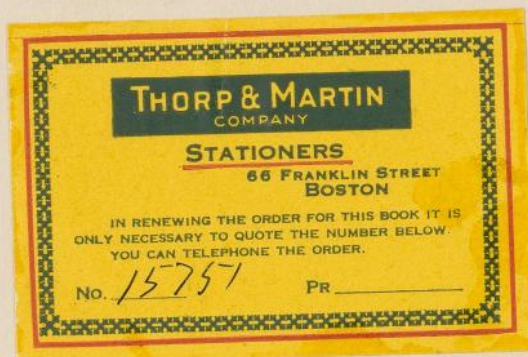


KG
11366
216

Ida E. Woods
Book 40
Miscellaneous Milky Way Regions

page
17 18 24-23

KG11366.216
Of special interest: Van 114 Algol.
154



When new plates come
Looking 199

Harvard College Observatory

Ida E. Woods

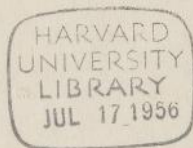
Book No. 40

Examination of Miscellaneous
Milky Way Regions

See Index

Continued from Bk. 38.

KG 11366.216



A Plates

9376	18 39	-24.9	June 14, 1909	Eff. 60
9370	18 21	-25.	June 13, 1909	60
7494	18 49	-22.5	Sept 18, 1905	60
3530	19 7	-23.1	May 19, 1899	65
6790	18 13	-16.9	June 30, 1904	40
2727	19 10	-22.5	Sept. 4, 1897	10
2842				

Continued from Bb. 38.

Region 18 24-23.

Long Exposure B plates. and a few for idem. (short exp.)

Bb. p.	B	Exp.	Region
38-158	5245	1890 60	18 22-25
	9852	1893 10	18 12-18
	13539	1895	18 49-28
	16826	1896 25	18 38-28
	17708	1896 11	18 30-23
	19326	1897 10	18 11-22
	21285	1898 10	18 30-18
	25523	1900 60	18 9-17
38-156	25746	1900 79	18 26-22
	26116	1900 10	18 11-28
	26257	1900 63	18 52-27
	27184	1901 60	18 28-27
	27408	1901 10	18 8-23
38-156	28156	1901 61	18 29-22
	28231	60	18 9-17
	29525	10	18 6-22
Bb38 p156	32014	1903 60	18 26-18
38-210	32076	1903 62	18 48-27
38-158	32309	1903 63	18 5-22
38-210	33776	1904 60	18 50-28
	33980	60	18 26-18
38-156	34009	1904 60	18 25-18

8

Unusually
small range? Only few
stars real. Little

Position meas. Bb. 39, p. 205.
Region Continued from Bb. 38, page 219.

M.W. Region 18 24 - 23 and fol.

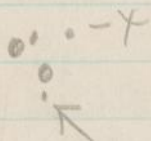
No. 86

18 50 - 29.6

Small range

Mhd B 33776

July 19, 1926
in B plates



B_m = x or brighter
F_t = near limit

B_m B 33776

F_t 32076

Too far for

5266

medium B 26257

27184

Perhaps B_m 28160

" 32052

3868 seen but

A 6124

near limit of pl.

2736

B_m or F_t?

8986

→ May be an Algol of small range.
* Lettre for more material. 1928

Meas on ~~B/pl?~~
at 4800 has been found
~~Have confirmed~~

Position measured
Bb. 49, p. 27.

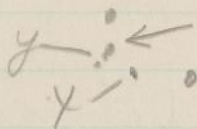
9

New

No. 87 18 48 - 30.9

mlsd 33776, 32076

July 20
in B plates



Gord range

Br. = about x
Ft = a little brighter
than y

Conf. by Miss Cannon
March 23, 1928

Br 33776

26257

28160

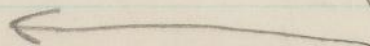
medium?

Very ft -
Hazy? 32076
32052

NGC 6715 near,
is N following.

A 4800

? 3868
~~Seen, not in~~ A 7737,
(if same star)
A 10750



~~Find A 4800~~

A plates too faint
meas. pos.

13.5 to 15.5
?

No seg. (see MF plate)
near -
Magns on MF
off this region

Probably NS
and the star
seen is ft star
fol.

This is apparently the
Var.

• ← Medium
brightness
(or nearer Min)

ft stars barely seen
near edge.

10

Pos. Meas, Bk. 49, p. 6.

Long Period - not known -

Noticed between
 B & A plates
 Regim 18 24-33 and pl. Mkd on A 8986, 2736
 No. 88 near 80 See Bk 38, p. 214

18 56-27.9 Very large range

July 20, 1926

Found while
marking

A plate for

Var. 80 fm

B plates

Br. B 32076 June 30 1903

Brighter 33776 May 1904

Some change, above but

was not found on B plates.

Seen

Ft. A 8986

A 2736

B 26257

B 32052

B 5266

B 3868

B 30870 (10m)

Make note of 2 faint stars on A 2736

which of
2 stars -

Br. A 6124

Medium A 10750

+ Br. B 16826

→ One of the stars, 80 or 88, probably 88, by magn.
 is Innes' star

AX 1049 May 14-15, 1925, NS

1106 May 29-30 NS

1284 Aug 15-16 1925 Poor

1316 Sept 10-11, probably NS

1360 Oct 8-9. NS

1575 Apr. 17-18 1926 NS

1625 May 12-13 NS

1650 May 18-19 NS

1754 July 9-10 Br

1853 Aug 26-27 NS

1919 Sept 28-29 NS

1941 Oct 5-6 NS or ft

note:

Can get
 definite period
 when more
 plates come.

100°+

✓

11

No. 89 18 13 - 23.7

Very bright object
Note known Variable

July 21

In A plates

Very bright object on

A 7332

June 5, 1905

Uranus

June 5 Almanac Position

18 13 6.62 - 23 40 20.8

12 104° !

Leave for present?

Not proved
New Var?Regim 18 24-23 and fol.
M 90 18 35.8-19.5July 22
in platesMbd on A 9566
and MF 8 B34033~~M 90~~

Br. A 9759 Sept 5, 1909

A ft. star
Br = a little brighter than x
NSA 9566too faint for ^{short off} B plates. Leave for more A pl
[am "]Medium
9769Probably seen ft 8759 -
Seen only ft 8766 } or second
also, as follows: 8770 } image -
NS 9565 } not plate
for disc.wrong star
was taken
on these
plates.
Var is
probably
too ft.

Br B34033 June 9, 1904

Fl or NS 9589

33980

9597

30573 1902

9656

prob. bright from images

9663

30572

9672

9684

Too poor 28185

9691

Seen MF

9747 too poor, trailed images
9759 probably ft

9779

9784

Not showing ft at
B3852B33980
34033B30573 240 ft.
stars mixed up

~~XXX~~
 Proceed

~~Leave for Japan~~

Look up for Nova 13

Position meas. Bk. 49, p. 32 when more material is here

No. 91 18 27.6 - 20.3 New Var? mtd on A9566 and MF

July 22
 in A plates

Br. = nearly = x

+ - - - - - ←

Br. A9566 July 15, 1909 — Ft A 9259

NS B40184 May 7 1909 — note, same year MF 9793

Seen Br. 8447, Aug 17, 1907 11^m

Too faint for AM plates

Several plates of June - Sept, 1909,
 AM, examined. Star is too
 faint for more than possible trace

Gram late AX plates
 when they can be found.
 -15 to -30 both out of boxes

Magn.
 (comp. equal star
 near north seq on
 MF 9793)

9566 = about 12.7 to 12.6 July 15 18503

14.8 9759 Sept. 5, 1909 18555

B40184 May 7 < 13.2 18434

Nova? Not many plates for proof
 Normal is a very faint star, about 16.5? mtd on A7340

B33980
 MF 8519 Perhaps trace
 8759 Trace only if
 8766 seen B28156
 8770 NS 3852
 9550 NS 34033
 8638 Very ft if one
 9565 of stars seen B25746
 9589 Very ft if seen
 9597 B 23758
 9656
 9663
 9672
 9747
 9759
 9769
 9779
 9784

14

Leave for present

Region 1824-23

No. 92 18 35.5-20.3

 $\rightarrow \begin{matrix} \bullet & \bullet-x \\ \dots & \dots \end{matrix}$
July 22
in a plates

New Var?

Mbd on A9566 and 9759

MF

Not much range

Br = nearly as br as x. Ft = quite ft.

Ft 9566

Br^a 9759

Quite a faint star

9393

7370

?

Br^{MF} 8519

Br? 9589

Enough proof?

To faint to prove

Proof?

1837

MF 9793

8759

8766

8770

9565

9597

9656

9663

9672

9684

9691

9740

9747

9759 good image for proof

9769

9779

Probably ft B 30573

30572

28185?

25746

23758

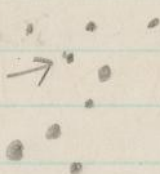
Long
period?

Leave for present

mer Var?

M. 93

18 39 -19.8

Mkd 9566 NS
and 9759
and MFJuly 22
on a platesSmall range

Br. 9759

MF 9793

a 2757

Fl. ~~45~~ a 9566

16

Proof? Miss ~~Can not~~ ^{see} ~~care for present~~

Region 18 24-23 and fol.

New Var.?

No. 94

a

v

18 40-19.8

Mhd 9566

July 22

on A plates

N B ft star

almost coincident

a = a very ft star close B = nearly = x

Rather faint star

B. A 9759

NS ~~ft~~

A 9566

ft star

B 30573 (240)

A 2757

star is

not Max

9793

probably,

Medium

8519

in many

Not sufficient for proof

B 30572

8759

cases, at

Too ft for B plates

8766

least, a

8770

only.

9565

9589

9597

9656

9663

9672

9684

9691

9747

9759

9769

9779

B 25746

23758

Position measured, Bk. 39, page 48

17

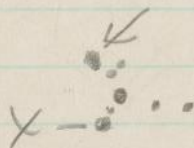
Correct

X

No. 95
July 22
on 2 plates

18 42 - 19.8

New Var? Mbd ^a 9566 NS
and A9759
and MF



Good range

Br. = about as bright as X

34770
Seen 34033
Means A9759

Br. A9759
MF 8519

NS 9566
71 A 2757 Seen
MF 9793

Almost too faint to be found
on MF plates, in corner of pl.,
but distinctly seen for
proof.

9184

9672

9663

9597

8638

8770

A9759 13.0
9566 15.5

Probably NS B 33980
" " B 25746

Position meas. ^{Leave for present} with 95, Bk. 39, page 49

Region 18 24-23 and fol. ^{new Van?}

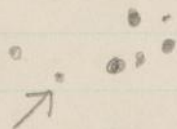
M. 96

18 42-19.6

Mhd 9566

July 22
on A plates

and 9759
and MF



edge of MF

Br A 9759

A very ft star.
Fl. 9566

Seen, probably Map,
very ft. star, A 2757.

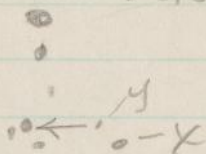
Proved
Position measured, Bk. 39, page 60.

19

new Var?

No. 97
July 22
on a plate
off MF region

18 43.5-20.2



msd 9566
and 9759 and
B 28185

B_r = Brighter than X
Fl = y

meas. - B_r 9759
*A 9757
corner
but very
br.

Medium,
not Max B28185

Fl^a 9566
B 30572

many of the long exp B plates do not show
very fr. stars.

13.5 ?

15.0

See 2nd 98 ^{and} 9566 = No. 100

Position measured ~~Pl. 39, *~~
Region 1824-23 page 61.

No. 98 .y .y 1842-20.7

new Var?

July 24
on A plates

→ :

Br. = a little brighter than ~~x~~
Ft = fainter than y

Idem B21285

~~not much~~ ^{good} range - but a fairly bright star.

Meas

Bu 9759

Ft A 9566

MF 9793 nearly = N

Ft B 25746

9565 Median B28185

MF 8759

9589

" B 30572

B 3852

9597

MF 8519

B 19581

9656

* 2757 extreme

22613

Sedge

25428

B 27484

29657

28185

30075

30572

32406

30573

34335

24033

33980

MF 8766

34009

8770

MF 8770

Many B plates
may show this
at times. Have

not exam carefully
enough to state if other
ft enough stars show

Seldom bright

Cephid?

or long Per. probably

MF
9793 13.5?
A 9566 15.5?

Proved Position Meas., Bb. 39, p. 62.

New Var?

* Small range
aft. star

No. 99

18 34.5-20.7

mbd 9566

July 24
on a plate

and MF

Br = nearly = 4

Br. 9566

a 9759
Fr. 9566

barely
seen?

* MF 9793

bright on power a pl.

MF 9779

ns B 340 33

Medium

MF 8759

MF 9550

8519

MF 9565

Extremely fr MF 8766

B 18539

" " 8770

~~B 3852~~

~~B 19581~~

Magn

MF 9793 13.7?

a 9759 [16 at least

22

Region 18 24 -23
 No 100

Mhd 9566

July 24
 on a plate

Same as No. 29, Bk. 38, p. 160

Cancel No 100

✓ X No. 100

← 18 48.5 - 19.9

Mhd 9566

Meas. Position,
 Bk. 39, page 70
 Idem B2 613

ix

and A 9759
 and B 28185

meas. — B^a 9759

B₁ = nearly as br as x
 Very ft^a 9566

Found independently
 Obj. 212, p. 134

A 2842

B 28185
 B 30572
 A 7494

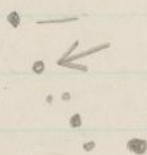
14.5

16.0

No 101

July 24
on A plates

Mtd a9566



A faint star - Small range.

B. a9566

Fr

→ This is Star 3, Bb. 37, page 84

Leave for present

Region 18 24 - 23 New Var.?

No. 102 18 41 - 20.1 (1900)

July 24
on a plates

→

mbd a1837 and
Very ft at max

a 7340 and
MF Is this
right star

A ft. star. Hazy?

B1 7340

MF 9793?

NS^a 1837
a 7494

Tooft - Lease

~~not proved~~ Position measured, Bk. 39, p. 171

25

No. 103

18 30.5 -21.1 (~~1855~~)

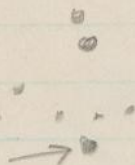
New Var?

Mhd A 1837
and MF

July 24
on A plates

Fairly br.

Idu 21285



• Magn
a 1837

Bk A 1837
a 2811 (10m)

NS 7340

NS MF 9793

NS 99759

9566

1112996

a. 4297 *

B 23758 140m

B 25746 79

33m

7340 [16.0

4297 (120^{mag}) [17.0

Short exp.

B plates not

proof

26

Period Position measured, Bk 39, page 54.

Region 18 24-23 Min Var? Fairly good range

No. 104

18 37-22.5

Mixed A 1837

and MF

July 24
in plates

Br. 1837 Br. on pro. pl. NS 7340
Br. MF 9793 A 9566
MF 9784 9759
MF 8759

Magn
MF 9793 13.88
a [185]

near Var. 40
See Bb. 39, p. 171 Proved - Position measured, Bb. 39, p. 63 27

near Var? Large range
No. 105 18 43 - 22.2 (1901) mtd 18.37 (NS)
July 24 and 7340 and
on plates B28185 &
MF 8519

just beyond region of MF

Br A 7340 1905

NS 1837 Sun Var
ft

ft B28185

NSA 9759

NSA 9566

ft A 2842

NSA 9376

ft A 7494

See detail of identification

MF 8519 shows other
star.

Not on print B 5266
from MF 9740 26257 Not Map

A VII F 9793 25746

7370

12.7

16.5

23758

3852

Perhaps Medium

19581

22745

NB 2 stars

about equal

A 7370 shows both

MF 8519 does not show V (or at limit of
plate)

tho' V would probably come

just inside edge

Proved

Position measured, Bk. 39, page 64 *

Region 18 24-23

New Var.?

No. 106 18 38.5 - 23.5

Mhd 1837,

A7340, B28185

and MF

July 27
on a plate

••••• ← 106

Br =

meas — Br. A7340

••••• ← 107

Br. m# 9793

Br. A7370

B 25746

A7340 13.5

A 1837 15.7 about

~~A~~ 1837 very fr

A7494

A 9376

A 2842

B 28156

B 5245

16826

Enough proof ~~X~~ 31st June 3 B36137

Position measured, with 106, Bk. 39, page 65 ~~X~~

new Var?

