1899phmr.proj.229cB

2

Variable Stars
w Centauri
M 5 S. V. B.

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W Centauri

Var. star measures

A. F. D.

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1899phae..9..228B

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√Cont.

Var No 4H.

AB. Feb. 13. '99

√ X.9271

√ X9205

13.32 n³ 1.1 o³ 13.42 13.38 = 13.40 .02 .02
13.38 13.48

√ X9027

14.32 O s³ + 14.32

√ X9062

13.48 O o³ 13.48

√ X9072

13.69 p³ 1.1 q³ 13.79 13.80 = 13.80 .01 .00
13.80 13.90

X9074

√ 13.69 p² 2.1 q³ 13.89 13.80 = 13.84 .00 .04
13.80 13.90

√ X9073

√ X9026

14.09 O r³ 14.09

√ X9064

13.90 q³ 1.1 r³ 14.00 13.99 = 14.00 00 .01
13.99 14.09

√ X9216

14.09 O r³ 14.09

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✓ X9022
14.32 Os³ ± 14.32

X9021
✓
14.09 r³ 1.1s¹ ± 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X9023
✓
14.09 Or³ ± 14.09

X9066
✓
14.09 Or³ 14.09

X9063
✓
14.09 Or³ 14.09

X9070
✓
13.69 p³ 1.2 q³ 13.74 13.70 = 13.74 .05 .04
13.70 13.90

X9075
✓
13.90 Oq³

X9071
✓
13.32 n³ 1.1o³ 13.42 13.38 = 13.40 .02 .02
13.38 13.48

X9065
✓
13.90 Oq³ ± 13.90

X9069
✓
14.09 Or³ 14.09

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✓ χ 9067
14.09 O r³ 14.09

✓ χ 9024
14.09 r³ 1.1 s³ 14.19 14.22 = 14.20 .01 .02
14.22 14.32

✓ χ 9068
14.09 O r³ 14.09

✓ χ 9025
14.09 O r³ ± 14.09

✓ χ 9020
—

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Cent-
Var-No 45-

ANB. Feb. 13.

X 9020
✓
14.00 Or = 14.00

X 9025-
✓
13.80 Oq 13.80

X 9068
✓
14.00 Or 14.00

X 9024
✓
13.30 Om = 13.30

X 9067
✓
14.00 Or 14.00

X 9069
✓
14.00 r l.1 r 14.10 14.10 = 14.10 00 00
14.10 14.20

X 9065-
V
13.80 q l.2 r 13.90 · 13.84° = 13.85 .05- .05-
13.85- 14.00

X 9071
✓
13.00 O m 13.00

X 9075-
V
13.30 m l.20 13.40 13.34e7 = 13.34 .06 .07
13.27 13.47

X 9070
✓
13.47 Oo 13.47

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✓ X9063
13.67 Or 13.67

✓ X9066
14.00 Or 14.00

✓ X9023
13.00 m1.2m 13.10 13.10 = 13.10 00 00
13.10 13.30

X9021
✓ 13.30 m1.1o ± 13.40 13.37 = 13.38 .02 .01
13.37 13.47

X9022
✓ 12.72 h1.2m 12.82 12.80 = 12.81 .01 .01
12.80 13.00

X9216
✓ 14.00 Or 14.00

✓ X9064
13.67 Or 13.67

✓ X9026
13.67 Or 13.67

✓ X9073
13.00 m2.1m 13.20 13.20 = 13.20 00 00
13.20 13.30

✓ X9074
13.47 Oo ± 13.47

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✓ X9072
Om

13.00 13.00

✓ X9062
m1.10 ± 13.40 13.37 = 13.38 .02 .01

13.30
13.37 13.47

✓ X9027
m1.15 14.10 14.10 = 14.10 00 00

14.00
14.10 14.20

✓ X9305
Om

13.67 13.67

✓ X9271
m1.2m 13.10 13.10 = 13.10 00 00

13.00
13.10 13.30

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1899phae.proj.2286B



No 46 vCent - DB. Feb. 14.

✓ X 9271
13.30 Or 13.30

✓ X 9305
14.00 Or ± 14.00

✓ X 9027
13.30 Or ± 13.30

✓ X 9062
14.00 rl. l s 14.10 14.10 = 14.10 00 00
14.10 14.20

X 9072
✓
13.00 ml. l m 13.10 13.20 = 13.15 .05 .05
13.20 13.30

X 9074
✓
13.47 ol. l p ± 13.57 13.57 = 13.57 00 00
13.57 13.67

X 9073
✓
13.47 ol. 2 p 13.57 13.47 = 13.52 .05 .05
13.47 13.67

X 9026
✓
14.00 Or ± 14.00

X 9064
✓
14.00 Or ± 14.00

X 9216
✓
13.47 Oo 13.47

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1899phae.proj.2286B



✓ X 9022
14.00 Or ± 14.00

✓ X9021
13.30 <m <13.30

✓ X9023
14.00 Or ± 14.00

✓ X9066
14.20 O5 14.20

✓ X9063
13.80 gl.1r 13.90 13.90=13.90 00 00
13.90 14.00

✓ X9070
12.72 k3.1m 13.02 12.90= 12.96 .06 .06
12.90 13.00

✓ X9075-
—

X9071
✓
13.00 ml.1m 13.10 13.20=13.15 .05 .05
13.20 13.30

✓ X9065-
14.20 O5 ± 14.20

✓ X9069
13.00 ml.1m ± 13.10 13.20=13.15 .05 .05
13.20 13.90

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1899phae.proj.2286B



✓ X 9067

14.00 R 1.15" ± 14.10 14.10=14.10 00 00

14.10 14.20

✓ X 9024

13.80 < 9" < 13.80

✓ X 9068

13.30 O N ± 13.30

✓ X 9025-

13.67 < 1" < 13.67

✓ X 9020

13.67 < 1" < 13.67

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Cont.

JJB. Febj 14-

No. 47

✓ X9020

13.30 m 1.10 13.40 13.37 = 13.38 .02 .01

13.37 13.47

✓ X9025-

✓ X9068

13.00 m 3.1 m 13.30 13.20 = 13.25- .05- .05-

13.20 13.30

✓ X9024

13.30 m 1.10 * 13.40 13.37 = 13.38 .02 .01

13.37 13.47

✓ X9067

13.67 0 p 13.67

✓ X9069

13.00 m 1.1 m 13.10 13.20 = 13.15- .05- .05-

13.20 13.30

✓ X9065-

13.67 p 1.1 q 13.77 13.70 = 13.74 .03 .04

13.70 13.80

✓ X9071

13.67 p 1.1 q 13.77 13.70 = 13.74 .03 .04

13.70 13.80

✓ X9075-

13.30 0 m ± 13.30

✓ X9070

13.47 01.1 p + 13.57 13.67 = 13.57 00 00

13.57 13.67

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1899phae.proj.2286B



✓ X9063
13.67 Of 13.67

✓ X9066
13.67 Of 13.67

✓ X9023
13.00 m3.1n 13.30 13.20 = 13.25 .05 .05
13.20 13.30

✓ X9021
13.00 m3.1n 13.30 13.20 = 13.25 .05 .05
13.20 13.30

✓ X9022
13.00 m1.1n 13.10 13.20 = 13.15 .05 .05
13.20 13.30

✓ X9216
13.00 13.30 13.20 = 13.25 .05 .05
13.20 m3.1n 13.30

✓ X9064
13.47 o1.1n ± 13.57 13.57 = 13.57 00 00
13.57 13.67

✓ X9026
13.47 Oo 13.47

✓ X9073
13.67 Of 13.67

✓ X9074
13.30 m1.1o ± 13.40 13.37 = 13.38 .02 .01
13.37 13.42

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1899phae.proj.2286B



✓ X9072

13.67 Or ± 13.67

✓ X9062

13.30 Om ± 13.30

✓ X9027

13.67 h1.2q 13.77 13.60 = 13.68 .09 .08

13.60 13.80

✓ X9305

13.47 Oo ± 13.47

✓ X9271

13.30 m2.1o ± 13.50 13.37 = 13.44 .06 .07

13.37 13.47

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1899phae.proj.2286B



cont.

No 48

AJB - Feb. 14

X 9271

✓
11.74 g 2.1 h 11.94 12.07 = 12.00 .06 .07
✓
19.07 12.17
✓ X 9300
—

✓ X 9027
h 1.2 k
12.17 12.27 12.25 = 12.26 .01 .01
12.20 12.45

✓ X 9062
0 h
12.17 12.17

✓ X 9072
k 1.1 h
12.45 12.55 12.62 = 12.58 .03 .04
12.62 12.72

✓ X 9074
k 2.1 h
12.40 12.65 12.62 = 12.64 .01 .02
12.62 12.72

✓ X 9073
k 2.1 h
12.40 12.65 12.62 = 12.64 .01 .02
12.62 12.72

✓ X 9026
0 h
12.40 12.45

✓ X 9064
h 2.1 k
12.17 12.37 12.35 = 12.36 .01 .01
12.35 12.45

✓ X 9216
0 h
12.17 12.17

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1899phae.proj.2286B



✓ X9022
12.17 0h 12.17

✓ X9021
12.17 0h 12.17

✓ X9023
12.17 0h 12.17

✓ X9066
12.17 h2.1k 12.37 12.38 = 12.36 .01 .01
12.38⁻ 12.45⁻

✓ X9063
12.45⁻ 0k 12.45⁻

✓ X9070
12.45⁻ k2.1l 12.65⁻ 12.62 = 12.64 .01 .02
12.62 12.72

✓ X9075⁻
12.72 0l 12.72

✓ X9071
12.46⁻ k1.1l 12.55⁻ 12.62 = 12.58 .03 .04
12.62 12.72

✓ X9065⁻
12.45⁻ 0k 12.45⁻

✓ X9069
—

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1899phae.proj.2286B



✓ ×9067
12.43 Ok 12.43

✓ ×9024
12.17 Oh 12.17

✓ ×9068
12.43 k1, 2 h 12.55 12.52 = 12.54 .01 .02
12.52 12.72

×9025-
✓
12.17 Oh 12.17

✓ ×9020
12.17 h1, 3 k 12.27 12.15 = 12.21 .06 .06
12.18 12.43

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1899phae.proj.2286B



Wcent. A.D.B.

No. 49

✓ X9020
13.69 < h³ < 13.69

✓ X9025
13.69 < h³ < 13.69

✓ X9068
13.69 O h³ ± < 13.69

✓ X9024
14.32 O s³ ? 14.32

✓ X9067
13.32 O n³ 13.32

✓ X9069.
13.69 O h³ ± < 13.69

✓ X9065
13.69 h³ 1.1 q³ ± 13.79 13.80 = 13.80 .01 00
13.80 13.90

✓ X9071
14.09 O n³ ± 14.09

✓ X9075
14.09 O n³ ± 14.09

✓ X9070
14.09 O n³ 14.09

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✓ X9063

14.09 $Or^3$ ± 14.09

✓ X9066

13.05 $m^3 2.1 m^3$ 13.25 13.22 = 13.24 .01 .02

13.22 13.32

✓ X9023

14.09 $Or^3$ ± 14.09

✓ X9021

—

✓ X9022

13.69 $< r^3$ < 13.69

✓ X9216

13.90 $Oq^3$ 13.90

✓ X9064

14.32 $Os^3$ ± 14.32

✓ X9026

14.09 $r^3 1.1 s^3$ ± 14.19 14.22 = 14.20 .01 .02

14.22 14.32

✓ X9073

13.90 $Oq^3$ ± 13.90

✓ X9074

13.96 $Oq^3$ ± 13.98

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✓ X 9072

14.09 $0 r^3$ ± 14.09

✓ X 9062

14.09 $r^3 1.15^3$ 14.19 14.22 = 14.20 .01 .02

14.22 14.32

✓ X 9027

14.32 $0 s^3$ ± 14.32

✓ X 9305

14.09 $0 r^3$ ± 14.09

✓ X 9271

14.09 $0 r^3$ ± 14.09

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W Cent.

№ 50

✓ X 9271

13.80 < 9q < 13.80

✓

X 9305

13.30 m 2.10 ± 13.50 13.37 = 13.44 .06 .07

13.37 13.47

✓ X 9027

13.80 0q ± < 13.80

✓ X 9062

13.00 m 2.1m 13.20 13.20 = 13.20 00 00

13.20 13.30

X 9072

✓

13.30 m 1.10 ± 13.40 13.37 = 13.38 .02 .01

13.37 13.47

✓ X 9074

13.30 m 1.20 ± 13.40 13.27 = 13.34 .06 .07

13.27 13.47

✓ X 9073

13.47 01.2p ± 13.57 13.47 = 13.52 .05 .05

13.47 13.67

✓ X 9026

13.80 0q ± 13.80

✓ X 9064

13.47 02.1p 13.67 13.57 = 13.62 .05 .05

13.57 13.67

✓ X 9216

13.67 0p 13.67

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✓ X9022
13.67 Op + 13.67

✓ X9021
13.30 m1.1o 13.40 13.37 = 13.38 .02 .01
13.37 13.47

✓ X9023
13.80 Oq * 13.80

✓ X9066
13.67 Op 13.67

✓ X9063
13.00 m3.1m 13.30 13.20 = 13.25 .05 .05
13.20 13.30

✓ X9070
14.00 Or + 14.00

✓ X9075
13.00 m3.1m 13.30 13.20 = 13.25 .05 .05
13.20 13.30

✓ X9071
13.47 02.1p 13.67 13.57 = 13.62 .05 .05
13.57 13.67

✓ X9065
13.30 m1.1o + 13.40 13.37 = 13.38 .02 .01
13.37 13.47

✓ X9069

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| | | | |
|---|---|---|---|
| v | X 9067 | | |
| 13.80 | 9 1.1 r | 13.90 | 13.90 = 13.90 oo oo |
| 13.90 | | 14.00 | |
| ✓ | X 9024 | | |
| 13.80 | 9 1.1 r ± | 13.90 | 13.90 = 13.90 oo oo |
| 13.90 | | 14.00 | |
| | X 9068 | | |
| 13.67 | O r | 13.67 | |
| | X 9025 | | |
| ✓ | | | |
| 13.80 | O 9 ± | 13.80 | |
| | X 9020 | | |
| ✓ | | | |
| 13.30 | M 1.1 0 | 13.40 | 13.37 = 13.38 .02 .01 |
| 13.37 | | 13.47 | |

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1899phae.proj.2286B



Cent - Dip. Feb - 15 -

No 51

✓ X 9020
14.00 Or ± 14.00

✓ X9025
13.67 Or ± 13.67

✓ X9068
14.00 Or + 14.00

✓ X9024
13.80 Om 13.80

✓ X9067
14.00 Or + 14.00

✓ X9069
—

✓ X9065
14.00 Or 14.00

✓ X9071
13.00 Om 13.00

✓ X9075
—

✓ X9070
13.00 Om 13.00

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✓ X9063

13.47 01.1h 13.57 13.57 = 13.57 00 00

13.57 13.67

✓ X9066

14.00 R1.1s + 14.10 14.10 = 14.10 00 00

14.10 14.20

✓ X9023

13.00 Om 13.00

✓ X9021

—

✓ X9022

12.72 Or 12.72

✓ X9216

14.00 Or + 14.00

✓ X9064

14.00 R1.25 14.10 14.00 = 14.05 .05 .05

14.00 14.20

✓ X9026

13.67 Oh + 13.67

✓ X9073

13.47 Oo 13.47

✓ X9074

13.47 01.1h 13.57 13.57 = 13.57 00 00

13.57 13.67

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1899phae.proj.2286B



✓ X9072
13.30 On 13.30

✓ X9062
13.47 Oo 13.47

✓ X9027
13.80 q1.1r 13.90 13.90 = 13.90 oo oo
13.90 14.00

✓ X9305-
12.72 Or 12.72

✓ X9271

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1899phae.proj.2286B



w Cent.

