KG
11365
941

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

KG11365 A41

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

KB 11365.941

HARVARD UNIVERSITY LIBRARY JUL 17 1956

Contents of Book V H.S.C.

Object		Page
δ Cassiopeiae	Est. of Brightness	4-28, 98, 99
R Cassiopeiae	Scale Measures	29, 30, 32-35
δ Cephei	Scale Measures	31, 36, 37
ζ Persei	Est. of Brightness	38-96 (even pages)
S Persei	Est. of Brightness	39-97 (odd pages)
R Aurigae	Est. of Brightness	103-115
R Lyncis	Est. of Brightness	116-119, 134-140, 142-152 (even pages), 154-158, 164-166
Pleiades	Scale Meas. of Standard Stars and of Prismatic Comparisons	120-126, 129-133 ~~1-10~~
Pleiades	Estimates by Argelander's Method	127, 128
R Lyncis	Est. of Brightness of Comp. Stars	141-153 (odd pages), 159, 163
R Ursae Majoris	Estimates of Brightness	167-194
δ Cassiopeiae	Scale Meas. of Faint Comp. Stars	195, 196
δ Cassiopeiae	Argelander Est. of Br. of Faint Comp. Stars	197, 198
ζ Cassiopeiae	Scale Meas. Faint Comp. Stars	199, 200
R Aurigae	Scale Meas. Faint Comp. Stars	201, 202
ζ Cassiopeiae	Argelander Est. " " "	203, 204
R Aurigae	" " " " "	205, 206
R Ursae Majoris	Scale Measures " " -	207, 208
" " "	Argelander Est. " " "	209, 210
Comp. Var(?) N. near R Ursae Majoris		211-215
S Bootis	Scale Meas. Faint Comp. Stars	216-217
R Camelopardalis	" " " " "	218-219

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Reduced March 2, 1916 H.F.M.

November 21, 1902

Estimates of the brightness of S Cassiopeiae
Continued from Vol II p. 219

Plate A.C. 2032 taken Dec. 1, 1901

10.48 9.52 l 4 V 10.88 9.92 11.24 10.10 11.38 10.12 v = 11.17 10.05 27/07 .13 07 .25 21 .07

11.24 V 0 5 11.24 10.10
11.38 10.12 V 6 p 11.98 10.72

Trails. Extreme edge of plate

Plate A.C. 1081 taken Dec. 2, 1900

V m. s.
12.31 10.96 2 = .2 v < 12.5 V < 11.16

Extreme edge

Plate A.C. 751 taken March 11, 1900

V m. s. v < 9.6
9.59 ~~11.98~~ 8.81 k = .1

Plate A.C. 919 taken July 9, 1900

V m. s.
p m. s. v < 11.4 V < 10.30
11.24 10.10 0 = .2

On the verge of Invisibility

Plate A.C. 2141 taken Jan. 2, 1922

12.30 10.46 q 1 V 12.40 11.06 12.31 10.96 V = 12.36 V = 11.01 04 .25 05 .25
12.31 V 0 R 12.31 10.96

0 m. s.

Plate A.C 2757 taken Aug. 16, 1902
Not on plate

November 21 1902

S Cassiopeiae Continued

Very faint plate

Plate A.C. 1770 taken Sept. 22, 1901

V m. s.
863 7.98 g = .2 v < 8.8 V < 8.18

Plate A.C. 2812 taken Sept. 14, 1902
Not measured - extreme edge.

Plate A.C. 441 taken Sept. 15, 1899

V m. s.
11.24 10.10 0 = .1 v < 11.3 V < 10.20
p m. s.

Plate A.C. 1640 taken Aug. 4, 1901

V m. s.
795 7.70 k = .1 v < 8.0 V < 7.80

Extreme edge

Plate A.C. 1595 taken June 30, 1901

9.59 8.81 V m. s. k = .2 v < 9.8
m m. s.

Plate A.C. 1978 taken Nov. 10, 1901

10.26 9.40 K 1 V 10.36 9.50 10.44 9.52 10.14 9.50 v = 10.33 V = 9.51 03 .01 15 .01 19 01
10.48 10.14 9.50 V 0 L 10.48 9.52 10.34 9.70 V 2 L

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.T.M.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 559 taken Nov. 26, 1899

V m.s. v < 12.0 V < 10.77
11.98
10.72 p = .05

Plate A.C. 1582 taken June 29, 1901

V m.s. v < 10.4
10.34
9.70 h = .1 V < 9.80
o m.s.

extreme upp
of plate

Plate A.C. 1322 taken March 6, 1901

V m.s. v < 10.6
10.48
9.52 h = .2 V < 9.72
h m.s.

Plate A.C. 565 taken Dec. 4, 1899

12.74 12.84
11.22 o V 11.32 v = 12.84 ?
t m.s.
w m.s.

Plate A.C. 385 taken August 8, 1899

V m.s. v < 12.0
11.98
10.72 p = .05 V < 10.77

Plate A.C. 2075 taken Dec. 18, 1901

10.34 10.74 11.88 v = 11.31 .57 .37
9.70 h 4 V 10.10 10.62 V = 10.41 .21 .21
11.88 11.98
10.62 V 1 p 10.72
o hidden by defect in plate

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1912 taken Oct. 26, 1901

10.21 10.41 10.26 10.38 v = 10.35 .06 .21 .03
9.34 m 2 V 9.54 9.40 9.42 9.45 .09 .25 .03
10.26 10.26
10.28 V O K 9.70
9.42 V 1 l 10.48 9.52
Very poor plate images badly out of focus.

Plate A.C. 2319 taken Sept 7, 1902

V m. s.
10.21 v < 10.4
m = .2 9.34 V < 9.54

Plate A.C. 1250 taken July 17, 1901

V m. s.
12.31 v < 12.5
10.96 h = .2 V < 11.16
h m.s.

extreme edge

Plate A.C. 2072 taken Dec 11 1901

11.24 11.54 11.88 v = 11.71 .17 .17
10.10 o 3 V 11.40 11.62 V = 11.51 .11 .11
11.88 11.98
11.62 V 1 p 10.72

extreme corner of plate

Plate A.C. 2823 taken Sept. 8, 1902

V m. s.
11.24 v < 11.3
10.10 o = .1 V < 10.20

Plate A.C. 2055 taken Dec. 5, 1901
Useless - Only Spotted discs faintly seen on plate

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916 H.F.M.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1242 taken Feb. 11, 1901

v < 12.1

11.98 V m.s. V < 10.92
10.72 p = .2

ϕ hidden by defect in film

Plate A.C. 2126 taken June 14, 1902

v < 11.3

11.24 V m.s. V < 10.20
10.10 o = .1

Plate A.C. 2810 taken Sept. 4, 1902

12.31 V m.s. v < 12.4
10.96 r = .1 V < 11.06

Plate A.C. 1215 taken Feb. 7, 1901

exclusive edge

11.98 V m.s. v < 11.0
10.72 p = .1 V < 10.82

Plate A.C. 955 taken Aug. 6, 1900

10.48 V m.s. v < 10.6
9.52 l = .2 V < 9.72

Exclusive edge

Plate A.C. 2766 taken Aug. 19, 1902

11.24 V m.s. v < 11.3
10.10 o = .1 V < 10.20

Poor focus

* Plate A.C. 1810 taken Sept. 27, 1901

9.22 9.62 9.59
8.78 d 4 V 9.18 9.39 v = 9.50 12 11
9.39 v 2 h 8.81

* Reject measure. Star 2' has a companion not sufficiently separated from it on A.C. Plates. A.C. 1800 measured p. 98

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 2796 taken Aug. 30, 1902

10.48 V m.s. v < 10.5
9.52 l = .1 V < 8.62

Plate A.C. 2010 taken Nov. 27, 1901

Edge of plate

11.24 11.54 11.68 v = 11.61 .07 .07
10.10 o 3 V 10.40 10.42 V = 10.41
11.68 11.98
10.42 v 3 p 10.72
p = .1

Plate A.C. I 23614 taken Sept. 21, 1899

V m.s.
12.74 r = .05 11.22 v < 12.8 V < 11.77

Plate A.C. 514 taken Nov. 10, 1899

10.48 V m.s. v < 10.6
9.52 l = .2 V < 9.72
l m.s.

Plate A.C. 907 taken July 1, 1900

11.24 V m.s. v < 11.3
10.10 o = .05 V < 10.15
p m.s.

Plate A.C. 1866 taken Oct. 15, 1901 See p. 99

9.22 9.62
8.78 d 4 V 9.18 9.39 v = 9.50 12 11
9.39 v 2 h 9.59

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.F.M.

November 21, 1902

S Cassiopeiae Continued

Corner of plate — Plate A.C. 2777 taken Aug. 25, 1902
V n.s.
11.24 / 10.10 v = .1 — V < 11.3 / V < 10.20

Poor plate near edge — Plate A.C. 996 taken Aug. 11, 1900
V n.s.
10.48 l = .1 9.52 — V < 10.5 / V < 9.62
An object in plate (barely visible) seems to be the variable as the position is slightly different. Probably a defect

Plate A.C. 171 taken Jan. 24, 1901
V n.s.
11.98 / 10.72 p = .05 — V < 12.0 / V < 10.77

Plate A.C. 2496 taken April 19, 1902
Too close to edge of plate

Near edge — * Plate A.C. 1765 taken Sept. 21, 1901
9.22 / 8.78 d 3 V 9.52 9.49 — v = 9.50 — 02 01
9.49 V 1 K 9.59
Images much out of focus. Variable appears even more blurred than the other images.

Plate A.C. 2341 taken March 1, 1902
12.74 / 11.22 2 1 V 2 — 12.84 / 11.32 — v = 12.84 ?
n n.s.

Image of V much more diffuse than

*Reject. See note for AC 1800, p. 8. AC 1765 remeasured p. 98

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1971 taken Nov. 9, 1901
10.48 / 9.52 l 1 V — 10.58 / 9.62 — 10.84 / 9.70 — v = 10.11 — V = 9.96 — 13 .07 — 13 .04
10.84 / ~~12.42~~ 9.40 V 4 0 — 11.24 / 10.10

Plate A.C. 2742 taken Aug. 12, 1902
V n, s.
12.31 / 10.96 2 = .2 — v < 11.5 / V < 11.16
2 n.s.

Plate A.C. 1962 taken Nov. 6, 1901
10.48 / 9.52 l 1 V — 10.58 / 9.62 — 10.84 / 9.70 — v = 10.11 — V = 9.96 — 13 .07 — 13 .04
10.84 / 9.70 V 4 0 — 11.24 / 10.10

Plate A.C. 1345 taken Mar. 17, 1901
Not measured - bands.

Plate A.C. 656 taken Jan. 4, 1900
11.24 / 10.10 0 1 V — 11.34 / 10.20 — 11.58 / 10.32 — v = 11.46 — V = 10.26 — 12 .06 — 12 .06
11.58 / 10.32 V 4 p — 11.98 / 10.72

Plate A.C. 1764 taken Sept. 21, 1901
Extreme comm. not measured

~~Plate A.C. 64 taken Jan 2, 1901~~
~~Poor plate = not measured~~

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.F.M.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1017 taken Sept. 26, 1900

V m.s.
11.24 10.10 c = .2 <10.30 v ≤ 11.4
p m.s.

Plate A.C. 1513 taken June 8, 1901

V m.s.
10.21 9.34 m = .1 v < 10.3 V < 9.44

Plate A.C. 1078 taken Dec. 20, 1900

V m.s.
11.98 10.72 p = .2 v < 12.1 V < 10.92
g m.s.

Plate A.C. 2143 taken Jan. 3, 1902

11.98 10.72 p 2 V 12.18 10.92 12.20 10.86 v = 12.19 V = 10.89 .01 .03 .01 .03
12.80 10.86 V 1 g 12.36 10.96

Plate A.C. 1535 taken June 13, 1901

V m.s.
10.34 9.70 h = .2 v < 10.5 V < 9.90
O m.s.

~~Plate A.C. 923 taken Dec. 2, 1902~~
Useless. Only brightest stars appear

Plate A.C. 1131 taken Jan. 5, 1901

Extinction
Corner of plate

V m.s.
11.24 10.10 O = .3 v < 11.5 V < 10.40
p m.s.

November 21, 1902

S Cassiopeiae Continued

Extinct edge of plate

Plate A.C. 2690, taken July 13, 1902

V m.s.
11.24 10.10 O = .2 v < 11.4 V < 10.30

Near edge-Very poor focus

Plate A.C. 1996 taken Nov. 2, 1901

11.24 10.10 O 1 V 10.20 11.68 10.42 v = 11.51 V = 10.31 ~~.13~~ .11 ~~.13~~ .11
11.68 10.42 V 3 p 11.98 10.72

Plate A.C. 1155 taken Jan. 18, 1901

V m.s.
12.74 11.22 c = .5 (?) v < 12.8 V < 11.27
n. m.s.

Plate A.C. 2327 taken Feb. 14, 1902

V m.s.
12.31 10.96 n = .1 v < 12.4 V = 11.06

Plate A.C. 1207 taken Feb. 6, 1901

Useless. No stars visible in region

Plate A.C. 1752 taken March 12, 1900 *

Extinct Corner

11.24 10,10 O 1 V 11.20 v = 11.34 ? V = 11.20
p m.s.

Extinct Corner

Plate A.C. 935 July 19, 1900

V m.s.
v < 10.3 V < 9.44
10.21 9.34 m = .1

* Assumed intended for A.C. 752, as 1752 does not cover + A.C. 752 agrees in magn. and date.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics + Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.F.M.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1256 taken Feb 6, 1901.
Not measured - density 1

Plate A.C. 957 taken Aug. 9, 1900
Useless - no stars in region

Plate A.C. 1422 taken April 27, 1901

V n.s.
11.98
10.72 p = .2 v < 12.1
g n.s. V < 10.92

Edge of plate - poor focus.

* Plate A.C. 1790 taken Oct. 21, 1901
9.49 V 1 h 9.59 v = 9.49?
d not comparable. must be a poor focus.

Extreme edge of plate

Plate A.C. 1436 taken May 3, 1901
V n.s.
11.24
10.10 0 = .05 v < 11.3
V < 10.15

Plate A.C. 1332 taken March 12, 1900
Region not crowded

Plate A.C. 1956 taken Nov. 20, 1901

10.26		10.46	10.48	10.84	v = 10.59	13	11	.05	
9.40	k 2 V	9.60	9.52	9.70	V = 9.61	.01	.02	.09	
10.48	V 0 l	10.48							
10.84		9.52							
9.70	V 4 0	11.24							
		10.10							

* Reject. See note for AC 1800 p. 8.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 1161 taken Jan. 19, 1901
v < 14.1
V n.s. V < 11.97
14.1 o
11.92 n = .05

Plate A.C. 1612 taken July 14, 1901
V n.s.
11.98
10.72 p = .05 v < 12.0
V < 10.77

Plate I 25410 taken Feb. 5 1902

12.31		12.51	13.60	12.74	v = 12.95	44	65	21	
10.96	k 2 V	11.16	11.22	11.42	V = 11.26	.10	.24	.16	
13.60		14.1 o							
11.42	V 5 n	11.92							
12.74	V 0 s	12.74							
		11.22							

Plate A.C. 1120 taken Jan. 2, 1901
V n. s.
10.48
9.52 l = .3 v < 10.7
p n s. V < 9.82

Edge of plate. Very poor focus

Plate A.C. 1927 taken Oct. 30, 1901

10.26		10.46	10.48	10.24	v = 10.39	07	09	15	
9.40	k 2 V	9.60	9.52	9.60	V = 9.57	.03	.05	.03	
10.48	V 0 l	10.48							
		9.52							
10.24		10.34							
9.60	V 1 h	9.70							

Plate I 17036 taken Jan. 11, 1897

11.98		12.18	12.10	v = 12.14	04	04			
10.72	p 2 V	10.92	10.76	V = 10.84	.08	.08			
12.10		12.30							
10.76	V 2 q	10.96							

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.F.M.

November 21, 1902

S Cassiopeiae continued

Extremely faint

Plate A.C. 2095 taken Dec. 21, 1901

11.24 11.54
10.10 v 3 V 10.41 v = 11.54?
p n.s.

Plate A.C. 2843 taken April 17, 1902

V n.s. v < 9.6
9.59
8.81 h = .05

Plate A.C. 2513 taken May 1, 1902

V n.s.
11.24 v < 11.4
10.10 v = .2 V < 10.30
p n.s.

Plate A.C. 1119 taken Jan. 2, 1901

V n.s.
11.24 v < 11.3
10.10 v = .1 V < 10.20
p n.s

* Plate D 2415 taken Aug. 30, 1901

9.59 V v h 9.59 10.11 v = 9.85? 4 26 26
10.11 V m 10.21 9.37
h too different for satisfactory comparison.
Extreme edge of plate

Plate A.C. 1197 taken Feb. 2, 1901

V n.s.
9.22 v < 9.3
8.78 d = .1 V < 8.98

* Reject measure. See note for ac 1800 p.8.
D 2415 Remeasured p.99.

Reduced March 2, 1916
H.F.M.

November 21, 1902

S Cassiopeiae Continued

Plate A.C. 2757 taken Aug. 14, 1902

10.96 V m.s.
12.31 v = .1 v < 12.4 V < 11.06

Extreme edge from

Plate A.C. 2129 taken Jan. 17, 1902

11.98 12.18 12.10 v = 12.14 .04 .04
10.72 p 1 V 10.82 12.16 10.76 V = 10.79 .03 .03
10.76 12.30 r 2 g 10.96
Comparison very uncertain. Probably would differ considerably another time. Image of variable diffuse.

Plate A.C. 1179 taken Jan. 29, 1901

V n.s.
11.98 v < 12.1
10.72 p = .2 V < 10.92
g n.s.

Plate A.C. 1696 taken Aug. 29, 1901

10.48 10.58 v = 10.48
9.52 L 1 V 9.62 V = 9.62?
11.24
10.10 O n.s.
h incomparable

Plate A.C. 2744 taken Aug. 13, 1902

V n.s.
11.98 v < 12.0
10.72 p = .05 V < 10.77

Plate A.C. 1944 taken Nov. 2, 1901
Useless. too near edge

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced to arcs 2, 1916 H.T.M.

November 21, 1902

Excellent plate

Plate Dd 4195 taken Dec. 9, 1899

12.31 10.96 2 v 12.51 11.16 12.74 11.22 v = 12.62 V = 11.19 11 .03 12 03

12.74 v 0 2 12.74 11.22

n not comparable

Extreme edge Barely visible

Plate A.C. 699 taken Jan. 3, 1900

11.24 10.10 0 4 v 11.64 10.50 11.98 10.72 v = 11.81 V = 10.61 17 .11 17 11

11.98 10.72 v 0 p 11.98 10.72

Very doubtful "v" may be a defect in plate

Plate A.C. 1367 taken March 23, 1901

v n.s.

