KG
11365
780

KG 11365.780

S.T. m.T
1h = 8 7 50

Annie J. Cannon

1901phae.proj...78lC

KG 11365.780

HARVARD
UNIVERSITY
LIBRARY
JUL 17 1956

Friday, October 18, 1901

7 45 y Cass. Photog. var. 23h 58.2 +55
Estimates of photog. sequence

+54°3103 ~~e~~ 3-4 a
a 6 or 7 b
b 9 c
~~c 4 d~~
c 3 f
f 1 d
d 5 h
h 3 k
k 7 ~~g~~ l

Oct. 24, 1901. The e observed is D. M. + 54°3103. Photographic e has not yet been observed. See p. 61.

High power used from "d" down

.d

e

l very faint

g?

g? ~~this star is marked the variable on photog. chart~~

This is the variable

~~est. 11~~

~~A~~
g 1 ~~2h~~
" " . . .

Nov. 1, 1901. Star h was probably incorrectly identified on this eve, due to indefinite lines on phot. chart.

Look up star g.

October 19, 1901. I find that the variable was marked incorrectly on the photographic chart, and therefore, the wrong star was observed last night. Also owing to indefinite lines connecting names & stars on the photog. chart some errors were made in comp. stars. Corrections are made in ink above. The variable was not compared at all. It was fainter than f & g (from memory)
A. J. C.

Oct. 18, 1901.

8 30 — Aquarii 21 7 — 14 48

Estimate of photog. sequence

b 4 a

a 3 c

~~d 1 e~~ Wrong star was marked d

c 5 e

e 7 f

f - g too large to estimate

g 2 h High power

~~k 1 h~~ Wrong star marked for k

h 5 l

m not seen

D.M. -~~[illegible]~~ 14° 59~~3~~40 was taken for d

-14° 59~~3~~40 ~~d~~ 3 v

v 1 e est = 8½

~~Fr~~ Oct. 18, 1901

RT Cygni

var. bright.

Estimates of photog. sequence

a 3-4 b
b-c too large
High power { c 4 d
d 5 e   c is reddish

The variable is brighter now than photographic "a", hence brighter comp. stars must be used I will take the stars marked on chart ⓐ

α 5 v
v 1 γ est = 8

Phot. a = vis. δ chart ⓐ
" b = " ε " "

variable very free from color; it seems decidedly white

Oct. 18, 1901.

X Ceti
Photog. sequence

b 4 a
a 6 c
c 3^{4} d
d 2 e

e 2 v

est = 9½

9 30 SS Cygni
d 3 v.
v 1 e est = 8½

(8) (118)
*(24) *(69)

Led. Plott. Post.

Monday, Oct. 21, 1901

M

7 40 R Trianguli
est. of photog. sequence

α $\overset{4}{5}$ a
a 5 μ
μ 3 ζ
ζ 6 b
b 1-2 c
c 4 d
d 5-6 e
e 2-3 f
f 6 g
g 2 h
k invisible

b 0-1 v
v 2 c est = 8 ✓

Oct. 21, 1901

8 30 Y Cass. 23 58 +55 7
Photog. sequence

Oct. 24, 1901 comp. star e was wrongly identified on the enlargement. It is not D. M. +54°3103 but a much fainter star near. The photographic "e" has therefore not yet been compared.

~~e 5 a~~

~~e is a, bluish white star, and I can not understand why it is so faint on the photog. plate.~~

a 4 b'
b' 3-4 b
b 7 c
c 3 d High power

b 5 f
f 2-3 e low power

d 5 g
g 3 h
h 5 k
l not seen

h 3 v
v 1-2 k est = 11

Field high

Oct. 21, 1901

8 45 SS Cygni

f 3-4 v

v = g   est = 9 1/2

8 48 U Persei

Est. of photog. sequence

Photog. a = vis. a

a 5 vis. b

vis. b 5 phot. c

phot. c 4 phot. ~~e~~ ~~d~~ b

phot. ~~d~~ b 3 " d

" d 6 " e {e is close to another star

" f 1 " e

" e 3 " g

" g 3-4 " l

" l 3 " k

" k 2 " h

k & h are rather faint in the moon light and the estimates are uncertain

(phot.) d 3 v +

v 1-2 f (phot.)   est = 11

Oct. 21, 1901

9 10 X Cygni
Field too near moon

RT Cygni
Est. of phot. sequence
and of previous vis. sequence
marked on chart ⓐ

X
β 5 m
m 5 α
α 3-4 γ
γ 4-5 δ
δ (= a phot.) ~~3-4 ε (= b phot.)~~
3-4 ε (= b phot.)
ε (b) 5 a (visual chart ⓐ)
~~a (vis) 3-4 ε~~
a (vis.) 5-6 c (phot.)
c phot. 5 d phot.
e too faint in moonlight

γ 3 v
v 1 $a_{\text{phot.}}$ (δ vis) est = 8

1901phae.proj...78IC

Oct. 21, 1901

10 00 U Orionis
v invis
r seen

10 02 R Gem.
Too low.

Led Plott. Post.

(11) (129)
#(37) #(106)

Friday, Oct. 25, 1901

M

7 50 V Aquilae

γ 2 v
v 3 α   chart Ⓦ ✓
est = 8

v is remarkably red. The photographic sequence will not be of any use visually, since phot. a is several magnitudes fainter than the variable which does not vary more than 1½ or 2 mag. at the most.

8 00 T Andromedae

g 3 v
v 1 h   est = 9 ? ✓

Field near moon and in strong glare.

Oct. 25, 1901.

8 05 Z Aquarii

Field too near the moon to make a satisfactory obs. of comp. stars.

var < a, & $\overset{\ngtr}{\nless}$ b but the interval bet. a & b is very large visually.

c & d are very faint
e is not seen even with high power.

8 25 χ Cygni

est = 8½
v 1 n m not on chart.

v is red and n is white so that comparison is somewhat difficult.

Oct 25, 1901,

8 30 S Cass

v 4-5 c
d not on chart ✓
c too bright to compare with
est = 8 ~~½~~

8 35 T Cass
c 3 v
v = f est = 9 ✓

8 40 SS Cygni
f 2 v H
v 1 g est = 12

L. P. P.
(10) (139)

Wednesday, Oct. 30, 1901

6 20 S Lacertae
Est. of photog. comp. stars.

a much > b
b 6 c
c 5 d
d 1 e

a 8 b

a ~~5~~ 6 v
v 3 b   est = 10

Field high and accurate
comparison is difficult

Oct. 30, 1901.

7 08 — Cass 23^{h} 08 +55 7.

Comp. stars

a 5 b'
b' 3 b
b 6 f
f 3 c
c 3-4 d
d 4-5 e
e 1 h
h 5 g
g 4 k
k 7 l

g 3 v
v 1-2 k est = 10½ ✓

Oct. 30, 1901

7 15 — Capricorni 21 1.7 −16 49

Est. of photog. comp. stars

b much > a

~~b 9 or 10 a~~

~~a~~

b 6 c
c 5-6 a
a 7 d
d 6-7 e
& d 5 f
f 2 e
f 7 g High power
g 2 h
h 6 k
k 2 l k & l are very faint

c 6 $\overset{v}{p}$
v 1 a est = 8

7 50

Oct. 30, 1901.

