KG
11365
933

1902phae.proj..934L

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AC-plates from "4, 1903" 8h.00 +60° Area not cover region

KG 11365.933

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1902phae.proj..0241

Observations up to Page 100 are by Miss Lundin
" from Page 101 onward are by H.S.L.

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140	" " " " DM +49° 4032	

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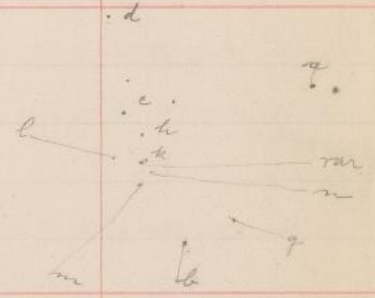
4

Measures of Andersonia Variable 19 1902.
R.A. Dec. Comp stars marked
m I 9371., I 9069.
February 11, 1903.

I 9069

10.30 q 3 v 10.60 10.46 = 10.53 07 07
10.46 v 1 h 10.56

(10.56 E.L.) h 1 v 10.66 10.57 = 10.62 04 05
10.57 v 3 k 10.87



I 9371
v 3 m
m 2 k

~~11.48~~ m 3 v ~~11.60~~ 11.66 ~~11.60~~ = 11.63 ~~02~~ ~~03~~ ~~02~~ ~~03~~
~~11.60~~ 74 ~~12.00~~ v 2 m ~~11.80~~ 94 ~~12.00~~ 74 78 76

I 8885

9.62. d 2 v 9.82. 9.70 = 9.76 06 06
9.70 v 1 c 9.80

I 23503

~~11.80~~ 94 m 2 N ~~12.0~~

I 27513

9.12 b 3 v 9.42 9.28 = 9.35 07 08
9.28 v 1 c 9.38

I 11965.

~~11.36~~ 48 m 1 N ~~11.46~~ 5

I 9520

~~11.80~~ 94 m 1 N. ~~11.92~~ 12.0

I 11544

10.30 q 1 v 10.40 10.46 = 10.43 03 03
10.46 v 1 h 10.56

I 6902

~~11.36~~ 48 m 2 N 11.2 6

I 7098

~~11.08~~ 14 l 1 N 11.2 21

I 16049

~~11.80~~ 94 m 3 N 12.2 2

I 7401

~~11.36~~ 48 m 2 N 11.2 6

I 27872

9.80 c 3 v 10.10 9.95 = 10.02 08 07
9.95 v 2 f 10.15

I 29497

10.56 h 1 v 10.96 10.77 = 10.86 10 09
10.77 v 1 k 10.87

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1902phae.proj..934L

Andersonis Variable. "19 1902"

February 13, 1903.

J ✓

J 23606.

11.80 94 m 1 N 11.9 12.0

✓ J 23944.

11.80 94 m 1 N 11.9 12.0

J 18896. Too.

10.30 g 1 r 10.40 = 10.46 10.43 03 03

10.46 r 1 h 10.56

J 23769

11.36 48 m 2 N m 2 r 11.5 6 ✓

r 1 i

* J 18856.

10.56 h i r g 2 r 10.66 + 10.57 = 10.62 04 05

10.57 r 3 k r 2 h 10.87

J 18888

10.56

h 2 r g 2 r 10.76 10.67 = 10.72 04 05

10.67 r 2 k 10.87

J 18966

10.56 h 3 r 10.86 10.67 = 10.76 10 09

10.67 r 3 k 10.87

J 16263

11.82 94 m 1 N 11.9 12.0

J 4052

✓ 11.36 48 m 1 N 11.5 5

✓ J 2557

11.36 48 m 1 N 11.5

✓ J 6989

11.88 14 l 3 N 11.8 4

J 9767

✓ 11.08 14 l 2 N 11.2 3

J 21565

9.38 C 3 r 9.68 9.42 = 9.55 13 13

9.42 r 2 d 9.62

J 26178

✓ 11.80 94 m 1 N 11.9 12.0

J 26158 ✓

11.80 94 m 1 N 11.9 12.0

J 2434 ✓

Too faint

J 159

Too near the edge of the plate

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1902phae.proj..934L

Anderson's Variable. "19 1902"

February 13, 1903.

I 4077.
10.87 k 1 N 10.9

Near edge - Poor plate

I 29395
11.88 94 m 1 R 11.9 12.0

I 4506.

Near edge - Fair poor

I 29537 ~~9.82 9.60 9.71~~
9.62 d 2 r 9.82 9.60 = 9.71 11 11.
9.60 r 2 e 9.80

I 26114
11.36 48 m 1 N. 11.4 11.5

I 4051
11.36 48 m 1 N 11.4 5

Very poor plate I 7302
10.56 k 1 N 10.6

Very poor
Near edge of plate I 7226
10.87 k 1 N 10.9

I 9321
11.80 94 m F 1 ~~11.99~~ 12.04 11.80. 11.80 94

Near edge. I 7215.
10.87 k 1 N 10.9

Fair poor I 7013

I 21501
9.38 c 3 r 9.68 9.42 = 9.55 13 13.
9.42 r 2 d 9.62

Fair poor I 13341

I 12069
11.08 14 k 1 N. 11.2 2

Fair poor I 13375

Fair poor I 13289

Near edge I 1612

Fair poor I 1587

I 15754
11.08 14 k 1 N. 11.2 2

Near edge I 16109

Fair poor I 13174

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1902phae.proj..934L

Andersonia Variable. "19 1902"

February 13, 1903.

J 15429

k × k

10.87 k 3 v 11.17 ~~10.98~~ 11.04 = 11.08 ~~09~~ 07 ~~10~~ 06

~~10.98~~ 11.04 v 1 c 11.08 14

See Book 5 p 94

For just off edge J 19210

J 8915

9.62 d 2 v 9.82 9.60 = 9.71 11 11

9.60 v 2 e 9.80

J 4461

10.15 f 2 N. 10.3

For prov J 4376

For prov J 7345

J 19449

11.80 74 m 1 N. ~~11.9~~ 12.0

For prov J 27892.sp.

J 16952

11.08 14 l 1 N. 11.X 2

J 15465

9.80 e 3 v 10.10 10.05 = 10.08 02 03.

10.05 v 1 f 10.15

For prov J 21397.

J 29211

10.30 g 2 N? 10.5

For near edge J 19663

On edge J 19877

11.36 48 m 2 N 11.5 6

J 27942 Sp.

10.56 h 1 N 10.6

For near edge J 20179

J 26142

11.36 48 m 1 N 11.4 5

Near edge J 29025

11.08 14 l 1 N. 11.X 2

J 21074

10.87 k 1 N 10.9

J 7383

For near edge?

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1902phae.proj..934L

Anderson's Variable "19 1902"

February 13, 1903.

J 4596
11.08 14 b 1 N 11.1 2

J 2712
11.36 48 m 1 N 11.4 5

Too poor J 2333 Sp.

Feb. 14, 1902 J 21273
11.36 48 m 1 N 11.4 5

J 22926
9.62 d 2 v 9.82 9.70 - 9.76 06 06
9.70 v 1 c 9.80

Too poor B 808

Too poor B 810

Too poor B 833

Too poor B 841

Too poor B 901

Too poor B 1557

Too poor B 1593

Too poor B 1605

Too poor B 1640

Too poor B 1816

Too poor B 1894

Too poor B 1908

Feb. 16, 1902. AC 2853
9.38 C 2 N 9.5

AC 2946
10.30 g 1 v 10.40 10.36 - 10.38 02 02
10.36 v 2 h 10.56

Too near edge AC 3146 2717

AM 542
9.12 b 1 N 9.2

Too near edge AM 122

AC 3146
9.80 e 1 N 9.9

AC 2909
10.15 f 1 N 10.2

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1902phae.proj..934L

Anderson's Variable "19 1902"

February 16, 1903.

Toward near edge AM 1092

Toward near edge AM 1368.

Toward near edge AM 1505

Toward near edge AM 602

Toward near edge AM 254

AC 2679
(var.?) 11.86 m 1 R? 11.4

Toward near edge AM 40

AC 2241
9.12 b 1 R. 9.2

Toward poor AM 518

AC 1667
8.89 a 1 R 8.9

AC 1907
9.12 b 1 R 9.2

AC 2640
9.38 c 1 R 9.4

AC 1870
9.38 c 1 R 9.4

February 17, 1903 AC 2510
9.80 c 3 v 10.10 10.05 = 10.8 02 03
10.05 v 1 f 10.15

AM 123
10.56 h 1 R: 10.6

Toward near edge AC 1930

AC 3092
9.80 c 3 v 10.10 9.95 = 10.02 08 07
9.95 v 2 f 10.15

AC 2867 (3198)
11.08 c 1 R 11.1

AC 3190
11.08 c 1 R 11.1

AC 1834
9.38 c 1 R 9.4

Toward near edge AC 88

AC 668
9.38 c 2 v 9.58 9.52 = 9.55 03 03
9.52 v 1 d 9.62

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1902phae.proj..934L

Anderson's Variable "19 1902"

February 17, 1903

Too poor AM600

AC1106
11.08 14 c 2 N 11.X 3

AC1014
11.36 48 m 1 N 11.4 5

AC2979
9.80 c 2 r 10.00 10.05 = 10.02 02 03
10.05 r 1 f 10.15

AC1881
9.38 c 1 r 9.48 9.52 = 9.50 02 02
9.52 r 1 d 9.62

AC1843
9.38 c 1 r 9.48 9.32 = 9.40 08 08
9.32 r 3 d 9.62

AC1803
9.12 c 2 r 9.32 9.28 = 9.30 02 02
9.28 r 1 c 9.38

AC2593
9.80 c 2 r 10.00 10.05 = 10.02 02 03
10.05 r 1 f 10.15

AC2889
11.36 48 m 1 N 11.4 5

AC2758
11.36 48 m 1 N? 11.4 5

AC2142
11.08 14 c 1 N 11.1 2

AC1985
10.30 g 1 r 10.40 10.46 = 10.43 03, 03
10.46 r 1 h 10.56

AC1942
9.80 c 2 r 10.00 9.95 = 9.98 02 03
9.95 r 2 f 10.15

Too poor AC1833

AC487
11.08 14 c 1 N? 11.X 2

Too poor AC2852 N

AC2865
9.62 d 1 N 9.7

AC2883
11.08 14 c 1 N? 11.X 2

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Andromeda Variable "19 1902"

February 17, 1903

Too pow AC 2664

AC 2511

9.80 8 2 v 10.00 9.95 = 9.98 02 03

9.95 v 2 f 10.15

AC 2130

11.08 4 l R 11.1 2

Too pow AC 1850

Too pow AC 1966

AC 1864

9.12 b 3 v 9.42 9.28 = 9.35 07 07

9.28 v 1 c 9.38

Too pow AC 1577

AC 391

10.56 b 1 R 10.6

Feb 18, 1903 I 9660 Sp.

Too pow

I 18580

Too near edge

I 11800

Too pow

Feb 18, 1903.

I 2373

10.56 b 8 R.

10.6

Too pow I 4078

Too pow I 1684

Too pow I 8945

Too pow I 4434

Too pow I 4376

Too pow I 21105

Too near edge I 19582

I 21470

9.38 9.58, 9.42 = 9.50 08 08 c 2 v

9.42 9.62 v 2 d

Too pow I 1633

Too pow I 21926

Too pow I 21662

Too near edge I 1845

Too pow I 1957

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Anderson's Variable "1902"

February 18, 1903

A 1719
11.36 m 1 N 11.4

A 790
11.08 l 2 N 11.3

A 1710
11.36 m 1 N 11.4

Variable not shown, and A 5358
m + n cut off by edge of plate - Would otherwise show.

A 1544
11.08 l 1 N 11.2

A 771.
9.80 e 3 N 10.18

A 3868
11.80 m 1 N 11.9 12.0

AC 1892
9.80 e 2 v 10.00 9.95 : 9.98 02 03
9.95 v 2 f. 10.15

For re-reductions see note at the foot of the following page.

Note. Only AC + AK plates of qualities 4 + 5 were measured. Difficult to distinguish between variable & k.

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Scale Measurements

Anderson's Variable "1902"

February 18, 1903.

	9371	23503.
a	6.4	7.4
b	6.7	7.7
c	6.8	8.0
d	7.0	8.3
e	7.2	8.54
f	7.6	8.6
g	7.7	8.46
h	8.1	8.7
k	8.4	8.9
l	~~8.5~~ 8.9	~~9.3~~ 9.4
m	~~8.8~~ 9.5	~~9.5~~ 9.7
n	~~9.6~~ 10.0	~~9.7~~ 10.0
v	9.3	0

	9069	8885
a	7.5	7.4
b	7.6	7.4
c	7.9	8.0
d	8.18	8.2
e	8.2	8.4
f	8.64	8.6
g	8.46.	8.8
h	8.7	9.0
k	9.0	9.5
l	9.2	9.7
m	9.5	9.8
n	10.0 7	~~9.10~~ 10.4
v	8.7	8.2

Miss Lundin remeasured l, m, n and entered results in pencil in comp. star sheet. There second measures

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March 2, 1903.

" 21 1902"

J 17668

11.06 h 3 v 11.36 11.03 · 11.20 16 17
11.03 v 3 h 11.33

J 25732

11.82 h 1 v 11.92 11.90 = 11.91 01 01
11.90 v 2 m 12.10

J 8877

11.83 h 4 v 11.73 11.52 = 11.62 11 10
11.52 v 3 h 11.82

J 25719

11.82 h 3 v 12.12 11.70 = 11.91 21 21
11.70 v 4 m 12.10

J 21121

11.82 h 3 v 12.12 1200 = 1206 06 06
1200 v 1 m 12.10

J 9073

11.83 h 2 v 11.53 11.42 = 11.48 05 06
11.42 v 4 h 11.82

J 18377 near edge.

1210 m F 1 12.20 12.10.

J 18146

Too near edge.

J 18051

10.54 f 2 v 10.74 10.73 = 10.74 00 01
10.73 v 1 g 10.83

J 17859 near edge.

11.82 h 3 v 1212 11.90 · 1201 11 11
11.90 v 2 m 1210

J 17670 near edge. (Remeasured.) h + k off edge

10.54 f 3 v 10.84 10.63 = 10.74 10 11
10.63 v 2 g 10.83 10.83 g 3 v 11.13

J 16801. near edge

11.13 v 2 k 11.33 11.13 10.93
(h is as near edge as k, k fainter than h.)

J 16571 near edge.

11.83 h 2 v m 11.63
h n.s.

J 16515 near edge

11.83 h 4 v 11.73
h n.s.

J 16463 sp.

11.06 h 2 N 11.26
(h fainter than k)

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1902phae.proj..934L

March 2, 1903.

"21 1902"

J16194 near edge
11.33 k 3 v 11.63 11.52 = 11.58 05 06
11.52 v 3 l 11.82

J16142 near edge
11.06 k 2 v 11.26 11.13 = ~~11.20~~ 06 07
11.13 v 2 k 11.33

J16132 near edge
assumed to be J16133.
10.16 ~~e~~ k 4 v 10.56 10.34 = 10.45 11 11
10.34 v 2 f 10.54

J13136 near edge
11.33 k 3 v 11.63 11.52 = 11.58 05 06
11.52 v 3 l 11.82

J2485 near edge
11.33 k 3 v q 11.63 11.52 = 11.58 05 06
11.52 v 3 l 11.82

J15929 near edge
11.06 k 2 v 11.26 11.13 = 11.20 06 07
11.13 v 2 k 11.33

J15900 near edge
~~k 2 v~~
~~v k ?~~
11.33 k 3 v ~~11.43~~ 11.63
l n s

J15731 near edge
11.33 k 3 v 11.63 11.52 = 11.58 05 06
11.52 v 3 l 11.82

J16111 near edge
11.33 k 3 v 11.53 11.42 = 11.48 05 06
11.42 v 4 l 11.82

J15371
Off edge + too poor

J16008 near edge
11.33 1 k 3 v 11.63 11.52 = 11.58 05 06
11.52 v 3 l 11.82

J16001 near edge
11.06 k 3 v 11.36 11.03 = 11.20 16 17
11.03 v 3 k 11.33

J15931 near edge + h fainter than k.
11.33 k 3 v 11.63
l n s

J15930 near edge h a little than g.
10.54 f 3 v 10.84 10.63 = 10.68 = 16 15
10.53 v 3 g 10.83

J18432 near edge h, k
11.33 k 4 v 11.73 11.62 = 11.68 = 05 06
11.62 v 2 l 11.82

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March 2, 1903

"21 1902"

I 18532 near edge

v. ms v.

12.10 m1 K ? 12.20

I 18713 near edge

11.33 k4v 11.73

l ?

I 19250 near edge

11.06 k3v 11.36 11.23 = 11.30 06 07

11.23 v1k 11.33

I 19472 near edge

12.10 m1v 12.20 12.26 = 12.23 03 03

12.26 v1m 12.36

I 19525 near edge.

11.33 k3v 11.63 · 11.52 · 11.58 05 06

11.52 v3l 11.82

I 19682 near edge

11.06 k2v 11.26 11.13 = 11.20 06 07

11.13 v2k 11.33

I 15899 near edge

11.33 k4v 11.73 11.72 = 11.72 01 00

11.72 v1l 11.82

I 25436

11.82 l3v 12.19 11.80 = 11.96 16 16

11.80 v3m 12.10

I 25879

11.82 l3v 12.12 12.00 = 12.06 06 06

12.00 v1m 12.10

I 25970 near edge

11.06 k4v 11.46 11.23 = 11.34 12 11

11.23 v1k 11.33

I 27754 near edge

11.06 k4v 11.46 11.23 = 11.34 12 11

11.23 v1k 11.33

I 27792 sp.

10.83 g1K ? 10.93

I 27989

10.16 e3v 10.46 10.44 · 10.45 01 01

10.44 v1f. 10.54

I 28997 Remeasured

10.83 g2v 11.03 10.96 = 11.00 03 04

10.96 v1k 11.06 11.06 k2v 11.26 11.03 11.15

11.03 v3k 11.33

I 29001 near edge

11.06 k3v 11.36 11.13 = 11.24 12 11

11.13 v2k 11.33

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1902phae.proj..934L

March 2, 1903. "21 1902"

J 29014 near edge
11.33 k1v 11.43 11.42 = 11.42 01 00
11.42 v4l 11.82

J 29152 poor image
11.06 k2v 11.26 11.03 = 11.14 12 11
11.03 v3k 11.33

J 29192
11.33 k3v 11.63 11.52 = 11.58 05 06
11.52 v3l 11.82

J 28198
10.16 l4v 11°.56 11°.44 = 11°.50 06 06
11°.44 v1f 10.54

J 29193
11.33 k1v 11.43

J 13103 Remeasured
11.06 k3v 11.36 11.03 = 11.20 16 17
11.03 v2k 11.33 / 11.33 k1v 11.43 11.42 11.42 0100
11.42 v4l 11.82

J 13275 near edge
10.16 e3v 10.46 10.44 = 10.45 01 01
10.44 v1f 10.54

J 13256
11.33 k2v 11.43 11.42 = 11.42 01 00
11.42 v4l 11.82

J 6729
10.54 f3v 10.84 10.73 = 10.78 06 05
10.73 v1g 10.83

J 22896
11.82 l2v 12.02 11.80 = 11.91 11 11
11.80 v3m 12.10

J 7054
11.06 k3v 11.36 11.03 = 11.20 16 17
11.03 v3k 11.33

J 7028 near edge
10.83 g3v 11.13 10.96 = 11.04 09 08
10.96 v1h 11.06

March 4, 1903
J 6946
10.83 g3v 11.13 10.66 = 10.90 23 24
10.66 v4h 11.06

J 6917
11.06 h2v 11.26 10.83 = 11.04 22 21
10.83 v5k 11.33

J 4371
stairlike line region of graticule

11 12
11.15

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1902phae.proj..934L

March 4, 1903

"21 1902"

J 4882 near edge.

11.06 h 2r ? 11.26

K F

h n. s.

J 11426 near edge

11.82 l 3r 12.12 11.80 = 11.96 16 16

11.80 r 3m 12.10

J 7090

10.83 g 3r 11.13 10.96 = 11.04 09 ~~x~~ 8

10.96 r 1h 11.06

J 13311 near edge

10.83 g 2r 11.03 10.96 = 11.00 03 04

10.96 r 1h 11.06

J 14813

11.82 l 2r 12.02 11.90 = 11.96 06 06

~~11.90~~ ~~T 2h~~ r 2m ~~10~~ 12 ~~36~~

J 25162

11.06 h 2r 11.26 11.03 = 11.14 12 11

11.03 r 3 h 11.33

J 23645 near edge

10.16 e ½ r 10.36 10.24 = 10.30 06 06

10.24 r 3f 10.54

J 18865 sinchron.

11.33 h 4r 11.73 11.72 = 11.72 01 00

11.72 r 1 l 11.82

J 18655 near edge

11.82 l 3r 12.12 11.80 = 11.96 16 16

11.80 r 3m 12.10

J 16258 near edge

11.33 h ½ 3r 11.63 11.52 = 11.58 05 06

11.52 r 3 l 11.82

J 17910

11.33 h 3r 11.63 11.52 = 11.58 05 06

11.52 r 3 l 11.82

J 13135 sp?

Too poor

J 13181 near edge

11.33 h 2r 11.53 • 11.42 = 11.48 05 06

11.42 r 4 l ½ 11.82

J 13218

11.06 h 1r 11.16 11.03 = 11.10 06 07

11.03 r ½ 3 h 11.33

J 13158

1182 l 2r 1282 11.80 • 11.91 11 11

11.80 r 3m 12.10

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1902phae.proj..934L

March 4, 1903.

"21 1902"

J 13156 sp. Near edge
10.83 q 2v 11.03
h n. s.

J 13256 near edge.
10.54 f 3v 10.84 10.63 - 10.74 10 11
10.63 v 2q 10.83

pm J 13287 near edge
10.16 e 2f 10.36 - 10.16

J 13295 near edge.
11.06 h 2v 11.26 11.13 - 11.20 06 07
11.13 v 2 R ? 11.33

J 13304 near edge
10.83 q 3v 11.13 10.96 - 11.04 09 08
10.96 v 1 h 11.06

pm J 13387 near edge
10.83 q 2v to 11.03 10.86 - 11.94 09 08
10.86 v 2 h 11.06

J 13447 near edge
11.06 h 1 v 11.16 11.03 - 11.10 06 07
11.03 v 3 k 11.33

J 13468 near edge
10.54 f 3 v 10.84 10.63 - 1074 - 10 11
10.63 v 2 q 10.83

J 13489 sp. On the edge
v ? k ? 11.32 11.23
h - a superposed.

J 11254 sp.
Too pm

J 3696 near edge
Too pm

J 9286
Too pm

J 4045
11.33 h 3 v 11.63 11.62 - 11.62 01 00
11.62 v 2 l ? 11.82

J 15372
Too near edge

J 4202
Too pm

J 13038 sp.
10.83 q 1 N ? c 10.93

J 13085 sp
Too near edge

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1902phae.proj..934L

March 4, 1903 " 21 1902"

J13541 near edge
11.33 h 3 v 11.63 11.52 = 11.58 05 06
11.52 v 3 h 11.82

J14175 near edge
Too faint

J14813 near edge
11.82 h 2 v 12.02 11.80 = 11.91 11 11
11.80 v 3 h 12.10

J14812 near edge
11.82 h 2 v 12.02 11.90 = 11.96 06 06
11.90 v 2 h 12.10

J14081 near edge
Too faint

J14061 near edge
10.83 g 3 v 11.13 10.96 = 11.04 09 08
10.96 v 1 h 11.06

J14037 near edge
Too faint

J14036 near edge
10.54 f 1 v 10.64 10.53 = 10.58 06 05
10.53 v 3 g 10.83

J13606 near edge
11.06 h 3 v 11.36 11.13 = 11.24 12 11
11.13 v 2 h 11.33

J13629 near edge
defective in position
& variable.

J15071
off edge

J15236
Too near edge

J15240
Too near edge

J20429 near edge
11.33 h 1 v 11.43.

J20520 near edge
10.83 g 2 v 11.03
h off edge

J21071
h n s
11.13 v 2 k ~~11.33~~ ~~11.03~~ 10.93

J21135 near edge
10.83 g 2 v 11.03
[illegible] too near edge to

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1902phae.proj..934L

March 4, 1903.

"21 1902"

J 2 1181

11.06 h3r 11.36 11.03 = 11.20 16 17

11.03 r3k 11.33

J 21924

Too near edge

J 22789 near edge

12.36 m2r 12.56 12.52 : 12.54 02 02

12.52 r10 12.62

J 22831

11.33 k1N ? 11.43

J 23241 near edge.

11.33 k2r ? 11.33 11.52 = 11.52 01 00

~~11.82~~ 11.52 r3l 11.82

J 23584 near edge

10.16 e3r 10.46 10.24 = 10.35 11 11

10.24 r3f 10.54

J 13094 near edge

11.06 h4r ? 11.46 11.13 = 11.30 16 17

11.13 r2k 11.33

J 18305

12.00 r1m ~~12.10 12.00~~ 11.90

plate scratched too near l for estimate

J. 18377 near edge

12.10 m1r ? 12.20

n n.s.

March 5, 1903.

J 4371

11.06 h1N ? 11.16

plate stained in region of variable

J 13485 19

Too near edge

J 9085

10.54 f2N ? 10.74

J 13095 p

11.33 k2r 11.53 11.52 = 11.52 01 00

~~11.82~~ 11.52 r3l 11.82

J 27646

10.54 f3g 10.84 10.83 10.86 = 10.84 00 01 02.

10.83 g0r

10.86 r2l 11.06

J 16309 p near edge

10.83 91r 10.93 10.86 = 10.90 03 04

10.86 r2l 11.06

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1902phae.proj..934L

March 5, 1903 -

J 13283 sp.
10.5 k 2 N 10.7 k

J 27245
11.33 k 2 v 11.53 = 11.52 = 11.52 01 00
11.52 v 3 c 11.82

AM 624
11.33 k 1 v 11.43 11.52 = 11.48 05 04
11.52 v 3 c 11.82

AM 653
Too faint

AC 2396 near edge
9.44 c 3 N 9.74

AC 2924
11.33 k 3 v 11.63
c n s ?

AM 540 ~~too faint~~
11.82 ~~c F 1 · 11.92 = 11.82~~

AC 2888
10.83 g 2 v 11.03 10.86 = 10.94 09 08
10.86 v 2 h 11.06

"21 1902"

AC 2866
11.33 k 2 v 11.53 scratch on
c n s ? plate.

March 6, 1903.

AC 2209
Plate defective in re
gion of variable.

AC 2289
9.44 c 2 N 9.64

AC 2205 on the edge
11.06 h 1 N 11.16

AC 2354 on the edge
9.44 a 1 N 9.54

AC 2353
near edge - poor
in region of variable

AC 2341 near edge
10.54 f 3 v 10.84 10.73 10.78 06 05
10.73 v 1 g 10.83

AC 2356 near edge
10.16 e 1 N 10.26

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1902phae.proj..934L

March 6, 1903.

"21 1902"

AC2055 near edge.
9.44 C2 N. 9.64

AM1416
Tr near edge

AM1462
Tr near edge

AC2838 h higher than h
10.16 E3 r 10.36 10.34 = 10.35 01 01
10.34 r2 f 10.54

AC2772
9.44 C3 N Pm — 9.74

AC1541
10.16 E3 r 10.46 10.24 = 10.35 11 11
10.24 r3 f 10.54

AC1497
9.87 d3 r 10.17 10.06 = 10.12 05 06
10.06 r1 E 10.16

AC1667
9.44 C4 N 9.84

AC2022
11.06 h2 r 11.26 11.03 = 11.14 12 11
11.03 r2 k 11.33

AC2933
10.54 f3 r 10.84 10.63 = 10.74 10 11
10.63 r2 g 10.83

AC594
11.06 h F1 11.16 = 11.06

AC1080
11.06 h 2 r 11.26 11.13 = 11.20 06 07
11.13 r2 k 11.33

AM1302
10.54 f3 r 10.84 10.73 = 10.78 06 05
10.73 r1 g 10.83

AM122
10.54 f2 r 10.74 10.68 = 10.68 06 05
10.63 r2 g 10.83

AM600
11.06 h1 r 11.16
k n.s.

AM578
10.16 E1 N 10.26

AC1834
10.54 f2 r 10.74 10.63 = 10.68 06 05
10.63 r2 g 10.83

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1902phae.proj..934L

March 6, 1903 — "21 1902"

AC 2678 ✓

10.54 f 2v 10.74 10.63 = 10.68 06 05
10.63 v 2 g 10.83

AC 1824 ✓

10.54 f 2v 10.74 10.63 = 10.68 06 05
10.63 v 2 g 10.83

~~AC 2866~~ ✓

AM 542 iss.

10.54 f 4R 10.94

AC 502 ✓

11.06 h 2v 11.26

k + b superposed ?

AC 130 ✓

10.54 f 3v 10.84 10.73 = 10.78 06 05
10.73 v 1 g 10.83

AC 95 ✓

9.87 d 2R 9.97

AC 88 ✓

11.06 h 2v 11.26 11.23 = 11.24 02 01
11.23 v 1 k 11.33

AC 1016 ✓

11.06 h 1R 11.16

AC 918 ✓

11.33 k 2v 11.53
b u s.