12.74 11.22 s = .2 v < 12.9 V < 11.42

Plate Ad 239 taken Aug. 12, 1902

Not measured

Plate A.C. 2161 taken Jan 3, 1902

Not measured - Crum of plate

Edge of plate

Plate A.C 672 taken Jan. 10, 1900

10.48 9.52 l 3 v 10.78 9.82 11.14 10.00 v = 10.96 V = 9.91 18 .11 18 .11

11.14 10.00 v 1 0 11.24 10.10

Uncertain - from focus and trail

Plate Ad 106 taken Feb 6, 1901

v n.s.

11.24 10.10 0 = .1 v < 11.3 V < 10.20

Reduced to arcs 2, 1916 H.T.M.

November 21, 1902

S Cassiopeiae continued

Plate A.C 2063 taken Dec. 6, 1901

11.24 10.10 0 3 v 11.54 10.40 11.78 10.52 v = 11.66 V = 10.46 12 .06 12 .06

11.78 10.52 v 2 p 11.98 10.72

Extreme corner

Plate A.C 2392 taken March 6, 1902

v n.s

11.98 10.72 p = .1 v < 12.0 V < 10.82

p n.s.

Trails from focus -

Plate A.C. 1458 taken May 8, 1901

v n.s.

11.24 10.10 0 = .05 v < 11.3 V < 10.15

Plate A.C. 2703 taken July 26, 1902

v n.s.

863 7.98 g = .2 v < 8.8 V < 8.18

Plate A.C. 1167 taken Jun. 22, 1901

v n.s.

12.74 11.22 s = .3 v < 13.0 V < 11.52

x n.s.

Plate A.C. 2684 taken July 11, 1902

v n.s

11.24 10.10 0 = .2 v < 11.4 V < 10.30

p n.s.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.T.M.

U

November 21, 1902

S Cassiopeiæ continued

Plate A.C. 2345 taken Feb. 19, 1902
Too near edge

Plate A.C. 1471 taken May 16, 1901

10.34 V n.s. v < 10.5
9.70 k = 2 V < 9.90
0 n.s.

Plate AC 1889
Not measured. Too near edge

Extreme edge — Plate AC. 551 taken Nov. 24, 1899

7.95 V n.s. v < 8.2
7.70 k = 3 V < 8.00

Edge of plate Image more shadowy. — Plate AC. 1674 taken Aug. 22, 1901

10.84 10.54 v k = 10.54
9.70 k 2 r 9.90 V = 9.90
10.10 0 n.s.

Plate AC. 1995
not measured. Too near edge

Plate AC 2780
Not measured. Too near edge.
Near corner. — Plate AC. 862 taken May 21, 1900

12.30 V n.s. v < 12.3
10.96 g = 25 V < 11.01

Defect on plate near pos. of V.

November 21, 1902

C

S Cassiopeiæ continued

Plate A.C. 481 taken Oct. 16, 1899

10.34 V n.s. v < 10.4
9.70 k = .1 V < 9.80
1 n.s.

Plate A.C. 2019 taken Nov. 28, 1901

11.24 11.44 11.68 v = 11.56 12 12
10.10 0 2 r 10.30 10.42 V = 10.36 .16 06
11.68 11.98
10.42 r 3 p 10.72

Plate A.C. 1084 taken Dec 22, 1900

V n.s.
11.98 p = .1 v < 12.0
10.72 V < 10.82
g n.s.

Plate A.C. 621 taken Dec. 24, 1899

10.26 V n.s. v < 10.3
9.40 k = .1 V < 9.50
1 n.s.

Plate AC 1995 taken Dec. 27, 1900

Extreme edge — V n.s. v < 12.0
11.98 p = .05 V < 10.77
g n.s.

Plate AC 2092
Not measured - Too near edge

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
eq. 7 Tm.

November 21, 1902

δ Cassiopeiæ Continued

Plate A.C. 906 taken Sept. 4, 1903
Not measured - Trails - Exterior edge

Plate A.C. 2187 taken Jan. 14, 1902

11.24 v n.s. v < 11.5
10.10 0 = .3 v < 10.40
p n.s.
Very poor plate trails and repeated images

Exterior edge

Plate A.C. 1731 taken Sept. 7, 1901

9.22 9.62 10.11 v = 9.86 24 25
8.78 d 4 r 9.18 9.24 v = 9.21 .03 03
10.11 10.21
9.24 v 1 m 9.34
Images badly out of focus - Definition not very good.

Plate A.C. 810 taken April 10, 1900

11.34 11.44 v = 11.44 ?
10.10 0 2 v 10.30 v = 10.30
p n.s.

Plate A.C. 1751*

9.22 9.62
8.78 d 4 v 9.18 9.39 v = 9.50 12 11
9.39 v 2 k 9.59

*See note p. 98.

Reduced March 2, 1916
eq. 7 Tm.

November 22, 1902

δ Cassiopeiæ continued

Exterior edge of plate

Plate A.C. 716 taken Feb. 5, 1900

10.26 10.46 10.48 v = 10.47 01 01
9.40 k 2 r 9.60 9.52 v = 9.56 .04 .04
10.48 10.48
10.48 v 0 l 9.52
0 n.s
Images badly out of focus and very faint

Plate A.C. 922 taken July 14, 1900
useless - exterior edge & very poor plate

Exterior corner

Plate A.C. 1756 taken Sept. 19, 1901

8.63 v n.s.
7.98 g = .2 v < 8.8 v < 8.18

Plate A.C. 2537 taken May 10, 1902

11.24 v n.s.
10.10 0 = .2 v < 11.4 v < 10.30
p n.s.

Plate A.C. 1914 taken Oct. 27, 1901

10.26 10.26 10.28 v = 10.27 01 01
9.40 v 0 k 9.40 9.32 v = 9.36 .04 .04
10.28 10.48
9.32 v 2 l 9.52

Plate A.C. 574 taken Dec. 9, 1899
Not measured close to edge Images poor
Plate A.C. 1992
Not measured - exterior edge

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
H.F.M.

November 22, 1902

S Cassiopeiae continued

Plate A.C. 958 taken Aug. 10, 1900

V m.s.

12.30
10.96 q = .05 v < 12.3
v < 11.01

Plate A.C. 2519 taken May 3, 1902
Too close to edge

Plate I 23615 taken Sept. 2, 1899

V m.s.

14.10
11.92 n = .1 v < 14.2
v < 12.02

Plate A.C. 2153 taken Jan. 3 1902

Comes 2 plates

12.31 12.41 12.44 v = 12.42 01 02
0.96 n 1 v 11.06 10.92 v = 10.99 .07 .07
12.44 12.74
10.92 v 3 n 11.22

Poor focus - images very faint

Plate A.C. 2046 taken Dec. 4, 1901 5 15

10.34 10.54 11.24 11.48 v = 11.09 45 38 39
9.70 h 2 v 9.90 10.10 10.22 v = 10.07 .17 .03 .15
11.24 v 0 0 11.24 10.10
11.48 11.98
10.22 v 5 p 10.72

Plate A.C. 1198 taken Feb. 3, 1901

V m.s.

10.21
9.37 m = .1 v < 9.3
v < 9.44

Plate A.C. 2175 taken Jan. 2, 1902

11.98 12.18 12.21 v = 12.20 02 01
10.72 p 2 v 10.92 10.86 v = 10.89 .13 .03
12.21 12.31
10.86 v 1 n 10.96

Images especially faint Comparison uncertain

November 22, 1902

S Cassiopeiae Continued

Plate A.C. 1347 taken March 17, 1901

V m.s.

11.24
10.10 0 = .05 v < 11.3
v < 10.15

Plate A.C. 1094 taken Dec. 27, 1900

V m.s.

12.31
10.96 n = .05 v < 12.3
v < 11.01
2 m.s.

Plate A.C. 105 taken Feb. 6 1901
Not measured - trails

Plate A.C. 2150 taken June 27, 1902

V m.s.

11.98
10.72 p = .2 v < 12.18
v < 10.92

Object on faint near position of p
probably a defect.

Plate A.C. 2469 taken April 14, 1902
Not measured. Extreme edge of poor plate

Trails and repeated images

Plate A.C. 710 taken Feb. 6 1900

10.48 10.58 10.24 v = 10.41 17 17
9.02 l 1 v 9.62 9.60 v = 9.61 .01 .01
10.24 10.34
9.60 v 1 h 9.70

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced March 2, 1916
4.7.m.

November 22, 1902

S Cassiopeiae Continued

* Reject measure. See note for ac 1800 page 8. ac 1883 measured 0.98

Plate A.C. ~~1800~~ 1883 taken Oct. 19, 1901

9.22 8.78 d 6 v 9.82 9.38 9.49
9.49 v 1 l' 9.59

Plate A.C. 662 taken Jan 4, 1900

10.48 9.52 l 3 v 10.18 9.82 11.14 10.00 v = 10.96 .18 .11 .18
11.14 10.50 v 1 0 11.24 10.10

Plate A.C. 2093 taken Dec. 21, 1901
Not measured. Extreme corner.

Plate A.C. 996 taken Sept. 7, 1900

v m. s.
8.63 7.98 g = .2 v < 8.8 v < 8.18

Plate A.C. 2490 taken April 15, 1902

v m. s.
10.48 9.52 l = .1 v < 10.5 v < 9.62

Plate A.C. 2079 taken Dec 19, 1901

12.30 8.63 v 0 g 8.63 12.30 10.96 12.21 10.86 v = 12.26 .04 .04 v = 10.91 .25 .05
12.21 10.86 v 1 r 12.31 10.96
Images very faint

Plate A.C. 1703 taken Aug 30, 1901
v as bright as l 10.48 9.52 v = 10.48
No decent comparison possible. Images so faint that they can be discerned at all only by superposition.

Reduced March 2, 1916
4.7.m.

November 22, 1902

S Cassiopeiae Continued

Plate A.C. 2470 taken April 17, 1902

Enveloping plate

v m. s.
11.98 10.72 p = .1 v ≤ 12.0 v < 10.82

Plate A.C. 1726 taken Sept. 7, 1901

v m. s.
10.21 9.34 m = .2 v < 10.4 v < 9.54

Plate A.C. 2577 taken May 13, 1902

v m. s.
11.98 10.72 p = .1 v < 12.0 v < 10.82

Plate A.C. 2188 taken Jan. 14, 1902

v m. s.
12.30 10.96 g = .1 v < 12.4 v < 11.06

Plate A.C. 1169 taken Jan 22, 1901
Not measured. Extreme corner.

Plate A.C. 657
Not measured. Extreme corner

Plate A.C. 1009 taken Sept. 21, 1900
Useless - only brightest stars appear

Plate A.C. 1055 taken Dec. 14, 1900

Here is an effort very close to perfection (v, w must [illegible] show [illegible]

v m. s.
14.10 11.92 v = .1 v < 14.20 v < 12.02

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

Reduced, March 2, 1916

November 22, 1902

S Cassiopeiae Continued

Plate A.C. 2799 taken Oct. 14, 1902

V m.s.
11.98
10.72 p=.05 $v < 12.0$ $v < 10.77$

Plate A.C. 0914 taken Oct. 20, 1902

V m.s.
11.98
10.72 p=.1 $v < 12.0$ $v < 10.82$

Plate A 186 taken Jan. 23, 1894

V m.s.
14.10
11.92 u=.05 $v < 14.1$ $v < 11.97$

Plate A 1832 taken March 5, 1895

10.48 10.88 11.24 11.58 $v = 11.23$ $\frac{35}{45} = .1$ 35
9.52 l 4 V 9.92 10.10 10.32 $v = 10.11$ .19 .01 .21
11.24
11.58 V O O 10.10
10.32 V 4 p 10.72
11.98

Plate A.C. 1508 taken June 20, 1895

V m.s.
12.31
10.96 x=.1 $v < 12.4$ $v < 11.06$
A m.s.

Continued top 98.

November 22, 1902

Measures with scale of comparison stars to R Cassiopeiae

Plate I 15895 taken Sept. 4, 1896

f	5.1	5.3	Superseded – see next page
g	5.3	5.9	
h	5.0	5.0	
k	5.8	6.1	
l	6.1	6.8	
m	6.1	6.9	
n	7.0	7.3	
ñ		7.7	
o		8.3	
ó		8.8	wrong star first 10s
p		8.9	
q		8.4	
r		8.3	
s		9.0	
t		9.1	
u		9.7	
w		10.1	
x		10.3	
y		10.2	
z		m.s.	
V		9.1	

Trails on brighter stars embarrass measures
Measures doubtful also because of long distance of scale – Sight not very good. Meas. again later when the

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics – Provided by the NASA Astrophysics Data System

November 24, 1902

R Cassiopeiae continued

I 15895 ?
Plate I 15875 taken Sept. 4, 1896

f	5.2	5.7
g	5.5	5.9
h	5.0	5.3
k	5.9	6.3
l	6.4	6.9
m	6.2	6.8
n	7.0	7.3
o		8.4
p		8.9
q		8.6
r		8.7
s		9.0
t		9.2
u		9.7
w		10.1
x		10.3
y		10.4
z		10.6
v		9.1
w		7.8
o'		8.1

Remeasured from previous page because of fading light Sunday afternoon – See note prev. page

November 24, 1902

Measures of brightness of Companion stars for S Cephei –

Plate I 17982 taken April 2, 1897

a	6.0	6.2
b	6.9	7.1
c	6.8 7.0	7.4
d	6.3	6.7
e	6.9	7.2
i		7.6
f		7.4
g		8.12
h		8.1
k		8.7
l		8.9
m		9.0
n		9.0
o		9.9
p		9.6
p'		9.7 9.7
q		9.7
v		9.4

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics - Provided by the NASA Astrophysics Data System

November 24 1902

Measures of the brightness of comparison stars to R Cassiopeiae

Plate I 18308 taken July 1, 1897

Images washout To form	f	4.7	4.9
"	g	5.0	5.4
"	h	5.0	5.1
"	k	5.6	5.9
"	l	6.0	6.2
	m	6.4	6.8
	n	7.0	7.0
	o		8.4
	p		9.0
	q		8.7
	r		8.7
	s		9.0
	t		9.2
	u		9.9
	w		10.2
	x		10.0
	y		11.5
	z		11.5
	V		8.8
	n'		7.4
	o'		8.1

Images of central stars fairly good. Better measurement plates used for this star

November 24, 1902

R Cassiopeiae continued

Plate I 17299 taken Feb. 10, 1897

	f	4.9	6.1
	g	5.9	6.0
	h	5.0	5.2
	k	6.2	6.7
	l	6.9	7.2
	m	6.6	7.0
	n		7.7
	o		8.4
	p		9.0
	q		8.7
	r		8.9
	s		9.0
	t		9.1
	u		9.7
	w		10.0
	x		10.3
	y		10.3
	z		10.4
	V	5.9	6.0
	n'		8.0
	o'		8.5

Variable bright + dim measure uncertain

An excellent plate

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 24, ~~1892~~ 1902

R Cassiopeiae continued

Plate I 21443 taken Oct. 17, 1898

pm focus	f	~~4.4~~ 4.9	5.1
	g	4.9	5.1
	h	4.4	4.9
	k	5.1	5.5
pm focus	l	5.7	6.0
	m	5.8	6.0
	n	6.6	6.5
	o		7.5
	p		8.3
	q		7.5
	r		7.8
	s		8.4
	t		8.7
	u		9.0
	w		9.2
	x		9.7
	y		9.7
	z		9.8
	V		9.1
	n'	6.8	6.9
	o'	7.0	7.2

November 24, 1902

R Cassiopeiae continued

Plate I 16512 taken Nov. 14, 1896

f	4.8	
g	5.0	5.1
h	4.8	5.0
k	5.2	5.7
l	5.7	6.0
m	6.0	6.2
n	6.3	6.8
o		
p	Other images not comparable	
q		
r		
s		
t		
u		
w		
x		
y		
z		
V		
n'		7.0
o'		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 24, 1902

Measures of the brightness of Comparison Stars for δ Cephei (Cont. from Page 31)

Plate I 17582 taken April 18, 1897

a	6.8	7.0	
b		7.9	
c		7.9	
d	7.1	7.4	
e		7.7	
f		8.0	
g		8.7	
h		8.6	
k		9.0	
l		9.1	
m		9.1	
n		9.4	
o		10.2?	
p		9.8	
q		9.7	10.0 Defect close to q caused mistake at first
V		9.6	
e		8.0	
f		9.9	

Good plate

November 24, 1902

Measures of the brightness of Comparison Stars for δ Cephei Continued

Plate I 17573 taken March 17, 1897

a	5.6	6.0	
b	6.0	6.5	Not included in final Ledger
c	6.8	7.0	
d	5.9	6.1	
e	6.5	6.8	
f	7.0	7.2	
g		8.1	
h		8.1	
k		8.6	
l		8.9	
m		9.0	
n		9.0	
o		9.7	
p		9.5	
q		9.6	
V		9.6	
e		7.2	
f		9.7	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

Notice T Persei on even pages

Estimates of the brightness of T Persei

Plate I 17354 / 16696 taken Aug. 1, 1897 / Dec. 7, 1896
h' 1 v
v 1 θ

near edge — Plate I 17553 taken March 13, 1897
h' 3 v
v 1 θ

Plate I 16696 taken Dec. 7, 1896
h' 3 v
v 1 θ

Plate I 19760 taken Nov. 30, 1897
h' 3 v
v 1 θ

Plate I 16735 taken Dec. 11, 1896
h' 3 v
v 1 θ

Plate I 17823 taken April 12, 1897
h' 1 v
v 3 θ

November 25, 1902

Notice S Persei on odd pages

Estimates of the brightness of S Persei

Plate I 17354 / 16696
l 2 v
v 2 m

near edge — Plate I 17553
l 1 v
v 2 m

Edge of plate — Plate I 16696
K 2 / 7 v
v 0 l
v 4 m

Plate I 19760
l 1 v
v 2 m

Plate I 16735
l 1 v
v 4 m

Edge of plate — Plate I 17728
K 3 v
v 0 l
v 2 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1792 1902

7 Persei continued

Plate I 18464 taken Aug. 6, 1897
θ 1 V
V 0 θ'

Plate I 16764 taken Dec. 14, 1896
k' 2 V
V 1 θ

Very faint - from print
Plate AC 107 taken Dec. 7, 1898
k' 3 V
V 2 k'

Edge of plate
Plate I 16981 taken Jan 6, 1897
k' 2 V
V 0 θ

Plate I 18720 taken Sept. 8, 1897
k' 3 V
V 1 θ

Plate I 17035 taken Jan. 11, 1897
k' 3 V
V 0 θ
V 1 θ'

Plate AC 116 taken Dec. 9, 1898
k' 3 V
V 3 k'

November 25, 1792 1902

8 Persei continued

Plate I 18464
l 2 V
V 2 m

Plate I 16764
K 3 V
V 1 l

faint
Plate AC. 107
K 4 V
V 0 l
V 3 m

Plate I 16981
K 4 V
V 0 l
V 3 m

Plate I 18720 taken Sept. 8, 1897
l 2 V
V 2 m

Plate I 17035
K 4 V
V 0 l
V 4 m

Extreme edge. Very faint
Plate AC 116 taken Dec. 9, 1895
K 3 V
V 1 l

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

χ Persei continued

Plate I 19178 taken Oct. 5, 1897
Useless - Only brightest stars appear
Plate AC. 394 taken Aug. 15, 1899
Useless - Only bright stars appear

Plate I 18186 taken June 1, 1897
k 2 t
t 2 b

Plate I 16692 taken Dec. 7, 1896
V not on plate

Plate I 17302 taken Feb. 10, 1897
k 3 V
V 1 θ

Plate AC 493 taken Oct. 24, 1899
Useless only bright stars

Plate I 16552 taken Nov. 16, 1896
k 2 V
V 2 θ

Plate AC 91 taken Oct. 24, 1898
Defect on plate prevents estimate

November 25, 1902

χ Persei Continued

Plate I 19178
Useless
Plate AC. 394 taken Aug. 15, 1899
Useless -

Plate I 18186
l 1 V
m n. s

Exposure edge - forms bad

Plate I 16692
k 2 V
V 1 b
Plate I 17302
k 4 V
V 0 d
V 4 m
Plate AC 493
Useless - only bright stars appear

Plate I 16552
k 3 V
V 0 d
V 4 m
Plate AC 91
V n. s.
k e. 2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

T Persei continued

Plate I 18512 taken Aug. 12, 1897
θ 1 v
v 0 θ'
v 2 k'

Plate I 16206 taken October 19, 1896
k' 2 v
v 2 θ

Plate I 17866 taken April 16, 1897
v 0 k'
v 4 θ

November 25, 1902

S Persei continued

Plate I 18513
k 3 v
v 1 m

Very poor focus

Plate I 16206
k 8 v
v 0 l
v 3 m

Plate I 17866
k 3 v
v 0 l
v 3 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902

S Persei continued

Plate I 20129 taken Feb. 3, 1898
K 2 V
V 1 θ

Plate I 21541 taken Oct. 30, 1898
K 3 V
V 1 θ

Plate I 20573 taken April 1, 1895
K 2 V
V 2 θ

Plate I 17401 taken Feb. 24, 1897
K 2 V
V 1 θ

Plate I 16226 taken Oct. 22, 1896
K 3 V
V 1 θ

Plate I 19859 taken Dec. 30, 1897
K 2 V
V 1 θ

Plate AC 69 taken Oct. 20, 1895
Too poor

November 26, 1902

S Persei continued

Plate I 20129
K 2 V
V 1 L

Plate I 21541
θ 3 V
V 0 K
V 3 L

Plate I 20573
K 3 V
V 3 L

Plate I 17401 taken Feb. 24 1897
K 3 V
V 0 L
V 4 M

Plate I 16226
K 2 V
V 1 L

Edge of plate

Plate I 19859
L 1 V
V 2 M

Plate AC 69
Too poor

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902.