T Androm.

8 05 f 2 v
v 2 g est = 9

U Persei
Est. of photog. sequence

phot. a 4-5 vis b
vis. b 5-6 phot. c
phot. c. 4 " ~~d~~ b
" ~~d~~ b 2-3 " ~~b~~ d
" d 5 vis e chart (u)
vis e 4 phot. f
phot f 3 phot. e
" e 5 " g
" g 3 " k
" k 2-3 " h

The moon is now up and near region so that estimates may be somewhat affected.

phot. d 4 v
v 2 vis. e
v 4 phot. f est = 10

8 35

Oct. 30, 1901 M

8 45 Z Aquarii $23^h 47^m$ $-16° 25'$

a 8 v
v 3 b est = 8½ ?
seeing very poor

a 10 b
b 5 c Estimates very
c 3 d uncertain
e too faint

9 00 V Pegasi

a 4 b
b 4 c
c 4 d
e, f, & g are so nearly equal ~~that~~ I can not estimate them in the hazy moon-light

v invis-
b seen

L. P. P.

(13) (52)

(x2) # (.48)

Thursday, Oct. 31, 1901

7 35 X Aquarii

a 7 a'
a' ~~4~~ 5 b
b ~~5~~ 6 c
c 4 d
d 4-5 f
f 2 e

Seeing very poor

v invis.
h seen.

8 05 W Aquarii

a 3 a'
a' 7 ~~b~~ c
~~b~~ c 3 b
b 6 d
e not seen

No trace of the var seen

1901phae.proj..78I

Oct. 31, 1901

8 25 S Urs. min.

b 3 a
a 4 c
c 4 c'
c' 7 d
d 3 e
e 3-4 f
g, h, k not seen or identified

e 3 v
v 1 f est = 10 1/2

9 20 R Gem.
Region too near moon

L. P. P.

(#16) (#164)

(3) (55)

Saturday, Nov. 2, 1901

8 00 T ~~A~~ Androm

f 1-2 v
v 3-4 g est = 8

8 07 T Cass
f 3 v
v 1 g est = 9

8 20 R Andromedae

e 1 v
v 3 f est = 8

8 30 S Ceti

p 2 v
v 2 g est = 11 ½
Hagen used

8 35 S Cass
f 3 v
v 2 g est = 9

Nov. 2, 1901

8 40 R Piscium
h 3 v
v 1 h   est = 8½ ✓

8 45 R Arietis
f 2 v
v 1-2 g   est = 9 ✓

Obs. diff. on account
of bright star near var.

8 55 S Persei
g 3 v   Can not find h on
any chart   est = ~~9½~~ 10½ ✓

9 00 T Persei
C 3 v
v 2 d   est = 9 ✓

o Ceti
9 20 α 3 v
v 4 β   est = 8 or ~~less~~ brighter ✓

Nov. 2, 1901.

9 30 R Ceti

l 1 v

v 4 m est = 10 ✓

9 40 R Urs. Maj.

s 4 v

v 2 t est = 13

Hagen used

9 45 χ Cygni ✓

$n\,\overset{5}{\cancel{4}}\,v$

v 0-10 est = 8½

(25) (180)

L.P.P.

Monday, Nov. 4, 1901

7 35 S Urs. Maj. ✓
e 4 v
v 2-3 f est = 8 1/2

7 45 T Urs. Maj: ✓
k 5 v
v 2 l est = 10
Field low. Stars ill defined

7 55 S Bootis ✓
g 5 v
v 1 h est = 10 1/2
Field low & hazy.
~~Old chart. Hagens~~

8 05 R Camelop ✓
k' 3 v
v 3 l est = 12
Old chart used. Hagen not marked

8 15 R Urs. Min ✓
d 3 v
v 2 e est = 9 1/2

Nov. 4, 1901.

8 25 R Draconis ✓
v invis. 4
o seen

Can not identify b. Is there a Hagen marked?

8 30 S Cygni 1+
e 3 v
v 2 f est = 9

8.40 T Cephei ✓
d 3-4 v
v 2 e est = 7½

8 50 S Cephei
g 3 v
v 1-2 h est = 9½ ✓

Variable not red.

8 55 R Lyncis ✓
g 1 v
v 4-5 h est = 9

Nov. 4, 1901.

9 01 R Aurigae
d, v
v 3 e est = 8 ✓

9 12 R Delphini
v visis.
m seen H

9 20 V Cygni
v visis
n seen H

Dew on the object-glass.

9 50 R Pegasi
~~R~~ r 2 v
v 2 s est = 11½

(25) (205)
L. P. P.

Thursday, Nov. 7, 1901

7 40 W Herculis
f 1-2 v
v ~~4~~ 2 g ✓ est = 9

8 00 T Herculis
v invis ✓
2 glimpsed
Hagen

8 15 R Cygni
s 1 v H ✓
v 4-5 t est = 12
Hagen

8 25 RS Cygni.
d 2 v
v 2 e est = 7 1/2 ✓
v very red

8 30 U Cygni
v = a ✓
v 4 d est = 8

Nov. 7, 1901

8 35 R Vulpec.
v invis.
s seen ✓

Hagen

8 40 S Pegasi.
v invis. ✓
s seen Hagen

8 48 R Aquarii ✓

l 3 v
v 2 m est= 9½

~~8~~ 9 00 SS Cygni
o 4 v
v = p est= 12½

9 15 U Ceti ✓
k, v
v 3 l est= 10½

~~(17) (222)~~

~~Led. Plott. Post.~~

Nov. 7, 1901

9 40 S Lacertae

a 5 b
b 8 c
d not seen and is not on
Hagen
~~v 2 a~~
interval bet c & e is too
large to estimate.
a 2 v
v 2 b est = 9

(19) (2-2-3)
*2 (*166)
L. P. P.

Sunday, Nov. 10, 1901

5 45 R Coronae

Too bright to compare with of
the brightest comp. star on chart

5 50 S Coronae
v invis.
s H seen   H
Hagen used.

A 6 05 R Sagittarii
d $\overset{3}{5}$ v
v 5 f   est = 8
e is off the chart

Inquire about comp. star h.
h marked on chart is < k

6 10 S Sag
v invis.
s seen.   Hagen's chart for
R Sag used.

(4)(22) L. P. P.

Friday, Nov. 15, 1901

5 30 R Herculis
v invis. ✓
f seen Hagen

7 3~~5~~5 T Androm.

d 2 v
v 4 e est = 8 ✓

7 40 SS Cygni

(8) f 1-2 v est = 12.5

7 50 R Scuti ✓
f 3 v
v 3-4 g est = 6½

8 05 S Aquarii
v invis. ✓
x seen Hagen

8 15 T Aquarii
h 5 v
v 1 k est = 8½ ✓

Nov. 15, 1901

R Triang.
comp. stars

a 4-5 b   Seeing excellent
b 6 c
c 5-6 d
d 8 e
e 5 f
f 4 g
g h 1 g
h 5 k'
k' 3 k
k
l 4 l'
l' 3 m
n 1-2 m

k' 3 v
v 2 k   est. 8½-9

8 50 Faint star bet. m + n, which is phot. k is distinctly seen to-night for the first time. It is 13m or less.