D13-Feb-1[illegible]

No 52

✓ X9271

✓ X9305

✓ X9027
12.45 k3.1l ± 12.75 12.62 = 12.68 .07 .06
12.62 12.72

✓ X9062
13.00 m2.1m ± 13.20 13.20 = 13.20 00 00
13.20 13.30

✓ X9072
13.30 0m ± 13.30

✓ X9074

✓ X 9073
13.47 0o ± 13.47

✓ X9026
12.45 k2.1l 12.65 12.62 = 12.64 .01 .02
12.62 12.72

✓ X9064
12.72 l1.1m 12.82 12.90 = 12.86 .04 .04
12.90 13.00

✓ X9216
13.00 0m ± 13.00

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1899phae.proj.2286B



✓ X9022

13.00 ml.lm 13.10 13.20 = 13.10 .00 .00

13.20 13.30

✓ X9021

—

X9023

✓

13.00 ml.lm ± 13.10 13.20 = 13.10 .00 .00

13.20 13.30

✓ X9066

~

✓ X9063

12.72 ℓ 1.2m ± 12.82 12.80 = 12.81 .01 .01

12.80 13.00

✓ X9070

13.30 Om ± 13.30

✓ X9075

—

✓ X9071

13.47 Oo ± 13.47

✓ X9065

13.47 Om ± 13.47

✓ X9069

—

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1899phae.proj.2286B



✓ X9067

—

✓ X9024

13.30 Om ± 13.30

✓ X9068

—

✓ X9025—

12.72 b1, 2 m 12.82 12.80 = 12.81 .01 .01

12.80 13.00

✓ X9020

—

close & difficult

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1899phae.proj.2286B



Wolf. DB - Feb. 15-

No 53

X9020
h 2.1 k
12.17 12.87 12.38 = 12.36 .01 .01
12.38⁻ 12.48⁻

X9025⁻
h 1.1 k
12.17 12.27 12.38 = 12.31 .04 .04
12.38⁻ 12.48⁻

X 9068
O l³ ±
12.68 12.68

X9024
h 1.1 k
12.17 12.27 12.38 = 12.31 .04 .04
12.38⁻ 12.48⁻

X 9067
O l³ ±
12.68 12.68

X 9069
O k ±
12.48⁻ 12.48⁻

X 9065⁻
O K ±
12.48⁻ 12.48⁻

X 9071
k 1.1 l
12.48⁻ 12.58⁻ 12.62 = 12.58 .03 .04
12.62 12.72

X 9075⁻
k 1.1 l ±
12.48⁻ 12.58⁻ 12.62 = 12.58 .03 .04
12.62 12.72

X 9070
l³ 1, 2 m³
12.68 12.78 12.85⁻ = 12.82 .04 .03
12.85⁻ 12.95⁻

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1899phae.proj.2286B



✓ X9063
12.68 Ok$^3$ 12.68

✓ X9066
12.68 k$^3$ 1.2 m$^3$ 12.78 12.85 = 12.82 .04 .03
12.85 13.05

✓ X9023
12.45 OK 12.45

✓ X9021
12.17 k 1.2 k 12.27 12.26 = 12.26 .01 .01
12.25 12.45

✓ X9022
12.17 k 1.1 k 12.27 12.35 = 12.31 .04 .04
12.35 12.45

✓ X9216
12.17 Ok 12.17

✓ X9064
12.68 k$^3$ 1.2 m$^3$ 12.78 12.80 = 12.82 .04 .03
12.80 13.05

✓ X9026
12.45 Ok 12.40

✓ X9073
12.68 k$^3$ 1.3 m$^3$ 12.78 12.75 = 12.76 .02 .01
12.75 13.05

✓ X9074
12.68 k$^3$ 1.2 m$^3$ 12.78 12.85 = 12.82 .04 .03
12.85 13.05

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1899phae.proj.2286B



X9072

✓ 12.68 l³ 1.2 m³ 12.78 12.80 = 12.82 .04 .03

12.80 13.03

X9062

✓ 12.68 O l³ 12.68

X9027

✓ 12.45 O k 12.45

X9305

✓ 12.45 O k 12.45

X9271

✓ 12.68 l³ 1.1 m³ 12.78 12.90 = 12.86 .08 .09

12.95 13.00

(Var - comp. with both first & third sequence)

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Wcat -

No 54 #13. Feb 16.

✓ X9271

—

✓ X9305-

13.80 q 1.1 r ± 13.90 13.90 = 13.90 00 00

13.90 14.00

✓ X9027

13.80 q 1.1 r ± 13.90 13.90 = 13.90 00 00

13.90 14.00

✓ X9062

14.00 Or 14.00

✓ X9072

13.30 m 2.10 13.50 13.37 = 13.44 .06 .07

13.37 13.47

✓ X9074

13.80 Oq ± 13.80

✓ X9073

13.67 Op ± 13.67

✓ X9026

13.80 q 1.1 r 13.90 13.90 = 13.90 00 00

13.90 14.00

✓ X9064

13.67 Op ± 13.67

✓ X9216

13.30 On ± 13.30

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✓ X 9022

13.67 Of + 13.67

✓ X 9021

—

✓ X9023

—

✓ X9066

13.00 m 2.1 m 13.20 13.20 = 13.20 ~~00 00~~

13.20 13.30

✓ X9063

14.00 Or + 14.00

X9070

13.0✓0 m 2.1 m 13.20 13.20 = 13.20 - .00 - .00

13.20 13.30

✓ X9075

13.67 Of 13.67

✓ X9071

13.47 Oo + 13.47

✓ X9065

13.67 Of + 13.67

✓ X9069

—

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✓ X9067

13.00 M 2.1 M 13.20 13.20 = 13.20 ~~00 00~~

13.20 13.30

✓ X9024

13.67 O P ± 13.67

✓ X9068

13.90 O M ± 13.90

✓ X9025-

13.80 O Q ± 13.80

✓ X9020

13.47 O O ± 13.47

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1899phae.proj.2286B



Cent

No 55

A B . Feb. 16

✓ X9068
14.09 O r³ ± 14.09

✓ X9020
13.90 < q³ < 13.90

✓ X9025
13.69 O p³ ± 13.69

✓ X9024
13.69 O p³ ± 13.69

✓ X9067
14.00 O r³ 14.00

✓ X9069
—

✓ X9065
14.00 O r³ 14.00

✓ X9071
13.69 p²2.1q³ ± 13.89 13.80 = 13.84 .05 .04
13.80 13.90

✓ X9075
14.00 O r³ 14.00

✓ X9070
13.69 O p³ 13.69

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1899phae.proj.2286B



✓ X9063
14.32 O $s^3$ ± 14.32

✓ X9066
14.09 O $r^3$ ± 14.09

X9023
✓
13.90 < $q^3$ < 13.90

X9021
✓
13.90 < $q^3$ < 13.90

X9022
✓
13.90 < $q^3$ < 13.90

X9216
✓
13.48 O $o^3$ 13.48

✓ X9064
13.90 O $q^3$ ± 13.90

✓ X9026
13.48 O $o^3$ ± 13.48

✓ X9073
13.90 O $q^3$ ± 13.90

✓ X9074
13.90 $q^3$ 1.1 $r^3$ ± 14.00 13.99 = 14.00 00 .01
14.09

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1899phae.proj.2286B



v X9072
13.90 Oq³ ± 13.90

v X9062
13.90 Oq³ ± 13.90

X9027
v
13.69 P¹1.1q³ (3) 13.79 13.80 = 13.80 01 00
13.80 13.90

X9305 —
v
13.69 Op³ ± 13.69

X9271
v
13.90 <q³ < 13.90

Diffr cult - from distance —

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1899phae.proj.2286B



W Cent.

W 56

4 12 Feb - 16 -

✓ X 9271
14.09 N3 1.1 S3 ± 14.19 14.22 = 14.20 .01 .02
3
14.32 14.32

✓ X 9305
14.32 O S3 ± 14.32

✓ X 9027
14.32 O S3 14.32

✓ X 9062
14.32 O S3 14.32

✓ X 9072
14.09 O N3 14.09

✓ X 9074
14.32 O S3 14.32

✓ X 9073
14.32 O S3 14.32

✓ X 9026
14.32 O S3 14.32

X 9064
14.09 O N3 14.09

✓ X 9216
13.69 N3 1.49 3 ± 13.79 13.80 = 13.80 01 ~~02~~
13.80 13.90

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1899phae.proj.2286B



X9022

X9021
13.69 < h³ < 13.79

X9023
13.90 < 9³ 13.90

X9066
13.48 O o³ 13.48

X9063
14.32 O 5³ 14.32

X9070
14.09 R³ 1.1 5³ 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X9075
13.48 O³ 1.1 β³ ± 13.58 13.59 = 13.58 .00 .01
13.59 13.69

X9071
14.32 O 5³ ± 14.32

X9065
13.00 M³ 3.1 M³ 13.30 . 13.20 = 13.25 .05 .05
13.20 13.30

X9069

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1899phae.proj.2286B



✓ x9067
13.48 $O^3$ 13.48

✓ x9024
13.90 $<q^3$ <13.90

✓ x9025
13.69 $<p^3$ <13.69

✓ x9020
13.69 $p^3 1.1 q^3$ (3) 13.79 13.80 = 13.80 .01 .00
13.80 13.90

x9068
✓
13.69 $p^3 1.1 q^3$ ℓ 13.79 13.80 = 13.80 .01 .00
13.80 13.90

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1899phae.proj.2286B



W Cent.

DB.

Mo 57

9068

✓ m² 1.1 m²

13.08 13.18 13.22 = 13.20 .02 .02

13.22 13.32

✓ x 9020

—

✓ x 9025⁻

13.65⁻ < h² < 13.65⁻

x 9024

✓ 0² 1.1 h² + 13.61 13.55 = 13.58 .03 .03

13.55⁻ 13.65⁻

x 9067

✓ 0² 1.1 h² + 13.61 13.55 = 13.58 .03 .03

13.57 13.65⁻

x 9069

✓ 0 0² +

13.57

x 9065⁻

✓ 0 h².

14.04 14.04

x 9071

✓ m² 1.10²

13.32 13.42 13.41 = 13.42 00 .01

13.41 13.51

x 9075⁻

✓ 0 0² +

14.04 14.04

✓ x 9070

13.08 m² 2.1 m² 13.28 13.22 = 13.25⁻ .03 .03

13.22 13.32

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1899phae.proj.2286B



X9063
O q²
13.87 13.87

✓ X9066
O² 1.1 p²
13.87 13.61 13.57 = 13.58 .03 .03
13.57 13.60

✓ X9023

✓ X9021

✓ X9022

X9216
q² 1.1 r²
13.87 13.97 13.94 = 13.96 .01 .02
13.94 14.04

X9064
~~p² 1.1 p²~~ q² 1.1 r²
13.87 13.97 13.94 = 13.96 .01 .02
13.94 14.04

✓ X9026
O p²
13.60 13.60

✓ X9073
O m²
13.32 13.32

✓ X9074
O² 1.1 p²
13.87 13.61 13.57 = 13.58 .03 .03
13.57 13.60

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1899phae.proj.2286B



✓ X9072
13.87 Oσ 13.81

✓ X9062
13.87 Oq² ± 13.87

✓ X9027
13.68 Oμ² ± 13.68

✓ X9306
13.87 ~~Oq²~~ 1.1 μ² 13.97 13.94 = 13.96 .01 .02
13.94 14.04

✓ X9271
13.08 m 1.1 m 13.18 13.22 = 13.20 .02 .02
13.22 13.82

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1899phae.proj.2286B



W Cent -

No 68

N.I.B. - Feb 17.

| | | | |
|---|---|---|---|
| ✓ | X9271 | | |
| 13.47 | 02.1 p | 13.67 | 13.57 = 13.62 .05 .00 |
| 13.57 | | 13.67 | |
| | X9305 - | | |
| 13.47 | 01.1 p | 13.57 | 13.57 = 13.57 00 00 |
| 13.57 | | 13.67 | |
| ✓ | X9027 | | |
| 13.30 | m1.10 | 13.40 | 13.37 = 13.38 .02 .01 |
| 13.37 | | 13.47 | |
| | X9062 | | |
| ✓ 13.67 | 0 p | 13.67 | |
| ✓ | X9072 | | |
| 13.47 | 01.1 p | 13.57 | 13.57 = 13.57 00 00 |
| 13.57 | | 13.67 | |
| ✓ | X9074 | | |
| 13.47 | 00 (3) | 13.47 | |
| ✓ | X9073 | | |
| 13.47 | 02.1 p | 13.67 | 13.57 = 13.62 .05 .00 |
| 13.57 | | 13.67 | |
| ✓ | X9026 | | |
| 13.30 | m1.10 | 13.40 | 13.37 = 13.38 .02 .01 |
| 13.37 | | 13.47 | |
| | X9064 | | |
| ✓ | | | |
| 13.47 | 01.1 p | 13.57 | 13.57 = 13.57 00 00 |
| 13.57 | | 13.67 | |
| | X9216 | | |
| ✓ 13.47 | 02.1 p | 13.67 | 13.57 = 13.62 .05 .05 |
| 13.57 | | 13.67 | |

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1899phae.proj.2286B



X 9022
13.67 0μ 13.67

X9021
—

X9023
13.47 01.1μ ± 13.57 13.57 = 13.57 00 00
13.57 13.67

X9063
13.67 0μ 13.67

X9070
13.47 02.1μ 13.67 13.57 = 13.62 .05 .05
13.57 13.67

X9075
13.47 00 ± 13.47

X9071
13.67 μ1.1μ 13.77 13.70 = 13.74 .03 .04
13.70 13.80

X9065
13.47 01.1μ 13.57 13.57 = 13.57 00 00
13.57 13.67

X9069
13.47 00 ± 13.47

X9067
13.47 01.2μ 18.57 13.47 = 13.52 .05 .05
13.47 18.67

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1899phae.proj.2286B



✓ X9066

13.30 m 1.10 + 13.40 13.37 = 13.38 .02 .01

13.37 13.47

✓ X9024

X9025

✓

13.67 Of + 13.67

X9020

✓

13.30 M 1.10 + 13.40 13.37 = 13.38 .02 .01

13.37 13.47

✓ X9068

Changes seem small & rather unsatisfactory.

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1899phae.proj.2286B



Cont-

## No 59

X 9068

14.09 $n^3 1.1 s^3$ ± 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X 9020

14.09 $0 n^3$ 14.09

X 9025-

13.90 $0 q^3$ ± 13.90

X 9024

13.90 $0 q^3$ ± 13.90

X 9066

14.09 $n^3 1.1 s^3$ 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X 9067

13.90 $q^3 1.1 n^3$ ± 14.00 13.99 = 14.00 ~~00~~ .01
13.99 14.09

X 9069

14.09 $n^3 1.1 s^3$ ± 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X 9065-

—

X 9071

13.90 $q^3 1.1 n^3$ 14.00 13.99 = 14.00 ~~00~~ .01
13.99 14.09

X 9075-

14.32 $0 s^3$ ±

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1899phae.proj.2286B



✓ X9070
13.69 h³1.1q³ 13.79 13.80 = 13.80 .01 00
13.80 13.90

✓ X9063
14.09 Or³ ± 14.09

✓ X9023
13.82 n³2.1 0³ 13.52 13.38 = 13.48 .07 .07
13.38 13.48

X9021
✓
13.69 Oh³ ± 13.69

X9022
✓
13.32 n³1.2 0³ 13.42 13.28 = 13.35 .07 .07
13.28 13.48

X9216
✓
13.69 Oh³ ± 13.69

X9064
✓
14.09 r³1.1 s³ 14.19 14.22 = 14.20 .01 .02
14.22 14.32

X9026
✓
13.90 Oq³ ± 13.90

X9073
✓
13.90 q³1.1r³ ± 14.00 13.99 = 14.00 00 .01
13.99 14.09

X9074
✓
14.09 r³1.1s³ ± 14.19 14.22 = 14.20 .01 .02
14.32

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1899phae.proj.2286B

✓ X9072

14.09 $R^3 1.15^{-3}$ 14.19 14.22 = 14.20 .01 .02

14.22 14.32

✓ X9062

14.09 $O R^3 \pm$ 14.09

✓ X9027

14.09 $O R^3 +$ 14.09

✓ X9305

14.09 $O R^3$ 14.09

✓ X9271

13.90 $q^3 2.1 R^3 =$ 14.10 13.99 = 14.04 .06 .08

13.99 14.09

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1899phae.proj.22886B



wCent. DIB - Feb. 11.

No. 60

✓ X 9271
12.03 ~~Ok~~ 0 m³ ± 13.03 ~

✓ X 9305 ~
11.74 ~~gl~~ gl.1h ± 11.84 12.07 = 11.96 .12 .11
12.07 12.17

✓ X 9027
11.74 ~~gl~~ gl.1h ± 11.84 12.07 = 11.96 .12 .11
12.07 12.17

✓ X 9062
12.40 ~ 0 k ± 12.40 ~

✓ X 9072
12.68 0 l³ ± 12.68

✓ X 9074
12.40 ~ 0 k ± 12.40 ~

✓ X 9073
12.40 ~ 0 k ± 12.40 ~

✓ X 9026
11.74 gl.1h ± 11.84 12.07 = 11.96 .12 .11
12.07 12.17

✓ X 9064
12.68 l³1.2 m³ 12.78 12.83 = 12.82 .04 .03
12.83 ~ 13.03 ~

✓ X 9216
13.03 ~ m³ l. 2 m³ 13.10 ~ 13.12 = 13.14 .01 .02
13.12 13.82

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1899phae.proj.2286B



v X9022
12.68 Ol³ ± 12.68

v X9021
13.03⁻ Om³ ± 13.03⁻

v X9023
12.17 Oh ± 12.17

✓ X9063
12.43⁻ Ok ± 12.43⁻

v X9070
13.03⁻ Om³ ± 13.03⁻

v X9075⁻
12.17 Oh ± 12.17

✓ X9071
12.68 Ol³ ± 12.68

X9065⁻
12.68 l³1.2m³ ± 12.78 12.85⁻ = 12.82 .04 .03
12.85⁻ 13.03⁻

✓ X9069
13.03⁻ Om³ 13.03⁻

v X9067
12.68 l³1.1m³ 12.78 12.93⁻ = 12.86 .08 09
12.93⁻ 13.08⁻

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1899phae.proj.2286B



✓ X 9066

12.68 $l^3$ 2.1 $m^3$ 12.88 12.95⁻ = 12.92 .04 .03

12.95⁻ 13.05⁻

X 9024

✓

11.74 g 2.1 h ± 11.94 12.07 = 12.00 .06 .07

12.07 12.13

X 9025-

✓

12.17 0 h ± 12.17

X 9020

✓

12.68 $l^3$ 2.1 $m^3$ 12.88 12.95 = 12.92 .04 .03

12.95⁻ 13.05⁻

X 9068

✓

13.05⁻ 0 $m^5$ 13.05⁻

Comp. with stars of first and third sequence. Star is dbl. In these measures light of both components together was used. Difficult. but var. is large.