No. 107

18 39 - 23.7

Mkd 1837

July 27
in A plates

See page 28

slightly brighter than
Br nearly = ~~X~~

meas. — Br. A 7340 June 7
1905

June 27

NS 1837

seen, Medium, A 7370

Probably NS MF 9793

(Later, spec. MF pl.
which may give better proof.

NS A 7494 1905

A 9376 A 9575

A 2842

B 25746 B 23753

B 28156 B 28185 ¹⁴⁰

B 5245 3057.2

16826 3057.3 ¹⁰⁴

NS MF 8519 9769

(Seen) 8759 9779

" " 8766 9784

" " 8770

Fairly seen 9565 B 25746

9589 79

9597 ft. seen

NS 9656 [B 5266 60

9663 seen ft

9672 2366 5

9684 27184

9691

9747

9759

A 7340 13.2 ⁴

A 837 [16.0 Examined all plates
about June, July 1905

Region mld
A M 3625 to see if star might
be nova. Is too faint
to show on A plates.

Certainly never was
unusually bright during
that time.

Consider that the MF plates,
showing medium, not fully
maximum, are proof

Medium
nearly
ft

Dr. S. saw this. Probably not nova —

Note: — Never reaches full Max except June 7, 1905
37 obs.

30

Correct Position measured, Bk. 39, page 66

Regim 18 24 - 23

New Var

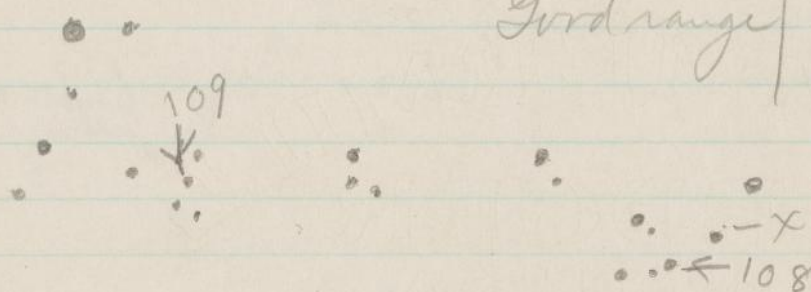
No. 108

18 32 - 24.0

Mbd 1837

July 27
in a plates

Gord range and MF



right hand of
2

Br. 1837

A 9370 perhaps Br.

A 11895 perhaps not
quite Max.

B 28156 seems to be at limit
of plate

N. S. A 7340

MF 9793

FA 9376

MF 8519

Seen, fr, MF 8759

" " 8766

NS 12507

12061

See 2 ft stars 12062

Seen 12065

2 ft stars 12066

fr 12349

11979

A 1837 13.5

A 12507 16.5

Proved Position measured, Bk .39, page 67

31

New Var?

No. 109

18 32.5 - 24.0

msd 1837

July 27
in plates

See page 30

Fair range

B 1837
93

Medium M# 8638

seen but not Max.

Seen but not, M# 8766

May 16
July 16

N.S. A 7340

NS 9376

NS B 28156

Seen, ft, M# 8759
A 1837

NS M# 9793

M# 8519

Viz Jr A 12061 May 11

NS 12507 July 9 July 2

9375 too
poor.

*A 11979

Almost too ft
to prove by M# fl?
Only very good M# fl.
would show

See A 12507
Nos. transposed from 1837

A 11979 13.8

A 12507 [16.5

✓ Region 18 24-23
No. 110

Mkd 1837

July 27
in a plates

Probably defect
on 7340

Q 12507

~~Probably proof~~ - Leave for more plates?

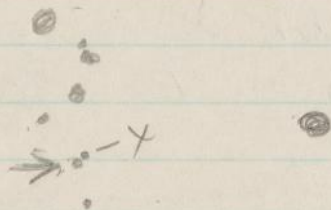
Position meas. Bk. 39, p. 169

No. III 18 30 - 23.2

New Var.?

~~See Chapter~~ too far
Mik 1837
and MF

July 27
in A plates



Slightly brighter than X

↑ when Var.
is bright

Var. = middle of 3 stars almost equal δ

Br. 7340 hazy images

Br. 9376 near edge

Very Br. 9370

Fl 1837

Prob. Fl MF 9793

Fl B 25746

Probably Fl B 28156

M 8519 Fl?

B plates Perhaps Br. M 8759
not satisfactory Br. or Median M 8766
proof.
M plates
images overlap

8x10 pl. of
NEC 6656

Meas. 8x10

7340 13.0
9370 13.6

1837 16.0

a 11979

12019

12061

12062

12065

12066

12349

12369

* 12392 fainter

12439

12507

12551

12553

12714

about
constant

Region 18 24-23

No. 112

18 23-23.3

mbd 1837

July 27
on plates

Very bright Object on A 1837

not Planet

June 12, 1896

Probably not a Nova — Image differs.
 → Dr. Fisher saw this, Aug. 31.

Proved

(Have Min C. See.)

~~1 case. Watch.~~Does not look like Defect. 35
Position meas. Rh. 39, λ 174.

no. 113 18 19 - 23.7

July 27
in plates41
↓
↓
↓

New Var? Mbd 1837

Seen on poorer plate and MF
A very faint star but
fair range.

Br - nearly as br. as x

Br^A 1837, 1896

NS 9340 B 23758

NS 9370 140m

B 25746, 1900 not full Map

7332

x seen on A 4297, 120m
but V not seen

A 12996

7359

x quite br.

A 3699 V NS

8x10 NSC 6626

A 12562

when
seen, if
right star,
is about at
limit of plate

12565 many ft stars here

12570 12661

12588 12663

12591 12666

12594 668

12597 670

12600 683

12603 A 4379

12605 4380

12608 12532

12631 12534

12637 12536

12639 12541

12644

12655

12657

See 12661, 12534

(4297 not as clear)

magns.

A 1837 15.2

A 7340 17.0

Meas 12532

Detail from
best of pl.↓
↓
↓

19270hae.proj.121 W

36 N.B. Algol with drop of 2⁴ days min. ?
Position measured, Bk. 39, page 76.
Regin 18 24 - 23
No. 11.4
18 17.5 - 23.9
July 27
in plates
X - . . . <
A very faint star
Br. & X (fainter)
Seen by
Dr. ...
Mkd 1837
and MF

I thought it was
worth looking at
all available
plates (those at for
regin) as this
seems to be
difficult to prove.
Short Period ?
Algol ?

Br. 1837
MF 9793
MF 8519
8759
8766
8770
9550
9565
9589

Medium ?
MF 8638
probably not
clear image

Very faint 7340 June 1905
7332 June 5
9370 (1909) June 13
7327 June 3

meas a3699
magn
a3699 13.8
7340 16.2

Bright Cont.
a3699
a4379
perhaps even brighter
than others, slightly

Br. Cont.
a4380
4399
4422

Dr. S. saw curve

9656
9663
9672
9684
9691
9747
9759
9769
9779
9784
B5245 seems by -
about limit of plate
B25746
B32309

~~Leave for present~~
Position meas. with 116, Bb. 39, p. 78

New Var? Mbd 12666

No. 115

July 27
in 2 plates

18 19 - 24.8
• ! K

Mbd 1837

A very ft star and MF
Br. = about = x a trifle

faintly
a little brighter than x on 12996

Br 1837
* 12996

N 87340
Probably NS on MF 9793

Long Period

Seen
(very ft)
Maximum or?

12637

12639

12644

12655

12657

12661

12663

12666

12668

12670

12683

12689

A 9370

* 7327

* 4297

7359

7332

2532

12588

12591

12594

12597

12600

12603

12605

12608

12631

Examined all
these plates as they
were consecutive plates
of greater no. than
usual and there
was a chance of this
being bright if
a Aphelid.

Magn.

A 12996 $\frac{14.0}{13.5}$

A 4297 [16.5

4297 quite black but

120^m eff. Limit about 16.5?

38

Proved Position measured, Bk. 39, p. 77

Regim 18 24-23 Nur Var?

No. 116

18 20-24.7

Mhd 1837

and MF

July 27
in a plate

Very near 115

Not large range

2 Stars about same
Var is S.Br. \pm brighter than X
much brighter on 8519

Meas. — Br 1837

Medium?

Fl 7340

* MF 8519

7332

Seen but not br. MF 9793

* A 12532

seen faint
MF 8638Very faint NS (see background)
MF 8759

A 12666

12689

N B.

12683

A plates

12670

are reversed
in order

12668

12666

12663

12661

12657

12655

12644 brighter

12639

12637

12631

12608 brighter

12605

12603 brighter

12600

12597

12594

12591

See bright Var
marked on

A 12657, Nov. 16, 1927,

while exam. this

Var. Known

12657 Br.

12639 Fl

See No. 254, p. 188

MF 8519 13.7

A 7340 < 160

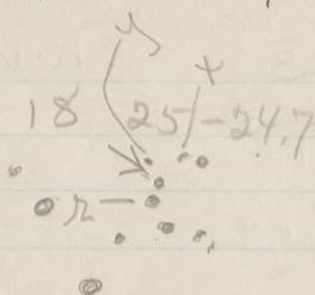
star N is seen but
not the Var

Is this
Proof enough?

Position measured, Bk. 39, p. 79.

No. 117

July 27
in plates



new Var?

Mbd 1837

and MF

Fair range.

Br. = X

Fh. = Barely seen when y
is quite bright.

Very ft 7340

A 9370 probably
N.S.

meas.
a 7332 & Br 1837
a 9376 tw *MF 9793
hor-edge ~~A 9370~~

Proof ** nearly = r on MF 8519

Probably
Long Period

MF 9793 13.8
a 3699 16.2?

MF 8638

8759

a 2752

Fh. (many ft. stars seen)

a 370

Very ft a 3699

N.S. a 11895

" a 11979

a 3801 very ft.

40

Is 118 hazy? A 1837 Position meas. Bk. 39, p. 81

Probably 2 or more stars close but seems hazy besides.

Region 18 24-23

New Var?

and MF

No. 118 18 27.8 - 25.3

Mhd 1837

July 27
in a plate

Small range if any

-118

Br. 7340 Medium?

FH 1837

A 3699 Medium?

~~Very faint A 3699~~ *

A 9376?

A 9370?

FH A 11895

A 2752

A 8370?

11979

B Plates are hardly proof -
MF " " " "Limit for present

Slight, if any

Proved meas. 119, 118 doubtful
Position measured, Bk. 39, p. 80
New Var?

No. 119 18 28.0-25.3
July 27 See page 40
on A plates

Msd 1837 and MF

A very ft star
but good range,

Br. = about = X
Th. = N. S.

No. 119 follows and N of 118

Br 1837

N S 7340

Perhaps not Max. A 11895

N S MF 9793

" " " MF 8759

Very ft. A 3699 *

B plates probably do not show

" " A 11979 *

119 - i.e. it is faint while
equal stars show -

A 9370

8370

Br A 8766

9376

A 2752

MF

MF 8519

9793 13.8

07340 [16.5

42

Position meas. Bk. 39, p. 82

Is this same star on A & M F pl? Probably many
 good pl = M F 8766
 Check carefully
 Region 18 24-23
 New Var?

No. 120 18 28.5 - 24.2 X

July 27
 in a plate

Near Cluster
 See 38;

Br = brighter than x
 Ft = barely seen

Fairly good range

Meas. —

Br. 7340

Medium

Ft 1837

Seen nearly Br 9370

M F 8766

Ft M F 9793 but seen

Too faint 9376

M F 9550

Seen M F 8519

NS 8636

Shows some change
 on M F pl. but probably
 too ft to be found,
 especially on trailed
 plates

I think
 these 2 pl.
 show proof
 measure

NS A 11895 (good for
 ft stars 8x10)
 Seen ft A 11979

Leave till more plates
 Note of star close

Magnus, 39:82

11895 9793

No. 121

mhd 1837

July 27
mhd plates

Asteroid m 1837

44 Bk. 39, p. 83

Position measured

Bk 39, p. 158. Regm 18.24 - 23

No. 122 18.29.5 - 24.2

July 27
in A platesNear Cluster
see 38:
H₂Too far from
NYC 6656*
**

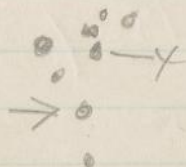
Br 7340

Br MF 9793 not Max

A 12349 April 25

12325 April 18

1923

Seq. See
A 12349 13.7
MF 9793 15.0

Fair range

Br. = slightly better than x

NS 1837

A 9370

NSA 11895 SX 10

good for first stars

Very ft A 11979

NSA 11979 11895

NS MF 8519

Fl 8638

Fl 8759

** 8766

Very ft B 25746

B 27184

28156

A 12507

May 26 12392 very ft

12439 "

12471 " "

12553

Continued,
Bk 46, p. 36

Star Var.

Mbd 1837

and 7340 and MF

Proved Position measured, Bb. 39, p. 68

45

to be Var

Not much range - but proved

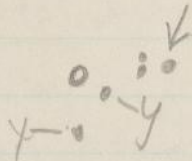
Mkd 1837 and

A 7340 and MF

No. 123

18 35 - 24.7

July 27
in plates



Br. = not as br. as X
Fh = ~~fainter than~~ ^{about as} ~~faint~~ ^{as} Y

Br. Medium

— A 7340 A 7370

A 9376 MF 8519

A 7494 probably Br.

Too faint for
9370 Probably Br B 38572

MF 8638

MF 8759

MF 8766

8770

9550

9565

9589

9663

9691

9740

9759

9784

Long
period

A 7340 13.8

A 1837 15.5

Probably
summing

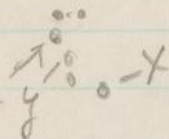
V

46

✓

Regim 18 24-23

No. 124

July 57
in a platesmbd 1837 NS
and 7340 ~~and~~

as bright as x
Br. = Good range, but not
th. = NS when y is seen

Br. A 7340

NS A 1837

This is Var. No. 4, Bk. 37, page 85

Position meas. Bb. 39, p. 84
 Period

47

No. 125 18 55-25.7
 July 28
 on A plates
 not on HF Reg.

7 ft.
 Mkd on A 6124
 a ft. star.
 mkd on A 8986 and
 B 28185

Meas. — B 8986 medium? 7 ft.
 A 2736 ~~7 ft.~~ A 6124
 Proof B 28185
 * B 26257

B 3377 6 not much
 B 32076 change as
 perhaps faintest plate but I
 yet undoubtedly
 proves var.

15.0
 16.5

Position meas., Bb. 39, p. 85

Region 18 24 - 23

No. 126

18 51 - 25.8

very mbed 6124

July 28
on a pl.

X - X

a faint star and

B 28185

Br. = a little brighter than X

meas? → Br A 6124

Very ft. A 8986

Unless proved by other A plates, leave for present.

Medium? A 2736

B 28185 too far

NS B 26257

B 32076

B 33776

Are not these B plates proof?

15.0

16.2

Position measured, Bb. 39, p. 42. X

~~Enough proof?~~

New Var.

No. 127

18 53 - 25.8

July 28
on A plate- X
- - XGood
range
much brighter
than Xmild 6124 NS
and A 8986 and
B 28185 barely
seen if seen

Mean

B and 8986

A 6124 NS

Medium - A 2736

B 28185

Seen but fainter
than X

30359

B 33776

32076

26257

Confirmed
Mals.

Jan. 19, 1928

13.8

[16.5

50

Leave for more plates 1928

Region 18 24-23

No. 128

18 39-28.4

Mbd 6124
NSJuly 28
on A plates

and A 8986

and ~~A~~ MFBr. ^{much} ~~same~~ brighter than γ

NS A 6124

Br. A 8986

A possible Algol?

Too faint for B plates & MF

A 2736

* A 2752

A 8370

Probably Br B 26257 seen

Seen Doubtful

Br or FF probably

nearly max

38776

Probably FF

B 32076

Forb. up
 some time
 Dm. not

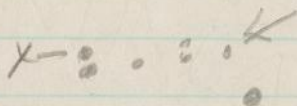
Leave for more plates 1928

51

new

No. 129 18 43 - 28.0

July 28
on 2 plates

x-

mid 6124

A ft. star and small range
mid on MF (edge)

Br. = fully = x

Br. A 6124

Ft. A 8986

Probably too ft. for Br or MF

Ft. A 2752

8370

2736

52

1928 Leave for more proof

Position measured with 131, Bb.39, p.87.

