

KG
11366
204

Ida E. Woods
Book 28
Examination of Milky Way Region

h m
19 25 - 30

KG 11366.2074

Oct. 1924. To p. 50 All Vars. are fixed, meas., and have
cards made for publication.

Later: Verify p. 14 = Wolf.

Harvard College Observatory

Ida E. Woods

Book No. 28.

Continued from Bk. 27

Special Examination of MC Plates

Milky Way Regions

953

FRANKLIN
LIBRARY

KB 11366 204



Milky Way

Region 19^h 25^m - 3.1°New
Vars. Epan.
B628

Available Plates:

63,605	12	MC 19899	July 13, 1923	Eph. 92 ^m
19267	13	19947	August 9, 1923	80
	44	19953	Aug. 13, 1923	80
2	14	20787	June 10, 1924	121
	54	20813	July 7, "	80
22	60	20824	" 11, "	70
22	23	20896	July 27, "	60
2	30	20912	August 2, "	60
1	40	20917	Aug. 5, "	93
2?	44			
48		20801	June 25, "	36
(12 new above)	49	20959	August 28,	70
- 63,51		20997	September 24,	99
57		21019	October 2	60
to Oct. 30				
7		21531		
		21534		
		21563	August 22-23,	89
		21596	Sept. 20-21,	83
		21652	October 17-18,	62

MD Plates

20896

Limits of region:
 R.A. $19^h 10^m$ to $19^h 36^m$
 Dec. $+1.5$ - 5.7

1911

Known Variables in Region - from Miss
 Cannon's Card Cat.

191100	19 11.5 - 0 3	13.0 - < 15.5	Wolf
191100 - Agl	19 11.6 - 0 46	10.5 - < 12.5	Graff
Mira Ag 3	19 13.3 + 1 36		
Mira Ag.	19 15.3 - 0 19		
agl	19 15.9 + 1 38	13.5 - 15.0	Wolf
agl	19 16.9 + 0 34		Wolf
agl	19 17.7 - 0 48	13.0 - 14.5	Wolf
agl	19 17.8 + 0 22	13.5 - < 15.5	Wolf
agl	19 18.4 + 1 20	13.5 - < 15.5	Wolf
TU agl	19 22.6 + 1 51	9.8 - 13.5	Leland + 1° 4003
	19 25.6 + 1 58	12.0 - 14.5	Wolf
	19 26.1 + 0 55	14.0 - 14.5	Wolf
	19 26.9 + 0 25	12.0 - 14.0	Wolf
	19 27.2 + 1 50	12.5 - < 15.5	Wolf
	19 28.4 + 1 22	13.0 - 13.5	Wolf
* agl	19 29.8 - 0 46	13.0 - < 15.5	Wolf
	19 30.3 + 0 29	11.5 - < 15.5	Wolf
	19 31.2 + 1 50	12.5 - < 15.5	Wolf

A Plates of Region

A 1106 19.5 - 2.8

2825 19.

2827 19.

9586 19.

Exp.
12

Too poor

Excellent for ft. stars 7976 19.6 0 120

8957 19.6 0 120

9888 19.6 0 10

9725 19.3 0 10

10456 19.2 0 59

10458 19.2 0 120

10467 19.2 0 120

9586 19.3 -5 11

9587 19.7 -5 11

2729 19.2 -2 10

5974 19.2 -2 10

10117 19.2 -2 60

10136 19.2 -2 60

2 19.5 -2

Saturday, August 9, 1924.

D 19267 = MC 19947
MC 19899

Wednesday, August 13, 1924.

D 19267 = MC 19947
MC 19953

Thursday, August 14, 1924.

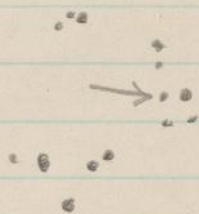
D19267 = mc 19947
mc 20787

19.27.5 - 0.9
(1855)

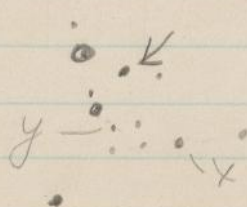
New Var.

N. edge of plate

Waf?



19 26.2 - 2.3 New Var. near center 1



Br.