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1899phae.proj.2286B



No 76 WCmt Dec. Feb. 18.

✓ X9068

13.47 Oo ± 13.47

✓ X9020

13.30 M2.10 ± 13.50 13.37 = 13.44 .06 .07

13.37 13.47

✓ X9025

—

X9024

✓

13.47 Oo ± 13.47

X9066

✓

13.47 Oo ± 13.47

✓ X9067

13.30 Om ± 13.30

✓ X9069

—

X9065

✓

13.67 M1.29 13.77 13.60 = 13.68 09 .08

13.60 13.80

✓ X9071

14.00 Or 14.00

✓ X9075

13.30 Om ± 13.30

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1899phae.proj.2286B



✓ X9070
13.80 ql.l r 13.90 13.90 = 13.90 00 00
13.90 14.00

✓ X9063
13.67 pl.l q = 13.77 13.70 = 13.74 .03 .04
13.70 13.80

✓ X9023

✓ X9021
—
a

X9022
✓
13.80 ql.l r 13.90 13.90 = 13.90 00 00
13.90 14.00

✓ X9216
13.30 On 13.30

✓ X9064
14.00 Or + 14.00

X9026
✓
13.30 On + 13.30

✓ X9073
13.47 ol.l p 13.57 13.57 = 13.57 00 00
13.57 13.67

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1899phae.proj.2286B



✓ X9074
13.47 Oo ← 13.47

✓ X9072
13.80 q1.1r 13.90 13.90 = 13.90 00 00
13.90 14.00

✓ X9062
13.67 Op 13.67

✓ X9027
13.30 m1.1o 13.40 13.37 = 13.38 .02 .01
13.37 13.47

✓ X9305-
13.00 m2.1m 13.20 13.20 = 13.20 00 00
13.20 13.30

X9271
✓ 13.67 Op ← 13.67

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1899phae.proj.22886B



# No 77 arcut.

A.J.B. Feb-18-'99

X9271

✓
14.04 ~~Oq²~~ Or² ± 14.04

X9305-

✓
14.04 Or² ± 14.04

X9027

✓
13.67 O² 1.2 p² 13.61 13.45 = 13.63 .08 .08
13.45⁻ 13.6σ⁻

X9062

✓
13.67 O o² ± 13.67

X9072

✓
13.87 O q² 13.87

X9074

✓
13.67 O o² ± 13.67

X9073

✓
13.67 O² 1.1 p² ± 13.61 13.65 = 13.68 .03 .03
13.63⁻ 13.6σ⁻

X9026

✓
13.6σ⁻ O p² 13.6σ⁻

X9064

✓
13.67 O² 1.1 p² 13.61 13.65 = 13.68 .03 .03
13.63⁻ 13.6σ⁻

X9216

✓
13.67 O² 1.2 p² 13.61 13.45 = 13.63 .08 .08
13.45⁻ 13.6σ⁻

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1899phae.proj.2286B



✓ X9022
—

✓ X9021
—

X9023
✓ 13.87 $q^2 1.1 \nu^2$ 13.97 13.94 = 13.96 .01 .02
13.94 14.04

X9063
✓ 13.37 $0 0^2$ 13.37

X9070
✓ 13.87 $q^2 1.1 \nu^2$ 13.97 13.94 = 13.96 .01 .02
13.94 14.04

X9075
✓ 13.32 $m^2 2.1 0^2$ 13.32 13.41 = 13.46 .06 .03
13.41 13.51

X9071
✓ 13.87 $0 q^2$ 13.87

X9065
✓ 13.87 $0 q^2$ ± 13.87

X9069
✓ 13.87 $q^2 1.1 \nu^2$ 13.97 13.94 = 13.96 .01 .02
13.94 14.04

X9067
✓ 13.67 $\nu^2 1.1 q^2$ 13.77 13.78 = 13.74 .01 .01
13.87 13.89

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1899phae.proj.2286B



6

X 9068

13.65⁻ $\mu^2 1.1 q^2$ ± 13.75⁻ 13.77 = 13.76 .01 .01

13.77 13.87

✓ X 9024

13.65⁻ $0 \mu^2$ ± 13.65⁻

X 9025⁻

✓

13.65⁻ $\mu^2 1.2 q^2$ ± 13.75⁻ 13.67 = 13.71 .04 .04

13.67 13.87

X 9020

✓

13.87 $< q^2$ < 13.87

X 9068

13.87 $0 q^2$ ± < 13.87

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1899phae.proj.2286B



W-78 W Cent- A.L.B. Feb-18-99

X9068

13.08 mi 2. 1 mi 13.28 13.22 = 13.25 - .03 .03

13.22 13.32

X9020

13.08 O mi ± 13.08

X9025-

13.08 mi 2. 1 mi 13.28 13.22 = 13.25 - .03 .03

13.22 13.32

X9024

13.08 mi 1. 1 mi 13.18 13.22 = 13.20 .02 .02

13.22 13.32

X9066

13.08 mi 1. 2 mi 13.18 13.12 = 13.15 - .03 .03

13.12 13.32

X9067

13.08 O mi 13.08

X9069

13.08 mi 1. 2 mi 13.18 13.12 = 13.15 - .03 .03

13.12 13.32

X9065-

13.08 mi 1. 1 mi 13.18 13.22 = 13.20 .02 .02

13.22 13.32

X9071

13.08 mi 1. 2 mi 13.18 13.12 = 13.15 - .03 .03

13.12 13.32

X9075-

13.08 mi 1. 2 mi 13.18 13.12 = 13.15 - .03 .03

13.12 13.32

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1899phae.proj.22866B



X9070

✓
13.08 m² 1.2 m² 13.18 13.12 = 13.18 − .03 .03
13.12 13.32

X9063

✓
13.08 m² 1.1 m² 13.18 13.22 = 13.20 .02 02
13.22 13.32

X9023

✓
13.08 0 m² 13.08

X9021

✓
13.08 0 m² ± 13.08

X9022

✓
13.08 m² 1.1 m² 13.18 13.22 = 13.20 .02 .02
13.22 13.32

X9216

✓
13.08 0 m² ± 13.08

X9064

✓
13.08 m² 1.1 m² 13.18 13.22 = 13.20 .02 .02
13.22 13.32

X9026

✓
13.08 m² 3.1 m² 13.38 13.22 = 13.30 .08 .08
13.22 13.32

X9073

✓
13.08 m² 2.1 m² 13.28 13.22 = 13.25 − .03 .03
13.22 13.32

X9074

✓
12.69 m² 4.1 m² 13.09 12.98 = 13.04 .05 − .06
12.98 13.08

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✓ X9072
0 m²
13.08 13.08

✓ X9062
0 m²
13.08 13.08

✓ X9027
0 o²
13.08 13.08

✓ X9305
0 m² ±
13.08 13.08

✓ X9271
0 m² ±
13.08 13.08



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Mar. 16. 1900 - DIB -

Special sequence. remeasure of. Var No 8. a Cnt -

4 ✓ ~~20~~ x 8595 -

2r, 2δ, ~~0~~ 2w, 0x, 0z, 2l, t1.
2/15.7, 2/16.2, 2/16.1, 2/15.6, 2/15.2, 2/14.7, 2/16.9

3 ✓ x 6693

0o, ε2, ζ3, k1, β3, 3x, 2z.
2/11.6, 2/12.2, 2/13.2, 2/12.0, 2/12.9, 2/12.6, 2/13.2

3 ✓ x 6667

1t, 2l, 2w, x1, z1.
2/14.9, 2/14.7, 2/16.1, 2/16.6, 2/16.2

4. x 8642

✓ x 6633

3. ζ- 0c, b1, 1o, ε1, 0k, 0β, ζ1.
2/10.0, 2/10.9, 2/10.6, 2/11.2, 2/11.0, 19.9, 2/11.2

3 ✓ x 6534

0t, 1l, 3w, 1y, 2δ, 0x, z2.
2/15.9, 2/15.7, 2/15.1, 2/16.7, 2/16.2, 2/15.6, 2/17.2

2 dbl ✓ x 6533

n. s - 0=1, ε=.1
<+1.6 L x 0.2

When I record a star =.1 I mean that such stars are the faintest in that group which I am positive are seen - tho' in some cases I may think that there is some impression of faint stars. and I am positive that the var is the shape the star so called = 1.1

3 ✓ x 5712

3w, 2l, 1t, 1x. K4.
2/15.1, 2/14.7, 2/14.9, 2/14.6, 2/15.0

4 ✓ x 5559

~~2m, 3m~~, 1m, (2m,) 2l, 2d, 1o,
2/10.9 2/11.7 2/11.5 2/11.2

3. ζ- ✓ x 5558

1a, 2b, 3c, 0s, 2r, 3f, (n3) 2h.
2/7.5 2/7.9 2/7.8 2/7.5 2/7.1 2/6.1 2/5.9

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qual.

## Mar. 17 -

circle contains comp. stars divided by a line in two parts A. & B. all stars in A are placed in the comp. to the right of the var. - all in B to the left.

3 ✓ X 5552

3t, 2x, 2z, 02, C3, k3, 3l,
12.9 13.6 13.2 13.6 13.0 14.0 13.7

2 ✓ X 5554

N. c = 11.1 f = 11.1
< 10.0 < 10.2

2.5- ✓ X 5532

N is certainly < f, and 0.
< 10.2 < 11.6

3 ✓ X 5523

shows few stars - only star in sequence seen g

2.5- ✓ X 4693

Consider this plate shows too few stars well to give accurate results -

3 ✓ X 4681

f1, c1, 10, k1, β1, 4x, 4z
11.2 11.0 10.6 10.0 10.9 11.6 11.2

3 ✓ X 4679.

2m, (4n) 3d, 4e, 3f.
~~-0.1~~ 9.9 10.5 ~~-0.3~~ 9.7 ~~-0.8~~ 9.2

2 ✓ X 4614

N certainly < C or f.
< 10.0 .. 10.2

2 ✓ X 4613

stained & too poor to measure -

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Mar 17.

~~2.5~~ 3 ✓ X4589
f3, c2, o2, K3, 3l, β2, 2x, 1z.

✓ X4588
3 03, t1, 0x, 0z,

~~2.5~~ 2 ✓ X4578
2m, (4m,) 4q, 4d, 3 ~~e~~ e,

2 - ✓ X4006
m3, q2, 0s

4 ✓ X8598
m1, 1q (1m,) 0s, 2e, 2d,

3 ✓ X6753
o2, 2t, 2p, 1x, 1z, K4, 2l.

~~2.5~~ 3 ✓ X6743
N. satellite < 0" or K"

3 ✓ X6734
N. l = .1, t = .1, γ = .1

3.5 ✓ X6725
t1, 0l, x1, z2.

3. ✓ X4694
2m, 2q, (4m,) 3e, 3d, 1s.

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Mar 17-

2.5 ✓ X 6717
? image dbl ful -

4 ✓ X 6715-
2 m, 3 q (4 n), 3 d, 4 e, 3 f.

2 ✓ X6714
shotted. prov. dbl-ful.

2.5 ✓ X6708
N. C = 1 + . O = .1

3 ✓ X6707
N :: R = .1

4 ✓ X6705-
2 m, 3 q. (4 n.) 2 d, 2 e, 2 f.

~~3~~ 2.5 ✓ X6696
0 b, 1 a, 1 c, m 3, 0 p, 0 e, 3 o, 0 k, 0 r, 5 l.

3.5 ✓ X6695-
1 q. (1 n) m 1, 0 d, 0 e, f 1.

4 ✓ X8331
1 t, 2 y, 0 x, 0 z,

3. ✓
~~2~~ 2.5 ✓ X7838
(0 n) q R 1, m 2, f 2, 3 s, 4 r, 1 3

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Mar 17 –

4 ✓ X7788
2m, 4q, ~~4q~~, 4e, 4d, 2t.

4 ✓ X7660
p1, 0e, 1o, 0r, a1, 0b, 0c, 1f, h3, 3k.

3 ✓ X7616
m2, 0~~f~~g, ~~=~~(1n), 0z, 0d, 0e, t2, 3s.

3 ✓ X7500
3m, 0f.

3 ✓ X7443
0p, 0e, a2, 0b, 0f, 0k.

3 ✓ X6716
(n2)z 3, 0s, 2r, 3a.

3. p ✓ X7394
p3, 0e, 1o, 0k, a3, 0b, c1, r2.

2 ✓ X6697
0o, e1, p3, r1, s3, h1.

3 ✓ X6973
0t, 2y, 2δ, 0l, 2w, 0x, 0z.

3. ✓ X6959
1θ, 3m, ~~3~~4g.

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Went.
Mar. 19-'00

4 ✓ X 6812
t 1, 1 γ, 2 δ, l 2, 1 ω, x 1, z 2.

3 ✓ X 6777
N. ϯ = .1

3 ✓ X 6775⁻
o 2. k 1, 2 x, 2 z, 3 l, c 5⁻.

4 ✓ X 6773
0 p. 3 o, ~~3~~ 3 ε s 2. 2 β. 1 a, 2 b. 3 c. h 1, 1 f

5⁻ ✓ X 8562
m 5. q 3. (n 3.) ζ 3. 2 μ. 2 ν, 3 s, 4 a. 4 h.

~~3.4~~ ✓ X 8593
(n 2.) ζ 1, 4 a. 5⁻ h.

5⁻ ✓ X 8557
1 γ, 2 δ, t 1, x 1, z 2. 2 ω. 0 l.

3.3 ✓ X 8553
0 o, ε 2. β 3. b 3. c 3. f 2.

3 ✓ X 8543
1 t. 2 l. 0 x, 0 z.

4 ✓ X 8541
0 3. 3 t. β 3. 1 x, 0 z, k 2, 4 l. c 3.

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Mar. 19 -

4 ✓ X 8539
1m, 3q, (3n), 3z, 0d, ~~1d~~ 3d, ~~3e~~ 3e, 2o.

4 ✓ X 8537
0t, 3y, 3δ, 0l, x1, z1, 2w.

4 ✓ X 8565 -
04, 1t, z1, 0x, 3w, K4, 2l,

5- ✓ X 8570
0θ, 2m, 4q, 5-d, 6e, 3o.

3 ✓ X 8573 -
04, 1t, 3y, 3δ, z1, 1x, 1l.

3 ✓ X 8577
n2, 0q, 0d, 0e, o1, 1z.
On this plate stair in sequence, n which has generally been observed as about the brightness of q & z appears faintly as follows. n0b, p2n, n0e -
and n will not be more used for comps. ag var.

3 ✓ X 8582
t2, 0y, 2δ, x1, z2, 3w, 1l

4 ✓ X 8583 -
0p, 2e, h2, 3k, 0a, 2b, 2c, 3f.

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Mar-19

3. ✓ X 6776
0t. 0z. 2x.

4 ✓ X 8590
0t. 1γ. 1δ. z1. 0x. 2w. 0k.

4 ✓ x 8998
t1. 1γ. 2δ. 0k. x1, z1. 1w.

3 ✓ X 8975
0t. 0γ, 1δ. 0k. x1, z1. mage of var from. scratched

3. ✓ X 8771
0γ. 1c. r1, s2. a2. 0b, 0c. 1f. h3. 2k

3 ✓ X 8763
0t. 2l, 0x. 0z.

3 ✓ X 8753
0t. 1l. z1. 0w.

3 ✓ X 8999
1γ. 2δ, 1t, 2l. 0x, 0z. 2w.

2. ✓ X 6778
N. C = .1

3 ✓ X 8750
04. 1t. 3γ. 3δ, 3l, 2x. 2z.

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# Mar 19.

3 ✓ X8709
2t, 1x, 1z, β2, b3, ε3.

4 ✓ X8705-
0ϕ, 2m, 4d, 4e, 2+.