Region 18 24-23

New

No. 130

18 52.5-27.4

Mbd 6124

July 28
on A platesProbably ^aslight ~~if any~~ variation and
Fair range B26257
$$\begin{array}{c} \circ \\ x - \cdot \cdot \cdot - y \end{array}$$

Ft stars see A8986

Br. = nearly = x Ft = y or fainter.

Ft. 8986

Meas. — Br. 6124

Probably too ft for long exp. B 5MF
a 2786B Plates do not separate
these stars

Probably Br B32076

Only A plates will be
good enough for proof

Probably
proof enough? Position measured, Bb. 39, p. 88⁶.

No. 131 18 53 - 27.2 New Mhd 6124
July 29 Bright on former plate
and pl. Fair range for a ft. star
Mhd on B 26257

Mhd - B. A 6124
B 26257

Seen, not Max
B 32076

NS 8986
NS 2736 which shows
many ft. stars near.

15.0
2736 [170

54

~~Proof enough?~~ Position measured, Bk. 39, page 88

Region 18° 24' - 23'

No. 132

18° 54.5' - 28.3'

New Mbd 6124

July 29
maple.

Good range

Mbd (NS) B26257

Br. = triple brighter than x

Ft. = N. S. when ft. stars
are numerous. See 8986(Confirmed MAB
Jan 19.

Meas —

Br. A 6124⁽¹⁹⁰²⁾ Medium

NS A 8986

A 2736 (1897)

B 26257

Seen but ft.

B 32076

33776

z is a very ft
star but appears
on good plates, even
long B

+4.5 15.0

[16.0

~~June
later~~

Lease for maps plates

Position meas. *Bk*. 39, p. 188.

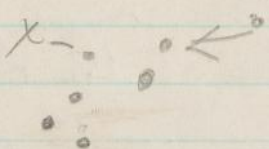
new

No. 133

41.5 - 30.2

mbd 6124

and B 26257

July 29
on ApeA very ft star
B₂ = brighter than XB₁ A 6124

n SA 8986

Confirmed
mde

Seen - not Max.?

B 26257

Jan. 19, 1928

A 2736

B 33776

B 27184

Very ft B 32076

15.5

[16.5

56

Lease 1928

Not passed
Lease for
present No.July 29
on a pl.

Region 18 24-23

134

18 47.5-29.7

new

Mbd 6124

and B 26257

Fair range, probably
too ft. for m + s B pl.

much brighter than X

Northy fol. of 2 stars:

Br. A 6124

Very ft. - (or NS)?

A 8986

NS A 2736 Very ft. stars
new

Seen, not Br, B 32076

NS B 26257

Too poor B 27184

Very ft B 33776

Not found Leave for present 1928

57

No. 135 18 49-29.5 New

July 29
Aplc.

x-
.
.
.
.-x

mlcd 6124
A very fr star
mlcd (n 3) B26257
Br - brighter than x

Br A 6124

medium A 2736
Perhaps Fr

A 8986
B26257

Perhaps see B33776 } off?
32076

Correct Position measured, Bb. 39, page 45.

Region 18, 24-23

new Var.

M. 136

R 50-50.5 (190)

Mbl B 28185

and B 30572

and A 9759

July 30
in B plates

y-
↓
•
•
•
•
•

x-
•

Fair range -

B 30572

A 7494

FK B 28185

A 9759 *

A 2842

Found independently on A plates, Obj. 217, p. 139

A 7370

FK A 9566

A 7494
Meas. 9759 if
none better

14.0

15.5

25428 excellent
for ft stars
Probed?
Ready to measure?
~~Nova of 1902~~
No A plate

Range perhaps 1.5 mag? 59
(to NS) (14.5 to 16.0)
a rather ft star at Max

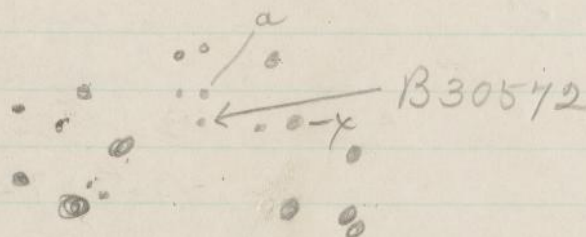
No. 137

18 47 - 21.1 (1900)

Mixed B28185

July 30

in B pl.



and B30572

Br = a little fainter
than x

Br. B 30572 }
30573 } 1902
Aug 30

A7370

trace?

Not Nova

Too faint for AM plates
Several exam.

NS B28185
Probably NS in A9759
Probably S of the ray ft.
star in sketch above
NS A9566
NS A2842 excellent pl.
NS A7494 " "
NS A7370 see ft stars*
not on MF regions

Region & Date covered by
Long exp. plates

Too faint
for ft stars
4161, 22613
36474, 43746
B3852 seen, ft
10040 large seen, ft stars well seen 1893
13589 probably NS - defective 1895
16289 NS 1896
19581 Br 1897
22745 NS 1899
25428 NS 1900
27484 Medium? 1901
29657 NS 1902
30075 NS June 1902
32406 NS 1903
36873 NS 1905
39136 NS 1908

Am 1523 Aug 31 does
not show ft. enough stars

1487 July 29 383"
may be trace?

1488 Aug 1 1448 Exp

may show trace? = 24h

No A plates near date
" other B pl. " "

Compare with

A7370 — or mess B19581

60

Proved Position meas., Bb. 39, p. 73.

Region 18 24-23

new

M. 138

K. 18 59.8-22.2 (1900) Mhd B 28185

and A 7494

X-...

July 30

on B plates

Br. = brighter than X
not large range

B 30572

The best good image. A 7494

B^B 28185

— B 7370

A 2842

3530

Br. A 2727 (10th exp)meas. A 7494 if
came better

14.5

16.0

Proved Position measured, Bk. 39, p. 74.

61

No. 139
July 30
B plates

18 57.5-22.4 (1900)

New

• • from A 7494

Good range

Mixed B 28185
and A 7494,
if it is the ft.
star msk

• • from B 2818.5
• • ←

A 3530
prov

B 28185

A 7370

Medium A 2842

N S B 30572
Very ft A 7494

14.8

16.0

Known -

*

Region 18 24-23
 No 140 18 51.8-22.7 (1900) ~~new?~~ Mhd B 28185
 July 30 Limit bright, large range and B 30572
 B plates and A 7494

Already mhd B 30572
 Van 7378 A 7370 **
 Limit Br. A 9759
 " " 9566

ft 28185
 A 7494 several extremely
 ft stars close to this
 position
 * A 2842 for ft stars, see
 this plate
 which star is var.? if seen
 seen - ft. A 9376

This is - BU Sgr Beljarsky.
CPD -22° 7287

Not in Prager, 1928

CPD -22° 7287 = 18 50 31.2 -22 44.2 10.4 (1875)
 Prager BU Sgr 18 49 19 -22 45.7 (1856)

18 50 31.2 -22 44.2 (1875)
 1 30.4 +1.6
 18 52 1.6 -22 42.6 (1900)

Var. was bright when CPD was made
 → Bel. 10.3 to [12.5 — we could give
 better mhd.

Assume 2 Variables, March 30, 1928

~~Not possible~~Probably both a & b change
See below.

Position meas Bk 49, p. 28

No. 141 18 44.6 -23.7

July 30
Bpl.

Just off M Aug.

Br 28185 Aug 10 1901

See A 7494



which star?

images of
28185 are
elongated in the
direction of this line
of stars. Var is
probably
this star

but see A 7370 the lower?
is quite bright

B 28160 equally br.
Aug 7 1901

See 30572

18-30 mbd am 907 br. star = a

Star? NS 907 July 9

" NS 1028 Sept 4

" NS 1043 " 6

not max
but must
be there y?

A 9577 (1909)

Am 19-15

835 June 6 1901

850 June 11

868 June 21

875 June 22

888 June 25

959 Aug 5

1010 Aug 23

1191

A prec. N. Cont. Bk. 46, p. 86

12.5 to 160

B fol. S

12.5 to 165

see 46, p. 87

64

Position meas., Bb. 39, page 43.

Provid

Region 18 24 - 23

New Var

No. 142

18 47 - 26.5

Good range

Mkd on B28185

and B30572 and

A6124

July 30
on B plates

B_r = much b. than x
 Ft. = fainter than y

already found on a plates,

Obj. 47, Bb. 37, p. 181

B 30572

Meas → A6124

B26257

A8986

Very ft B28185

A9376

* A2736 very ft.

B27184

* B33776

B20359 (10^m)

* A2736

B32076

may be

12.5 brighter?

Found independently on

B26257, Obj. 147, page 69.

about 16.5?

Also, = 47, Bb. 38, p. 181.

mirif Var ~~X~~

Very large range

Mkt. on B 28185 and
B 30572 and A 7494

B₂ =

Ft = about = y

No. 143 18 59 - 23.0

↓ . . - y

Is star on A 7494 same one? Try to find change
on A plates.

B₂ B 28185

Ft B 30572

A 7494

Near SU Sag, which is marked on A 7494 and other plates -

Maybe defective on 28185 — Watch

Probably only defect -

~~X~~ Hard miss Cannon see

66

✓

Region 18 24 - 23

No 144

18 34 - 22.1
1900

Very br. and large range

Mtd on B 28185

July 30
on a plate⋮
⋮
⋮
←~~sd~~

Br. B 28185

B 30572

→ This is star No. 1, Bk. 37, page 82

No. 145 18 58.5-25.3

August 3
on B plates

o
↑

¹⁵ Van Newell Mbd on B 32076

Defect?

Asteroid?

Seems different image
from stars.

On B 32076
Motion?

* Have Miss C see

✓

Region 18 24 - 23

No. 146

Bright defect on B 32076

Mkd on 32076

Aug. 3, 1926

on B pl



No. 147
Aug. 3
and B pl.

18 47-26.5 New Mhd 26257
K

B₁. B26257

NS or limit on B 32076
B33776

This is No. 142, see page 64.

70

~~about
etc~~August 3
on B fl

✓ This to be watched

Region 18 24-23
No. 148 18 55-29,3new
msd 26257
and 32076Probably defective image
WatchB1 32076
B 33776
A 8986
A 6124
2736

Defective ? 26257

Proved Position meas., Bk ³⁹40, p. 44.

71

Ms. 149 18 45 - 29.2 New Msd 26257 (NS)
 August 3, " " " Var. and 32076
 in B plates

meas — Br 32076 NS 26257
 33776 Q 8986
 Seen, perhaps not max, Q 6124 Q 2736 NS
 Proof

Found independently in A plates, Obj. 188, Bk. 49, p. 110

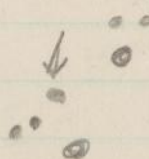
14.0

□ 16.5

72

Is this proof enough? ~~Kassova~~
 ✓ MW Reg. 18 24-23 etc
 No. 150 18, x 37-25.4

Aug. 3
 on a pl



Position measured, Bb. 49, p. 7

A very ft star

Marked on A 8370
 and B 26257 and 33076
 Br = slightly fainter than ~~and MF~~

NS on A 2752

Br 8370 the poor plate.

To ft for B 26257

~~MF~~

NS A 6124

Look up data of
 Innes

This may be Nova?

Seen, faint, A 9376 NS B 33776
 Seen, ft B 332076 Perhaps seen but very

faint A 8986

Probably NS A 2736

Poor, probably NS 33776

NS MF 9793

No. This may (probably is)

be Innes' star 18 36.5-25 22 Seen ft B 28160

NS B 27184

just off edge of

8x10 WAC 6656 a pl

ft^{MF} 8519

NS 8759

8765 9779

8770 9784

9565

9589

9597

9656

9663

9672

9684

9691

9747

9759

9769

Innes 149 for discussion
 see Bb 46, p. 116

15.5

16.5

7 Position measured, Bp. 39, p. 154-166 — Probably reject
~~case, at present~~ Good range. Of 154 73
 Needs more A plates

No. 151 18 33 - 25.0

August 3
 at A pl.

•
 :
 x - : :

Mkd on 28370 and B26257
 and M#

Br = *, a little brighter than x
 Ft = N.S.

Too faint(?)

to be missed by
 M# plates, at
 least by poor
 images

Br. A 8370 the poorer plate

N S A 2752

Seen not Max B 32076 N S MT 9793

12019 probably br, poor

Ft but seen A 11979

12061

N S 12349 1923

* 12062

12392

12063

12439

12064

12471

12065

12507

12066 1922

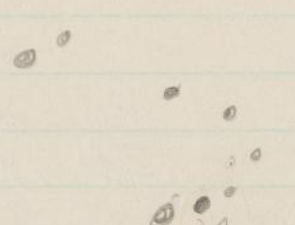
@ 12062, 140

A 2752 [160

74

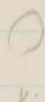
Region 18 24-23 etc

M. 152

Aug. 3
on a pl.

 → hazy, ?

 Defect or Motion.
 A 8370

 N S 2752
 kept fr. stars
 in about this position.



Too fr for B pl

~~more proof?~~ Position measured with 154.
Continued, Bb 46, p. 50

No. 153 18 27 -25.5 Marked on A 8370 and MF
August 3 small range but
on a pl. apparently real.

• ←
• - x
y' •

Br = brighter than x
Ft = ~~near fainter than~~

A 8370

Ft 27 52

MF plates
show images
very close.

Probably Medium

MF 9793

Ft good, well
Refracted image; A 3699

8519

A 11895 **

Unsatisfactory in
troubled images.

Is only S star seen A 9370? Difficult
as images are very long. But this
apparently identifies wholly as the
Southern star. 8x10

A 12019

N Ft

A 12349

S Br

8x10
Var. on extreme
edge of film

12062 brighter, July 2
12063 " 2

Start. Cap.

A 12061 24 23 23 38

13 44 35

12471 July 2
12064 July 2
12065 July 2

12066

11979

12062

"

15 09 31

12063

"

17 11 30

12064

"

18 55 30

12065

"

20 57 33

12066

"

22 05 35

12061 July 2

12714

12553

July 2 - Short Per
Cepheid?

Magns see Bb. 46

13.4 to 15.0

76

Can this be Nova of 2 May?

Ft stars
A 12471Marked on
A 11979Continued
Pl. 40, p. 216
August 3, 1926
on a pl.

Region 18 24 - 23

No. 154

18 26 - 25.4

X...K

New

Msd on A 8370 and

MF

Also msd MF 8759

mkl on A 11979
and MF 8759

Br. A 8370

Br. = X

Ft = NS

Ft. A 2752 NS

MF 9793

MF

8519

9589

A 9370

9597

A 3699

9658

A 11895

9663

Seen, Ft. A 11979

9672

9684

9691

9747

9759

9769

9779

9784

9785

8638

8X10 nesc 6656

A 11895 NS

12551

12507

12553

12714

12392

12439

12471

Seen faint

12349

12019

B plates, see p. 316

SS Cygni type?

Probably long period.

One Max 1886 of 12.8 is too

poor a plate to claim as significant date.

Magns.

13.0 \pm [15.0 obs176
216
217

36 obs

28

12

only extreme max 12.8
in poor plate.

~~Leave for more proof.~~
Position measured, Bk. 39, p. 155.

Continued, Bk. 46, p. 30 ⁷⁷

No. 155 18 23 -25.2
Aug. 3
on a pl

new

Very ft star
mtd on A 8370
and MF

Probably not worthwhile to examine all
8x10 Br. A 8370 except very long exp., if Variable were bright, might show.
On region 6626 n.s. or limit of pl. A 2752
"some of 6656 A 12996
MF 8519 ?
perhaps not Map
* A 3699
12553
12019

* Br ^{MF} 8638
probably not caused by def.
more proof? (proof)

Br * B 23758 (140" Exp) —
probably B 37695
A 12637 — Sept 2
A 12655

MF 9793 12532
A 12594
ft but seen
12603
12605
12608 Aug 18

* 12657
12663
12666
12668

Magnus

B 23758

1.45 or a little brighter

A 3699

[17.0 ?

B 25746 79" Exp
8759
8766
8770
9565
9589
9597
9656
9663
9672
9684
9691
9740
9747
9759
9769
9779
9784

This is Luyten's Var.
18 22 54 -25 8.3
HV 4064, 1413.852

78

~~Leave for more proof.~~ Position meas. Bk. 39, p. 159

Region 18 24-23

No. 156

18 25.5-25.8

Aug 3
on a pl

Arcy ft star

Br. = nearly = x

Br A 8370

NS 2752

MF 9793

Not Max but ^{mf} seen 8638

A 9370

A 3699

Confirmed by *
Dir. Cannon
Nov. 3, 1927.