Nov. 15, 1900.

9 — Cass. 21 1.7 −16 49

α vi, a (phot. a) ✓

Field too low to get comp. plates.

9 20 Z Aquarii
c' 4 v
v 2-3 e est = 8½ ✓

9 40 U Orionis
v = t ✓
v 4 u est = 12½

9 50 R Tauri ✓
v invis.
s seen Hagen

9 52 S Tauri
v invis
s seen " ✓

S Cygni
10 00 e 2 v ✓
v 2 f est = 9½

(20) (247) *(12) *(178)

L.P.P.

Wednesday, Nov. 20, 1901

M

610 U Herculis
p 4 v
v = q est = 10 ✓

Hagen
Seeing very poor. Field low

615 S Herculis
v invis.
p seen ✓

R Cass.
625 g 5 v
v 1 h est = 7½

Field high. variable red

635 χ Cygni
e 1 v
v 3 e est = 8 ✓
v very red

640 S.S. Cygni
γ 3 v
v = δ est = 12½

Nov. ~~15~~ 20, 1901

6 4~~9~~5 S Cygni
c 2 v
v 3 f est = 8 1/2 ✓

7 00 T Androm.
c 4-5 v
v = d est = 8

(13) (260)
L.P.P.

Wednesday, Nov. 27, 1901

5 15 T Androm
d 2 v
v 4 e est = 8 1/2

5
~~4~~ 30 RT Cygni
Photog. d ~~3~~ 4 v
v 2 phot. e

est = 10 1/2

5 50 U Persei
f 3 v
q v 4 g est = 10

Old vis. sequence used marked in pencil on chart (L)

Wind makes telescope very unsteady.

(6) (266)

L.P.P.

Saturday, Nov. 30, 1901

7 45 R Geminorum
v = q
v 3 - 4 r est = 11½
Hagen

7 50 SS Cygni
γ 2 v
v = δ est = 12

8 00 X Cygni
s 5 v
v 1 t est = 9

8 30 W Aquarii
v seen
e not seen. Field low

8 45 Z Aquarii
b 3 c′
c 7 ~~d~~ c
~~d 2 e~~
~~d~~ c 2 d
d 6 e
c 2 v
v 1 d est = 9½

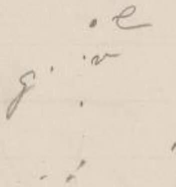
Nov. 30, 1901.

9 00 R Trianguli

Phot. f 2 v ✓

v 4 phot. f est = 9 1/2

9 15 S Urs. Min



are these f + k?? I can not tell from the phot. chart

v 4 g est = 10 1/2 ✓

Am not certain of f

9 25 V Delphini

v invis.

d seen H. ✓

c + f not seen

Nov. 30, 1901

9 30 X Ceti
b 5 a
a 4 c'
c' 3 c
c 2 d
d 0.1 e (-1°471 was here obs. for e)

~~b~~

a 4 v,
v 3 c' . est = 9

~~Look up e, Star marked on photo is not the D. M. star but a faint one near by. There may be a mistake in the identification.~~

10 0 S Can Min
o 2 v
v 1 p
Hagen est = 12 ✓

Field hazy, obs. diff

10 02 V Cancri
Seen bet. clouds
f 1 v
v 3 ~~k~~ g est = 8
Stopped by clouds.

L.P.P.

(9) (28 ✓)
#(9)#(187)

Sunday, Dec. 1, 1901

7 00 T Herculis
q 2 v
v 3 r
Hagen
est = 12 –

7 05 R Cygni
t 1 v
v 4 u
Hagen
est = 12 ✓

7 10 RS Cygni
v = d
c 3 v
est = 8 ✓

7 15 U Cygni
c 3 v
v 1 d
est = 8 ✓
v intensely red

7 20 T Aquarii
h 2 v
v 2 k
est = 8½ ✓

7 35 R Pegasi
s 1 v
v 2 t
Hagen
est = 10½ ✓

Dec. 1, 1900

7 45 S Pegasi

u 4 v Hagen ✓

v = w est = 13

7 48 R Aquarii ✓

v 3 e

d not on chart

est = 7½

7 50 S S Cygni

f 3 v

v = δ est = 12

S Ceti

8 00 h 2-3 v

v 1 k est = 9½ ✓

8 03 R Piscium

n 2 v

v 1-2 o est = 10 ✓

8 15 T Androm.

d 3 v

v 1 e est = 8½

L.P.P. (23) ✓ (30 P)

Monday, Dec. 2, 1901

7 55 V Cygni
p 4 v
v 0-1 q est=12

7 58 SS Cygni ✓
f 3 v
v 0–1 b est= 12

8 03 R Arietis ✓
d 4 v
v 2 e est= 8½

8 10 o Ceti ✓
β 4 v
v 1 f est= 8

8 15 R Ceti
g 1-2 v
v 3 h est= 9½

8 20 U Ceti
p 2 v
v 2 q est=10

Dec. 2, 1901.

8 30 R Aurigae ✓

e 4 v

v 2 f   est = 9

8 40 U Orionis

v seen by glimpses

t seen steadily

u not seen

t 4 v   est = 12½

8 50 R Lyncis

k ~~t~~ 2 v

v = ~~k~~ l   est = 10~~½~~ ✓

9 00 R Urs. Maj.

o 2 v

v o-1 p   est = 10 ✓

Dec. 2, 1901.

9 08 R Camelop.
v mires
h, seen. Ask about h, k
& l of this star
Seeing very poor.
Cloudy near pole.

9 20 T Cephei
d, 1 v
v 4 e est = 7

Stopped by clouds.

(22) (23)
L. P. P.

Wednesday, Dec. 4, 1901

5 45 R Scuti
l 1-2 v
v 2 m est = 8 ✓

5 50 W Herculis
m 7 v
v 2 n est = 10 1/2

6 00 R Delphini
v invis.
n seen Hagen ✓

8 00 S Aquarii
v invis Hagen ✓
w seen

8 25 T Aquarii
h 2 v
v 4 k est = 8 1/2 ✓

8 30 S Urs. Maj
v = l
v 5 f est = 8 1/2 ✓

Dec. 4, 1901.

8 40 T Urs. Maj.
v invis.
o seen   Hagen

8 45 S Bootis
v not seen
h barely seen
Field dd not corr.

8 50 R Camelop.
v invis.
m not seen
Star near b which is k or
l is seen. Comp. stars h, k, l,
not marked on Hagen.

8 55 R Urs. Mini
v = 7
e 3 v   est. = 9

9 00 R Draconis
v invis
o seen   Hagen.

Dec. 4, 1901.

9 10 S Cygni
g 5 v
v 2 ~~f~~ h est = 10½

9 30 S S Cygni
d 2 v
v 2 e est = 8½:

(20) (350)

L.P.P.

Thursday, Dec. 5, 1901

5 35 T Cass
g 3 v
v 2 h est = 9

5 45 R Androm
v 1 d est = 6 1/2

c too far off

5 50 S Cass
g 1-2 v
v 3 h est = 9 1/2

5 53 T Persei
c 3 v
v 1 d est = 9

5 58 S Persei
g 2 v
v 1 h est = 10 1/2

6 15 S S Cygni
c 1 v
v 2-3 d est 8
(11) (361) LPP.