AC 1957 ✓

10.16 e 2R 10.36

AC 1870 ✓

10.54 f 3 v 10.84 10.73 = 10.78 06 05
10.73 v 1 g 10.83

AM 1739 ✓ m the edge

AC 2928 ✓ m the edge

AM 1590 ✓ m the edge

AM 946 ✓ m the edge

AM 1022 ✓ m the edge

AM 1597 ✓

10.54 f 3 v 10.84 10.73 = 10.78 06 05
10.73 v 1 g 10.83

* Miss Lunden must have measured K and the rav. were difficult to separate as they are rarely close together on the plates. K is usually not near each other.

Note * Only quality 4 + 5 plates of AC & AM series measured. The difficulty presented by these plates was in attempting to separate K * L

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1902phae.proj..934L

March 6, 1903.

J 27642.

11.06 h 2 r 11.26 10.93 = 11.14 16 17

10.93 r 4 k 11.33

J 1706 sp

Ti pm

J 1663 sp.

9.44 c 2 N 9.64

J 373

11.33 k 2 r 11.53 11.52 = 11.52 01 00

11.52 r 3 c 11.82

J 3942

Ti near edge

J 3875 near edge

10.16 e 1 N 10.26

J 4426 sp.

9.44 c 3 N 9.74

J 4397

Ti near edge

J 4129

Ti pm

"21 1902"

J 6728 near edge sp

11.06 h 1 N. 11.16

J 6751 sp

Ti pm

J 6781 sp.

Ti pm

J 6966

11.06 h 3 r 11.36 11.03 = 11.20 16 17

11.03 r 3 R 11.33

J 7289

11.06 h F 1 11.16 = 11.06

J 2085 near edge.

10.54 f 3 r 10.84 10.73 = 10.78 06 05

10.73 r 1 g 10.83

J 12900 sp near edge.

(Ti pm)

9.44 c 2 N. 9.64

J 12908 sp near edge

11.06 h 2 r 11.26 11.23 = 11.24 02 01

11.23 r 1 R 11.33

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1902phae.proj..934L

March 6, 1903. "21 1902"

J 12912 sp., near edge
10.16 e 1 N 10.26

J 12928 sp, near edge.
Tr near edge.

J 12956 sp near edge
9.44 C 3 N 9.74

J 12994 sp. near edge.
11.33 k F 1 11.43 = 11.33

J 8800
11.06 h 1 v 11.16 11.13 = 11.14 02 01
11.13 v 2 k 11.33

J 9516
10.54 f 2 r 10.74 10.63 = 10.68 06 05
10.63 r 2 g 10.83

J 9760
10.54 f 1 r 10.64 10.53 = 10.58 06 05
10.53 r 3 g 10.83

J 3874
11.06 h 2 N. 11.26

J 4686 sp.
9.44 C 2 N 9.64

J 6968 pr. a plate
11.06 h 1 N 11.16 : broken in region of variable

J 4128
10.54 f 2 r 10.72 10.73 = 10.72 00 01
10.73 r 1 g 10.83

J 29245
11.06 h 2 r 11.26 11.13 = 11.20 06 07
11.13 r 2 k 11.33

J 5373
Tr near edge.

J 4730 sp.
off edge

J 13268 sp.
10.83 g 1 r 10.93 x 10.86 = x 10.90 03 04
10.86 r 2 w 11.06

J 13084 sp
11.06 h 1 N 11.16

J 15082 sp
9.44 C 2 N 9.64

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1902phae.proj..934L

March 7, 1903 "21 1902"

J 13114 sp ✓
11.33 kF1 2 11.43 = 11.33

J 13486 sp ✓
11.33 k1N 11.43

J 3913 sp ✓
~~k1N~~
11.33 kF1 2 11.43 = 11.33

J 22876 sp ✓
11.33 k1V 11.43
l n.s.

J 4160 sp. ✓
10.54 f1N 10.64

J 13527 sp ✓
11.33 k2N 11.53

B 694 ✓
Too few

B 733 ✓
Too few

B 765 ✓
Too few

B 778 ✓
Too few

B 1487 ✓
Too few

B 1490 ✓
Too few

B 1635 ✓
Too few

B 1706 ✓
Too few

B 2816 ✓
Too few

A 2758 ✓
11.06 h 2V 11.26 11.13 = 11.20 06 07
11.13 V2k 11.33

A 2693 near edge ✓
12.36 N1V 12.46 12.32 = 12.39 07 07
12.32 V3O 12.62

A 4648 ✓
11.82 l 3V 12.12 11.90 = 12.01 11 11
11.90 V2K 12.10

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1902phae.proj..934L

March 7, 1903.

"21 1902"

A 781

11.82 b2r | 12.02 11.80-11.91 ii ii

11.80 v2 m 12.10

AC 2933.

10.54 f 4 v 10.94 10.63 = 10.78 = 16 15

10.63 v 2 g 10.83

~~A 5502~~

AC 2866. k & l cannot be separated. See p. 22.

A 3216

cannot be found.

AC 2192

Defective in region of variable.

A 6146 not arrived

AC 2267

Too near edge.

A 6149 not arrived

AC 2305

On the edge & defective.

A 6173 not arrived

A 6203 not arrived.

AC 3353

A 6076 not arrived.

11.06 k 1 v. 11.16

AC 2928

Too near edge.

AC 52 near edge

11.06 g 2 v 11.16 - 11.06

AC 3404

11.03 k 1 v 11.48

l ns.

See page 32 for measures of additional plates.

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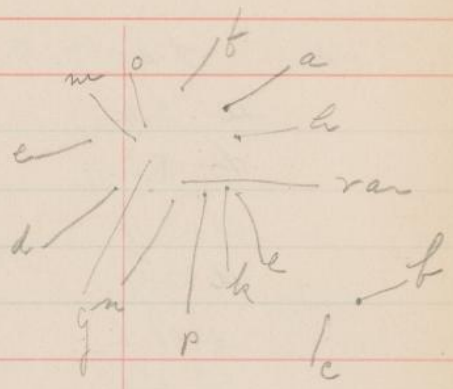
1902phae.proj..934L

Scale Measurements.

"21 1902"

Ŷ 17668

a	1.8	5.5
b	1.7	5.7
c	2.2	6.2
d	2.6	6.6
e	3.1	7.1
f	3.5	7.5
g	3.9	7.9
h	4.0	8.0
k	4.2	8.2
l	4.7	8.7
m	5.0	9.0
n	5.2	9.2
o	5.5	9.5
p	5.7	9.7
rar	5.8	8.1



Ŷ 8877

a	2.0	6.0
b	2.2	6.2
c	3.0	7.0
d	3.4	7.4
e	3.8	7.8
f	4.2	8.2
g	4.5	8.5
h	4.8	8.8
k	5.2	9.2
l	5.8	9.8
m	10.2	10.2
n	10.5	10.5
o, p,		N.S.
rar	5.4	9.4

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1902phae.proj..934L

Scale Measurements

"21 1902"

	A 20-719.	
a	2.6	6.6
b	2.9	6.9
c	3.4	7.4
d	3.8	7.8
e	4.1	8.1
f	4.4	8.4
g	4.6	8.6
h	4.8	8.8
k	5.0	9.0
l	5.4	9.4
m	5.7	9.7
n	5.9	9.9
o.	6.2	10.2
p.	n.s.	n.s.
ran	5.6	9.6

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1902phae.proj..934L

Scale Measurements.

" 21 1902

J	J 25732.	
a	2.7	6.7
b	3.1	7.1
c	3.6	7.6
d	4.1	8.1
e	4.3	8.3
f	4.7	8.7
g	4.9	8.9
h	5.1	9.1
k	5.3	9.3
l	5.8	9.8
m	6.0	10.0
n	6.2	10.2
o	6.4	10.4
p	n. s.	n. s.
Nr.	5.8	9.8

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1902phae.proj..934L

"21 1902"

I 21135 On the edge
10.83 g 2v 11.03
h n.s.

I 30148 Near edge
11.82 l 2v 12.02 11.90 = 11.96 06 06
11.90 v 3m 12.10

I 30131 Near edge
12.10 m 1v 12.20 12.26 = 12.23 03 03
12.26 v 1n 12.36

I 13245 Near edge
Too few.

I 13226.
11.06 h 1v 11.16 11.03 = 11.10 06 07
11.03 v 3k 11.33

I 13117 Sp.
11.06 h 2v 11.26
k + l superposed

I 14814 Near edge
11.82 l 1v 11.92 11.90 - 11.91 01 01
11.90 v 2m 12.10

I 14796 Near edge
12.36 m k½v 12.56 12.62 = 12.59 03 03
12.62 v 0 12.62

Too few to measure
λ 1502
λ 15-05
λ 8703
λ 11308
λ 13060
λ 14080
λ 14148
λ 15002
λ 15587

Cont. p. 94, pp 198-207
Book 4 p. 143

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1902phae.proj..934L

April 4, 1903.

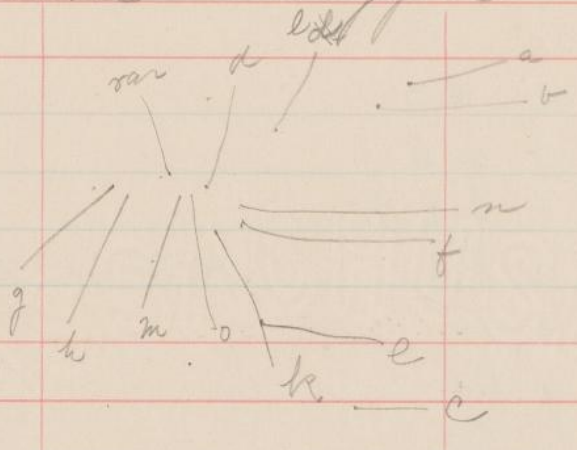
Scale Measurements. Sequence on I. 29510.

Williams variable S.Z. Cygni.

I. 29510.

~~10.83 9.25 11.03 10.76 10.90 13 14~~

~~10.76 9.56 11.06~~



I 29510

a	5.4
b	5.7
c	6.0
d	6.3
e	6.6
f	7.2
g	7.5
h	7.78
k	8.2
l	8.5
m	~~8.8~~ 9.0
n	9.3
o	9.5
p	9.7
var.	7.6

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1902phae.proj..934L

Scale measures.

April 4, 1903.

Williams' Variable

I 25920.

a	6.3	
b	6.6	
c	6.8 9	
d	7.2	1st time took wrong star.
e	7.5	
f	8.0	
g	8.3	
h	8.6	
k	9.0	
l	8.2	
m	8.7	
n	8.9	
r	9.1	
p	8.3	
var	7.4	

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1902phae.proj..934L

April 4. 1903 Scale Measures -

Williams' Variable -

I. 2416

a 6.2
b 6.5
c 6.8
d 7.A
e 7.4
f 7.9
g 8.2
h 8.6
k 9.0
l 9.4
m 9.8
n 10.1
o 10.4
p 10.5 ?
Var. 9.1

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1902phae.proj..934L

April 4, 1903.

Williams' Variable

I 27868

a 5.3
b 5.6
c 5.8
d 6.2
e 6.5
f 7.X 2
g 7.5 4
April 6 h 7.8 Light too poor to continue
k 8.1 measuring.
l 8.5 4
m 9.2
n 9.4 1st time comes in my diaphr.
o 9.6
p 9.8
var. 6.4

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1902phae.proj..934L

March 27, 1903 Sequence on I 29510.

Williams Variable

I 29510.

10.54 g 2½ r 10.64 10.70 = 10.67 03 03
10.70 r 2½ h 10.90

I 27868.

9.52 d 3 r 9.82 9.70 = 9.76 06 06
9.70 r 4 e 9.80

I 2416.

11.23 k 3 r 11.53 11.18 = 11.36 17 18
11.18 r 5 l 11.68

I 25930.

9.52 d 1 r 9.62 9.60 = 9.61 01 01
9.60 r 2 e 9.80

A 23051.

9.52 d 2 r 9.72 9.60 = 9.66 06 06
9.60 r 2 e 9.80

A 16009.

10.28 f 1 r 10.38 10.24 = 10.31 07 07
10.24 r 3 g 10.54

A 5012.

9.80 e 3 r 10.10 9.98 = ~~10.04~~ 06 06
9.98 ~~99~~ r 3 f 10.28

A 23674.

10.90 h 3 r 11.22 11.03 11.12 08 09
11.03 r 2 k 11.23

A 21600.

10.54 g 3 r 10.84 10.80 = 10.82 02 02
10.80 r 1 h 10.90

A 26021.

10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 k 11.23

A 23-973.

10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

A 2227.

9.80 e 1 r 9.90 9.78 = 9.84 06 06
9.78 r 4 f 10.28

A 21171.

10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 k 11.23

A 23695.

10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

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1902phae.proj..934L

March 27, 1903.

Williams Variable

J 4430 · near edge
11.23 k 2 r 11.43
plate scratched in
position of l

J 5113 ·
10.64 g 4 r 10.94 10.60 = 10.77 17 17
10.60 r 3 k 10.90

J 29303 ·
10.90 k 3 r 11.20 10.93 = 11.06 14 13
10.93 r 3 k 11.23

J 29307 ·
10.90 k 2 r 11.10 11.03 = 11.06 04 03
11.03 r 2 k 11.23

J 29308 ·
10.90 k 2 r 11.10 11.03 = 11.06 04 03
11.03 r 2 k 11.23

J 29309 · S. pon + near edge.
10.28 f 2 N 10.4

J 23167 ·
10.90 g k 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 g k 11.23

J 23150 ·
10.90 k 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

J 23086 · On the edge
10.28 f 2 N. 10.4

J 23079 · near the edge
9.52 d, N 9.6

J 23078 · On the edge
Too poor

J 23061 · On edge
1/2 variable off the edge.
9.80 e 2 r 10.00 9.88 = 9.94 06 06
9.88 r 4 f 10.28

J 7067 ·
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 k 10.90

J 4373 ·
10.54 g 4 r 10.94 10.60 = 10.77 17 17
10.60 r 3 k 10.90

J 6971 ·
10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 k 10.90

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Williams' Variable

J 8802.
10.54 94 r 10.94 10.60 = 10.77 17 17
10.60 r 3 h 10.90

J 23723.
9.80 e 1 r 9.90 9.88 = 9.89 01 01
9.88 r 4 f 10.28

J 23741 On the edge.
10.54 91 r 10.64 10.40 = 10.52 12 12
10.40 r 5 h 10.90

J 23465 On the edge
11.23 k 2 r 11.43 11.28 = 11.36 07 08
11.28 r 4 t 11.68

J ~~16349~~ near
16146 On the edge.
9.80 e 2 r 10.00 9.88 = 9.94 06 06
9.88 r 4 f 10.28

J 16022 Near edge
e 3 r
r 3 f
9.80 e 4 r 10.20 10.08 = 10.14 06 06
10.08 r 2 f 10.28

J 15873.
11.23 k 2 r 11.43 11.18 = 11.30 13 12
11.18 r 5 l 11.68

J 10426 Sp.
9.52 d 1 r 9.6

J 11803 Sp.
10.28 f F1 l 10.38 10.28

J 9721
10.54 92 r 10.74 10.40 = 10.57 17 17
10.40 r 5 h 10.90

J 9709
9.80 e 4 r 10.20 10.08 10.14 06 06
10.08 r 2 f 10.28

J 13759 near edge.
9.80 e 5 r 10.30 10.18 = 10.24 06 06
10.18 r 1 f 10.28

J 22805. near edge
10.90 k 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

J 22898 near edge
10.28 f 3 r 10.58 10.44 = 10.51 07 07
10.44 r 1 g 10.54

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Williams' Variable

J 22981 near Dr. edge

9.80 e 1 r 9.90 9.88 = 9.89 01 01
9.88 r 4 f 10.28

J 22982

f 0.52
r 1 d

J 22982 -

9.52 d 3 r 9.82 9.70 = 9.76 06 06
9.70 r 1 e 9.80

J 22986 -

9.52 d 3 r 9.72 9.70 = 9.71 01 01
9.70 r 1 e 9.80

J 22987 near edge

9.52 d 3 r 9.82 9.70 = 9.76 06 06
9.70 r 1 e 9.80

J 22988 near edge

9.52 d 3 r 9.82 9.60 = 9.71 11 11
9.60 r 2 e 9.80

J 22996 -

10.54 g 2 r 10.74 10.60 = 10.67 07 07
10.60 r 3 h 10.90

J 23509 near edge -

10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

J 23634 near edge -

10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

J 23675 near edge -

10.90 h 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

J 29310 near edge -

10.90 h 1 r 11.00

k n. s.

J 28183 near edge

10.54 g 3 r 10.84 10.80 = 10.82 02 02
10.80 r 1 h 10.90

J 28218 On the edge - poor

10.54 g 3 r 10.84 10.80 = 10.82 02 02
10.80 r 1 h 10.90

J 28251 near edge -

10.54 g 3 r 10.84 10.60 10.72 12 12
10.60 r 3 h 10.90

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Williams' Variable -

J 28793.
d 4 r
r 2 f

J 28793 -
9.80 e 3 r 10.10 10.08 = 10.09 01 01
10.08 r 2 f 10.28

J 28795 -
9.80 e 2 r 10.00 9.98 = 9.99 01 01
9.98 r 3 f 10.28

J 28910 Near edge -
10.90 h 3 r 11.~~20~~ 11.03 = 10.~~08~~ ~~04~~ ~~02~~ 12 08 09
11.03 r 2 h 11.23

J 28911 Near edge -
10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 h 11.23

J 28912 Near edge -
10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 h 11.23

J 27579 Near edge -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

J 27585 -
10.54 g 1 r 10.64 10.50 = 10.57 07 07
10.50 r 4 h 10.90

J 27798 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 h 10.90

J 27799 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 h 10.90

J 27801 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 h 10.90

J 23042 Near edge -
f 2 r
r 1 g
9.80 e 4 r 10.20 10.08 = 10.14 06 06
10.08 r 2 f 10.28

J 23041 Near edge -
9.52 d 1 r 2 9.6

J 23010 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

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Williams' Variable

T 23008 -
10.54 g 3 2 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 19393
h 3 r -
r 1 h
11.23 h 1 r 11.33 11.18 = 11.25 6 07 08
11.18 r 5 l 11.68

T 19340 -
9.80 e 3 r 10.10 9.98 8 = 10.04 4 06 06
9.98 r 3 f 10.28

T 19207 -
9.80 e 3 r 10.20 9.98 = 10.04 06 06
9.98 r 3 f 10.28

T 19019 - On the edge
9.80 e 4 r poor 10.20 10.18 = 10.19,0 1 01
10.18 r 1 f 10.28

T 18986 Near edge -
9.80 e 5 r 10.30 9.98 = 10.14 4 16 16
9.98 r 3 f 10.28

T 18942 -
10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

T 18842 Near edge -
11.23 h 3 r (11.53 11.48 = 11.50 03 02
11.48 r 2 l 11.68

T 18611 Near edge -
10.54 g 4 r 10.94 10.80 = 10.87 07 07.
10.80 r 1 h 10.90

T 18558 -
10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 h 11.23

T 18542 Near edge -
10.54 g 3 r 10.84 10.80 = 10.82 - 02 02
10.80 r 1 h 10.90

T 18296 -
10.90 h 2 r 11.1 10.80 96 = 10.83 96 14 13
10.83 r 4 h 11.23 "

T 15618 - Near edge
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 1170 -
10.54 g 2 r 10.74 10.50 = 10.62 12 12
10.50 r 4 h 10.90

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Williams' Variable.

D 26286 -
10.90 k 4 r 11.30 11.03 = 11.16 14 13
11.03 r 2 k 11.23

D 16310 Sp.
9.80 e 5 r 10.00 9.88 = 9.94 06 06
9.88 r 7 f 10.28

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D 7209 Near edge
10.54 g 5 r 11.04 10.80 = 10.92 12 12
10.80 r 1 h 10.90

D 22998 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

D 22997 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

D 8993. Near edge.
11.23 k 2 r 11.43 11.28 = 11.36 07 08
11.28 r 4 l 11.68

D 21020 -
9.52 d 3 r 9.82 9.60 = ~~9.52~~ 9.71 11 11
9.60 r 2 e 9.80

D 7203 near edge
10.90 h 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

D 18153 Sp.
10.54 g 3 r 10.84 10.80 = 10.82 02 02
10.80 r 1 h 10.90

D 18138 Sp.
9.80 e 4 r 10.20 9.98 = 10.09 11 11
~~9.98~~ r 3 f 10.28

D 7168 Near edge.
11.23 k 2 r 11.43 11.28 = 11.36 07 08
11.28 r 4 l 11.68

D 23133 Sp. Near edge
9.80 e 2 r 10.00 10.18 = 10.09 09 09
10.18 r 1 f 10.28

D 30167. Near edge
10.54 g 3 r 10.84 10.80 = 10.82 02 02
10.80 r 1 h 10.90

D 30165 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 h 10.90

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Williams' Variable

D 30163 Near edge -
10.90 h 2 r 11.10 10.93 = 11.02 08 09
10.93 r 3 k 11.23

D 30101 -
g + h two prm.
10.28 f 1 r ? 10.38 ?

D 30098 -
9.80 e 4 r 10.20 9.98 10.09 11 11
9.98 r 3 f 10.28

D 30046 -
10.54 g 2 r 10.74 10.60 = 10.67 07 07
10.60 r 3 h 10.90

D 30043 -
10.54 g 3 h 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

D 30040 prm -
10.54 g 2 h r 10.74 10.70 = 10.72 02 02
10.70 r 2 h 10.90

D 29987 prm -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

D 29985 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

D 29936 -
10.90 h 3 r 11.30 11.13 = 11.22 08 09
11.13 r 1 k 11.23

D 11499 Sp. Near edge
10.54 g 1 N ? 10.6

D 3842 Two prm -

D 4326 Two prm -

D 4406 Sp. -
9.80 e 2 N 10.0

D 17936 -
10.90 h 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

D 17934 -
g + h off the edge
10.83 r 4 k 11.23 10.83

D 19026 Sp
On edge of plate
9.80 e 3 r 10.10 10.08 = 10.09 01 01
10.08 r 2 f 10.28

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Williams' Variable -

J 23724 Near edge -
9.52 d 5 r 10.02 9.70 = 9.86 16 16
9.70 r 1 e 9.80

J 16726 Near edge -
9.80 e 4 r 10.20 10.08 = 10.14 06 06
10.08 r 2 f 10.28

J 16623 Near edge -
10.90 h 3 r 11.20 10.93 = 11.06 14 13
10.93 r 3 k 11.23

J 23000 -
11.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

J 22999 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

J 21956 On the edge -
10.90 h 2 r 11.10 10.93 = 11.02 08 09
10.93 r 3 k 11.23

J 23003 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

J 23508 -
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

J 23488 - On the edge of plate
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

J 15750 On the edge -
10.90 h 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

J 15438 Near edge -
9.80 e 4 r 9.90 9.88 = 9.89 01 01
9.88 r 4 f 10.28

J 15361 Near edge -
10.54 g 2 r 10.74 10.70 = 10.72 02 02
10.70 r 2 h 10.90

J 14673 Sp. -
10.54 f 3 k 10.28

J 13529 Sp. - Nova
10.54 g 2 r 10.74 10.70 = 10.72 02 02
10.70 r 2 h 10.90

J 13488 Sp. Near edge -
9.80 e 2 r 10.00 9.88 = 9.94 06 06
9.88 r 4 f 10.28

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Williams' Variable

J 13448 Near edge.
11.23 h 3 r 11.53 11.28 = 11.40 13 12
11.28 r 3 l. 11.68

J 30181 Near edge
+ Too few
9.52 d, IV? 9.6

J 13367.
10.54 g 2 r 10.74 10.60 = 10.67 07 07
10.60 r 3 h 10.90

J 13318 Near edge
10.54 g 2 r 10.74 10.60 = 10.67 07 07
10.60 r 3 h 10.90

J 13284 Lp. Near edge
Too few

J 13309 Lp. Near edge
10.54 g F IV 1 ? 10.64 10.54

J 13209 Lp.
10.54 g 3 r 10.84 10.70 = 10.77, 07 07
10.70 r 2 h 10.90

J 13144 Near edge
9.80 e 3 r 10.10 9.88 9.99 11 11
9.88 r 4 f 10.28.

J 13143 Near edge.
9.80 e 4 r 10.20 9.88 = 10.04 16 16
9.88 r 4 f 10.28

J 231 Lp.
10.90 h F I ? 11.00 10.90

J 37
10.54 g 3 r 10.84 10.70 10.77 07 07
10.70 r 2 h 10.90

J 7141 Near edge
9.80 e 3 r 10.10 9.88 9.99 8 11 11
9.88 r 4 f 10.28

J 7122
9.80 e 3 r 10.10 9.88 9.99 11 11
9.88 r 4 f 10.28

J 7092 Near edge
10.28 f 3 r 10.58 10.34 10.46 12 12
10.34 r 2 g 10.54

J 7030
10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 h 11.23

J 6948
9.80 e 4 IV 10.20
two h

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Williams' Variable -

J 6919 near edge.
9.80 e3K 10.10
f n.s. ?

J 6881 near edge -
9.80 e4r 10.20 9.98 = 10.09 11 11
9.98 r3f 10.28

J 7413 sp -
10.54 g3r 10.84 10.60 = 10.72 12 12
10.60 r3h 10.90

J 7298 near edge -
10.54 g4r 10.84 10.70 = 10.82 12 12
10.70 r2h 10.90

J 7249 near edge -
10.54 g3r 10.84 10.60 = 10.72 12 12
10.60 r3h 10.90

J 1893 -
10.54 g3r 10.84 10.60 = 10.72 12 12
10.60 r3h 10.90

J 1889 -
10.54 g2r 10.74 10.50 = 10.62 12 12
10.50 r4h 10.90

J 1540 -
10.54 g2r 10.94 10.60 = 10.87 17 17
10.60 r3h 10.90

J 1182 sp -
10.54 g4r 10.94 10.80 = 10.87 07 07
10.80 r1h 10.90

J 1235 sp -
Too faint

J 1281 sp -
10.54 g2K 10.7

J 1303 sp -
9.80 e3r ? 10.10 10.18 = 10.14 04 04
10.18 r1f 10.28

J 1318 -
10.90 k3r ? 11.20 11.13 = 11.16 04 03
11.13 r1h 11.23

J 1395 sp -
Too faint

J 1418 sp -
10.64 g F1 ? 10.64 10.54

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Williams' Variable

J 1434 sp.-
9.80 e 2r 10.00 9.98 - 9.99 01 01
9.98 r 3 f 10.28

J 2025. -
10.90 h 3r 11.20 11.13 = 11.16 04 03
11.13 r 1 k 11.23

J 1920. sp -
Tr pm

J 1977 sp. - near edge
9.52 d, N 2. 9.6

J 2033 sp. -
Tr pm

J 9517 -
10.54 g 1r 10.64 10.50 = 10.57 07 07
10.50 r 5 h 10.90

J 9398 -
10.54 g 3r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

J 9317 -
10.90 g 3r 11.20 9.93 11.06 14 13
9.93 r 3 k 11.23

J 9316 -
10.90 h 3r 11.20 10.83 11.02 18 19
10.83 r 4 k 11.23

J 4712 sp -
9.52 d 2r 9.7

J 4450 -
10.54 g 3r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

J 4072 -
10.54 g 4r 10.94 10.80 = 10.87 07 07
10.80 r 1 h 10.90

J 4071 -
10.90 h 3r 11.20 11.13 = 11.16 04 03
11.13 r 1 k 11.23

J 4047 - near edge
10.90 g 2r 11.10 11.03 = 11.06 04 03
11.03 r 2 k 11.23

J 7642 sp.
~~10.28 f 1r 10.3~~

J 7673 sf - pm
10.28 f 2r 10.48 10.54 = 10.51 03 03
g pm.
10.54 r 2 g 10.54

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Williams' Variable -

D 7720 Sp. -

9.80 e 3 r 10.10 9.98 = 10.04 06 06

9.98 r 3 f 10.28

D 7732 Sp. -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

D 7744 Sp. -

10.64 g 3 r 10.84 10.70 10.77 07 07

10.70 r 2 h 10.90

D 3903 Sp. -

9.52 d 2 r 9.72

Ellis ?

D 16573 Near edge

10.54 g 2 r 10.74 10.50 = 10.62 12 12

10.50 r 4 h 10.90

D 16464 Sp. -

10.54 g 4 r 10.94 10.70 = 10.82 12 12

10.70 r 2 h 10.90

D 26152 On edge of plate

10.14 r 4 g 10.64 10.14

f much fainter than g

D 27325 -

10.28 f 3 r 10.58 10.34 = 10.46 12 12

10.34 r 2 g 10.54

D 27363 Near edge

9.80 e 4 r 10.20 9.98 = 10.09 11 11

9.98 r 3 f 10.28

D 27420 Near edge

9.52 d 2 3 r. 9.8

D 27804 -

10.54 g 4 r 10.94 10.70 = 10.82 12 12

10.70 r 2 h 10.90

D 27806 -

10.54 g 4 r 10.94 10.70 = 10.82 12 12

10.70 r 2 h 10.90

D 27808 -

10.54 g 4 r 10.94 10.70 = 10.82 12 12

10.70 r 2 h 10.90

D 27810 Sp. Near edge

10.54 g 4 r 10.94 10.70 = 10.82 12 12

10.70 r 2 h 10.90

D 27849 -

10.54 g 2 r 10.74 10.50 = 10.62 12 12

10.50 r 4 h 10.90

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Williams' Variable

T 27850 -

10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

T 27854 -

10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 27961 plate defective?