5- ✓ X8703
μ3, ε1, 0o, π4, ~~π~~ 3t, β2, 3x, 3z, b1, c1, f1.

4 ✓ X8643
1q, 1ζ, m2, +1, 0d, 0e.

3 ✓ X6698
? nuge rather dbtful.

4 ✓ X8603
0t, 2γ, 2δ, 1l, 0x, 0z, 3π.

4 ✓ X8445-
01, 1m, 3q, 3ζ, 3d, 3e, 0λ.

4 ✓ X8443
0t, 2γ, 2δ, 0l, x1, z1, 1ω.

2 ✓ X9020
N ϕ = .1

4 ✓ X9065-
q4, ζ3, 1π, 1σ, d2, e1,

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Mar. 19.

3 ✓ X 6774
r1. s2. 0β. b1. c1. ~~0~~ 0f, 1k.

3 ✓ X 9026
0a, 1b. 2c. 2f. 1r. 0s. h1.

2 ✓ X9021
N. r = .1

4 ✓ X9062
0o, ε2. b1. c1. 0k mage of var. peculiar Hpror.

3 ✓ X9027
0r. s1. a2. 0b. 0c. 0f. mage pvvr.

3 ✓ X9022
N K = .1

3 ✓ X9023
θ1. 1m. 3q. 3z. 2d, ~~3~~ e. 1σ.

3 ✓ X9024
0θ. 1m. 3q. 4z. 3d, 4e, 2σ.

~~2.3.~~ 3 ✓ X9067
0o, 0μ. 2ε. 0a, 0k mage pvvr.

3 ✓ X9025
q3. z1. d3, e2.

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Mar 19–

3 – ✓ X 9066
image of var. poor –

2.5 ✓ X9068
1t, o3. poor image.

3 ✓ X9074
Or, s2, 1o, p2, 0ε, a1, 0b, 0c, 0f. ~~0d~~, h1.

3 ✓ X9069.
seen? < f.

4 ✓ X9071
0θ, 1m, 2q, 3z, 0t, 2d, 1e.

3 ✓ X9305 –
? image affected by shut?

5 – ✓ X8554
0p, 2o. ~~0x~~: 0r, s2, h1, 0a, 1b, 1c, 1f.

3 ✓ X9271
N. 0 = .1 f = .1

3 ✓ X9075 –
p1, 1o, b3, c3, f1, β1.

~~3~~ 2.5 ✓ X9216
o3, ε4. poor for H stars

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Mar 19.

4 ✓ X 9070
1t, 2l, 0x, 1z. more of var - poor

4 ✓ X9072
m1. 0q. 1z. 0d, 0e, 0l.

3 ✓ X9073
3z. 2p, 1r, 0s, 1h. 1a, 3b, 3c, 3f.

4 ✓ X9063
1θ. 2m. 4q. 4z. 4d, 4e, 2l.

4 ✓ X9064
θ2. ~~0~~ 1m. 2q. 2z. 1d. 2e, 0l.

March 20.

2 ✓ A 1771
2. ~~b~~ 2 0p. 0s. 2o, r2. s2. a2. b1. c1. 0f

3 ✓ A1750
p 3. 1o, 1ε. r2. s3. a2, b1. 0c, 0f.

3 ✓ A1746
N o = .1

3 ✓ A1741
t1. 1γ. 1δ, 0l, 0+. ~1.

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Mar 20-

3 ✓ X 5560
0z. 9 l. ~~2 b~~ 3a, 0t, 3h-
Exposure excessive for var. st. work. ~~3 h exposure?~~ 3

3 ✓ X 5557
p 2, 0ε, h 2, x l. s 3, a 3, b 1, 0c, 0f.

~~3.5~~ 4 ✓ X 4695
04, 1t. 3γ, 4δ, 1κ. 1ζ. 2λ.

3 ✓ X 8388
0p, 1κ, 0s, 3a, 0h.

3 ✓ X 6957
broken across region

3 ✓ X 8831
ζ 1, η 2. d 2, e 2, 3a.

3 ✓ X 8610
N 3. z = 1

4 ✓ X 8427
2γ. 1t, 0x, Z l. 2w. 1λ.

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Mar - 20 -

The fol. meas. are to test effect of inverting the plate so that the var. shall be on the opposite side from what it was in the preceding measures. In what precedes as stated on p. 62 all stars in region (½ of circle inclosing special seq. for N-S var.) marked a were placed at right of var in company them, all in B were placed at the left. In what follows those in A are placed to the left, those in B to the right -

X 8582.
2k, 1l, 0p, 2δ, 0x, 2l, 3w.

X 85-85-
0n, 8-2, h3, 2k, a1, 1b, 1c, 1f, 1p.

X6776
0t, 1x, 0z.

X 8590
0t, 1p, 1δ, +1, z1, 2w, 0k.

X 8998 ~~8590~~
t1, 1y, 2δ, l1, x1, z2, 2w

X 8771
0p, 1ε, ~~ε~~r1, δ1, a2, 0b, 0c, 0f, h1, 3k,

X 8763
0t, 2l, 1x, 1z, e

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x 8753
0 t, 1 l, z2, 0w.

x 8999
3 y, 45, 2t, 2l, x1, z1. 2w.

x 8750
~~0~~3, 1t, 3y. 35, 2l, 1x, 2z.

x 8705
0 θ. 2m. 4d, 4e, 2ζ

x 8703
~~β~~ ~~3,0~~ ε. 00. r3, 4t, β1, 4x. 3z. 3b, 2c, 3f.

x 8643
0 g. 2z. m2, ζ2, d1. e 1.

x 8603
1t. 3y, 35, 0l, 0x. 0z. 2w.

x 8445
02. 0m. 2g. 3z. 1d. 1e, 0ζ

x 8443
1t, 2y. 25, 0l, 0x z1, 1w.

x 9065
g 3. 0z. 1r, 1s. d3. e4.

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x 6774
r1. s3.0B. 0b. 0c. - 0 f. 0K.

x 9026
a1, 1b. 2c, 1f. 1r, s1. h2.

x 9062
00. s2. b3. c3. k1.

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# March 24 - 1900 -

Comparison between the special sequence stars selected for Var. No. 8. ω Centauri - and the stars of the regular sequence No 2. of the cluster. In this comparison the star of the regular (No 2) sequence was always placed to the right of the special sequence star -

## X 6693

| | | |
|---|---|---|
| z | $m^2 4,\ n^2 1,\ 1 o^2$. | $m^2$ of second seq. is same star as m of special seq. |
| ε | $p^2 3,\ 0^* q^2,\ 2 r^2$. | |
| μ | $o^2 1,\ 1 p^2$. | |
| o | $q^2 1,\ 0 r^2,\ 2 s^2$ | |
| d | $m^2 2,\ 2 n^2$ | |
| e | $m^2 2,\ 2 n^2$. | |
| f | $p^2 3,\ 0 q^2,\ 1 r^2$ | |
| m | $l^2 5,\ 3 n^2$ . | |
| q | $m^2 3,\ 1 n^2$ | |
| γ | two St for safe comp. | |
| δ | " " " " " . | |

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a 0² 2. 1 p.

b p² 1. 2 q²

c p² 2. 1 q²

d l² 4. 1 m²

h n² 2. 0 o. 2 p²

k q² 1. 1 r².

l too faint.

s o² 1. 1 p².

t too faint for safe comp.

r o² 2. 0 p². 2 q².

ɤ m² 1. 4 n²

β p² 3. 0 q². 1 r².

χ 0 s² ÷. r² 2.

w Too faint.

z r² 2. 0 s ÷.

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X 7394

ζ $m^2 3, 1 n^2$

ε $q^2 1, 1 r^2$

d $m^2 2, 2 n^2$

e $m^2 1, 3 n^2$

f $0 q^2 2 r^2$

μ $p^2 1, 1 q^2$

o $q^2 1, 0 r^2, 1 s^2$.

δ $s^2 3, t^2 1,$

γ $s^2 3, t^2 1.$

φ $m^2 3, 2 n^2.$

m $l^2 4, 4 n^2$

a $0^2 1, 1 p^2$

b $p^2 1, 0 q^2$

θ $l^2 4, 1 m^2$

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C f²1. 1g²

h o2. 1f²

k 0g² 1r² + dif.

l s²3, 0t +

t s²3. 0t +

s n²2, 0o². 2f².

d m²1. 3n²

r o²2. 1f²

β f²2. 0g². 1r²

x s²1, 1t

w t²1 ±

Z s²2. 2t²,

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March. 26. 1900.

X. 8703

ζ $m^2\ 3.\ 1n^2$

ε $p^2\ 3,\ 0q^2,\ 2r^2.$

d $m^2\ 1.\ 1n^2$

e $m^2\ 1.\ 1n^2.$

f $p^2\ 2.\ 1q^2$

p $o^2\ 2.\ 0p^2.\ 2q^2$

o $p^2\ 3.\ 0q^2,\ 1r^2.$

δ $s^2\ 2^{3}\!/_{4},\ 0t^2$

γ $s^2\ 2,\ 1t^2.$

q $m^2\ 2.\ 1n^2.$

m $l^2\ 4.\ 3m^2.$

a $o^2\ 1.\ 0p^2.\ 2q^2$

b $p^2\ 2.\ 0q^2,\ 2r^2.$

θ $l^2\ 3.\ 2m^2$

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Mar. 26.

C $p^2 2.\ 0 q^2.\ 2 r^2.$

h $0^2 1.\ 1 p^2$

k $p^2 2.\ 0 q^2.\ 1 r^2.$

l $s^2 3.\ 1 t^2.$

t $q^2 3.\ 0 s^2.$

s $0^2 p'.\ 0 p^2.\ 1 q^2$

ſ $m^2 1.\ 2 m^2$

r $0^2 2.\ 0 p^2.\ 2 q^2$

β $p^2 2.\ 1 q^2$

x $s^2 1.\ 2 t^2.$

w $s^2 3.\ 0 t^2$

z $r^2 1.\ 1 s^2.$

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1899phae..proj..22866B



Mar-26-

X8570

ε $q^2 2, 1r^2$

d $m^2 1, 1' n^2$

e $m^2 3, 1n^2$

f $p^2 2, 0q^2, 1r^2$

p $f^2 1, 1q^2$

o $q^2 2. 0r^2, 2s^2$

δ $s^2 3. t^2 1.$

γ $s^2 1, 1t^2$

q $m^2 2, 1n^2$

m $l^2 4, 3n^2$

a $o^2 2. 0f^2. 2q^2$

b $f^2 1, 1q^2$

θ $l^2 3, 1m^2$

c $f^2 2. 0q^2. 2r^2$

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Mar. 26 -

h o² 3. 0 h². 2 g²

k g² 1. 1 r²

l Lu faint or indistinct. To compare well.

t g² 3. 0 s². 2 t²

s o² 2. 0 h². 2 g²

r m² 2. 3 n².

n o² 2. 0 h². 2 g²

p h² 2. 0 g². 2 r²

x r² 3. 0 s². 2 t²

w t² 1.

z r² 3. 0 s². 2 t²

y m² 2. 1 n²

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Mar. 30 -

Plate overlooked.
X 8642.
t 1, 1 p, 2 δ, 1 h, x 1, z 2.

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Apr. 4-7 1900.

Remeasures of certain plates for Var. No. 18
Comb. with second sequence.

X 8763 $O_3$, Oq. 2n 13.81, 13.87, 13.84 ; 13.84

X 8771 N1, 25 14.14, 14.05 ; 14.10

X 8705 N1. 1.5 14.14, 14.15 ; 14.14

X 5223 N.S. ; (not seq 1. seen? m = .2

X 8831 O2, On. 3q 13.71, 13.65, 13.57 ; 13.64

X 8703 Om. 2n. 13.08, 13.12 ; 13.10

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# April 11 - 1900

Positions of var measured on plate 1828. the one (20×24) with ~~Rese~~ cam which Miss L. has used lent using steel m.m scale - giving distance in m.m from star to line as stated.

Var. No. 42 -

| | m.m | | Line |
|---|---|---|---|
| S + N | 75.0 | To | 40 |
| | 74.9 | " | " |
| | 74.9 | " | " |
| | 70.0 | to | 57 |
| | 69.9 | " | " |
| | 69.9 | " | " |
| E + W | 70.2 | to | 58 |
| | 70.3 | " | " |
| | 70.2 | " | " |
| | 74.7 | to | 41 |
| | 74.8 | | |
| | 74.7 | | |

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Var. No III.

N + S

92.6 mm to 39
92.8 "
92.9 "

77.5 " 59
77.6
77.4

E + W

65.1 to 58
65.1
65.2

71.1 to 42
71.2
71.0

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Apr. 12. 1900.

Remeas. of No. 10.

X6715

→ m3, 0m, 20. 13.30, 13.30, 13.27 ; 13.29

X6667 m2, 00, 2/v 13.50, 13.47, 13.47 ; 13.48

X4613 (01 : 0/v) = : dif. ( 13.57, 13.67 ; 13.62 ) : dif.

X6959 m3, 00, 0/v. 13.60, 13.47, 13.67 ; 13.58

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April 12 - '00

Position of Var. 80.

Oriented by placing over sul. dese. on free. page (the one used by Miss L.) the sul. from 8642 (made in Peru) placed over the other so that a ruler edge passes thro the centers of the same pair of stars on both plates - Then lines drawn on sul. of 8642 to correspond with those on the other sul -

Var 80.

| | | | | |
|---|---|---|---|---|
| Dist from E. + W line | S | 37.7 m.m | | mean of Dist |
| " " N + S - | fol. | ~~29.7~~ 0.8 | | S. 37.7 |
| " " E + W " | S | 37.7 | | mean fol |
| " " N + S - | fol. | 0.9 | | 0.8 |
| " " E + W. | S | 37.8 | | |
| " " N + S | fol | 0.8 | | |

Var 79

| | | | | |
|---|---|---|---|---|
| Dist from E + W line | S | 32.2 m.m | | mean of |
| " " N + S " | free | 29.3 | | Dist S |
| " " E + W " | S | 32.0 | | 32.1 |
| " " N + S " | free. | 29.3 | | mean free |
| " " E + W " | S | 32.2 | | 29.3 |
| " " N + S. " | free | 29.2 | | |

Hence using orientation as above
Var 80 follows Var 79 30.1 m.m, and S 5.6 m.m

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For scale of enlargement for 8642

Distance between ZC 1095 and 1232

171.3 mm
171.2
171.3

mean 171.3 mm

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April. 22 - ~~18~~ 190 - Dβ -

Var - N° 36. with special sequence -

X 8771
b2, 0c, 4k, 3d, 4u, n2, p4, 3q

X 8763
a3, 3b, 3c, 0f, 3n, 0β.

X 9071
b2, c2, ~~6~~d1, ~~3~~0e, n3, 2q

A 1741
0K, 1q, 0d, 0e, 1f, h3, u1.

X 8554
a4, 1b, 1c, p2, 1m

X 9021
(2),

X 5559
b3, c1, 1k, 2d, 3e, 3f, 1h 3u.

X 5544
b2, 0c, p4.

X 6812
1b. 3c. 0p.

X 6774
a4, 2b, 3c, 0p, 0β.

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1899phae.proj.2286B



X7838
a3, 1b, 1c, 0β, 0μ.

X8753
b4, c4. d1. e2. f1. h3. 0u, 0q

X8750
d2. e3. u1. q1. m1. 1l.

X8709
0k, 2m, 2q, 0d, 0e, 1u. h1.

X8643
0b, 0c. 1h, 3d, 3e. β9, μ8.

X8642
1b, 1c. β3. μ3.

X8598
0b, 1c, μ1, β2.

X9305
1b. 2c. μ1, β2

X9072
b3, d1, h1. 0k, e1. 1m, 2l

X9062
k2, m1, 1l, d1, e2, h2.

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1899phae.proj.2286B



X 9026
b 3, c 1, 3 d, 2 h.

X 9025
1 ?

X 9024
a 3, 3 b. 0 β, 0 μ.

X 9023
a 4, 2 b. 0 μ. β 1.

X 9022
1 b, 2 c. μ 1. β 2.

X 8999
a 4, 2 b. 3 c. μ 2. β 2.

X 8937
a 3, 3 b. 0 β, 0 μ.

X 8445
b 3. c 2. 0 d. 0 e. 1 f. 1 k, 2 m, 4 h.

X 8443
b 1, 0 c, 3 d, 3 e, 3 f. β 3, μ 3. 4 k

X 9063
0 k, 2 m, 3 l, 0 d, e 1, 1 f.

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1899phae.proj.22886B



X 9027
( c 2, 1 d ) ±

A 1746
0 b, 1 c, β 2, μ 2.

A 1771
b 3. c 3. 1 k. h 2.

X 8595
b 4, c 3. d 2. e 1. f 1. k 2, 0 m 2 l.

X 8570
a 3, 3 b, 3 c, μ 1. β 2.