7 Persei Continued

Plate I 18506 taken Aug. 12, 1897
l' 2 V
V 1 θ

Plate I 19509 taken Nov. 7, 1897
l' 3 V
V 0 θ
V 2 θ'

Exposure edge of plate — Plate I 16577 taken Nov. 22, 1896
l' 1 V
V 3 θ

Plate I 22345 taken Feb. 20, 1899
l' 3 V
V 0 θ
V 1 θ'

Edge of plate — Plate I 19598 taken Nov. 17, 1897
θ 1 V
V 1 θ'

Plate I 18496 taken Aug. 12, 1897
l' 4 V
V 0 θ
V 1 θ'

November 26, 1902

8 Persei Continued

Plate I 18506
l 3 V
V 1 m

Plate I 19509
l 2 V
V 1 m

P
Plate I 16577 taken Nov. 22, 1896
N 2 V
V 1 l

Plate I 22345 taken Feb. 20, 1899
θ 3 V
V 1 N

Plate I 19598
l 2 V
V 2 m

Plate I 18496
l 3 V
V 1 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902

S Persei continued

extreme edge very faint

Plate AC 264 taken March 29, 1899
θ 1V
V 1θ'

Plate AC 106 not measured - trails

Plate AC 157 taken Jan. 17, 1899
θ' 2V
V 0 K'
V 2K

Plate I 18115 taken May 19, 1897
Too far - only brightest stars seen
Plate I 18508 taken Aug. 12, 1897
Not measured - near edge

Plate I 16391 taken Oct. 30, 1896
K' 3V
V 1θ

Plate AC 163 taken Jan. 18, 1899
θ' 1V
V 0 K'

Plate I 16525 taken Nov. 14, 1896
θ 1V
V 1θ'

November 26, 1902

S Persei continued

extremely faint close edge

Plate AC 264
K 3V
V 1L

Plate AC 106
Not measured

Plate AC 157 taken Jan 17, 1899
K 3V
V 0L
V 3M

near edge - faint

Plate I 18115
Too far
Plate I 18508
Not measured - near edge

Plate I 16391
K 4V
V 3M

Plate AC 163
K 2V
V 1L

Images of 1 hazy in comparison

Images very much out of focus

Plate I 16525
L 1V
V 2M

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902

J Persei continued

Plate I 17050 taken Jan. 12, 1897
k' 2 v
r 1 θ

Plate I 19459 taken Nov. 4, 1897
θ 1 v
r 1 θ'

Plate I 16629 taken Dec. 1, 1896
k' 3 v
r 0 θ
r 1 θ'

Extreme edge of plate — Plate I 19768 taken Dec. 16, 1897
k' 2 v
r 2 θ

Swings out of focus near edge of plate — Plate I 17190 taken Jan. 25, 1897
θ 1 v
r 1 θ'

Plate I 21535 taken Oct. 28, 1898
k' 4 v
r 0 θ
r 1 θ'

Extreme edge of plate — Plate AC 1782 taken Oct. 16, 1899
~~r m.s.~~ θ' 1 v
f θ' nbs.

November 26, 1902

S Persei continued

Plate I 17050
k 4 v
r 0 l
v 3 m

Plate I 19459
k 3 v
r 1 l

Plate I 16629
k 4 v
r 0 l
v 3 m

Plate I 19768
k 2 v
r 1 m

Very near focus Edge of plate — Plate I 17190
k 3 v
r 0 l
v 2 m

Plate I 21535
θ 3 v
r 1 k

Plate AC 482
v m.s.
10 = .2

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902

γ Persei continued

Plate I 18390 taken Aug. 4, 1897
k' 4 v
v 0 θ
v 3 k'

Plate AC 437 taken Sept. 14, 1899
Nucleus - only brighter stars appear

Plate I 18187 taken June 1, 1897
k' 3 v
v 1 θ

Plate I 16662 taken Dec. 3, 1896
k' 3 v
v 0 θ
v 1 θ'

Plate I 18313 taken July 5, 1897
k' 3 v
v 1 θ

Plate I 17279 taken Oct. 9, 1897
k' 3 v
v 0 θ
v 2 k'

November 26, 1902

γ Persei continued

Plate I 18390
k 3 v
v 0 m

Plate AC 437
Nucleus - only brighter stars appear

Plate I 18187
v n. s.
l = .05

Plate I 16662
k 3 v
v 0 l
v 2 m

Plate I 18313
k 3 v
v 1 l

Plate I 17279
k 1 v
v 3 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1912

γ Persei Continued

Exp. Extremely faint. Confirmation doubtful

Plate A C 134 taken Dec. 19, 1898
k' 5 v
v 1 K'

Plate I 9215 taken Oct. 9, 1897
θ 1 v
v 1 θ'

Extreme edge of plate

Plate I 16605 taken Nov. 30, 1896
k' 3 v
v 1 θ

Plate A C 935 taken July 19, 1900
k' 3 v
v 3 K'

Edge - Very faint

Plate A C 662 taken Jan. 6, 1900
θ' 1 v
v 0 K'

Plate A C 958 taken Aug. 10, 1900
Useless - too near edge

Plate I 26029 taken Nov. 10, 1905
Not on plate.

November 26, 1902

γ Persei Continued

Plate A C 134
v m, s.
l = .05

Edge of plate. Poor focus.

Plate I 9215
k 2 v
v 1 m

Plate I 16605
K 3 v
v 0 l
v 4 m

Plate A C 935
v m s.
K = .1

Plate A C 662
v not separated from l

Plate A C 958
Not measured too faint

Extreme edge

Plate I 26029
k" 4 v
v 2 K

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

χ Persei continued

Extreme edge very poor focus — Plate AC 1131 taken Jan 5, 1901
θ' 1 V
V 1 K'

Poor focus — Plate AC 1986 taken Nov. 20, 1901
θ' 1 V
V 1 K

Edge of plate — Plate AC 2280 taken Feb. 6, 1902
K' 3 V
V 0 θ'
V 1 K

Near edge but very clear — Plate AC 1945 taken Nov. 2, 1901
θ' 1 V
V 1 K

Edge of plate very poor focus — Plate AC 2342 taken Feb. 19, 1902
θ' 2 V
V 0 K'

Plate AC 1741 taken Sept. 13, 1901
V n.s.
K = .1

Corner of plate very poor focus — Plate AC 1977 taken Nov. 10, 1901
K' 1 V
V 1 K

November 25, 1902

χ Persei continued

Extreme edge — Plate AC 1131
g 1 V
V 1 K

Plate AC 1986
Too close to blurred image of C to measure

Edge of plate — Plate AC 2280
V not distinguished from K

Clear images — Plate AC 1945
K 3 V
V 0 m

Plate AC 2342 taken Feb. 19, 1902
V n.s.
K = .2

Plate AC 1741 taken Sept. 13, 1901
V n.s.
K = .1

Poor focus — Plate AC 1977
K m 1 V
V n.s.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 22, 1902

S Persei continued

Extreme edge
Very poor focus

Plate AC 2272 taken Feb. 5, 1902
h' 4 V
V 1 K'

Plate AC 1084 taken Dec. 22, 1900
K' 2 V
K 1 V
(S 3 7)

Very faint

Plate AC 673 taken Jan. 10, 1900
K 1 V
V 3 L

Plate AC 959 taken Aug. 10, 1900
(7 0 S)
L' 3 V
V 0 B'

Focus seems different in different images
Very difficult observation.

Plate AC 1154 taken Jan. 18, 1901
L' 3 V
V 0 B'
V 2 K'

November 22, 1902

S Persei continued

Extreme edge. Bad focus. Its doubtful

Plate AC 2272 taken Feb. 5, 1902
L 2 V
V 1 m

Edge of plate poor focus

Plate AC 1084 taken Dec. 22, 1900
L 4 V
V 2 K

Plate AC 673
V n.s.
L = .1
V may be lost in diffuse image of L

Plate AC 959
L' 3 V
V 3 K
Extremely faint, poor focus - identification difficult - Observation poor & doubtful

Plate AC 1154
L K² V
V 1 K'

Image of V peculiar in appearance a defect in film may coincide with position and make the variable appear brighter

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

S Persei continued

Plate AC 698 taken Jan. 30, 1900
B 2 V
V 0 B
V 1 K

Plate AC 2135 taken Jan. 1, 1902
B 2 V
V 0 K

Plate AC 1866 taken Dec. 15, 1901
B 2 V
V 0 K

Plate AC 2143 taken Jan. 3, 1902
B 2 V
V 0 K
V 2 K

Plate AC 1685 taken Aug 27, 1901
Defect in plate hides V

Plate AC 1155 taken Jan. 18, 1901
B 2 V
V 0 K

Plate AC 1054 taken Dec. 14, 1900
B 1 V
V 1 K

November 25, 1902

S Persei continued

Clear margin

Plate AC 698
m 1 V
n n.s

Plate AC 2135
m 4 V
n n.s.

Plate AC 1866
V not separated from d

Edge of plate

Plate AC 2143
m 2 V
V 3 n
Extremely faint - very poor focus -

Plate AC 1685
h 3 V
V 0 K
Very faint - K n.s. very poor focus

Plate AC 1155 taken Jan. 18, 1901
h 3 V
V 0 K

Plate AC 1054 taken Dec. 14, 1900
V 0 B
V 1 K
V 3 K

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

T Perrine cont.

Plate A C 810 taken April 10, 1900
V n. s =
k' = .2

Plate A C 639 taken Dec. 30, 1899
k' 2 V
V 3 θ'

Plate A C 1799 taken Sept. 27, 1901
V n. s.
k' = .3

Plate A C 2032 taken Dec. 1, 1901
k' 2 V
V 0 k

Plate A C 2327 taken Feb. 14, 1902
k' 3 V
V 0 θ'
V 2 k'

Green Z plate for focus

Plate A C 1884 taken Oct. 19, 1901
k' 1 V
V 1 k

Plate A C 2334 taken Feb. 15, 1902
θ' 1 V
V 1 k'

November 25, 1902

T Perrine cont.

Plate A C 810, taken April 10, 1900
V n. s.
k' = .2

Plate A C 639
k 3 V
V 1 k

Plate A C 1799
V n. s.
k' = .3

Plate A C 2032
m 4 V
n. n. s.
Very faint - uncertain

Plate A C 2327
V not separated from k

Plate A C 1884 taken Oct. 19, 1901
V n. s.
k = .2

Very faint trails

Plate A C 2334
V not separated from k

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

S Persei continued

Plate AC 2244 taken Jan. 25, 1902
Too faint - Close to edge - Pinholes and other defects

Plate AC 1703 taken Aug. 30, 1901
Extreme edge - only brightest stars appear

Plate AC 2194 taken Jan. 16, 1902
Too faint - only brightest stars

Plate AC 1691 taken Aug. 28, 1901
Too faint - Close to edge - faint

Plate AC 955 taken Aug. 6, 1900
Wrong region

Plate AC 680 taken Jan. 21, 1900
B 1 V
V 1 K

Extreme edge - Images might not be in focus.

Plate I 25928 taken Oct. 16, 1900
~~B 2~~ V
V 0 B

Plate AC 710 taken Feb. 6, 1900
Not measured - Extreme edge trails and multiplied images

November 28, 1902

S Persei continued

Plate AC 2244
Not measured

Plate AC 1703
Not measured

Plate AC 2194
Not measured

Plate AC 1691
Too faint - Close to edge - faint

Plate AC 680
M 4 V
V 1 M
M extremely faint - ident. not certain

Plate I 25928
B 2 V
V 1 K
Image of B close to edge - badly out of focus

Plate AC 710
Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

V Cygni continued

Plate A C 1818 taken Oct. 3, 1901
B' 2 V
V 0 K

Lines and multiplied images - Comp. diffuse

Plate A C 752 taken March 12, 1900
K' 1 V
V 3.8'

Plate I 28108 taken Dec. 21, 1901
B' 1 V
V 1 K'

Plate A C 2235 taken Jan. 24, 1902
K' 6 V
V 0 K'

Plate A C 1332 taken March 12, 1901
region not on plate

Plate A C 2163 taken Jan. 5, 1902
B' 1 V
V 1 K'

Plate A C 1252 taken Feb. 17, 1901
K' 1 V
V 1 K

November 28, 1902

S Cygni Continued

Multiplied images -

Plate A C 1818
~~B~~ 1 V
n n. s.

Plate A C 752
V not separated from L

Eyepiece Comes Dec. Elongated Greatly

Plate I 28108
m 2 V
n n. s.

Plate A C 2235
V n. s.
L = .3
May not be separated from L - poor focus

Plate A C 1332
Region not on plate

Plate A C 2163
m 3 V
V 2 n
n extremely faint Comparison difficult

Plate A C 1252
K' 2 V
V 3.8'

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

7 Persei Continued

Plate AC 1852 taken Oct. 8, 1901
b' 2 V
θ' n.s.

Plate AC 2046 taken Dec. 4, 1901
θ' 2 V
V 1 K'

Plate AC 2175 taken Jan. 10, 1902
θ' 2 V
V 0 K'

Plate AC 703 taken Feb. 1, 1900
θ' 2 V
V 0 K'
V 2 K

Plate AC 2134 taken Jan. 1, 1902
θ' 1 V
V 2 K

Plate AC 1852 taken Oct. 8, 1901
Defect in film near plane of V.
Very poor images & bad corner of plate

Plate AC 1055 taken Dec. 14, 1900
θ' 2 V
V 0 K'

November 28, 1902

S Persei Continued

Plate AC 1853
V n.s.
b' = .2

Images clear

Plate AC 2046
m 4 V
V 1 n
n extremely faint

Extreme edge. Very poor focus

Plate AC 2175
m 3 V
n n.s.

Images clear

Plate AC 703 taken Feb. 1, 1900
m 4 V
V 2 n

Plate AC 2134
V n.s.
b = .3
m. not seen
Very bad focus. corner of plate

Plate AC 1852
V n.s.
b = .1

Plate AC 1055
b' 3 V
V 0 θ'
V 2 K'

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

γ Persei Continued

Plate AC 950 taken Aug. 1, 1900
B 1 V
V 1 K

Extreme corner — Image very faint — Comparison doubtful

Plate AC 1690 taken Aug. 28, 1901
V M. S.
K = .2

Plate AC 2013 taken Nov. 27, 1901
K 4 V
V 0 B

Comparison very doubtful. Images faint and shadowy

Plate AC 2317 taken Feb. 11, 1902
Multiplied images
K 2 V
V 0 K

Doubtful comparison. Images very faint

Extreme edge — Very doubtful

Plate AC 1914 taken Oct. 27, 1901
K 1 V 2

Plate AC 2371 taken March 1, 1902
B 1 V
V 2 K

November 28, 1902

δ Persei Continued

Plate AC 950
V M. S.
K = .1

Plate AC 1690
V M. S.
K = .2

Plate AC 2017
V M. S.
K = .1

Plate AC 2317
Image of V obscured by star image reputed.

Plate AC 1914
K 1 V
Extreme edge — no other image comparable. Very faint and much out of focus

Plate AC 2371
V not separated from K

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

γ Persei continued

Very poor frame

Plate AC 1222 taken Feb. 5, 1901
θ' 2 V
V 0 K
Star K" appears as bright as θ'

Plate AC 1751 taken Sept. 16, 1901
V n. s.
k = .2

Extreme edge - Bad frame

Plate AC 1956 taken Nov. 4, 1901
k' 4 V
V 0 θ'
Very uncertain - images shadowy. Identification difficult and doubtful

Plate I 28376 taken Jan. 23, 1902
θ 1 V
V 0 θ'

θ'
K'
K"

θ' 1 K"
K' 3 K"

Stevens

Plate AC 1697 taken Aug. 24, 1901
θ' 1 V
V 2 K"

Plate AC 2187
Useless multiplex images + trails
Extreme edge

November 28, 1902

γ Persei continued

Extreme edge - Poor frame

Plate AC 1222
k' 1 V
V 3 θ'

Plate AC 1751
V n. s.
k = .2

Plate AC 1956
V n. s.
k = .1

Plate I 28376
m 4 V
V 1 n

Edge γ plate

Plate AC 1697
K 1 V
l n s.