9.80 e 6 r 10.40 10.18 = 10.29 11 11
10.18 r 1 f 10.28

T 28031 -

10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 28034 -

10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 28922. Near edge.

9.80 e 3 r 10.10 9.98 = 9.04 06 06
9.98 r 3 f 10.28

T 22990 -

10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

T 23696 Near edge -

10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

T 23748 Near Edge

10.28 f 1 r g 10.18 10.24 = 10.21 03 03
10.24 r 3 g 10.54

T 23761. Near edge -

10.90 k 3 r 11.20 11.03 = 11.12 08 09
11.03 r 2 k 11.23

T 23924 -

10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

T 23986 Near edge

10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

T 24506. -

10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

T 25249 Too faint

T 25399 Near edge -

f fainter than g.
10.54 r 2 g 10.54 10.34

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Williams' Variable -

T 25882 Near edge -
10.54 g 5 r 10.04 10.80 = 10.92 12 12
10.80 r 1 h 10.90

T 25889 Near edge -
9.80 e 5 r 10.30 10.18 = 10.24 06 06
10.18 r 1 f 10.28

T 28079 -
10.28 f 1 r 10.38 10.24 = 10.31 07 07
10.24 r 3 g 10.54

T 28080 -
10.28 f 2 r 10.48 10.34 = 10.41 07 07
10.34 r 2 g 10.54

T 28081 -
10.28 f 3 r 10.58 10.44 = 10.51 07 07
10.44 r 1 g 10.54

T 28082 -
10.28 f 2 r 10.58 10.44 = 10.51 07 07
10.44 r 1 g 10.54

T 26005 Near edge -
9.80 e 5 r 10.30 10.18 = 10.24 06 06
10.18 r 1 f 10.28

T 26027 Near edge -
10.90 h 1 r 11.00 10.83 = 10.92 08 09
10.83 r 4 k 11.23

T 19591 On the edge -
10.90 h 1 r 11.00 10.83 = 10.92 08 09
10.83 r 4 k 11.23

T 9668 Too near edge Sp
on too faint.

T 12110 Sp: Near edge.
9.80 e 4 r 10.20 10.18 = 10.19 01 01
10.18 r 1 f 10.28

T 13089 Sp: Near edge
10.90 h 2 r 11.10
to N.S.

T 13096 Sp - Near edge.
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

T 9064 -
9.52 d 3 r 9.82 9.50 = 9.56 16 16
9.50 r 3 e 9.80

T 6924 -
9.80 e 4 r 10.20 10.08 = 10.14 06 06
10.08 r 2 f 10.28

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Williams' Variable

T 16260 -

9.80 e 1 r 9.90 9.88 = 9.89 01 01

9.88 r 4 f 10.28

T 25395 -

9.80 e 4 r 10.20 10.18 = 10.19 01 01

10.18 r 1 f 10.28

also 10.34 r 2 g 10.54

T 9046. Near edge -

9.80 e 1 r 9.90 9.88 = 9.89 01 01

9.88 r 4 f 10.28

T 25950 Near edge -

10.54 g 2 r 10.74 10.50 = 10.62 12 12

10.50 r 4 h 10.90

T 23684 Sp -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

T 8964 Near edge -

10.90 h 4 r 11.30 11.08 (3) 11.19 (6) IX (4) IX (3)

11.08 (3) r 2 k ~~X~~ 11.28 (3)

T 8880 Near edge -

9.80 e 4 r 10.20 10.08 = 10.14 ~~06~~ 06 06

10.08 r 2 f 10.28

T 23602 Near edge -

10.54 g 2 r 10.74 10.60 = 10.67 07 07

10.60 r 3 h 10.90

T 23633 -

10.54 g 3 r 10.84 = 10.70 = ~~10.62~~ 10.77 ~~12~~ 07 07

10.70 r 2 h 10.90

T 29(3)23 -

9.52 d 2 r 9.7

T 29325 Near edge -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

T 29829 -

10.90 h 3 r 11.20 10.93 = 11.06 14 13

10.93 r 3 k 18.23

T 13133 Sp Near edge -

9.52 d 1 r 9.62 9.50 = 9.56 06 06

9.50 r 3 e 9.80

T 10344 Sp -

9.52 d 1 r 9.62 9.50 = 9.56, 06 06

9.50 r 3 e 9.80

T 16349 Sp -

9.52 d 2 r 9.72 9.70 = 9.71 01 01

9.70 r 1 e 9.80

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1902phae.proj..934L

March 28, 1903

Williams' Variable.

A 23337 -
10.54 g 3r 10.84 10.70 = 10.77 07 07.
10.70 r 2h 10.90

A 5300 -
10.90 h 4r 11.30 11.03 = 11.16 14 13
11.03 r 2k 11.23

A 27852 -
10.54 g 3r 10.84 10.70 = 10.77 07 07.
10.70 r 2h 10.90

A 29322 Near edge -
10.54 g 3r 10.84 10.60 = 10.72 12 12
10.60 r 3h 10.90

A 29315 S. (Class) Two prm

A 29321 Near edge -
9.80 fe 3 K : 11.2'

A 29324 S. (Class) Near edge
Two prm -

A 20901 Two prm -

B 2991 Two near edge Sp.

B 1661 Sp.
9.52 d 2 K : 9.7

B 1781 Two prm

B 1788 Two prm

B 1833 Two prm On the edge

B 2757 Two prm Sp. On the edge

B 2785 Two prm Sp. On the edge

B 2809 Sp Two prm
On the edge

B 2835 Sp.
On the edge.

B 2978 Sp.
On the edge

A 29833 - Near edge
10.90 h 2r 11.10 11.13 = 11.12 02 01
11.13 r 1k 11.23

A 14839 - Sp. Near edge.
10.54 g 2r 10.74 10.70 = ~~10.62~~ 10.67 07 07
10.80 r 3h 10.80

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1902phae.proj..934L

March 30, 1903.

Williams' Variable -

A 20977. Near edge

980 e2r (+Plate not so strong)
9.88 r4f 10.28 10.00 9.88 = 9.94 06 06

A 20994 -

980 e3r 10.10 9.98 = 10.04 06 06
9.98 r3f 10.28

A 21133 Near edge

11.23 k F1 ? 11.33 11.23

A 21242 On the edge -

11.23 k 2r 11.43 11.58 = 11.50 07 08
11.58 r1 l 11.68

A 21245 Near edge -

10.90 h 2r 11.10 11.03 = 11.06 04 03
11.03 r2 k 11.23

A 21348 -

Too near edge

A 21435 Near edge -

10.54 g 4 4r 10.94 10.70 = 10.82 12 12.
10.70 r2 h 10.90

A 21462 Sp Near edge -

9.80 e 2r 10.00 9.98 = 9.99 01 01.
9.98 r2f 10.28

A 13430 -

10.90 h 3r 11.20 11.03 = 11.12 08 09
11.03 r2 k 11.23

A 13735-7 = A 13758 Near edge

The two superposed
Hr measures made because of
confusion of images -

A 23043 M Near edge

Poor images -

A 23044 - corresponding brightest images

9.80 e3r 10.10 taken 10.08 = 10.09 01 01
10.08 r2f 10.28

Only brightest images
(corresp.) measured -

A 23108 - M Near edge

10.54 g 2 1r1 10.74 10.60 = 10.67 07 07.
10.60 r3 h 10.90

10.54 g 2 2r2 10.74 10.60 = 10.67 07 07
10.60 r2 3 h2 10.90
10.54 g 3 2r3 10.74 10.60 = 10.67 07 07
10.60 r3 3 h3 10.90
10.54 g 4 2r3 10.74 10.60 = 10.67 07 07
10.60 r4 3 h4 10.90
10.54 g 5 2r5 10.74 10.60 = 10.67 07 07
10.60 r5 3 h5 10.90

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1902phae.proj..934L

March 30, 1903

Williams' Variable.

H 23108 - Continuous

10.54 q6 2r6 10.74 10.60 = 10.67 0707
10.60 r6 3 h6 10.90

H 23085 - Dim edge -

11.28 h3r 11.53
h no 2, 1

H 23084 - Near edge

10.90 h1 3r1 11.20 11.03 = 11.12 0809
11.03 r1 2 k1 11.23
10.90 h2 3r2 11.20 11.03 = 11.12 0809
11.03 r2 2 k2 11.23

H 23083 - Near edge

10.90 h1 3r1 11.20 11.03 = 11.12 0809
11.03 r1 2 k1 11.23
10.90 h2 3r2 11.20 11.03 = 11.12 0809
11.03 r2 2 k2 11.23
10.90 h3 3r3 11.20 11.03 = 11.12 0809
11.03 r3 2 k3 11.23
10.90 h4 3r4 11.20 11.03 = 11.12 0809
11.03 r4 2 k4 11.23

H 23080 - Stained

H 6772 -

Too near edge -
too poor.

H 23081 - ~~too far, too poor~~ -

10.90 h3 3r3 11.20 11.03 = 11.12 0809
11.03 r3 2 k3 11.23
10.90 h4 3r4 11.20 11.03 = 11.12 0809
11.03 r4 2 k4 11.23
10.90 h3 3r3 11.20 11.03 = 11.12 0809
11.03 r3 2 k3 11.23
10.90 h4 3r4 11.20 11.13 = 11.16 0403
11.13 r4 1 k4 11.23
10.90 h5 3r5 11.20 11.13 = 11.16 0403
11.13 r5 1 k5 11.23

H 23082 - Near edge -

10.90 h1 3r1 11.20 11.13 = 11.16 0403
11.13 r1 1 k1 11.23
10.90 h2 3r2 11.20 11.83 = 11.16 0403
11.83 r2 2 k2 11.23
10.90 h3 3r3 11.20 11.83 = 11.16 0403
11.83 r3 2 k3 11.23
10.90 h4 3r4 11.20 11.83 = 11.16 0403
11.83 r4 2 k4 11.23

H 9300

9.80 e in 9.9

H 19018 Near edge -

10.54 q2r 10.74 10.60 = 10.67 0707
10.60 r3 h 10.90

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1902phae.proj..934L

March 30, 1903

Williams' Variable

~~I 20306 Up.~~

I 20900
Tri pron

I 9636. missing —

I 16173 near edge
9.80 e 3 r 10.10 9.88 = ~~9.99~~ ~~10.04~~ ~~11~~ ~~16~~
9.88 r 4 f. 10.28

I 15362
Tri pron

I 16261 near edge
9.80 e 3 r 10.10 ~~x~~ 9.98 = ~~9.94~~ ~~9.99~~ ~~16~~ ~~21~~ ~~21~~
9.98 r 5 f. 10.28

I 23043 near edge
10.28 f 1 ~~4~~ 2 r 1 10.48 10.44 = 10.46 02 02
10.44 r 1 1 q 1 10.54
10.28 f 2 2 r 2 10.48 10.34 = 10.41 07 07
10.34 r 2 2 q 2 10.54
f 3, 4, — pron images

I 15540 near edge
9.80 e 3 r 10.10 9.98 = 10.08 ~~4~~ 06 06 x x
9.98 3 r 3 f 10.28

I 9636 plate missing —

I 24539. near edge
10.54 q 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

I 21461 ap.
a + r. Tri pron

I 25799 near edge
9.80 e 2 r 10.00 9.88 = 9.94 06 06
9.88 r 4 f 10.28

I 11484
10.54 q 2 r 10.74
h n.s.

I 1371
10.54 q 2 r 10.74 10.50 = 10.62 12 12
10.50 r 4 h 10.90

I 23325 s/p
Tri pron

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1902phae.proj..934L

AC Plates of qualities 3, 4, 5
measured

March 30, 1903 -

Williams' Variable -

AC 2696 Near edge
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 k 10.90

AC 2721 -
9.80 e 1 r 9.9

AC 2639 -
11.23 k 3 r 11.53
~~r 1 k~~
k n.s.

AC 2592 -
10.54 g 1 r 10.64 10.50 = 10.57 07 07
10.50 r 4 k 10.90

AC 2554 -
10.54 g 1 r 10.64 10.50 = 10.57 07 07
10.50 r 4 k 10.90

AC 2498 -
10.90 k 2 r 11.10
k brighter than f.

AC 2358 k brighter than f.
~~k 3 r~~ 10.54 g 4 r 10.90 10.80 = 10.85 05 05
10.80 r 1 k 10.90

AC 2071 -
9.80 e 3 r 10.10 9.98 · 8 10.04 06 06
9.98 r 3 f 10.28

AC 2051 -
10.28 f 1 r 10.38

AC 2007 -
9.80 e 2 r 10.00 9.88 = 9.94 06 06
9.88 r 4 f 10.28

AC 1949 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 k 10.90

AC 1891 -
10.54 g 4 r 10.94 10.80 = 10.87 07 07
10.80 r 1 k 10.90

AC 1899 -
10.90 k 2 r 11.10 11.03 = 10.06 04 03
11.03 r 2 k 11.23

AC 1835 -
10.90 k 1 r ? 11.0

AC 1816 -
10.90 k 1 r 11.00 10.93 = ~~11.03~~ 10.96 04 03
10.93 r 3 k 11.23

AC 2955 -
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 k ~~11.23~~ 10.90

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1902phae.proj..934L

April 1, 1903

Williams Variable

AC 3248 -
9.80 e 2 r 10.0

AC 3066 -
9.52 d 4 r 9.92 9.70 = 9.81 11 11
9.70 r 1 e 9.80

AC 2990 - On edge of plate
9.80 e 3 r 10.10 10.08 = 10.09 01 01
10.08 r 2 f 10.28

AC 2977 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

AC 2976 -
10.54 g 1 r 10.6

AC 2918 -
10.90 h 1 r 11.00 11.03 = 11.02 02 01
11.03 r 2 k 11.23

AC 2882 -
180 e 3 r 10.10 10.08 10.09 01 01
10.08 r 2 f 10.28

AC 2855 -
10.28 f 1 r 10.3

AC 2835 -
980 e 2 r 10.00

AC 2814 -
10.90 h 3 r 11.20 11.13 = 11.16 04 03
11.13 r 1 k 11.28

AC 2745 -
10.54 g 1 r 10.64 10.60 = 10.62 02 02
10.60 r 3 h 10.90

AC 1798 -
10.90 h 2 r 11.10 11.03 = 10.06 04 03
11.03 r 2 k 11.23

AC 856 -
10.54 g 3 r 10.84 g brighter than f
h n 3 f

AC 841 -
10.54 g 2 r 10.74 10.60 = 1067 07 07
10.60 r 3 h 10.90

AC 776 -
10.74 10.70 = 10.72 02 02
10.54 g 2 r images poor
10.70 r 2 h 10.90

AC 426 -
10.74 10.60 = 10.67 07 07
10.54 g 2 r g brighter than f
10.60 r 3 h 10.90

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1902phae.proj..934L

April 1, 1903.

Williams' Variable

AC 352 -

10.28 f 9 3r 10.58 10.34 = 10.46 12 12

10.34 r 2g ? 10.54

AC 334 -

10.28 f 2r ? 10.48 10.44 ~~=10.46~~ 02 02

10.44 r 1g : 10.54

AC 1761 -

10.54 g 3r 10.84 10.70 = 10.77 07 07

10.70 r 2h 10.90

AC 1744 -

Too faint

AC 1671 -

10.54 g 1r ? 10.6

AC 1661 -

10.28 f 3r 10.58 10.44 = 10.57 07 07

10.44 r 1g 10.54

AC 1614 -

~~d 4r~~

~~r 1e~~

9.80. e 1r 9.99 9.88 = 9.89 01 01

9.88 r 4f 10.28

AC 1578 -

9.80 e 2r 10.00 9.98 - 9.99 01 01

9.98 r 3f 10.28

AC 1552 -

10.54 g 4r 10.94 10.60 = 10.77 ~~14~~ 17 ~~14~~ 17

10.60 r 3h 10.90

AC 1140 -

Too faint

AC 1017 -

10.54 g 3r ? 10.84

h n s ?

AC 987 -

(h 2r)

10.54 g 3r 10.84 10.70 = 10.77 07 07

10.70 r 2h 10.90

AC 926 -

9.80 e d 3r ? 10.10 9.62 = 9.~~83~~ 86 24 24.

e brighter than d

9.52 - d 2r 9.62

r 1f ? 10.28

AC 2635 near edge -

~~f 2r~~ ?

11.23 h 2r ? 11.4

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1902phae.proj..934L

April 2, 1903

Williams' Variable

AC 2510 - Near edge.

9.80 e 3 v 10.10 9.98 = 10.04 06 06
9.98 v 3 f 10.28

AC 2511 - Near edge -
K III ½ (many plates)

9.80 e 3 v 10.10 9.98 = 10.04 06 06
9.98 v 3 f 10.28

AC 2578 Poor images

9.80 e 2 v 10.00 10.08 = ~~10.04 04 04~~ 10.04 04 04
10.08 v 2 f 10.28

AC 2664 -

10.54 g 4 v 10.94 10.80 = 10.87 07 07
10.80 v 1 h 10.90

AC 2740 -

g 4 v
v 2 f

10.90 h 3 v 11.20 11.03 = 11.12 08 09
11.03 v 2 h 11.23

AC 2750 Poor images

10.90 h 3 v 11.20 11.03 = 11.12 08 09
11.03 v 2 h 11.23

AC 2852 -

9.80 e 3 v 10.10 9.98 = 10.04 06 06
9.98 v 3 f 10.28

AC 2865 -

10.54 g 3 v 10.94 10.80 = 10.87 07 07
10.80 v 1 h 10.90

AC 2883 -

9.80 e 3 v 10.10 9.98 = 10.04 06 06
9.98 v 3 f 10.28

AC 2919 -

10.54 g 4 v 10.94 10.80 = 10.87 07 07
10.80 v 1 h 10.90

AC 2920 -

10.90 h 3 v 11.20 11.13 = 11.16 04 03
11.13 v 1 k 11.23

AC 2928 -

10.28 f 1 K 10.3

AC 2946 -

10.54 g 2 v 10.74 10.60 = 10.67 07 07
10.60 v 3 h 10.90

AC 2974 -

~~10.90~~ 10.54 g 2 v 10.74
h n.s.

AC 3058 -

10.54 g 2 v 10.74 10.60 = 10.67 07 07
10.60 v 3 h 10.90

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1902phae.proj..934L

April 2, 1903

Williams' variable

AC 3100

9.80 e2 r 10.00 9.88 = 9.94 06 06
9.88 r4 f 10.28

AC 3104

9.80 e3 r 10.10 10.08 = 10.09 01 01
10.08 r2 f 10.28

AC 3159

9.80 e3 N 10.1

AC 3368 Pom images

9.80 e5 r 10.30 10.18 = 10.24 06 06
10.18 r1 f 10.28

AC 2640 Pom images

11.23 h2 r 11.43 11.48 = 11.46 03 02
11.48 r2 h 11.68

AC 2678 Near edge

10.54 g2 r 10.74
Image of "h" too pom to estimate

AC 2738 Near edge

9.80 e3 r 10.10 10.08 = 10.09 01 01
10.08 r2 f 10.28

AC 2772 Near edge

9.80 e5 r 10.30 10.18 = 10.24, 06 06
10.18 r1 f 10.28

AC 2791 Near edge

8 10.28 f F1 10.88 10.28

AC 2838 Near edge

10.54 g3 r 10.74 10.60 = 10.67, 07 07
8 12 12
72

10.60 r3 h 10.90

AC 2844 Near edge

10.28 f 3 r 10.58 10.54 = 10.56 02 02
10.54 r0 g 2 10.54
h m f.

AC 2866 Near edge

10.54 g3 r 10.84 10.60 = 10.72, 12 12
10.60 r3 h 10.90

AC 2888

9.80 e2 r 10.00 9.88 = 9.94, 06 06
8
9.88 r4 f 10.28

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1902phae.proj..934L

April 3, 1903.

Williams' Variable

AC 2895 -

9.80 e 3 r 10.10 10.18 = 10.14 04 04

10.18 r 1 f 10.28

AC 2924 near edge -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

AC 2968 near edge -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

AC 2978 near edge -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

AC 3353 -

10.54 g 1 r 10.64 10.50 = 10.57 07 07

10.50 r 4 h 10.90

AC 861 -

10.54 g 2 r 10.74 10.60 10.67 07 07

10.60 r 3 h 10.90

AC 918 -

10.90 h 2 r 11.10

le n.s.

AC 988 - 11.00 10.93 = 10.96 04 03

10.90 h 1 r Poor image

10.93 r 3 k 11.23

AC 1016 -

10.54 g 2 r ? 11.8 10.7

AC 1572 -

11.90 k 2 r 11.1

AC 1639 -

9.80 e 3 r 10.1

AC 1667 -

10.28 f 1 r 10.3

AC 1695 - 10.58 10.34 = 10.46 12 12

10.28 f 3 r f. pm

10.34 r 2 g 10.54

AC 1736 -

9.52 d 3 r 9.82 9.60 = 9.71 11 11

9.60 r 2 e 9.80

AC 1834 -

11.23 k 2 r 11.4

AC 1170 -

Too faint

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1902phae.proj..934L

April 3, 1903

Williams' Variable

AC 1870 -
10.28 f 2 r 10.48 plate
g n.s. scratched

AC 1954 -
10.90 h 2 r 11.10 11.03 11.06 04 03
11.03 r 2 k 11.23

AC 1957 - "g" brighter
11.23 k 2 r 11.43 than "f"
l n.s.

AC 2000 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

AC 2043 -
11.23 k 1 r 11.33 11.28 = 11.30 03 02
11.28 r 4 l 11.68

AC 2572 -
10.54 g 3 r 10.8

AC 95 -
9.52 d 2 r 9.7

AC 133 -
9.80 e 2 r 10.00 9.98 = 9.99 01 01
9.98 r 3 f 10.28

~~AC 326 Lost~~

AC 418 - Plate scratched
10.54 g 1 r 10.6

AC 425 -
10.90 h 2 r 11.10 11.23 = 11.16 16 07
11.23 r 0 k 11.23
l n. s.

AC 502 -
10.54 g 3 r 10.84 10.70 = 10.77 07 07
10.70 r 2 h 10.90

AC 1966 -
11.23 k 2 r 11.43 11.28 = 11.36 07 08
11.28 r 4 l 11.68

AC 2100 -
10.28 f 1 r 10.3

AC 1984 -
11.23 k 2 r 11.43 11.28 = 11.36 07 08
11.28 r 4 l 11.68

AC 2030 -
10.54 g 3 r 10.84 10.60 10.72 12 12
10.60 r 3 h 10.90

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1902phae.proj..934L

April 3, 1903.

Williams' Variable

AC 1906 -

9.52 d 1R: 9.6

AC 1732 -

10.54 g 4 r 10.94 10.80 = 10.87 07 07

10.80 r 1 h 10.90

AC 1753 -

10.54 g 3 r 10.84 10.80 = 10.82 02 02

10.80 r 1 h 10.90

AC 1783 -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

AC 1850 -

10.90 h 2 r 11.10 11.13 = 10.12 02 01

11.13 r 1 h 11.23

AC 1864 -

9.80 e 3/4 r 10.20 10.18 = 10.19 01 01

10.18 r 1 f 10.28

AC 1619 -

9.80 e 3 r 10.10 9.98 = 10.04 06 06

9.98 r 3 f 10.28

AC 825 -

10.54 g 2 r 10.74 10.50 10.62 12 12

10.50 r 4 h 10.90

AC 830 -

10.54 g 4 r 10.94 ~~10.87~~ 10.70? 10.82 12 12

10.70 r 2 h 10.90

AC 886 -

9.80 e 3 r 10.10 10.08 = 10.09 01 01

10.08 r 2 f 10.28

AC 1064 -

10.54 g 2 r 10.74 10.60 = 10.67 07 07

10.60 r 3 h 10.90

AC 391 -

10.54 g 3 r 10.84 10.70 = 10.77 07 07

10.70 r 2 h 10.90

AC 302 -

10.54 g 2 r 10.74 10.60 = 10.67 07 07

10.60 r 3 h 10.90

AC 316 -

9.80 e 3/4 r 10.20 10.18 = 10.19 01 01

10.18 r 1 f 10.28

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1902phae.proj. 934L

April 3, 1903

Williams' Variable

AC 354 -
11.28 k2r 11.43 11.28 = 11.36 07 08
11.28 r4l 11.68

AC 1635 -
10.57 g3r 10.84 10.60 = 10.72 12 12
10.60 r3h 10.90

~~AC 1641~~ F

AC 1684 -
9.80 e3r 10.10 10.08 = 10.09 01 01
10.08 r2f 10.28

AC 1577 -
10.90 h3r 11.20 11.03 = 11.12 08 09
11.03 r2k 11.23

AC 1583 -
9.80 e2r 10.00 9.88 = ~~9~~ 9.94 06 06
9.88 r4f 10.28

AC 577 -
11.23 k3r 11.53 11.38 = 11.46 = 07 08
11.38 r3l 11.68

AC 280 Iso. Near edge
10.90 h2r 11.10 10.93 = 11.02 08 09
10.93 r3k 11.23

AC 312 - Near edge
11.28 k4r 11.63 11.58 = 11.60 03 02
11.58 r1l 11.68

AC 344 - Near edge
9.80 e3r 10.10 10.08 = 10.09 01 01
10.08 r2f 10.28

AC 395 Found in the clear. Too p~~r~~. C.

AC 727 - Near edge
9.80 ~~g~~5r 10.30 10.28 10.24 = 10.27 03 01 03
10.28 f = r 10.28
10.24 r3g 10.54

AC 890 Near edge -
10.28 f2r 10.48 10.34 = 10.41 07 07
10.34 r2g 10.54

AC 1022 - Near edge.
10.54 g3r 10.8 Plate defective

AC 1268 -
Film on edge of plate gone.

AC 1453. Off edge

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1902phae.proj..934L

April 3, 1903.

Williams' Variable

AC 1496 On edge of plate
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

AC 1645 Near edge
10.28 f 2 r 10.4

AC 1701 Near edge
9.80 e 3 r 10.10 10.18 = 10.14 04 04
10.18 r 1 f 10.28

AC 1713 Near edge
10.28 f 2 r 10.4

AC 1767 Near edge
11.23 k 2 r 10.43
l n.s.

AC 1822 Near edge
10.90 h 2 r 11.10 11.28 = 11.18 08 08
11.28 r 0 k 11.28
l n.s.

AC 1863 Near edge
10.54 g 3 r 10.84 10.70 10.77 07 07
10.70 r 3 h 10.90

AC 1974 Near edge
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90

AC 2014 Near edge
9.80 e 4 r 10.20 9.98 10.09 11 11
9.98 r 3 f 10.28

AC 2567
10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90
"h" fainter than "k."

AC 2735 Near edge
10.28 f 2 r 10.48 10.44 = 10.46 02 02
10.44 r 1 g 10.54

AC 2756 Near edge
10.28 f 2 r 10.4

AC 3026 Near edge
10.54 g 3 r 10.84 10.60 = 10.72 12 12
10.60 r 3 h 10.90
"h" fainter than "k"

AC 3048 Near edge
10.54 g 4 r 10.94 10.70 = 10.82 12 12
10.70 r 2 h 10.90

AC 3335 Near edge
9.80 e 3 r 10.1

AC 3384 Near edge
10.54 g 2 r 10.74
h n.s.

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1902phae..proj..934L

April 3, 1903

Williams' Variable

AC 509 ~~On the edge.~~
~~9.52 d 2 v 2 9.72~~ Too near edge.

AC 1596
9.12 C3N 9.4

AC 1860
Too near edge.

AC 1973
Too near edge

AC 1815
Too near edge.

AC 2889 Near edge
9.52 d4v 9.92 9.70 = 9.81 11 11
9.70 v1e 9.80

AC 2859 Near edge
9.52 d2N 9.7

AC 2806 1st.
Near edge + stained.

AC 2801 1st.
Too near edge.

AC 2748 Near edge.
9.80 e3v 2 10.10 9.98 = 10.04 06 06
9.98 v3f 10.28

AC 2679 Near edge
10.54 g2v 2 10.74 10.60 10.67 07 07
10.60 v3h 10.90

AC 2631 Near edge.
10.28 f3v 2 10.58 10.44 = 10.51 07 07
~~10.44~~ ~~10.80~~ v f g 10.54 ~~10.90~~

AC 2171 Too near edge

AC 1613 f. v, g poor
10.28 f3v 2 10.58 10.34 = 10.46 12 12
10.34 v2g 10.54

AC 1014 Near edge
10.90 h2v 2 11.10

AC 852
10.54 g2N 10.7 Near edge

AC 668 Near edge
10.54 g2v 10.74 10.80 = 10.77 03 03
10.80 v4h 10.90

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1902phae.proj..934L

April 3, 1903.