9597

9656

9663

9672

See ft. stars near A 3699

On edge of region 8x10 NYC 6626

NS A 12532 (some plates)

12600

12661

MF plates
show stars
as bright as
star on
A 8370

MF 8519

8759

8766

Seen ft 8770

ft 9565

NS B 32076

Magn 2.0
39, 159

157
1927 Leave for more material

m# 9793 NS
m# 8766 ft
A 8370

79

No. 157
August 3
in APL

18 34-26.1 Not large range
Br. = a little brighter than x
Ft = a little brighter than y

Br. or pro. pl.
Br. A 8370

Ft 2752

Seen, probably ft, m# 8766 *
most m# plates not good enough

Seen, very ft m# 9759

ft star, probably y, seen 9779
and others about this date

Var in S

9370 too
9577 pro.

Perhaps Br
m# 9691

80

Continued
Bb. 46, p. 68.Aug. 3
on a pl.Light Curve
plottedDr. S. saw
Leave type, etc.
for more materialConfirmed
by Miss Cannon
November 4, 1927Magnus
Q8370 14.0

Q2752 155

perhaps a little fainter on MF9793

Try to prove Position meas. Bb. 39, p. 160

Regim 1824-23 etc

No. 158

• • 18 37-26.4

Fair? Mbd A8370
(Small) range but MF
apparently variesBr. = about = x
Fl = only a little higher
than y

Fl 2752

~~AS~~ A2736

Seen, fl. A8986

Fl a 6124

Fl MF9793

B32076 B23758

B26257 B28160
27184

MF8519

8638

8759 9119

8766 9784

8770

9565

9589

9597.

9656

9663

9684

9691

9746

9747

9759

9769

Seems
constantly
faint
not long period

Position measured, Bk. 39, p. 90

No. 159 18 21 -26.5
August 3
on a plate



Mkd on A 8370
and MF

brighter than x (9370)
Br. = about = x nearly r
Fl = NS

Br. A 8370
** A 9370

Br. but
not Max
R 5245

NS A 2752 showing
MF 9393 faint stars
A 2605

MF 8519

8638

8759

8766

9550 shows good
images of
fl stars

9597

B 27184

Magnos.
A 9370 13.5?
A 2752 16.5

This is Luyten's star $18^{\text{h}} 20^{\text{m}} 51^{\text{s}} - 26^{\circ} 27' 0''$
HV 4061, see HV 852

Position meas. Bk. 39, p. 161

Region 18 24-23 etc

mbd as 3703 MF

No. 160

• - x

18 39-26.4

Very small range

but seems real Var.

Br = triple brighter than x

Ft = fainter than y

Aug. 4

on a plates

y - • ←

Br 8370

Medium MF 9793

Ft 2752

8986 ?

MF 8519 ?

MF 8638

2736

8759

B 33776

9565

* 32076

* 9597

max ~~14.2?~~ 14.5?MF 9597 ~~15.2?~~ 15.5?

A 2752

15.5 or fainter

two obj. = 161, see one numbered 161a

83

No. 161
Aug. 4
an a pl Asteroid ? on A 8370

→ No 161a

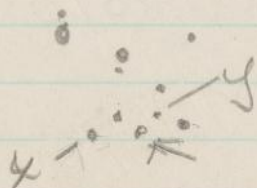
Defect as Obj. on A 8370

Errord. Position measured, Bb. 39, page 89 ~~X~~

Regim 18 24 -23 etc
No. 162 18 36.5-26.8

New Good range
mbd A 2752 8370
and MF

Aug. 4
on a pl



Br. = nearly = x
Ft = y

Br. A 2752

8370

6124

2736

Could have
been found
on MF plates
though pretty
faint.

MF 8519

Perhaps median

8986

Median B 33776

MF 9793

Median B 32076

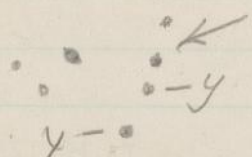
A 2752 13.6

A 8370 15.0

Nov. 1927 Leave for moon pl.

85

No. 163
Aug. 4
on a pl.

18 33-26.5 mbs on 8370, 2752
and M7


Br. = nearly = X
 Ft = ~~parent~~ ^{family} than Y

Br 2752

Almost the
 ft for M7 and B
 as 8370 the form

Extremely ft 8370
 " " M7 9793

86 Levere
1928

August 4
on a pl.

No. 164

Perhaps Algol? Not proved

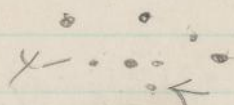
Regim 18 24 - 23 etc

18 29 - 26.9

Position measured
2752 and 178

mkd 8370 ~~115.5~~

A ft. star and not
much range



Br. = nearly = x

9370 and

On a 2752 Medium?

~~115.5~~ 8370

9376

Probably Max

MF 9793

too ft. star
9377 too faint

MF 8519

Too faint to prove by MF?
unless it is N.S.

* 8638 highest?

MF 9740 ft?

Examined MF
plates, hoping to
prove Algol
type

8759

Probably in B5245 (140° B 23758 ft?)

8770

not proof

9550

9597

Long exposure
B plates, examined

9565

of this star is about
at limit of pl.

9589

* is extremely faint

9656

9663

Range

9672

About 14.2 to 155?

9684

9691

* 9747 perhaps
a little brighter
per pl.

9740 ft?

9779

8766

A Nova?

No

Cont Bk 46, p. 6

87

Position meas, Bk. 39, p. 168

Very good range

Mtd on 8370 and 2752 and
MF

No. 165 18 27 - 26.7

Aug. 4
a Bl

Br = brighter than x

Torpor 9876 Br 2752 (1897) Sept 21

2799 Oct 5 1897

only 10^m but shows Br at Max.

off edge of A

plates of 8x10, for
MPC 6656 and 6626

2 other dates

not showing ft stars

Q 8876 10m

9449 11

off edge A 3358

2605

B 19896 Q July, 1897

does not show ft stars

mag

Q 2752 13.0

Q 8370 17.0

NS 8370 a 9376 (60^m)

9370

9577 (30)

MF 9793

8519

(Rev
1.8 9-30)

8638

MF 8505

8759

8647

8766

8679

8770

8762

9565

8779

9589 NS unless at

limit of plate

9597

9656

MF 9041

9663

9048

9672

9053

9684

9105

9691

9151

9747

9495

9759

9521

9769

9779

9784

MF 2818

4542

88

~~Not Proved~~ ✓ Position measured, Bhr 39, p 93
with 167

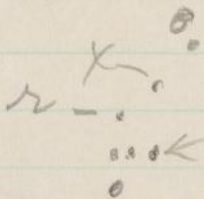
Regim 18 24 -23 etc

18 24.5-26.8

No. 166

Mason 8370 NS, 2752,

Aug. 4
as a pl.



Very faint star. and MF

ft stars Br = about = x
near Van

Have this
checked

Br A 2752 (1897)

Is the Var same star as
seen on 8370? ~~Probably is~~ ^{yes, very ft.}

Var. seems to
be triple S of
straight line 93

* 2605

* B 28160 (88) 1901

Fr A 8370

MF 9793

A 9370

B plates not useful, except
long exp.

~~Proof~~

B 23758

27184 too faint

Exam. MF plates

MF plates not

suitable for proof.

magn.

On B 28160 Var is between μ & x

On MF 9793 this would be about 14.5

make a blurred

line which sometimes

seems heavier but

as the Var. is not

separate, it can

not be proved by these

the bright

See 9799, 9589

On A 8370 Var about 17. ^{a little} or ^{brighter}

Magns.

14.5 to 16.5

Prored Measured Bb.39, p.92

89

No.167

18 23.8-26.5

New

Mbd A8370

Aug. 4
on a pl.

Br. = fainter than x,
brighter than y -

Br. A8370

~~A9370~~

B27184

Possible trace on plate that
shows ft. stars, A2752

MF9793

8519

A9370

B5245

B28160

Star 1 Br
8370Ft or NS
2752

A8370	1	MF	Star seen bright is
A2605	2	9793	2 B28160 2
2752	2	8519	1 & 2 23758 2
9370	2	8759	2 27184 1 & 2
		8766	2
		8770	2
		9565	2

Star 2 MF9793
28160
23758
2605

167 Magns

13.8 A8370

Star 1 = No.167

2 sens constant

A2752 faint, fairly new star just south, seems a little heavier
[17.0] print but on original, MF9740, is normal.

90

See page 161 for ^{no.} 239

Is one of these Innes' stars?

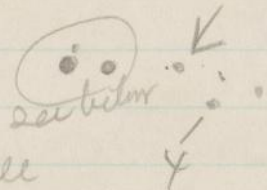
Position meas. Bk. 39, p. 172.

Region 18 24 - 23 etc

Mk'd on A 8370

No. 168 18 20 - 27.1

and MF

Aug 4
on a plsee
sketch
belowAft star
Br. = about = x (a triple
brighter)

Br 8370

Medium MF 9723

Almost
n.s.

FF 2752

In looking at
No 168 on A 2605
I saw star near
varies.

9370

Very ft seen MF 8519

Probably Long
PeriodSame
group
as above

168

239

168 continued

Br

MF 8759

FF A 2605

MF 8519

Magnus

I 170 A 2752

8766

Medium?

8770

9656

9565

9663 decreasing

9672

14.5 A 8370

9589

9597

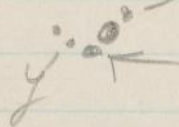
Probably br B 19580

Pwood " See star of June 18 19.6-27.6 ⁹¹ approx.

Position meas. Bb. 39, 1.170 ^{June 18 20.6-27.2}

No. 169 18 20 - 27.5 ^{MBL A 8370 and MF}

Aug. 4
and a pl

y 

Br - much brighter than X
~~not as br. as X~~
Ft = about = y

Bb. A 8370 ^{medium?} a 9370

2605

MF 8759

8766

8770

Ft a 2752

Probably NS MF 9793 *

NS MF 8519

MF 8638

9556

B 21284

19580

A 8370 135?

MF 9793 155

A 2752 perhaps 16.5?

~~Leave for more A plates A very ft var.~~

Weld on A 8370 and MF

Region 18 24 - 23 etc

A slight change

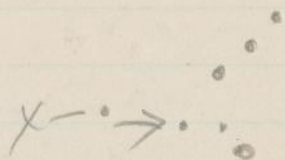
No. 170

18 20.5 - 28.2

New which seems real.

Aug 4
on A pl

A very ft star



Br = about = X

Br A 8370

Med.

Perhaps to A 2605 A 2605

FKA 2752

MF 9793

9550

Many of MF plates
do not extend
quite as far South

Too faint for
MF plates for proof

B 27184

B 28160

B 19380

Confirmed by
Miss Cannon
m. a. s.

May 4, 1928
in 3 A pl.

15.0 to 16.0?

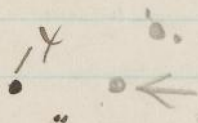
Continued, ~~Leave for future~~
 Bb. 46, p. 22 maybe nova - No.

No. 171

18 22-28.3

Aug. 4
 in a pl

Off Edge of
 MF region



$B_r = \text{nearby} = x$

mhd A 2752 Sept 21, 1897

Confirmed by

10^m Ed. A 2749, Oct. 5, 1897

B 20212 Sp. Aug. 31, 1897

Star not seen.

A 8370

2605

B 27184

not quite
 as bright

Magnus.

Bb. 39, p. 38

See Sep. Nova Sag. No. 5 mhd on A 2752

171 about = 15 - 12.8

L 17.0

X Position measured, 93
 Bb. 39, p. 182 A 2752 and B 27184
 mhd on A 8370 n.s.
 Quite bright and
 large range

94

Enough proof?

Is this Dunes star?

Comes on MF field

Position meas.
Bb. 39, p. 163Regim 18 24 - 23 etc
18 22 - 28.1

Mhd A 8370 NS, 2752, and

A bright star, B 2816

Aug. 4, 1926

on a pl

Br = triple brighter than X

Seen by Dr. Shapley
Jan. 28, 1928

Nora

Br. A 2752

NS A 8370

Sept 21, 1897 Seen Ft. A 2605

B 27184

Field of MF plates

varies. Few extend

quite as far as
thisAn 2605 ^{very slightly}
^{fainter than}

Aug. 3

Very fr A 2799

NS B 11761

many
10^m B platesX plainly
seen

NS m# 9793

13728

8638

16164

9589

23665

9597

26483 (45^m)

9663

26491 (45^m)

9672

28621

9684

29904

9691

32627

9740

9747

B 17651

9759

19380

9769

19580

9784

20451

9779

21284

22515

Sept 14 1897

35686

23203

does not show ft

36385

23665

stars

37314

25390

June 18 19580

39151

27446

June 18 X seen

40363

29531

Var ns

41504

29160 (88^m)

Important date

* B 20451 Sept 18 19580

31576

from plate

Continued, Bk. 46, p. 44

See B 11761

Dunes, I tried to mark

some star that would agree

with Dunes' Var. position.

marked ^{Var} 253 - see page 186.

This star proves Var, A 2605, 2752 same year

June 3

19380 13^mX and much fainter
stars seen Var ns

B 20322 Sept 12

See blank space

B 28160

(does not exist)

End B 20359

B 9881
July 1899

1927phae.proj.121.W

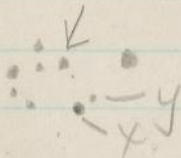
Proved Position measured, Bb. 39, p. 167,

~~and MF~~
Near Mbd A 8370, B 27184,

No. 173

18 26.5 - 28.1

Aug 4
on a pl



Large range

Long period

* Br 8370
A 2605 edge (fl)
Br MF 8770 edge
MF 8759

Br. = nearly = x
Fl. = about = y
Fl A 2752

Fl B 5245

Sum not Max, M# 9793

N S B 27184

M# 8638

M# 9550

9793

Magn.

13.0 to 14.5

1881
July 1893

96 Confirmed by MAS

Position meas. Bk. 39, p. 192

Region 18 24-23 etc

18 29.5-27.8

No. 174

Mhd 28370, MF,

B32076 NS

B28160 seen

Aug. 4
and a pl

Bar on power plate

B a 8370

B28160

MF 8770

Br = nearly = X

Ft or NS

A 2752

MF 9793

B32076

MF 9759

9784

9769

9691

9663

9597

8370 about 145

2752 [17.0

Position meas. Bb. 39, p. 189.

*

97

18 35-27.7

New.

Good range

Mbd A 8370, B 33776

h MF

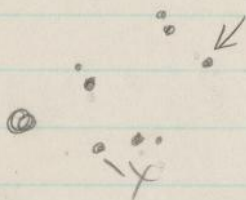
Br = about = 4

Several ft stars near

No. 175

Aug. 4

in a pl



see 39, p. 189 Br on poorer plate

Medium

for Br A 8370

Perhaps seen

detail of

B 33776

B 26257

faint stars close,

May 19, 1904

27184

Var. at Min.

MF 9793

very

Doubtful
5266

A 2752

B 28160

3868

9577 ft stars NS

Var NS

Probably seen ft B 32076

June 30 1903

14.0? probably a
little brighter

2752 seen at limit

7 pl, about 17.0?

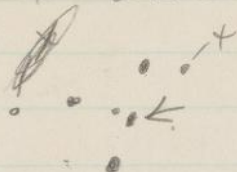
98

~~Have confirmed by mine~~

Position meas. Bb. 39, p. 191

Region 18 24 - 23 etc

No. 176



18 35.5-28.1

Aug. 4
on a pl

Mhd 8370, MF, B33776

Brn from pl.
Br 8370Br = about = 4
or a little brighter
NS 2752B 5266 probably br.
B 28160 (1901)

B 33776

32076

27184

26257

MF 9793

9565

9589

9684

9691

9769

A 2799 10m

off S edge of
some MF plates

15.0 to 16.5

Lease for more proof 1928

99

18 30 - 27.5 mlsd 27525 MF

Not much range

Br. = about = x

No. 177

Aug. 4

in a pl

• • K
• •
• • - 4

A 2752

It A 8370

MF 9793

B 32076

MF 8759

8766

8770

9565

9589

9597

9663

9691

9769

9759

Doubtful

27184

Small change but seems real.
Not proved.