θ' 1 K"
K' 3 K"

Plate AC 2187
Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 26, 1902

J Persei continued

Plate AC 1727
Useless - Corner of plate. Only bright stars appear

Plate AC 1053
Trails - Not measured

Edge of field - Bad focus

Plate I 23983 taken Nov. 6, 1899
G 1 V
V 1 K
G 1 K'
K' 3 K"

Plate AC 2777 taken Aug. 5, 1902
Not right region

Extreme edge

Plate AC 559 taken Nov. 26, 1899
K' 5 V
V 0 G'

Multiplied images

Plate AC 1345 taken March 17, 1901
Field too confused for identification almost impossible

Corner of plate

Plate AC 2711 taken July 30, 1902
K' 1 V
V 4 G'
Very faint, poor focus. Multiple comparison

November 27, 1902

S Persei continued

Plate AC 1727
Not measured

Plate AC 1053
Trails - Not measured

Plate I 23983
K 3 V
V 0 m

Poor focus images faint and discordant

Plate AC 559
K 4 V
V 0 m
G' 3 K'
K' 3 K"

Edge of plate - Multiplied images

Plate AC 1345
K' 2 V
V 5 K

Plate AC 2711
V m. s.
K = 1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

γ Persei continued

Edge of plate for focus

Plate AC 638 taken Dec. 30, 1899
K' 5 V
V 0 B"
B' 2 K"
K' 2 K"

Plate AC 1197
Nucleus. Only brightest Stars appear

Plate I 23992 taken Nov. 7, 1899
B' 1 V
V 1 K

Plate AC 511 taken November 9, 1899
B' 2 V
V 0 K
B' 1 K"
K' 3 K"

Plate AC 2936 taken Oct. 25, 1902
K' 4 V
V 0 B"
K' & K" not separated

Extreme edge. Poor focus

Plate AC ~~2095~~ 2095 taken Dec. 21, 1901
K' 4 V
V 1 B"
B' 0 K"
B' 4 K"

November 25, 1902

δ Persei continued

Plate AC 638
V n. s.
L = .1

Plate AC 1197
Not measured

Very poor focus

Plate I 23992 taken Nov. 7, 1899
L 3 V
V 0 m
V 6 m
B' 1 K"
K' 2 K"

Plate AC 511 (a)
L 3 V
V 0 m

Plate AC 2936
V not separated from L

Plate AC 2095
V not separated from L

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 25, 1902

J Persei Continued

Plate AC 2225 taken Jan. 23, 1902
L 5 V
V 0 B'

Plate AC 1978 taken Nov. 10, 1901
B' 2 V
V 2 K

Plate I 23979 taken Nov. 5, 1899
B 1 V
V 1 B'
B' 1 K"
K' 3 K"

Corner of plate - poor focus

Plate AC 2743 taken Aug. 12, 1902
B' 1 V
V 2 K

Plate AC 2073 taken Dec. 12, 1901
B' 1 V
V 2 K

Plate AC 2929 taken Oct. 23, 1902
L 5 V
V 0 B'
V 2 K

November 25, 1902

S Persei Continued

Plate AC 2225 taken Jan 3, 1902
V not separated from L

Extreme edge - poor focus

Plate AC 1978
V too close to L to be measured
B' 1 K
K' 3 K"

Plate I 23979
L 3 V
V 0 M
V 6 N

Plate AC 2743
V M.S.
m = .1

Plate AC 2073 taken Dec. 12, 1901
K 3 V
V 1 L
Very faint - poor focus. identification of V very doubtful

Corner of plate - poor focus

Plate AC 2929
V not separated from L

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

T Persei continued

Edge of plate
Very far from focus
images elongated

Plate A C 2261 taken Feb. 3, 1902
θ' 2 v
v 1 k

edge

Plate A C 565 taken Dec. 4, 1899
θ' 3 v
v 0 k
Very far from focus - Observation doubtful

Plate A C 2809 taken Sept. 2, 1902
Useless - Only bright stars appear

Plate A C 2913 taken Oct. 20, 1902
v 0 θ'
v 3 k

Plate A C 2219 taken Jan. 20, 1902
θ' 1 v
v 2 k'''

Plate A C 1161 taken Jan. 19, 1901
k' 3 v
v 1 θ'

Plate A C 2938 taken Oct. 25, 1902
k' 3 v
v 1 θ

November 28, 1902

S Persei continued

Plate A C 2261
v not separated from k

Corner of plate - Very far from focus

Plate A C 565
v not separated from k

Plate A C 2809
Not measured

Plate A C 2913
k 1 v
v 3 m

Plate A C 2219
v n. s.
k - 1 s

Plate A C 1161
k 3 v
v 0 k'

Plate A C 2938
k 3 v
v 1 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

S Pucci cont.

Plate AC 504 taken Nov. 7, 1899
θ' 2 r
r 1 K

Plate AC 2742 taken Aug. 12, 1902
θ' 2 r
r 2 K

Extreme corner-ray from focus — Plate AC 2751 taken Aug. 12, 1902
r 0 θ'
r 3 K

Plate I 23984 taken Nov. 6, 1899
θ 2 r
r 0 θ'

Plate AC 2771 taken Aug. 26, 1902
θ 1 r
r 1 θ'

Extreme edge-ray from focus — Plate AC 1368 taken March 23, 1901
k' 4 r
r 0 θ'

Plate AC 2499 taken April 25, 1902
Not measured. Edge of from plate

November 28, 1902

S Pucci continued

Plate AC 504
l 4 r
r 0 m

Plate AC 2742
r m. s.
l - 2

Plate AC 2751
l 2 r
m n. s.

Corner of plate — Plate I 23984
l 3 r
r 0 m
r 5 m

Extreme edge-point from focus — Plate AC 2771
m 3 r
n n. s.

Plate AC 1368
k' 2 r
r 1 θ'

Plate AC 2499
Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 27, 1902

S Persei Continued

Plate AC 579 taken Dec. 9, 1899
θ 4 V
V 0 K

Plate AC 1200 taken Feb. 2, 1901
Not measured. Only brightest stars appear

Extreme edge of plate — Plate AC 2718 taken July 31, 1902
θ 4 V
V 0 K

Plate AC 2200 taken Jan. 17, 1902
K 3 V
V 0 θ

Plate AC 514 taken Nov. 10, 1899
θ 3 V
V 0 K

Plate AC 2810 taken Sept. 4, 1902
K 2 V
V 1 θ

Extreme edge of plate. Poor focus. Position of V not absolutely certain.

Edge of plate poor focus — Plate II 2393 taken Nov. 7, 1899
θ 2 V
V 1 θ

November 28, 1902

S Persei Continued

Plate AC 579
m 5 V
V 1 n

Plate AC 1200
Not measured

Extreme edge — Plate AC 2718
V n 3.
K = 1

Plate AC 2200
m 5 V
V 0 n

Plate AC 514
V n 3.
K = 2

Plate AC 2810
V n 3.
θ K = 2

Plate II 2393
m 1 V
V 4 n

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 28, 1902

T Persei continued

Extreme edge

Plate AC 1171 taken Jan. 24, 1901
6' 1R
r 1K

Plate AC 1756 taken Sept. 19, 1901
Useless – only brightest stars appear

Plate AC 1181 taken Jan. 29, 1901

November 28, 1902

S Persei continued

Poor focus

Plate AC 1171
h' 2v
r 2b

Plate AC 1756
Useless – only brightest stars appear

Plate AC 1181

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 29, 1902

δ Persei continued

Plate AC 1225 taken Feb. 8, 1901
b 3 v
~~v b~~
θ 2 v
v 1 b

Plate AC 684 taken January 22, 1900
θ 1 v
v 1 b

Plate AC 1969 taken Nov. 7, 1901
θ 1 v
v 1 b

Plate I 23997 taken Nov. 7, 1898
Not measured

Plate AC 2796 taken Aug. 30, 1902
Region not covered

Plate AC 1181 taken Jan. 29, 1901
θ 2 v
v 0 b

Plate AC 2876 taken Oct. 8, 1902
b 4 v
v 0 θ

November 29, 1902

δ Persei continued

Plate AC 1225
b 3 v
v 1 b

Plate AC 684
b 4 v
v covered by defect in film

Plate AC 1969
v n. s.
b = .3
v may be hidden by defect in plate, which is not very clear just at that place

Plate I 23997
Not measured

Plate AC 2796
Reg. not covered

Plate AC 1181
b 3 v
v 0 b

Plate AC 2876
v not separated from b

Extreme corner

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 29, 1902

γ Persei continued

Plate AC 1792 taken Sept. 26, 1901
v n.s.
h' n.s.
h = .8

Plate AC 1182 taken Jan. 29, 1901
h' 2 v
v 1 0'

Plate AC 2877 taken Oct. 3, 1902
v n.s.
h' = .1

Extreme edge of plate

Plate A 15 taken Nov. 16, 1893
h' 1 v
v 1 0

Plate A 204 taken Jan. 31, 1894
h' 2 v
v 1 0

Plate A 179 taken Jan. 22, 1894
h' 2 v
v 1 0

Plate A #69 taken Dec. 2, 1893
h 2 v
v 1 0

November 29, 1902

γ Persei continued

Plate AC 1792
h 2 v
h' n.s.
Extremely faint - poor focus - v difficult to identify

Edge of Plate - Poor focus

Plate AC 1182
h 2 v
v 0 h'
v 2 0'

Plate AC 2877
h 3 v²
v 0 h'²
Extremely faint - poor focus - v. doubtful

Plate A 15
h 2 v
v 2 h

Plate A 204
h 2 v
v 1 h

Plate A 179
h" 3 v
v 2 h

Plate A #69
h 3 v
v 1 h

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 29, 1902

γ Persei continued

Plate A & 1273 taken Jan. 29, 1895
h 2 V
V 1 θ

See remark on opposite page

Plate A 158 taken Jan. 12, 1894
θ 1 V
V 1 θ'

Plate A 78 taken Dec. 6, 1893
h 2 V
V 2 θ

Plate A & 109 taken Dec. 25, 1893
h 2 V
V 2 θ

Plate A 19 taken Nov. 18, 1893
h 2 V
V 1 θ

Plate A 125 taken Dec. 27, 1893
θ 3 V h 1 V
V V 2 θ

Plate A 181 taken Jan. 22, 1894
h 3 V
V 0 θ
V 2 θ'

November 29, 1902

S Persei continued

Plate A 1273
K 4 V
V 0 l
V 3 m

Plate A 158
K 1 V
V 3 l

Trails and different star images side by side. Shan measured the round images

Plate A 78
θ 3 V
V 0 K
V 4 l

Plate A & 109
h 4 V
V 1 K

Images very poor

Plate A 19
K 3 V
V 1 l

Plate A 125
θ 3 V
V 0 K

Plate A 181
θ 2 V
V 1 K

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 29, 1902

J. Persic cont.

Plate A 237 taken Feb. 16, 1894
h' 3 V
v 1 θ

Plate A 1207 taken Dec. 20, 1894
h' 2 V
v 2 θ

Plate A 58 taken Nov. 30, 1893
h' 2 V
v 1 θ

Plate A 1272 taken Jan. 29, 1895
h' 3 V
v 1 θ

Plate A 1343 taken March 18, 1895
h' 3 V
v 0 θ
v 3 K'

Plate AC 2899 taken Oct. 14, 1902
h' 4 V
v 0 θ'
v 1 K'

Continued Book VI f. 190

November 29, 1902

S Persic continued
Plate A 237
θ 2 V
v 2 K
Very poor focus- images shadowy
Plate A 1207
K 3 V
v 1 L

Plate A 58
K 2 V
v 1 L

Drawings not elongated

Plate A 1272
K 4 V
v 0 L
v 4 m
Plate A 1343
L 2 V
v 1 m

Plate AC 2899
L 3 V
v 0 m
N.S.

Continued Book VI f. 190

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

November 29, 1902

Estimates of the brightness of S Cassiopeiae
continued from page 28

Plate A C 1800 taken Sept 27, 1901

9.22 d 5 V 9.72 10.16 V = ~~10.94~~ 9.94 22 22
10.16 V 1 K 10.26

Plate AC 1585 taken June 30, 1901

V n.s. V < 9.6

9.22 d = .4

Plate AC 1765 taken Sept 21, 1901

9.22 d 4 V 9.62 10.01 V = 9.82 20 19
10.01 V 2 m 10.21

Plate AC 1883 taken Oct. 19, 1901

9.22 d 7 V 9.92 10.11 V = 10.02 10 09
10.11 V 1 m 10.21

Plate AC 2899 taken Oct. 14, 1902

V n.s. V = 12.0

11.98 f = .1

Plate * AC 1751 taken Sept. 16, 1901

9.59 h 2 V 9.79 9.81 V = 9.80 01 01
9.81 V 4 m 10.21

Plate AC 2914 taken Oct. 20, 1902

V n.s. V < 12.4

12.30 f = .1

Diagr. much off from V appearance page

* Reject measures for this plate on p. 22 & this page. See note for AC 1866, p. 99.

November 29, 1902

S Cassiopeiae continued

* Plate A C 1866 taken Oct. 5, 1901

9.59 h 4 V 9.99 10.01 V = 10.00 01 01.
10.01 V 2 m 10.21

Plate I 27415 taken Aug. 30, 1901

9.22 d 7 V 9.92 10.11 V = 10.02 10 09
10.11 V 1 m 10.21

Continued Book XI p 159

* Reject measures of A C 1866 on page 98 and on this page. Re-measure plate if sufficiently good. March 21, 1916.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 G.F.M.

November 29, 1902

Observations of the brightness of R Aurigae
Continued from

Plate I 24427 taken Jan. 10, 1900

12.10 O' 4 V 12.50 12.94 V = 12.72 22 22
12.94 V 3 p 13.24

Plate I 21962

10.68 K 2 V 10.88 11.22 V = 11.05 17 17
11.22 V 1 n 11.32

Very doubtful observation. Ephemeris error of plate
Very bad focus. Comparison star e barely and
perhaps partially conceals V

Extreme edge

Plate I 24832 taken March 14, 1900

11.32 n 1 V 11.42 11.42 V = 11.42 00 00
11.42 V 2 o 11.62
Above remark applies equally here

Plate I 17040 taken Jan. 14, 1897

10.68 V o k 10.68 10.68, 10.88 V = 10.78 10 10
10.88 V 1 l 10.98

Plate I 28314 taken Jan. 24, 1902

10.98 l 3 V 11.28, 11.32, 11.72 V = 11.44 24 28
11.32 V o n 11.32
11.72 V 2 m 11.92

November 29, 1902

R Aurigae Continued

Plate I 22009 taken Dec. 23, 1898

10.68 V o K 10.68 10.68 V = 10.68 00 00
10.68 V 3 l 10.98

Plate I 16857 taken Dec. 23, 1896

9.82 g 2 V 10.02 10.18 V = 10.10 08 08
10.18 V 5 k 10.68

Plate AC 1252 taken Feb. 17, 1901
V not separated from g

Plate I 17322 taken Feb. 13, 1897

11.32 n 4 V 11.72 11.62 11.82 V = 11.72 00 10 10
11.62 V o o 11.62
11.82 V 1 m 11.92

Plate I 24443 taken Jan. 16, 1900

13.24 p 3 V 13.54 13.44 V = 13.49 05 05
13.44 V o q 13.44

Plate AC 2343 taken Feb. 19, 1902

12.10 O' 5 V 12.60 12.94 V = 12.77 17 17
12.94 V 3 p 13.24
V is fairly separated from q. Doubtless observation
is affected by this, though I distinguish the vessels
clearly.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 G.F.M.

November 29, 1902

R Aurigæ continued

Plate I 16239 taken Oct. 22, 1896

7.93 C 3 v 8.23 8.46 v = 8.34 11 12
8.46 v 2 d 8.66

Plate I 18227 taken June 16, 1897

v n.s. v < 11.7

11.62 0 = .1

Plate A C 1171 taken Jan. 24, 1901

v not separated from g

Plate I 25110 taken April 10, 1900

10.98 k 2 v 11.18 11.22 v = 11.20 02 02
11.22 v 1 m 11.32

See remark 6th ¶ page 101

Plate A C 151 taken Jan. 11, 1899

10.98 v o l 10.98 11.62 10.98 v = 11.30 32 32
11.62 v 3 m 11.92

Plate A C 1191 taken Feb. 1, 1901

v not separated from g

v well separated, though closeness of g makes comparison very difficult

Plate A C 2163 taken Jan. 5, 1902

9.82 g 6 v 10.42 10.58 v = 10.50 08 08
10.58 v 1 k 10.68

Reduced April 13, 1915 G.F.M.

November 29, 1902

R Aurigæ continued

Plate A C 2278 taken Oct. 8, 1902

v not separated from g

Plate A C 1200 taken Feb. 2, 1901

Nebulae for this star

Only bright stars in region

v not separated

Plate A C 2958 taken Oct. 31, 1902

10.98 v o l 10.98 11.02 v = 11.00 02 02
11.02 v 3 m 11.32

Plate A C 2273 taken Feb. 5, 1902

v not sufficiently separated to measure

Plate A C 752 taken March 12, 1900

v not separated

Plate A C 2384 taken March 4, 1902

v not seen

Plate A C 1697 taken Aug. 29, 1901

v not sufficiently separated to measure

Plate I 26060 taken Nov. 12, 1900

10.96 k 2 v 10.96 11.32 11.32 v = 11.17 21 15 05
11.32 v 0 m 11.32
11.22 v 4 o 11.62

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 9.F.H.

November 29, 1902

R Aurigae continued

Plate AC 1131 taken Jan. 5, 1901
V not separated

Clearly separated

Plate AC 1937 taken Nov. 1, 1901
8.66 d 4 V 9.06 8.95 V = 9.00 06 05
8.95 V 1 L 9.05

Plate AC 1394 taken April 1, 1901
trails - not measured

Plate AC 2033 taken Nov. 22, 1901
V not separated from q

Plate AC 1345 taken March 17, 1901
V not separated

Plate AC 2028 taken Nov. 30, 1901
Region not covered

Plate AC 1309 taken Feb. 24, 1901.
V not separated

Plate I 16681 taken Dec. 1, 1896
9.64 V 0 q 9.64 V = 9.64
no other comparison practicable Images badly out of focus, but magnitudes agree

November 29, 1902

R Aurigae continued

Plate AC 685 taken Jan. 22, 1900
V not separated

Plate AC 2251 taken Jan. 27, 1902
V not separated

Images badly out of focus

Plate AC 1756 taken Sept 19, 1901
V not separated, but bright
8.66 d 4 V 9.06 8.95 V = 9.00 06 05
8.95 V 1 L 9.05

Bell separated, but comp very difficult

Plate AC 2094 taken Dec. 21, 1901
9.82 q 5 V 10.32 10.48 V = 10.40 08 08
10.48 V 2 L 10.68

Plate AC 1377 taken March 27, 1901
V not separated

Plate AC 514 taken Nov. 10, 1899
V not separated

Plate AC 1302 taken Feb. 27, 1901
V not separated

Plate AC 1276
Poor focus - useless for this star

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 G.F.M.