Friday, Dec. 6, 1901

8 00 SS Cygni

Can not make comparisons on account of frost ~~of~~ on object-glass.

1901phae.proj..78IC

Tuesday, December 10, 1901

7 35 S S Cygni
c1v
v3d est=8 +

7 40 X Cygni ✓
u1v
v 2-3 w est = 9½

8 00 R Vulpeculae ✓
v invis
t seen Hagen

8 03 T Cephei
d5v
v1e ✓ est = 6½

8 15 S Cephei
l4v
v1m ✓ est = 10½

8 20 R Cas ✓
k4v
v2l est = 9

Dec. 10, 1901.

8 30 T Androm.
v = 7
v 4 g est = 9

8 35 R Tauri ✓
v invis.
s seen

8 40 S Tauri ✓
v invis.
t seen

9.15 R Geminorum
z 1 v
v 2 s
Hagen.
Seeing hazy.
est = 12

9 25 V Cancri
e 4 v
v 1 f est = 8
very hazy.

(9) (380) L.P.P.

Wednesday, Dec. 11, 1901

8 20 S Cygni
k 2 v
v 2 l est = 11

8 23 SS Cygni
c 1 v
v 3-4 d est = 8

8 40 RT Cygni
Chart ⓐ
Drawing of ft. stars
(phot. e) π 5 v
v 3 r est = 11½ or 12
Obs. diff.
π = phot. e

8 50 S Urs. Min.
v = e
can not identify f

9 00 Z Aquarii
c 1 v
v 3 d est = 9

Dec. 11, 1901

910 V Pegasi

v = k

v 4 l

est = 12

Field rather low.

9 20 — Androm. 2350 +485

var. bright.

clouds came before obs. could be made

Stopped by clouds.

(10) (391)

L.P.P.

Monday. Dec. 16, 1901

5 15 R Scuti
Cloud on again

Monday, January 20, 1902

M

8 15 S Cygni
v not seen
g barely seen.
Field very hazy.

8 25 T Androm
m 4 v
v 1 o
est. in the haze n no far off to
est = 10½
Seeing very poor.

8 40 R Urs. Maj.
v = g
v 5 h est = 8

7.71
7.68
7.70

8 45 S Urs. Maj.
e 2 v
v 3 f est = 9

8.18

8 55 T Urs. Maj.
v not seen
l seen

Jan. 20, 1902

9 10 R Urs. Min.

L 4 v

v 0-1 e est = 9 1/2

Seeing too poor to continue

(10) (401)

L. P. P.

Thursday ~~Wed.~~ Jan 23, 1902

M

7 35 SS Cygni
v not seen H
f seen

7 45 T Cass
b 4 v
v 1 m est = 10½

v decidedly red in the
strong moonlight

7 50 R Androm
c 4 v
v 1 d est = 6½

8 00 S Cass.
v 2 k est = 9½
h is too far away.

8 30 S Persei
h 1 v
v 3 k est = 10½

Jan. 23, 1902

833 T Persei

c 3 v

v 3 d est = 8½

L. P. P.

(10) H(1)

Friday, January 24, 1902

M

7 35 SS Cygni
γ 1-2 v
v 3 γ H
est = 12

7 40 R Cass
m 1 v
v 4 n est = 9

7 43 S Cephei
g 2 v
v 2 h est = 10

7.45 T Cephei
v > d, c not on chart.
est = 6

8 10 V Cygni
n 2 v
v 3 o est = 11 Hagen

8 18 U Cygni
e 1 v
v 3 f est = 9
field low v very red

Jan. 24, 1902

S Cygni
Too low

R Drac.
Too low, sky too bright & hazy.

8 35 R Camelop.
h 3 v   High

Look up star k on old chart,
est = 10 1/2

8 50 R Lyncis

o ~~n~~ 3 v
v 1 p   est = 11

Ledgered, Plotted, Posted.

(13) (H24)

Saturday, Jan. 25, 1902

Moon rising

7 40 SS Cygni
g 2 v
δ not seen
Seeing very poor

7 45 S Ceti
g 2 v
v 2 h est = 9½ or 10
Region very hazy,
stars seen indistinctly.

8 00 R Piscium
v invis
t seen

8 05 R Arietis
n 1 v Hazy
v 1 o est = 10

8 10 o Ceti
g 4 v
v 1 δ est = 8½
Region hazy.

Jan. 25, 1902.

8 30 R Ceti
v not certainly seen
0 seen

X 8 40 U Orionis.
p 3 v Hagen
v 1 q est= 10
Hazy, near moon

8 50 S Can. Min.
h 2 v
v 1-2 k est= 9 1/2

853 ~~9 00~~ S Tauri
n 3-4 v
v 10 est= 10

8 55 R Tauri
v invis.
l seen

L.P.P. (16) (440)

Monday, Jan. 27, 1902

7 35 S S Cygni
γ 3 v
v 1 δ est = 12½
Sky very clear.

7 50 R Pegasi
v invis.
t seen Hagen

8 00 S Pegasi
v 1 ?
Field too low
Observe again earlier

8 30 U Ceti
t 2 v
v 2 u est = 12½
Can not find Hagen. Used
old chart of zt. Stars

8 35 ~~R~~ R Cancri
v 2 ~~k~~ l est = 8½
k not on chart.

Jan. 27, 1902

8 40 V Cancri
g 3 v
v 0-1 h est = 8

8 50 S Hydrae
e 2 v
v 2 f est = 8

9 00 T Hydrae
v invisible
r seen

9 10 R Leonis Minoris
g 2 v
v 1-2 r est = 10

9 15 R Leonis
h 2 v
v 3 k est = ~~7~~ 6½

9 30 R Comae
v invis.
r seen

9 35 R Draconis
g 3 v
v 1 h est = 8½

Jan. 27, 1902

9 45 R Aurigae

l 2 v

v 3 m est = 10

(21) (461)

Ledgered, Plotted, Posted

Tuesday, Jan. 28, 1902

6 10 SS Cygni
γ 3 v
v 1 δ est = 12½

6 20 R Cygni.
ver. at extreme limit of visibility
γ seen distinctly
f not seen
γ 4 v est = 13 or less

6 35 X Cygni
Hagen
γ 3 v
v = δ est = 12.5 ✓

Identif. difficult.

R Delphini
too low

6 45 R Aquarii
v 5 e
d not on chart ✓

Jan. 28, 1902.

6 50 S Pegasi ✓
s 1 v
v 4 t est = 12~~½~~

6 53 S Cygni ✓
v invis.
p seen

7 10 R S Cygni ✓
d 1 v
v 4 e est = 8½

7 13 R Vulpec. /
g 1-2 v
v 3 g est = 8½

7 35 S Bootis x
v invis.
b seen

Jan. 28, 1902

7 45 R Gem.
t 3 v
v 2 μ est = 12.5 ✓

8 40 – Androm 23 50 +48 5
Phot. sequence
b much > a

b 3 a'
a' 4 b'
b' 4 a
a 6 d
d 4 c
c 4-5 e

b' 5 v
v 2-3 a est = 8 1/2

v reddish

9 00 R Can. Venat
v = n
v 3 d est = 10 ✓

L.P.P. (20) (201) *(6) #(93)

Thursday, Jan. 30, 1902

5 46 R Delphini
Too low. Can not be obs.