100

Position meas.
 Ab. 39, p. 193.
 No. 178

Good enough?

Region 18 24-23

x
 . . -178

Aug. 4
 and a pl

18 ³⁰ 24.5 - 27.8

Mhd A 8370 & MF
 near 174

Br = much brighter than x

Ft = nearly N S

A very ft star, small range
 but would be measurable, if
 var. is proved.

Ft. A 8370

Probably ft MF 9779

Br.

A 2952

MF 9565

8766

9656

B 28160

This is quite
 ft for MF plates
 and images close
 together

15.0

16.5

18 31 - 28.0 Wkd a plate
B344678

No. 179

Aug 4
on a pl

•
◀

very bright star seemed to be diff. relation
to others. Cannot prove

A 8370

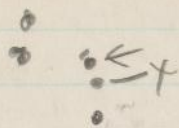
Diff. images on A 2752
seems fainter

102

Proved
Position measured, Bb. 39, p 207.
Region 18 24-23 etc

No. 180

Aug. 4
on a pl



Br 8370 (poorer pl)
* brighter than B 19580 10m

About Medium B 19380 13

B 33776

Br. or Medium B 28160

Mhd A 8370, B 19580, B 26257
18 33-28.0

Just a br. star.
not large range

Br = ~~not as~~ ^{than} Br as x

Ft = about 1 or 1 1/2 M fainter

Ft 2752

Probably NS B 26257

27184

very ft or NS 3868

B 32076

30321

Look up
?

Times 18 33-28 46
nearly a degree away

14.0 to 15.5?

Look up Innes 18 33.8 - 29 0 very ft.
Position measured Bla. 39, p. 184

Southern of 2 stars not very close.
No. 181

Apparently near
18 34 - 28.2

Aug. 4
on a pl

Mhd 2752

Br (B 26257) Probably
brighter than x

Too ft for
A 5266
Br A 2752 1897
** B 26257 1900
Max B 28160 1901

For NSA 8370

NS B 32076

33776

27184

Probably NS edge 23758
B 3868

2752 135 ?
8370 about 16.0

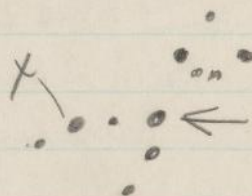
104 Proved

Position meas with 181, 39:185

Region 18 24-23 etc
 No. 182 18 35-28.3

Innes
 Apparently ~~new~~
 Mhd 2752 & MF 9793

Aug. 4
 on a pl



slightly
 Br = brighter than X

Northern of 2
 stars, not close
Quite bright

A 2752

Barely A 8370

Meas 2752

Medium

NS B 3868

B 26257(1900)

28160

33776

32076

5266 Too far

B plates fine

Ft but seen MF 9793

MF 9565

perhaps
medium?

9589

9597

9684

9691

9656

9663

9759

Beyond limits of

MF 8519

8759

8770

2752 12.8 ?

8370, 16.5

Error in 1900 in Var Cat

Innes near 18 34.8-28 15

182 = 18 34 54 -28 9

46) Innes = 18 34.48? -28 15

Innes prec. 6^s S 6' Mhd region on A 2752Innes
and 47

See Bib. 46, p. 111 and 120

No star found to vary A 2752-8370

47) Innes = 18

193 1927phae-proj-121 W

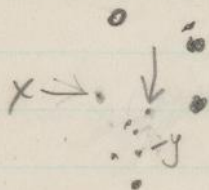
Position measured, Bk. 49, p. 9

Conf. M.A.G. Feb. 1, 1928.
No. 183

Neur
18 37 - 27.5

not much range
Very ft at Max
Mhd A 2752 and
MF

Aug 4
on a pl



Br = x
Ft = families than y

Br A 2752

Medium
Perhaps not max
A 2736 (1897)
B 33776 (1904)

Ft A 8370

NS B 27184 B 30321

Too fr
B 5266
26257
3868

32076
28160
A 8986 } edge but
 } shows ft stars
6124 }

15.5
16.5

MF 8519 9656
MF 8759 very ft or
8766 a defect
8770
9565
9589
9597
9779
9793
9769
9759
9747
9740
9691
9684
9663

Regin 18 24-23
No. 184

Aug. 4
on a pl

This is Var. 82, Bb. 38, p. 216.

Position measured, Bk. 49, p 8

0.8 1.5

107

18 38.5 - 27.8

mbd A 8370, B 2718x

A very ft star but
bright on poorer plateBr = a little brighter than x
Ft = NS when y shows.

No. 185

Aug 4
an aple

Br 8370

H A 2752

Br 27184.

Already mbd -

Probably Times 18 38.5 - 27.8 14.5 to < 17
U. Cir. 37, 303

not in Proger

185 is same star as 54

Regin 18 24 - 23
No. 186

Aug. 4
on a pl

= Var. 17, Ab. 37, p. 98

Peculiar Nothing proved. Leave.

109

No. 187
 Aug. 4
 on a plate

18 43.5 - 27.8

Mixed A 8370
 B 28160

• : •
 → :- y

It not much brighter than y

Peculiar image on A 8370 (1907)

Hazy, rather bright, apparently diff. direction

But This is a faint star on 2752

Hazy effect may = another obj. superposed?

Aug 7 1901 Hazy effect seen (P) B 28160 but faint.

A 8986 Very ft though not m

6124 " "

2736 " "

B 33776

27184

3868

30321

32076

Probably defect superposed
 on faint star.

Am plates 1907 do not
 show object though several
 are 25 and most of them show
 the brighter faint stars near
 objects

Am 4804 May 7

4954 July 1

5013 July 17

5024 July 30

5090 Aug 25

110

No. 188 *Regin 1824 - 23 etc**Aug. 4
on a pl**= Var. 149, page 71*

2 pairs a pl. Proof \checkmark Position meas. Bk. 39, p. 197.

111

Confirmed by M.A.G.

New

Mled 8370 & B28160

No. 189

K₁ \searrow
y - . . . \searrow

18 40.2 = 28.5

Aug. 4
and a plB₂ = brighter than \times
4th faint as y.Small range but
real.B₂ A 8370
* 8986

4th A 2752

Not definite

B 27184

32076

3868

26257

5266

B 33776
Probably ft B 28160
A 2756
6124

14.5 to 16.0

?

Tried to work
into center of
m⁺ pl. for
magn

112

This is Var. No. 64, Bb. 38, p. 198.

Region 18 24-23 etc

no. 190

Aug. 4
on a pe

✓

= No. 64

This is Var. 83 Bk 38, p. 217

113

No. 191

V

Aug. 4
on tape

114

~~Hasse~~ confirmed
 Ma. 18
 April 18
 No. 192

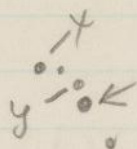
Aug. 4
 on the pt

Position meas. Bb. 39, p. 209.

Regin 18 24-23

Mixed A 8370, B 27184

18 33-29.0



Br = much br. than x
 Ft = fainter than y

A very distinct
 faint image
 on A 2752

Br A 8370 to on from
 plate

Medium B ~~30321~~
 28160

Very ft A 2752

B 27184

~~30321~~

Probably 33776
 32076

Ext. ft 3868

B plates not
 very good

~~No~~ This is probably Innes 18 33.2-29.8
 13.8 to <16 Algol?
 (Might announce date of Min.)
 U Cir 37, 302.

See Bb 46 p. 112

14.0 - 16.5

Look up also 18 33.1-28.46 11.8-12.9

U Cir. 20, 152

No. 193

Asteroid on A 2752

Aug 4
on 6 pl

16

Leare

Regin 18 24-23 etc. Mbl A8370 B28160
 No. 194 18 27-29.0

195
 ↓
 194 → . . .
 0

Aug. 4
 on a pe

A8370

194 probably Asteroid.
 N82752

Possible Nova? Leare 1928

117

18 27-29.0

Mhd A 8370, B 28160

No. 195

Aug. 4
in A pl

195 =

See p. 116

A 8370

NS 2752

B 27184

B 28160

B 30321

118 Leave for proof

Regin 18 24-23 etc

Mhd A 8370

No. 196

18 26-28.7

B 28160

Aug. 4
and pl.

Which? probably to NS on A 2752

too poor
27184

2 stars on 8370

1 on 2752

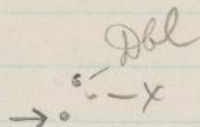
Apparently diff shape B 30321
but a faint objectfind ²³⁷⁷⁰
30321

Leave for more plates

119

No. 197

18 24.2 - 29.0

Mbd A8370
B28160Aug. 4
and pl.


Br - nearly - x

Br A8370

NS a2752

Images overlap
if star is seen
B28160

21

26483

26491

20

Leave for present

Region 1824-23 etc.

Mbd A8370 and B27184

No. 198

18 24-28.4

A ft. star

Aug. 4
on a pl.
off MF Reg.

B₁ = brighter than xB₁ A8370

N.S. 2752

A 2605

B Plates not
for proof?

Probably ft B 27184
to form B 5245

B 30321

Position measured, Bp. 49, p. 81 with 175 of Region 18 9-30.

121

Probably can be confirmed

No. 199 18 23.5-28.5

Mkd on A 8370 b
B 27184

Aug. 4
on a pl.
Not on MF

.. .. K
.. .. -y
.. ..
o-x

Br. = about = x
It = a little brighter than y

A 8370 (brighter on poorer plate)

It 2752

B 27184

Seen, not Max A 2605
poorer pl.

30321

Medium

A 10775

Perhaps It B 28160

top from
B 5245
26483
26491

(199)
See Region 18 9-30 this follows, slightly N
of 175 of 18 9-30

Measure the two stars on A 10775
Region of 18 9-30 covers this

MF 9151

MF 9521 ?

M 10391

10142 ?

10366 June 14

* MF 10272 May 18

122

Leave for further proof

Region 18 24 - 23 etc. mbd A 8370 B 28160

No. 200

18 22.5 - 28.5

Aug. 4
on a pl~~Slight, if any, change.~~

X - •

↓ y

• •

• •

Br - a little brighter than x

Fr = y

Small range

Br 8370

Fr A 2752

Leave

123

No. 201

Very ft.

Probably not rare.

Aug 4
on a pl

124

Leave for more proof

202 N of 203
202 follows 203

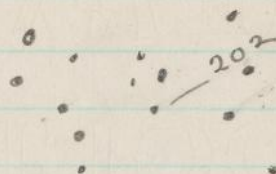
Region 18 24 - 23 etc

Mhd 8370

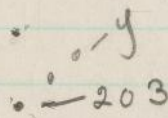
No 203

18 21.2 - 29.1

202

Aug 4
on a pl

A very fr star

Very small range
perhaps .6

A 8370

A 2752

Lookout Perhaps a very ft Algol
 at once
 when more plates 18 21.0 - 29.2
 No. 203

Aug 4
 on a pl

See p. 124

Leave

125

Mixed 8370 B 27184
 Small range but seems real.

Br = brighter than y
 Ft = fainter than y

Ba 2752

B 27184

30231

28160

Ft A 8370

Regin 1.8 24 - 23 etc
M. 204

Aug. 4
on a pl

Very slight, if any, change.

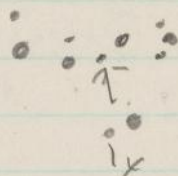
Quint.

18 20 - 28.8

No. 205

28.8 -

very faint star

Aug. 4
on A plBr = slightly fainter than x
Perhaps 15.5 ~~or 16.0~~

Br 8370

NS 2752

Too faint for even long exp B plates for proof.
Might be seen at limit on good pl.

Region 18 24 - 23
m. 206

Aug. 4
on 6 pl

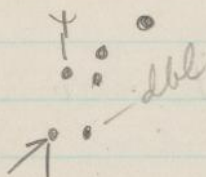
Probably defect on A 8370

Mhd 8370, B30327¹²⁹

A very ft star but fair range.

18 22-29.8

No. 207

Aug. 4
on a pldetail
↓

elongated

A8370

Br = about = x

H = a little brighter than y

H 2752 better plate

several ft stars around Var

B 30 321

27184

Seen faint B 28160

Possible Cepheid?
Leave for more plates

130

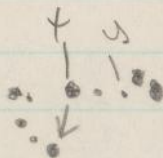
Leave for more plates

Reg 18 24-23

Mbl A 8370, 2752, B 30321

No. 208

Good range

Aug. 4
on a pl

18 23-29.9

Br. = some brighter than x
Ft = about = y

Br 8370

Ft but seen 2752

Perhaps Medium B28160

Very fr, if seen, B27184

Position measured Bk. 49, p. 10.

18 25-29

See Bk 8, p.

No. 209

Imes Var. near Nova Sag 5
(18 25 29)

Aug 4

already mtd on A 2752

A fairly br star.

a plates

Br = brighter than x
Ft = fainter than y

↓
••• - Nova Sag. as ft star

Br. 8370

2752

B 30321

See Var 257,
page 220,
found A 2752
and B 30321,
in looking up
this Var.

132

Position measured, Bk. 39, p. 208.

Feb. 11, 1928

Confirmed
by Miss Cannon

Region 1824 - 23 etc Mhd, 8370, 2752, B 30321

18 28-30.1

Aug. 4

on a pl

following of 2 which have
same δ Br = brighter than γ
Fl 8370

B 2752

Perhaps br 27184

Fl = fainter than γ
B 30321

B 28160

23770 (255^m)B 33776
too ft for short eff.By shape of image
on B 23770
this seems to be
a double image14.5 ? \pm 16.0

1926

Perhaps = Algol —
 from at once with late plates

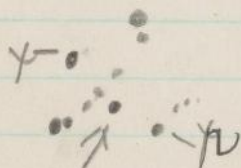
No. 211

1833-29.6

Mled 8370, 2752, B33776

Aug. 4

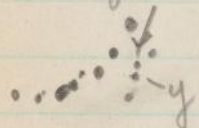
no. 1



Br = brighter than y but a little
~~about = y~~ fainter than r

Detail 2752

faint



8370

Perhaps br B33776

B 30321 good proof
 27184 " " ft stars
 well seen

2752 (better plate)
 at limit of pl. about = y

B 32076

* 28160

badly scratched

** 3868

in just this region

2799 10m

26257 - NY for this

23770 (255^m)

134

✓

Regim 1824-23

No. 212

a 7474

August 5
on 12 plates

This is Var. 100, p. 22

No. 213

Aug. 5
in a pl.

18 39 -19.9

N°

JEW
Kum ~~mark~~

mhd on

Pye. N. Ford range A 7494

* Corner of region

Br. 2842 (Corner)

not Max B30572

Probably Max B28185

meas — A.9566

7370

Assumed
Algol —

A 7494 Extremely ft.

Same obj. as No. 21, Bk 38, p. 152

136

Leave for present

Region 18 24-23

No. 214

A 7494

Aug. 5
on a pl.

• • • •

Very faint star

Br 7494 on proper pl.

2842

Leave for present

No. 215
Aug. 5
on A pl

18 47.6 - 21.1
↓
∴

Nur A 7494
Ft star but seen on poor pl.

Small range but seems real

B. A 7494

NS 2842

Probably too ft for B pl.

A 9759 Prob. very ft
a mere trace A 7370 which
shows ft. stars.

A 9566 does
not well show
ft. stars

38

Is this known? Apparently not

Position measured, Bk. 39, p. 53.

Region 18 24 -23

No. 216

18 38.5 21.2

mbd on A7494

and MF

Aug. 5
on a pl↓
o . . -x
o . .A rather ft star but
bright on poorer pl.Br = brighter, slightly,
than x

Ft. = NS on excellent pl.

A7494
* MF9793

meas.

— A9566

A9759

already
mbd "Vd")

— A7370

A7340

* NS A. 2842

Perhaps Ft B34019 — not
good enough for proof

Seen, faint, B34033

" " B30572

" " 28185

Very ft 28156

NS or " " 25746

NS. 17708

MF 12.7
9793

A2842 limit = about 15.0

V = L 15.0

✓

No. 217

Aug. 5

on a pl

Same as No. 136, p. 58

P. 07494

140

Enough Prof?