December 1, 1901

R Aurigæ Continued

Plate I 18116 taken May 19, 1897

v n. s. v < 13.3

13.24 p=.1

Plate I 19512 taken Nov. 7, 1899

10.98 l 2 v 11.18 11.22 v = 11.20 02 02

11.22 v 1 n 11.32

Clearly distinguished

Plate A C 2203 taken Jan. 17, 1902

11.32 n 1 v 11.42 11.62 v = 11.52 10 10

11.62 v 1 o 11.62

Plate I 19743 taken Dec. 15, 1899

9.64 v 0 q 9.64 9.62 v = 9.63 .1 01

9.62 v 2 q' 9.82

Plate I 17303 taken Feb. 10, 1897

11.32 n 4 v 11.92 11.52 v = 11.62 10 10

11.52 v 1 o 11.62

Clearly distinguished

Plate A C 2164 taken Jan. 5, 1902

9.82 q' 6 v 10.42 10.58 v = 10.50 08 08

10.58 v 1 k 10.68

Plate A C 1285 taken Feb. 24, 1901

Twilight obscured images. Useless for this variable

December 1, 1901

R Aurigæ Continued

Clearly separated

Plate A C 2228 taken Feb. 25, 1899

9.82 q' 3 v 10.12 10.92 v = 10.02 10 10

10.92 v 4 n 11.32

Plate A C 1799 taken Sept. 27, 1901

9.05 v 0 l 9.05 v = 9.05?

Focus poor - not clearly separated from q, but mis-interpretation as bright as l

Plate I 21553 taken Oct. 30, 1898

v n. s. v < 10.0

9.82 q' = .2

Plate A C 2350 taken March 3, 1902

v n. s. v < 13.3

13.24 p = .1

Images elongated but clearly defined. If v were bright enough it could easily be separated from q

Plate I 27635 taken Sept. 27, 1901

9.05 l 3 v 9.35 9.43 v = 9.39 04 04

9.43 v 1 f 9.53

Plate I 18468 taken Aug. 6, 1897

12.10 o 6 v 12.70 13.04 v = 12.87 17 17

13.04 v 2 f 13.24

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 Y.F.M.

December 1, 1902

R Aurigæ continued

Plate AC 935 taken July 19, 1900

7.93 c 4 v 8.33 8.56 v = 8.44 11 12
8.56 v 1 d 8.66

Plate AC 2428 taken March 25, 1902
v not separated from g

Clearly separated Plate AC 1797 taken Oct. 17, 1901

8.66 d 2 v 8.86 8.95 v = 8.90 04 05
8.95 v 1 c 9.05

Plate AC 437 taken Sept. 14, 1899
v not separated from g

Plate AC 1156 taken Jan. 18, 1901
v not separated from g

Plate AC 2200 taken Jan. 17, 1902

11.32 n 2 v 11.52 11.52 v = 11.52 00 00
11.52 v 1 o 11.62

Bad focus image of v not clearly separated from g. Deviation doubtful

Plate AC 1084 taken Dec. 22, 1900
v not separated from g

Reduced April 13, 1915 Y.F.M.

December 1, 1902

R Aurigæ continued

Plate I 19490 taken Nov. 6, 1897

10.98 c 1 v 11.08 11.12 v = 11.10 02 02
11.12 v 2 n 11.32

Plate AC 1979 taken Nov. 10, 1901

9.05 c 1 v 9.15 9.33 v = 9.24 09 09
9.33 v 2 f 9.53

Clearly separated. Images much elongated and very black. Extremely faint g unusually embarrassing

Plate AC 4911 taken Oct. 25, 1899
Useless - only bright stars appear
v n.s. v < 9.10
9.05 c = .05

Plate I 19537 taken Nov. 9, 1897

10.68 v 0 k 10.68 10.88 v = 10.78 10 10
10.88 v 1 c 10.98

Corner of plate. Images very badly out of focus not clearly separated from g

Plate AC 2292 taken Feb. 7, 1902

Nearly separated 12.10 c 4 v 12.50 v = 12.50 ?
f n.s.

Plate AC 639 taken Dec 30, 1899
v not separated from g

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 S.F.M.

December 1, 1902

R Aurigae continued

Plate AC 1818 taken Oct 3, 1901

9.05 c1 v 9.15 9.13 v = 9.14 01 01
9.13 v4 f 9.53

Plate I 18391 taken Aug. 2, 1897

12.10 0 7 v 12.80 13.34 v = 13.07 27 27
13.34 v1 g 13.44

Plate AC 1691 taken Aug. 28, 1901

v not separated from g

Plate AC 2002 taken Nov. 22, 1901

9.05 c3 v 9.35 9.43 9.39 04 04
9.43 v1 f 9.53

Plate AC 559 taken Nov. 26, 1899

v not separated from g

Plate I 16505 taken Nov. 12, 1896

8.66 c1 v 8.96 8.95 v = 8.86 09 09
8.95 v1 e 9.05

Plate I 19744 taken Dec 15, 1897

10.98 c4 2 v 11.18 11.22 v = 11.20 02 02
11.22 v1 n 11.32

Right Certainly Wrong
Was wrong plate in cover?

Plate AC 2409 taken April 25, 1902

December 1, 1902

R Aurigae Continued

Assumed to be AC 2409 - See foot of preceding page S.F.M.

Poor focus

v 0 g 9.64 v = 9.64

Extreme edge - no other comparison possible

It is not certain what plate and date the above observation refers to. Rejected.

Plate I 20721 taken April 21, 1898

v not separated from g

Plate AC 2850 taken Sept. 23, 1902

v not separated from g

Plate AC 2221 taken Jan. 20, 1902

v not separated from g
poor focus

Plate AC 662 taken Jan. 6, 1900

v not separated from g

Plate AC 2048 taken Dec 11, 1901

Region not covered

Plate AC 678 taken Jan. 19, 1900

v not separated from g

Plate I 16764 taken Dec. 17, 1896

9.64 ~~g~~ 3 k 9.94 9.82 v = 9.88 06 06
9.82 v 0 g 9.82

Plate AC 2322 taken Feb. 12, 1902

v not separated from g

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 S.F.M.

December 1, 1902

R Aurigae continued

Plate I 27634 taken Sept. 27, 1901
9.05 c 2 v 9.25 9.33 V = 9.29 01 04
9.33 v 2 f 9.53

Plate I 21739 taken Nov. 25, 1899
11.32 m 3 v 11.62 11.52 V = 11.57 01 05
11.52 v 1 0 11.62

Plate I 27573 taken Sept. 25, 1901
9.05 c 2 v 9.25 9.33 V = 9.29 01 04
9.33 v 2 f 9.53

Plate AC 264 taken March 29, 1899
8.66 d 3 v 8.96 9.05 9.13 V = 9.05 01 00 08
9.05 v 0 c 9.05
9.13 v 4 f 9.53
V not separated from q. Then compared the single bright image

Plate AC 2771 taken Aug. 26, 1902
V not separated from q

Plate AC 1945 taken Nov. 2, 1901
8.66 d 3 v 8.96 9.05 9.13 V = 9.05 01 00 08
9.05 v 8 fc 9.05.
9.13 v 4 f 9.53

December 1, 1902

R Aurigae

Plate AC 1059 taken Dec. 16, 1900
V not sufficiently separated from q

Plate I 23531 taken Sept
12.10 0 4 v 12.50 12.74 V = 12.62 12 12
12.74 v 5 f 13.24

Plate AC 1376 taken March 27, 1901
Trails - not measured

Plate I 24090 taken Nov. 19, 1899
Trails - not measured

Plate AC 1365 taken March 22, 1901
Trails - not measured

Extreme edge Very from focus

Plate I 16555 taken Nov. 6, 1896
9.05 V 0 c 9.05 9.13 V = 9.09 01 04
9.13 v 4 f 9.53

Plate AC 1332 taken March 13, 1901
V not separated from q

Image q Plate-Pos from

Plate I 23572 taken Sept. 17, 1899
11.92 m 1 v 12.02 12.00 V = 12.01 01 01
12.00 v 1 0 12.10
Very uncertain. Images mere shadows on the plate - V scarcely seen

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced April 13, 1915 G.F.M.

December 1, 1902

R Aurigae Continued

Plate AC 2087 taken Dec. 18, 1901
Region not on plate

Plate AC 570 taken Dec. 9, 1899
V not separated from g

Comm g plate Very poor frame

Plate I 23570 taken Sept. 17, 1899
11.92 m 2 v 12.12 12.10 v = 12.11 01 01
12.10 v 0 c 12.10
Very faint, images shadowy. Obs. poor.

Plate AC 2337 taken Feb. 15, 1902
V not separated from g

Plate AC 1227 taken Feb. 8, 1901
V not separated from g

Plate AC 1709 taken Sept. 4, 1901
V not separated from g

Plate A 120 taken Dec. 26, 1893
10.68 K 3 V 10.98 10.98 10.92 v = 10.96 02 02 04
10.98 V 0 L 10.98
10.92 V 4 n 11.32

Plate A 238 taken Feb. 16, 1894
10.68 K 2 V 10.88 10.98 11.02 V = 10.96 08 02 06
10.98 V 0 L 10.98
11.02 V 3 n 11.32

Reduced April 13, 1915 G.F.M.

December 1, 1902

R Aurigae Continued

Plate A 172 taken Jan. 22, 1894
10.98 L 1 V 11.08 11.02 v = 11.05 03 03
11.02 V 3 n 11.32

Plate A 137 taken Jan. 1, 1894
10.68 K 2 V 10.88 10.98 11.02 V = 10.96 08 02 06
10.98 V 0 L 10.98
11.02 V 3 n 11.32

Plate A 113 taken Dec. 25, 1893
10.98 L 1 V 11.08 11.12 v = 11.10 02 02
11.12 V 2 n 11.32
Very poor frame. Images very faint

Plate AC 80 taken Oct. 27, 1898
V not separated from g

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
G.F.M.

December 1, 1902

Estimates of the Brightness of R Leonis

Plate I 16768 taken Dec. 14, 1896

V m. s. v > 14.47

14.42 a = .05

Plate I 19514 taken Nov. 7, 1897

p 2 r

r 19

Extreme edge of plate - from focus - very faint

Plate I 16117 taken Oct. 8, 1896

p 2 r

r 4 n

Extremely faint

Plate I 21819 taken Nov. 28, 1898

13.73 $r^{=n'}$ 3 v 14.03 14.54 v = 14.28 25 26

14.54 v 0 t 14.54

Corner of plate bad focus

Plate I 16859 taken Dec. 23, 1896

V m. s.

p = .1

Plate I 23542 taken March 1, 1902

V m. s v > 13.78'

13.73 $r^{=n'}$ = .05

Extreme edge

Plate I 23573 taken Sept. 17, 1899

9.79 9 3 v 10.09 9.88 v = 9.98 11 10

9.88 r 3 $L^{=R'}$ 10.18

December 1, 1902

R Leonis, Continued

Extremely faint Nros 5 doubtful

Plate I 16507 taken Nov. 12, 1896

13.73 $r^{=n'}$ 3 v 14.03 14.32 v = 14.18 5 14

14.32 v 1 s 14.42

p 17
r 5 2

Plate I 17343 taken Feb. 16, 1897

V m. s. v > 12.34

12.24 $a^{=a^2}$ = .1

Plate I 24568 taken Feb. 6, 1900

V m. s. v > 14.62

14.42 a = .2

Plate I 22481 taken Feb. 25, 1899

V m. s. v > 13.78'

13.73 $r^{=n'}$ = .05

Plate I 18117 taken May 19, 1897

10.18 $L^{=R'}$ 4 v 10.58'

r 2 l

Plate I 24745 taken March 10, 1900

13.73 $r^{=n}$ 3 v ? 14.03 ?

14.42 a m. s.

Plate I 16596 taken Nov. 22, 1896

13.73 $r^{=n'}$ 1 v ? 13.83 ?

14.42 s m. s.

Extremely faint - from focus

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
G.F.M.

December 1, 1901

R Lyncis continued

Plate I 22261 taken Jan 27, 1899
V.M.S.
$\rho = .2$

Plate I 24379 taken Jan. 5, 1900

N.B. $t > 3$?

14.42 2 1V 14.52 14.74 V = 14.63 11 11
14.54 t 2V 14.74
Clear images

Plate I 26621 taken Feb 8, 1901

Corner of Plate Poor focus

14.54 t 1V 14.64 14.42 V = 14.53 11 11
14.42 V 0 2 14.42

Plate I 27886 taken Oct. 29, 1901

10.18 t 4 V 10.58
V 2 L

Plate I 25111 taken April 10, 1900

V.M.S. V > 14.47
14.42 $\rho = .05$

Plate I 21782 taken Dec. 1, 1898

V.M.S V > 13.13
13.08 $\rho = .1$

Plate I 24044 taken Nov. 13, 1899

11.91 0 4V 12.11 12.14 V = 12.12 01 02
12.14 V 10 12.24

December 1, 1901

R Lyncis continued

Plate I 17830 taken April 12,

Continued page 184

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 2, 1902

Measurements of magnitudes of standard stars of the Pleiades

Plate I 2311

a	-	
b	-	
c	-	
d	2.3	
e	4.1	
f	4.3	4.8
g	4.4	4.9
h	5.0	5.2
i		
j	6.0	6.5
k		8.0
l		
m		
n		
o		

To be measured again, as shown on the faints stars identified.

December 2, 1902

Pleiades Continued.

Plate I 2311 - Prismatic Comparisons

a,	4.1	
b,	4.9	
c,	5.7	
d,	5.9	
e,	8.0?	Very uncertain
f,	9.0?	Image much faded out in appearance
g,		
h,		Prismatic comparisons incompatible
i,		with scale
j,		
k,		
l,		
m,		

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Measurement of magnitudes of the Standard Stars of the Pleiades

Plate I 2311 taken Nov. 20, 1890

a		
a'		
b		
b'		
c	1.9	
d	3.4	
e	3.5	
f	4.2	
g	4.4	
h	5.0	5.2
i	5.6	6.0
j	6.1	6.4
j'	7.0	7.4
k		7.9
l		8.7
m		9.1
n		n.s.
o		n.s.

Images of faintest stars very poor. m and o are probably lost on this account.

Prismatic Comparisons not Comparable with scale nor with star images

December 3, 1902

Pleiades continued

Plate I 2490 taken Dec. 13, 1890

a			
a'			
b			
b'	2.1		
c	2.7		
d	3.2		
e	4.1		
f	5.0	5.2	
g	5.1	5.3	
h	5.6	6.0	
i	6.1	6.6	
j	6.4	6.7	m. elongated
j'	~	7.9	
k		8.2	
l		9.1	
m		10.0	
n		n.s.	
o		n.s.	

Prismatic Comparisons have trails and are not Comparable either with scale or with star images

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Pleiades continued

Plate I 17460, taken March 4, 1897

a		
a'		
b		
b'		
c		
d		
e	2.5	
f	3.1	
g	3.3	
h	3.8	
i	4.1	
j	5.0	5.0
j'	6.0	6.1
k	6.4	6.7
l		7.7
m		8.4
n		9.1
o		9.6

December 3, 1901

Pleiades continued

Plate I 17460 - Prismatics superposed

a,	5.1	5.5
a',	hidden by b'	
b,	5.8	6.0
b',	6.0	6.5
c,	6.4	6.8
d,	6.8	7.1
e,		8.0
f,		8.1
g,		8.3
h,		8.6
i,		9.0
j,		9.2
j',		9.9
k,		10.3 ? Andromeda

A very fine plate

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Pleiades continued

Plate I 17096
Comm of plate, poss fems, prismatic companions not comparable.

Plate I 9503
Comm. poss fems. prism. companions not comparable

Plate I 3085 has two prismatic companions for each star
m is faintest star of sequence seen.

December 3, 1902

Pleiades continued.

Estimate by Argelander's method of the brightness of standard stars of Pleiades

Plate I 17460

j 4 a,
a, 5 j

j too much brighter to compare
b, 1 j
b, 3 ~~k~~ k
a, 3 b,

j 3 c,
c, 0 k
c, 6 l ? or more!

~~b 10 j~~
b, 0 j
b, 2 k

k 2 d,
d, 4 l

l 1 l,
l, 7 m ?

l 3 f,
f, 4 m

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Pleiades continued

Plate I 1746 continued

l 4 g,
g, 3 m

l, 0 m
l and n too many grades dist. to compare

too many grades — m 6 j,²
j, 2 n

0 3 j,

December 3, 1902

Pleiades cont. Measures with scale to determine magnitudes of Standard Stars j

Plate B 1033

l	4.5		
j	~~5.6~~		
j'	5.0	5.2	
K	5.8	6.1	

Plate B 2054

i	3.1		Images from Measures not very certain.
j	3.6		
j'	4.3		
K	5.0		

Plate B 3159

l	4.7	5.0	
j	5.1	5.5	Images from j and K very difficult to measure
j'	6.2	6.7	
K		7.7	

Plate I 199

i	4.4		
j	4.9	5.2	excellent plate
j'	5.7	6.0	
K	6.0	6.4	

Full measures of these plates will be found in Vol II pages 125-128
Comparison stars and differences for measures that I plate Halong page

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Pleiades Continued

Plate B 1033

a		
a'		
b		
b'		
c		
d		
e	~~2.8~~	
f	2.8	
g	3.0	
h	3.1	
i	3.7	
j	4.1	
j'	4.9	5.2
k	5.8	6.1
l	6.4	6.8
m		7.9
n		9.0
o		9.3

Good plate

Comparison of g difficult because an adjacent star image touches it.

December 3, 1902

Pleiades Continued

Plate B 2057

a	
a'	
b	
b'	
c	
d	
e	
f	2.8
g	2.9
h	3.0
i	3.3
j	3.7
j'	4.2
k	5.0
l	too faint to measure
m	" " "
n	n.s.
o	n.s.

Images elongated
Poor plate - Do not use unless necessary

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 3, 1902

Pleiades continued

Plate B 3159

a		
á		
b		
b'		
c	2.3	
d	2.8	
e	3.8	
f	4.2	
g	4.3	
h	4.5	
i	4.9	
j	5.5	5.7?
j'	6.2?	6.9?
k		7.8!
l		8.7?
m		9.6?
n		n.s.
o		n.s.

Very poor focus - Do not time unless necessary

December 3, 1902

Pleiades continued

Plate I 199

a		
á		
b		
b'		
c		
d		
e	2.7	
f	3.3	
g	3.7	
h	4.0	
i	4.4	
j	4.9	5.1
j'	5.9	6.0
k	6.0	6.4
l	7.0	7.4
m		8.4
n		9.3
o		9.7

Good plate, but the light changed rapidly during measures - Fog rolling in.

Henry H will be remeasured as Doris succeeds [illegible] after measuring h

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914 G.F.M.

