximum, and 11.6 at minimum.

Latest Number, 501 on South Pole plates.

Monday, February 8, 1915

South Pole

Plate B 39449 superposed on D 14717 = B30246

Var Br Ft

491 39449 B30246

Known Var. 055686 = R Octantis.

492 30246 [13.5] (20426) [13.7] 39449 [14.3] 24367 38998 37997 38187
31354 19568 19409 38478 38236 32831
9348 26997 18954 22764 35907
37237 25041

Maximum apparently very brief, as variable is uniformly faint on 18 out of 20 plates. No plates taken near enough the times of B 30246 and 20426 to determine whether period is very short.

493 30246 [12.0] (29157) 19568 39449 [13.0] (38998) (24367) (31354) 38187
(19409) (38478)

Discovered on B 24367 but change was so small it was not looked up further

494 39449 38187 38998 30246 38478 19568 31254
[On 39449, 13.0] [On 30246, 13.6]
On 38187, 12.8 On 38478, 13.6

Period apparently short.

Tuesday, February 9, 191~~4~~5

South Pole

B39449 Cont.

Var Br Ft

× 495 39449 [13.8] 37997 (24367) 30246 [14.3] 20426 38998 38236
25041 ~~[13.4]~~ 19568 38187 31354 38478 19409 38707
[On 37997 13.4] 16345 9348

This star seems to be certainly variable, but do not announce at present on account of its faintness and small range, which is probably smaller than the above observations indicate. Difficult on these plates. Measure up

× 496 This star is not variable

× 497 Not variable (double)

× 498 39449 20426 38998 38187 30246 29157 19409 16345
19568 38478 38707

Variation seems to be real but small (13.2 & 13.6) Do not announce, but measure up. Discovered independently on B 20426

499 30246 [11.5] 29151 [11.2] 39449 [12.3] 9348 16345 38236 38707
19568 (20426) 31354 38478 (38998) 24367 25041

Period probably long

504 39449 [12.3] (38998) 30246 [13.4] 25041 24367 37997
(38187) 19568 [11.2] (20426) 38478 (29151) 38707 16345
(31354) (19409)

Period probably long

On B39449 sup. on D 17417 = B30246 were discovered No 491 to 499, and also 504. No. 491 is Known Var. 055686 R Octantis, Nos. 496 + 497 not var. Nos. 495, 498 suspected. No. 498 previously discovered on B24367

Total ~~5~~ 4 new
2 Known
2 suspected.

South Pole

B 20426 superposed on D 14717 = B30246

Var Br Ft

Re-discovered Nos. 473, 498, 499

500 Not Variable

501 Known. S Octantis

502 20426 [11.] (25041) (37997) 30246 [13] 38998 [13.5] 19568
39449 38187 [10.5?] (38478) 19409 38707 16345 9348
31354 38236

503 Not var.

On B20426 sup. on D 14714 = B30246 were discovered Nos 500-503. No. 501 is known, S Octantis. Nos. 500 and 503 are not variable. Also re-discovered Nos. 473, 498 suspected, 499

Total 1 new
~~4~~ 3 known
1 suspected re-discovered