Position meas., Bb. 39, p. 50

Region 18 24 - 23

new

Mo. 218

18 53 - 21.3

Mbd on A 7494

and B 28185

A ft star but seen
in poor plate

NS a Ft A 2842

A 7370

Aug. 5

on a pl

South of fol.

of 2 that Br A 7494

K

are fairly bright Br B 28185

A 9566 but a ft star is slightly following

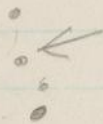
and A 9759 does not show ft stars. δ Sg V.

15.5 ?

16.5 ?

^{Proved}
Position measured, Bb. 39, page 52.

No. 219 18 55.5-21.4 New mtd on A7494
Aug. 5 and 2842 and B28185
on a pl (7.5)



Measure Br. A 2842
Proof. B 30572

Very fr 7494
B28185
A7370

14.0

7494 about 165
or fainter

42

Regin 18 24 -23

Mo 220

Msd on A7494

Aug. 5

on a pl Probably in change

Conf. mag.
Jul 18

~~Enough for?~~

Position meas., Bk. 39, p. 51

new

No. 221

18 53 -21.8

Mbd on A. 7494

and 2842

and B28185

Aug. 5
on A pl

14
••
• 0-4
• ←

Br = brighter than x
Fk = a little fainter than y
Good range

Br

Medium?

A 2842

A 9759

Fk. 7494

7370

B30572

B28185

13.8

16.0

144 Cont. Bb. 46, p. 42 / ~~Notes of 1905?~~ No.
 Position measured, Bb. 39, page 202.
 Region 1824-23 New
 No. 222 19 3.5 - 22.0 Mbd on A 7494

Aug. 5
 on a pl

~~Defective~~ large range on A 2042

Mbd
 am 3764
 B 36702

B 7494 (1905)
 Sept 18

NS 2842
 NS on very ft A 7370
 B 30572

*
 Probably not Nova,
 " Ling Period

B 36702 Aug 18
~~even at Max. very ft on A 2042~~
 19-15 1905

* Same date as
 A 7494

Looks up
 again

18-30 Sept 18*

12.5 to 16.5

20-30

July 11	AM 3711	probably NS
Aug. 8	3764	" bright
Aug 18	3801	bright
Sept 18*	3891	very ft, if image
July 5	3689	from
Aug 18	3812	prob. seen to?
Sept 16	3883	too poor
July 22	3728	prob. N.S.
Aug 17	3794	seen to
Sept 5	3843	" " very poor
Sept 16	3884	prob. NS
Oct 9	3945	very poor

19-30

July 12

3720

poor

Proved Position measured, Db. 39, page 59

145

No. 223

Aug. 5
on a pl

18 43 - 22.8
y - . . . K

is proved
Limit a faint star but Var.

Mbd on 7494 and B28185

Fair range -

Bi = nearly = x

Ft = some brighter than y

B27494

medium?

Ft^a 2842

7340

A9759 edge

9376

meas. — 7370

B28185

B30572

14.5 to 15.5

small range and
very fr.

146

Proved Position measured, Bk. 39, p. 69. ^{Cat stars on B22613}

Region 18 24-23

New Var.

M. 224

19 1 -22.8

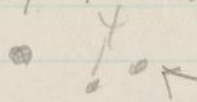
Mkd on A 7494

and 2842 and

B 30572

Br. = very much brighter
than X

Aug 5
on a pl



Br. A 2842

NS or limit of pl 7494

Proof Br not Max B 30572 — NS B 28185
meas. — A 7370

12.8

E 14.5

Enough proof? Leave for present

147

New Var?

No. 225

19 5 - 23.6

Not a large range but
on edge of plateau 494
held on 226
and B 28185

Aug. 5
on a pl

K 225
Y -

Br = much br. than x

Ft = much ft than y

Sept. 148

Br. a 7494

Ft 2842

7370

Probably
medium

B 28185

30572

148

Proved Position measured, Bk. 39, page 55.

Regin 1824-23

Newbar

m. 226

19 3-23.6

Mbdm A 7494
and A 2842Aug. 5
on a pl
$$\begin{array}{c} \times = \circ \circ \circ \\ \pi \quad \rightarrow \circ \circ \circ \end{array}$$

Br. = ^{much} ~~a triple~~ brighter than γ (brighter on B pl) Ft = barely seen
Br A 2842 γ A 7494

Proof \times B 28185 ——— NS B 30572
(Should have been found on B pl) Very ft A 3530
Images are different.

edge
meas.

A 7370 nearly = γ
** — B 13539 (10 m) Brightest?
or about same as 7370

meas. — Br not Max A 2727 10 m Eff.

about 12.0?

L 16.5

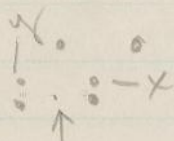
Enough
prop?Position meas., Bk 39, p.
Leave for present.

New

No. 227

18 57.5 - 23.3

Mbl 7494

Aug 5
and a pla faint star, ^{and B 28185} small range,
but seems real.

Br = nearly = x

#h = fainter than y

Br 7494

Medium B 28185

#t 2842

** 7370

Probably very faint B 30572

150

Leave for present Too faint for material at hand.

Region 18 24 - 23

now

No. 228

18 50 - 23.7

Mbdm A 7494 and B 28185

Aug 5
on a pl
$$\begin{array}{c} x - \downarrow \\ y - \cdot \end{array}$$

Very small

range but seems red

Br = about x

Ht. = trifle brighter than y

Even long exp
pl. do not
show these stars

Br. A 7494

Ht. A 2842

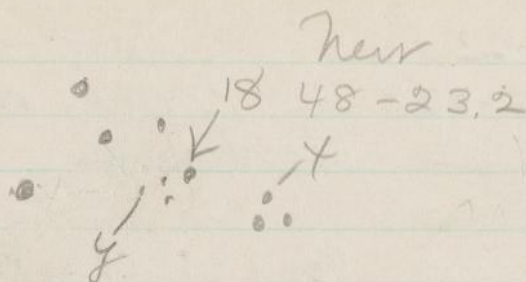
A 7370

Proved Position measured, Bk. 39, page 58.

151

No. 229

Aug. 5
in a pl



NS
MBD on 7494 and
Good range A 2842
and B 30572

Br = nearly = x

Ft = NS when y is distinctly seen.

Br. A 2842

7370

Comp B 30572

NS 7494

NS or Ft B 28185

Probably NS B 13539 (10m)

2842 15.0?

Perhaps 14.8

+ E 16.5

152

Proved Position measured Bb. 39, page 71.

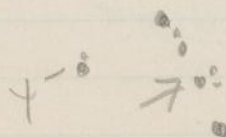
Region 18 24 -23

No. 230 18 45.5 -23.3

New
Noted on A7494 NS
Good range and A2842

Aug. 5

on a pl

Br = nearly as br. as γ (not as black)
Th. N.S. when ft stars seenmeas Br A 2842
A 7370NS A 7494
B 28185
A 9376
B 3057213.8 \pm 16.0



No 231

7494

Aug. 5
on 2 pl

Found independently No. 238. As
diagram, etc., are not entered here,
see No. 238, page 160

154

Proved

Position measured, Bk ³⁹40, p. 56

Region 18 24-53

new

A ft star

No. 232

18 53.8

-23.8

mbd on A7494

and 2842 and

B 28185

Aug. 5
on A pl.Conf. by MCG
Jan. 19.

Br

A 2842

Probably B 28185

Br. = much brighter than x

Probably N.S. 7494 —

diff. star from ft. one seen

NS A 7494

XX

Already mbd NS on
A 7370

Too poor B 30572

15.2

16.5

156

✓

Regim 18 24 - 23

No. 234

Slight, if any change
in object inspected

A 7494

Aug 6
on a pl

No. 235
Aug 6
at a pl

18 47-24.4

Here

Mbd on 7494 vanyft
and A 2842

y - 0.0

Y-1

~~Menu~~

marked $\frac{1}{2}$ in between
B₁ B₂

B. A. 2842

Probably B. A 9376

a 7370

meas

Br. = nearly = x fully as bright as
Fl. = fainter than y bright as n 737c
at 0 74211

Fl a 7494

h SB28185

MS B 30572

13.0 土

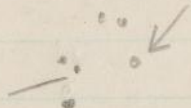
16. ~~6~~

58

Leave for present

Region 18 54-23

No 236 18 45.5-24.7

Aug 6
as a pl

New

A very ft star mbd on 7494

Br

a 7494 (Br in poor pl.)

NS 2842

NS 7370

NS B 28185

Is this defect??

Looks like other star
images but ft.

although stars seen

NS A 9376

1905 Sept 18

1905 June 27

~~Have~~
Confirmed
by May

Aug. 6
on pl.

Southern
edge

just off MF pl.

~~Leave for present.~~ Good range. ~~2 possible Nova?~~ 159
~~Watch~~ Position measured Bk. 49, p. 29.
New

M 237 K 50.5-25.2

mid. in Cen 7494 N.S.
and 2842 and
B 28185

o o v
x - . .

Bz = x Ft = very ft.

Ft A 7494

A 376 N.S.

Ft B 28185

~~A~~ 8986 N.S.

Undoubtedly the star
marked is the var.
or very slightly following
this, if a supposed
star.

Ft not min A 7370

" " " A 2736

N.S. (min? A 6124 **
ft star seen

N.S. B 30572

A 9363

A 9577 does not
show ft stars N.S.

From
Three magnitudes seen:

2842 V = x

7494 V a little br. than y

6124 Z seen V trace or N.S.

2736 V = m

7370 V a little fainter than m

This has one extreme max only
but other plates show variation
15.0 to 16.5

Detail from 7494
m - .
o o v
x - . . y

160

Pinned Position meas., Bb. ³⁹40, p. 47

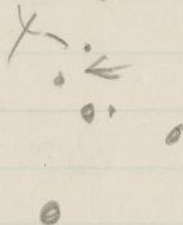
New

and MF
and B 32076

Aug. 9 No. 238
on A plates
found, marking
nearly Var. 76

18 41.5 - 24.4

Mbd A 7370



Aft star
B = brighter than X
South of 76

Same as
No. 231

A 7370

A 7494

~~A~~

Ft 2842

B 32076

A 9376

This is No. 231 see also page 153

B 32776

A 7370

14.5

2842 [15.5

does not show ray fr stars

NS on MF plates appear
but within limits

See page 90
 Position meers. Bh. 39, p. 173 Vars. cont. on page 172 | 161
 Sept. 4, 1926 No 239 Very slightly preceded 168, trifle N.
 on a pl. Whole exam. 168
 18 50 - 27.0

sketch with 168, p. 90

Br. = much brighter than X

Br. A2605 Medium 8370 Ft 2752

MF 8759

MF 9793

8519

MF 9684

9672

9691

A2605 14.0?

2752 16.5?

Wednesday, September 1, 1926.

Nebula surrounding star 18 26 - 25.2 (1900)
 See NGC 6644 ⁽¹⁸⁶⁰⁾ 18 23 56 115 14 0 Stellar Pickering
^{2 28}
 (1900) 18 26 24 - 25 12 ^{1.5}

This was first noted and marked on first examination of MF plates.

On exam. of Vars. 153 & 154, in close position, this was looked at especially for identification on A plates.

Is it a recent development?

MF 8519 & 9793 seem alike

(1924)

→ Note open appearance of northern portion

Marked as B5245

? MF plates, only, show neb.

Star may be fainter when nebula is brighter.

21 MF Plates showing marked Nebula and
apparently same ^{in all} except that on the plates with
no images, it is blurred)

MF 8519

8638 less intense — rather poor pl. though 60^m

8759 apparently just like others, perhaps a
little larger

print? { * 8766 extends nearly to N star

* 8770 very complete

* 9550 very sharp outline 45^m

9560

9589

9597

9656

9663 open space not noticeable —
very poor plate. Star images trailed
and poor —

9672

9684

9691

9740

9747

9759

9769

9779

9784

blurred — no open space — stars
trailed images.

9793

open space, stars more evenly
trailed.

No nebula seen, same star. Marked ? on
A 11979 and
A 8370

A 11895 Aug., 1917 Star bright.
→ plate with grating

A 11979 May, 1922, Star much brighter than
good images fairly ft. stars seen.

A 3699 July 1899 Very bright -

A 8370 July 1907 Star br.

9370 June 1909 br.

2752 Sept 1897 br.

Get A 13849 June 1926
14x17

B Plates early, few exam., do not show it.

B 27184 1901 16856 1896 28156 1901 etc -

M# 4701 Aug. 1919 10^m probably does not show.

J. W. M. L. L.

B18772 CDA -25 6556



-25 6557

Nebula — Bibliography

Note pec. objects shown to Dr. Fisher

Region 18 24 - 23 etc.

A plates, beyond 18.8

Continued from
Bh. 37, page 81

A 4800 18.8 - 32

Page 172

9737 18.7 - 30

Region in common =
 $= \frac{1}{4}$ approx.

4800 superposed

A 4714 19.2 - 32 (broken, mended on glass)

Page 173

10149

10149 superposed

4800 18 50 - 32

(page 182)

10750 19 0 - 30

4800 superposed

— region in common
= more than $\frac{1}{4}$

4800 see above

9058 19 0 - 35

4800 superposed

region in common =
less than $\frac{1}{4}$

Continued from Bb. 37, page 77
 A plates of adjoining regions

4714

4800 Oct. 12, 1900 60 18 50 - 32

7737 June 16, 1906 60^m 18 40 - 30

10149

10750 July 7, 1913 60 19 00 - 30

8486 Aug. 30 1907 120 19 24 - 30

Examine
?

Marked with many circles. Already
exam. for ?

9854 October 13, 1909 60 19 19 - 30

9058 Aug. 29, 1908 50 19 00 - 35

172

nos. continued from p. 161 Position measured,
Bk. 49, p. 20.

New Var. Regin 18 24 - 23 etc.

No. 240

18 52 \pm 30.7

Good range

Mhd on A 4800
and B 32407Sept 8
on a plates

Br - brighter than x

4800 much
poorer fl.

A 4800

br.

10750

27737 Very ft probably trace

NS 1332052 60m

NS 3868 60m

NS 33776 60m

NS 32076 62

for
proof - Seen faint 52558 10

Probably NS 28160 88 corner

Seen faint 26257 63

NS 32407 11

14.5k [16.5

Have ^{this} Conf - B plates

Position meas. Bb. 39, p. 212. 173

New Var

1915-29.7

No. 241

Mhd on a 10149

B 28628

Sept 8 extreme

• • •

on a plates n edge
of a 4714

• • •
• • •

Bz = x

Ht = n.s.

If not found

better placed,

Br. a 4714

medium

Ft a 10149

meas. a 4714

B 28628

B 32052

B 30483

A 8486

9854

8493 used

for this region -

* ~~measured~~
a 6137 120 m N.S.

9854

Seen ft a 10750

150 k

L 16.0 (edge of a 10149)
n.s.

165 a 6137 center ray ft

174

Region

18 24-23 New Var.

no. 242

Sept 8

on a plate

Position measured, Bk. 39, p. 213

19 10-31.5

Mbd on A10149

Exord range B 28628
for a ft. star

•

.-

• ←

•

Br - a little brighter
than x

Br A 4714

* 6137

Ft A 10149

B 28628

A 9854

8486

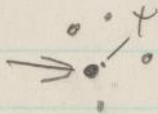
A 10750

New Var 19 2 - 31.7

243

Good range

10149

Sept 8
on a pl.B^a 4714

6137

A 10750

B 32076

32052

* 3868

32031

46908

more plates for proof, p. 183

n.s

Very faint A 10149
(the faint star is
brighter)

B 26628

B 33776

Found independently, No. 251, p. 183, on A plates.

Var close to Carte Regio

B 46908 is Sequence plate of Carte Reg 19^h - 31.5

Var. is a little fainter than Star 12 of Seq. on B 46908 ab

A 4714

12.2

[16.2

176

Reg.
1824-23Sept 8
a plates

244

Asteroid on a 10149

a 10149

Position meas. Bk. 39, p. 215.

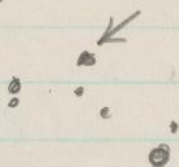
177

New Var. 19 13.5-33.6

245

Good range

A 10149

Sept 8
Apl.Br. A 10149
B 28628

Very fr 4714

178

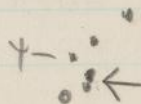
Position measured, Bb. 39, p. 216

Region
18 24-23

New Var.