R Vulpec
6 00 f 1 v
v 3 g est = 8 1/2

6 05 S S Cygni
f 2 v
v 2 b est = 12 1/2

6 20 S Pegasi
v = k
v 4-5 k

R Ceti
6 30 o 4 v
v 1 p est = 11

Jan. 30, 1902

8 30 S Urs. Min.

a ~~4~~ 2 v

v 1-2 c est = 8 ~~½~~ 9

v slightly red

8 45 Z Cass 23 58 +55 7

Var. not seen

b seen distinctly

a faint star bet. b & v is seen. This ft. star precedes var. and is seen on photo. chart.

9 10 U Persei

b ~~4~~ v

v ~~3~~ 2 c' est = 8½

Int. bet. b & c previously selected seems rather large. c' is star formerly used visually and marked c' on chart ⓐ

Jan. 30, 1902.

9 15 R Triang. ✓

ψ 1 v
v 3 ρ est = 12½

Stars marked on old chart. var. to pt. for phot. seq. except photog. k which is the pt. itself.

X Ceti
e 4 v ✓

Have no familiar comp. stars marked! Look up!

est = 9½

9 40 V Eridani 3 59 −16

a 2 v ✓
v 3 b est = 8

X, R, T, U Virg. all looked for but can not be seen now on account of east Dome.

Jan. 30, 1902

10 05 X Virg ✓

l 8 v

v 1-2 m est = 10½

(20) (501)

L. P. P.

Monday. ~~Ja~~ Feb. 3, 1902

5 50 SS Cygni
c 2 v
v 2 d est = 8 1/2

6 10 Mr. Dunne's Var. in Cygnus
+40° 4393

β 2-3 v
v 2 γ est = 8 1/2

6 20 RT Cygni
High
o 5 v
v 1 π est = 12

Stars o and π marked
on Mr. Reed's drawing
chart (a)

(6) (007) L.P.P.

Wednesday, Feb. 5, 1902

6 30 +40° 4393 Mr. Dume's var.

β 1 v
v 2 γ est = 8½

6 32 SS Cygni
c 1 v
v 3 d ✓ est = 8½

6 55 S Lacertae
d 2 v
v 1 e est = 12 ✓

Look up phot. e. I have called it star marked on Hagen, or rather I have just marked on Hagen the star I call photog. e. Chart is too indistinct to tell its position.

7 00 R Cygni
v invis.
w seen

7 03 RS Cygni ✓ Low.
d 3 v
v 0+ e est =

Feb. 5, 1902

7 15 — U Cygni
e 2 v
v 3 f — est = 8 1/2 ✓
v very red

7 18 — V Cygni
m 2 v
v 2 n — est = 10 1/2 ✓

R Vulpec.
Too low

S Ceti
7 25 — g 3 v
v 1 h — est = 8 1/2 ✓

7 50 — T Androm
g 2 v
v 3 r — est = 12 ✓

7 55 — T Cass
o 2 v
v 3 p — est = 10 1/2 ✓

Feb. 5, 1902

805 S Cass
v = k
v 4 m ✓

l, k

810 R Cass
m 5 v
v 1 n est = 9 ✓

815 R Androm.
e 2 v 7.55
v 3 f 7.41
7.48 est = 7 ✓

818 S Cephei
g 2 v
v 1 h est. 9½ ✓

v very red and well defined.

8 20 T Cephei
v very bright and reddish.
too bright to compare with d.
est. 6½ or 6

Feb. 5, 1912

8 45 R Arietis

v = p

v 3 q ✓

est = 11 1/2

Frost on eye-piece very troublesome.

8 48 o Ceti

γ 3 v

v 1-2 δ

est = 8 1/2 ✓

9 00 U Orionis

v = q

~~x~~ p 4 v

est = 10 1/2

(33) (5-40)

L. P. P.

Thursday, Feb. 6, 1902

7 45 S Canis Min

f 2 v
v 2 g est = 9 ✓

Sky somewhat hazy.

Cloud in the west so I can not observe S.S Cygni. The variable was seen, still very bright, but the stars were too hazy to make estimates of any use

7 55 ~~S~~ V Cancri ✓

v = n
m 4 v est = 9½

8.10 R Cancri ✓

n 2 v
v 1-2 o est = 9½

Seeing very poor

9 30 S Hydrae

g 1 v
v 3 h est = 8½ ✓

Feb. 6, 1902.

9 40 S Tauri ✓
~~n = [illegible]~~
n 4 v
v = 0 est = 10½

9 43 R Tauri ✓
v invis.
u seen

9 48 R Urs. Maj. ✓
g 4 v
v 1 h est = 8

8.11
8.08
8.10

9.53 S Urs. Maj. 9.00 ✓
g 2 v
v 2-3 h est = 8½

10 00 T Urs. Maj
Can not find Hagen
so can not observe as
star is faint.

(15) (555)

L.P.P.

Friday, Feb. 7, 1902

7 55 SS Cygni

l 3 v
v 2 f est = 9½

8 10 R Ceti
v not seen 11.6
p glimpsed –

U Ceti
Field too low to identify
fainter stars. Try earlier

8 30 S Persei
k 2 v 10.88
v 2 l 11.13 ✓ est = 10
11.00

8 32 T Persei
l 5 v 8.88
v 2 d 8.48 ✓ est = 8½
8.68

1901phae.proj..78IC

Feb. 7, 1902.

8 45 T Hydrae
v invis.
x glimpsed 11.9

8 50 R Leonis
k 3 v 692
v 2 l 678
6.85 est = 7

v very red

9 05 R Leonis Minoris
v = 9 r 10.51
v 3 r 10.64
10.58

est = 10

9 15 S Bootis
v invis. 12.1
m? seen

9 20 R Camelop

l 4 v 10.22
v 0-1 f 10.27
10.24 est = 9 1/2

Feb. 7, 1902.

9 25 R Urs. Min
a 1 v
v 3 e
9.36
9.32
9 34
est = 9

9 30 R Draconis
v = e
v a f
8.02
8.08
8.05
est = 8½

(19) (574)

L. P. P.

Monday, Feb. 10, 1902

7 50 S S Cygni
h 1 v
v 2 k est = 10

8 01 R Lyncis
p 3 v
v 1 q ✓ est = 12

8 15 R Geminorum
Obs. difficult due to faintness
u 4 v
v 1 w est = 13 ✓

8 25 S Cygni
v dubius
0 seen ✓
p glimpsed

8 35 R Can. Venat.
p 3 v
v 2 q ✓ est = 10

Feb. 10, 1902

8 45 U Persei
d 4 v
v 1 e'
old chart ⓐ
est = 8

9 00 V Eridani

δ 3 v
v 1 a
est = 8

Est. of photog. sequence
a 3 b
b 5 c
a 3 ~~c~~ d
d ~~c~~ 2 e
e 2 f
f 8 g

9 10 S Urs. Min.
b 3 v
v 1 a
est = 8

($\overset{5.}{17}$) ($5\overset{29}{94}$)

*(6, 199)

L. P. P.

Tuesday, Feb. 11, 1902

6 1~~0~~5 S Ceti
h 3 v
v = k est = 9 ✓

6 25 U Ceti
t 3 v
u not seen distinctly
obs. diff. objects faint
est = 12 1/2 ✓

6 31 SS Cygni
v = ~~l~~ m
v 3 ~~m~~ l est = 10 1/2

6.35 l and m as marked on Mr. White's chart. m > l

(5) (594)

L.P.P.