20787

20813

Very ft. on N. S.

19947

19953

19899

@ 2827 Exp. 60~

ft. stars seen

2825 Exp. 47

Trace

Br. = x

Ft = < y

Marked on B 25436 ft. star, but at its
probable max.

N.B. Image on 2827

Position meas. Bb. 29, p. 14. seems large but very ft.

19 26.2 - 2.3 New Var. Cent.

N. S.

A 8957

A 7976

Est. of Magn., Oct 28, See p. 52

14.4 on 20787

16.4 " 19947

Friday, August 15, 1924.

Continued

① 19267 — 20787^x

Br

ft.

19947

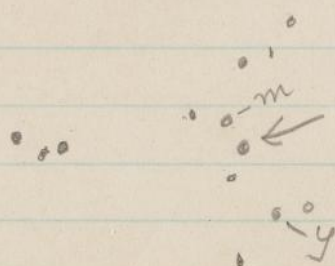
20787

19953*

20813*

20824

19 30.6-4.7
(1855)



Br, nearly = x
Ft. = y

perhaps defective on 20787?
No. Variation is proved by other plates.
Note: Image seems large and
"fuzzy", or different shape — see
MC 20787. Fainter on 20813
Are 2 stars seen? Exam. A plates, if possible
Large range.

Two stars are probably seen on 20787.
A 2827, Exp. 60, shows only one, faint,
apparently the following one.
Also, 2825, Exp. 47^m, shows 1, ft

MC 19947 — 19953, showing obj. bright, probably
overlapping the fol. ft. star.
19953 shows ft. edge of fol. star under
bright object.

(recorded)
(Aug. 16.)

N.B. Is this a Nova? No. Seen on B plates.
Early^{mc} plates br — later ft

mc 19899 both obj seen, probably, prec. star slightly brighter.

20824 both, very faint

20896 faint fuzzy? doubtful 1 or 2

20912 probably both, faint

Look up B plates - when at Max, would be seen, bright as star marked X, p. 18.

B15044 shows ft. stars. star m, p. 18 is seen, Var. N. S.

Nov. 1896 17836 shows ft. stars. star m is barely seen, Var. is bright, though probably not max.

23971 m seen, trace possibly, of Var probably N. S.

23207 m & Var both seen. Var. ft., but brighter than m.

May, 1899 22707 var. br. m, trace or N. S.
var not as bright as X

many plates exam. which do not show ft. stars - not recorded.

± 29029 m seen Var. Ft.

N.B.

23971 & 22707 — stars seen, are not identical, m on 23971, Var. on 22707.

Notice slight, but ^{distinct} ~~marked~~, diff. in Dec. on this scale.

* Position measured, Bk 29, p. 16.

Est. of Magn. Oct. 28. See p. 52.
12.8 (or 13.0) on 19953

~~Find~~ 20813 = 16.5

Saturday, August 16, 1924.

M.W. Reg. Continued.

D 19267 = MC
MC 20813

No new objects found.

D 19267 = MC
MC 20824

20824. Cracked & mended on glass.
No new objects found.

Monday, August 18, 1924.

D19267 = MC

MC 20896

New Var.

Near N edge

Br. 20896

7.50

7.19947

20912

19899

20959

19953

20787

20813

20824

A 2825

2827

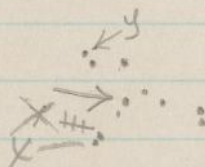
A 10136

A 10117

A 7976

8957

19 19.2 - 1.3



Br. = x

x = lower of 2 stars, brighter on 20912

Th. = a little fainter than y.

→ Rather small var.

* Position measured, Bk. 29, p. 20.

Possibly Trace, at limit of plate, I 29029 & 32
A few F and B plates exam. Too faint for these
Faint stars ^{are} seen on B 23971 but var. n.s.

Est. of Magn., Oct. 28. See p. 52.