19 6 -33.1

246

Sept 8
A platesBr = not as br as x
Hr = NS

Br A 4714

NS A 10149

Probably not Max. but seen 9058

B 28628

14.0 to 16.0

Lease Position measured, Bb. 39, d. 217

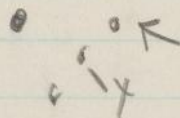
179

New Var. 18 59 - 33.4

247

Small range
Br = brighter than x

Sept 8
Apl.



Too far to prove by present material

Region

Br. A 4714

Ft A 10149

19 10-32 (8x10)

9058

Perhaps medium

just off edge

B 32031

B 32050

32257

Top from
3868

Probably Br A 4800

180

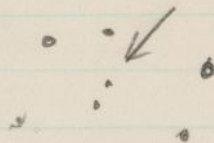
Position meas.

Bk 39, p. 218

Reg.

18 24-23 New Var. 19 8 - 34.7

248

Sept 8
on 2 platesSmall var, but
seems real.
perhaps .7?mag.
Confirmed by the
8x10 plates by

Br. A 4714

11524

* 11544

Medium?

11510

Ft 10149

9058

* 11482

~~Base conf. 9~~

Small range of fr star

15.2 to 16.2 ?

New Var. 19 26-32.4

249

Sept 8
on A plates

• - x
• ←
• - v

A 10149

B 28628

B₁ = ~~brighter than~~ x
much " " 12

Medium?

B 10149

A 5627

NSA 4714

9854

B 28628

* 8486

Perhaps NS on A 6137

* 8493

extreme edge but stars
near shore

B 32257 1903

Am Plates 1907 exam near date of 8486 (Max.) stars as
far not seen. Star just free, almost same P₁ is
much brighter and is seen near limit of good All.
Perhaps, when measures are made, Am plates should
be exam. to see if it ever is a little brighter.

Range

12.5

[16.5

182

Position measured, Bk. 49, p. 21

Innes

Regin 1824-23 Nov 1857.5-31.3

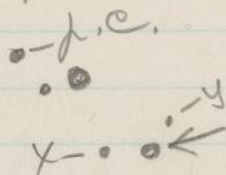
No. 250

Very large range
Mkd on 4800Sept 9
on a plate

Not prismatic conf.

B 32407

A 10750

Br = very much brighter
than x

Br. 10750

Medium

NS 4800

6137

B 32407

A 4714

* B 22558 to between x & y

Probably NS B 26257

Br.

B 3868

A 10149

32052

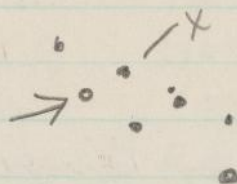
32076

33776

Position measured, Bk. 49, p. 22

Nov 19 2.5-31.8

No. 251

Sept 9
on a plates

Is this dpl. 183
 of another var. Is
 marked by 59W
 on
 mbd on a 4800

A 10750

B 32407

Br = a little brighter than x

A 10750

B 32407

32052

32076

3868

33776

A 6137

A 4714

should
 have
 been found
 on these B
 plates

NS 4800

Ft seen B 22558

Perhaps barely seen 26257

B 33776

Very fr A 11557

Look up Var 243, A 10149

Same star, found independently.

84 ~~have~~ ~~this confirmed~~ Great diff in images
 252 some distance from 251 Position meas,
 Bb .49, p.23
 Regim 1824-23 New fols n g 251
 m. 252 19 30-31.6 mbd on A4800

Sept 9
 on A plates

$\gamma^{\circ} \leftarrow$

A10750

B 32407

Br = Brighter than X

At limit of
 B plates

Br.

A10750

Doubtful
 32016

B 32407 not max (perhaps median) Very ft A4800
 6137 (perhaps NSB22538)

Perhaps br 33776

" br 32052

* B3868

A11557

A9854

Br A10149

13.2 comp. Carte Seq.
 15.0

Identical(?) with CDM-31°16401

Checked by
 Miss Wells, M.A.S.

Tuesday, August 16, 1927

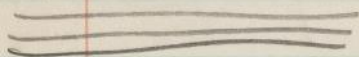
185

Comparing MF 9589

9769

9769 superposed

No new objects found



Position measured, Bk 39, p. 164.

Reg 1824-23

18 21.8 - 27 43

m 253

See p. 94, note.

Near no. 172.

Tried to prove that no 172 was not James Var of nearby position.

Mkd star on B11761 that would agree with James position. Mkd this on A 2605. To prove Var.

Short period?

← probably = James.

Br = a little brighter than x

Short off B plates would, if good grade show star at max.

B13936 has an image which is not quite in position at limit of plate?

J.D

2417698

Brighter?

Be A 2605 Aug 3 1897

B 23203 1899

not Max - but seen

* B 36385 (1905) probably this is the star.

* 37314 (1907) 39151 (1908)

2414140
B 9854

13936

17651

19380

19580

20451

21284

22515

25390

26387

27446

29531

31576

33657

34250

35686

Cmt 187

ns
Fla 2752

ns MF 9793

8519 probably seen, Fl

ns 8638

8759 MF 9784

8766

ns

8770

B 9881

Fl 9565

13728

9589

23665

Fl 9597

26483

9656

26491

9663

9672

A 2799 probably

9684

ns would be

9691

on limit of pl

9740

A 8370

9747

B 23758 (140^m)

9759

28160 (88)

9769

9779

NS

B

B 40863

41504

42311

42656

42752

43694

48714

43931

44677

? 44713 Maybe seen at
limit of plate — but
probably defect

~~44722~~

47759 defect in position
many more plates than but
do not show ft. enough
stars; no record made

Union Cir 20, p 152 18 20 10 - 27 44.5 (1875)

13.5 to 17

→ 135 - July 23 1914 = 2420346³⁷

UC 37, p 301 same Var — range 14.5 to 17

2420337 + 215d

20337 = July 1914

1824-23

Var. 254

Kumm.

Nov. 16, 1927 While examining Var. 116, p. 38,
I saw a bright star was Variable.
Proved to be Kumm.

XZ Sgr. 18 16.0 - 25 17 (1900)
8.5 to 11.3 A. J. Cannon

Br A 12657

Th A 12639

255 follow

Var 255

Position meas. Bh. 39, p. 177

18 27.6 - 25.2

Mhd MF & A 7340

256 Nov. 17, 1927 While examining Var. 118, 119, p. 40, 41,
I found 2 stars that varied close by. See p. 189.

See 8x10

a

Flares

plates NYC 6656

Br 7340

A 1837

12996 Medium A 12062 12369

Br = x

12551

11979

not quite Max 12553

12019

12061

12065

12066

12349

12392

12439

12507

12714

** 4297

2752

9370

~~Prof. B?~~

Magn.

A 7340 12.8

A 4297 17.0 ?

See first stars 12369

255 p 188

Position meas. Bb. 39, p. 176. 189

18 27-25.2

Var 256

M2 A7340 & 247

255 — . . . — 256

256
is S of
3 close
stars

Br A7340

A4297

Median

Br Not Max

A12369

12392

Flux US

A1837

* A12062

12551

11979

12019

* 12061

12065

12066

12349

12439

12507

12553

* * 12714

2752

9370

12996

Prop B?

Magn.
A7340/2.6

A1837/6.5

Var. 257, see p. 220

Continued from Bk., 38, p. 161.

→ Object 30 18 22 - 21.7

and plates

Exam. only good plates as this is rather a faint star.

→ Am 817 marked

Most of these Region 18 00-30

plates would 1428 1902

not show 1422 "

far unless it 1414 "

were brighter 1278 "

than seen in 1252 "

1901 or at 1236 "

least as bright 1437 "

1487 "

137 1899

461 1900

538 "

~~614~~ "

1528 1902

1543 "

1589 "

1917 1903

2085 "

2109 "

2129 "

2144 "

2261 "

2572 1904

2639 "

Object N.S. unless noted.

2713 1904

2746 " shows ray

fr stars for an and

no trace

2756 1904

2797 "

2854 "

2916 "

2959 "

3002 "

3392 1905

3448 "

3496 "

3537 "

3625 "

3689 "

3802 "

3883 "

4205 1906

4269 "

4311 "

4339 "

4365 "

4388 "

Re-exam.
N.S.
Seen

18 22-21.7 Object N.S.

am 4527

~~4804~~

4539

4562

4620 1906

4804 1907

4954

5013

5024

5090

5114 1907

5340 1908

5390

5444

5576

5640

5683

5712

5820

5854 1908

6011 1909

6114

6170

6228

6338

6343

6347

6374

6454

6592 1909

6613 1909

6946 1910

6952 1910

6976

7033

7063

7084

7163

7265 1910

7402 1911

7457

7458

7496

7530

7549

7606

7651

7676

7792

7841 1911

8165 1912

8206

8230

8301

8307

8369

8390

8423

8469

8485

30

29
30
59

192

5959 15486
11276
*15795

B 9937

*9455

9386 br. ^{copy by} fainter 3
9392 10822 10741 15745
Object N.S.

AM 8492 1912

8522

8559

8579

8598

8624 1912

8851 1913

8903

8937

8944

8999

9068

9090

9131

9146

9197

9203

9237

9267

9304

9386

9392

9455

9541 1913

9860 1914

9889

9891

9937

9943

9947 1914

9977

9983

10038

10085

10088

10093

10098

10146 1914

10180

10257 1914

10570 1915

10741

10764

10788

10902

11084

11689 ¹¹²⁷⁶ 1915

11775 1916

11785

11829

12127

12208

12216

12235 1916

12508

12535 1916

13141 1917

13400

29
30
59

DM 13417 1917
13440 1917
14154 1918
14244 1918
14682 1919
14869
15021 1919
15294 1920
15486 1920
1
15663 1921

15745 1922
15767 1922
15795
15818
15826
15842
15869
15909
15931
15934
15959
15990
15996

18 22-217

Object N.S.

Am 16014 1922

16015

16017

16018

16059

16068

16120 1922

16220 1923

16262

16296

16351

16382

16386 1923

13

Summary:

Am Jago

190

45⁴

191

59⁴

192

59⁴

193

23⁴

194

13⁴

195

17⁴Total
198Not seen and packed
1899 to 1923 except 1901/1902

1901 2 pl. N.S.

5 - Seen?

See Bk 38, p. 161

23 MF

6 a

31 B

198 Am

17 aX

275

6

19

300

Ledges (period of 1800-1901) no estimates
" estimated

Some ~~Most~~ of these plates show stars ^{marked Z} 2-... ^{Var} 195

ax Plates Region 18 00 - 30. Object Not Seen
ax Plates show fainter stars than AM

ax 535 1924

613

645

725

765 (250^m Exp)

1049 1925

1106

1284

1360 1925

1575 1926

1625

1650

1757

1805

1853

1919

1941 1926

17

Early B Plates

5245-1890

B 6114 1891

6135 1891

9211 1893

9880 1893

13536 1895

13580 1895

16570 1896

17834 1896

18772 1897

19326 1897

19575 1897

21226 1898

21519 1898

22034 1898

22744 1899

23758 3338 1899

33681 1904

31685 1903

35851 1905

39152 1908

41365 1910

41505 1910

25746 1900

Expt
1892 to 1894

18^h 0^o

AI Plates of 1901

182 March 30

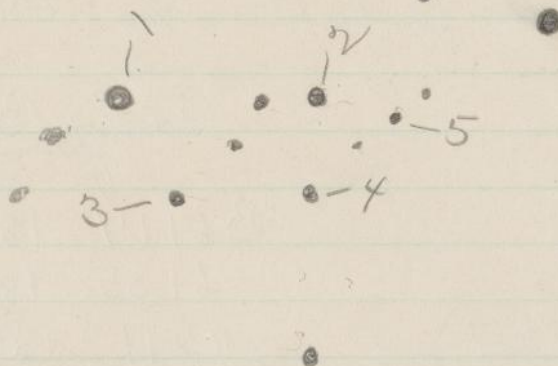
195 July 25

199 July 27

dates are wanted
but plates are too
poor to identify

196

- from A 7340

18 2221

	1 A7340	B28156	MT 4542	Am 802	Mean	Corrected Magn.	
Cut in Grades,	2 11.6	11.7	11.6	11.5	11.60	+0.24	11.84
also	3	12.0	12.1	5	12.05	+0.24	12.29
Comparing	4 12.0	12.1	12.3	2	12.10	+0.24	12.34
Sep. 6656	5 12.3	12.4	12.6	3	12.43	+0.24	12.67

Comparison Seq.

WBC 6656 Pas mbd on MF 4542

Magnus. Bk. 45, p. 127

Uncorrected

b 11.02

c 11.88

d 12.40

e 12.75

f 13.13

Use

4 11.8 (2

9 12.3 Use (3

4 12.8 12.4 Use (4

1 12.7 (5

198

Reported to
D.S. Sept. 20, 1927 checked

	Object 30	J.D.	Estimated magn ⁵ ₁₆
	B 25746 (Eff 79) July 21, 1900	2415222	NS < 12.5
	am 538		
	am 538 July 23	5224	NS < 12.4
	566 " 30	5231	NS < 12.6
	577 Aug 2	5234	NS < 12.7
appeared	B 25879 Sept 1	5264	12.5
?	am 614 " 1	"	12.6
	B 26386 Oct. 11	5304	Br. not est.
	am 685 " 15	5308	Br. not est.
	ac 1462 May 13, 1901	5518	Br. not est.
	am 798 " 21,	5526	11.6 ? Poor
	802 " 22,	5527	11.5
	B 27408 " 25,	30	12.1
	am 808 " 27,	32	12.6
	817 " 28,	33	12.6
	835 June 6	42	Seen. Too poor for
	ac 1527 " 11	47	" " " "
	am 875 " 22	58	12.5
	888 " 25	61	Seen
	907 July 9	75	N.S. < 12.4
	B 28156 August 6	5603	12.9
	28231 " 16	13	13.2
	am 1028 Sept 4	32	< 12.8
	1043 " 6	34	< 12.7
	B 28620 Oct. 3	61	< 12.4
	28734 " 10	68	about 13.0

faint stars not separated, only blue

Object 30

 $18^h 22^m 4^s - 21^\circ 38'.2 (1900)$

Bk	page	
38,	161	Discovery & proof
40,	190	Plates exam
	196	Sequence of Magns.
	194	Count of AM & 2x plates, etc.
39,	150	Position

Summary

Discovered July 1, 1926 on long exp. B plates
(not Maximum)

Comparison Sequence = N.G.C. 6656

See A 7340 for ft stars

p. 198 ledger

Not seen on earlier or later plates, except the
ft. star on A pl.

1890 to 1926 except 1892 & 1894

200

18^{Regin}
24-23

Cont. from.

Object No. 7 Bb. 37, p. 88

18 17-25.7

To find object on plates except 1924
Star not seen, unless otherwise stated.AX Plates
mbd18^h - 30

1049

1925

1106

1284

1360

1575

1926

1625

1656

1757

1805

1853

1919

1941

see AX

12
p. 205MF Plates other than 1924
See Bb. 37, p. 88Also, early, MF 2818
4542

Broken plates not exam

201

18^h-30^o All Plates
Object not seen unless stated

Am 15 1899

Am 3002 1904

137 1899

3392 1905

461 1900

3448

* 538 1900 → 1900-1901

3496

Insert
p. 207

1236 1902

3537

1278

3625

1414

3655

Exp^m
491^m

1422

3689

1428

3802

1437

3883 1905

388^m

1487

4205 1906

1528

4269

1589 1902

4311

1917 1903

4339

1952

4365

2085

4388

2109

4527

2129

4539

defect in

2147

4562

same position

2261 1903

4620 1906

2572 1904

4804 1907

2639

4954

Exp^m
480^m

2713

5013

2746

5024

2756

5090

2797

5114 1907

2854

5340 1908

2916

5390

2959

5444

29
29
—
58

Obj. No. 7

N.S.

AM 5640	1908	7606	1911
5683		7651	
5712		7676	
5820		7725	
5854	1908	7792	
6011	1909	7841	1911
6114		8206	1912
6170		8230	
6228		8301	
6338		8307	
6343		8369	
6347		8396	
6374		8423	
6454		8469	
6592		8485	
6613	1909	8492	
6946	1910	8522	
6952		8559	
6976		8579	
7033		8624	1912
7063		8851	1913
7084		8903	
7163		8937	
7265	1910	8944	
7402	1911	8999	
7457		9068	
7458		9090	
7530		9131	
7549		9146	1913

Obj. No. 7

N.S.