Wednesday, Feb. 12, 1902

8 30 γ Cass
γ var. nivis.
m seen distinctly.

Estimates of photog. sequence

a $1.^{m}5$ brighter than b.

b 4 c
c 2-3 d
d 4-5 e
~~f 1-2 d~~ f = d
c 3 f

f 2 g
h 2 g
k 1 g

k 6 $\bar{l}$
l 8 m
n not seen

Feb 12, 1902

9 20 V Canis Min
var invis.
v seen
p not seen

9 38 — Canis Min 7^h 43 +5 40

a 1 v
v 4 b est = 8½
v appears somewhat red

X Vir
Clouded over again

Stopped by clouds.

4 598

#(11 210)

L.P.

Friday, Feb. 14, 1902

6 15 S Pegasi m

n 3 v
v 0-10 est = 10 ✓

Moon near, twilight strong.

6 30 R Piscium
Star seen in position of
var. as far as I can tell
from D. M. enlargement.
Hagen is not in place.
est = 10½

Feb. 15: Star seen was not the var. but a star n. f. var.

6 40 R Pegasi
v invis. ✓
n seen

9 00 R Andromedae
f 2 v
v 4 q est = 8 ✓

9 10 R Trianguli
φ 2 v ~~φ s~~ Moon near.
est = 12

1901phae.proj..78IC

Feb. 14, 1902

9 30 X Virg
l 3 v
v 2 m   est = 10

9 45 R Virginis

c 3 v
v 1 d   est = 7.

10 00 R Bootis
v not seen
r seen
s perhaps glimpsed

10 25 T Virg.
v invis.
0 seen

(12) (6 10)

L.P.P.

Thursday, Feb. 27, 1902

7 45 R Androm. ✓

k 2 v
v 2 l est = 10

Seeing poor, field low.

Clouds forming.

8 20 U Orionis ✓

m 1 v
v 3 n est = 9½

Sky very clear

8 25 S Tauri ✓

v = p
v 3 q est = 10½

8 30 R Tauri ✓

t 4 v
v 0-1 u est = 13

Obs. diff. due to faintness

8 33 R Cass. ✓

n 5 v
v 1 o est = 10½

Feb. 27, 1902.

8 40 R Comae
v invis. ✓
r seen.

9 05 U Virg
b 4 v
v 1-2 c est = 7½ ✓

9 10 U Persei ✓

d 3 v
v, e' old vis. chart ⓔ

est = 8

9 45 R Geminorum
v invis. ✓
w seen

(46) (6 = 6)

L. P. P.

Monday, March 3, 1902

745 T Androm.
var, not seen
& glimpsed.
Field corr, ✓

750 R Androm.
k 3-4 v   9.00
v 1 l   8.87
8.94 est = 9½ ✓

v red.

800 T Cass
p 1 v   11.42
v 3 p'   11.48
11.45 est = 11 ✓

810 S Cass.
v = n   10.78
v 3 o   10.78
10.78 est = 11 ✓

815 T Persei
c 4 v   8.78
v 1 d   8.58
8.68 est = 8½ ✓

816 S Persei
k 2 v   10.88
v 1-2 l   11.18 est = 10½ ✓
11.03

Mch. 3, 1902

8 25 R Aurigae

o 3 v
v 1 p $\frac{\begin{matrix}12.23\\12.26\end{matrix}}{12.24}$ est = 11 ✓

obs. difficult on account of bright star g.

8 30 S Can. Minoris
e 3 v
v 2 f $\frac{\begin{matrix}8.36\\8.28\end{matrix}}{8.32}$ est = 8 ✓

8.40 R Cancri

p 2 v
v 2 g $\frac{\begin{matrix}10.13\\10.01\end{matrix}}{10.07}$ est = 10 ✓

8 45 V Cancri
p 2 v
v 3 g $\frac{\begin{matrix}11.04\\10.97\end{matrix}}{11.00}$ est = 11 ✓

905 S Hydrae
l 3 v
v 1 m $\frac{\begin{matrix}10.53\\10.56\end{matrix}}{10.54}$ est = 9 10 ✓

Mch. 3, 1902.

9 15 T ~~L~~ Hydrae

s 1 v 11.89 ✓
v 2 t 11.97
11.93 est = 12/2

R Leonis Min.

9 20 s 1 v 11.68 ✓
v 3 t 11.73
11.70 est = 11/2
Ident. correct.

9 30 R Leonis
l 6 v 7.48 ✓
v 0-1 m 7.18
v 4 n 7.07
7.24 est = 7/2

9 35 R Urs. Maj.
h 5 v 8.68
v 2 l 8.60
8.64

If I identify k correctly it seems slightly fainter than l.

9 38 S Urs. Maj.
k 4 v 10.14
v = l 10.09
10.12 est = 9 1/2 ✓

Mch. 3, 1902

9 50 T Urs. Maj.

l 2 v 10.29 ✓
v 1 m $\frac{10.55}{10.42}$ est = 10

10 00 S Bootis ✓

m 2 v 12.24
v 2 n $\frac{12.30}{12.27}$ est = 1.2

10 02 R Camelop ✓

b 6 v 9.05
v 1 c $\frac{8.92}{8.98}$ est = 8 ~~½~~

10 04 R Urs. Min.

d 1 v 9.36
v 3 e $\frac{9.32}{9.34}$ est = 9½ ✓

10 05 R Draconis

d 2 v 7.86
v 3 e $\frac{7.72}{7.79}$ est = 8 ✓

10 1$\overset{5}{4}$ T Cephei

v > d
c not on chart

L. P. P. (42) (668)

Thursday, Mch. 6, 1902

7 45 W Cass ✓

α 4 v
v 3 β est = 8

8 01 R Cass –

p 2 v 10.70
v 3 q 10.68
10.69 est = 11

8 05 S Cephei ✓

v 1 g 9.84
v 3 h 9.92
9.88 est = 9½

8 10 S Tauri –

q 2 v 11.34
v 2 r 11.46
11.40 est = 11

8 15 R Tauri ✓

s 2 v 12.24
v 2 t 12.26
12.25 est = 12

8 20 U Orionis –

l 3 v 8.57
v 1-2 m 8.73
8.65 est = 9

March 6, 1902

25 X Virg.
l 3 v $\frac{11.12}{10.96}$
v 2 m 11.04 est = 10 1/2 ✓

8 35 R Comae
v invis.
t seen 12.6 ✓

8 40 R Virginis
e 4 v 7.49
v 0-1 f $\frac{7.51}{7.50}$ est = 7 ✓

8 50 U Virginis
b 2 v 7.53
v 2 c $\frac{7.36}{7.44}$ est = 7 1/2 ✓

9 00 R Can. Venat.
p' 5 v 10.94
v 2 q $\frac{10.98}{10.96}$ est = 10 ✓

The notation of comp. is very different in Hagen and in photo. enlargement.