X 8541
b 3, c 3. d 1. e 1. 0 f. h 2. 0 m.

X 8539
b 2. c 2. 0 d, 1 e. 1 f. 0 h. 2 m, 1 k.

X 8427
a 4, 1 b. 1 c. μ 2. β 3.

X 8610
a 4. 1 b, 2 c. β 3, μ 2.

X 6937
b 3, c 3. d 1, 0 e. f 1. k 1, 0 m

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1899phae.proj.2286B



X4695–
1b, 0c, 3d, 3e, 3f, β2, μ2, 2h, 4u.

X8388 F
β1, μ1, 1b, 1c,

A1750
a3, 3b, 4c, 0f, 0β.

X6725–
(2)

X8331
0b, 1c, 3e, 2K.

X8590
a4, 1b, 1c, β2, μ2.

X5712
b4, c3, d1, h1, 0e, 0f, 3u.

X5558
b3, c2, 0d, 1e, 2f, 1k, 2m.

X5557
b1, 0c, 2d, 2e, 3f, 3k.

X5552
b4, c3, d2, h2, 0f, 0k, 2m.

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1899phae.proj.2286B



X 5532
(?)

X 4694
b4, c3, 0d, h1, 0e, 1f, 1k.

X 4693
(?)

X 4681
β3, μ1, 1b, 1c.

X 6973
β2, μ2, 0b, 1c, 3k, 3d, 3h.

X 6959
b3, c3, d1, h1, 0e, 0f.

X 7788
a2, 4b, 1β, 1μ.

X 7616
a4, 2b, 2c, μ2, β2.

X 7443
1b, 2c, β1, μ1.

X 7660
2b, 2c, 0μ, β1.

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1899phae.proj.2286B



X7500
b4. 0d. k1,

X7394
b4. 0d, h1, 0k, 1μ. 0e.

X9271
(?)

X9070
0b, 0c, 2d, 1h. 3e. 3f. 2K.

X9068
a3, 0b, 0c. 3k. 3e. h2. β1,

X9067
0b, 2c. β2. μ1, 3d, 3h.

X9216.
b2, 0d, 0h.

X9075
0b, 0c. ½ h. 2d 2e. 2f. β3, μ3,

X9074
b2, c1, 0d, 0h, 0e, 0f. 1K.

X9073
b4. c3, h1, d1, e1, 0f, k1.

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1899phae.proj.2286B



April 23 - ( N° 36 Comet )

X 9066
a 3. 2 b. 2 c. $\beta$ 1, 0 $\beta$ . 3 $\phi^n$.
(a 4. 0 b, 1 c. $\beta$ 2. $\beta$ 2. 2 $\phi^n$.)
X 9065 -

X 9064
b 1, c 1. 2 d. 1 h. 2 e. 2 f. $\phi^n$ 2.

X 6773
1 b, 1 c. $\beta$ 2. $\beta$ 3. 0 $\phi^n$.

X 6759
b 4, c 3. d 1. h 2. e 1. 0 f.

X 6743
(b 3, c 3. 0 d, 0 h. 0 e) =

X 6734
b 2, c 3. 1 d, 1 h. 0 $\phi^n$

X 6717
(?)
$\beta$ 2. $\beta$ 2. 1 b, 2 c - 3 $\phi^n$.

X 4679
b 3. C 3. d 1. h 2. e 1. 0 f.

Y 4614
(?)

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1899phae.proj.2286B

X4613
(?)

X4589
a3, 1b, 2c, 0f, 0β,

X4588
b3, c3, d1, h2, e1, 0f, k1, ν3.

X4578
(?)

X4006
(?)

X6715
1b, 2c, β1.0f.

X6714
0b, 0c, 3d, 2h, f2.

X6708
(?)

X6707
(?)

X6705
0b, 1c, 2d, 3e

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1899phae.proj.22866B



X6698
(?)

X6696
(c2. 0d. 0e) ±

X6695-
b4, c4, h2, d2, e2, w1, 1b.

X6693
β2, /c2, 1b

X6667
b4, c3, d1, h1, e1, 0w, 1b.

X6633
b2, c2, 0d, 1e, 2f, φ^m 1, 1k.

X6534
b1, 0c, 3d, 2h, β3: 1φ^m.

X6533
(?)

X 8998
0b, 0c, 3d, 2h. 0φ^m.

X 9020
(?)

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1899phae.proj.2286B



X8975-
1b, 1c, 3d, 2h, β3, μ2.

X8577
0b, 2c, 4d, h1, β1.

X8703
1b, 1c, 3d, 2h, μ2, 2φ[m].

X8603
b1, c1, 2d, 1h, φ[m]2, 2k.

X9069
(?)

X8543
1b, 2c, 3h, 3d, 0β, 0μ.

X8593
b3, c3, 0d, 0h, 2u, 2q, 2m.

X8585-
b1, 0c, 3d, 3h, β2, μ2.

X8582
bp[l], c1, 2d, 2h, 0φ[m], 3k,

X8575-
b3, c3, d2, h2, e1, φ[m]3, 0k, 0m.

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1899phae..proj..228bB



X8565-
b 1. 0 c. 1 h. 3 u. 0 β. 2 k.

X8562
b 2. c 1. 2 d. 1 h. 1 e. 2 f. 3 w. 3 k.

X8557.
d 1. h 2. e 1. 0 f. 0 μ. 0 q. k 1. 0 m.

X8553
(2)

X6778
(2)

X6777
1 b. 2 c. β 2. μ 2.

X6776
a 4. 2 b. 2 c. 0 β. 0 μ.

X6775-
a 3. 3 b. 3 c. 1 μ.

X5223
(2)

X8831
(b 2. 1 d) ±

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1899phae.proj.2286B



X 8705-
0β. 0μ. 2b, 2e.

X6697
(1b. 1c. 0μ) ±

XJ560
b2. c2. 1d, 1h. 0φ^m 3k. (long exh.)

X6716.
1b. 2c. β1, μ1.

Sequence used estimated in grades - X 8999
a 2 β 0 μ 3 b 0 m 1 c 2 k 0 h 1 d 0 e 0 f 0 m
0 m 0 q 1 b.

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1899phae.proj.2286B



May 2 - 1900 -

Remarks of Var - No 42 - W Centauri

X 4588
Ot + 14.41

X 4699
OK 12.45-

X 5223
( Om + ) ( 13.00 )

X 5552
( Or + ) ( 14.00 )

X 5559
( Or + ) ( 14.00 )

X 6533
( ? ) —

X 6693
f 2. 2g . 11.46 .08 .08 11.38 , 11.54

X 6698
Og + 11.74

X 6707
f 2. 2g 11.46

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1899phae.proj.2286B



X 6708
X3.1g 11.56 .08 .08 11.48 , 11 64

X6715
0g ± 11.74

X6717
0g 11.74

X6734
0g ± 11.74

X6957
0r ± 14.00

X6959
0g ± 13.80

X6973
0g ± 13.80

A1746
h2,2k 12.31 .06 06 12.37 , 12.25

A1750
(2) —

X7500
m.2,2n 13.15 05 05 13,20 13-10

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1999phae.proj.2286B



X7838
Om ± 13.00

X8331
g1, 2h 11.90 .06 .07 11.84, 11.97

X8427
Os ± 14.20

X8443
Or ± 14.00

X8445
Os ± 14.20

X8537
Or ± 14.00

X8539
Or ± 14.00

X8541
Or ± 14.00

X8543
Os ± 14.20

X8642
K1, 1h 12.58 .03 .04 12.54, 12.62

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1899phae.proj.2286B

X8643
Oh ± 12.72

X8703
h1, 1K ± 12.31 04 .04 12.27, 12.35

X8709
Oh ± 12.17

X8771
Oh ± 12.17

X8831
On ± 13.30

X9216
On ± 13.30

X9271
(Oo) : ( 13,47 ) :

X9305
(h1,1m) ± ( 12.86 ).04 .04 12,82, 12.90

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1899phae.proj.22866



Cent. Var. No 35 — Sat. May 5 —
special Sequence

X 8831
1g, 1h, 1e, 0f,

X8610
N.S. < e

X 4679
0f, 2e, 1g, 1h, y3, w2, z1.

X6743
1y, 3z, 0s, a4,

A1741
1y, 3w, 3z, 3g, *5 1, +3,

X6753
2y, 1*5, +p3, a3,

A1746
D

X6773
yz, 1f, 2g, 2h, 3e, 0w, 0z,

A1750
0e, 0h, f1, g1, 0t,

X6774
yz, 1f, 1g, 2e, 2h, 0r, g3,

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1899phae.proj.2286B



A 1771
D

X 6775
f 2. 0 e. 0 h. g 1. b 1. 0 c 0 t.

X 4006
D

X 6776
( f 2. g 2. 0 e. 0 t

X 6777
f 1. g 1. 0 e. b 2. 0 c.

X 4578
D

X 6778
f 1. 0 g.

X 4588
1 f. 1 g. 2 e. 2 h. y 2. 0 m. d 3. 0 s

X 6812
0 y. 2 z. 2 w. @ 1. 0 5. q 1.

X 4589
0 y. 1 z. 1 w. 2 f. 2 g. 2 h. 3 e. 0 q. 2 b.

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1899phae.proj.2286B



X6957
3f. 3g. 1y. 1g. 4l. 1s.

X4613
D

X6959
0y. 2f. 3g. 3h. 3e. 0β. 0s.

X6973
y2. 0f. 0g. f2. 2h. 0b. g2.

X4614
D

X7394
f1. g1. 1e. 1h. c2. r3.

X4681
f1. g1. 0e. 0h. 2t.

X7443
f1. g1. h1. e1. 0t. b2.

X4693
(1g. 0s, β1) =

X7500
f1. 0e. g1. h1. 1t.

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1899phae.proj.2286B



Mon. May 7.

X 7616
~~0f~~. 1g, 1h, 2e. β3 s3. 1f 2b. ~~3c~~

X 4694
1f. 2g. 2h. s2. β3. 4t.

X 7660
0f. 0g. 1e, 1h, 0b. 1c. 3t.

X 4695
f1. g1. h1. 1e. 0t.

X 7788
3f. 4g. 4h. 4e. 0y. 0s, 0g. +3.

X 7838
D

X 8331
1f. 1g. 2e, 2h. β3. s3.

X 5223
D

X 8388
f1. 0e, 0h, 0t.

X 5532
s1. 0g. 0y

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1899phae.proj.2286B



X8427
0s, 1β. 1q. 1y. 3f. 3g. 2t.

X5544
D

X8443
1y. 0q. 3b. 3r. + 3.

X5552
(0y. 0q. 0s. 0β) ±

X8445
q1. 0f. 1e. 1h. β2. y2.

X8537
0f. 0g. 0h. y2. β$z^3$, s4. q4. 1t.

X5557
D

X8539
2f. 2g. 4e. 4h. 1q. 4r.

X5558
f1, g1, 0e, 0h. r1, 1t.

X8541
0f, 0g. 1e, 1h, q3, 0r

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1899phae.proj.2286B



χ 8543
f 1, g 1, 0 h, 2 e, r 1,

χ 8553
D.

χ 8554
0 f, 0 g, 2 e, 1 h, r 1, 2 t.

χ 5559
2 f, 1 g, 3 e, 2 h, g 3, 1 r, α 3, β 2.

χ 8557
g 1, 3 r, 0 y, 0 α

χ 5560
D.

χ 8562
g 1, 3 r, 1 y, α 4

χ 8565
1 f, 1 g, 2 e, 2 h, g 4, 1 r, y 3

χ 5712
1 y, 0 g, 1 α, 1 β, α 3.

χ 8570
1 y, 0 g, α 4,

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1899phae.proj.2286B



X6533
D

X8575
$\Phi^2$ g, gf 2, 1 r, gf 2, 0 w.

X8577
a 4, α 3, 3 y, 2 gf, 2 r, 2 β

X8582
gf 1, 2 f, 2 g, gf 1, 3 r, 2 b, 2 c

X6534
0 gf, 0 y, 3 f, 3 g, 2 b, 3 c, 0 β, 0 r.

X 8585
1 y, 0 gf, 3 f, 3 g,

X6633
y 1, 0 gf, 3 f, 3 g, A 1, 0 β, 1 z

X8590
1 y, 1 gf, a 4, α 3

X8593
f 1, gf 1, 1 r, 0 h, b 2, c 1

X6667
1 y, 0 gf, 1 A, 1 β, α 3

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1899phae.proj.2286B

χ 8595
0f, 0g, 1h, 2e, 4, 0r

χ 8598
2y, 1g, α3, α4

χ 8603
1y, 1g, α3

χ 8642
y1, g1, 2f, 2g, 3e, 3h

χ 6693
2y, 0g, α3

χ 8643
f1, g1, 1e, 1h

χ 6695
f1, g2, 0h, 1t

χ 8703
0y, 0g, ~~2r~~, 3f, 3g, α3

χ 8705
1y, 0g, α4,

χ 8709
f1, 0g, 0t, y3, r1

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1899phae.proj.2286B



χ6696
1f, 2g, y1, g2, 2r, r3

χ8750
f2, g2, 0e, 0h, 1t

χ8753
1f, 0g, 2e, 1h, y3, 0r, 1t

χ8763
0g, 3r, 1y, 0r

χ8771
2y, 1g, α3, α4

χ8975
D

χ6697
(0e, 0β)?

χ8998
1y, 0g, 3f, α4

χ8999
0f, g1, 1~~f~~, 0h, y3, r1

χ9020
D

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1899phae.proj.2286B



χ9021
D

χ9022
0f, 0g, 1t, y3

χ6698
2y, a2, 2s

χ9023
3f, 2g, s1, 0β

χ9024
1y, 0s, 0g, 3r

χ6705
0y, g1, 3f, 3g

χ9025
D

χ9026
0y, 0g, 3f, 0β

χ9027
0f, 1g, y2, g4, 1t, β2

χ9062
0f, 0g, 2e, 1h, y3, g3, 1r

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1899phae.proj.2286B



X 9063
0f, 0g, y2, g3, 0r

X 9064
f1, g2, 0h, 0e, 1t

X 6707
D

X 6708
D

X 9065
1f, 1g, 2e, 2h, 0z, 3t

X 6714
D

X 9066
2f, 3g, 3h, y1, 0g, 3r

X 9067
1g, 1y, a3, x3, 0r

X 6715
1g, 2y, x3, a4, 1β

X 9068
0f, 3g, 0β, 1r

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1899phae.proj.2286B



X 9069
D

X 9070
2y, 1g, α3, α4

X 6717
0y, α2, 0β

X 9071
0y, 0β, 3f, 3g

X 9072
(1f, 1g, β1) + or −

X 6725
0y, g1, 2r, 3f, 3g, 3h, α1

X 9073
(0f, 1g, 1t, 0r) + or −

X 6716
1y, 0g, α4

X 9074
D

X 9075
D

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1899phae.proj.2286B



X 9216
Oy, Oq, 3r, d4

X 6734
f2, g1, 1e, 1h, y3, 1t

X 9271
D

X 9305
Oq, 3r, β1, s1, 4f

≡

Of the stars selected for this Special Sequence ε is the variable No 32. t is rejected — β and δ are dble. this shows on best plates but on others does not show. In all cases where β + δ are used in the comparisons the light of the pair of stars is used — on plates where the stars is separated it has not been used —

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1899phae.proj.2286B



Friday - may - 11 - 1900 -

Centauri. nº 24 Special Sequence.

X8753
a1, 2e. ~~0m.~~

X8595
a1, 2e. ~~2m~~

X6693
a1, scratched.

X6698.
(½) D.

X6697
d3. 0a. 2e.

X6696
d3, 0a 2e.

X6705
a1, 1e.

X6707
D

X6695
a2. 1e.

X6708
D

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1899phae.proj.2286B



X6667
e1, 0b, 0c.

X6714
D

X6715
e2, 0c, b1, 2h.

X6633
a3, 0e, 1b, 2c

X6534
a3, 1e, 2b, 3c.

X6717
D

X6725
e2, 0b, 0c, 2h, k2.

X6533
z3, d2, 1a.

X6716
e3, b2, c2, 1g, 1f.

X6734
a4, 0e, 2b, 1c, 0k

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1899phae.proj.2286B



X9305
a1. 2e, 2f 1b. 2c.

X9271
e1, 3f. 3g. 0b. 0c.

X9216.
a3, 1e 3b. 3c.

X9075
e1. 2f. 2g. 0c, k1.

X5712
e3. k1. 1t, b1. c1.

X9074
a4, e1. 0b, 0c. 2g, 3f.

X5560
e2. 1g. 2f 1k. 2h

X5559
e2. 1g. 2f. 2t

X9073
a3. 0e. 1b, 2c, 0k.

X5558
a4, e1, 2g. 3f, 3t,

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1899phae.proj.22886B



X 9072 -
0a, 2e. 2 4, 2 4. 3 k, 3 b, 3 c.