15.2 ~ 20896

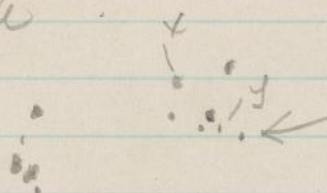
16.4 ~ 19947

Marked on A 2827

Monday, August 18, 1924

19947 D 19267 - 20896

New Variable

 h_m near Center
 19 25.2 - 2.4


Br.	Ft.
19947	20896
A 8957	19953
A 2827	20787
	20813
	19899
	20824
	20912

Br. = a trifle brighter than x
 Ft = y

Need more proof of Max. but
 apparently Var. of small range.

* Position meas. Bb. 29, p. 22. Meas. A. 2827

Probably Seen Br. A 8957

" " Ft. 7976

NB dates Oct. 13, 1897 } " A 2825

Oct. 14, " } Br. A 2827

Seen at limit of plate B23971

Ext of Magn. Oct. 28. See p. 52

15.4 on 19947

16.5 on 20896

Wednesday, August 20, 1924.

MW Region

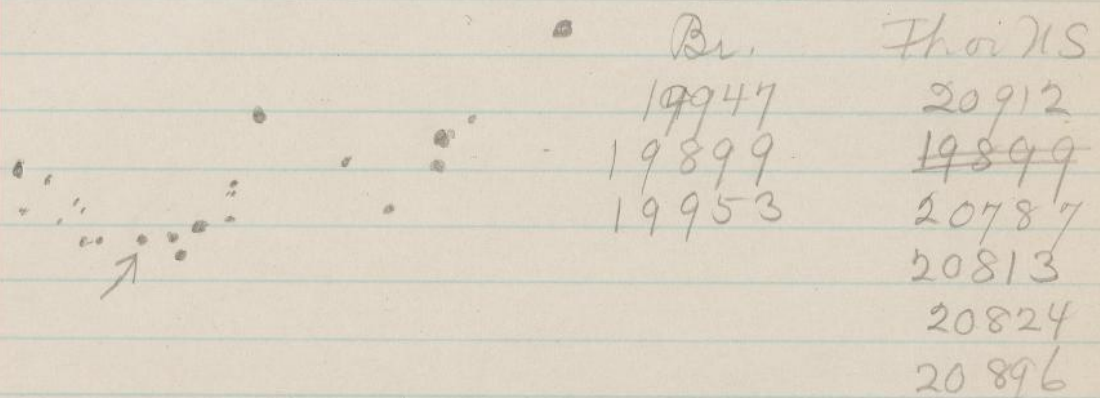
D 19267 = MC

MC 20912

$19^h 32.9 - 1.9^m$

New Variable

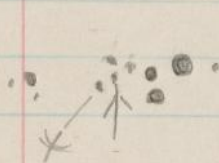
A faint star at Max.



This var. should have been found on earlier pl.
No trace on A 2827 Exp. 60
A 2825

X { Meas. pos. MC A 8957
No trace on A 7976 Exp. 120^m or very ft.
Br. A 8957 Exp. 120^m

Ft. stars that show on A 7976 are not
seen. See plot. Prob. Var. is
star marked.



from A 7976

when Var. is Br. on 8957, it
may cover star x or ft. stars
do not show at all on 8957

Position measured Bk. 29, p. 24.

Est. g Magn. Oct. 28. Sep. 52

15.8 on 19947

14.0 on A 8957

[16.5 on MC 20912

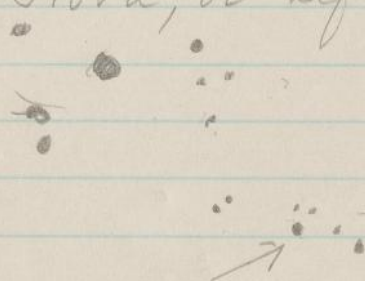
Hesse Prof. King exam with micros.

Wednesday, August 20, Cont.

19267 — 20912

Var., Nova, or Defect?

?



Br.

20912

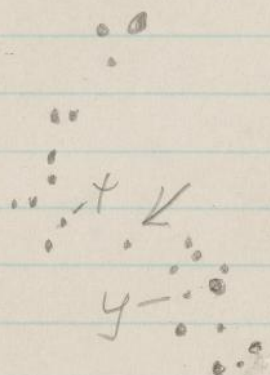
M.S.