December 4, 1902

Estimates of the brightness of R Lyncis, continued from page 119

p 4 r
r 22

Plate I 17304 taken Feb. 10, 1897
V m.s. v > 14.52
14.42 v = .1

Edge of plate
Very faint
r 0 p ½

Plate I 28337 taken Jan. 25, 1902
V m.s. v > 13.13
13.03 v = .1

0·3 r
·r 0 v
r 1 p

Plate AC 1263 taken Feb. 19, 1901
V m.s.
p = .2

Plate AC 2159 taken Jan. 3, 1902
V m.s.
p = .1

p 2 r ?
S m.s.
? Scarcely seen but certainly persists

Plate AC 1227 taken Feb. 8, 1901
V m.s.
p = .2

r m.s. ?

p, g, r m.s.

Plate AC 1778 taken Sept. 24, 1901
9.08 f = 8' 8 V 9.58 9.59 v = 9.58 oo 01
9.59 V 2 g 9.79

Edge of plate

Plate I 21552 taken Oct. 30, 1898
V m.s.
11.71 O = 0° .3 v > 12.01
p = 0° r.s.

Reduced Dec. 23, 1914 G.F.M.

December 4, 1902

R Lyncis continued

Edge of plate
p, g, r m.s.

Plate AC 1873 taken October 16, 1901
10.18 f = 2' 1 V 10.28
l not separated from near stars
m m.s.

p r m ?
Image irregular
r m.s.

Plate AC 2275 taken Feb. 5, 1902
V m.s.
p = .1

Edge of plate
Image faint
V m.s.

Plate AC 2165 taken Jan. 5, 1902
V m.s. v > 11.91
11.71 O = 0° 2)

f, r m.s.
g = .1

Plate AC 1787 taken Sept. 25, 1901
9.08 f = 8' 6 V 9.68 9.69 v = 9.68 oo 01
9.69 V 1 g 9.79
There are too many grades between f and g — more than seven probably, but there is no state of intermediate brightness consistently seen.

p, g, r m.s.

Plate AC 2523 taken May 5, 1902
V m.s. v > 12.29
12.24 O = 0° = .05

p 4 r
r 4 t

Plate I 24736 taken March 10, 1900
14.84 t 3 V = 14.84?
Defect in plate close to s. Difficult very near V and might be mistaken for it. Description questionable or unquestionable, thought it to mark region of invisibility

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
G.F.M.

December 4, 1902

R Lyncis continued

Grism & plate
very poor focus.
g1 k2
2k1 k4

Plate I 22258 taken Jan. 27, 1799
v m.s.
p = .1

Plate AC 2225 taken Jan. 28, 1902
Class C. Not measured

p, g, r n.s.

Plate AC 585 taken Dec. 12, 1899
v m.s. v > 11.20
11.15 k = .05

pg; r n.s.

Plate AC 2461 taken April 4, 1902
v m.s. v > 11.25
11.15 k = .1

Plate I 22317 taken Jan. 24, 1902
Limits - Not measured

Plate AC 1907 taken Oct. 25, 1901
p = .2
r n.s.
10.18 k=4' v 10.58 V = 10.74 15 17
10.91 v 2m 11.11

Plate AC 554 taken Nov. 24, 1899
v m.s. v > 13.13
13.03 g = .1
r n.s.
p = 1

Reduced Dec. 23, 1914
G.F.M.

December 4, 1902

R Lyncis continued

Images elongated. Not the fine work on Nov. 1

Plate AC 1898 taken October 23, 1901
10.18 k=4' v 10.58 10.91 V = 10.74 15 17
10.91 v 2m 11.11

Plate I 18471 taken Aug. 6, 1897
2 1 p 2
Extremely faint
9.19 g 2v 9.99 9.68 v = 9.84 15 16
9.68 v 5 k=3' 10.18

Plate I 16247 taken October 22, 1896
p 1v
r n.s.
Is r variable? It has appeared nearly as bright as p on most plates. But on this plate it is faintly seen. I think I see a trace of it, but if so it is fainter than v.

Plate AC 2373 taken March 1, 1902
v m.s. v > 13.08
13.03 g = .05

Extremely Ug. & faint

Plate AC 789 taken April 2, 1900
v m.s. v > 13.13
13.03 g = .1

Plate AC 222 taken Feb. 24, 1899
v m.s. v > 11.73
11.68 r = .05

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
E.F.M.

December 4, 1902

R Lyncis Continued

Plate I 2850 3 taken Feb. 15, 1902

14.54 t 11 14.64
Vm rings of invisibility
p 2 r
r 4 2

Plate AC 1733 taken May 3, 1901

V n.s. v > 11.21
11.11 m = .1

Plate AC 2092 taken Oct. 10, 1902

9.79 g 11 9.89 9.98 V = 9.94 05 04
9.98 r 2 h 10.18
r n.s.
13.03 g = .1

Plate AC 2579 taken May 28, 1902

13.03 g 11 13.13
V 1 p
r n.s.
p in rings of invisibility

Plate AC 2027 taken Nov. 30, 1901

12.24 O 3 V 12.54 12.93 V = 12.74 20 19
12.93 r 2 g 13.03
g 1 r?
r 1 p?
doubtful on account of extreme faintness

E.F.M.

December 4, 1902

R Lyncis continued

Plate AC 1428 taken May 1, 1901

11.15 K 2 V 11.35 11.68 V = 11.52 17 16
11.68 V O 2 11.68
o not clearly separated from adjacent stars
p, g, r n.s.

Plate AC 645 taken Jan. 2, 1900

V n.s. v > 13.13
13.03 g = .1
r n.s.

Extreme edge of Plate

Plate AC 1045 taken Nov. 23, 1900

V O n 2 11.48?
Images shadowy
g, p, r n.s.

Plate AC 2048 taken Dec. 4, 1901

12.24 O 2 V 2 12.34?
V my poor seems images shadowy
O 1 r 2
g, p n.s.
This certainly seems to be r though very faint
g may be seen. There seems to be a slight
defect on plate in its position. The focus
is so poor, that the image of p may be simply
not separated from r.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914

Plate December 4, 1902

R Lyncis Continued

Plate I 17042 taken Jan. 14, 1897

v m. s. v > 12.29

12.24 $o^{=0^2}$ =.05

Plate A C 2189 taken Jan. 15, 1902

v m. s. v > 12.29

12.24 $o^{=0^2}$ =.05

Plate A C 1173 taken Jan. 25, 1901

r m. s. v > 11.81

11.71 $o^{=0}$ =.1

Extreme edge — Plate A C 2087 taken Dec. 18, 1901

r m. s. v > 12.34

$o^{=0^2}$ =.1

Plate A C 1096 taken Dec. 27, 1900

Position of r crossed by a heavy trail

Near edge — Plate I 2045 taken Nov. 13, 1899

Very poor focus

11.71 $o^{=0}$ 5 v = 12.21

12.24 v o o $^{=12.24}$

12.83 v r q = 13.03

v = 12.43 22 12 40

Plate I 17009 taken Jan. 7, 1897

N.B. t > s ? * 14.54 * t 2 v 14.74 v = 14.63 11 11

14.42 s 1 v 14.52

t certainly brighter than s

December 4, 1902

Not R Lyncis

Estimates of brightness of comp. stars 2 for R Lyncis

Plate I 17042

r m. s.

o' =.05

Plate A C 2189

r m. s.

p m. s.

o' =.05

Plate A C 1173

r, q, p m. s.

o =.1

Plate A C 2087

Object near position of s certainly a defect

Plate A C 1096

Position of s crossed by trail

Plate I 2045

p 2 r ?

s m. s.

Plate I 17009

p 4 r

r 3 t

r 4 s

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
S.J.M.

December 4, 1902

R Lyncis continued

Plate AC 2375 taken March 4, 1902
V n.s. v > 12.01
11.71 $O^{-0.1}_{-0.2}$ 3 v > 12.01
O n.s.

Plate AC 1218 taken Feb 7, 1901
V n.s.
p = .1

Plate AC 248 taken March 20, 1899
V n.s. v > 12.21 ?
11.71 $O^{-0.1}_{-0.2}$ .5 ?
O Concealed by defect in plate

Plate AC 2329 taken Feb. 14, 1902
Images elongated and confused with one another. Observation in v impossible

Plate AC 1712 taken April 19, 1901
Useless. Only bright stars on plate

Plate AC 500 taken Nov. 5, 1899
V n.s. v > 11.25
11.15 R = .1

Trails from frame

Plate AC 1386 taken March 30, 1901
V n.s. v > 11.65 ?
11.15 R = .5 ?
O not separated from adjacent stars

December 4, 1902

Mt. R Lyncis
Comparison stars 2 for R Lyncis cont.

Plate AC 2835
p, g, r n.s.
O = .3

Plate AC 1218
r n.s.
p = .1

Plate AC 248
r n.s.
O = .5 ?

Plate AC 2329
Observation impossible

Plate AC 1712
Useless

Plate AC 500
Not measured

Plate AC 1386
Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
E.S.F.Jr.

December 4, 1902

R Lyncis Continued

Extreme edge — Plate AC 2310 taken Feb. 10, 1902
v n.s. v > 11.25
11.15 t = .1

Extreme edge — Plate I 16556 taken Nov. 16, 1896
v n.s. v > 13.83
13.73 r = .1
p = .2

Plate AC 1370 taken March 23, 1901
v n.s. v > 13.13
13.03 q = .1

Plate AC 2408 taken March 14, 1902
v n.s. v > 12.44
12.24 o = .02
q n.s.

Extreme edge of plate — Plate AC 157 taken Jan. 18, 1901
v n.s v > 13.13
13.03 q = .1

Can be made out with difficulty — Plate AC 2083 taken Dec. 16, 1901
p 1v
v 4r².

Extreme edge — Plate AC 1192 taken Feb 1, 1901
v n.s.
t = .1

December 4, 1902

Not R Lyncis

Comparison stars for R Lyncis - continued

Plate AC 2310
Not measured

Plate I 16556
p 1 r
t, o, n.s.

Plate AC 1370
r n.s.
p n.s. q = .1

Plate AC 2408
r n.s.
q n.s.

Plate AC 157
r n.s
p n.s.
q = .1

Plate AC 2083
p 5 r²
r scarcely seen

Plate AC 1192
Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Received Dec. 23, 1914
G.F.M.

December 4, 1902

R Lyncis continued

Plate AC 2376 taken March 2, 1902
v m.s. v > 11.78
11.68 n = .1

Plate AC 1085 taken Dec. 22, 1900
v m.s. v > 13.13
13.03 gf = .1
p m.s.

Plate AC 275 taken April 10, 1899
v m.s.
p = .1
r m.s.

Plate I 16860 taken Dec. 23, 1896
v m.s.
p = .2

Plate AC 2427 taken March 24, 1902
v m.s.
p = .1

Plate AC 1975 taken March 25, 1901
Useless. Only bright star appears
Plate AC 489 taken Oct. 21, 1899
11.68 n 2 r 11.88
o = 0² m.s.

December 4, 1902

Nov. R Lyncis
Comparison Stars for R Lyncis - Continued

Plate AC 2376
r m.s.
n = .1

Plate AC 1085
r m.s.
p m.s.
gf = .1

Plate AC 275
r m.s.
p = .1

Plate I 16860
p 1 r
r m.s.
t n s

Plate AC 2204
p 3 r
r o t n.s.

Plate AC 2415
r m.s.
o = .1

Plate AC 1334
r o p 2
Extremely faint

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
Y.F.M.

December 4, 1902

R Lyncis continued

Plate AC 1406 taken April 13, 1901
V m.s. v > 11.25
11.15 k=.1
Depet on fobm near position of V

Plate AC 2284 taken Feb 6, 1902
V m.s. v > 13.83
13.73 r=.1
p=.4?
a+t n.s.

Plate AC 2415 taken March 15, 1902
V m.s. v > 12.34
12.24 o=.02?1
q n.s

Plate AC 1334 taken March 12, 1901
V n.s.
p=.1

Plate AC 2323 taken Feb. 12, 1902
V n.s.
p=.2

Plate AC ~~2~~ 1839 taken Oct. 6, 1901
9.79 q 2V 9.99 10.08 v = 10.04 .05 .04
10.08 V 1 t=h' 10.18

December 4, 1902

Nr R Lyncis
Comparison Star n for R Lyncis continued

Plate AC 2335
There is an image near position of n,
which must be a defect on plate. I do not
see n

Plate AC 1839
n n.s.
q=.05

Plate AC 1874
n n.s.
o=.2

Plate AC 2158 taken Jan. 3, 1902
p 3n?
n, t n.s.
Identification of n not absolutely certain.
Almost invisible

Plate I 17830 taken April 12, 1897
p 5n
n 2d
o o t?
Images diffuse. Star q o always more
definite than n and t

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
G.F.tn.

December 4, 1902

R Lyncis continued

Plate AC 1874 taken Oct. 16, 1901
10.18 $h=2^{d}$ v 10.38 10.41 v = 10.40 02 01
10.41 v 7 m 2 11.11
b too close to other stars

Plate AC 725 taken Feb. 19, 1900
r n.s. v > 11.73
11.68 n = .05

Plate AC 1183 taken Jan. 29, 1900
r n.s. v > 12.44
12.24 $0=0^{2}$ = .2

Plate AC 2245 taken Jan. 25, 1902
r n.s. v > 11.88
11.68 n = .2

Extreme edge. Very poor forms
Plate AC 2487 taken April 18, 1902
r n.s. v > 10.58
10.18 $h=2^{d}$ = .4 ?

Plate AC 2158 taken Jan. 3, 1902
p 3 v
b, 1 n.s.

Plate I 17830 taken April 12, 1897
11.71 $0=0^{1}$ v 11.81 11.74 v = 11.78 03 04
11.74 v 50 $=0^{2}$ 1224

December 4, 1902

Not R Lyncis
Comparison Star n for R Lyncis continued

Plate I 17216 taken Jan. 29, 1897
p 4 2
r 4 2

Plate I 19493
p 2 2
r 4 b
2 n.s.
Is this variable? or 0?

Plate I ~~23475~~ taken
p 4 2
r 3 b
b 1 2

Plate AC 2939 taken October 25, 1902
r n.s.
p = .2

Plate AC 2930
r 0 p
2, b n.s.
Images extremely faint

Plate AC 2863
r n.s.
p n.s.
g = .1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
G.F.M.

December 4, 1902

R Lyncis continued

Ephemeris edge of plate

Plate I 16665 taken Dec. 3, 1896
r n.s.
p = .05
2 n.s.

Plate AC 758 taken March 13, 1900
r n.s. v > 9.18
9.08 p = .1

N.B. t > s?

Plate I 17316 taken Jan. 29, 1897
14.42 2 3 v 14.72 14.84 v = 14.78 04 04
14.54 t 3 v 14.84

Ephemeris edge of plate from Prov.

Plate AC 1777 taken Sept. 24, 1901
9.08 p = 8 p 9.78 9.79 9.88 v = 9.82 04 03 06
9.79 v 0 g 9.79
9.88 v 3 2 = 10.18

Plate I 19539 taken Nov. 9, 1897
p 4 v 14.24 13.84 v = 14.04 20 20
14.24 v 3 t 14.54
13.73 2 = 1 v 13.84

Plate I 2 2475 taken Feb. 25, 1899

* Rejected; var.?

December 6, 1902

Not R Lyncis
Comparison star 2 for R Lyncis entered

Plate AC 1953 taken Nov. 3, 1901
g 2 2
2 0 p
t, 0 n.s.

Plate AC 634 taken Dec. 29, 1899
2 n.s.
p = .1

Plate I 16068 taken Nov. 12, 1900
p a 2
2 s a

Image of t not separated from adjacent star. It is apparently a grade brighter than 2

3 edge of plate

Plate I 19491 taken Nov. 6, 1897
p 3 2
a, t a s.
p is at least three grades fainter than 2, possibly more. Prov. Forms.

Near edge Prov. Forms.

Plate I 19539 taken Nov. 9, 1897
p 1 2
2, t n.s.

Plate I 28542 taken March 6, 1902
2 1 2 ?
v seen clearly - identification of 2 doubtful. If there at all it is scarcely visible.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
W.F.M.

December 6, 1902

R Lyncis Continued

Extreme edge of plate — Plate AC 2365 taken Feb. 24, 1902
V m.s. v > 11.35
11.15 K = .2

Plate AC 2939 taken Oct. 25, 1902
10.18 $\frac{k'}{2}$ V 10.38 10.71 v = 10.54 N 16 17
10.71 V 4m 11.11

Plate AC 2390 taken Feb. 14, 1902
V m.s.
f = .2

Extreme edge of plate — Plate AC 1429 taken May 1, 1901
V m.s. v > 10.38
$k = \frac{k'}{2}$

Plate AC 2863 taken October 6, 1902
9.79 V 0 9.79 9.98 9.88 09 10
9.98 V 2h $= k'$ 10.18

Plate AC 2562 taken May 18, 1902
V m.s. v > 9.13
$f = \frac{k'}{2}$ .05

Plate AC 1952 taken Nov. 3, 1901
11.11 m 2 V 11.31 11.05 v = 11.18 13 13
11.05 V 1 K 11.15 Continued to opposite page

December 6, 1902

R Lyncis continued

Plate AC 1413 taken April 26, 1901
Trail + not measured

Extreme edge. — Plate AC 1962 taken Nov. 6, 1901
11.11 m 1 V 11.21 11.41 v = 11.31 10 10
11.41 V 30 = k'?
Observation very uncertain. Images quite shadowy. V is certainly slightly fainter than m - but it is impossible to estimate number of grades to 0 which is barely visible

Plate AC 634 taken Dec. 29, 1899
V m.s.
f = .1

Plate AC 608 taken Dec. 19, 1899
V m.s. v > 11.20
11.15 K = .05

Very poor images — Plate I 26068 taken Nov. 12, 1900
11.15 K 1 V 11.25 11.58 v = 11.42 19 16
11.58 V 1 m 11.68

Poor plate — Plate AC 2040 taken Dec. 2, 1901
V m.s. v > 10.28
10.18 $k = \frac{k'}{2}$ .1
An object near position of variable is shown by superposition to be probably a defect

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
W.F.M.

December 6, 1902

R Lyncis Continued

Plate AC 820
Not measured - No stars found on plate

Plate AC 590 taken Dec. 13, 1899

Poor frame

11.11 m 2 V? 11.31? 11.15? V = 11.23? 08 08
11.15? V 0 K 2 11.15
Images faint and shadowy. Confusion uncertain.

Extreme edge of plate

Plate AC 2028 taken Nov. 30, 1901

11.68 m 4 V 12.08 12.24 12.83 V = 12.38 36 14 45
12.24 V 0 0^{2} 12.24
12.83 V 29 13.03
All grades uncertain Images faint and much cut by frame.

Plate AC 1056 taken Dec. 14, 1900

V m. s. v > 13.13
13.03 p = .1

Edge of plate

Plate I 19491 taken Nov. 6, 1897

p 3 V
13.73 V 0 r - r' 13.73
2, t
n. s.

December 6, 1902

R Lyncis Continued

Plate I 21843 taken Nov. 30, 1898
Too near edge to measure.

Corner of plate

Plate I 22475 taken Feb. 25, 1899
V n. s.
p = .1
r n. s.