X J-J-J-7
a 3, 1 e

X 9071
a 1, 2 e. 3 f. 3 g. 2 k. 3 h.

X 9070
a 3. 0 e, 3 f, 3 g. 0 k, 2 h.

X 5-5-52.
a 1, 2 e, 2 3,

X 9069
D

X 9068
D

X 9067
2 a, 2 3, 2 4, 2 b, 2 c.

X 5-5-44
D

X 5-5-32
e 1, 2 g, 0 7, 1 k, 3 h.

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1899phae.proj.2286B



χ 5223
D

χ 9066
a 2, 2 e, 2 b, 2 c, 3 h.

χ 4695
e 2, 1 f, 1 g, 3 t, 1 h, k 1

χ 9065
d 4, a 1, 2 e, 3 g, 4 f, 4 t.

χ 9064
f° e, d 3, 3 f 3 g, 2 k.

χ 9063
a 3, f° e, 3 g, 4 f, 2 b, 1 c.

χ 4694
e 1, f° b, 1 c, 2 k,

χ 9062
a χ 4, f° e, 2 f, 2 g, 2 t, 3 k

χ 9027
a 3, 1 f, 1 g, 2 t, 0 f k, 1 h

χ 9026
e 3, 1 f, 1 g, 2 t, b 1, c 2.

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1899phae.proj.2286B



χ 4693
(e 2, 1f.) + −

χ 9025
e 2, 1f, 1g, 1t.

χ 4681
a 3, 1e, 2f, 2g, b 1, 1c, 1k.

χ 9024
a 4, 1e, 2f, 2g.

χ 4614
D

χ 9023
a 3, 1e, 2f, 2g.

χ 4613
D

χ 9022
a 2, 2e, 2b, 2c.

χ 4589
e 1, 2f, 2t, k 2, 0h, 0b, c 1.

χ 9021
(a 3, 0e, 1b.) +, −

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1899phae.proj.2286B

X 9020
a 3, 1 e, 1 b, 2 k.

X 8999
e 1, 3 f, 2 g, 1 h, 9 k, b 1, c 1.

X 8998
e 2, 1 f, 1 g, 1 i, 0 1 h, k 1.

X 8975
a 2, 1 e, 1 b, 2 k, 3 h.

X 4588
a 2, 1 e, 2 k, 1 b, 2 c.

X 8771
a 3, 0 1 e, 3 f, 3 g, 1 b, 1 c, 2 k.

X 8763
e 2, 1 g, 2 f, 2 i, 1 h, 0 1 k, b 2, c 2.

X 4578
D

X 8750
a 2, 1 e,

X 8709
e 2, 1 g, 2 f, 0 1 h, k 1, b 1, 0 1 c

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1899phae.proj.2286B



X 8705
e 1, 2g, 2f, 3t, 3h, 1k, 0 f b.

X 8703
e 2, 2f, 1g, 3t, 0 f k, 2h, 0 f b.

X 8643
a 2, 1e, 3b, 3c.

X 8642
e 2, 1f, 1g, 2t, k 1, 0 f h, b 1.

X 4006
D

X 8603
a 3, 0 f e, 1 b, 2 c, 2 k.

A 1771
a 3, 0 f e, 2 k.

X 8598
a 4, e 1, 3 f, 3 g, 3 t, 2 h, b 1, 0 f k.

X 8593
a 4, 0 f e. 0 f k, 2 h, 1 b, 1 c.

A 1750
a 3, 1 e, 0 f b, 1 c, 1 k, 2 h,

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1899phae.proj.2286B

a 1746
D

a 1741
e 3, f° g, 1 f, 1 t, 7° h, k 1, b 2.

χ 8590
a 3, f° e, 2 k, 1 b, 2 c.

χ 8585
a 1, 2 e, 3 b, 3 k

χ 4679
a 3, 1 e, 2 b, 3 c, 3 k

χ 8582
e 2, 2 g, 3 f, 3 t, 2 h, b 1, 1° k.

χ 8577
a 4, 1° e, 1° b, 1 c, 1 k, 2 h.

χ 8388
a 1, 2 e, d 3, g 4.

χ 8575
a 2, 1 e, 3 b, 3 c, g 4, d 4.

χ 8570
e 2, 2 f. 2 g, 4 t, 3 h, b 1.

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1899phae.proj.22866



X 8565
e 2, 2f, 2g, 3t, 0 k, 2h, 0 b.

X 8331
a 4, 0 e, 3f, 3g, b 1, 0 k.

X 8562
a 2, 1e, 3b, 3c, 3k, d 4.

X 7838
a 1, 2e, 3b, d 3.

X 7788
a 2, 2e, d 3, 2k, 1b.

X 8557
a 2, 1e, 1k, 3h, 2b, 2c.

X 7660
a 1, 2e, 3k, 2b, 2c, d 3.

X 8554
a 2, 1e, 3b, 3c, 3k.

X 7616
e 2, 1f, 1g, 2t, 0 h, k 1, b 2.

X 8553
a 3, 0 e, 3f, 3g, 1b.

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1899phae.proj.2286B



X 7500.
a 2, 2 e, 3 b, 4 c, 3 k.

X 8543
a 2, 1 e, 1 b, 1 c, 1 k, 3 h.

X 7443
D

X 6973
a 1, 1 e, d 3, 1 b, 1 c, 1 k, 3 h.

X 8541
a 2, 2 e, 2 b, 1 c, 1 k.

X 6959
e 2, 1 f, 1 g, k 1, 1 h, 1 b.

X 8539
a 3, 1 e, 3 f, 2 g, 4 t, 1 b, 1 c.

X 6957
D

X 8537
e 2, 1 f, 1 g, 2 t, 1 h.

X 6812
a 2, 1 e, 1 b, 1 k.

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1899phae.proj.2286B



χ 8445
e 2, 1 f, 1 g, 2 t, 1 h, k 1, b 1.

χ 6778
D

χ 8443
a 1, 2 e, d 3, 3. 4, 1 b, 2 k.

χ 6777
(d 4, 1 e, 3 f) +, −

χ 8427
a 2, 1 e, 2 b, 2 c, 1 k.

χ 6776
e 3, 1 g, 1 f, 1 k, b 2, 1 h.

χ 6775
e 2, 1 g, 2 f, 2 t, b 1, k 1.

χ 6774
e 3, 1 f, 1 g, 1 t, 1 h, k 1, b 1.

χ 6773
e 2, 2 f, 2 g, 2 t, 1 b,

χ 6753
a
k 2, 1 ε, 2 b, 2 k

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1899phae.proj.2286B



6h

X 7743
a 3, f° e, 3 g, 3 f, 1 k, 1 b.

X 7394
e 2, 2 f, 2 g, f° k, b 1.

X 8610
a 3, f° e, 1 k, 1 b, 1 c.

X 8831
e 2, 2 f, 2 g, f° b, f° c.

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1899phae.proj.2286B



Friday - July 13 - 1900 -

Cent - var No 2 -

| X | J.D. | Date | ver | Comb | | |
|---|---|---|---|---|---|---|
| 9500 | 4795 | May 20 1899 | 30m | f1, 3g | 11.28, 11.44 | 11.36 |
| 9803 | 4848 | July 12 " | " | f3 1g | 11.48, 11.64 | 11.53 |
| 9852 | 4856 | " 20 | - | g3, 0h, 2K | 12.04, 12.17, 12.25 | 12.15 |
| 9853 | 4857 | " 21 | - | h1, 2K | 12.27 12.25 | 12.26 |
| 9921 | 4878 | Aug 11 " | - | 02, 1r | 13.67, 13.57 | 13.62 |
| 9935 | 4883 | " 16 " | 20 | ? | — | — |
| 9936 | 4884 | " 17 - | 30 | g1, 1r | ± 13.90, 13.90 | 13.90 |

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1899phae.proj.2286B



Remeasures Cent. Aug. 2 1900.

Var. No 9.

| | | | | | |
|---|---|---|---|---|---|
| X4378 | | | | | |
| m 3, 1 n | 13.30 | 13.20 | 13.25 | 05 | 05 |
| X5544 | | | | | |
| 0 s' + | v. dif. | | 14.21 | A | |
| X5557 | | | | | |
| n 1. 20 | 13.40 | 13.27 | 13.34 | 06 | 07 |
| X4695 | | | | | |
| n 1. 0 s'. 2 t' | ~~13.90~~ 14.10 | 14.21 | 14.18 | 14.16 | 06, 05, 02 |
| X4681 | | | | | |
| n 2. 00. 1 v | 13.50, | 13.47 | 13.57 | 13.51 | 01, 04, 06 |
| X4613 | | | | | |
| ∴ dif. | — | — | — | | |
| X 4589 | | | | | |
| q 2. 0 n. 2 s' | 14.00, | 14.00, | 14.01 | 14.00 | 00, 00, 01 |

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Var 1896
X 4695-
Ofr & dif - 13.67 A .?.

~~August 6 1896.~~

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1899phae.proj.2286B



W Cent -

August 3 - 1900 -

Comparison of special sequence stars -

Special Seq. for Var. No. 36.

X 8585
m l q

X 8582
m 0 q

X 8577
m l q

Special Sequence for Var. No. 35.

X 8565
z l r
c l h
b 0 r
z l b

X 8570
b 0 r
z l b

X 8577
b 0 r
z 0 b

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1899phae..proj..2286B



X 8582
b 0 r
z 0 b

X 8585
b 0 r
z 0 b.

August 6-1900-
Comb. of Spec. seq. stars Pan. No 36.

X 8585
q 1 b

X 8582
q 2 b
u, m

X 8570
q 2 b

X 8577
q 0 b

X 8565
q 1 b

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1899phae.proj.2286B



Aug - 10 - 1900

Remeasures of Var 42 - w Cut -

| | | | | |
|---|---|---|---|---|
| X 4679 | | | | |
| m 1, 3m | 13.05 | 05, 05 | 13.10 | 13.00 |
| X 4694 | | | | |
| m 1, 3m | 13.05 | 05, 05 | 13.10 | 13.00 |
| X 4695 | | | | |
| 0m | 13.30 | A | | |
| X 5712 | | | | |
| m 1, 10 | 13.38 | 02, 01 | 13.40 | 13.37 |
| X 6633 | | | | |
| l 2.0 m 3m | 12.97 | 05, 03, 03 | 12.92 | 13.00 13.00 |
| X 6534 | | | | |
| 0o | 13.47 | A | | |
| X 6753 | | | | |
| 0g | 11.74 | A | | |
| X 6773 | | | | |
| 0g | 11.74 | A | | |
| X 6775 | | | | |
| l 2.1 g | 11.51 | 13, 13 | 11.38, 11.64 | |

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1899phae.proj.2286B



X6777
f2.2'g 11.51 13.13 11.38, 11.64

X7394
g2,2h 11.96 02, 01 11.94, 11.97

X8975-
f3.1g 11.56 08, 08 11.48, 11.64

X9021
~~f1.2g~~ g1,2h 11.90 06, 07 11.84, 11.97

X9022
~~f1.2g~~ g1.2h 11.90 06, 07 11.84 11.97

X9025-
~~f2.1g~~ g2.1h 12.00 06, 07 11.94 12.07

X9027
g2/.1h 12.00 06.07 11.94, 12.07

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1899phae.proj.2286B



W Camb.

Verification of Previous Measures

| Star | Peabo | comparison | |
|---|---|---|---|
| 1 | 7394 | ~~Repeat~~ C 2, 2 d, | Probably better but difficult owing to brightness of twilight |
| 42 | 7394 | q 2, 2 h | but difficult |
| 1 | 7660 | Difficult but equal | l + or — |
| 2 | 6959 | m 2, 3 m | Sure |
| 85 | 6959 | q 1, 1 N | Diff |
| 113 | 6959 | Probably ~~s³ + q t³~~ | image imperfect? |
| 2 | 8831 | above on suspicion that image was bad. Re-observed by high power & found genuine, which gives m 2.10. | |
| " | 9074 | 0 s | sure |
| 4 | 5552 | q 1, 2 s | sure |
| 10 | 6715 | m 3, 1 m | |
| 13 | 4695 | q 1, 2 r | |
| 18 | 8703 | $m^2$ 1, 2 $n^2$ | |
| | 8705 | $s^2$ 1, 2 $t^2$ | |
| | 8763 | $p^2$ 1, 2 $n^2$ | |
| | 8771 | $q^2$ 1, 2 $r^2$ | |
| | 8831 | $0^2$ 1, 2 $q^2$ | |
| 25 | 7838 | n 1, 1 0 ? | Very diff |
| 27 | 6973 | r 1, 1 s | |
| 29 | 8554 | f 1, 4 q | Diff from brightness |
| 30 | 8445 | m 1, 1 o | |
| 40 | 9066 | 0 $r^3$ | Diff. |
| | 9070 | r 1, 2 s | |
| | 9072 | 0 $t^3$ | Doubtful + diff |
| 51 | 8388 | ~~0 + 2 p~~ | ~~Diff~~ r 2. 1s } rechecked with special care - error - as star is much fainter evident error of ident - |
| | 8593 | ~~0 m~~ | r 1. 1s } |
| 54 | 8610 | q 2, 1 N | |
| | 8642 | r 2, 1 s | |
| | 8750 | ~~0 o~~ | but rather fainter - better q 1, 1 r |

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Cont.

| | | | |
|---|---|---|---|
| | Cont. | | |
| 55 | 6725 | $r^3 1,\ 1s^3$ | Diff. |
| 59 | 8753 | $w 2,\ 1 o$ | |
| 69 | 9070 | $q 1?,\ 1 r?$ | |
| 62 | 5557 | $q 2,\ 1 r$ | Very diff. |
| 68 | 5532 | $o 1,\ 1 p$ | |
| 69 | 8975 | $o p$ | Diff. |
| 75 | 9071 | $o 1,\ 2 q$ | |
| 85 | 6959 | $q 1,\ 1 r$ | |
| 86 | 6667 | $s 1,\ 1 t$ | |
| 88 | 6725 | $r^2 2,\ 1 s^2$ | |
| | 6973 | $q 1,\ 1 r$ | Diff. |
| 91 | 6753 | $q 1,\ 1 r$ | |
| 97 | 8709 | $q 1,\ 2 r$ | Diff. |
| 100 | 8537 | ~~$w 2$~~, $1 o$ | |
| | 8831 | $o p^2$ | |
| | 8975 | $o q^2$ | |
| | 9063 | $r^2 2,\ 1 s^2$ | Doubtful |
| | 9072 | $s^2 1,\ 1 t^2$ | |
| 113 | 6957 | $o^3 2,\ 1 p^3$ | Difficult but ~~K.E.~~ matches better $w 2.1 n$ |
| | 6959 | Taken on other Plate. | |
| 115 | 8582 | $q^2 1,\ 2 r^2$ | |
| 118 | 6775 | $o^2 1,\ 2 p^2$ | Doubtful |
| | 9070 | $n^2 1,\ 2 o^2$ | |
| | 9071 | $q^2 1,\ 1 r^2$ | |
| | 9072 | $p^2 1,\ 2 q^2$ | Doubtful. |
| | 9074 | $p^2 2,\ 1 q^2$ | |
| | 9075 | $p^2 2,\ 1 q^2$ | Doubtful |
| | 9216 | $m^2 2,\ 2 o^2$ | " |
| | 9305 | $m^2 1,\ 2 n^2$ | Doubtful. |
| | | $q 2,\ 1 r^2$ | |

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W Cent

Remeasures.

x 67 1/6 Var No 1 -
0d ± diff.

Projection

x 55 44 Var. No 9 -
01.1 pr or 05' . 05' .

Remeasure.

x 55 44 var. No. 12. On ± diff - v. poor plate.

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W Cent.

Sept. 21. 1900

Remeasures -

Var. No. 30 -

| | | | | mean. | |
|---|---|---|---|---|---|
| X 4681 | $\mu^3$ 2. 1 $q^3$ | | 13.89 , 13.80 | 13.84 | 05 , 04 |
| 4694 | $\mu^3$ 1. 1 $q^3$ | | 13.79 , 13.80 | 13.80 | 01 , 00 |
| 5712 | $o^3$ 3. 1 $\mu^3$ | | 13.78 , 13.59 | 13.68 | 10 , 09 |
| 6696 | $Oq^3$ ± | | 13.90 | 13.90 | A |
| 6716 | $\mu^3$ 1. 2 $q^3$ | | 13.79 , 13.70 | 13.74 | 05 , 04 |
| 6778 | $\mu^3$ 1. 1 $q^3$ | ± diy. | 13.79 , 13.80 | 13.80 | 01 , 00 |
| A 1750 | $\mu^3$ 1. 1 $q^3$ | ± | 13.79 , 13.80 | 13.80 | 01 , 00 |
| 1771 | $\mu^3$ 1. 1 $q^3$ | ± v. diy | 13.79 , 13.80 | 13.80 | 01 , 00 |
| X 7616 | $Oq^3$ ± | | 13.90 | 13.90 | A |

Var. No-41.