19899
19947
19953
20787
20813
20824

No trace on 20896 July 27
Bright. 20912 August 2
No trace on 20917 August 5

Seen by Miss Cannon — Probably defect.
" " Dr. Shapley — " "

Aug. 20.

19267-20912
new Variable $19^h 17.7^m - 1.5^\circ$ 

Br.	Fl
20912 not Max	19947
20824	19899
	19953
Med.	A 10136
20787	Very fl A 2827
20813	A 2825
20917	10117
	Fl. extreme edge of A 8957

Small range

Br. = a little brighter than x

Fl. = a " fainter than y.

Not bright enough on A plates to meas.
Meas. on MC 20912

Measured Br. 29, p. 26.

Est. of Magn., Oct. 28. See p. 52

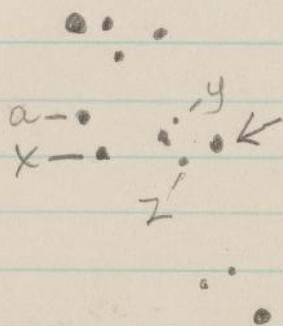
 15.5 on 20824
 20912
 16.5 on MC 19947

Thursday, August 21, 1924.
MW Region $19^{\text{h}} 4^{\text{m}} - 3^{\circ}$

D 19267 = MC
- MC 20917

19 29.0 - 2.5 New Variable or Nova. Br.

Probably
defect.



20917

Ft.
19899
19947
19953
20787
20813
20824
20896
20912

Br. = a little brighter than x
Ft. = faint as y

Can this be object, p. 34, Moving Obj.,
diff. in plates = 3 d. ? No trail.
Dr. Shapley saw this. Not same obj.
Motion on 60^m Exp. Plate would be
large.

Reg. marked on I 29029 Exp. 32^m
Obj. would show if as br. as on MC 20917
or even fainter, and would
show on 10^m plates

Position measured, Blo. 16, p. 38

Friday, August 22, 1924.
MW Reg. $19^{\circ}4' - 3^{\circ}$ Cont.

Obj. p. 40 Cont.

Is not faint star on plates noted p. 40,
a little following this object?

*

Obj. did not appear Aug. 2, bright Aug. 5

marked on A 2825 Shows ft. star

2827 Shows ft. star

Shows ft. stars in region

9586 Too poor.

8957 Ft. star seen

Shows more ft. stars.

7976 " " "

Shows still more ft. st.

Recent plates

AI 23467 20 0 D.O. Aug. 8 1924 122^m Eff.

Nearby stars identified. This star too faint for AI

23457 19 -20. Aug. 2 118

23467 20 0 8 122

23479 19 0 16 115

AI plates iden. by AC 5302, $20^h 0^m$

AY 202 20 0 Aug. 16 61^m N.S.

195 19 -15 " 15 60 N.S.

Obj. undoubtedly too faint, unless it grew very much brighter than Aug. 5, for AI or AY pl.

→ Over 55 plates, B & I, regular regions 19.3 to 19.7, were exam. But no one of these was object seen. Dates 1891 to 1913.

Tuesday, August 26, 1924.

MW Region Cont.

Object, p. 41 Cont.

Recent plates of region

I 43897	Aug. 18	6 ^{1/2}	Star z, p. 40, plainly seen. Th.
43898	" 18	6 ²	" " " " hardly seen
AC 25612	Aug. 1	61	Stars a & x, p. 40, barely seen. Th.
25614	Aug. 2	60	Stars a & x, p. 40, seen
25618	Aug. 8	62	Star a, p. 40, barely seen

AT 23475 Aug. 15 99 Too poor.

Object did not show as bright as obj.
on Aug. 5, MC Plate, on any date —
Aug. 1, 2, 8, 15, 18 (Aug. 8 plate would
hardly show even that magn.)

→ Was probably defect.

→ Another, brighter, defect, less like star
image, preceding, about same Dec.

→ Also another, same R.A., near S
edge.

Following, South Corner of D plate is defective film. To make sure no part of this region was omitted, I superposed each original with 19953 and exam. this corner

Photo N.S.

19899

19953

Photo N.S.

19947

19953

20787

19953

20824

19953

20896

19953

20912

19953

20917

19953

20813

19953

44 Very strong

August 26, 1924.