Williams' Variable.

AC 1016

10.28 2f 1 N. 10.3

AC 1399

10.28 f 2 r ? 10.8 4

A 1693

X 9.80 e 3 r 10.10 10.08 = 10.09 0 10 1

10.08 r 2 f 10.28

A 583

10.90 h t r 11.00 10.64 10.50 = 10.83 10.92 08 09 07 07

10.83 r 3 4 h 11.23 10.90

A 703 sp

g 3 r ?

r 1 h

9.80 e 3 r 10.10 9.98 = 10.04 06 06

9.98 r 3 f 10.28

A 729 sp

10.28 f 2 N 10.4

A 1371 sp Near edge

9.80 e 4 r 10.20 10.08 = 10.14 06 06

10.08 r 2 f 10.28

A 5299 On the edge

10.54 g 2 r 10.74 10.50 = 10.62 12 12

10.50 r 4 h 10.90

AC 474

10.28 f 1 r 10.38

"g" brighter than f" ?

AC 2631 Near edge

10.54 g 2 r 10.74 1070 = 10.72 02 02

10.70 r 2 h 10.90

"h" brighter than "h."

Apr. 24, '03. I 30304 On the edge.

10.28 f 2 r ? 10.48

"f" defective, "g" and "h" off the edge

I 30302 On the edge

10.28 f 3 r 10.58

"g" off the edge.

I 30224 Near edge

980 e 2 3 r 10.00 9.88 = 9.94 06 06

9.88 r 4 f 10.28

I 30221 Near edge

980 e 2 r 10.00 9.88 = 9.94 0606

9.98 r 4 f 10.28

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1902phae.proj..934L

apr. 23, 1903. Williams' Variable

I 30181 near edge
Too poor on page 44

AC 3404 near edge -
1090 h 2 v 11.10 11.13 = 11.12 02 01
11.13 v 4 h 11.23

AC 3495 - 10v near edge
erased figures were for 3484 + put under 3495.

AC 3484 -
10.54 9 1 v 10.64 10.80 = 10.72 08 08
10.80 v 1 h 10.90

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1902phae.proj..934L

April 11, 1903 Sequence on I 30187

Crosbie "4 1903"

I 30233. apr. 23.
9.97 b 3 v 10.27 9.92 = 10.10 17 18
9.92 v 4 c 10.32

I 30235.
9.97 b 2 v 10.17 9.92 = 10.04 13 12
9.92 v 4 c 10.32

I 30234.
9.97 b 2 v 10.17 9.92 = 10.04 13 12
9.92 v 4 c 10.32

AC 3466.
9.97 b 3 v 10.27 10.02 = 10.14 = 13 12
10.02 v 3 c 10.32

AC 3464.
9.97 b 1 v ? 10.07 9.82 = 9.94 13 12
9.82 v 5 c 10.32

AC 3474.
9.97 b 2 v 10.17 9.92 = 10.04 13 12
9.92 v 4 c 10.32

AC 3460.
Just off edge

AC 3454.
Probably two pairs

I 30299.
9.97 b 3 v 10.27 = 10.14. 13 12
10.02 v 3 c 10.32

I 30273.
10.76 e 2 v 10.96 11.11 = 11.04 08 07
11.11 v 1 f 11.21

I 30274.
10.54 d 2 b v 10.74 10.66 = 10.70 04 04
10.66 v 1 e 10.76

AC 3490.
9.97 b 3 v 10.27 10.12 = 10.20 07 08
10.12 v 2 c 10.32

AC 3486. poor images
9.97 b 1 v ? 10.07 9.92 = 10.00 07 08
9.92 v 4 c 10.32

AC 3481.
9.52 a 4 v 9.92 9.87 = 9.90 02 03
9.87 v 1 b 9.97

I 30276.
10.32 c f 1 v 10.42 10.24 = 10.33 09 09
10.24 v 3 d 10.54

continued on page 74.

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1902phae.proj..934L

April 11, 1903

Sequence on I 28963

"18 1902"

A 4652.

12.07 m ~~k~~ 5 v ? 12.67 | 12.22 = 12.44 23 -22

12.22 v3 m 12.52

April 14, 1903

I 30272 Glare S.

10.78 f1N 10.8

AC 3418 -

9.73 c3 N ? 10.0

AC 3344 -

11.75 b3 N 12.0

AC 3424 -

Too poor

AC 3468 -

11.15 b 2N 11.35

AC 3393 -

Does not cover region

AC 3197 -

11.75 b 1v 11.85

m ns.

AC 3334 Near edge

11.75 b 1N ? 11.8

AC 3166 Near edge

10.78 f 2N 10.9

AC 3176 -

10.23 c 2N 10.4

apr. 24 AC 3502 -

10.23 c 2 N 10.4

AC 3494 -

10.03 d 2N 10.2

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1902phae.proj..934L

Sequence on I 29690.

Lemaire's "20, 1902"

I 30248 -
11.71 h 2 R. 11.9

I 30246 -
Too faint

I 30244 -
Too faint

I 30222 -
12.19 h 2 v 12.39 12.29 = 12.34 05 05
12.29 v 2 m 12.49

I 30261 -
12.19 h 1 v 12.29 12.09 = 12.19 10 10
12.09 v 4 m 12.49

I 30242 -
Too faint

AC 3368
~~e 2 R.~~ ?

Apr. 24, 1903.
I 30307 -
12.19 h 3/4 v 12.49 12.29 = 12.39 10 10
12.29 v 2 m 12.49

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1902phae.proj..934L

Sequence on I 9371 73

Anderson's "g 1902"

April 18, 1903.
BC 3368 -
To Pease

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1902phae.proj..934L

 Continued from p. 70.

April 24, 1903 - Cerasky's "4, 1903"

T 30275 -

10.32 c 3 r 10.62 10.44 = 10.53 0909
10.84 r 1 d 10.54

AC 3501 -

9.97 b 1 r 10.07 10.02 = 10.04 0302
10.02 r 3 c 10.32

AC 3503 -

9.52 a 4 r 9.92 9.87 = 9.90 0203
9.87 r 1 b 9.97

AC 3498 -

Does not cover region

AC 3493

Too faint

AC 3476

Too faint

AC 3479

Does not cover region

C 14294 -

10.54 d 1 r 10.64 10.46 = 10.55 0909
10.46 r 3 e 10.76

C 14295 -

10.32 c 1 r 10.42 10.24 = 10.33 0909
10.24 r 3 d 10.54

C 14296 -

10.32 c 1 r 10.42 10.24 = 10.33 0909.
10.24 r 3 d 10.54

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1902phae.proj..934L

Apr. 24, 1903. Turner's Nora

T. 30289 · AI 961 ·

7.98 C 3 r 8.28 8.40 = 8.34 06 06 For pm.

8.40 r 1 d 8.50

I 30290 sp:

8.82 e 2 r 9.02 9.04 = 9.03 0101

9.04 r 1 f 9.14

AC 3478 :

7.98 C 1 r 8.08 8.10 = 8.09 0101

8.10 r 4 d 8.50

AC 3497 ·

7.98 C 3 r 8.28 8.30 = 8.29 0101

8.30 r 2 d 8.50

AC 3496 ·

7.98 C 3 r 8.28 8.30 = 8.29 0101

8.30 r 2 d 8.50

AC 3485 ·

7.98 C 3 r 8.28 8.30 = 8.29 0101

8.30 r 2 d 8.50

AC 3489 ·

7.98 C 3 r 8.28

d n.s.

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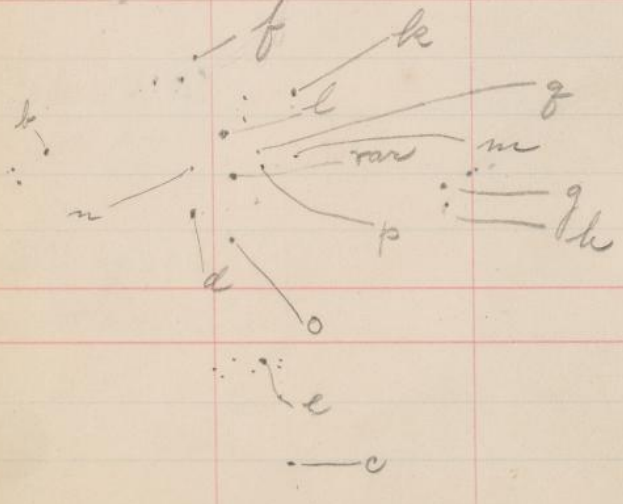
1902phae.proj..934L

Sequence on B 18236.

April 27 1903. Kapteyn's Variable.
Scale Measures.

B 18236		B 12739	
a	4.9	a	4.5 2
b	5.2	b	4.8
c	5.6	c	5.2
d	5.9	d	5.5
e	6.2	e	5.8
fg	6.4 3 6.6	f	5.9
h	7.1	g	6.2
k	7.3	h	6.7 8
l	7.7	k	6.9
m	8.2	l	7.2
n	8.3 4	m	7.6
o	8.6 5	n	7.8
p	9.1	o	8.0
q	9.5	p	8.5
var.	6.3	q	8.9 diffuse
		var	5.7

a



Film side back

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1902phae.proj..934L

April 27, 1903 Kapteyn's Variable

B 38947.

a	4.9
b	5.3
c	5.7
d	6.0-5.9
e	6.2
f	6.3
g	6.6
h	7.1
k	7.3
l	7.7
m	8.2
n	8.4
o	8.6
p	9.1
q	9.6
var.	6.1

B 26646.

a	5.1
b	5.4
c	5.7
d	6.0
e	6.2
f	6.4
g	6.67
h	7.0
k	7.2
l	7.6
m	8.1
n	8.3
o	8.5
p	9.1
q	9.45
var	6.64

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1902phae.proj..934L

April 25, 1903 Kapteyn's Variable

B 18236.
9.07 e2 v 9.27 9.09 = 9.18 0 9 0 9
9.09 v 1 f. 9.19

B 12739
9.07 f e1 v 9.27 9.19 9.19 = 9.18 01, 01, 01.
v of 9.19
9.19 v3 g 9.49

B 28947.
9.29 f 1 v 9.29 = 9.29 00 00
9.29 v 2 g. 9.49.

B 26646.
9.07 e 3 v 9.37 9.09 = 9.23 14 14
9.09 v 1 f 9.19

B 15078.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 29339.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 24579.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 11205 Tarpon

B 18199.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 24247. Near edge
f 1 v
v 3 g

B 24959.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 3 g 9.49

B 18078.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 21006.
9.19 f 3 v 9.49 9.19 = 9.34 15 15
9.19 v 3 g 9.49

B 24285.
9.19 f 2 v 9.39 9.29 = 9.34 05 05
9.29 v 2 g 9.49

B 24316. Near edge
9.07 e 3 v) 9.37 9.09 = 9.23 14 14
9.09 v 1 f . 9.19

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1902phae.proj..934L

April 25, 1903 Kapteyn's Var.

B24521 near edge.
9.07 e2r 9.37 9.09 - 9.23 14 14
9.09 r1f 9.19

B24526 near edge
9.07 e3r 9.37 9.09 - 9.23 14 14
9.09 r1f 9.19

B25046 near edge
9.19 f2r 9.29 9.19 - 9.24 05 05
9.19 r3g 9.49

B25090 near edge
9.07 e2r 9.27 8.99 - 9.13 14 14
8.99 r2f 9.19

B25157
9.19 f2r 9.39 9.29 - 9.34 05 05
9.29 r2g 9.49

B26902 near edge
9.07 e3r 9.37 8.99 - 9.18 19 19
8.99 r2f 9.19

B27187 near edge
9.07 e2r 9.27 9.09 - 9.18 09 09
9.09 r1f 9.19

B27209
e2r
r1f

B4000 sp.
On edge. Toi pm

B1171.
Toi pm

B1192. Toi pm (Region)

B4609 v
9.19 f2r 9.39 9.19 - 9.29 10 10
9.19 r3g 9.49

B4708 sp.
Toi pm

B4908 sp. v
9.07 e2r 9.27 9.09 - 9.18 09 09
9.09 r1f 9.19

B4909 v
9.07 e3²r 9.27 8.99 - 9.13 14 14
8.99 r3²f 9.19

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1902phae.proj..934L

April 25, 1903. Kapteyn's Var.

B 4974 near edge
9.9 f 3 r 9.49 9.9 = 9.34 15 15
9.9 r 3 g 9.49

B 4975 near edge
9.9 f 3 r 9.49 9.9 = 9.34 15 15
9.9 r 3 g 9.49

B 5827 Sp.
Too faint

B 27209
9.9 f 2 r 9.39 9.9 = 9.29 10 10
9.9 r 3 g 9.49

B 24247 near edge
9.07 e 3 r 9.37 9.09 = 9.23 14 14
9.09 r 1 f 9.19

B 7237
Too near edge

B 7415 Sp.
9.9 f 2 r 9.39
g + h superposed

B 7500
9.9 f 1 r 9.29 9.9 = 9.24 05 05
9.9 r 3 g 9.49

B 8855
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

B 8911 Sp.
9.9 f 2 r 9.39 9.29 = 9.34 05 05
9.29 r 2 g 9.49

B 9084 Sp. Images not
9.9 f 2 r 2 9.39 9.39 00 00. separated
9.39 r 1 g 9.49

B 10529 near edge
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

B 10530
9.9 f 2 r 9.39 9.9 = 9.29 10 10
9.9 r 3 g 9.49

B 10770 Sp. near edge
9.9 f 2 r 9.39
g + h superposed

B 10771 Sp.
Too near edge

B 10782 Sp.
Too faint

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1902phae.proj..934L

April 25, 1903

Kapteyn's Var.

B 10812 Near edge
9.07 e 3 r 9.37 8.99 = 9.18 19 19
8.99 r 2 f 9.19

B 10866 sp.
9.19 f 3 r 9.49
g + h ~~triangle~~ - a perpendicular
f brighter than e

B 10917
9.07 e 3 r 9.37 9.09 = 9.23 14 14
9.09 r 1 f 9.19

B 10947
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

B 11036 sp. Near edge.
9.19 f 2 r 9.39 a perpendicular
g + h ~~nearly~~ completely

B 13013
9.19 f 3 r 9.49 9.19 = 9.34 15 15
9.19 r 3 g 9.49
f ~~brighter than~~ e

B 14969 Near edge
9.19 f 3 r 9.49 9.19 = 9.34 15 15
9.19 r 3 g 9.49

B 14989
9.07 e 3 f r 9.37 8.89 = 9.13 24 24
8.89 r 3 f 9.19

B 15227
9.07 e 3 r 9.37 8.89 = 9.13 24 24
8.89 r 3 f 9.19

B 17960
9.07 e 3 r 9.37
f ff edge

B 17704 9.27 9.49 9.19 = 9.32 05 17 13
9.07 e 2 r
9.19 f 3 r } f brighter than e
r 3 g 9.49

B 15599
9.07 e 3 r 9.37 8.99 = 9.18 18 18
8.99 r 2 f 9.19

B 416 sp.
Too pm

B 2336 sp.
Too near edge

B 4699 f brighter than e.
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

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1902phae.proj..934L

April 25, 1903

Kapteyn's Var.

I 2477 Sp. Near edge.
9.19 f 2 r 9.39
g + the superposed —

I 7439
Too poor

I 2478 Sp.
9.19 f 1 r 9.29 9.29 0 0
9.29 r 2 g 9.49

I 2464 Sp. Near edge.
9.19 f 2 r 9.39
g + B superposed

I 2463 Sp. Near edge
9.07 e 1 r 9.17 9.09 = 9.13 04 04
9.09 r 1 f 9.19

I 2408 Sp Near edge
9.19 f 1 r 9.29
g + the superposed

I 2344 Sp. On the edge
r 1 f 9.19 = 9.09
e ff edge.

I 873
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49
f brighter than e. in pm images.

I 22530 Sp.
9.19 f 2 r 9.39 9.29 = 9.34 05 05
9.29 r 2 g 9.49

I 22571 Sp.
9.07 e f 1 r 9.17 9.09 = 9.13 04 04
9.09 r 1 f 9.19

I 24951 Sp. On the edge
9.07 e 2 r 9.27
f ff the edge.

I 28076 Sp. On the edge
9.07 e 2 r 9.27
f ff the edge.

B 29392 On the edge
9.19 f 3 r 9.49
g off the edge

B 29492 On the edge
9.19 f 2 r 9.39 9.09 = 9.24 15 15
9.09 r 4 g 9.49

B 29638 On the edge.
9.07 e 2 r 9.27
f ff edge

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April 25, 1903. Kapteyn's Var.

B18045 - On the edge
9.07 e2r 9.27 8.99 = 9.13 14 14
8.99 r2f 9.19

B18221
Does not cross region

B20462
9.07 e3r 9.37 8.99 = 9.18 19 19
8.99 r2f 9.19

B20602
9.07 e3r 9.37 9.09 = 9.23 14 14
9.09 r1f 9.19

B20856 Sp.
9.07 e2r 9.27 8.99 = 9.13 14 14
8.99 r2f 9.19

B20874
9.07 e3r 9.37 9.09 = 9.23 14 14
9.09 r1f 9.19

B20993 Poor images
9.27 f2r 9.39 9.29 = 9.34 05 05
9.29 r2g 9.49

B21040 Poor images
9.19 f1r 9.29 9.19 = 9.24 05 05
9.19 r3g 9.49

B21202
9.07 e3r 9.37 8.99 = 9.18 19 19
8.99 r2f 9.19

B22423
9.07 e3r 9.27 8.99 = 9.13 14 14
8.99 r2f 9.19

B22622
9.07 e2r 9.27 9.09 = 9.18 09 09
9.09 r1f 9.19

B18572 Sp.
Confusion of images.

B344
Too poor.

B4608
9.19 f3r 9.49 9.29 = 9.39 10 10
9.29 r2g 9.49

B17935
9.07 e2r 9.27 9.09 = 9.18 09 09
9.09 r1f 9.19

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1902phae.proj..934L

Apr. 27, 1903.

Kapteyn's Var.

B 26553 - On edge of plate
9.07 e 4 r 9.47
f off edge

AC 3194 - Near edge
~~e 2 r~~
9.19 f 1 r ~~f~~ 9.29 9.09 = 9.19 10 10
9.09 r 4 g 9.49

AM 735 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 39 9.49

AM 1746 -
9.19 f 2 r 9.29 9.09 = 9.19 10 10
9.29 r 4 g 9.49

AM 1757 - On edge of plate
9.07 e 1 r 2 9.17
f too near edge.

AM 1768
ran just off edge

AM 1775 -
9.19 f 2 r 9.39 8.99 = 9.19 20 20
8.99 r 5 g 9.49

AC 3437 -
Too poor in region of var.

AM 1637 -
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 g 9.49

AM 1648 - On edge of plate
r 4 g 9.49 9.09
f off edge.

AM 1663 -
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 f g 9.49

AM 1737 -
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 g 9.49

AM 1738 - On edge
r 4 g 9.49 - 9.09
f off edge

AC 2118 - Plate stained
9.07 e 3 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

AM 413 - 9.37 9.19 - 9.09 = 9.22
9.07 ~~9.07~~ e 3 r 9.37 15 03 13
9.19 f 0 r 9.19
9.09 r 5 g ~~9.19~~ 9.49

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1902phae.proj..934L

Apr. 27, 1903. Kapteyn's Var

AC 3426-
9.19 f 1 r 9.29 9.49 · 9.39 10 10
9.49 r 09 : 9.49
Prm in region of var.

AC 3392-
Tr prm

AC 3377
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 39 9.49

AC 785-
Tr prm
in region of var.

AM 693- Near edge
9.07 e 2 r : 9.27.
f off edge

AM 752 Near edge
9.07 e 3 r : 9.37
f off edge

AM 1126-
Off edge

AM 262-
9.19 f 1 r 9.29 8.99 = 9.14 15 15
8.99 r 5 g 9.49

AM 331.-
9.19 f 1 r 9.29 8.99 = 9.14 15 15
8.99 r 5 g 9.49

AM 339- Tr
9.19 f 1 r 9.29 8.99 = 9.14 15 15
8.99 r 5 g 9.49

AM 374-
Tr prm

AM 406- (prm images)
9.19 f 2 r 9.29 9.09 9.19 10 10
9.09 r 4 g 9.49

AM 435-
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 g 9.49

AM 747-
9.18 09 09
f 1 r 9.07 e 2 r 9.27 9.89 = 9.28 08 01
r 4 g 9.89 r 1 f 9.19

AM 1125-
9.07 e 2 r 9.27 9.09 - 9.18 09 09
9.09 r 1 f 9.19

AM 1617 1142
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 g 9.49

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1902phae.proj..934L

April 27, 1903. Kapteyn's Var

AM 1617 -
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 f 9.49

AM 217 Near edge
9.07 e 3 r 9.37 9.09 9.23 14 14
9.09 r 1 f 9.19

AM 259 -
9.07 e 3 r 9.37 9.09 = 9.23 14 14
9.09 r 1 f 9.19

AM 343 -
e 4 r
r 0 f
9.19 f 1 r 9.29 9.09 = 9.19 10 10
9.09 r 4 f 9.49

AM 353 -
9.07 e 3 r 9.37 9.09 = 9.23 14 14
9.09 r 1 f 9.19

AM 1204 On edge of plate
9.07 e 2 r 9.27
f off edge

AM 1602 On edge
9.07 e 3 r 9.37
f off edge

AM 1198 -
Var. off edge

AM 224 -
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 f 9.49

AM 245 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 f 9.49

AM 367 -
Too poor

AM 1151 -
Too poor

AC 23003 Near edge
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

AC 2604 -
Flagpole

AC 3388 Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 f 9.49

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1902phae.proj..934L

April 27, 1903 Kapteyn's Var.

AC 3362 Near edge
9.19 f 1 r 2 9.29 9.09 = 9.19 10 10
9.09 r 4 g 9.49

AC 3322 Near edge
9.07 e 2 r 9.27 9.09 = 9.18 09 09
9.09 r 1 f 9.19

AC 3291 Near edge
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

AC 3846 Near edge
9.17 f 2 r 9.39 9.09 = 9.24 15 15
9.09 r 2 g 9.49

AC 2426 Too poor

AC 2381 Near edge
9.07 e 2 r 9.27 9.09 = 9.18 09 09
9.09 r 1 f 9.19

AC 2295 Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 2236 Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 3140 Near edge.
9.19 f 4 r 9.59 9.09 = 9.34 25 25
9.09 r 4 g 9.49

AC 1046
Too poor

AC 818
Plate defective
in region of variable.

AC 2059 Near edge.
9.07 e 2 r 2 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

AC 1964 Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 1235 Near edge.
e 3 r
r 1 f
9.19 f 2 r 9.39 9.09 = 9.24 15 15
9.09 r 4 g 9.49

AC 1089 Near edge
9.19 f 1 r 9.29
g off edge

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1902phae.proj..934L

April 27, 1903. Kapteyn's Var.

AC 1068 - Near edge
9.19 f 1 r 2 9.29 8.99 = 9.14 13 15
8.99 r 5 g 9.49

AC 718 -
9.19 f 1 r 9.29 9.09 9.19 10 10
9.09 r 4 g 9.49

AC 2147 - Near edge
9.19 f 1 r 9.29 9.09 - 9.19 10 10
9.09 r 4 g 9.49

AC 491 -
9.07 e 2 r 2 9.27 8.99 = 9.13 14 14
8.99 r 3/5 f 9.19

AC 2127 - Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 686 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 2115 - Near edge
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 567 -
9.19 f 2 r 2 9.39 9.19 - 9.29 10 10
9.19 r 3 g 9.49

AC 2104 -
9.07 e 2 r 9.27 8.99 = 9.13 14 14
8.99 r 2 f 9.19

AC 1233 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49
g imperf

AC 1057 -
Piece of film in position
of variable gone.

AC 1253 -
Too poor

AC 712 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AC 1254 -
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

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1902phae.proj..934L

April 27, 1900. Kapteyn's Var

AC 1356.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 1847.
9.19 f 1r 9.29 9.19 = 9.24 05 05
9.19 r 3g 9.49

AC 1989.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 2058.
9.19 f 1r 9.29 9.09 = 9.19 10 10
9.09 r 4g 9.49

AC 2097.
8.79 d 3r } = 9.09 8.97 = 9.03 06 06
8.97 r 1e } 9.07
poor images.

AC 2180.
9.19 f 1r 9.29 9.19 = 9.24 05 05
9.19 r 3g 9.49

AC 2204.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 2274.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 2389.
9.19 f 2r 9.39 9.29 = 9.34 05 05
9.29 r 2g 9.49

AC 2407.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 2448.
9.19 f 2r 9.39 9.29 = 9.34 05 05
9.29 r 2g 9.49

AC 3017.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

AC 3158.
9.19 f 3r (9.49 = 9.49 0 0
r 0g 9.49
lines.
Has poor in region of variable.

AC 3231.
9.19 f 2r 9.39 9.19 = 9.29 10 10
9.19 r 3g 9.49

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1902phae.proj..934L

April 27, '03 Kapteyn's Variable

AC 3285-
9.19 f1 r 9.29
9 brighter than f
because of greater
distance from edge.

AC 3312-
Too poor

AC 3326-
9.19 f2 r 9.39 9.29 = 9.34 05 05
9.29 r3 g 9.49

AC 3346-
9.07 e1 r 9.17 9.09 = 9.13 04 04
9.09 r1 f 9.19

AC 2922-
9.07 e1 r 9.17 8.99 = 9.08 09 09
8.99 r2 f 9.19

April 28 1903.

AC 2360-
9.19 f2 r 9.39 9.19 = 9.29 10 10
9.19 r3 g 9.49

A 3494-
9.19 f1 r 9.29 9.19 9.24 05 05
9.19 r3 g 9.49

AM
1184 Superposed on
1185 the latter
not found

AM 1565-
Broken - but secure
from Peru.

AM 271-
Too badly broken to
be measured

AM 1231-
9.07 e2 r 9.27 9.09 = 9.18 09 09
9.09 r1 f 9.19

AM 1291-
9.07 e2 r 9.27 9.09 = 9.18 09 09
9.09 r1 f 9.19

AM 1581-
1584
9.07 e2 r 9.27 9.09 = 9.18 09 09
9.09 r1 f 9.19

A 4994-
Too near edge

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1902phae.proj..934L

Kapteyn's Variables

AM 273.
Too badly broken & the
nebula.

AM 1160
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 g 9.49

AM 317
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 g 9.49

AM 349.
9.07 e 2 r 9.27 9.19 9.09 = 9.18 09 01 09
9.19 r 0 f 9.19
9.09 f 4 g 9.49

AM 382.
9.07 e 1 r 9.17 9.09 = 9.13 04 04
9.09 r 1 f 9.19

AM 391.
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 g 9.49

AM 721.
9.07 e 2 r 9.27 9.09 = 9.18 09 09
9.09 r 1 f 9.19

AM 723.
9.07 e 2 r 9.27 9.09 = 9.18 09 09
9.09 r 1 f 9.19

AM 785.
9.19 f 2 r 9.39 9.19 = 9.29 10 10
9.19 r 3 g 9.49

AM 1113.
9.19 f 1 r 9.29 9.19 = 9.24 05 05
9.19 r 3 g 9.49

B 28746. Near edge
9.07 e 2 r 9.27 9.09 = 9.18 09 09
9.09 r 1 f 2 9.19

B 395. Too poor

B 1101 lp
Too poor

B 266

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1902phae.proj..934L

May 5

Kapteyn's Variable.

B 266.

Two pm-
questionable

B 268

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1902phae..proj..934L

May 7

"20, 1902"

I 30292

11.44 g 2r 11.64 11.51 11.58 08 07
11.51 r2b 11.71

I 30293

11.93 b 3N. 12.28

"4, 1903"

AC 3523 iso.

9.97 b2r 10.17 10.22 10.20 03 02.
10.22 r1c 10.32

AC 3522 iso.

9.02 a b 5r 10.02 9.87 9.94 08 07
9.87 r1b 9.97

AC 3514

9.97 b 2r 10.17 10.12 10.14 03 02
10.12 r2c 10.32

I 30295

"Probably broken in development."

"4, 1903"

I 30296

9.02 a 6r 10.12 9.87 10.00 12 13
9.87 r1b 9.97

"18, 1902"

AC 3531

Not region of var.

AC 3511

10.78 f 1R ? 10.8 ?

Plate defective in region of variable.

"19, 1902"

AC 3519

Near edge + too poor

Williams' Var. S. Z. Cygni

AO 3519

10.54 g 3R 10.84

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1902phae.proj..934L

May 8 "20 1902"

I 30329

11.93 f2r 12.13 12.07 12.10 03 03

12.07 r1l 12.17

I 30331

11.93 f3r 12.23 12.17 12.24 12.21 02 04 03

12.17 r0l 12.17

12.24 f3m 12.54

I 30333

Too poor

I 30343

12.17 l2r 11.97

m n,s

I 30260 does not cover region.

"21 1902"

I 30245 near edge

12.10 m2r 12.30 12.26 12.28 02 02

12.26 r1m 12.36

I 30247 near edge

12.10 m2r 12.30 12.26 12.28 02 02

12.26 r1m 12.36

"4 1903"

I 30341

10.32 02r 10.52 10.34 10.43 09 09

10.34 r2d 10.54

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1902phae..proj..934L

May 15

"20 1902"

I30390
l 2 r
r 3m

I30393
l 2 r
r 1m

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1902phae.proj..934L

May 20, 1903.