A 1771 On ± v. diff. 13.30 A

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Sept 21 - 1900 a Cent

Remarques

Var - N° 42.

| | | | | | |
|---|---|---|---|---|---|
| X 4679 | m 1, 1 m | dif. | 13.10, 13.20 | 13.15 | 05 05 |
| 4694 | Om | + | 13.00 | 13.00 | A |
| 4695 | m 1, 1 m | " | 13.10, 13.20 | 13.15 | 05 05 |
| 5552 | Ot | + | 14.38 | 14.38 | A |
| 5559 | Om | + | 14.00 | 14.00 | A |
| 5712 | Om | + | 13.30 | 13.30 | A |
| 6534 | Om | + | 13.30 | 13.30 | A |
| 6633 | Om | + | 13.00 ~~11.38, 11.54~~ | 13.00 ~~11.46~~ | A ~~08 08~~ |
| 6693 | ƒ 2. 2 g | | 11.38, 11.54 | 11.46 | 08 08 |
| 6698 | ƒ 2. 2 g | | 11.38, 11.54 | 11.46 | 08 08 |
| 6707 | ƒ 2. 2 g | | 11. 38, 11.54 | 11.46 | 08 08 |
| 6708 | ~~ƒ 3. 2' g~~ | | 11.48, 11.64 | 11.56 | 08 08 |
| 6715 | ~~ƒ 3. 2' g~~ | | 11.48, 11.64 | 11.56 | 08 08 |
| 6717 | O g | | 11.74 | 11.74 | A |
| 6734 | ƒ 3, 1 g | | 11.48, 11.64 | 11.56 | 08 08 |
| 6753 | [illegible] Oh. | | 12.17 | 12.17 | A |
| 6773 | O g | + | 11.74 | 11.74 | A |
| 6775 | ƒ 2, 2 g | | 11.38, 11.54 | 11.46 | 08 08 |
| 6777 | ƒ 3, 1 g | | 11.48, 11.64 | 11.56 | 08 08 |
| 7394 | O h | + | 12.17 | 12.17 | A |

Reproduction

Var 42

X 5552 . g 2. 2 h or Ot . Ot.

5559 g 2, 2 h or Om . Om

6753 ƒ 3. 2 g or Oh ƒ 3. 2 g better but prob not the two -

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Sept. 22 - 1900 a Cent.

Remeasure.

Var. No 44.

| | | | | | |
|---|---|---|---|---|---|
| X 8427 | $\beta^3$ 1, 1 $t^3$. | 14.42, 14.48 | 14.45 | 03 | 03 |

Var. No 47.

| | | | | | |
|---|---|---|---|---|---|
| X 5558 | M. 1q | 13.77, 13.70 | 13.74 | 03 | 04 |
| 5712 | 02.0 f, 2q | 13.67, 13.67, 13.60 | 13.65 | 02, | 02, 05 – |
| 6693 | 02. 1 f | 13.67, 13.57 | 13.62 | 05 – | 05 – |

Var. 52.

| | | | |
|---|---|---|---|
| X 6693 | 0m + | V. diff | |
| 7660 | 0m + | " | – |

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1899phae.proj.2286B



Feb. 24. 1900 Went.

Remeasure

X 6725

Var. No 68.

m 3. 1m 13.30, 13.20 13.25 OS OS

X 6743. Var No 107.

O R² ±

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1899phot.proj.22866

Oct. 27-1900:

Comp. of stars of K Cruis on an Isochromatic plate - X. 9212 - and ordinary plate X 9213.

No of stars compared about 240 - in a circle whose centre is about the centre of cluster and diameter about 25'.

No differences noted except in two cases both brighter on isochromatic plate - i. red. Star marked No 1. (on rul with reticle in box with Miss Leland) prob. = A.G.C. 17500. is rather striking - The other is only a Trifle brighter than on ordinary plate.

For an exact comp. of the brightest stars of this cluster exposures of 5m or 10m in the 13" would be better than longer exp.

Comp of M 3. on Isoch. pl. No X 9204 and paper print pr X 8611.

No of stars compared 693 - circle whose diam. is 20' arc.

Marked differences noted in the case of 32 stars - every one of wh. proved to be one of the Known variables. This is quite independent in most cases as I could not remember at the moment of comparison in many cases whether the star was one of the Known Variables or not -

(13) [illegible] by a t [illegible]

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1899phae.proj.2286B



Rep. Var. Stars

# M 3 cont.

These 32 vars. were comp.-on plates 9204, 9205-, 9206 - They are marked 1 - 32. (See print on which they are marked)

| | | 9204 | 9205- | 9206 | |
|---|---|---|---|---|---|
| 108 | No 1. | $\frac{m}{m}$ 1,1m | Om ± | N.S. | 9204 Koch. pl |
| 107 | " 2 | Og | Og ± | ? | 9205- ordinary - |
| 79 | " 3 | e3,1f | O K | Om ± | 9206 Koch. - |
| 21 | " 4 | Of | O K ± | Om ± | 9204 quality 4 - 5- |
| 84 | " 5- | e3,1f | g1,1h | Oh ± | 9205- - 3 |
| 68 | " 6 | e2,0m,2n | Om ± | O l ± | 9206 2 |
| 106 | " 7 | Oo | Ok | e1,2f | |
| 67 | 8 | e3,0f,2g. | h1,1k | Om ± | but 9205- shows |
| 128 | 9 | (Oh ±) | (Og ±) | (Og ±) | the stars are much |
| 44 | 10 | Om | Om ± | Om ± | fainter than 9204- |
| 34 | 11 | Of | g1,1h | O l ± | |
| 100 | 12 | Om | Om ± | Ol ± | 9206 is very poor - |
| + | 13 ✓ | g2,1h | Og ± | Og ± | |
| 54 | 14 | f1,2g | Ok ± | Oo ± | |
| 45- | 15- | Om | f1,2g. | g1,1h | |
| 24 | 16 | Of | g1,1h | g2,1h | |
| 31 | 17 | d2,1e | f1,2g | g1,2h | |
| 36 | 18 | Om | Om ± | e1,2f | |
| 22 | 19 | d2,1e | Oh ± | O$\frac{m}{p}$ ± | |
| 48 | 20 | Om ± | Om ± | O l ± | |
| 58 | 21 | Oh | O k ± | ft ? | |
| 41 | 22 | Of | Oh ± | Om ± | |
| 96 | 23 | Om | Om ± | d3,1e | |
| 97 | 24 | Oh | O$\frac{p}{m}$ ± | Om ± | |
| 82 | 25- | Oo | Om ± | Ol ± | |

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| Var. St. No | | ×9204 | 9205 | 9206. | |
|---|---|---|---|---|---|
| 91 | 26 | 0 m | 0 m ± | 0 f |  |
| 17 | 27 | m 1, 1 n | 0 n ± | 0 K ± |  |
| 50 | 28 | g 1, 1 h | 0 K ± | 0 n ± |  |
| 126 | 29 | f 1, 1 g | 0 h ± | 0 m ± |  |
| 13 | 30 | 0 m | 0 m ± | f 1, 1 g |  |
| 76 | 31 | 0 K ± | 0 l ± | 0 n ± |  |
| 88 | 32 | e 2, 2 f. | 0 g ± | 0 h ± |  |

The 80 ch. plates show generally fainter stars than regular plates -

Although the periods of above vars. are not known except in case of var. No. 96. the changes shown by the measures on the plates, given above, would probably be satisfied by assuming periods similar to those usually found in clusters. I.e. there seems no positive evidence of difference in color shown by these plates -

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Nov. 2. 1900

Comp. of print of cut fr 8557 ~~9215~~, an ordinary plate with X9215 an isochromatic plate -

No of stars compared 3067 stars -
on above plate & print -
well marked changes were noted in the case
of 28 ~~27~~ stars -

Var!

These formed wbe the vars.
1, 4, 6, 13, 22, 32, 33, 36, 39, 44, 46. 47, 49, 51. 57, 59.
64, 73, 75. 82, 96. 118. 122, 123, 124, and three
new vars. 130, 131, 132 -

a reexamination of region of var. 2. also shows
that it did have been added as it appears on
the print but is N.E. on plate 9215 and on
9216 (ordinary plate) perhaps seen but if so very ~~st~~ ~~f~~
Miss L in her measurements gives star on these
plates evidently measured the star formerly called 2.
which is close to it. & is not var. probably -

No 1 seems to me to be decidedly ~~yellow~~ Dame magn.
on plates 9205. 9216. & 9217 -
There is also no pos. evidence of color in No 2.

Indeed I see no instance of much difference of
color in any ~~yellow~~ stars of this cluster -

Var 130 is near the border of cluster - It was best on
X9215 but & and on 9216, & 9207. on regular
plates I examined 19 before I found it

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bright again - Bgt on X 5432.
Vars 131 + 132 are near centre of cluster
and very dif. objects but variability has been
checked + believe sure.

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Went -

Tues. Nov. 6. 1900 -

Comparison of Sequence Special for Var. No. 36 with the Standard Sequence No. 1. (Orig. Int Seq)
Plate X 6693 -

| | |
|---|---|
| a | m 1, 3 n |
| β | m 3, 1 n |
| ~~e~~ e | q 1, 1 r |
| ~~f~~ f | r 1, 2 s |
| K | q 1, 1 r |
| l | 0 s ± |
| m | r 1, 2 s |
| b | n 1, 2 o |
| c | o 1, 1 p |
| h | 0 q ± |
| d | 0 q ± |
| μ | 0 r ± |
| p | m 2, 2 n |
| q | 0 r |
| n | 0 o |

Dist from other Sequences Hence difficult.

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Comp. of phot. seq. for Var. 35 with seq. 1.

Plate X 6693

| | |
|---|---|
| a | 0 m |
| d | m 1. 3 m |
| s | 0 m |
| q β | m 4, 1 m |
| z | 0 p |
| c | 0 p |
| t | 0 q |
| y | m 1, 1 m |
| w | 0 q |
| b | 01, 2 p |
| f | 0 p |
| e | r 2, 0 s. |
| r | 0 q |
| h | r 1, 1 s |
| g | 0 r |

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went

Nov. 6. 1899 -

Comb. of Phae. Seq. for ~~26~~ 24. with Seq. Seq. No 2 -

X 6693.

z l3, 1 m
d 0 m
a m2, 2 m
k pl. 1 q
h 0 r ±
t 0 r ±
c 0 q ±
b 0 p ±
~~q~~ e 0 o ±
~~*~~ g 0 q
~~*~~ f 0 r

rather difficult from distance -

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Cent
Nov - 6 - 1900

Spec-seq. Stars for Nº. 36 comp. with Seq. 1.
× 7394

a 0 m
β 0 m
e 0 q
f 0 r
K 0 o
l q 1. 1 r
m 0 p ± ?
b m 3. 1 m
c 0 o
h 0 q =
d 0 q =.
u 0 r =
p m 3. 1 m
g 0 q =
m m 2. 1 o

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W Cent

Nov. 6. 1900

Comp. of Spec. Seq. Stars fr 35- with seq- 1.
X 7394.

a 0m
+ l 3.1m
δ 0m
q 0m
β m 1.10
Σ 01.1 p
c 0o
t q 1.1r
y r 2.10
γ r 0p
b 0o
f 0q
e 0r
r p 1.1q
h q 1.1r
g 0q

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W Cent.
Nov-6-1900

Comp. of Shee-Seq. for Val. 110-24. with Kg. Seq. 2
X7394.

| | |
|---|---|
| z | l 1,2 m |
| d | 0 m |
| a | m 2. 1 m |
| k | 0 g |
| h | r 1, 1 s |
| t | r 2. 1 s |
| c | p 1. 1 q |
| b | 0 o |
| e | 0 o |
| g | 0 r |
| f | 0 r |

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Cent

Nov. 7. 1900.

Comp. of Shee seq. for # 36 with seq. seq. 1.
X 8570.

| | |
|---|---|
| a | ml, 3r |
| β | r1, 10 |
| e | p2, 2r |
| f | 0r |
| k | 01.1 l. |
| l | 05 |
| m | p1, 2r |
| b | 00 |
| c | 00 |
| h | p1.2r |
| d | p1.2r |
| u | p2.1r |
| p | m3.1r |
| q | 0r 2 |
| r | r1, 10 |

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Cent-

Nov. 7 - 1900

Comb. of the. Seq. for #35 - with Seq. 1 -
× 8570.

| | |
|---|---|
| a | l2, 1m |
| δ | l3, 1m |
| δ | 0m ± |
| q | 0m |
| β | m 2, 1o |
| z | 01, 2p |
| c | p 1, 3r |
| t | r 1, 1s |
| y | 0o |
| w | 02, 1p |
| b | p 1, 3r |
| f | p 2, 1r |
| e | r 1, 1s |
| r | 0p |
| h | p 2, 1r |
| g | p 2, 1r |

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w Cent.

Nov. 7. 1900 -

Comp. of spec. Seq. pr Var. 24. with Seq. Seq. 2 -
X 8570

| | |
|---|---|
| z | b2, 3m |
| d | 0m |
| a | m1, 2m |
| k | 0p |
| h | 0r |
| t | r1, 1s |
| c | 0q |
| b | o1, 1p |
| e | 0o |
| g | 0n |
| f | r1, 2s |

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W Cent.
Nov. 7. 1900.

Comb of the Seq. for Var. 11 - 36 - with Seq. Seq. 1
X 8703.

| | |
|---|---|
| a | O m |
| b | O n |
| e | q l. 1 r |
| f | O r |
| k | O ~~r~~ q |
| l | r l. 2 s |
| m | q l. 1 r |
| b | n l. 1 o |
| c | O o |
| h | O q |
| d | q l. 1 r |
| u | O r |
| p | O n |
| q | O r |
| n | O o |

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W Cant.

Nov-7-1900.

Comb. of Spec. seq. for 35°, with eq. seq. 1 -
X 8703

a 12.1m
t m1.3m
s 0m
q 0m
β m2.1m
z 0/m
c 0/m
t q2.1m
y 01.1/m
w 0q
b 0/m
f q1.1m
e 21.15
r 02.1/m
h q2.1m
g q2.1m

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W Cent.

Nov. 7. 1900

Comb. of Phot. seq. for Var 24. with Kq. Seq. 2.

× 8703.

z l 1, 2 m
d l 3, 1 m
a 0 m
k h 1, 1 q
h 0 q
t 0 r
c 0 q
b 0 r
e 0 o
g q 1, 1 r
f q 4 1 r

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Nov. 7. 1900

St Cluster in Hercules.
estimated grades between sequence stars.
Ent. from x , D 4563.

b 2 c 3 d 2 e 3 f 3 g 4 h 2 k 2 l 5 m 2 n

Yerkes plate. yellow glass screen.

c 3 d 2 e 1 f 3 g 3 h 4 k 2 l 1 m 5 n 4 o 2 p 2 q

Yerkes plate
e 2 148 ~~8~~
148 0 f
148 2 g

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Nov-15-1900

Region of North Pole.

Comparison of plates D 22292 Isochrom. plate and D 3550 - ordinary plate. One was placed over the other and 1681 stars were compared. — within 4½ degrees, more or less, from pole — Owing to different forms of wedge on different parts of the plate + various differences according to magnitude, between the ord. + Isoch. plate, exact comparison seemed to me difficult. No certain case of marked difference of magnitude due to color was seen. Two cases however seem to me probably real. They are D.M. +87°.51 H.P. 1292. and One +88° 112. H.P. 3426 wh. is Lambda U.M.

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Cent. D 4831. (Broken Ckt)

from
No. 114 to 42 for y is 1.3 dw = N° 55.'12. estimated by eye.
" " " " x " -0.9 " . Prec. 38.16

Pos. of No 114 x +62.2
y -118.0

∴ for 42 { x + 24.
y − 63.

from 40 to 42 is 5.3 div for y is 1.8 Horiz Prec. = 76."3
" " " 5.3 " x = Fil. 224.7
for 40 x = -197.3 ; y = -129.0
∴ for 42 { x = + 27."4
y = − 53.

from 41 to 42 for x is 3.7 dw prec = 156."9
" " " " y " 2.3 N " 97.5
pos of 41 x = +177.1 ; y = -147.6
∴ for 42 { x = + 20".
y = − 50.

Image of 42 on abrd enlargement is not distinct from other star + identification difficult.

mean x +24
y − 53

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Cent - Aphor. pos. of Vars Nos 130 - 132.

No. 130 - pos comp with 73.

130 fol 73. 4 div. (× 42.4) = 169.6

" N of 73 3.5 " " = 148.4

No 131 pos - comp. with #40

131 fol. 40 1.3 div - × 42.4 = 55.1

" is N of " 1.5 " " " = 63.6

~~130~~

No 132 position comp with 40.

132 fol. 40 3.4 div - × 42.4 = 144.2

" " N of " 2.3 " " = 97.5

Position of No 130 - comp. with 73.