Plate I 19539 taken November 9, 1897
V m. s.
p = .2

Plate AC 2480 taken April 17, 1902
V m. s. v > 12.34
12.24 0 0^{2} = .1

Plate AC 584 taken Dec. 12, 1899
Extreme edge of plate - No stars in region

Plate AC 1902 taken Oct. 24, 1901
10.18 2 R' 2 V 10.38 ?
m n. s.
Obs. doubtful. Images extremely faint

Extreme edge of plate

Plate AC 811 taken April 10, 1900
V n. s. v > 11.21
11.11 m = .1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
9.7.m.

December 6, 1902

R Lyncis continued

Plate AC 765 taken March 16, 1900
V n.s. v > 11.25
11.15 K=.1

Plate I 18412 taken Aug. 3, 1897
9.79 v o g 9.79 9.78 V = 9.78 .00
9.78 v f h' = 10.18'

Extreme edge Poor grass - Plate A 206 taken Feb 1, 1894.
14.42 S I V? 14.52?
Faint and shadowy

Plate A 370 taken March 16, 1894
Touches to edge of plate

Poor grass Plate A 1326 taken Feb. 26, 1895
p 5 V
v 2 b

Extreme edge of plate. Very poor grass Plate A 243 taken Feb. 16, 1894
V n.s.
14.42 2 = .05 v > 14.47

Plate A 524 taken April 9, 1894
11.11 m I V 11.21 11.48 V = 11.34 13 14
11.48' v 2 n 11.68
Continued page 164

December 6, 1902

Not R Lyncis

Comparison Stars for R Lyncis cont. from p. 153

Plate I 2604 taken Feb. 8, 1901
p 3 r
r 2 b
t 1 r

Extreme edge Plate I. 23573 taken Sept. 17, 1899
p 2 r 2
Cloudy Trouble

Plate I 16589 taken Dec. 23, 1896
r n.s.
g c. .05

Plate I 24044 taken Nov. 13, 1899
p 2 r
r 4 b
t 1 r

Very faint Plate I 18412 taken Aug. 3, 1897
p 3 r
t, s n.s

Plate I 18417 taken May 19, 1897
p 3 r
r 3 b
t 1 r

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 6, 1902

Not R Lyncis

Comparison Stars for R Lyncis continued

Plate I 17343
r = n'
p n.s.

Plate I 16596 taken Nov. 22, 1896
p 6 r?
r o t
Very faint: r must fall in that
p, though no. of grades is difficult to estimate

Plate I 16768 taken Dec. 14, 1896
p 2 r
r 4 t
s n.s.

Plate I 24568 taken Feb. 6, 1900
p 4 r
r 3 t
t 2 s

Plate I 24389 taken Jan. 5, 1900
p 4 r
r 3 t
t 2 s

Plate I 19514 taken Nov. 7, 1897
Too near edge

December 6, 1902

Not R Lyncis

Comparison Stars for R Lyncis cont.

Plate I 24745
p 3 r
s, t n.s.

Plate I 21882 taken Dec. 1, 1898
r n.s.
p = 1

Plate I 21819 taken Nov. 22, 1898
p 2 r
r 1 t
Very faint - poor focus - Obscuration poor

Plate I 25111 taken April 10, 1900
p 2 r
r 5 t
t 1 s

Plate I 22471 taken Feb. 25, 1899
p 2 q
q 2 r
s, t, n.s.

Given 3 plate

Plate I 22261 taken Jan. 27, 1899
p 2 r?
s, t n.s.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 6, 1902

not R Lyncis

Comparison Star 2 for R Lyncis continued

Plate I 27886 taken Oct. 29, 1901
p n.s.
2 n.s.
q = 1

Exposure edge-Very poor focus

Plate A 206 taken Feb. 1, 1894
p 2 n
n 5 e
p 0 q
t not separated from adjacent star

Plate A 1326 taken Feb. 26, 1895
p 4 n
n 3 t

Exposure edge of plate. Poor focus

Plate A 243 taken Feb. 16, 1894
p 5 n?
n 3 e?
Images very diffuse

Edge of plate

Plate A 524 taken April 9, 1894
p 3 n
n 3 t
t 1 e
p 0 q

December 6, 1902

not R Lyncis

Comparison star 2 for R Lyncis

Plate A 259
p 3 n
t, 0 n.s.

Apparently the best plates show little, if any variation in this star. The observations showing it bright or faint seem to be open to more or less doubt. Yet the indication of variation is too strong for it to be safely used as a comparison star for R Lyncis

Dec. 9, 1903

See Book II p. 134

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914
S.J.M.

December 6, 1902

R Lyncis Continued from page 158.

Plate A 259 taken Feb. 24, 1894
V m.s.
p = .4
2 = .1

Edge of plate

Plate A 193 taken Jan. 25, 1894
V m.s.
p = .2
2 m.s.

Plate A I 174 taken March 06, 1901
V m.s. v > 10.48
10.18 k = .3

Plate A I 75 taken Jan. 5, 1901
Not region

Plate A 156 taken March 12, 1901
V m.s. v > 11.78
11.68 n = .1

Plate A 93 taken Jan. 25, 1901
V m.s. v > 9.13
9.08 f = .05

Plate A 155 taken March 12, 1901
Only faintest stars in region
Not measured

December 6, 1902

Plate A 142 taken March 6, 1901
1 V m.s. v > 11.20
11.15 k = .05

Plate A 107 taken Feb. 6, 1901
V m.s. v > 10.23
10.18 k = .05

Plate A 90 taken Jan. 13, 1901
Var

Plate A 117 taken Feb. 7, 1901
V m.s. v > 11.21
11.11 n = .1

Plate A 62 taken Jan. 1, 1901
Not measured. Class C

Plate A 100 taken Feb. 2, 1901
V m.s. v > 9.18
9.08 f = .1

Plate A 130 taken Feb. 18, 1901
V m.s. v > 10.28
10.18 k = .1

Plate A 151 taken March 7, 1900
Too near edge of plate

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Reduced Dec. 23, 1914 W.F.M.

December 6, 1902

R Lyncis continued

Plate AD 91 taken Jan. 13, 1901
Not measured. Stars

Plate AD 178 taken March 30, 1901
9.79 g 2 v? 999? 10.08 v = 10.04? 05 04
10.08? v 1 r 10.18
What I have measured as v is not unlikely a defect in plate.

Plate AD 168 taken March 17, 1901
Not measured — Only bright stars on plate

Plate AD 159 taken March 14, 1901
1 u.s. v > 9.13
9.08 f 05

December 8, 1902

Estimates of the brightness of
R Ursae Majoris. See remark p. 171

Plate I 17832 taken April 12, 1897
g 4 v
v 1 r

Plate I 23624 taken Sept. 21, 1899
0 1 v
v 5 f

Plate I 32710 taken April 19, 1899
v 1 s.
u = .05

Plate AC 1241 taken Feb. 11, 1901
b 3 v
v 1 m

Plate AC 258 taken March 24, 1899
v m.s.
f = .2

Plate AC 1085 taken Dec. 22, 1900
v 0 k?
Plate AC 1372 taken March 23, 1901
b 3 v
v 3 g

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 7, 1902

R Ursæ Majoris

Plate I 18202 taken June 11, 1897
V n.s.
r = .05

Coming plate — Plate I 16916 taken Dec 28, 1896
g 3 v
v 2 l
Spherule mountain g and l both distant. Focus different on all three stars

Near edge of plate — Plate I 17345 taken Feb. 16, 1897
l 3 v
v 5 m

Plate A 168 taken Jan. 2, 1901
V n.s.
o = .3

Plate AC 726 taken Feb. 19, 1900
V n.s.
r = .1

Plate A 193
Not measured

Plate AC 1196 taken Feb. 1, 1901
p 1 v
v 4 2
Image of g defective

December 7, 1902

R Ursæ Majoris continued

Plate AC 859 taken May 20, 1900
V o h
v 7 g

Plate AC 820 taken April 15, 1900
Not measured. quality 1

Plate A 110 taken Feb. 6, 1901
m 3 v
v 2 n
Mountain on account of extreme faintness

Edge of plate — Plate AC 608 taken Dec. 19, 1899
V n.s.
n = .1

Plate AC 1159 taken Jan. 18, 1901
t 2 v
image of s defective

Plate I 16708 taken Dec 7, 1896
r 4 v
v l t

Plate A 117 taken Feb. 7, 1901
Scratches and defects make identification uncertain. Plate not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 7, 1902

R Ursae Majoris continued

Plate I 18101 taken May 18, 1897
t 3 v
v 2 k

Plate AC 1370
not measured

Plate AC 1137 taken Jan. 7, 1901
g 1 v
v 3 k
Images extremely faint

Plate AD 169 taken March 17, 1901
t 3 v
v 4 g

Plate AC 554 taken Nov. 24, 1899
v m.s.
g = .1

Plate AC 1341 taken March 16, 1901
t 1 v
v 4 g

Plate AC 289 taken April 19, 1899
t 3 v
s, t n.s
v on the verge of invisibility

December 7, 1902

R Ursae Majoris continued

Comes off plate

Plate AC 1334 taken March 12, 1901
t 4 v
v 1 g

Plate AD 176
Not measured

Plate AC 305 taken April 26, 1899

Estimates on AC plates are especially good. The variable usually comes fairly near the centre of the plate. When it is brighter than o measures on AC plate are usually better than on I plate. The comparison stars are widely scattered and on I plates the focus of the different images to be compared often differs so much as to make comparison almost impossible

December 10, 1902

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 7, 1902

R Ursae Majoris continued

Plate AC 2894 taken Oct. 10, 1902
Region not on plate

Plate AC 1218 taken Feb. 7, 1901
m 2 v
v 0 0
v 4 p

Plate AC 2525 taken May 5, 1902
q r 1 v
s, t n.s.

Near edge — Plate I 16914 taken Dec. 28, 1896
q 2 v
v 1 l

Mountain-fronts different on all 3 stars very fully separated.

Plate AC 2562 taken May 18, 1902
Region not on plate

Plate AC 850 taken May 7, 1900
v 1 h
a bit too many grades brighter to compare

Plate AC 2245 taken Feb. 3, 1902
q 2 v
r 2 l

December 8, 1902

R Ursae Majoris continued

Plate AC 1874 taken Oct. 16, 1901
v n.s.
m = .1

Plate I 17526 taken March 11, 1897
n 2 v
r 3 p

Plate AC 2379 taken Feb. 17, 1902
l 4 v
v 0 k
Region q, r foggy while l and k are on clear background. Since comparison must be

Extreme edge of plate — Plate AC 1953 taken Nov. 3, 1901
v n.s.
s = .1

Too faint — Plate AC 2694 taken July 16, 1902
v n.s.
0 = .1

Plate AC 517 taken Nov. 10, 1899
v n.s
m = .05

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursae Majoris cut.

Extreme edge of plate

Plate A 200 taken Jan. 30, 1894
r 2 v
v 3 r

Plate A C 2701 taken July 23, 1902
v n.s.
g -.2

Focus sharp

Plate A C 2870 taken Oct. 7, 1902
r 5 v
v 0 d
v 4 m

Plate A C 2446 taken March 15, 1902
m 3 v
v 0 5
v 5 p

Extremely faint

Plate A C 2474 taken April 15, 1902
r 3 v
v 4 r

Plate A C 319 taken May 11, 1899
v n.s.
r -.05

Plate A 208 taken Oct. 1, 1894
r 3 v
v 3 r

December 9, 1902

R Ursae Majoris continued

Plate A C 2932 taken Oct. 24, 1902
v 0 r
v 3 g

Plate A C 2611 taken June 6, 1902
v n.s.
r -.1

Plate A C 1164 taken Jan. 20, 1901
g 3 v
v 1 r

Extremely faint

Plate A C 2475 taken April 15, 1902
g 3 v
v 2 r

Plate A C 2685 taken July 12, 1902
V n.s.
0 -.1

Very dark plate

Plate I 28160 taken Dec. 30, 1901
k 2 v
v 1 g

Near edge - from focus - Image Z g quite different from those of v and k

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursae Majoris continued

Plate AC 2528 taken May 5, 1902
v n.s.
0 = .3

Plate AC 583 taken December 9, 1899
t 1 v
u n.s.

Plate AC 2596 taken May 10, 1902
v n.s.
p = .1

Plate AC 2689 taken July 13, 1902
A defect in the glass just under below the position of the variable makes it almost impossible to measure this plate.

Plate AD 268 taken Aug. 23, 1902
v n.s.
h = .05

Images very clear. Good Observation.

Plate A 464 taken March 24, 1894
u 3 v
v 2 x

Plate AC 2563 taken May 15, 1902
t 2 v
x n.s.
Images extremely faint. Poor focus.

December 9, 1902

R Ursae Majoris continued

Plate AD 317 taken Sept. 10, 1902
v n.s.
L = .5

Poor focus

Plate AC 2570 taken May 21, 1902
v n.s.
p = .3
q n.s.

Plate AC 2421 taken March 23, 1902
0 3 v
v 1 f
Extremely faint - Poor focus.

Near edge

Plate I 24837 taken March 14, 1900
n 2 v
v 3 x
Images clear, though focus is not good

Plate AC 610 taken Dec. 19, 1899
v n.s.
d = .05

Plate AC 605 taken April 26, 1899
l 3 v
b n.s.
Images very faint. Plate fogged

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Hrose Majors Continued

Near corner of plate — Plate A 1316 taken Feb. 23, 1895
t 4 r
r 3 n
Images clear, but focus poor

Plate AC 800 taken April 6, 1900
b 4 r
r 3 0

Edge of plate Poor focus — Plate I 22929 taken May 25, 1899
n 3 r
r 1 n'

Extreme edge of plate Very poor focus — Plate AC 765 taken March 16, 1900
v 0 n
No other comparison practicable Images very faint. on verge of invisibility

Images elongated — Plate AC 1347 taken March 20, 1901
h 3 r
r 1 g

Plate I 20077 taken Jan. 24, 1898
Spectrum Plate

Near edge of plate — Plate I 24838 taken March 14, 1900
n 2 r
r 3 n

December 9, 1902

R Hrose Majors Continued

Edge of plate — Plate AC 500 taken Nov. 5, 1899
r n.s.
n = .05

Plate AC 753 taken March 12, 1900
o 4 r
p n.s.
There is a defect on plate near the variable, but the elongated image, similar to other images in the neighborhood, is clearly seen

Plate AC 1174 taken Jan. 25, 1901
Not class 2

Poor focus — Plate I 16617 taken Nov. 30, 1896
t 3 r
r 2 n

Plate AC 1067 taken Dec. 17, 1900
r n.s.
a = .1

Plate I 16437 taken Nov. 2, 1896
n' 1 r
r 3 r

Plate AC 1175 taken Jan. 25, 1901
Images much elongated Not measured

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursæ Majoris continued

Plate I 19576
Not Class L - Not Measured

Images elongated

Plate AC 3247. taken Jan. 25, 1902
g 1 v
v 4 l

Plate AC 1550 taken June 17, 1901
o 4 v
v 1 p
Extremely doubtful observation. Images, especially of the variable, mere shadows and difficult to identify.

Plate I 23343 taken Jan. 25, 1902
k 2 v
v 2 g

Near edge. Poor focus. Images shadowy

Plate A 496 taken April 2, 1894
vi v
x n. s

Plate AC 259 taken March 24, 1899
v n.s.
g = .1

December 9, 1902

R Ursæ Majoris continued

Near corner of plate

Plate I 19784 taken Dec 16, 1897
g 4
v o l
v 6 l
Focus different for each image, on account of their distance apart.

Plate AD 174 taken March 29, 1901
l 4 v
v o g
v 6 l

Poor focus. Images faint

Plate AC 1561 taken June 21, 1901
v n.s.
o = .05

Plate AC 2693 taken July 16, 1902
v n. s.
o = .1

Plate AD 305, taken Sept. 6, 1902
v n.s.
g = .05

Plate AC 2566 taken May 20, 1902
v n.s.
o = .3

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursæ Majoris continued

Plate A V 330 taken Sept. 14, 1902
Very poor. Not measured

Plate AC 2579 taken May 28, 1902
v m.s.
g -.1

Plate AC 2140 taken Jan. 1, 1902
g 2 v
v 2 l

Plate AC 2431 taken March 25, 1902
0 3 v
v 1 f
Images much elongated and very faint. Identification difficult. Estimate not satisfactory.

Plate I 20411 taken March 8, 1898
2 3 v
v 3 2

Plate AC 1991 taken Nov. 20, 1901
2 3 v
v 3 2

Edge of plate from frame

Plate A 1339 taken March 5, 1895
t 1 v
v 3 1

December 9, 1902

R Ursæ Majoris continued

Plate AC 1111 taken Dec 29, 1900
0 1 v
t m.s.

Plate AC 877 taken June 9, 1900
2 3 v
v 1 g

Plate AC 1444 taken May 6, 1901
l 4 v
v 0 l'
v 3 m

Plate AC 2020 taken Nov. 27, 1901
There is a defect on plate close to position of v, which prevents measuring

Plate AC 333 taken May 26, 1899
v m.s.
g -.1

Plate AC 1457 taken May 12, 1901
l' 3 v
v 2 m

Very poor from frame. Images double

Plate AC 2073 taken Dec 16, 1901
l 3 v
v 1 l'

Extreme edge of plate

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursae Majoris Continued

Plate AC 1412 taken April 19, 1901
Very poor - not measured

Extreme edge — Plate AC 645 taken Jan. 2, 1900
V n.s.
r=.1
Film full of defects. Variable may be concealed.

Plate I 21847 taken Nov. 30, 1898
m 2 r
v 0 0
v 6 f
Focus of different images differs

Plate AC 2915 taken Oct. 20, 1902
h 1 v
v 2 g

Plate AC 2628 taken June 15, 1902
V n.s.
s=.05

Plate AC 2116 taken Dec. 7, 1901
g 1 v
v 4 l

December 9, 1902

R Ursae Majoris Continued

Plate AC 2534 taken May 9, 1902
V n.s.
t=.1

Plate AC 2259 taken Jan. 30, 1902
g 1 v
v 2 l

Plate AC 2559 taken May 17, 1902
V n.s.
o=.3

Plate I 16249 taken Oct. 22, 1896
V n.s.
u=.3

Plate AC 1211 taken Feb. 6, 1901
Very poor - not measured

Extreme edge of plate — Plate AC 2284 taken Feb. 6, 1902
g 2 v
v 1 l

Plate AC 1898 taken Oct. 23, 1901
V n.s.
p=.05

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 9, 1902

R Ursæ Majoris continued

Plate I 17058 taken Jan. 12, 1897
L 3 V
V 19
Images of f g elongated S and V circular

Plate A C 2313 taken Feb. 10, 1902
l 1 V
r 2 l'

Plate A C 1915 taken Oct. 27, 1901
v n. s.
r = .1

Plate A C 1433 taken May 3, 1901
l' 1 V
r 3 m'

Plate A 1422 taken May 2, 1895
Extreme edge of plate
h 5 V
V 1 l
Uncertain comparison. Found h b a very poor focus. That g l is fairly good. g is not on plate.