I "20, 1902 "

I 30370
o iv
v ip

I 30448
Part of region

I 30438
l 2 r
v 2 m

I 30372
l 2 r
v 2 m

I 30371.
l 3 r
v 2 m

"18 1902"

I 30380
Class S.

ac 3589
d 2 ir

ac 3544
d 2 iv

ac 3543 On edge.
d 1 ir

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1902phae.proj..934L

May 20, 1903
"4, 1903"

I 30322
c 2 v
v 1 d

I 30323
c 2 v
v 2 d

I 30324
b 3 v
v 2 c

I 30325
b 2 v
v 2 c

I 30326
b 2 v
v 2 c

I 30327
b 2 v
v 2 c

I 30459
f 1 v
v 4 g

I 30460
f 5 v
v 0 g
g 2 h

I 30461
h 2 v
v 2 k

I 30462
h 4 v
v 1 k

I 30463
l 2 v sends the requisi

I 30464
h 1 v
v 3 k

I 30465
g 2 v
v 2 h

I 30466
f 3 v
v 2 g

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1902phae.proj..934L

May 20, 1903
"4, 1903" continued

I 30467
d2r
r0e
e3f

I 30468
d1r
r1e

I 30470
f2r
r3c

I 30471
f2r
r3c

AC 3542 from images.
f2r
r1c

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1902phae.proj..934L

June 13, 1903.

Eleven of plates for Paris 28980 = BD. 15° 4266a
RA 1855 = 20h 42m 24s Dec = +15° 14' 38", See postal of
F. W. Risteenpart — May 29, 1903 (29, V, 03).

Plate	Date	Eff.	
I 36794	Aug 29 1892	10m	4
I 30245	Mar 28 1902	25	20
I 28997	July 12 1902	13	19
I 27546	Sept. 24, 1901.	11	18
I 26023	Nov. 10, 1900	11	17
I 23585	Sept 20, 1899.	10	16
I 21178	Sept 13, 1898	10	15
~~I 20429~~	~~7~~		
I 18067	May 7, 1897.	13.	13
I 19260	Oct 13, 1897.	10.	14
I 14640	Mar. 12, 1896.	10	9
I 16572	Nov 17, 1896	9	12
I 16086	Oct 1, 1896	10	11
I 15906	Sept 7, 1896	60	10
I 13447	Sept 5, 1895	13	8
I 11396	Aug 22, 1894	12	7
I 9761	Oct 25, 1893	10	6
I 7028	Sept 15, 1892	13	5
I 4154	Sept 4, 1891.	30	3
I 1370	June 30, 1890.	11	1
I 2085	Oct 28, 1890.	11	2

On examination of the above plates shows slight if any variation in the star Paris, 28988. It is always about 0.4 fainter than +14°4442 9.4 and 0.2 brighter than +15° ~~4260 86~~ 4271 9.2

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From this page onward, all observations are by H. S. L.

September 27, 1903 H.S.L.

Exam. of plates for Variable $18^h\ 38^m.13^s.9$ $+32^\circ\ 39'.1$ (1855

"19, 1903" Williams

A large number of plates has been examined and show a variation of about 1.5 magn. The latest plate was AC649 taken Jan. 3, 1900. It is apparently a variable of long period. Said in card catalogue to be of class II - both dp in Am.

The Var. is Brighter	Fainter
I 1216, May 22, '90	I 1737, Aug. 29, '90
2378 Nov. 28, '90	2349 Nov 26, '90
2394 Dec. 2 '90	4242 Sept. 19, '91
3755 June 23, 91	18962 Sept 21, '97
6640 July 23, '92	19015 " 25 '97
6650 " 25 '92	
9357	
11262 July 14, '94	
11329 Aug. 10, '94	
13204 Aug. 8, 95.	
21862 Sept 28, '98	
21342 Oct 6, '98	
AC 501 Nov. 6, '99	

On other plates it is of medium brightness

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1902phae.proj..934L

September 28, 1903

Search for Var. 7, 1903 DM +19° 1347
12 17m 6.6 +19° 36'.1

There are two extremely faint stars near this position, but examination of about 70 I plates fails to prove either to be the variable sought. There appear to be slight fluctuations in brightness, possibly if both stars the variation of neither can exceed four grades.

References in the Nachrichten:

A.N. 161, 303 "Doubtful that it ever existed" Krentz
132 Univ. 1902 Apr. 10 in 6 in Leaff
" " " 14 " 12 in
134 Zone No. 95 Nov. 6, 1853
Jan. 19, 1855

September 29



I 2395, taken Mar. 8, 1898
a 2 (v1)
(v1) 1 (v2)
(v2) 3 b

I 17618 taken March 16, 1897
a 3 (v2)
(v2) 1 (v1)
(v1) 3 b

I 13967, Nov. 30, 1895
a 1 (v1)
(v1) 2 (v2)
(v2) 3 b

~~I 12589~~ I 24983 taken ~~Oct. 5, 1895~~ Mar. 29, 1900
a 1 (v2)
(v2) 3 (v1)
(v1) 1 b

These four plates show the extreme fluctuation in brightness, & are the only ones showing it clearly. Majority of plates on wh. stars appear at the above brightness equal

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1902phae.proj..934L

October 2, 1903

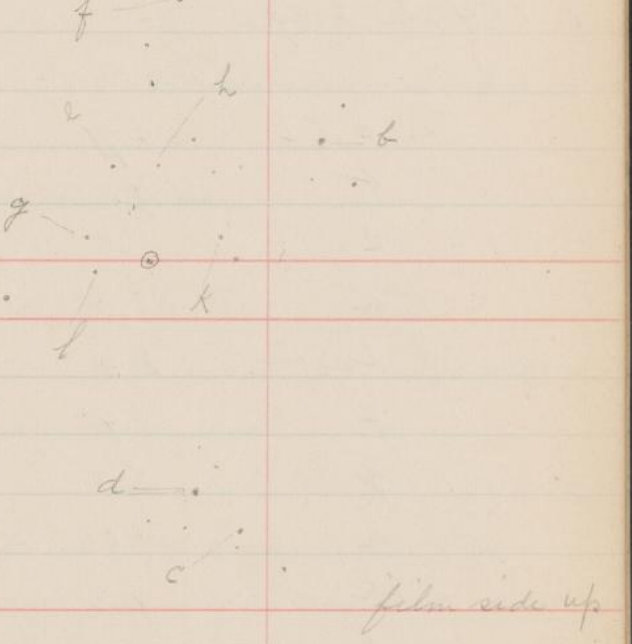
Sequence on I 21342

Scale Measurement of Comp. Stars for "19, 1903"

$8^h 38^m 39^s.9$ $+32^\circ 39'.1$ (Afferty)

I 21342, Oct. 6, 1898

a	6.7	7.0
b	7.0	7.2
c		8.0
d		8.4
e		8.7
f		8.7
g		8.9
h		9.0
k		9.1
l		9.7
γ		7.7



film side up

I 6680, July 27, 1892

This is an exceptionally good plate for scale measurements

a	7.3
b	7.8
c	8.3
d	8.4
e	8.8
f	8.7
g	9.0
h	9.1
k	9.4
l	10.0
γ	8.6

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1902phae.proj..934L

October 2, 1903

"19, 1903" Scale measures continued

I 15422, July 2, 1896

a	6.6	6.9
b		7.1
c		8.0
d		8.0
e		8.4
f		8.4
g		8.7
h		9.0
k		9.2
l		9.7
V		8.8

I 18879, Sept. 17, 1897

a	7.4
b	7.5
c	8.2
d	8.2
e	8.6
f	8.7
g	8.9
h	9.0
k	9.5
l	9.9
V	9.0

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1902phae.proj..934L

October 2, 1903

19, 1903 – Estimates of Brightness

I 13204, Aug. 8 '95 extreme edge
10.95 e 4 v 11.35 11.10 = 11.22 13 12
11.10 v 1 k 11.35 11.25 = 11.30 05 05

Extreme edge of plate

I 4142, Sept. 19, 91 near edge
11.35 h 3 v 11.65 11.53 = 11.59 06 06
11.53 v 1 k 11.63

I 11329, Aug. 10, 94 edge of plate
10.45 c 2 v 10.65 10.57 10.55 = 10.59 06 02 04.
v o d 10.57
10.55 v 4 e 10.95

I 23069, June 21, 99 extreme edge
11.35 h 1 v 1145 11.43 = 11.44 01 01
11.43 v 2 k 11.63

I 20894, June 21, '98
too poor

I 1563, Aug. 2, '90 extreme edge
10.57 d 2 v 10.77 10.85 = 10.81 04 04
10.86 v 1 e 10.95
Images very faint & poor

I 1737, Aug. 29, '90 difficult;
11.20 g 2 v 11.40, 11.35, 11.13 = 11.29 image of v very
v o h 11.35 11,6,16 much sharper
11.13 v 5 k 1163 than other

I 15422, July 2, '96
11.20 g 3 v 11.40, 11.35, 11.23 = 11.36 = 14 01 13
v o h 11.35
11.23 v 4 k 11.63

I 6680, July 27, '92
10.57 d 2 v 10.77 10.75 = 10.76 01 01
10.75 v 2 e 10.95

I 20991, July 7, '98
11.20 g 1 v 11.30 11.15 = 11.22 08 07
11.15 v 2 h 11.35

I 8816, July 19, '93 extreme edge
10.95 e 1 v 11.05 11.00 = 11.02 very doubtful
11.00 v 2 g 11.20 03 02.

I 23091 June 27, '99
11.35 h 2 v 11.56 11.53 = 11.54 01 01
11.53 v 1 k 11.63

I 8989, July 29, '93 too poor
too poor

I 18879 Sept. 17, '97
11.20 g 3 v 11.50 11.35 11.23 = 11.36 14 01 13
v o h 11.35
11.23 v 4 k 11.63

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1902phae.proj..934L

Octber 2, 1903

"19, 1903" Continued

I 25966, Oct. 20, '00 ✓
10.57 d 1 v 10.67 10.65 = 10.66 01 01
10.65 v 3 L 10.95

I 18921, Sept 18, '97 ✓
11.35 L 1 v 11.45 * 11.33 = 11.39 06 06
11.33 v 3 k 11.63

I 2370, Nov. 28, '90 ✓
11.20 g 1 v 11.30, 11.15 = 11.22 08 07
11.15 v 2 L 11.35

I 16380, Oct 28, '96 ✓
Reg. not on plate

I 2412, Dec. 4, '90 ✓ ethereal edge
11.35 L 1 v 11.45
k concealed by central

I 9058, Aug. 3, '93 ✓
11.20 g 3 v 11.50 11.35 11.13 = 11.33 17 02 20
v 0 L 11.35
11.13 v 5 k 11.63

I 11354, Aug. 17, '94 ✓
11.35 L 4 v 11.75 11.53 = 11.64 11 11
11.53 v 1 k 11.63

I 11550, Oct. 7, '94 ✓
11.20 g 2 v 11.40 11.15 = 11.28 12 13
11.15 v 2 L 11.35

I 19015, Sept. 25, '97 ✓ near edge
11.35 L 2 v 11.55 11.43 = 11.49 06 06
11.43 v 2 k 11.63

I 13350, Sept. 2, '95 ✓
11.35 L 2 v 11.55 11.33 = 11.44 11 11
11.33 v 3 k 11.63

I 16382, Aug. 28, '96 ✓ extreme edge
10.95 v 2 L ? 11.15
doubtful plate

I 16397, Aug. 31, 96 ✓
11.20 g 3 v 11.50 11.35 11.23 = 11.36 14 01 13
v 0 L 11.35
11.23 v 4 k 11.63

I 156L, Aug. 2 '90 ✓ Very poor
10.45 c 1 v 10.55 10.57 10.55 = 10.56 01 01 01
v 0 d 10.57
10.55 v 4 L 10.95 ✓

I 2394, Dec. 2, '90
10.57 d 3 v 10.87 10.86 = 10.86 01 01
10.85 v 1 L 10.95

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1902phae.proj..934L

19, 1903, Continued

I 11262, July 14, '94 ✓

10.95 c 4 v 11.35⁻ 11.10 = 11.22 13 12

11.10 v 1 g 11.20

I 1216, May 22, '90 ✓

10.95⁻ f 2 v 11.15⁻ 11.10 = 11.12 03 02

11.10 v 1 g 11.20

I 9357, ✓

10.45 c 2 v 10.65⁻ 10.57 10.55⁻ = 10.59 06, 02 04

v 0 d 10.57

10.55⁻ v 4 e 10.95⁻

I 6640, July 23, '92 ✓

10.57 d 3 v 10.87 10.85⁻ = 10.86 01 01

10.85⁻ v 1 e 10.95⁻

I 2349, Nov. 26, '90

11.35⁻ h 2 v 11.55⁻ 11.43 = 11.49 06, 06 ✓

11.43 v 2 k 11.63

I 21262, Sept. 27, '98 ✓

10.95⁻ f 2 v 11.15⁻ 11.00 = 11.08 07, 08

11.00 v 2 g 11.20

I 4111, Aug. 25, '91 ✓

two pairs

I 8794 July 16, 93 ✓

11.20 g 2 v 11.40 11.15⁻ = 11.28 12 13

11.15⁻ v 2 h 11.35⁻

I 3755, June 23, '91 ✓ near edge

11.20 g 2 v 11.40 11.25⁻ = 11.32 08 07

11.26⁻ v 1 h 11.35⁻

I 6651, July 24, '92 ✓

Reg. not on plate

I 8872, July 21, '93 ✓

Reg. not on plate

I 18962, Sept. 21, '97 ✓

11.35⁻ h 1 v 11.45⁻ 11.33 = 11.39 06 06

11.33 v 3 k 11.63

I 11200, June 18, '94 ✓

11.35⁻ h 3 v 11.65⁻ 11.43 = 11.54 11 11

11.43 v 2 k 11.63

AC 501, Nov. 6 '99 ✓

10.95⁻ f 2 v 11.15⁻ 10.00 = 10.08 07 08

11.00 v 2 g 11.20.

AC 4736

two pairs

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1902phae.proj..934L

Oct. 2, 1903

"19, 1903" continued

AC 502
to nuc edge

AC 312 almost to fault ✓
1135 h iv 11.345 − 11.53 = 11.49.07 07.
11.53 v j K 11.63

These are the only AC plates, up to Jan. 1900, which can be used for this variable

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1902phae.proj..934L

October 6, 1903

See Mrs. Fleming's
Bk 14, p. 170

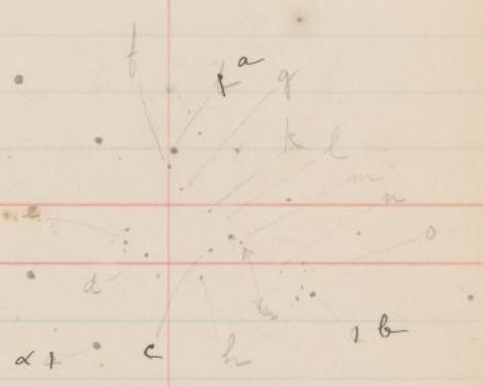
Examination of plates for new Variable

$20^h\ 14.^m7$ $+37^\circ\ 9'$ (approx for 1903 received by cable) announced as a Nova by Professor Wolff of Heidelberg. Found Var. by H.D.F. October 6, 1903. Spectrum type II

The Variable is bright on plates

I 4654 I 25972 I 30569

I 30676



It is faint on plates

I 6970 I 7066 I 23131 I 29367 film side up

It shows a range of fully two magnitudes

The above chart is drawn
from plate I 28921

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1902phae.proj..934L

October 7, 1903

Sellinger's Variable remeasured. Brown's original sequence contains but one catalogue star

Plate I 15422

See page 193

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1902phae.proj..934L

October 7, 1903

Variable $20^h 14^m.7$ $+37°.9'$ (appx. for 1903)

Scale measures of sequence

Plate I 28921

α	5.5	5.8
a	5.9	6.2
b	6.1	6.4
d		8.0
e		8.2
f		8.4
g		8.8
h		8.9
k		9.1
l		9.7
m		10.0
n		10.3
o		10.5
Var		9.0

For chart no p. 109

b 1.3 c

c 3 d

Plate I 25881

Images poor

α	6.1	6.5
a	6.6	6.8
b	6.7	6.9
d		8.4
e		8.6
f		8.8
g		9.0
h		9.1
k		9.4
l		10.0
m		10.3
n		m 2 n
o		m 2 o

b 9 c

c 6 d

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1902phae.proj..934L

Oct 7, 1903

Varnitha $20^h\ 14.^m7$ $+37°\ 9'$ (appr. 1903) Centroid (Hoff. Young)

Plate I 20993

a α	6.8	7.1
a x		7.7
b x		7.8
d		8.7
e		8.9
f		9.0
g		9.4
h		9.5
k		9.8
l		10.1
m		10.5
n		min
o		o m.s.
Var		10.4

b 7 c
c 4 d

Plate I 30569

α α	7.7
a x	8.1
b x	8.1
d	9.2
e	9.4
f	9.6
g	10.0
h	10.0
k	10.4
l	x 3 l
m	l 2 m
n	n s
o	n s
Var	

b 9 c
c 3 d

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1902phae.proj. 934L

October 8, 1903

Variable $2^h\ 14.7^m$ $+37°\ 9'$ (1903) Wolff. Fleming cont.
Estimates of brightness

√Plate I 30981 Very faint

1237 k 3 v 12.67 12.72 = 12.70 03 02.
12.72 v 1 k 12.82

√I 25881

1237 k 2 v 12.57 12.72 = 12.64 07 08
12.72 v 1 l 12.82

√I 30569

11.64 f 4 v 12.04 11.89 = 11.96 08 07
11.89 v 1 g 11.99

√I 28921

12.07 h 2 v 12.27 12.17 = 12.22 05 05
12.17 v 2 k 12.37

√I 30993

12.82 l 3 v 13.12 12.92 = 13.02 10 10
12.92 v 2 m 13.12

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1902phae.proj..934L

October 9, 1903

Variable Wolff. Fleming Continued

√ Plate I 30980
12.37 K 3 V 12.67 12.72 = 12.70 03 02
12.72 V 1 L 12.82
Adjust in plate close to
prof. makes comparison
difficult. Images of
K and V excellent, though
faint.

~~C 5136~~

√ C #204
12.37 K 1 N 12.5⁴

√ C 7161
12.07 L 2 N 12.5² 12.3²

√ C 6185
Plate too faint in Reg.

√ C 7238
11.64 f 1 N 11.7

√ C 5135
12.07 L 2 N ~~12.5~~² 12.3²

√ C 7160
12.07 L 1 N ~~12.2~~ 12.1

√ C 6184
Too faint in Reg

√ C 7238⁹
11.99 g 1 N ~~12.0~~ 12.0

√ ~~C 4205~~ 5136
12.07
2 L 3 V 12.37 12.27 = 12.32 05 05
12.27 V 1 K 12.37
Very doubtful. Identif. of V not certain
The image is different from others
and may be defect in plate

√ C 4205
11.64 f 2 N 11.8

√ I 30982
12.07 L 1 N ~~12.2~~ 12.1

√ I 1580
12.82 L 2 N 13.00

√ I 4901
11.99 g 1 N ~~12.00~~ 12.0

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1902phae.proj..934L

October 9, 1903

Wolff. Fleming Var. Conf

√ I 2469
Does not coincide.

I 1217

√ I 484 Extreme edge
10.86 C 3 N ~~11.1~~ 11.2
d. off plate ~~extreme edge~~

√ I 4729 extreme edge
11.46 e 3 N ~~11.8~~ 11.7
f off plate

√ I 4618 extreme edge
10.86 C 2 N ~~11.0~~ 11.0
d off plate

√ I 4046 poor plate
11.26 d 2 N 11.4

√ I 3982 extreme edge
11.46 e 1 N 11.5

√ I 3866
Too poor

√ I 3889 extreme edge
11.26 d 3 N 11.5
e off plate

√ I 4654 Superseded See page 128
11.26 d 2 V 11.46 11.36 = 11.41 05 05
11.36 V 1 e 11.46 ~~11.36~~
Image very faint

√ I 4357 extreme edge
10.86 C 3 N 11.7
d. off plate

√ I 4666 Spectrum plate
11.26 d 1 N 11.3

√ I 2231 Spectrum plate
10.86 C 1 N 10.9

√ B I 592 Spectrum plate
too poor

√ 3 1636 Spectrum plate
too poor

√ B 2911 Spectrum plate
Not separated, if present
from other spectra

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1902phae.proj..934L

October 9, 1903

Wolff - Henning Var. Cont

✓ B I 1488 Spectrum plate
Too poor

✓ I 695 Spectrum plate
Too poor

✓ B 1536 Spectrum plate
Too poor

✓ I 4456 Spectrum plates
1126 d 1 N 11.3

B X 779 Spectrum plate
Too poor

✓ I 4257
Reg not on plate

✓ B 664 Spectrum plate
Too poor

✓ I 3718 Spectrum plate
Too poor

✓ B 675 Spectrum plate
Too poor

✓ I 4457 ~~Spectrum plate~~
Too near edge

✓ B 1504 Spectrum plate
Too poor

✓ I 1262
Reg not on plate

✓ B I 673 Spectrum plate
~~Too poor to reg.~~ Not seen

✓ I 1217
Reg. not on plate

B I 657 Spectrum plate
Not seen

✓ I 13206 near edge
1126 d 4 V 11.66 1154 1160 06 06
1154 V 1 f 11.64
ε is abnormally bright in this place, equalling β, and a grade brighter than star ε following about 2½ m ε. i.e. Usually it is fainter than ε

B 1539 Spectrum plate
Not seen

✓ I 4440 Spectrum plate
Not seen

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1902phae..proj..934L

October 9, 1903

Wolff. Fleming Var. Cont.

√ I 13354
11.99 g 1 V 1209 11.97 = 1203 06 06
11.97 V 1 h 1207
normal

√ I 15287 Spectrum plate
12.37 k 1 N 12.4

√ I 12676
12.37 k 2 N 12.5
Am't just near position of
Var. seems to be a defect

√ I 13779
Reg. not on plate

√ I 13356
Reg. not on plate

√ I 13163
Reg. not in plate

√ I 13752
Too poor

√ I 13424 edge of plate
11.64 f 4 V 12.04, 11.99 11.77 = 11.93 11 06 16
V 0 g 11.99
11.77 V 3 h 12.07
normal

√ I 12857 edge of plate
11.26 d 1 N 11.3

√ I 15298 Spectrum plate
1086 c 2 N 11.0

√ I 13021
11.26 k 2 N 11.4

√ I 13652
Reg. not on plate

√ I 13064
Too poor

√ I 15312 Spectrum plate
Not seen

√ I 12617
Too poor in neighborhood of Var.

√ I 14743 edge of plate
12.32 l 2 N 13.0

√ I 1643
Reg. not on plate

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1902phae.proj..934L

October 9, 1903

Wolff - Fleming Vanuxem Cont.

√I 13049 Edge of plate
11.64 f 3 v 11.94 11.89 = 11.92 02 03
11.89 v 1 g 11.99
c Normal
Image of v difficult
to compare with others

√I 13758
Reg. not on plate

√I 13757
Reg. not on plate

√I 16144
Reg. not on plate

√I 14984 edge of plate
12.37 k 2 N 11.5
c normal

√I 15241
11.26 d 2 N 11.4
I 15243
Too poor

√I 16316
Reg. not on plate

√C 9178
11.46 l 2 N 11.6
(c normal)

√C 9179
Too poor

√C 8503
13.12 m 1 N 13.2

√C 8461
12.82 l 1 N 12.9

√C 8460
12.37 k 2 N 12.4⁵

√C 8552
12.82 l 3 N 13.1

√C 10321
13.12 m 1 N 13.2

√I C 9896 Spectrum plate
Reg. not on plate

√I 9410 Spectrum plate
12.07 k 2 N 12.2

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1902phae..proj..934L

October 9, 1903

Wolff. Fleming Var. Cont.

✓ I 2276 Spectrum plate
Not seen

✓ B 1658 Spectrum plate
Not seen

✓ I 1202
Reg. not on plate

✓ I ~~2234~~ 1219 Spectrum plate
Reg. not on plate

✓ I 1089
Reg. not on plate

✓ I 6536
Too poor

✓ I 11507
Too poor

✓ I 8714 Spectrum plate
Not seen

✓ I 9408 Spectrum plate
not seen

✓ I 21231 Spectrum plate
11.99 g 1 N 12.0

✓ I 9666 Spectrum plate
Not seen

✓ I 8801
Reg. not on plate

✓ I 11587
Reg. not on plate

✓ I 21321 Spherule edge
1207 h 1 V ~~21~~ 12.17
K nis.

✓ I 11474
Reg. not on plate

✓ I 9455 Spectrum plate
11.26 d 2 N 11.4

✓ I 9092
11.46 e 2 N 11.6
e normal

I 20993
e normal

✓ I 9980
12.82 h 1 N 12.9

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1902phae.proj..934L

October 9, 1903

Wolff - Fleming Var. Cont.

√ I 11017 Spectrum plate
Not seen

√ I 20899
Too poor

√ I 18964
12.37 K1 A 12.4
c mmmal

√ I 21122
Reg. not on plate

√ I 5272
12.07 k2 N 12.2

√ I 18200 Spectrum plate
11.26 d2 N 12.4

√ I 9457
13.32 m2 N 13.5-
A slight scratch may conceal the Var, which must certainly, however, be fainter than m

√ I 7202
12.37 k3 N 18.6

√ I 9977
11.64 f 3 N 11.9

√ I 9407 Spectrum plate
Not seen

√ I 18941 Isochromatic
12.37 K1 V 12.47 12.52 = 12.50 03 02
12.52 V 3 l 12.82
c bright (oc)

√ I 11965
12.82 l 1 N 12.9

√ I 9646 Spectrum plate
10.86 c 1 N 10.9

√ I 7091
11.64 f 1 N 11.7

√ I 9066
12.07 12.37 k 2 N 12.2 12.5-

√ I 7066
11.99 q 1 N 12.0

√ I 7605
11.26 d 2 N 11.4

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1902phae.proj..934L

October 9, 1903

Wolff. Fleming Variable cont.

✓ I9300
Reg. not on plate

✓ I7279
12.37 K 1 N 12.4

✓ I6918
11.26 d 3 N 11.5

✓ I11393
11.64 f 1 N 11.7

✓ I9399
Too poor

✓ I9418
11.64 f 1 N 11.7

✓ I11243
Not seen

✓ I6947
11.26 d 1 N 11.3

✓ I6771
Missing

✓ I6970 Isochromatic
1282 l 1 N 12.9
e ie

✓ I7029
11.26 d 1 N 11.3

✓ I11374
12.37 K 2 N 12.5
e ie

✓ I9397
, Trails useless

✓ I8879
11.99 g 1 V 12.09 1197 = ~~12.0~~ 12.03 06 06
1197 V 1 h 1207
Very faint and difficult

✓ I6849
12.37 K 1 N 12.4

I7167
12.37 K 2 N 12.5

✓ I9668 Spectrum plate
Reg. not on plate

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1902phae.proj..934L

October 9, 1903

Wolff - Fleming Var. Cat.

I 11236 - Spectrum Plate
10.86 c i R 10.9

I 9036
12.37 K i R 12.4
Var

I 9320
Reg. not on plate

I 6795
9.91 b i R 10.0

I 8709
Too faint

I 7737
11.99 g i V 12.09 19.97 = 12.03 06 06
19.97 v i R 12.07
Extremely faint and difficult

QC 133
11.64 f i R 11.7

QC 95
10.86 c i R 10.9

I 21376
Reg. not on Plate.

I 22769
12.07 K 3 R 12.3
Wolff plate

I 22926
Wrong region

I 22897
12.82 L i R 12.9

I 23647
Reg. not on plate

I 23401 Spectrum plate
11.99 g i R 12.0

I 23075
12.82 L i R 12.9

QC 502
12.37 K i R 12.4

QC 991
11.26 d i R 11.3

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1902phae.proj..934L

October 9, 1903

Wolff - Fleming Var. Cont.

✓ I 23131
12.37 K3N 12.6

✓ I 22920
12.37 K3N 12.6

✓ I 25163
12.37 K1N 12.4

✓ I 25889
Reg. not on plate

✓ AC 915
11.26 d2N 11.4

✓ AC 1016
11.26 d2N 11.4

✓ AM 542
10.86 C2N 11.0

✓ I 25328
✓ off plate

✓ I 25972
12.07 k1V 12.17 12.17 - 12.07 ~~0.07~~ 00 00
12.17 V2K 12.37

✓ I 27991
12.82 L3V 13.12 13.02 - 13.07 05 05
13.02 V 1in 13.12

✓ I 27960 Spectrum
Not seen

✓ I 27810 Spectrum
11.26 d1N 11.3

✓ I 27806 ✓ thin edge
10.86 02N 11.0

✓ I 27755
12.37 K3N 12.6

✓ I 27406 ✓ thin edge
12.37 K2N 12.5

✓ I 27434
12.07 h1N 12.1

✓ I 27585
12.07 h1N 12.1

✓ AC 1667
10.86 C1N - 10.9

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1902phae.proj..934L

Oct 7th 9, 1902

Wolff-Fleming Var. Cont.