Am 9153 1913

9197

9203

9237

9267

9304

9336

9386

9455

9541 1913

9860 1914

9889

9891

9937

9943

9947

9977

9983

10038

10085

10088

10093

10098

10146

10180

10257 1914

10570 1915

10741

10764

10788 1915

10822

10902

11084

11276 1915

11689 1916

11775

11785

11829

12127 1916

12208

12216

12235

12535 1916

13141 1917

13400

13417

13440 1917

14154 1818

14244 1818

14682 1919

14869 1919

15294 1920

15486

15663 1921

15767 1922

15745 1922

15795 1922

15818 1922

13417 — Miss Cannon see Jones

Uby. No. 7

N. S.

am 15826 1922
15842 1922
15869
15909
15931
15934
15959
15990
15996
16014
16015
16017
16018
16059
16068
16120 1922
16230 1923
16262
16296
16351
16382
16386 1923

22

ax 19^h-15^o

ax 126 1923 Too poor

178

187

226

256

~~By defect in glass~~

miss
in count

520 1924 see list of Object seen

1012 1925 (April) N.S.

1063

1204

1217

1305 1925

1581 1926

1626

1651

1705

1731

1791

1839

1854

1968 1926

19

Oly 7

AI 1924

several plates during these months. All poor, fogged in this portion of the plates.
Do not show object even after its date on other plates.

23262 April 15
23287 April 27
23307 May 17
23327 May 31
23336 June 7
etc.

A Plates

A 12996 show Nova bright June 11, 1924 not Mx.

7B
background

A 12689. 8x10 Sept. 15, 1923 last plate before.

Plates (8x10) NGC 6626, cover but do not show obj
earlier plates unless ft star

1923 12639 Sept. 2

12644 Sept 3

12655 " 10

12657 " 10

12661 " 11

12663 " 11

12666 " 12

12668 " 12

12671 " 12

12672 - 12675 " 13¹³

12683 " 14

A 12532 July 20

12534 " 20

12536 " 20

12541 " 21

12562 Aug 3

12570 Aug 4

12588 " 15

12591 " 15

12594 " 16

597 " 16

12600 " 17

12603 " 17

12605 Aug 18

12608 " 18

12631 Sept 1

12637 Sept 2

~~12672 " 13~~

~
about 40
ext plates

ay 19-15

ay 1924 but too poor to show fainter stars
 74 May 25

99

114

151

179

195

219

223

etc

1447 April 28-29, 1927 fairly good N.S.

see compared
 with MF 8519

AM Plates 1900-1901 (reserved for Nova, p. 195)
 add to list page 201

18-30

577 1900

798 1901

802

808

817

907

1028

1043 1901

19-15

685 1900

835 1901

868

875

888

(13)

For Seq. 9853 or 9854?

Obj 7

Early B Plates
Centers off -22

B 6114 1891

6135 "

9211 1893

13536 1895

13580 1895

16571 1896

17834 1896

18772 1897

19326 1897

19575 1897

21226 1898

21519 1898

22744 1899

23758 1899

Insert
below

31685 1903

33681 1904

35851 1905

41365 1910

25746 1900

25879 1900

26386

27408 1901

28156 "

28231

28734

$$\begin{array}{r} 25 \\ 28 \\ \hline 53 \end{array}$$

25

Object N.S.

B 6113 1891

9853 1893

9854 1893

9881 1893

11761 1894

13728 1895

13936 1895

15834 1896

16164 1896

17651 1896

19381 1897

19580 1897

20451 1897

ft stars close shor 140^m Exp

20476 1897

21284 1898

22515 1899

23203 1899

23665 1899

23695 1899

23770 1899

25390 1900

26116 1900

26387 1900

26483 1900

26491 1900

27184 1900

27446 1901

27750 1901

28

latw - 117708
30866

B	28160	1901	44722	1914
B	28621	1901	45394	1915
	29525	1902	45722	1915
	29531	1902	47710	1916
	29904	1902	47759	1916
	31576	1903	44793	1914
	32490	1903	44946	1914
	32627	1903	44970	1914
	33657	1904	50009	1917
	34250	1904	50123	1917
	35686	1905	50177	1917
	36385	1905	50394	1917
	37314	1907	50471	1917
	37695	1907	50473	1917
	39151	1908	50962	1917
	38824	1908	50963	1917
	38984	1908	53039	1918
	39510	1908	53051	1918
	40184	1909	50475	1917
	40363	1909	51015	1917
	41508	1910	51039	1917
	42311	1911	51090	1918
	42656	1911	51499	1917
	42752	1911	51110	1917
	43694	1913	51150	1917
	43714	1913	51165	1917
	43934	1913	51187	1917
	43933	1913	51210	1917
	44677	1914	51438	1917
	44713	1914		

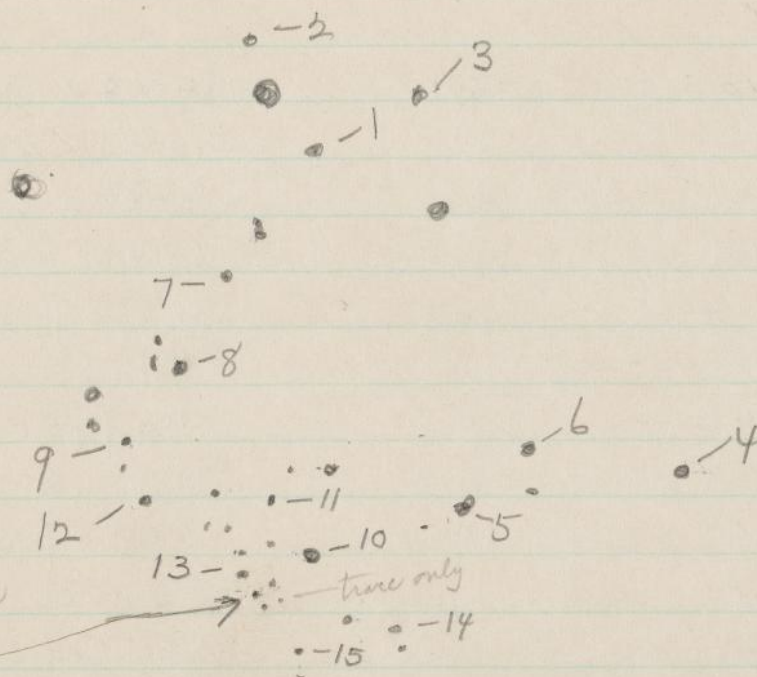
61

31
30

210

Obj 7
Verified
by mag
Sept 20, 1927

Marked on A 12675



Is this ft star
the Nova?

Checked
by Dr. Shepley

with Comp. Seq.
A 12675

By grades
A 12675

and
5714

Mean

Corr
Magn

Sept. 20.

Assume

this faint
star to be
the Nova.

1	10.9	—	10.8	10.85	+0.23	11.08		
2	11.2	11.2 ✓	11.0	11.13	+0.24	11.37		
3	11.5	11.5	11.4	11.47	+0.24	11.71		
4	12.0	11.9	—	11.95	+0.24	12.19		
5	12.3	12.1	—	12.20	+0.24	12.44		
6	12.6	12.7	—	12.65	+0.25	12.90		
7	13.2	13.1		13.15	+0.26	13.41		
8	13.4	13.4		13.40	+0.26	13.66		
9	13.8	13.9		13.85	+0.26	14.11		
10	14.0	14.4		14.05	+0.25	14.30		
11		14.7		14.7	+0.24	14.94		
12		14.7		14.7	+0.24	14.94		
13		15.2		15.2	+0.24	15.44		
14		15.5		15.5	+0.22	15.70		
15		15.8/160		15.8/160	+0.20	16.00		
		46		11.2 46 158 ✓				

Sept. 20, 1927

Comparison Seq. N.S.C. 6626

mkd on M F 4542

Magns. Bb. 45, p. 127

D 9.56

E 10.61

F 11.14

G 11.44

H 11.60

a 12.49

b 12.73

c 13.22

d 13.54

e 13.94

gn	Use	
08	11.1	(1)
37	11.4	(2)
71	11.7	(3)
19	12.2	(4)
44	12.4	(5)
90	12.9	(6)
41	13.4	(7)
66	13.7	(8)
11	14.1	(9)
30	14.3	(10)
94	14.9	(11)
94	14.9	(12)
44	15.4	(13)
570	15.7	(14)
6.00	16.0	15

Sum 7 plate

212 Q 7

8647 mld by Miss ?

estimates, less weight
 reported to Dr. Shapley
 N 206 Sept. 24, 1927
 appearance

A	12672	Sept. 13, 1923	3906	16.86	1st estimates changed by 1 or 2 in some cases.
A	12689	Sept 15, 1923		16.86	
MF	8505	April 30, 1924	3906	11.4	
	8519	May 2	3908	11.6	
AX	520	May 8	3914	11.7	
	535	" 13	3919	11.8 ✓	
	566	" 28	3934	12.0 ✓	
AY	572	" 29	3935	12.0 ✓	
AX	577	June 2	3939	12.0 ✓	about 12.0
A	12996	June 11	3948	12.1	
MF	8638	" 12	3949	12.34	
	8647	" 23	3960	12.5 ✓	
AX	613	" 23	3960	12.5	
	626	" 25	3962	12.5 ✓	
	645	" 28	3965	12.7 ✓	
MF	8679	" 30	3967	12.8 ✓	
AX	678	July 4	3971	13.0? / 12.8 ✓	
	725	" 26	3993	12.8 ✓	
	760	August 20	4018	13.2 ✓	
MF	8759	" 21	4019	13.5 ✓	
	8762	" 22	4020	13.6 ✓	
AX	765	" 22	4020	13.5 about	
MF	8766	" 23	4021	13.6	
	8770	" 25	4023	13.5 ✓	
	8779	" 27	4025	13.6 ✓	
AX	814	Sept. 18	4047	14.0 ✓	
	861	Oct. 14	4073	< 13.7	

A 13569 Oct. 7, 1925

about 16.5

Several AI plates of 1924, not good enough to est. 2 are
 in April and would be very valuable — Verified 100/2002

Bb.	Page	
37	88	Discovery & Proof,
40	200-209	Plates Examined
	215	Count of plates
	211	Magne, Comp. Seq.
	210	Plot & Magne, Sequence.
39	152	Position
40	212	Ledger of Obs.

Found on MF Plates, April 30, 1926
 Is faint star on long exposure A plates. Verified
 by Dr. S. See marked on plot, p. 210.
 Comp. Seq. N.G.C. 6626.

Plates exam. = 435, 1890 to 1927 except 1894.

214

Obj No. 7

Obj no 7

Bb h.	✓
37, 88	14 MF
	3 a
	6 B
40 206	29 a
200	12 ax
201	58 am
202	58 "
203	58 "
204	22 "
205	19 ax
207	1 ay
"	13 am
208	53 B
209	61 ✓
Total	<u>404</u> ✓

h
212 Ledger

1924 plates 25 11 MF, 1 a, 14 ax (not found)

1925

~~429~~

430

1

1924 ay

431

h 200

2 MF ~~h 200~~

209 (top)

2 additional Bpl

435

Reim
18 24-23Object 154, Plh. 40, p. 76

18 26-25.4

B plates exam. To see if Var is err = x
(x) Obj Obj NS unless statedB 6113 1891 ¹⁸⁹³ br star NS NS
921 9853 1893 Seen NS very ft if seen

9854 " NS

9881 " Seen NS

→ 11761 1894 Seen Nearly = x !

13728 1895 Seen Maybe seen ft

1393.6 Seen ?

15834 1896 Seen NS

176.51 Seen Seen probably

← 1783 19380 1896 1897 Seen NS

19580 1897 Seen Probably very ft

20476 Seen NS

21284 1898 Seen NS

22515 1899 Seen NS

23203 " Seen = V NS

23665 " V Seen very ft or defect

Gp 255 23770 " V Seen ft

25390 1900 V NS

26483 " V NS

26491 " V NS

27184 " V NS

27446 1901 V NS

28160 " V NS

29531 1902 V NS

→ Bright 29904 1902 V BL.

32490 1903 V ~~NS~~

Br. star Obj.

B	32627	1903	✓	perhaps very ft
	33657	1904	✓	NS
	34250	"	✓	NS
	36385	1905	✓	NS
	37314	1907	✓	NS
→	37695	1907	✓	Br not Max
	39151	1908	✓	NS
	38824	1908	✓	NS
	38984	"	✓	NS

Not shining ft stars

16164
28621

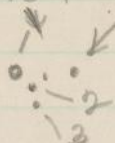
B 18772 1897 ✓ NS ft stars seen.

Exp 140 28753 Aug 2 1899 seen not Max

30866 1902 ✓ NS

Too faint for arm Plates and AX

12

Obj 154


182625

8370 near Hedge, so A22
 not on plate

a 11979

$$1 = 13.3$$

$$2 = 13.9$$

$$3 = 14.2$$

a 8370

$$1 (13.3)$$

$$2 14.0$$

$$3 14.3$$

M 9793

Use

$$13.3$$

$$14.0$$

$$14.4$$

Prof B see d & e seg - M 22

e is brighter than d on A 11979

omit e, take interval d - f
Magnus, Bk 39, p. 37.

Ledger

mf
a

Estimates on B plates showing Var. a few mean dates

13.3 B	11761	Aug. 7, 1894	10	2413048	
—	13728	June 11, 1895	10		perhaps barely seen. Not est.
13.2	17651	Oct 13 1896	10	13846	
12.8	13.2	17834	Nov. 11, 1896	10	13875
13.7	*	19580	June 18, 1897	10	4094
13.9		23665	July 26, 1899	13	4862
13.6 or 13.7		23758	Aug. 2 1899	140	4869
?	13.5	23770	Aug 4 1899	255	14871
13.9		29904	May 29 1902	10	2415899
< 13.6		32627	Sept 3 1903	11	16361
13.4		37695	June 29 1907	10	17756
13.4 a		8370	July 3, 1907	65	17760
13.9 + 4.0		11979	May 16, 1922	25	23191
13.6		12019	June 7 1922	22	3213
14.2		12349	April 25, 1923	40	3535
< 14.8		12392	May 26 1923	35	3566
< 15.0		12439	June 15 1923	30	3586
< 15.0		12471	June 22 1923	30	3593
13.6	mf	8759	Aug 21 1924	80	4019
13.4		8766	Aug 23 "	60	4021
13.5		8770	" 25 "	60	4023

19575 seen
too poor

220

leave

Found marking Var. 209, p 131.

Region 18 24-23

Var 257

18 24.5-29.8

Change? bet.

B 30321 & A 2752

No noticeable
change between

8370 & 2752

A 2752

Br or medium 8370.

Med. 27184

Med? B 19580

B 30321

Fl * 28160

Perhaps fl B 26482 45^mFl 19380 13^mBr. = as large as x but
not as black.Fl = about = y or
a little brighterimage looks diff. from other
stars on 2752, 2 superposed?

• • • • •

• ←

x • • y

Probably a
double star with
one variable,
small range.
Exam. when
more plates.
Miss Cannon
saw this.

Regin 1824-23

Var 258

18 49-27.2

Found identifying Var. 55 on B 20359
February 7, 1928

Is this Nova?

At. - 1897 Cannot be proved

Br. B 20359 Sept 15 1897
very br star



Image is peculiar, trailed,
heavy on free end, but
this is like all images
of this magnitude at this pl.

^a
N. S 8986 a 6124

2736

9363

9577

B 32052

32076

5266

3868

26257

33776

19580

27184

30321

28160

36385

39151

B plate shows object
1897

B 20359 Sept 15 21 06 to 21 16

A 2736 " " 21 18 to 22 18

This is prismatic comp.
of star a

just off edge B 19848, July 16, 1897

Sf. 20059 Sept 15 } too faint
19896 July 21

who thinks it a
star image
Seen by
Miss Gell
" Cannon
JEW = p.c.

222No. 259

Br star on A 4714 already mbd
 fr. on A 11524 8x10

RY Sagittarii

° ° °
 ° °

Position meas.

Bb. 49, p. 24.

Found March 15, 1928

No. 260.

See Bb. 46, p. 115

To iden. Jones.

marked A 8986

°
 °
 °

B. A 6124

8986

Fr
 A 2736