March 6, 1902,

9 20 Y Virg.

g 5 v 1246

V not seen < est = 12

9 30 R Lyncis

Can not find Hagen, so
I can not identify.

(22) (690)

L. P. P.

Saturday, March 15, 1902

M

6 45 R Piscium
Cloud over upon
Probably too low to observe
anyway.

6 55 o Ceti
Z 2 v 687
v 5 α 6.78
682
est = 7 1/2 ✓
Clouds very near.

7 10 R Ceti ✓
v invis.
n seen.

U Ceti
Too low.

7 20 T Androm ✓
v invis.
g seen.

March 15, 1902

7 30 R Arietis
var. may be glimpsed but
not seen steadily or certainly, -
& seen
Still very bright and near moon

7 35 R Leonis
n 4 v $\frac{7.87 \\ 7.57}{7.72}$ est = 8½ ✓
v 1 o

7 50 T Virginis
l 3 v $\frac{10.36 \\ 10.22}{10.29}$ est = 9½ ✓
v 4 m

8 20 R Trianguli
Hagen's chart ✓
l 3 v
v = l' est = 10½

8 25 U Persei
a f 2 v (photog. a & b)
v 1 d b est = 7½ ✓
ⓐ old vis chart used

Mch. 15, 1902.

8 30 S Urs. Min.

b' 5 v
v 2 b est = ~~8~~ 7½ ✓

8 45 — Can. Min. 7h 43 +5 40

a 2 v
v 4 b est = 8½

v rather red.

8. 55 R Lyncis ✓
v invis
q seen

(14) (704)
L.P.P.

Tuesday, March 25, 1902

7 35 R Leonis
g 2 v
v 2 r
$\frac{8.41 \quad 8.21}{8.31}$ est = 8½ ✓

7 50 R Geminorum
v invis.
w seen by glimpses 12.8 ✓

8 05 V Canis Minoris
v invis.
m seen distinctly ✓
n > m.

8 15 R Trianguli
v = l
v 4 l' est = 10½ ✓

8 25 U Orionis
h 3 v
v 1 k
$\frac{7.91 \quad 7.84}{7.88}$ est = 8 ✓

S Can. Min.
8 30 v = e
v 3-4 f
$\frac{8.06 \quad 8.13}{8.10}$ est = 8½ ✓

March 25, 1902

M

8 40 V Cancri
g 4 v 11.67 ✓
v 1 r 11.47
11.57
s = r or 1 > r
Seeing poor

8 50 S Urs. Maj.
m 3 v 10.95 ✓
v = n 11.08
11.02 est = 10 1/2

8 52 T Urs. Maj
h 2 v 9.37
v 3 k 9.55
9.46 est = 8 1/2 ✓

9 00 R Camelop
b 3 v 8.75
v 4 e 8.62
8.68 est = 8 ✓

9 05 R Draconis
v = e 8.02 ✓
v 3 f 7.98
8.00 est = 8

Seeing too poor to continue
(18) (722) L.P.P.

~~Tues~~ Wednesday, March 26, 1902

7 45 T Cass
o 3-4 v 11.37
v 1 p 11.22
11.30 est = 10½ ✓

7 50 R Urs. Maj.
o 3 v 10.18
v 1 p 10.36
10.27 est = 9½ !

8 00 S Cass
~~[illegible]~~ o 2 v 11.28
v 1 p 11.38
11.33 est = 10½ ✓

8 05 S Cephei
e 1 v 9.14 ✓
v 2 f 9.17
9.16 est = 9
v very red

8 15 T Persei
c 4 v 8.78
v 11 d 8.58
8.68 est = 9½ ✓

March 26, 1902.

8 25 S Persei
k 2 v 10.88
v 2 l 11.13
11.00 est = 11 ✓

8 30 R Aurigae
p 4 v 12.76
v = g 12.82 est = 12
12.79
Obs. very uncertain due to nearness of bright star g

8 40 R Lyncis
var. invis. 12.9 ✓
r seen

8 45 V Virg
v invis. 11.8 ✓
g seen.

9 00 Moon rising. Seeing too poor in east ~~to~~. get other stars in this region

March 26, 1902

9 03 S Cor. Bor.
e 4 v   7.36
f not on chart   ✓
est = 7 1/2

R Cor. Bor.
v too bright to compare with
f, the brightest comp. star on
chart.

9 15 W Herculis
v invis.   ✓
f seen   12.1

9 20 R Herculis
Field too hazy to compare
var. seen.

(15) (737)
L. P. P.

Monday, March 31, 1902

8 40 R Corvi
v 0-1 n 10.19
v 4 0 10.48
10.34 est = 10 ✓
Obs. uncertain due to haze or clouds.

8 55 S Virginis
v vis.
u seen 12.1 ✓

9 15 R Herculis
k 4 v 9.69
v = l 9.46
9.58 est = 9 ✓

9 17 U Herculis
o 2 v 9.16
v 1 p 9.19
9.18 est = 9½ ✓

9 25 S Serpentis
12.36 ✓
2 3 v
e not seen est = 12

March 31, 1902.

U Cygni
for corr

V Cygni
for corr.

List of Neb. stars completed.

950 U Persei

a 1 v,
v 3 e'

old vis. Chart ⓐ

est = 8½

(9) (746)
L P.P.

Thursday, April 3, 1902

7 58 T Cass
o 1 v 11.12 ✓
v 2 p 11.12 est = 10 1/2
11.12

7 53 S Cass.
11.38
o 3 v 11.43 ✓
v 0-1 p 11.40 est = 11

8 03 S Persei
k 2 v 10.88
v 2 l 11.13 est = 10
11.00

8 10 R Tauri
m 2 v 9.88 ✓
v 1 n 9.78 est = 9 1/2
9.83

8 13 S Tauri
s 1 v 12.14
v 3 t 12.16 obs. difficult
12.15 est = 12 1/2

8 15 U Orionis
f 2 v 6.82
v 3 g 6.74 est = 7 1/2 ✓
6.78

April 3, 1902,

8 22 S Canis Mini.
d ~~7~~ 3 v 8.00
v 2 e 7.86
7.93 est = 8 ✓

8 30 R Cancri.
g 3 v 10.51
v 1 2 10.48
10.50 est = 10 ✓

8 3~~7~~5 V Cancri
g 4 v ~~11.67~~ 11.67
v 1 ~~d~~ ~~11.47~~ 11.84
~~11.57~~ 11.76 est = 11 1/2 ✓

8 45 S Hydrae
p 3 v 12.14
v 1 q 12.18
12.16 est = 12 ✓

8 52 T Hydrae
v = p 10.85
v 4 q 10.79
10.82 est = 11 ✓

9 T Cephei
d 1 v 6.78
v 4 e 6.72
6.75 est = 7 ✓

April 3, 1902

902 S Cephei

f 1 v 9.47
v 3 g 9.53
9.50 est = 9 ✓

v is fiery red.