√ AC 1870
11.26 d 2 N 11.4

√ AC 1834
11.64 f 1 N 11.7

√ AC 1957
11.26 d 1 N 11.3

√ I 27645
12.07 k 1 N 12.1

√ AC 2030
12.37 K 2 N 12.5

√ AC 1966
12.37 K 1 N 12.4

√ AC 1850
10.86 C 2 N 11.0

√ AC 1864
11.99 g 1 N 12.0

√ AC 1628
Hot Class 7

√ AC 1577
10.86 C 1 N 10.9

√ I 28921
measured

√ AC 3018
11.99 g 1 N 12.0

√ AC 2928
9.81 a 1 N 9.9

√ AC 2924
11.26 d 2 N 11.4

√ AC 2866
11.64 f 1 N 11.7

√ AC 2588
12.37 K 3 N 12.46

√ AC 2772
~~11.26~~ d 1 N 11.3

√ AC 2838

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1902phae.proj..934L

October 9, 1903

Wolff-Fleming Var. cat

✓ AC 2838
11.64 f 1 N 11.7X a
e 1 e
f 4e
e 2 f

✓ AC 2675
12.07 h 1 N 12.1
d 1 e
e 1 e
e 2 f

✓ AC 2883
12.07 h 1 N 12.1X a
d 1 e
e 1 e
e 3 f

✓ AC 2946
12.37 k 2 N 12.5X
2 spectra
makes est. of e impossible

✓ AM 1596
bad poor

✓ I 29367
13.12 m 2 N 13.32
d 2 e
e 0 e
e 2 f

✓ AC 2565
11.26 d 5 e 2 N 11.7X
d 2 e
e 1 e

✓ AC 2664
11.26 d 2 N 11.4a

✓ AC 2852
11.26 d 1 N 11.3X

✓ I 30651 Fleming
Wolff plate

✓ F AC 30223 Class S
11.26 d 1 N 11.3X

I 30569
11.26 d 3 v 11.56, 11.64, 11.59 = 11.60
v 0 f 11.64
11.59 v 4 g 11.99
d 1 e
e 1 e
e 3 f

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1902phae.proj..934L

October 9, 1903

Wolff-Fleming Var. cont.

√ AC 3584
10.86 c 1 R 10.9 ✓

√ AC 3539
10.86 c 2 R 11.0 ✓

√ AC 3404
11.26 d 4 e 4 R 11.6 ✓

die
e2e
f143.

√ AC 3675
11.26 d 1 R 11.3 ✓

√ AC 3873
Class 7

√ AC 3368
11.26 d. 3 R 11.5 ✓

AC ~~3273~~ 3519

√ AC 3694
Too poor.

√ AC 3762
Too poor

√ AC 3815
10.86 c 2 R 11.0 ✓

√ AC 3909
~~10.~~ 11.26 d 1 R 11.3 ✓

√ AC 3942
9.81 a 2 R 10.0 ✓

√ AC 3980
11.64 f 1 R 11.7 ✓

die
e1e
e3f

√ AC 3838
10.86 c 3 R 11.1 ✓

√ AC 3946
10.86 c 3 R 11.1 ✓

√ AC 3353
11.26 d 1 R 11.3 ✓

√ I 30769
11.67 f 1 R 11.7 ✓

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1902phae.proj..934L

October 9, 1903

Wolff-Fleming Var. Cat.

√

I 30676 spectrum edge

11.99 v0g 11.99, 11.94, 11.87 = 11.93, .06, .01, .07

11.64 f3v 11.94

11.87 v2h 12.07

d e

d 2é

é 1e

e 2f

√ AC 3844

Too poor

√ AC 3879

11.64 f1R 11.77

d 1é

é 2e

e 3f

√ A 2000

11.64 f2v 11.84, 11.69 = 11.76, .08, .07

11.69 v3g 11.99

d 2é

é 1e

e of

f appears very bright on the plate?

√ A 1542 Spectrum

10.86 C 1R 10.96

√ A 1548 Spectrum

10.86 C 5V 11.36, 11.16 = 11.26, .10, .10

11.16 v1d 11.26

end not sufficiently separated from spectrum to the north

√ A 1546 Spectrum

10.86 C 6V 11.46, 11.16 = 11.31, .15, .15

11.16 v1d 11.26

Very doubtful. The spectrum is much shorter than the others and estimate almost impossible. I might as well have estimated several grades fainter, though certainly brighter than f

√ A 1682

12.07 h1v 12.17, 12.07 = 12.12, .05, .05

12.07 v3K 12.37

√ A 1728 Spectrum

10.86 C 2R 11.04

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1902phae.proj..934L

October 9, 1903

Wolff - Fleming Var. cont.

A 1682
d 1e
e 1é
é 2f

A 1547 Spectrum
11.64 f 1 v 11.74, 11.69 = 11.72 02, 03
11.69 v 3 g 11.99
Doubtful - Spectrum of Velat

A 769
Var. N.
Companion stars Wolf
c = 7.2

A 1165 Spectrum
Too poor

A 1729 Spectrum
Repeated Images
Too poor

A 708
Too poor

A 1708
Reg. not on plate

A 843
12.37 K 3 N, 12.6 X
d 1é
é 1e
f 1e
f bright

I 1580
11.26 d 0 é
é 3 e
e 0 f

A 677
11.26 d 4 v 11.66, 11.64, 11.49 = 11.60
06, 04, 11
v 0 f 11.64
11.49 v 5 g 11.99

d 1é
é 2e
e 1f

I 4654 Images poor
11.26 d 3 v 11.56 11.54 = 11.55 01, 01
11.54 v 1 f 11.64

Continued p. 191

renumbered because 2 was used in Rig. measures.

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1902phae.proj..934L

October 10, 1903

Examination of plates for Variables

5, 1903	5	43.5 11h 3m 46.1	+15° 50' 51"	(1900)	0 54 6 15
6, 1903	5	47.3	+15 42	"	0 54 7 15
	5	44.7	+15° 41'	(1855	

Star 5, 1903 is brighter on the plates than two following D.M. stars, though it is not in the D.M. Examined on 12 plates, it shows no marked variation. It is difficult to observe because of its brightness the distance of comparison stars, and the fact that the field is usually very near the edge of the plate.

This is 2 Tauri Star 6, 1903 Observed on 12 plates See page 96

Faint on	Bright on
I 53.71	I 396
5220	3063
5219	3133
4981	7935
4986	4965
	10533
	17403

2 Tauri The range as shown observed on these plates is about a magnitude and a half. But it is missing from most of the plates on which I observed it faint and it may have a wider range. It will be a difficult object on account of its faintness.

See Page 196

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1902phae.proj..934L

October 12, 1903

Examination of plates for Variable 9 1903

+22° 1579 $6^h.\ 58^m\ 53^s.24$ +22° 44′ 54″.0 (1855

This variable is extremely faint and difficult. There appears to be a range of about five grades, but in some instances it seems doubtful whether apparent variation is not due to the condition of the film. On the following plates it appears brighter than on others

I 12590
14821
17611
19391 Position marked
21747

On the following it appears faint

I 247(?)
8055
10122
10192

The following plates show it of medium brightness

I 376 Position marked
5538
10795
14720
16995

On the following plates it appears but no satisfactory observation has been made

I 5614
I 20691 (scratched)
I 25268 (bright?)

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1902phae.proj..934L

October 12, 1903

Examination of plates for Variable "17, 1902"

$18^h\ 40^m\ 45^s.1$ $+43^\circ\ 29'.2$ Williams

Bright on I 6641 I Faint on

6939 I 9002

13316 18538

19014

20975 seen

21341

27432

On most of the plates on which it is faint it is not seen, though very faint stars appear. The range cannot be less than a magnitude and a half

Var

The star marked Var on chart also varies slightly being ~~equal to~~ as bright as the preceding faint star on plates I 6939, I 9002, I 18538 I 19014 I.

It is fainter than the preceding star on I 13316 I 21341 (?) I 20975 I 27432

It appears very bright on I 6641

The total range does not appear to exceed two grades

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1902phae.proj..934L

October 12, 1903

Examination of plates for Variable "11, 1903" Williams

1h 30m 10.9s +37° 55.6 (1855)

This variable shows a range of fully two magnitudes. It is bright on plates

I 265
10206 very bright
19454
19976

Faint on plates
I 24605
29728

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1902phae.proj..934L

October 15, 1903

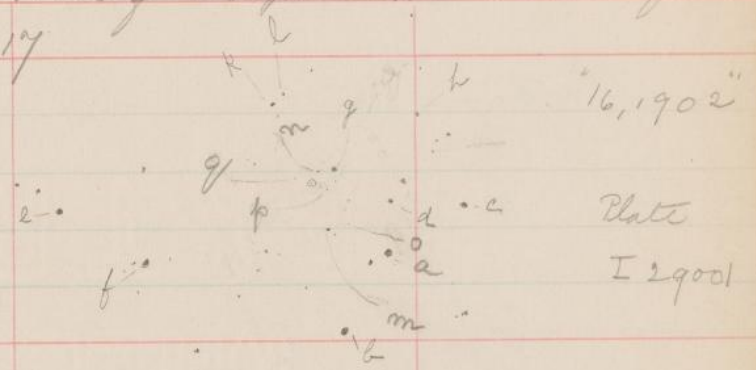
Measures of Brightness of Comparison Stars for Variable "16, 1902"

202817

Plate I 29001

a	5.4	5.7
b	5.7	6.0
c	6.5	6.5
d	6.8	7.0
e	7.0	7.4
f		7.7
g		8.0
h		8.2
k		8.5
l		8.7
~~m~~		~~8.9~~
m x		9.0
~~o~~		~~9.1~~
n		9.4
~~p~~		~~9.5~~
o x		9.7
p x		10.0
~~q~~ x		~~10.1~~
q h x		10.3.
Var		q d 1 V

Sequence marked on this plate



For faint stars r, s, t, see page 195

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1902phae.proj..934L

October 15, 1903

Variable "6, 1902" continued

Plate I 17670

a	5.5	5.7
b	5.7	6.0
c	6.5	6.8
d	6.7	7.0
e	7.0	7.4
f		7.6
g		8.0
h		8.2
k		8.6
l		8.8
m		9.0
n		9.6
o		9.9
p		10.3
q		~~10.4~~
r		~~9.2~~
x		
x		
x		
Var		6.8

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1902phae.proj..934L

October 15, 1903

202817 Variable "16, 1902" continued

Plate I 29004

a	5.6	5.8
b	5.9	6.2
c	6.8	7.1
d		7.4
e		7.6
f		8.0
g		8.3
h		8.6
k		8.7
l		8.9
m		9.1
n		9.6
o		9.8
p		10.1
q ~~q~~		p 4 ~~q~~
~~k~~		~~q a~~
Var		q ~~q~~ 1.7

Images elongated

~~Plate I 30245~~

a	5.8
b	
c	Images too far
d	to measure
e	
f	
g	
h	
k	
l	
m	
n	
o	
p	
q	
n	
Var	

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1902phae.proj..934L

Oct. 15, 1903

Variable "16, 1902" Continued

Plate I 23241 Images elongated

a	5.7	6.0
b	6.0	6.3
c	6.8	7.1
d	7.0	7.3
e		7.4
f		8.0
g		8.4
h		8.5
k		8.7
l		9.0
m		9.3
n		9.7
o		10.0
p		10.4
q		p 2 q
x		
Var		9.9

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1902phae.proj..934L

October 15, 1903

Examination of Plates for Variable "13, 1903" - Cuanke

$17^h \frac{15^m}{12.2}$ $+31^\circ$ 9' (1855)

The variable appears bright on plates
I 8056, I 10955, I 16994

It is faint on plates
I 222, I 954, I 5647 I 5738, I 14822

The range is about one magnitude

Position marked on Plate I 8056

Does not disappear from any plate

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1902phae.proj..934L

October 15, 1903

Examination of plates for Var. "14, 1903" – Cerulski

$6^h\ 52.^m5$ $+30°\ 45'$ (1855)

Bright on plates

I 805-6,	Feb. 15, 1893	Exp. 12^m	position marked
10123	Dec. 4, 1893	16	
10193	Dec. 17, 1893	11	

Faint on plates

I 222,	Dec. 3, 1889,	Exp. 13^m	
5647	Feb. 15, 1892	10	
5738	Feb. 18, 1892	11	
14822	April 8, 1896	11	
16994	Jan. 6, 1897	18	
17612	Mar. 16, 1897	10	
20431	March 9, 1898	13	

Of Medium brightness on

I 737,	March 3, 1890	Exp. 11
I 22479,	Feb. 25, 1899	13

The range appears to be somewhat over a magnitude. It disappears from none of the plates.

Position marked on I 20431

1002phae.proj.0341

October 16, 1903

See also p. 192

02/281

Examination of Plates for Var. "15, 1903" Cluster

$2^h 12^m.80 \quad +81^\circ 13' (1900) = 2^h 6^m.9 + 81^\circ 00^m (1855)$

On the following plates ~~this~~ star V on chart star shows little change in brightness

I 9830	Oct. 30, 1893	Exp.	10^m
I 9947	Nov. 18, 1893	Exp	
I 16644	Dec. 1, 1896		17
I 16701	Dec 7, 1896		17
I 23565	Sept. 17, 1899		10

V

V, 1903.2

On the following it appears bright

I 5025 Very bright

9953 Rather brighter than usual

On the following it appears faint

I 7454			
I 8027	Feb 7, 1893	Exp.	12^m
I 13598	Oct. 1, 1895		14
I 24232	Dec. 13, 1899		12

Position marked on I 9953

This star is a little north of and following the position given.

I find a star in the position given on the following two plates. It is not seen on any others

I 5025 Very bright (comparatively speaking)

I 13598 Faint

Probably this is the variable sought

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1902phae.proj..934L

October 16, 1903

Examination of Plates for DM +49° 4032
$22^h\ 58^m\ 27\overset{s}{.}3$ +49° 18′.8 (1855)

A faint star (magnitude 11?) appears very near the DM. position. Examined on the following plates, it shows no variation.

I 4446	October 5, 1891	Exp. 11m
I 7039	Sept. 15, 1892	16
7042	Sept 15, 1892	17
7103	Sept. 18, 1892	14
15527	Aug. 17, 1897	12
18702	Sept. 6, 1897	12
23545	Sept. 16 1899	12
23926	Oct. 23 1899	34
25236	Aug. 9 1900	10

On plate I 7039 a bright object on the film, strongly resembling a star image, exactly coincides with the position of the star on the DM chart. On plate 7042, taken the same night, there is no trace of an image in that position. The object observed must, therefore, be a defect.

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1902phae.proj.0241

October 16, 1902

Examination of Plates for "16,903"

~~$2^h\ 12.^m9$ $+81^\circ\ 13'$~~ $7^h\ 10^m$ $+1^\circ\ 22'$ (1855) Arcetri

This star shows well defined variation

Bright on plates

B 12574, Nov. 13, 1894 Exp. 10m
B 29418, Apr. 26, 1902 10

Faint on plates

I 12093 Dec. 19, 1894 Exp. 10m
B 15255 Dec. 23, 1895 10
I 22099 Jan. 1, 1899
B 25084 Apr. 11, 1900
B 26556 Nov. 12, 1900

On the last plate named it disappears entirely although extremely faint stars are seen. This would indicate a range of not less than $2\frac{1}{2}$ magnitudes

Position marked on B 12574

B 12464 Nov. 9, 1894 Exp. 11 Bright
12496 " 10 " 10 Very bright

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1902phae.proj..934L

October 17, 1903

Sequence pp 133, 195 — Delphini

20 2817 Estimates of brightness of Var. 16, 1902 Cerulke

DM +16° 4290 $20^h\ 25^m\ 5^s.5$ +16° 57'.2 (1855)

Not on plate list at all

Plate I

Reg. not on plate

√ I 4445

Var. off edge

√ I 6794 Aug. 29, 1892

Reg. not on plate

√ I 7138

Reg. not on plate

√ I 3887

Reg not on plate

√ I 6539

Reg. not on plate

√ I 4160 Sept. 7, '91

Reg. not on plate

√ I 5314

Reg. not on plate

√ I 4882 Nov. 30, 1891

Reg. not on plate

√ I 5112 Dec. 12, '91

11.50 k, N 11.6x

√ I 3944 Aug. 6, 91

Reg. not on plate

√ I 3874 July 21, 1891

11.03 k 2 N 11.2

See note page 214

√ I 6729 Aug. 15, '92

Reg. not on plate

√ I 3696 June 8, 1891

Spectrum plate - too poor

√ I 3876 July 21, '91 Images poor

10.83 q 2 r. 11.03 10.93 = 10.98 05 05

10.93 r 1 k 11.03

√ I 4703

Reg. not on plate

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1902phae.proj.0341

October 17, 1903

"16, 1902" Continued

✓ I 2553
11.50 k 1 N 11.6

✓ I 1530 July 27, 1890
9.62 C 2 N 9.8

✓ I 7246
Var. ff edge

✓ I 7065 Sept. 17, 1892
11.28 K 2 N 11.4

✓ I 2542 Dec. 20, '90 Spectrum
9.84 d 1 N 9.9

✓ I 2084 Oct. 28, '90
11.50 k 1 N 11.6

✓ I 1642 Aug. 15, 1890
9.84 d 5 R 10.34
e and fought to be sun, but are near edge of plate. g is not seen, but stars nearly as faint are seen. The variable to faint, about three grades removed from invisibility

✓ I 2085 Oct. 28, 1890
12.23 m 1 N 12.3

✓ I 2485 Dec. 13, 1890
12.51 0 1 N 12.6

✓ I 7028 Sept. 15, 1892
12.23 m 1 N 12.3

✓ I 1504, July 21, 1890
9.62 c 1 v 9.72 9.74 = 9.73 01 01
9.74 v 1 d 9.84
Images poor and faint

✓ I 2350 Nov. 26, 1890 Spectrum
8.80 b 2 N 9.00

✓ I 7165 does not come Reg.
✓ 7054 " " " "
✓ 7206 " " " "
✓ 7089 " " " "
✓ 7281 " " " "
✓ 1598 " " " "
✓ 4428 " " " "
✓ 7119 " " " "
✓ 4952 " " " "

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1902phae.proj..934L

October 17, 1903

"16, 1902" Continued

√ Plate I 4371 Sept. 28, '91
Var. of plate

√ I 15899 Sept. 6, 1896 good image
13.21 q 2 N 13.4

√ I 4202 Sept. 10, 1891
9.84 d 2 N 10.0

√ I 15929 Sept. 11, 1896
12.89 p 3 V 13.19 13.21 - 13.20 0 1 0 1
13.21 V 0 9 13.21
Very faint

√ I 15732 Aug. 19, 1896
12.23 n 2 N 12.4

√ I 4200 Sept 10, 1891
Too near edge

√ I 4324 Sept. 24 1891
9.84 d 1 N 9.9

√ I 15930 Sept. 11, 1896
12.51 0 1 N 12.6

√ I 4179 Sept. 9, 1891
11.03 h 1 R ? 11.13 ?
Image very faint Star not certain

√ I 15731 Aug. 19, 1896
12.23 n 4 V 12.63, 12.41 = 12.52 11 11
12.41 V 1 0 12.51

√ I 15541, July 28, 1896
11.03 2 2 N 11.2

√ I 15906 Sept. 7, 1896
11.75 m 1 N 11.8

√ I 15931 Sept. 11, 1896
12.23 n 4 N 12.6

√ I 4319 Sept. 23, 1891
10.48 f 3 N 10.7

√ I 15900 Sept. 6, 1896
12.51 0 1 N 12.6

√ I 6945 Sept. 9, 1892
12.23 n 1 N 12.3

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1902phae.proj.9341

October 17, 1903

2h 08.17 "16, 1902" Continued

I 4426 does not cover Reg.
4249 " "
4259 " " Not in plate list at all. Probably 4359.
3946 " "
4154 " "
3984 " "
4044 " "
6574 " "
4045 " "
~~4324~~ " "
6578 " "
3913 " "
3904 " "
4129 " "
6921 " "
4248 " "
6966 " "

I 17670, March 25 1897 A very fine plate
8.80 f y V 9.50 9.62 9.54 = 9.55 05 07 01
9.62 V 0 C 9.62
9.54 V 3d 9.84

I 19250 October 13 1897
12.51 01 N 12.6

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1902phae.proj..934L

October 17, 1903

"16, 1902" Continued

√ I 19358 taken Oct. 25, 1897
10.83 g 1 R 10.9

√ I 19446, Nov. 4, 1897
12.23 m 2 R 12.43

√ I 19525 Nov. 9, 1897
11.75 m 1 R 11.78

√ I 19631 Nov. 24, 1897
11.75 m 4 V 12.15 12.13 = 12.14 01 01
12.13 V 1 m 12.23

√ I 16136 Oct. 9, 1896
Reg. not on plate

√ I 19682 Dec. 2, 1897
11.75 m 2 V 11.96 11.93 = 11.94 01 01
11.93 V 3 m 12.23
Images very faint. A scratch on the plate close to the variable makes comparison difficult

√ I 19472 Nov. 6, 1897
12.03 V 2 m 12.23 12.03
m is hidden by a defect
K is too much brighter for an estimate to be made

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1902phae.proj..934L

October 17, 1904

Do 2817 "16, 1902" Continued

✓ I 16194, October 29, 1896
12.57 0 1 N 12.6

✓ I 16309, Octtr 26, 1896 Spectrum plate
11.03 h 3 N 11.3

✓ I 16515 Nov. 14, 1896
12.89 p 1 N 12.9

✓ I 14796 March 31, 1896
12.23 m 3 V 12.53 12.21 = 12.37 16 16
12.21 V 30 12.51

✓ I 14812, April 5, 1896
12.23 m 1 V 12.33 12.21 = 12.27 06 06
12.21 V 30 12.51

✓ I 15016 April 29, 1896
10.83 9 1 V 10.93 10.83 = 10.88 05 05
10.83 V 2 h 11.03

✓ I 14813 April 5, 1896
11.75 m 4 V 12.15 12.13 = 12.14 01 01
12.13 V 1 m 12.23

✓ I 21071 Aug. 15, 1895
12.57 0 1 N 12.6

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1902phae.proj..934L

October 17, 1903

"16, 1902" Continued

√ I 20737, June 9, 1898
12.23 m 3 N 12.5

√ I 21135 Aug. 28, 1898
Reg. not on plate

√ I 15013, Apr. 09, 1896
10.83 g 2 f 11.03 1093 = 1098 05 05
10.93 V 1 h 11.03

√ I 15311, June 18, 1896
Region not on plate

√ I 21181, Sept. 13, 1898
11.75 m 3 V 12.05 1203 = 1204 01 01
12.03 V 2 m 12.23

√ I 16258, October 24, 1896
12.51 0 1 N 12.6

√ I 15102, April 24, 1896
8.80 f 3 N 8 9.1x.

√ I 14666, March 17, 1896
12.23 m 4 V 12.63 1241 = 1252 11 11
12.41 V 1 0 12.51

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1902phae.proj..934L

October 17, 1903

2s 2814 "16, 1902" Continued

✓ I 16463, Nov. 6, 1896 Spectrum plate
11.28 K 2 N 11.4

✓ I 15092, May 11, 1896
10.16 e 5 V 10.65 10.38 = 10.52 +3 14
10.38 V 1 f 10.48

✓ I 14814, April 5, 1896
11.75 m 2 V 11.95 11.83 = 11.94 01 01
11.83 V 3 n 12.23
Images poor

✓ I 19321, Oct. 19, 1897 Spectrum plate
9.84 d 2 K 10.0

✓ I 21121, Aug 27, 1898
Reg. not on plate

✓ I 15070, May 4, 1896
10.48 f 1 V 10.58 10.63 = 10.60 02 03
10.63 V 2 g 10.83

✓ I 21176, Sept. 13, 1898
Reg. not on plate

✓ I 15244, June 2, 1896
Two poor

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1902phae.proj..934L

October 17, 1903

"16, 1902" Continued

√I 14955, April 16, 1896
11.28 K 4 N 11.6
Position of L concealed by defect.

√I 20429 March 8, 1898
11.28 K 1 R 11.38
Extremely faint

√I 20832, June 7, 1896
11.50 L 1 N 11.6

√I 13114- July 26, 1895 Spectrum plate
V 1 e 10.16 10.06
d off plate

√I 15071, May 4, 1896
10.48 f 3 R 10.78
Extremely faint. V of identified only by superposing

√I 15017, April 29, 1896
10.83 g 2 V 10.03 10.93 = 10.98 05 05
10.93 V 1 h 11.03

√I 16142, Oct 9, 1896
Reg. not on plate

√I 15236, June 2, 1896
10.48 f 1 V 10.58 10.53 = 10.56 02 03.
10.53 V 3 g 10.83

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1902phae.proj..934L

October 17, 1903

202817 "16, 1902" Continued

✓ I 15014, April 29, 1896
10.83 g 2 r 11.03 10.93 = 10.98 03 03
10.93 r 1 h 11.03

✓ I 20520, March 17, 1898
11.28 K 1 R 11.38

✓ I 16111, Octber 8, 1896
12.23 n 2 R 12.43
Images very poor and faint

✓ I 15018, April 29, 1896
10.48 f 4 r 10.88 10.73 - 10.80 08 07
10.73 r 1 g 10.83

✓ I 15360, June 23, 1896
11.03 L 2 r 11.23 11.18 = 11.20 03 02
11.18 r 1 K 11.28
Extreme edge of film - Images very poor

✓ I 13117, July 28, 1895 Spectrum plate
9.62 C 1 r 9.72 9.66 9.69 03 03
9.66 r 5 L 10.16
Comparison difficult & superposed

✓ I 15371, June 26, 1896
10.83 g 2 K 11.0

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1902phae.proj..934L

October 17, 1903

"16, 1902" Continued

√ Plate I 15163 May 23, 1896

10.16 l 5 r 10.66 10.38 = 10.52 14 14

10.38 r 1 f 10.48

Images poor

√ I 19683, Dec. 2, 1897

11.50 l 3 r 11.80 11.65 = 11.72 08 07

11.65 r 1 m 11.75

Images poor and faint

√ I 15015 April 25, 1896

10.83 g 2 r 11.03 10.83 = 10.93 10 10

10.83 r 2 h 11.03

√ I 13084, July 18, 1895 Spectrum plate

8.80 b 4 r 9.20 9.42 = 9.31 11 11

9.42 r 2 c 9.62

√ I 15373, June 26, 1896

11.03 k 1 r 11.13 10.98 = 11.06 07 08

10.98 r 3 k 11.28

√ I 15185, May 27, 1896

10.16 e 4 r 10.56 10.38 = 10.47 09 09

10.38 r 1 f 10.48

√ I 13060, July 11, 1895

Useless

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1902phae.proj..934L

October 17, 1903

2h 27m "16, 1902" Continued

Plates I 15093, 15003, 21030, ~~15014~~,
21182, 13025, 21029, 19690, 14798,
19617, 19526, 19339, 19311, 16133, 18799
do not cover region.

I 8877
11.03 2 1 N 11.1

I 15996
10.48 f 1 N 10.5

I 13094, July 23, 1895
9.62 c 1 V 9.72 9.64 : 9.68 04 04
9.64 V 2 d 9.84

I 14640, March 12, 1896
12.51 0 2 N 12.7

I 14079, Dec. 17, 1895
11.50 d 2 N 11.7

I 16086, Oct. 1, 1896
12.23 m 2 N 12.4

I 14081, Dec. 17, 1895
9.84 d 3 N 10.0

I 14174, Dec. 31, 1895
Useless

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1902phae.proj..934L

October 17, 1903

"16, 1902" continued

// I 14080 Dec. 17, 1895
Cls pror

√ I 14175 Dec. 31, 1895
10.83 g 1 N 10.9

√ I 16001, Sept. 23, 1896
12.57 0 1 N 12.6

√ I 16008, Sept. 23, 1896
12.89 p 1 N 12.9

√ I 11715, Oct. 18, 1894
10.16 c 2 V 10.36 10.08 : 10.22 i4 14
10.08 V 4 f 10.48
f appears abnormally faint?

√ I 16572, Nov. 7, 1896
11.50 c 3 N 11.8

I 7289, Oct. 8, 1892

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1902phae.proj..934L

October 19, 1903

20 2817 "16, 1902" Continued

√ I 9274,
12.23 n 1 N 12.3

√ I 11368, Aug. 18, 1894
10.48 f 1 V 10.58 10.53 - 10.56 02 03
10.53 V 3 g 10.83

√ I 11426, Sept. 11, 1894
9.84 d 2 V 10.04 10.06 = 10.05 01 01
10.06 V 1 e 10.16

√ I 11235, July 3, 1894 Spectrum plate
Dec. not corr. Region

√ I 16571, Nov. 17, 1896
12.23 n 4 V 12.63 12.41 = 12.52 11 11
10.41 V 1 0 12.51
Images extremely faint

√ I 12949, June 7, 1895
Two poor

√ I 11508 Sept. 25, 1894
10.16 L 1 V 10.26 10.08 = 10.17 09 09
10.08 V 4 f 10.48

√ I 11251 July 9, 1894.
Spectrum plate - two poor

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1902phae.proj..934L

October 19 1903

"16, 1902" Continued

L

I 7289, Oct. 8, 1892
11.75 m, N 11.8

I 9085, Aug. 4, 1893
11.75 m, N 11.8

I 9286, Aug. 22, 1893
Too prox

The following plates do not cover Region:-

I 8740, 8703, 8702, 9761, 9692, 9043,
I 9243, 7425, 8967, 9515, 9038, 12861,
I ~~12949~~, 9760, 12711, ~~11235~~, 11589, 11396

Plate I 13084 July 18, 1895,
An examination of the spectrum of "16, 1902" on this plate shows the Class to be M2.
W. P. Fleming.