December 9, 1902

R Ursæ Majoris continued

Plate A C 813 taken April 11, 1900
L 3 V
V 1 l'

Plate A C 1450 taken May 7, 1901
l' 2 V
r 2 m'

Plate A C 2068 taken Dec. 6, 1901
o 2 V
p n. s.

Plate A C 2412 taken March 14 1902
m' 2 V
V 1 o
trails and repeated images

Plate A C 1407 taken April 13, 1901
g 2 V
V 1 l
Images much elongated

Near edge of plate. Poor focus
Plate I 22755 taken April 27, 1899
t 2 V?
Images shadowy. V barely visible

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

R Ursae Majoris Continued

Plate I 16119 taken October 2, 1896
Images extremely faint
ν 2 v
v 1 x

Plate A C 1413 taken April 26, 1901
Trails - Not measured

Plate I 28161 taken Dec. 30, 1901
Extreme Edge of plate. Very poor focus
h 4 v
v 2 l
Image of g too close to edge and too much out of focus for comparison.

Plate A C 1485 taken May 23, 1901
m 1 v
v 1 m

Plate A C 2159 taken Jan. 3, 1902
Extreme edge of plate. Poor focus.
h 3 v
v 0 g
v 4 l

Plate A C 1292 taken Feb. 25, 1901
g 1 v
v 2 l

Plate A D 178 taken March 31, 1901
Trails. Not measured

December 10, 1902

R Ursae Majoris Continued

Plate A C 1542 taken June 16, 1901
Very faint
s 2 v
p n.s.

Plate A C 2245 taken Jan. 25, 1902
Extreme edge of plate
g 1 v
v 2 l

Plate I 16508 taken Nov. 12, 1896
ν 1 v
v 3 ν

Plate A D 163 taken March 16, 1901
h 2 v
v 1 g

Plate A C 1557 taken June 19, 1901
Extremely faint
0 2 v
p n.s.

Plate A C 758 taken March 13, 1900
Extreme edge of plate
v n.s.
h = .3

Plate A C 1564 taken June 25, 1901
v n.s.
p = .1

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

R Ursae Majoris continued

Plate AC 1360 taken March 19, 1901
h 2 r
r 1 g

Plate AC 1598 taken July 10, 1901
V. n. s.
l" = .3

Plate AD 82 taken Jan. 7, 1901
V n. s.
m = .1

Plate D 18413 taken Aug. 5, 1897
V n. s.
0 = .1

Plate AC 1669 taken Aug. 21, 1901
Trails - not measured

Extreme edge of plate — Plate AC 2385 taken March 4, 1902
l" 3 r
r 2 m

Plate AD 156 taken March 12, 1901
~~Im~~ h 3 r
r 1 g

December 10, 1902

R Ursae Majoris continued

Plate AC 658 taken Nov. 25, 1899
2 1 r?
Identification of r open to doubt. It is on the verge of invisibility if present.

Plate AC 1555 taken June 18, 1901
g 2 r
r 1 2
Focus poor. Image faint and shadowy

Images elongated — Plate AC 2336 taken Feb. 15, 1902
l 2 r
r 1 l"

Plate AC 1173 taken Jan. 25, 1901
Extreme edge of plate - Not measured

Focus very sharp — Plate I 16752 taken Dec. 13, 1896
p 3 r
r 0 q
r 4 r

Corner of plate — Plate I 28530 taken Feb. 27, 1902
l" 3 r
r 0 l
r 3 m
Very uncertain. Each image quite different from the three in focus.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

R Ursae Majoris Continued

Plate AC 1708 taken Sept. 30, 1901
v m s.
r = .2

Edge of plate — Plate AC 2408 taken March 14, 1902
0 1v
v 4f

Plate AC 1414 taken April 26, 1901
l 3v
v 1l

Near corner of plate — Plate I 25151 taken April 14, 1900
l 2v
v 2l
Difference in focus make observation doubtful

Images elongated — Plate AC 1467 taken May 15, 1901
m 1v
v 1m

Plate AC 277 taken April 10, 1899
u 3v
v 0u
Images of v and u so faint that identification is difficult.

December 10, 1902

R Ursae Majoris Continued

Plate AC 1356 taken March 30, 1901
Not measured - Edge of plate

Plate AC 448 taken Sept. 16, 1899
v m s.
m = .1

Plate AC 248 taken 20, 1899
v m s.
r = .1

Plate AC 2168 taken Jan. 5, 1902
v 0g
v 4l
l 3v

Plate AC 1498 taken June 4, 1901
Does not identify in region

Plate AC 1777 taken Sept. 25, 1901
v m s.
0 = .2

Plate I 20472 taken March 9, 1898
r 3v
v 2r

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

R Ursae Majoris Continued

Plate AC 906 taken March 6, 1900
v n.s.
0 = .2

Plate AC 1434 taken May 3, 1901
l 1v
v 3m

Plate AC 2035 taken Dec. 1, 1901
p 3r
r 0q
r 4r

Plate AC 1096 taken Dec. 27, 1900
v n.s.
m = 0.1
n, o n.s.

Plate AC 179 taken March 30, 1901
k 4v
v 1q

Plate AC 744 taken March 6, 1901
k 2v
v 2q

Plate AC 1524
v n.s.
m = .1

December 10, 1902

Measures of brightness of faint comparison stars for δ Cassiopeiae

Plate I 17036 taken Jan. 11, 1897

q	9.0
r	9.1
s	9.4
t	10.5
u	10.2
W	Near the image but cannot measure with Cale
x	10.3 Looks different from other images
δ	9.8

Can a defect in film coincide with position of x?

Plate I 15459 taken July 12, 1896

q	8.8
r	8.7
s	8.8
t	10.1
u	9.9
W	10.3
x	10.1
δ	9.0

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

S Cassiopeiæ - Measures with scale ocular.

Plate I 16637 taken Dec. 1, 1896

q	9.0
r	9.0 Images not easily comparable
s	9.2
t	10.6
u	10.4
w	10.7
x	10.5
s'	9.6

Ocular 4

Plate I 15896 taken Sept. 4, 1896

q	8.9	
r	8.9	Measures difficult
s	9.1	
t	10.5	
u	10.5	
w	10.5	
x	10.7?	
s'	9.3	

Plate I 16765 taken Dec. 14, 1896

q	9.2	
r	9.1	
s	9.5	
t	10.7	
u	10.2	Images clear but so faint
w	10.6	that it is difficult to make
x	10.5	any estimate with Scale
s'	9.8	

December 10, 1902

Estimates by Argelander's method of the brightness of Faint Comparison stars for S Cassiopeiæ

Plate I 15459 taken July 12, 1896

q 0 r
r 2 s
s 2 s'
s' 6 u
u 2 t
t 0 x
t 2 w

Plate I 15896 taken Sept. 4, 1896

Images not very good 0 feet in focus

r 1 q
q 3 s
s 3 s'
s' 4 t
t 1 w
w 0 x
w 2 u

Plate I 16637 taken Dec. 1, 1896

r 1 q
q 3 s
s 3 s'
s' 5 u
u 1 x
x 2 t
t 1 w

w on rings q invisible

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 10, 1902

Estimates of brightness of faint comparison stars for δ Cassiopeiæ, Continued.

Plate I 16765 taken Dec. 14, 1896

q o r
r 2 2
s 4 5
5' 4 u
u 2 x
x 1 t
t o w

Image of W very poor + indistinct

Plate I 17036 taken July 11, 1897

q o r
r 3 s
s 3 5'
5' 4 u
u 2 x
x 2 t
t 2 w

December 11, 1902

Measures with scale of brightness of faint comparison stars of δ Cassiopeiæ

Plate I 16523 taken Nov. 14, 1896

q	8.8	
r	8.9	
s	~~10.0~~ 9.4	
s	10.0	
t	10.2	Image very poor – much blurred
u	10.2	

Plate I 17300 taken Feb. 10, 1897

q	9.0	
r	9.0	
s	9.4	
s	9.9	
t	~~9~~ 10.3	
u	10.4	

An exceptionally good plate. Sharp focus. Images readily comparable with scale.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 11, 1902

Measures of I Cassiopeiae continued

Plate I 21055 taken August 13, 1898

q	9.0
r	9.0
s	9.6
s	10.2
t	10.4
u	10.4

A very fine plate

Plate I 21737 taken Oct. 21, 1901.

q	8.9
r	8.8
s	9.5
s	10.1
t	10.5:
u	10.5

t and u though clearly seen are so faint that it is very difficult to compare with scale the abov reflexions (for those two stars a mere guess as to their relation to the scale.

This plate has a poorer focus than the two previous.

December 11, 1902

Measures of faint Comparison Stars for R Aurigae

Plate I 16505 taken November 12, 1896

o	8.9
p	9.8
q	10.0
r	10.2
s	not measured
t	barely seen

I can see s very clearly but when I try to use scale I cannot see it, at least not to distinguish from defects in scale. Very faint

Plate I 17527 taken March 11, 1897

o	9.0
p	9.5
q	9.7
r	9.7
s	10.2
t	10.5

Focus not very good.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 11, 1902

Measures of Comparison Stars for R Aurigae Continued

Plate I 16767 taken Dec. 14, 1896

o	9.1
p	9.7
q	9.9
r	10.0
s	10.4
t	10.5

A good plate. There is a defect (apparently) on film very near t, which looks like a star image. t clearly distinguished.

Plate I 24743

o	9.2
p	9.8
q	10.1
r	10.1
s	10.2
t	not measured

I can see t but cannot distinguish from defects on scale

December 11, 1902

Estimates by Argelander's method of the brightness of faint comparison stars for T Cassiopeiae

Plate I 16523 taken Nov. 14, 1896

q 2 r
r 2 2′
s′ 4 s
s 3 u
u 1 t

Image of t very diffuse. It must really have more light than it though it certainly appears fainter

Plate I 17300 taken Feb. 10, 1897

q 2 r
r 3 s′
s′ 3 s
s 3 t
t 1 u

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 11, 1902

Cassiopeiae - Estimates of brightness of Comparison Stars Continued.

Plate I 21055 taken Aug. 13, 1898

g 1r
r 4d
d 5 d
d 1 t
t 3u

Plate I 27837 taken Oct. 21, 1901

g 1r
r 5d
d 3d
d 3t
t 1u

December 11, 1902

R Aurigae. Estimates by Argelander's method of brightness of faint Comparison Stars

Plate I 16505 taken Nov. 12, 1896

0 7p
p 0 g
g 0 r
r 5d
d 1 t?
t very faint, if seen

Plate I 16767 taken Dec. 14, 1896

0 8p
p 0 g
g 2r
r 4d
d 1 t

Plate I 17527

0 8p
p 0 g
g 2r
r 4d
d 1 t

It is always difficult to estimate g on account of the g bright star g very near it

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 11, 1902

R Aurigae - Estimates of brightness of faint comparison stars continued

Plate I 2443 taken Jan. 16, 1900

0 7 p
p 2 q
q 0 r
2 4 t
r 0 s

December 19 Plate I 2443 taken Jan. 16, 1900

r 1 s
0 5 t

Image very faint t on the verge of invisibility and difficult to identify. Images of r and s are poor and difficult to compare.

This estimate is made with the original estimate erased, so that it is entirely independent.

Is s bright on this plate? Or is discrepancy due rather to the faintness of the images?

December 11, 1902

R Ursae Majoris - Measures of magnitudes of faint comparison stars

Plate I 16119 taken Oct. 8, 1896

t	9.1
u	9.7
w	10.1
x	10.5?
y	10.5

Plate I 16437 taken Nov. 2, 1896

t	9.0
u	9.7
w	9.9
x	10.4
y	10.6:

Plate I 17058 taken Jan. 12, 1897

t	9.1
u	9.8
w	10.0
x	10.3
y	10.6:

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 11, 1902

R Ursae Majoris - Measures of faint comparison stars - continued

Plate I 17526 taken March 11, 1897

t	8.9
u	9.3
ú	9.7 Partly annulled by defect in film
x	
y	10.1

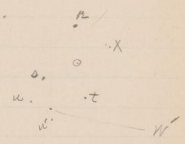
Not a good plate

December 13, 1902

R Ursae Majoris - Estimates by Argelander's method of brightness of faint comparison stars.

Plate I 16119

t 4 u
u 3 ú
ú 3 W
W 1 X
X 0 y?



A defect in film close to y makes estimate impossible.

Plate I 16437

t 5 u
u 2 ú
ú 1 W
W 4 X
X 0 y

Plate I 17058 taken Jan. 12, 1897

t 4 u
u 3 ú
ú 1 W
W 2 X
X 0 y

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 12, 1902

R Ursae Majoris - Faint Companion Stars Continued

Plate I 17526
t 5 u
u 2 w'
w' 1 w''
w'' 4 y
x faintly encircled by defect

Dec. 12, 1902

R Ursae Majoris - Continuation of estimates to see whether u' or w'' is variable

Plate I 23624
Stars faintly there & not seem an object near position of w'' proved by superposition & to probably a defect

Near corner of plate — Plate I 22710 taken April 19, 1899
t 4 w''
w'' 1 u
u' ~~0 u~~ 0 u
Although faint, the image of w'' is very clear. Image of u is barely visible

Near corner of plate — Plate I 23161 taken Dec. 30, 1901
t 4 w''
w'' 1 u
u' ~~0 u~~ 0 u S. ~~0 u~~ S. but defect in film makes estimate unfavorable. It may be brighter than w''
Key wrongly inserted from Plate I 22710

Plate I ~~16752~~ 17552 taken Dec. 13, 1896
t 5 u
u 4 w''
w'' 2 w'''
w''' 0 y
x n. e.
w''' and y on verge of invisibility

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 12, 1902

R Ursae Majoris - Faint companion stars cont.

Plate I 17832 taken April 12, 1897

t 3 u
u* 4 w
~~w 3 w'~~
w' 2 x
x 1 w'
w' 0 y

Plate I 20442 taken March 9, 1898

t 7 u
u 0 w
w' 3 w'
w' 0 x*
x' 0 y

~~Poor~~ Not perfect focus plate - What importance is to be attached to effective faintness of w on this plate? The image, though not in perfect focus, are clear. Stars never seem so faint on any other plate. Can it be an Algol variable?

Plate I 25151 taken April 14, 1900

t 4 u
u 2 w'
w' n.s.

Near edge of plate - Very poor focus

December 12, 1902

R Ursae Majoris - Faint companion Stars cont.

Plate I 18101 taken May 18, 1897

t 3 w'
w' 3 u
u 2 w'
~~w' 1 x'~~ w' 0 x'
y n.s.

[Can not absolutely certain that 2 on x] w' is a limit of visibility but perfectly clear. Spec again w* seems to be faint - or is w' bright? Superposition shows image of x plainly and at least equal to w'. If any it is one element brighter.

Plate C 5377 taken Feb. 15, 1893

t 5 u
u 3 w'
w' 1 w'
w' 3 x
x 1 y

Images all bright and clear

Plate C 7659 taken April 3, 1895

t 5 u
u 3 w'
w' 1 w'
w' 3 x
y n.s.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 12, 1902

R Ursae Majoris - Faint companion obs - Continued

Plate C 6224 taken Nov. 16, 1898

t 4 n
n 5 w
w' 0 W'
W 3 X'

Edge of plate

Plate A 1422 taken May 2, 1895

t 4 n
n 3 w'
w' 2 W'
W' 3 X
y not seen

Extreme edge of plate images faint and much out of focus

Plate A 1339 taken March 5, 1895

t 3 n
n 1 w'
w' 1 W'
x, y n.s.

Extreme edge. Images faint and shadowy

Plate A 200 taken Jan. 30, 1894

t 3 n
n 1 w'
w' 0 W'

Plate A 496 taken April 2, 1894

t 5 n
n 3 w'
w' 2 W'
X n.s.

December 12, 1902

R Ursae Majoris continued

Plate A 1316 taken Feb. 23, 1895

t 5 n
n 3 w'
w' 1 W'
X n.s.

A scratch on plate crosses w' and may make it appear unduly faint

Plate A 464 taken March 29, 1894

t 5 n
n 3 w'
w' 1 W'
W' 4 X
y n.s.

Plate A 208 taken Feb. 1, 1894

t 5 n
w', W' n.s.

Plate I 20411 taken March 7, 1898

t 6 w'
n, W' n.s.

Plate I 28160 taken Dec. 30, 1901

good plate

t 7 n
n 0 W'
w' n.s.
W' 3 X

Continued Book II p. 13

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 12, 1902

Measures of the brightness of faint comparison stars for Bootis.

Plate I ~~1594~~ 17013 taken ~~Sept. 15, 1896~~ Jan. 7, 1897

n 8.7
o 9.0
p 9.2
q 9.6
r 9.7

Plate I 18592 taken Aug. 21, 1897

n 8.8
o 9.0
p 9.6
q 9.8
r 10.0

Plate I 24305 taken Dec. 20, 1899

n 9.1
o 9.5
p 9.8
q 10.1
r 10.4½ Clearly seen, but not very distinct through scale

Plate I 11146 taken May 22, 1894

n 9.4
o 9.6
p 10.0
q 10.4
r 10.6½ Not very clear to me

December 12, 1902

R Bootis. Estimates of brightness of faint comparison stars

Plate I 11146

n 20
o 5p
p 4q
q 1r

Plate I 17013

n 20
o 4p
p 3q
q 1r

Plate I 18592 taken Aug. 21, 1897

n 30
o 4p
p 3q
q 2r

Plate I 24305

n 20
o 4p
p 2q
q 3r

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

December 12, 1902

R Camelopardali - Measures of brightness of faint comparison stars

l

Plate I 15907 taken Sept. 7, 1896

l Focus of this plate too poor to measure with scale through it shows faintest
m stars. Have any other plate for this star.
n
o
p
q

v

Plate I 17120 taken May 19, 1897

l 9.7
m 9.8
n 9.4
o 10.0
p 10.4
q n.s.

v

Plate I 17551 taken Aug. 17, 1897

l 9.2
m 9.4
n 8.9
o 10.0
p 10.3
q 10.4?

Focus of this plate poor

December 12, 1902

Measures continued

Plate I 28915 taken June 23, 1902

l 9.9 v
m 9.8
n 9.6
o 10.2
p 10.5?
q 10.6?

Focus poor

Plate I 17538 taken March 12, 1897

l 9.6 Omitted in Ledger
m 9.7
n 9.1?
o There seems to be a defect in film here
p 10.4?
q not certainly identified

Dec. 13

Plate I 14764 taken March 31, 1896 v

l 9.8
m 9.7
n 9.6
o A scratch or defect makes it impossible to measure
p 10.5
q n.s.

Good focus

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

Monday November 8, 1915

T Cassiopeiae

Estimate repeated on
C 8468

10.56 n 2 v 10.76 10.75 v = 10.76 00 01
10.75 v 3 n 11.05
Images double

Original measures v o l' (10.80) I, 156
v o n (10.56) III, 29

(1) 10.80
(2) 10.56
(3) 10.76
10.75
287
4
10.72 Adopted magn.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System