20917 superimposed

NW Region

Comparing MC 19953 & 20917, negatives, directly
New Var.?19 27.9 - 2.1
(1855)Bi.* 20917
20896

Thor N.S.

19953

19899

19947

20787

20813

20827

(A 2825

these 2827

show variation 7976

but not max.

Very ft 8957

For plotting showing
Var. and ft. starssurrounding
on large scale,
see Bb. 29, p. 28.Br. = Brighter than x
Ft. = Fainter than y

Meas. pos. A 7976

meas. pos. Bb. 29, p. 28.

Est. of Magn. Oct. 29. See p. 52

15.2 on 20917

16.6 on 19947

Wednesday, August 27, 1924.

MW Region Cont.

~~MC~~ 19967 = MC 19947
MC 20801 i

Fainter stars not clear on 20801
No objects found.

Thursday, September 11, 1924.

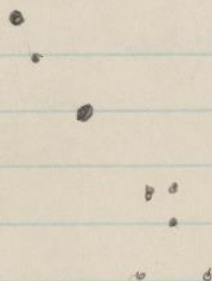
19^h 25^m - 3°

D 19267 = MC 19947

MC 20959

20959 superposed

19 27.9 - 2.1 New Var.



Same as ℓ . 44.

50

Watch this
in later plates
May be a
nova?

Saturday, September 20, 1924

D 19267 = 19947
MC 20959

Continued

Rev Variable

19 33.6 -3.7 (1855)

• :
y-•←

Bi. 20959 NS or Ft 19947

20917 Ft. 19899

~~but seen~~ 19953

Bi. 20997

20787

20801

Bi. = X

Ft. = N.S.

21019

growing fainter

20813

20824

20917

{ Ft. but Seen

20912

20896 very fr.

Group of A. Plates

A 2827 very ft.

2825 " "

Meas. MC 20959

Meas. Pos. Bb. 29, p. 38

Est. of Magn. on Oct. 29. See p. 52

14.0 on 20959

14.0 20997

[16.5 19947

Wednesday, October 8, 1924

19.4 -30

D19267, ^{mc 20997} too dark to compare with D plate

mc 20787

20997

compared negatives directly.

20787 superposed

no new objects found.

(See p. 50. This plate gives object p. 50)

Tuesday, October 28, 1924
 19^h 25^m -30^s Magnitudes

Region of Nova Aquilae, No. 1, Sequence as
 marked on MC 6180; Magns. N.A. 84, No. 5, p.
 Comes just off edge of MC 19947. Stars =
 l & p were chosen on 6180, that would
 come on 19947, though on edge. Allowing
 for out of focus, I chose stars on 19947
 that would be about = l & p, marked on
 19947 as 11.5 and 12.2, Corrected Magns.
 From these I attempted to choose stars of
 1 magn. difference.

Marked on 19947: - 11.5, 12.2, 13.2, 14.2, 15.2, 16. 2

Worked into center to reduce distortions.

Faintest magns. will doubtless be
 used most.

Also, compared with MC 19946 of region
 19.4-8. See Bk. 27, p. 80.

Magns. compare well.

19946 = 80^m Exp.

19947 = 80^m Exp.

* Approved by Dr. S. except 15.2 & 16.2
 read, 15.0 & 16.0

126.

16. 2.

Friday, October 31, 1924,

19.4^h - 3°

mc ~~20784~~ 19953

~~20997~~ 20787

20787 superposed.

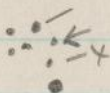
Both plates have already been examined.
Intercompared.

Both plates have already been compared with another

new Var.

just north of very br. star

19 29.1 - 1.3



Br. 20787
(a very ft star at Max)

N.S

19953

20801

19947

Br. = a little br. than x

Extremely ft

20813

barely seen but
probably not 20824
A 2827

Seen, probably
not near
20896

Same 20912

* Position meas. Bb. 29, p. 48

16.1 and on 20787
[16.5 19947

Var. confirmed by Miss Cannon, Nov. 7.