I 13136, July 30, 1895
9.62 C 2 V 9.82 9.74 - 9.78 04 04
9.74 V 1 d 9.84

I 14037, Dec. 12, 1895
8.80 b 2 N 9.0

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

20 28 17

✓ I 13181, Aug. 5, 1895 Poor plate
9.84 d 1 V 9.94 10.06 = 10.00 06 06
10.06 V 1 e 10.16

✓ I 18712, Sept. 8, 1897
11.50 l 2 N 11.7

✓ I 15966, Sept. 20, 1896
11.28 K 1 N 11.3

✓ I 14036, Dec. 12, 1895
12.23 m 2 N 12.4

✓ I 18713, Sept. 8, 1897
11.50 l 3 N 11.8

✓ I 13606, Oct. 2, 1895
11.75 m 2 V 11.95 11.93 = 11.94 01 01
11.93 V 3 m 12.23

✓ I 13447, Sept. 5, 1895
10.83 g 1 V 10.93 10.73 = 10.83 10 10
10.73 V 3 h 11.03

✓ I 18432, Aug. 5, 1897
13.21 g 1 N 13.3

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1902phae.proj..934L

October 19, 1903

" 16, 1902 Continued

I 13103, July 26, 1895
9.62 C 1 r 9.72 9.64 = 9.68 04 04
9.64 r 2 d 9.84

I 16761, Dec. 14, 1896
12.23 m 1 N 12.3

I 18110, May 18, 1897 Images poor
11.50 l l 11.80 11.72 08 07
11.23 N 3 r 11.53 11.65 = 11.59 06 06
11.65 V 1 m 11.75

I 18885 September 17, 1897 Dischromatic
var. off edge

I 19206, Oct. 9, 1897 Dischromatic?
12.23 m 1 N 12.3

I 13256, Aug. 19, 1895
10.16 l 3 r 10.46 10.28 = 10.37 09 09
10.28 r 2 f 10.48

I 15498, July 18, 1896
Too poor

I 18576, Aug. 20, 1897
Reg. not on plate

I 15439, July 10, 1896
Extreme edge
Images poor
11.50 l 1 r 11.60 11.45 11.52 .08 .07
11.45 r 3 m 11.75

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1902phae.proj.934L

October 19, 1903

2h 28m7 " 16, 1902, Continued.

✓ I 17911, April 18, 1897

10.16 c 3 v 10.46 10.28 = 10.37 * 09 09

10.28 v 2 f 10.48

✓ I 13158, Aug. 2, 1895

9.62 c 3 v 9.92 9.74 = 9.83 09 09

9.74 v 1 d 9.84

✓ I 18606, Aug. 27, 1897

12.51 0 1 N 12.6

✓ I 13236, Aug. 16, 1895

10.16 c 2 v 10.36 10.18 = 10.27 09 09

10.18 v 3 f 10.48

✓ I 18051, May 4, 1897

10.48 f 1 N 10.5

Au. object near pos. of var. proves by superposition to be a defect

✓ I 13357, Sept. 3, 1895

10.16 c 4 v 10.56 10.48 10.53 = 10.52 04 04 01

10.48 v 0 f 10.48

10.53 v 39 10.83

Plate so badly fogged that comparison is difficult

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

I 14061, Dec. 16, 1895
12.89 f 1 R 12.9

I 18182, June 1, 1897 Yerkes Plate
11.50 l 1 R 11.6

I 13287, Aug. 24, 1895
Trails - too poor

I 15497, July 18, 1896
10.83 q 1 R 10.9

New edge I 17910, April 18, 1897
10.16 l 4 v 10.56 10.38 = 10.47 09 09
10.38 v 1 f 10.48

I 18377, July 30, 1897
11.75 m 2 R 11.9

I 15372, June 26, 1896
11.03 l 3 v 11.33 11.18 = 11.26 07 08
11.18 v 1 k 11.28

I 13275, Aug. 22, 1895
10.16 l 3 v 10.46 10.28 = 10.37 09 09
10.28 v 2 f 10.48

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1002phae.proj.934L

October 19, 1903

D 2817 "16, 1902" Continued

I 17714, March 30, 1897
Trails - not suitable

I 13245, Aug 16, 1895
9.62 c 2 N 9.8

I 17937, April 19, 1897
10.16 e 3 v 10.46 10.28 = 10.37 09 09
10.28 v 2 f 10.48

I 15369, June 26, 1896
11.03 h 2 v 11.23 11.08 11.16 11.06 07 08
11.08 v 2 k 11.28

I 18067, May 7, 1897
11.03 h 2 v 11.23 11.18 = 11.20 03 02
11.18 v 1 k 11.28

I 13304, Aug. 30, 1895
10.48 f 3 v 10.78 10.73 = 10.76 02 03
10.73 v 1 g 10.83

I 13218, Aug. 14, 1895
10.16 e 1 v 10.26 10.08 = 10.17 09 09
10.08 v 4 f 10.48

I 18655, Sept. 5, 1897
12.23 m 1 N 12.3

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

I 15240, June 2, 1896

10.16 c 5 v 10.66 10.48 10.43 = 10.52 14 04 09

10.48 v 0 f 10.48

10.43 v 4 g 10.83

Comparison difficult Images very poor

I 16801, Dec. 17, 1896

12.23 m 1 v 12.33 12.11 = 12.22 11 11

12.11 v 40 12.51

I 18334, July 9, 1897

Trails - too poor

Extreme edge I 15188, May 27, 1896

v 3 g 10.83 10.53

c and f off edge of plate

I 13295 Aug. 27, 1895

10.16 c 5 v 10.66 10.48 10.43 = 10.52 14 04 09

10.48 v 0 f 10.48

10.43 v 4 g 10.83

I 18372, July 30, 1897

11.50 d 1 N 11.6

Image of I 15165, May 23, 1896

of defective 10.16 c 5 v 10.66 10.48 10.43 = 10.52 14 04 09

10.48 v 0 f 10.48

10.43 v 4 g 10.83

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

I 18460, Aug. 6, 1897
11.75 m 1 N 11.8

I 17859, April 15, 1897
10.16 L 3 V 10.46 10.28 - 10.37 - 09 09
10.28 V 2 f 10.48

I 13283, Aug. 25, 1895 Spectrum plate
Too near edge

I 18532, Aug. 13, 1897
13.51 0 2 N 12.7

I 13629, Oct. 5, 1895
11.50 L 1 N 11.6

I 18146, Aug May 25, 1897
11.28 K 1 N 11.3

I 6968, Sept. 10, 1892
11.75 m 1 N 11.8

I 4128, Sept. 2, 1891
Var ff edge

I 15702, Aug. 18, 1896
12.23 m 2 N 12.4

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

I 2527, Dec. 19, 1890
11.50 l, N 11.6

I 1969, October 11, 1890
11.75- m, N 11.8

I 18305, July 1, 1897
12.51 0 2 N 12.7

I 1869, Sept. 25, 1890
Too poor

I 15936, Sept. 11, 1896
11.50 l 3 N 11.8

I 1897, Sept. 29, 1890
11.50 l, N 11.6

I 15330, June 19, 1896
10.83 g 1 V 10.93 10.83 = 10.88 0.5- 0.5-
10.83 V 2 L 11.03

I 13311 Sept. 1, 1895
10.48 f 4 V 10.88 10.83 10.73 = 8 10.81 07 02 08
10.83 V 0 g 10.83
10.73 V 3 h 11.03

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1902phae.proj..934l

October 19, 1903

"16, 1902" Continued

I 18164, May 31, 1897

11.75 m 3 v 12.05 12.03 - 12.04 01 01

12.03 v 2 n 12.23

I 15302, June 30, 1897

9.62 c 2 N 9.8

I 13756, Oct. 30, 1895

Reg. not in plate

I 15297, June 16, 1896 Images poor

10.48 f 4 r 10.88 10.73 = 10.80 08 07

10.73 v 1 g 10.83

I 17680, March 25, 1897

9.62 c 1 v 9.73 9.54 = 9.63 09 09

9.54 v 3 d 9.84

I 13468, Sept. 8, 1895

10.83 g 2 v 11.03 10.93 = 10.98 05 05

10.93 v 1 h 11.03

The following plates do not cover Region

I 18533, 15426, 13166, 18530, 18690, 18656,

13427, 17696, 13052, 18851, 16101, 16102,

13656, 13786, 12950

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AC. 502, Nov. 6, 1899

10.83 g 3 r 11.13 1093 = 10.03, 10 10

10.93 r 1 h 11.03

AC 861, May 21, 1900

10.48 f 2 R 10.6

AC 837, April 28, 1900

Too prox

AC 918, July 9, 1900

9.84 d 2 r 10.04 9.96 = 10.00 04 04

*9.96 r 2 e 10.16

AC 998, Sept. 4, 1900

10.16 e 3 r 10.46 1038 = 10.42 04 04

10.38 r 1 f 10.48

AC 1016, Sept. 25, 1900

11.03 L 1 R 11.1

AC 1170, Jan. 24, 1901

Too prox

Image my prox

AC 1572, June 26, 1901

11.03 h 1 R 11.13

AC 98, Oct. 27, 1898

10.16 L 3 r 10.46 10.28 = 10.37 09 09

10.28 r 2 f 10.48

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AC 359, July 3, 1899
11.03 h 1 N 11.1

AC 392, Aug. 14, 1899
10.48 f 1 N 10.5

AC 470, Oct. 7, 1899
10.16 h 4 V 10.56 10.38 = 10.47 09 09
10.38 V 1 f 10.48

AC 549, Nov. 24, 1899
Class C not available

AC 594, Dec. 15, 1899
10.48 f 1 N 10.5

AC 894, June 21, 1900
10.48 f 1 N 10.5

AC 88, Oct. 31, 1898
9.84 d 2 V 10.04 10.06 = 10.05 01 01
10.06 V 1 h 10.16

AC 939, July 28, 1900
9.62 C 1 V 9.72 9.54 - 9.63 09 09
9.54 V 3 d 9.84

AC 1080, Dec. 2, 1900
12.51 ⊗ 01 N 12.6

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AC 1497, June 3, 1901
10.16 c 4 v 10.56 10.38 = 10.47 09 09
10.38 v 1 f 10.48

AC 1541, June 15, 1901
10.48 f 1 v 10.58 10.53 = 10.56 02 03
10.53 v 3 g 10.83

AC 1668, Aug. 18, 1901
10.48 f 1 N 10.5

AC 79, Oct. 27, 1898
10.16 c 2 v 10.36 10.18 = 10.27 09 09
10.18 v 3 f 10.48

AC 1724, Sept. 7, 1901
10.16 c 2 N 10.3

AC 2789, Aug. 28, 1902
10.16 c 2 N 10.3

AC 2678, July 10, 1902
11.28 k 1 N 11.3

AC 2968, Nov. 2, 1902
11.28 k 2 N 11.4

AC 1957, Nov. 5, 1901
10.48 f 2 N 10.6

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1902phae.proj..934l

October 19, 1903

"16, 1902" Continued

AC 1870, Oct. 16, 1901
11.03 h 1 N 11.1

AC 2734, Aug. 9, 1902
too poor

AC 1797, Sept. 27, 1901
10.83 g 2 N 11.0

AC 1834, Oct 6, 1901
11.03 h 2 N 11.2

AC 1965, Nov. 7, 1901
11.50 h 1 N 11.6

AC 1762, Sept. 21, 1901 Images extremely faint
11.75- m 1 R 11.85

AC 1911, Oct. 26, 1901
10.48 f 3 N 10.7

AC 1824, Oct 4, 1901
11.75-m 2 N 11.9

AC 1748, Sept. 22, 1901
too poor

AC 502, Nov. 6, 1899
10.83 g 2 V 11.03 10.93-10.98 06-05
10.93 V 1 h 11.03

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AC 2888, Oct. 10, 1902
11.75 m 1 N 11.8

AC 2954, Oct. 31, 1902
11.28 k 1 N 11.3

AC 2905, Oct. 17, 1902
11.03 h 1 N 11.1

AC 2722, Aug. 2, 1902
11.03 h 1 N 11.1

AC 1921, Oct. 29, 1901
11.28 k 1 N 11.3

AC 2978, Nov. 7, 1902
11.75 m 1 N 11.8

AC 2697, July 16, 1902
11.50 l 1 N 11.6

AC 2566, Oct. 7, 1902
10.83 g 1 N 10.9

AC 2884, May 28, 1902
11.28 k 2 N 11.4

AC 2022, Nov. 30, 1901
12.51 o 1 N 12.6

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1902phae.proj..934L

October 19, 1903

16, 1902, Continued

AC 2635, June 19, 1902
10.16 L 2 N 10.3

AC 2043, Dec. 4, 1901
11.75 M 1 N 11.8

AC 2784, Aug. 27, 1902
11.28 K 1 N 11.3

AC 2924, Oct. 22, 1902
11.28 K 2 N 11.4

AC 2500, Nov. 22, 1901
10.48 f 3 N 10.7

AC 2895, Oct. 12, 1902
10.16 e 2 N 10.3

AC 1993, Nov. 21, 1901
11.50 L 1 N 11.6

AC 1791, Sept. 26, 1901
10.83 g 2 N 11.0

AC 2353, Feb. 20, 1902
Reg. not on plate

AC 2897, Oct. 14, 1902
11.28 K 4 V 2 11.68 ?
Very poor and faint
Last separated from K. or N. S.

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1902phae.proj..934L

October 19, 1903

16, 1902, Continued

AC 2992, Nov. 14, 1902
10.83 g 2 N 11.0

AC 1538, June 13, 1901
9.84 d 2 N 10.0

AC 2933, Oct. 25, 1902
11.50 l 1 N 11.6

Extremely faint
AC 3027, Nov. 29, 1902
11.28 K 3 R 11.58
l nb separated from k l n.s.

AC 2998, Nov. 17, 1902
10.16 l 3 R 10.4

AC 2791, Aug. 29, 1902
Too faint in Reg. of Var.

AC 1879, Oct. 19, 1901
10.48 f 1 R 10.5

Extreme edge. Images very faint and poor. Obs. not satisfactory
AC 1638, Aug. 4, 1901.
10.16 l 8 r 10.46 10.48 10.63 = 10.52 06 04 11
10.48 v o f 10.48
10.63 v 2 g 10.83

See note Page 213

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1902phae.proj.:934L

October 19, 1903

"16, 1902" Continued

AC 1533, June 12, 1901
Too poor

AC 848, May 5, 1900
10.16 c 2 N 10.3

AC 417, Sept. 5, 1899
10.16 c 2 R 2 10.36
Extremely faint - close to edge

AC 52, Oct. 3, 1898
10.48 f 3 V 10.78 10.83 = 10.80 02 03
10.83 V 0 9
2 n.s.
Faint, near edge

AC 1613, July 14, 1901
9.84 d 2 N 10.0

AC 1639, Aug. 4, 1901
9.84 d 1 N 9.9

AC 1667, Aug. 18, 1901
10.83 9 2 N 11.0

AC 1695, Aug. 29, 1901
9.84 d 2 N 10.0

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AC 1736, Sept. 11, 1901
9.84 d 3 N 10.1

~~A 6146, Sept. 8, 1902~~

A 1599, Aug. 22, 1895
10.16 l 4 V 10.56 10.38 = 10.47 09 09
10.38 V 1 f 10.48

A 805 Aug. 17, 1894
10.48 f 2 V 10.68 10.63 = 10.66 02 03
10.63 V 2 g 10.83

A 6146, Sept. 8, 1902
q 3 r
r 4 s Sigsbee
e 2 t has been changed
t 3 v

Superseded
See p. 195



film side up
Superseded see p. 195

A 6149, Sept. 12, 1902
12.89 f 3 N 13.1

A 6203, Oct. 18, 1902
12.89 p 3 V 13.19 13.01 = 13.10 09 09
13.01 V 2 q 13.21

Mountain; Images on verge of invisibility

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1902phae.proj..934L

October 19, 1903

"16, 1902" continued

A 6173, Sept. 27, 1902
13.21 g 2 N 13.4

A 709, July 9, 1894 Spectrum plate
Too faint

A 2623, Aug. 9, 1897
13.21 g ~~K~~ 3 n 13.5

A 2096, Sept 25, 1896
Spectrum plate - too faint

A M 486, May 29, 1900
Trails - too poor

A.M. 129, Sept. 1, 1899
10.83 g ~~m~~ i K 10.9

A.M. 164, Sept. 27, 1899
9.84 d 3 K 10.1

AM 181, Sept. 30, 1899
10.16 e 4 R 10.56
Extremely faint

AM 1263, May 17, 1902
11.03 k 1 K 11.1

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1902phae.proj..934L

October 19, 1903

"16, 1902" continued

↓ A.M. 1022, Sept. 3, 1901
10.83 g 1 R 10.9

↓ A.M. 1375, June 17, 1902
11.75 m 2 R 11.9

↓ A.M. 876, June 22, 1901
10.16 e 1 R 10.2

↓ A.M. 877, June 22, 1901
Trails not available

↓ A.M. 946 July 25, 1901
11.28 k 3 R 11.58

↓ AM 1347, June 12, 1902
11.28 K 2 R 11.4

↓ AM 811, May 27, 1901
Extremely faint
10.16 e 4 v 10.56 10.38 10.47 09 09
10.38 v 1 f 1048

↓ AM 1634, Oct. 10, 1902
11.28 K 2 R 11.4

↓ AM 1302, June 4, 1902
11.75 m 1 R 11.8

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued

AM 1102, Oct. 31, 1901
11.03 h 2 N 11.2

AM 801, May 22, 1901
9.84 d 3 N 10.1

AM. 653, Sept. 13, 1900
9.84 d 2 N 10.0

AM 1338, June 11, 1902
11.38 K 2 N 11.4

AM 1090, Oct. 5, 1901
10.48 f 1 N 10.5

AM 195, Oct. 4, 1899
10.16 e 3 R 10.46
f n. s.

AM 542, July 23, 1900
8.80 b 7 V 9.50 9.62 9.44 = 9.52 02 10 08
9.62 V 0 c 9.62
9.44 V. 4 d 9.84

AM 1078, Oct. 2, 1901
Trails - too poor

AM 1057, Sept. 13, 1901
Class C, not available

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1902phae.proj..934L

October 19, 1903

"16, 1902", Continued

AM 491, May 31, 1900

Does not cover region

AM 535, July 21, 1900

9.62 C 3 V 9.92 9.74 = 9.83 0909

9.74 V 1 d 9.84

AM 624, Sept. 3, 1900

10.16 2 4 V 10.56 10.38 = 10.47 0909

10.38 V 1 f 10.48

AM 574, Aug. 3, 1900

9.52 V 1 C 9.62 9.52 9.44 = 9.48 04 04

9.44 V 4 d 9.84

b too much bright to compare

AM 1462, July 12, 1902

11.03 h 2 V 11.2

AM 549, July 24, 1900

9.52 V 1 C 9.62 9.52 9.54 = 9.53 01 01

9.54 V 3 d 9.84

f incomparable

AM 1487, July 9, 1902

10.48 f 3 V 10.7

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1902phae.proj..934L

October 19, 1903.

"16, 1902," Continued

AM 16, July 26, 1899
11.03 L 1 N 11.1

AM 1690, Nov. 18, 1902
10.16 L 1 N 10.2

AM 1590, Sept. 30, 1902
10.48 f 1 N 10.5

AM 1416, July 2, 1902
10.83 g 1 N 10.9

AM 1288, May 28, 1902
11.28 K 3 V 11.58
Lost separation from K on n.s.

AM 30, July 29, 1899
10.83 g 1 N 10.9

AM 1540, Sept. 16, 1902
10.48 f 3 N 10.7

AM. 1271, May 26, 1902
11.28 K 1 N 11.3

AM 464, May 8, 1900
10.48 f 2 N 10.6

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1902phae.proj..934L

October 19, 1903

"16, 1902" Continued.

AM. 153, Sept. 15, 1902

10.48 f 1 N 10.5

AM 29, July 29, 1900

10.48 f, 1 N 10.5

AM 890, June 25 -

10.83 g 1 V 10.93 10.73 = 10.83 10 10

10.73 V 3 h 11.03

AM 600, Aug. 30, 1900

10.16 e 3 V 10.46 10.28 = 10.37 09 09

10.28 V 2 f 10.48

AM 517, June 27, 1901

10.16 e 1 N 10.2

AM 218, Oct. 13, 1899

10.16 e 2 V 10.36 10.18 = 10.27 09 09

10.18 V 3 f 10.48

AM 122, Aug. 26, 1899

10.83 g 2 V 11.03 10.93 = 10.98 05 05

10.93 V 1 h 11.03

~~AM 1003, Aug 22, 1901~~

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1902phae..proj..934L

October 20, 1903

"16, 1902" Continued

AM 974, Aug. 8, 1901

11.03 h 1 N 11.1

AM 926, July 22, 1901

Trails, not suitable

AM 871, June 21, 1901

10.48 f 4 V 10.88 10.83 10.73 = 10.81 07 02 08

10.83 V 0 q 10.83

10.73 V 3 h 11.03

AM 233, Oct. 17, 1899

10.16 e 3 V 10.46 10.38 = 10.42 04 04

10.38 V 1 f 10.48

Images faint and poor

AM 518, June 27, 1900

10.48 f 3 V 10.78 10.73 = 10.76 02 03

10.73 V 1 q 10.83

Extremely faint and difficult

AM 862, June 20, 1901

10.83 q 1 V 10.93 10.73 = 10.83 10 10

10.73 V 3 h 11.03

AM 54, Aug. 3, 1899

11.03 h 1 N 11.1

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1902phae.proj..934L

October 20, 1903

"16, 1902" Continued

AM 103, Aug. 21, 1899
10.48 f 3 N 10.7

AM 1003, Aug. 22, 1901
11.28 K 3 v? 11.58
K is faintly concealed by the trail of sudden star. l not separated from K. m not seen. v on the verge of invisibility

AM 950, Aug. 2, 1901
11.50 L 1 v? 11.60
m m.s.
Images very faint

AM 38, Aug. 1, 1899
11.03 L 1 N 11.1

I 26023, Nov. 10, 1900
12.51 0 2 N 12.7

I 27792, Oct. 16, 1901 Spectrum plate
10.83 g 1 N 10.9

I 27646, Sept. 30, 1901
9.84 d 5 N? 10.3
e and f ff plate - g m.s.

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1902phae.proj..934L

October 20, 1903

"6, 1902" Continued

I 23645, Sept. 23, 1899
Reg. not on plate

I 23107, June 30, 1899 Spectrum plate
9.84 d 3 V 10.14 Evidently the wrong star was observed here. See page 215
d n.s.

I 30829, Sept. 5, 1903
11.75 m 2 V 11.95 11.93 = 11.94 01 01
11.93 V 3 m 12.23

I 27642, Sept. 30, 1901
11.75 m 1 N 11.8

I 25970, Oct. 20, 1900
12.23 m 1 V 12.33 12.11 = 12.22 11 11
12.11 V 4 0 12.31

I 23694, Sept. 30, 1899
Reg. not on plate

I 23584, Sept. 20, 1899 near edge
10.16 d 2 V 10.36 10.18 = 10.27 09 09
10.18 V 3 f 10.48

I 27703, Oct. 5, 1901. Extreme edge
12.23 m 2 N 12.4

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1902phae.proj..934L

October 20, 1903

"16, 1902" Continued

I 23241, July 27, 1899
12.23 n 2 v 12.43 12 21 = 12.32 ii ii
12.21 v 30 12.51

I 25167, April 14, 1900
Does not cover region

I 27754, Oct. 8, 1901 A very fine plate
13.21 g 1 N 13.3

I 30808, Sept. 3, 1903
11.03 k 1 N 11.1

I 30805, Sept. 3, 1903
11.28 k 1 N 11.3

I 22876, May 12, 1899 Spectrum plate
10.48 f 2 N 10.6

I 21463, Oct. 20, 1898 Spectrum plate
10.48 f 2 v 10.68
g n.s.

I 21244, Sept. 27, 1898. Extreme edge of plate
11.50 l 2 v 11.70 1165 = 11.68 02 03
11.65 v 1 ne 11.75

I 30804, Sept. 3, 1903
11.28 K 2 N 11.4

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1902phae.proj.0341

October 20, 1903

"16, 1902," Continued

I 30148, March 5, 1903

10.83 g 1 V 10.93 10.83 = 10.88 05 05

10.83 V 2 L 11.03

I 21433 Oct. 17, 1898

11.03 L 1 V 11.13 10.98 = 11.06 07 08

10.98 V 3 K 11.28

I 29780, Jan. 1, 1903 Edge of Plate

10.48 f 1 V 10.58 10.53 = 10.56 02 03

10.53 V 3 g 10.83

I 30803 Sept. 3, 1903

11.28 K 1 V 11.38

L on S.