$x = -507.3$
$169.6$
$337.7$

$y = +748.0$
$148.4$
$896.4$

x − 338.
y + 896.

comp. with 40 -

" " No. 131 $x = -197.3$
$55.1$
$142.2$

$y = -129.0$
$63.6$
$65.4$

x − 142.
y − 65.

No 132 $x = -197.3$
$144.2$
$53.1$

$y = -129.0$
$97.5$
$32.5$

x − 53.
y = − 32.

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Jan. 31 - 1901

An examination has been made of the faint stars of Messier 3. on 4 plates made by Kuler with the Crossley Reflector, of 1h exposure. No attention was given to those stars bright enough to show on the plates of 13" Boyden taken at Arequipa - the plates exam- were made on May 20. June 18. June 19 and June 23 - 1900. that of June 19 is perhaps the best. that of June 23 was poor and many stars included in the comparison did not show well on this plate.

2604 stars were compared on the 4 plates and no star, which showed good evidence of variation, was found.

The area examined was that shown on the Enl. print (of D 7473) It does not include quite all the cluster.

During the examination of the faint stars the variability of the 26 of the brighter stars of the cluster was incidentally noticed. These proved to be the known vars - 5, 11, 12, 13, 17, 18, 15, 28, 24, 38, 39, 40, 43, 47, 50, 51, 59, 68, 72, 75, 83, 94, 106, 109, 117, and 126.

(See photographs used in comparison)

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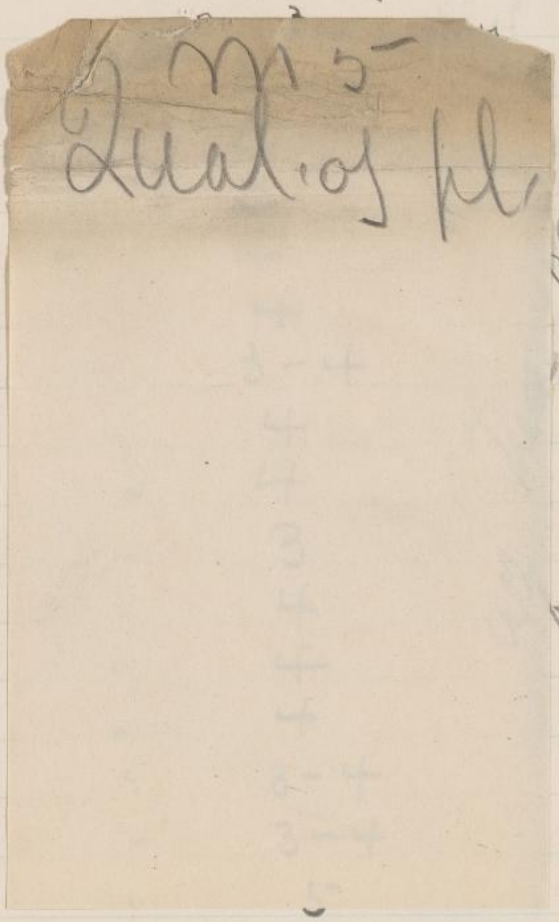
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# Feb. 4. 1901 -

## Messier 5 - Quality of plates

| | | | |
|---|---|---|---|
| ✓ | ✓ 8667 | Qual 4. | |
| ✓ | 8702 | " 3-4 | (measured before broken) |
| ✓ | 8710 | | |
| ✓ | 8358 | | |
| ✓ | 8452 | | |
| ✓ | 8453 | | |
| ✓ | 8467 | | |
| ✓ | 8515 | | |
| ✓ | 8538 | | |
| ✓ | 8540 | | |
| ✓ | 8542 | | |
| ✓ | 8544 | | |
| ✓ | 8556 | | |
| ✓ | 8564 | | |
| ✓ | 8571 | | |
| ✓ | 8576 | | |
| ✓ | 8578 | | |
| ✓ | 8583 | | |
| ✓ | 8586 | " | 4-5 |
| ✓ | 8591 | " | 2-3 |
| ✓ | 8594 | " | 3-4 |
| ✓ | 8596 | " | 4 |
| ✓ | 8599 | " | 4 |
| ✓ | 8604 | " | 4-5 |
| ✓ | 8622 | " | 2-3 |
| ✓ | 8706 | " | 4 (both system (measured before break)) |




Qual measured for all vars 1-92 in M 5

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# Feb. 4. 1901 -

## Messier 5 - Quality of plates

| | | | |
|---|---|---|---|
| ✓ | 8667. | Qual | 4. |
| ✓ | 8702 | " | 3-4 (measured before broken) |
| ✓ | 8710 | " | 2-3 " " " |
| ✓ | 8358 | " | 3 |
| ✓ | 8452 | " | 3 |
| ✓ | 8453 | " | 3 |
| ✓ | 8467 | " | 4 |
| ✓ | 8515 | " | 4 |
| ✓ | 8538 | " | 3-4 |
| ✓ | 8540 | " | 4 |
| ✓ | 8542 | " | 4 |
| ✓ | 8544 | " | 3 |
| ✓ | 8556 | " | 4 |
| ✓ | 8564 | " | 4 |
| ✓ | 8571 | " | 4 |
| ✓ | 8576 | " | 3-4 |
| ✓ | 8578 | " | 3-4 |
| ✓ | 8583 | " | 5 |
| ✓ | 8586 | " | 4-5 |
| ✓ | 8591 | " | 2-3 |
| ✓ | 8594 | " | 3-4 |
| ✓ | 8596 | " | 4 |
| ✓ | 8599 | " | 4 |
| ✓ | 8604 | " | 4-5 |
| ✓ | 8662 | " | 2-3 |
| ✓ | 8706 | " | 4 (work protein (measured before break)) |

all near hard for measure for all vars ~ 9m

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# M 5 Contr.

| | | | |
|---|---|---|---|
| C | 3473 | 1-2 | opp value for vars - |
| x | 8720 | 2-3 | few stars |
| | 8722 | 2-3 | " " |
| | 8754 | 3 | v |
| | 8790 | 4 | v |
| | ~~8~~ 9159 | 3 | v |
| | 9243 | 2-3 | |
| | 9307 | 2-3 | |
| | 9501 | 3-4 | v |
| | 9577 | 1 | |
| | 9590 | 2-3 | |
| | 9790 | 3-4 | v |
| | 9859 | 3 | v |
| | 9916 | 3 | v |
| | 9940 | 3 | v |

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# M 5 cont.

| | | | | | |
|---|---|---|---|---|---|
| ✓ | C | 10149 | Zeal | 3- | March 30 1897 |
| ✓ | | 10255 | " | 2-3 | Apr. 30 " |
| ✓ | | 10266 | " | 2 | May 4 " |
| ✓ | | 10278 | " | 3 | May 8 " |
| ✓ | X | 1482 | | 2-3 | |
| ✓ | | 1941 | | 2-3 | |
| ✓ | | ~~1421~~ discard | | 1-2 | 1486 an early plate |
| ✓ | | 1444 | | 2 | which was used on |
| ✓ | | 1728 | | 2-3 | early measures is |
| ✓ | | ~~1553~~ disc | | 1-2 | lost & cannot be |
| ✓ | | 1586 | | 2 | found. so ~~that~~ |
| ✓ | | 1530 | | 2 | it is regarded as a |
| ✓ | | ~~1749~~ disc | | 1-2 | rejected plate. |
| ✓ | | 1690 | | 2-3 | |
| ✓ | | ~~1428~~ disc | | 1 | |
| ✓ | | 6991 | | 4 | |
| ✓ | | 6981 | | 4 | |
| ✓ | | 6974 | | 3 | |
| ✓ | | 6637 | | 3 | |
| ✓ | | 7789 | | 4 | |
| ✓ | | 7601 | | 3 | |
| ✓ | | ~~7348~~ disc | | 1-2 | |
| ✓ | | 7043 | | 4 | |
| ✓ | | 7038 | | 3- | |
| ✓ | | 7036 | | 3 | |
| ✓ | | 7000 | | 3 | |
| ✓ | | 6960 | | 3 | |
| ✓ | | 6958 | | 4 | |

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# M 5 Cont.-

| | | | | |
|---|---|---|---|---|
| ✓ | X | ~~6816~~ | dise | 2 |
| ✓ | | 6817 | | 2-3 |
| ✓ | | 7018 | | 3 |
| ✓ | | 7009 | | 4 |
| ✓ | | 7007 | | 3-4 |
| ✓ | | 6763 | | 5 |
| ✓ | | 6805 | | 4-5 |
| ✓ | A | 1789 | | 3 |
| ✓ | | 1782 | | 3-4 |
| ✓ | | 1790 | | 3 |
| ✓ | | ~~1736~~ | dise | 2 |
| ✓ | X | 6785 | | 4 |
| ✓ | A | 1788 | | 2-3 |
| ✓ | | 1787 | | 3 |
| ✓ | | ~~1756~~ | dise | 2-3 |
| ✓ | X | 6784 | | 3 |
| ✓ | | 6786 | | 4-5 |
| ✓ | | 6806 | | 3 |
| ✓ | | 6813 | | 4 |
| ✓ | | 6814 | | 4 |
| ✓ | | 6815 | | 3 |
| ✓ | | 6877 | | 3 |
| ✓ | | 6838 | | 3 |
| ✓ | | 6836 | | 4 |
| ✓ | | 6829 | | 3-4 |
| ✓ | | 6821 | | 3 |
| ✓ | | 7010 | | 3 |
| ✓ | A | ~~1781~~ | dise | 2-3 |

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# M 5 Cont.

| | | | |
|---|---|---|---|
| ✓ | X 7661 | 2nd | 3 |
| ✓ | 7499 | | 3 |
| ✓ | A 1791 | | 4 |
| ✓ | 1785 | | 4 |
| ✓ | 1784 | | 3 |
| ✓ | X 6956 | | 3 |
| ✓ | 7008 | | 4 |
| ✓ | 7020 | disc | 1-2 |
| ✓ | A 1745 | disc | 2 |
| ✓ | 1786 | | 3 |
| ✓ | X 7603 | | 3-4 |
| ✓ | 7857 | disc | 2 |
| ✓ | 7469 | | 3 |
| ✓ | A 1809 | | 3. |
| ✓ | 1829 | disc | 2 |
| ✓ | 1828 | | 3. |
| ✓ | 1812 | | 2-3 |
| ✓ | 1821 | | 3. |

74 plates
26
700.

18

| | | | |
|---|---|---|---|
| ✓ | A 1744 | disc | 2 |

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Var - No 35 -

Preced. Seq. star (c.) = $m^7$.

From Table VII - differences between measures on same plates of this star were large - when comp. with orig. sequence -

For eq. as at first comp. given in Table VII -

star c (= $m^7$) × 7394.

| | | | |
|---|---|---|---|
| L | 92,0r | (Corrected from Table VII) | up + down c up |
| B | 0o | | right + left c right |

Reversed

| | | |
|---|---|---|
| L | r1,25 | up + down c up |
| B | 0q | right + left - c right |

again

| | | |
|---|---|---|
| L | about = r | up + down c down |
| B | 0r | right + left c left - |

But these differences may all be accidental -

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# Messier 3. Aug 13. 1901

Variable No 1. (see Arch plate of June 23 var bgt.)

| Plate | |
|---|---|
| Cr. 1 | m 1, 1 o |
| 2 | O m |
| 3 | O m |
| 4 | O m |
| 25 | m 2, 1 m |
| 5 | m 1, 2 m |
| 24 | m 2, 1 m |
| 20 | m 1, 1 m |
| 10 | m 1. 1 m |
| 9 | O m. |
| 23 | m 2. 1 m |
| 19 | m 1, 2 m |
| 8 | m 2, 1 m |
| 22 | m O |
| 17 | m 1, 1 m |
| 16 | m 1, 1 m |
| 7 | m 2. 1 m |
| 21 | m O |
| 6 | m 2, 1 m |
| 19 | m 1, 2 m |
| 18 | m 2. 1 m |
| 15 | m 2. 1 m |
| 11 | m 3. 1 m |
| 12 | m 1, 1 m |
| 14 | m O |
| 13 | m 2. 1 $\phi^{m}$ |

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M 3. Aug. 14. 1901

Variable No. 89

Numbers entered in order but measured at random, mixed

| Plate | | |
|---|---|---|
| | 1 | wO |
| | 2 | gO |
| | 3 | fO |
| | 4 | d3, 1e |
| | 5 | d2, 2e |
| | 6 | d1, 3e |
| | 7 | d3, 1e |
| | 8 | d3, 1e |
| | 9 | d3 1e |
| | 10 | l2 tm |
| | 11 | m1, 2n |
| | 12 | mO |
| | 13 | mO |
| | 14 | mO |
| | 15 | mO |
| | 16 | Ol |
| | 17 | m1, 2n |
| | 18 | m2, 1n |
| | 19 | m1, 2n |
| | 20 | m2, 1n |
| | 21 | m1, 2n |
| | 22 | m2, 1n |
| | 23 | m1, 2n |
| | 24 | l1, 1m |
| | 25 | Olv |

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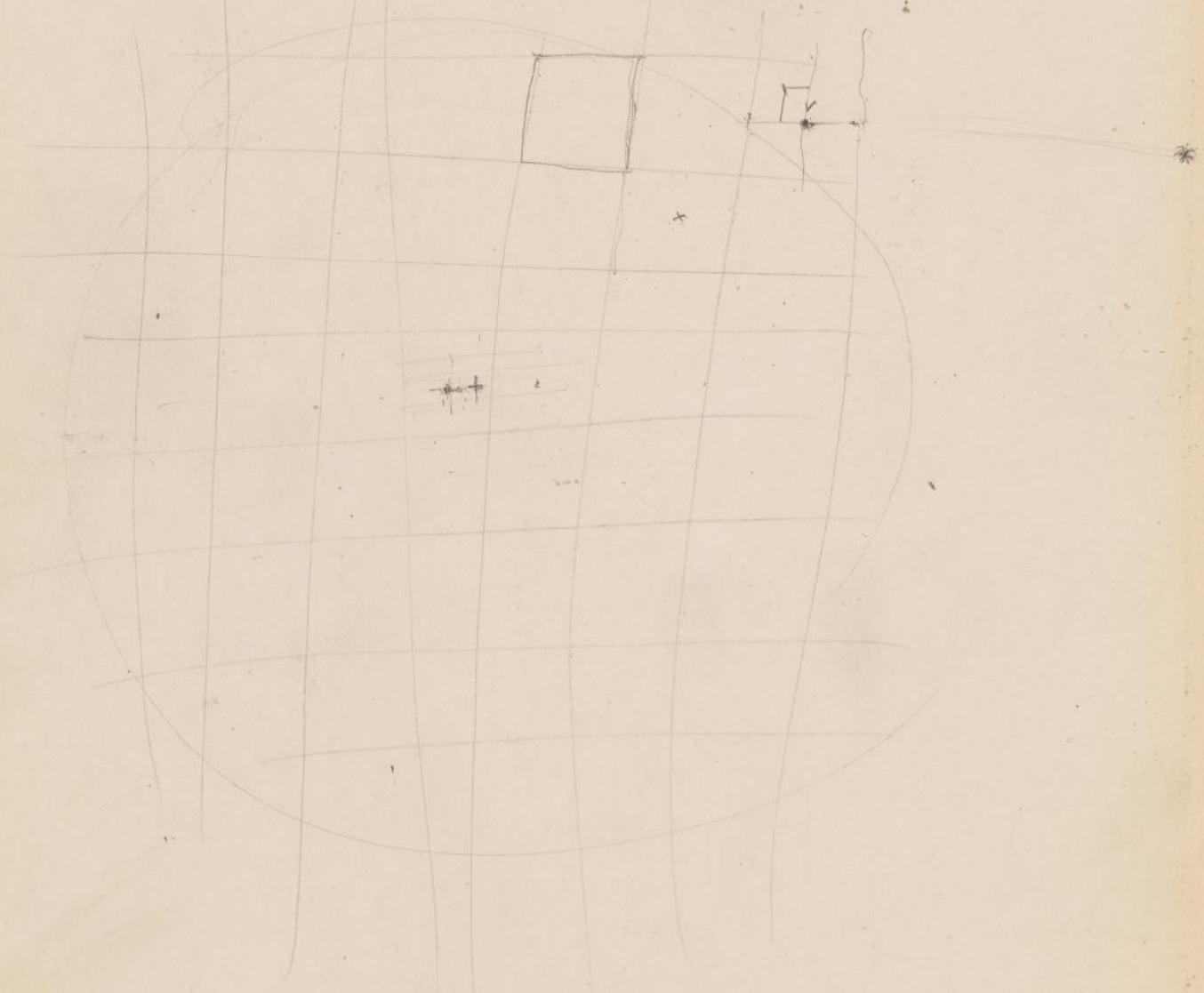
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