Saturday, November 1, 1924

19.4^h - 3°

MC 20896

21019

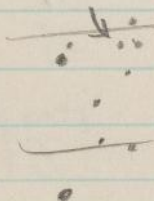
~~20896~~ superfract

See p. 57

New Var.

Be. 21019

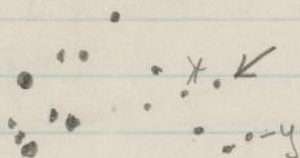
Ft. 20896



October 31.

New Var

19 32.6 - 2.2
(1855)



Br. = triple br. then x
Fr. = y

Br.	Fr.
20787	19953
*21019	19947
	20813

Very Fr 20912
Fr 20917
Fr 20959
Fr 20997
very Fr @ 2827

* Position meas. Bb. 29, p. 50

Est. of Magn. See p. 52
15.8 on 21019
16.3 or 4 19953
16.4 on 20912

Saturday, November 1, 1924

19.4-3

Mc 20896

21019

20896 superimposed

neb. S. of center very ft, large

New Var.

Bc

Ft

x $\downarrow$ -y

21019

20896

19947

~~20896~~

19953

20787

Bc = x

20801

Ft. about = y

20813

20824

20912

20917

20959

20997

~~19899~~

Est of Magn.

A 2827

15.0 on 19947

16.0

15.8 on 20896

19^h 32^m 9^s - 2° 49' 9" (1900)

Position meas. Bk. 29, p. 52.

Ought to have been
found, p. 26.

See p. 58
for diam. of
more plates

Var. Cont from p. 57

A 9587 does not show ft stars
 7976 +0 does not cover Var
 2825 Var. Br.

B 31961 Exp. 62 Var. Br.

23971 Exp. 10 Var. Br.

23792 Exp. 178 Var. Br.

Many B & D plates exp. Very few show ft stars.

B 7443

J 29029

~~A 2827~~

~~A 2825~~

A 8957

A 7976

J 34800 48^m poor pl.

Defect ?
B. on 21019

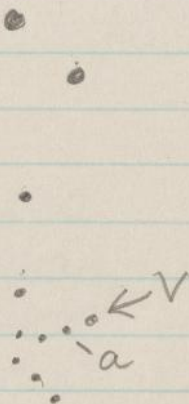
19.4-3

Me 19899

20813

20813 superimposed

New Var.



Does $\leftarrow V$ change ^(enough to meas.?) or does a slightly change. See 20912

Br. 20813

21019

19953

20997

20917

19947

20896

Fk 19899

20824

Not range enough to include at present.

Also seen by Miss Cannon.

Rather bright neb. $19^h 11^m -1.8^\circ$ (1855)

62 Pres.
elective
(C-D?)Tuesday, November 4, 1924.19. ^h 25 ^m -3°

Comparison of MD plates of regions.

MD 19947

20997

19947 superposed

new var.?

+1° 4003 19 20.3 16.5 +1 45.5 9.5 1855

Single image on DM Chart

" " " 19947

Double " " 20997

This is TU Aquilae 19 22.6 +1 51 (1900) Leland.
Verified by DM no.

MD 19953

20813

20813 superposed

No objects found.

Wednesday, November 5, 1924

Lgh $25^m - 3^o$

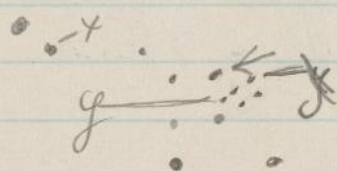
Comparison of early & late plates

mc 19899

20997

20997 superposed

19 13 -5.2



Br.* 19899

NS or Th

19947

20997

not Max.

20787

19953

20801

not max.

21019 fainter

Br. = x (nearly)

Th. = [y

(stars than y are
[perhaps 3])

second star marked y is a little
fainter than right hand star.

20813 y

seen

20824 probably
NS.

~~Position meas. Bb. 29, p. 54~~

20896 20586

20912 10105

20959

21136

Est. of Magn. See p. 52

14.7? (in extreme corner) 19899

[16.5 21019

This is same star as found Bb. 27,
p. 36.

Friday, September 11, 1925.

19 25-3

19947

21563

21563 superposed.

21563 too black after superposing.
Use for confirming vars.

HANMERVILLE
LEDGER