Extremely faint

I 29004, July 12, 1902

13.21 g 2 V 13.41

I 27989 Nov. 21, 1901

12.89 f 1 N 12.9

I 30697 Aug. 10, 1903

12.57 02 N 12.7

I 30807 Sept. 3, 1903

11.03 h 2 N 11.2

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1902phae.proj..934L

October 20, 1903

"16, 1902" Continued

I ~~23118~~, 30806, Sept. 3, 1903
11.03 h 1 N 11.1

I 23030, June 14, 1899
12.51 0 1 V 12.6

I 25953, Oct. 19, 1900
12.23 m 2 V 12.43 12.21 = 12.32 11 11
12.51 V 30 12.51

I 30245 March 25, 1903
11.50 k 5 V ~~12.00~~ 11.50 11.75 11.83 = 11.84 14 11 03 ~~16 19~~
11.75 V 0 m 11.75
11.83 V 4 m 12.23

I 17670, March 25, 1897
9.62 C 1 V 9.72 9.54 = 9.63 0909
9.54 V 3d 9.84

I 28198, Jan. 4, 1902
11.28 K 2 N 11.4
The film is in poor condition in the region of the variable. I am not certain that it is not on the plate. It must certainly be fainter than K

I 30835, Sept. 8, 1903
12.23 m 1 V 12.33 12.11 = 12.22 11 11
12.11 V 40 12.51

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1902phae.proj..934L

October 20, 1902

"16, 1902" Continued

I 30696, Aug. 10, 1903

12.33 m 3 V 12.5

I 25719, Sept. 1, 1900

10.16 e 5 r 10.66 10.48 10.43 = 10.52 14 04 09

10.48 r 0 f 10.48

10.43 r 49 10.83

I 30837, Sept. 8, 1903

11.75 m 2 r 11.95 11.93 = 11.94 01 01

11.93 r 3 m 12.13

I 30720, Aug. 15, 1903

12.57 0 1 r 12.61 12.69 = 12.65 04 04

12.69 r 2 p 12.89

I 30131, Feb. 28, 1903

10.48 f 3 r 10.78 10.73 = 10.76 02 03

10.73 r 1 g 10.83

I 30827, Sept. 8, 1903

11.75 m 1 r 11.85 11.93 = 11.89 04 04

11.93 r 3 m 12.13

I 30716, Aug. 15, 1903

12.57 0 3 r 12.81 12.79 = 12.80 01 01

12.79 r 1 p 12.89

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1902phae.proj..934L

October 20, 1903

"16, 1902" Continued

~~I 29193 Aug. 30, 1902~~
~~11.30 l 2 A 11.7~~

I 30802, Sept. 3, 1903
11.75 m, N 11.8

I 29192, Aug. 30, 1902
12.51 0 1 N 12.6

I 30687, July 31, 1903
12.89 p x 4 v 13.29 13.11 = 13.20 09 09
13.11 v 1 q 13.21

I 30247, March 28, 1903
11.50 l 3 v 11.80 11.65 = 11.7^{2} 08 07
11.65 v 1 m 11.75

I 30772, Aug. 24, 1903
12.51 0 1 N ? 12.6
An object in the position of the variable does not look like a star image and is not comparable with other images

I 25732, Sept 2, 1900
10.16 l 5 v 10.66 10.48 10X^{5}3 = 10.56 10 08 03
10.48 v 0 f 10.48
10X^{5}3 v 3 q 10.83

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1902phae.proj..934L

October 20, 1903

"16, 1902" Continued

I 28997, July 12, 1902
13.21 g 1 N 13.3

The following plates do not cover region:-

I 25840, 29153, 25879, 25500, 25578,
I 25956, 23118, 30807, 23644, 27545,
I 23585, 23722, 23740, 23152, 25162,
I 23673, 27468, 23694, 26010, 26103,
I 27546, 27547, 23645, 27777, 23756

A 855, Sept. 11, 1894
8.80 b 2 r 9.00 9.52 = 9.26 26 26
9.52 v 1 e 9.62

Incorrect
See page 214

Ann 88, Aug. 9, 1899
11.75 m 1 N 11.8

Ann 1597, Oct. 4, 1902
11.28 K 1 N 11.3

Ann 1503, Aug 14, 1902
11.28 K 3 N 11.5
h not separated from K

Ann 1037, Sept. 5, 1901
10.48 f 2 K 10.6

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1902phae.proj..934L

October 20, 1903

"6, 1902" Continued

✓ aC 1789, Sept. 6, 1901
10.48 f / W 10.5

Continued page 210

See also page 195

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1902phae.proj..934L

October 20, 1903

Wolf - Fleming Var. cont. from p. 125

Plate I 30984, Oct. 13, 1903

m 1 v

v 2 m

Extremely faint

I 30983, Oct. 13, 1903

Spectrum plate - not seen

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1902phae.proj..934L

October 21, 1903

15, 1903" Cerulski 021281
Further observations. See page 139

The variable is seen bright on the following plates: +

I 5157, December 13, 1891 Exp. 11 bright
I 13593 Oct. 18, 1895 Exp. 14 faint
I 13598 Oct. 1, 1895 Exp. 14 faint
I 19561 Nov. 10, 1897 Exp. 16 bright

On the following plates it is not seen.
I 2872 July 20, 1891 Exp. 11
I 9787 Oct. 25, 1893 Exp. 13m
I 23565 Sept. 17, 1899 Exp. 10 - An excellent plate
I 23592 Sept. 20, 1899 Exp. 11m

Position marked on I ~~9953~~ 5157

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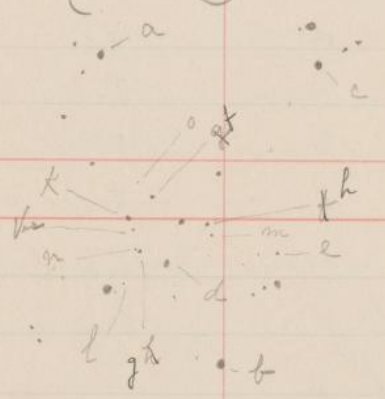
1902phae.proj..934L

October 21, 1903

Sutugue's "Nova" 10, 1903
$18^h 48^m 42^s$ $+32^\circ 39'.0$ (1855)

Plate I 22801

Var	O I V
a	7.8
b	8.3
c	8.6
d	8.7
e	9.0
h f	9.4
f g	9.3
g k	9.4
k	9.8
l	9.9
m	10.1
n	10.2
o	10.5



For faint stars see book 5 p. 58

I 15422

Var	9.3
a	7.1
b	7.8
c	8.0
d	8.3
e	8.5
h f	8.9
f g	8.8
g k	8.8
k	9.3
l	9.5
m	9.7
n	9.7
o	10.1

Image unfinished

Images from

Near edge of plate

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1902phae.proj..934L

October 21, 1903

Seelige's "Nova" 10, 1902 Continued

Plate I 1892

Var	m.s.
a	7.6
b	8.0
c	8.2
d	8.2
e	8.6
h f	8.9
f g	8.9
g k	9.0
k	9.2
l	9.2
m	9.7
n	9.8
o	10.2

An excellent plate

Orig Seq. (13k+8) =

a	=	h	= g
b	= b	k	= k
c	=	l	= l
d	= d	m	= m
e	=	n	= n
f	= h	o	= o
g	= f		

Plate I 25966

Var	m.s.
a	7.2
b	7.8
c	8.0
d	8.1
e	8.7[6]
h f	8.9
f g	8.9
g k	8.8
k	9.2
l	9.4
m	9.8
n	10.0
o	10.4

This sequence was measured in Miss Leland's book 28. pp 36-38
It had to be changed because there were but one too catalogue stars
For last stars see Book 5 p 58

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1902phae.proj..934L

October 21, 1903

"16, 1902" Cerulli DM +16° 4290

Estimates by Argelander's method of the brightness of faint comparison stars added to sequence.

α 6146 Sept. 8, 1902

p 3 q
q 3 r
r 2 s
s 4 t
t 3 u ~~v~~



I 30687

p 4 q
q 2 r
r 3 s
s 3 t? Identity of t doubtful

Bright stars of sequence pp 133, 134.
Estimates of brightness of Var pp 142 - 190 also p 210 ff

For repeated comparison see page 220

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1902phae.proj..934L

October 24, 1903

See page 129

Examination of plates for "6, 1903"

$5^h 47.^m3$ $+15° 42'$ (1900

5 44.7 +15 41 (1855)

Originally I mistook Σ Tauri for this star. Now I have identified it and marked it on plate I 17403

Examined on eight plates

	I 396,	Dec. 27, 1889,	Exp. 60^m	faint:
Edge of plate	I 3063,	Feb. 13, ~~1901~~ 1891,		med
	3133	Feb. 22, ~~1901~~ 1891	Exp 10^m	faint
Extreme edge	5371	Jan. 8, 1892	" 10	faint
Edge of plate	7935	" 21 1893	" 12	faint?
Extreme edge	7965	" 25 1893	" 15	bright
Extreme edge	10533	Jan. 22, 1894	" 10	faint?
	17403	Feb. 24, 1897	" 10	bright

Examining again plates 7935 and 7965, I find the images on both poor. On 7935 it seems to be certainly fainter than on 7965, but not so faint as on 5371. The extreme range observed does not exceed four grades

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1902phae.proj..934L

October 29, 1903

"6, 1903" Examination of Preceding Page Continued

Plates	I 25243	Jan 13, 1902	Exp 14m	med
	I 20310	Mar 3, 1898	Exp 13	med
	I 22096	Jan 1, 1899		med
	I 24219	Dec 12, 1899	Exp 10	med
	I 24340	Dec 28, 1899	79	med
	I 26357	Dec 29, 1900	10	med
	I 26474	Jan 13, 1901	18	bright?
	I 17403	Feb 24, 1897		bright
	I 4987	Dec 17, 1891 1901		Irr near edge
	I 4705	Nov 3, 1891		
	I 5371	Jan 8, 1892		faint
	I 3133			med? Irr near edge
	I 396	Dec 27, 1889		med
	I 10533	Jan 22, 1894		Irr near edge
	I 7935	Jan 21, 1893		med
Very near edge.	I 7965	Jan 25, 1893		bright
" "	I 3063	Feb 13, 1891		med

These observations confirm those of the preceding page. The latter plates, at the head of this list show no certain variation

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1902phae.proj..934L

November 4, 1903

Cirski's
~~Andromeda~~ Vac "21, 1902" 20h 13.8m +20° 39' (1855

Re-examination of certain plates

Plate I 16258, Oct. 24, 1896

Near edge of plate 11.33 k 1 v 11.43 11.58 = 11.50 .07 .08
11.56 v 2 l 11.78

Extreme edge I 21135, Aug. 28, 1898
Very uncertain. 10.83 g 2 v 11.0
Images very poor h ns.

I 15931, Sept. 11, 1896
Too near edge

I 27642, Sept. 30, 1901
10.83 g 1 v 10.93 10.96 = 10.94 .01 .02
10.96 v 1 h 11.06

I 13486, Sept. 13, 1895
9.87 d 1 N 9.9

Near edge of plate I 25970, Oct. 20, 1900
11.06 h 3 v 11.36 11.60 = 11.48 .12 .12
11.60 v 5 m 12.10
Images elongated. k and l not separated

near edge I 29004, July 12, 1902
11.06 h 5 v 11.56 11.70 = 11.63 .07 .07
11.70 v 4 m 12.10
k and l not separated. Images elongated

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1902phae.proj.:934L

November 4, 1903

"2, 1903 - Cont.

Edge of plate / Images very poor

✓ Plate I 13295, Aug. 27, 1895
11.06 h 1 v 11.1
K n s.

Near edge / Images clear

✓ I 16111, Oct. 8, 1896
11.33 K 2 v 11.53 11.62 = 11.58 .05 .04
11.62 v 2 L 11.82

✓ AC 2205, Jan. 17, 1902 does not cover eq

Extreme edge

✓ I 13304, Aug. 30, 1895
10.83 g 3 v 11.13 10.76 = 10.94 .19 .18
10.76 v 3 L 11.06
Estimate extremely doubtful. Image very poor point

Extreme edge

✓ I 15929, Sept. 11, 1896
10.83 g 1 v 10.93 10.76 = 10.84 .09 .08
10.76 v 3 L 11.06
Estimate difficult and uncertain. Images poor

Near edge

✓ I 27646, Sept. 30, 1901
11.06 L 1 v 11.16 11.03 = 11.10 .06 .07
11.03 v 3 K 11.33
Trails. Images poor. Est. uncertain

Extreme edge of plate

✓ I 13487, Sept. 13, 1895
10.83 g 1 v 10.93 11.03 = 10.98 .05 05
~~11.03~~ 33
~~10.76~~ v 3 K 11.06
Spectrum of h not visible from a

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1902phae.proj..934L

November 4, 1903

"2, 1902" Continued

I 21121, Aug. 27, 1898
11.82 l 3 v 12.12 11.90 = 12.01 .11 .11
11.90 v 2 m 12.10

Extreme edge of plate Images poor
I 16008, Sept. 23, 1896
11.06 l 5 v 11.56 11.90 = 11.73 .17 .17
11.90 v 2 m 12.10
K and L not separated

I 22876, May 12, 1899 Specimen plate
10.83 g 1 K 10.9

Extreme edge of plate
I 13468, Sept. 8, 1895
10.83 g 1 v 10.93 10.76 = 10.84 .09 .08
10.76 v 3 L 11.06

Extreme edge of plate. Images very poor
A I 13311, Sept. 1, 1895
11.06 L 1 v 11.16 11.76 = 11.46 .30 .30
11.76 v 4 m 12.10
K and L not separated

I 16133, Oct. 9, 1896
10.16 L 4 v 10.56 10.44 = 10.50 .06 .06
10.44 v 1 f 10.54

A 6146, Sept. 8, 1902
reg. not on plate

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1902phae.proj.:934L

November 4, 1903

"21, 1902" Continued

Extreme edge of ray from plate uncertain.

I 13387, Sept 3, 1895
10.83 g 1 V 10.93 10.96 = 10.94 .01 .02
10.96 V 1 K 11.06

I 15900, Sept. 6, 1896
Film defective in neg. of Var.

I 22896, May 23, 1899
11.82 L 2 V 12.02, 11.90 = 11.96 .06 .06
11.90 V 2 m 12.10

Extreme edge. Images ray from. Est. uncertain

I 16001, Sept. 23, 1896
10.83 g 2 V 11.03, 11.06, 11.23 = 11.11 .08 .05 .12
V 0 K 11.06
11.23 V 1 K 11.33

Extreme edge. Images ray from

I 22789, April 27, 1899
12.36 m 2 V 12.56 12.62 = 12.59 .03 .03
V 0 0 12.62
p n.s.

Extreme edge

I 13275, Aug. 22, 1895
10.54 f 1 V 10.64 10.63 = 10.64 .00 .01
10.63 V 2 g 10.83

I 16309, Oct. 26, 1896
Spectra. two near edge

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1902phae.proj..934L

November 4, 1903

"21, 1902" Continued

Plate I 5930 Sept. 11, 1896
Extreme edge - too poor

New edge I 2899 7 July 12, 1902
11.06 h 1 v 11.16, 11.13 = 11.14 .02 .01
11.13 v 2 k 11.83

I 1325 7 Aug. 26, 1895
Extreme edge - hazy - too poor

Extreme edge I 5899 Sept. 6, 1896
K 11.06 h 6 v 11.66 12.00 = 11.83 .17 17
12.00 v 1 m 12.10
K + L not separated

Extreme edge I 1344 7 Sept. 5, 1895
Very uncertain 11.06 h 3 v 11.36 11.90 = 11.63 .27 .27
11.90 v 2 m 12.10
K + L not separated

Extreme I 6801, Dec. 17, 1896
edge. Images 10.839 1 v 10.93 10.86 = 10.90 .03 .04
very poor 10.86 v 2 h 11.06

I 2900 1, July 12, 1902
Extreme 11.06 h 4 1 v 11.16 11.26 = 11.21 .05 05
edge of plate 11.26 v 9 m 12.10
K + L not separated

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1902phae.proj.:934t

November 4, 1902

"21, 1902 Cont

I 16133 compared

10.16 L 4 V 10.56 10.54 10.63 = 10.58 02 .04 05

V of 10.54

10.63 V 2 g 10.83

I 16001

V 0 g 0 h 0 K

Comparison impossible

I 13447

No accurate mens. possible

I 29004, July 12, 1902

11.06 L 4 V 11.46 11.60 = 11.53 .07 07

11.60 V 5 K^m 12.10

I 16111, Oct. 8, 1896

11.33 +2.10 K 1 V 11.43 11.62 = 11.52 .11 10

11.62 V 2 l 11.82

I 15929, Sept. 11, 1896

Comparison impossible

I 16008, Sept. 23, 1896

11.06 h 5 V 11.56 11.70 = 11.63 .07 .07

11.70 V 4 m 12.10

Very

uncertain I 15899

11.06 L 7 V 11.76 11.90 = 11.83 .07 .07

11.90 V 2 m 12.10

The above measures show no important variation from my previous measures.

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1902phae.proj..934L

November 5, 1903

"21, 1902" Continued

Plate I 13304 Aug. 30, 1895
I 13387 Sept. 3, 1895
I 13447 Sept. 5, 1895

On each of the above plates the variable has a very hazy, ill defined image, very difficult of compaison with the clearer images of the comparison stars. The magnitude appears to be about the same on all three. The relative differences of the compaison stars are well maintained in spite of the unfavorable situation near the edge of the plate. It is impossible for me to decide whether the variable is brighter or fainter than L. My estimates vary at different times.

Plate I 13311, Sept. 1, 1895

The image of the variable is somewhat better defined on this plate and is certainly fainter than L.

I believe that the magnitude on all four of the above plates is about the same.

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1902phae.proj.:934t

November 5, 1903

"21, 1902" Continued

Plates I	28997	July 12, 1902	S.Y $16^h 54^m$
	29001	July 12, 1902	18 24
	29004	July 12, 1902	20 26

Careful comparison of the above three plates leaves no question in my mind of the rapid fading of light plate 29001 occupying an intermediate position between the other two, and not nearer 28997. I have compared the variable with several adjacent stars, as well as with the regular comparison stars

Remeasured Dec. 31 Near edge

Plate I 16142

11.06 k 2 v 11.26 11.13 = 11.20 06 07

11.13 v 2 k 11.33

Plate I 16111, JD 3841 $23^h 17^m$

I 16133 3842 21 52

I 16142 3842 0 21

On the above plates the field is near the edge, but on all the images are clear and the sequence maintains its normal aspect. The measures needed by Miss Lamson and confirmed by myself are further confirmed by direct inspection of the three plates, which certainly show a gain of nearly a magnitude in $22^h 35^m$ of which gain about $\frac{3}{4}$ three fourths is lost in the succeeding $2^h 29^m$

Dec. 31, 1903

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1902phae.proj..934L

November 6, 1903

"21, 1902" Continued
Remeasurements Continued

Excellent plate

✓ A 4648, Sept. 3, 1900
11.82 k2 v 12.02 12.00 = 12.01 .01 .01
12.00 v1 m 12.10

✓ AC 1724 Oct. 4, 1901
10.54 f 3 v 10.64 10.63 = 10.64 .00 .01
10.63 v2 g 10.83

Near edge mountain Image very poor

✓ AM 624, Sept. 3, 1900
11.06 k2 v 11.26 11.33 = 11.30 .04 03
v0 k 11.33
m too faint for comp. k1 not separated from k

✓ I 25719, Sept. 1, 1900
11.82 k1 v 11.92 11.90 = 11.91 .01 .01
11.90 v2 m 12.10

~~I 17912, April 18, 1897~~

Near edge Images faint

✓ I 27754, Oct. 8, 1901
11.06 k4 v 11.46 11.60 = 11.53 .07 .07
11.60 v5 m 12.10

Exterior edge

~~AC 1834, Oct. 9, 1896~~ ✓ I 16142, Oct. 9, 1896
11.06 k1 v 11.16 11.13 = 11.14 .02 .01
11.13 v2 k 11.33.

✓ AC 1834 Oct. 6, 1901
10.54 f 3 v 10.84 10.63 = 10.74 .10 .09
10.63 v2 g 10.83

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1902phae.proj.:934L

November 6, 1902

21, 1902, Continued

Estimates from

I 17859 April 15, 1897

12.10 m 1 v 12.20 12.06 = 12.13 07 .07

12.06 v 3 m 12.36

AC 1870, Oct. 16, 1901

10.54 f 5 v 11.04 10.83 10.86 = 10.91 .13 .08 .05

v 0 g 10.83

10.86 v 2 h 11.06

Ann 600, Aug. 30, 1900

11.06 h 2 v 11.26

h ns.

I 20732, Sept. 2, 1900

11.82 l 1 v 11.92, 11.90 = 11.91 .01 .01

11.90 v 2 m 12.10

I 17910, April 18, 1897

11.33 k 1 v 11.43 11.62 = 11.52 .09, .10

11.62 v 2 l 11.52

Comparison of plates I 17859 and 17910 strikingly confirm the gain of about .6 of a magnitude in the three days

Direct comparison of plates I 27754 and AC 1834 confirm the loss of .5 of a magnitude in two days

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1902phae.proj..934L

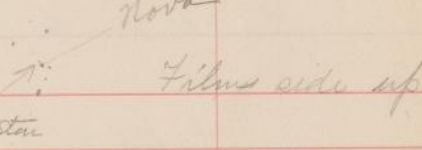
November 13, 1903

Examination of plate for position of faint star near Nova Geminorum.

The only plate I can find showing the faint star unmistakably is I 26070. Nov. 12, 1900

On plate I 30264, April 1, 1903, the Nova is rather near the edge of the plate, and in that position still to be right to allow a star so faint and so close to be seen.

Close examination of plate I 30263, shows a faint object very slightly north of and preceding Nova. The object is so faint to be seen when the plates are superposed but visual inspection suggests that it may be the same as the star on Plate I 26070.



The object on plate I 26070 is certainly not in the position of the Nova

On plate C 14321, there appears to be a faint star near the position, and in fact a triangle of three stars On C 14319 there appear to be two or three images but they cannot be distinctly seen

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1902phae.proj..934L

November 14, 1903

Examination of plates for SD −11° 4226 (16h 48m 1900)
16h 45m 7.2 −11° 25′.8 Suspected var by Ms. J.A. Dunne

Arte	I 939	April 1, 1890	Exp. 15m
	I 1355	June 28, 1890	10
	B 6076	May 28, 1891	12
	B 13986	July 8, 1895	10
	AM 61	Aug. 4, 1899	60
	AM 72	Aug. 7, 1899	60
	AC 808	Apr. 9, 1900	66
	AM 841	June 7, 1901	61
	AM 987	Aug. 12, 1901	66
	AM 1325	June 10, 1902	60
	AM 1350	June 13, 1902	61
	AM 1381	June 24, 1902	62
	AM 1396	June 26, 1902	60
	AM 1516	Aug 15, 1902	60
	AM 3602	May 25, 1903	65
	AC 3777	July 24, 1903	83

Examination of the above plates shows no variation in SD −11° 4226. It is always about a grade fainter than SD −11° 4234 7.5 and about a grade brighter than SD −12° 4598 7.0

See also page 219

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1902phae.proj..934L

November 17, 1903

Estimates of brightness of Cuneki's Var. 16, 1902
Cont from page 190 DM +16° 4290

I 4384, Sept. 30, 1891
10.48 f 2 N 10.6

I 30922, Sept. 22, 1903
11.56 l 4 N 11.90 11.75 11.73 = 11.79 11,04 06
11.75 r 0 m 11.75
11.73 r 5 N 12.23

I 6852, ~~Sept~~
Does not form neg

I 6874, Sept. 6, 1892 not on plate

I 16196, Oct. 19, 1896
11.75 m 2 N 11.9

I 22900, May 23, 1899
11.50 l 3 N 11.8

I 18305, taken July 1, 1897
13.21 q 2 N 13.4

I 29152, Aug. 23, 1902
does not form neg.

I 29193, Aug. 30, 1902
11.03 l 1 N 11.1

AC 4058, Oct. 19, 1903
10.83 g 3 N 11.13 10.93 = 11.03 10 10
10.93 r 1 h 11.03

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1902phae.proj..934L

November 17, 1903

"16, 1902" Cont.

Nearly AC 4165, Nov. 4, 1903
10.16 c l v 10.26
f ns.

" " AC 3708, July 27, 1903
11.03 b l R 11.1

" " AC 3861, Aug. 24, 1903
10.16 c l R 10.2

" " AC 3929, Sept. 13, 1903
9.84 d l R 9.9

" " AC 3941, Sept. 15, 1903
Two psa

" " AC 3995, Sept. 26, 1903
10.48 f 2 R 10.6

" " AC 3708, May 31, 1903
10.48 f 2 R 10.6

Very m- AC 3736, June 26, 1903
entire tail
Curves 10.83 g 3 v ? 11.13 10.93 = 11.03. ? 10 10
a little pa + faint
10.93 v l h ? 11.03

AC 3775, July 23, 1903
10.48 f l R 10.58

AC 3819 Aug. 12, 1903
Images faint 11.28 R 2 v 2 11.48 ?
and foul. Obs.
uncertain l ns.

AC 3853, Aug. 21, 1903
10.83 g 2 R 11.0

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1902phae.proj..934L

Nov. 17, 1903

"16, 1902" Cont.

AC 3562, Aug. 24, 1903
10.48 f 1 N' 10.5

AC 3908, Sept. 8, 1903
11.03 h 2 N 11.2

AC 3931, Sept. 13, 1903
11.03 h 2 N 11.2

AC 3974, Sept. 23, 1903
9.84 d 1 N 9.9

AC 3996, Sept. 26, 1903
11.03 h 1 N 11.1

AC 3404, March 6, 1903
10.48 f 1 N 10.5

AC 3571, April 29, 1903
Too poor

AC 3353, Feb 23, 1903
9.62 c 2 N 9.8

AC 3594, May 6, 1903
Too poor

AC 4046, Oct. 15, 1903
10.48 f 1 N 10.5

AC 3730, June 23, 1903
10.48 f 2 N 10.6

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1902phae.proj..934l

November 17, 1903

"16, 1902" Cont.

AC 4009 Sept. 29, 1903
11.03 L i N 11.1

AC 3804 Aug. 7, 1903
9.84 d i N 9.9

AC 3675, May 23, 1903
10.83 g i N 10.9

AC 3579 Sept. 2, 1903
10.48 f i N 10.5

AC 3767, July 15, 1903
Too poor in neg. of Ves

AC 3844 Aug. 18, 1902
Too poor

AC 3946 Sept. 18, 1903
10.16 e i N 10.2

AC 4031 Oct. 6, 1903
10.48 f i N 10.5

AC 1638 Aug. 4, 1901 Remeasured Nov. 18
10.83 g i N 10.9
A defect close to pos. of Ves. looks like star image, but does not coincide with pos.

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1902phae.proj..934L

November 18, 1903

"16, 1902" – Re-examination of some plates

First measurement of this plate

I 29001 July 12, 1902
13.21 q 1 V 13.31
2 ms.

A 855 ~~885~~, Sept 11 ~~23~~, '94
9.84 d 2 V 10.04 10.06 10.05 01 01
10.06 V 1 d 10.16

The first measure (p. 189) is evidently incorrect. Probably the comparison stars were wrongly recorded

I 15373, June 26, 1896
11.03 h 2 V 11.23 11.18 = 11.20 03 02
11.18 V 1 K 11.28

I 3876, July 21, 1891
10.83 q 2 V 11.03 10.93 = 10.98 05 05
10.93 V 1 h 11.03

I 17668, March 25, 1897
9.62 C 1 V ~~9~~ 6.72 ~~9~~ 6.74 = ~~9~~ 6.73 01 01
~~9~~ 6.74 V 1 d 9.84

First meas. p. 142
Evidently a mistake, as V is certainly seen, though faint

I 3874, July 21, 1891
11.03 h 1 V 11.13
K n.s.

I 15372, June 26, 1896
11.03 h 2 V 11.23 11.18 = 11.20 03 02
11.18 V 1 K 11.28

Images faint
Obs difficult

I 30720, Aug. 15, 1903
12.51 04 V 12.91 12.79 = 12.85 06 06
12.79 V 1 h 12.89

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1902phae.proj..9341

November 18, 1903

16, 1902" Cont.

I 14814, April 5, 1896
11.75 m 2 v 11.95 11.93 = 11.94 01 01
11.93 v 3 m 12.23

I 23107, June 30, 1899 Spectrum plate
10.83 g 1 K 10.9

Images
extremely
faint

I 19683, Dec. 2, 1897
11.50 L 4 v 11.90 11.75 11.73 = 11.79 11 04 06
v 0 m 11.75
11.73 v 5 m 12.23

I 15371, June 26, 1896
10.48 f 1 K 10.5

I 14813, April 5, 1896
11.75 m 1 v 12.15 12.13 = 12.14 01 01
12.13 v 1 m 12.23

Images
very faint

I 19682, Dec. 2, 1897
11.75 m 2 v 11.95 12.03 = 11.99 04 04
12.03 v 2 m 12.23

I 16761, Dec. 14, 1896
12.23 h 2 K 12.4

I 15369, June 26, 1896
11.03 h 2 v 11.23 11.18 = 11.20 03 02
11.18 v 1 K 11.28

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1902phae.proj..934L

November 18, 1903

16, 1902" Cont.

I 30883, Sept. 8, 1903

11.75 m2 v 11.95 11.93 = 11.94.01 01

11.93 ~~12.03~~ v 3m 12.23

I 14812, April 5, 1896

12.23 m1 v 12.33 12.11 = 12.22 11 11

12.11 v 40 12.51

~~I 11426, Sept. 11, 1894~~

~~v2v~~ ~~v0d~~ ~~v3t~~ ~~plates for L~~ ~~see next page~~

I 13387, Sept. 9, 1895

Too little light to-day

I 30835, Sept. 8, 1903

Geol. difficult 11.75 m4 v 12.15, 12.23 12.57 01 = 12.30 13 .02 .10 .12 ~~15~~ 07 ~~21~~

v0m 12.23

12.01 v 50 12.51

I 11254, July 9, 1894

Spectrum plate - too poor

I 27547, Sept. 24, 1901

Reg. not on plate

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1902phae..proj..934L

November 18, 1903

16, 1902" Cont

√ I 30829, Sept. 8, 1903

11.75 on 3 V 12.05 12.03 = 12.04 01 01

12.03 V 2 on 12.23

√ I 30716, Aug. 15, 1903

Image very faint 12.89 f 1 V 12.99 12.91 = 12.95 04 04

12.91 V 3 f 13.21

√ aC 418, Sept. 5, 1899

10.48 f 1 N 10.5

A defect on plate about pos. 7 Dec. may possibly hide it, but it must be fainter than f

√ aC 94, Nov. 1, 1898

Reg. not on plate

√ aC 52, Oct. 3, 1898

11.03 f 1 N + 11.1

√ aM 218, Oct. 13, 1899

10.16 f 1 V. 10.26 10.28 = 10.27 01 01

10.28 V 2 f 10.48

~~aC 94, July 4, 1900~~

Reg. not on plate

√ I 30803 Sept. 3, 1903

From f Var. very def. fine. Other sharp. Cut off by 11.50 f 1 V 2 11.60

in n.s.

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1902phae.proj..934L

Nov. 19, 1903

16, 1902 Cont.

I 11426, Sept. 11, 1904

9.84 div 9.94 9.96 - 9.95 0.01

9.96 var 10.16

I 13387, Sept. 3, 1895

10.48 f 1V 10.58 + 10.53 = 10.56 0203

10.53 V3g 10.83

Plate heavily fogged. Images poor. Estimate difficult

A 6146, Sept. 8, 1902

14.10 + 3V 14.40 14.30 = 14.35 05 05

14.30 V1d 14.40

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1902phae..proj..934L

November 22, 1903

SD −11° 4226. Further examination to confirm Professor Leuki's estimate of magn. 8.7, on June 30, 1897. See p. 209

No plate found, taken on June 30, 1897

The following plates are nearest that date

B 19372, June 3, 1897 Exp. 2
B 19441, June 8, 1897 Exp. 17
B 19717 July 2, 1897, Exp. 12
B 19743 July 16, 1897 Exp. 11
B 19779, June 9, 1897 Exp. 10
I 18446 Aug. 6, 1897 Exp. 10

On the first latter the star is too near the edge for an estimate to be made

On the other four plates the star is also near the edge, but is unmistakably near the magnitudes both of SD −11° 4234. and SD −12° 4598

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1902phae.proj..934L

November 24, 1903

Cumbi's Variable "16, 1902" See page 195

Estimates by Argelander's method of brightness of faint stars in sequence

a 6146
p 3g
g 4r
r 3 s
s 3 t
t 3 u

I 30687
p 4g
g 2 r
r 4 s
s 2 t
u n. s,
t extremely faint

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