9 08 X Virg
l 2 v 11.02
v 1 m 11.06
11.04 est = 10½ ✓

9 23 T Virg.
l 3 v 10.36
v 2-3 m 10.37
10.36 est = 10½ ✓

9 30 R Corvi
l 3 v ~~9~~ 10.16
10.04 ✓
v 2 n 10.10
(n 1 m)
est = 9½ or 10.

9 35 Y Virg 10.09
l 1 v 10.14
v 2 m 10.12 est = 10

April 3, 1902.

9 50 R Virg

m 2 p 9.54
v 1-2 n 9.47
9.50 est = 8½ ✓

9 55 U Virg

g 1 v
v 3 h 8.82
8.68
8.75 est = 8 ✓

(38) (784) L.P.P.

Monday April 14, 1902

M

7 50 R Trianguli

h 2 v
v 2 h' est = 9 ✓

7 53 U Persei ✓
d 3 v
v 2 e' est = 8 1/2

8 10 R Urs. Maj. ✓
p 4 v
v 1-2 q 10.86 / 10.97 / 10.92 est = 10 1/2

8 12 R Cass.
Field too low.

8 20 S Urs. Maj
~~12.27~~ ~~12.[illegible]~~ 0 3 v
v = p 11.88 / 11.94 / 11.91 est = 11 1/2 ✓

8 24 T Urs. Maj
7.63 / 7.60 / 7.62 d 0-1 v
v 4 c est = 7 1/2 ✓
d is too far off

April 14, 1902.

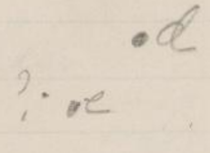
8 35 S Bootis
f 2 v 9.87
v 1 g 10.08
9.98 est = 9 1/2 ✓

R Camelop
8 37 b 3 v 8.75
v 4 c 8.62
8.68 est = 7 1/2 ✓

R Urs. Min. ✓

8 40 d 3 v 9.56
v = e 9.62
9.59 est = 9 1/2

Companion star of e seen. Do not remember it before, or if so, not so bright as to-night. Companion is about 1 step fainter than e.



8 45 R Draconis ✓
8.12 e 1 v
8.13 v 1-2 f est = 8 1/2
8.12

April 14, 1902.

9 15 S Serpentis

12.16 e 1 v

s not seen in the moon light

9 08 ~~S Coronae~~

6.59 ~~c H v~~

~~d not on chart~~

April 15, 1902. Comp. star "e" must have been observed for the variable a.f.S.

See following page

est = 7

9 15 Clouds forming

R Leonis

Clouds near.

$(^{19}_{20})$ $(80\overset{3}{4})$

L.P.P.

Tuesday, April 15, 1902

9 10 R Leonis M

t 1 v 8.95

v 3 u 8.68

8.82 est = 9 ✓

R Hydrae

9 30 g 3-4 v 7.69

v 2 r 7.62

7.66 est = 8 ✓

9 35 S Comae

v 3 g 7.52 est = 8 ✓

9 45 R Can. Venat.

r 3 v 11.99

v 1 r 12.04

12.02 est = 12 ✓

9 48 R Herculis ✓

n 3 v 10.57

v 0-1 o 10.65

10.61 est = 10½

9.55 U Herculis

p 1 v 9.39

v 4 g 9.37

9.38 est = 9½ –

April 15, 1902.

1000 S Herculis

g 2 v 8.29

v 2 h 8.11

8.20 est = 8

1005 T Herculis

v not seen

Seeing poor. p barely seen 11.0

(13)(216)

L. P. P.

Thursday, April 17, 1902

M

8 00 R S Virginis
v invis.
Seeing poor
e seen.

8 15 S Urs. Min.
b 2 v
v 1 c est = 8

8 25 RT Virginis
b 3 v
v 2 d est = 8

d > c

Clouds in west and
forming over whole sky.

× ($\overset{8}{1}$20)
L. P. P.

Thursday, April 24, 1902

8 20 v Cygni
Too low

8 25 RT Cygni
d 3 v
v = e   est = 8 ✓
Field rather low.

8 35 — Canis Min. +5° 1797
$7^h 43^m.4$ +8° 40'

a 5 v
v 1 b   est = 9 ✓
Moon up.

8 55 W Cancri
g 5 v   High power. ✓
v 1 h
v & h are very faint
est = 11½ or 12

9 20 R Leonis Minoris
12.33 t 3 v
12.19 v 2 u   est = 12 ~~½~~ ✓
12.26

April 24, 1902

M

9 30 R Leonis

t 3 v

v 1 u $\frac{9.15 \\ 8.88}{9.02}$ est = 8 1/2 ✓

9 40 ~~R~~ U Orionis

v 1 d 5.70

est = 7 1/2 ✓

9 50 Mrs. Fleming's new var. in Cygnus.
~~Field too low~~
Probably can not be observed
until eleven o'clock.

11 ~~2~~ 8 31

L. P. P.

Monday, April 28, 1902

8 15 R Bootis ✓
p 3 v 11.17
v 1 q 11.18 est = 10½
11.18

8 20 S Canis Minoris ✓
b 1 v 7.16
v 2 c 7.24 est = 7½
7.20

8 25 R Cancri
s 4 v 11.18
v 1 t 11.05 est = 11
11.12

8.40 V Cancri
t 1 v 12.43 ✓
v 3-4 u 12.41 est = 12
12.42

8 50 S Hydrae
v invis. v ✓
s seen.

9 05 T Hydrae
v = l 9.65
v 3 m 9.61 est = 9½
9.63

April 28, 1902

9 20 S Librae

8.48 e 3 v
8.34 v 1 f
8.41

est = 8 –
Field torr.

9 25 R S Cygni –

c 1 v 7.35
v 3 d 7.21
7.28

est = 8

9 30 U Cygni
g 3 v 9.12
v 2 h 9.05
9.08

est = 9 –
v is fiery red.

9 50 V Cygni
v ~~not~~ not seen for certain –
p seen

16 ($\overset{8}{\cancel{7}}$47)

Z. P. P.

Thursday, May 1, 1902

3
8 75 S Hydrae
var. invis. ✓
s seen

Re-examined to confirm visibility of s (seen April 28, see p. 120) photom. mag. 13.46. Field carefully identified. s is steadily seen, and is considerably brighter than r.
r seen with difficulty
q 2 s
s 4 r

9 U Persei @ old vis chart.
e' 3 v
v 2 e est = 9 1/2 ✓
Field low.

9.6 U Orionis
v = d 5.80 est = 6 ✓
v 4 e $\frac{5.61}{5.70}$
Clouds near.
Variable reddish.

May 1, 1902.

9 15 S Cass.
q 3 v 12.17
v 2 r 12.08
12.12 est = 12 ✓

9 25 X Virg.
l 4 v 11.22
v 0-1 m 11.11
11.16 est = 10½ ✓

9 35 R Corvi
d 1 v 8.06
v 2 e 8.07
8.06 est = 8 ✓

Field unsteady.

9 40. T Virg.
k 1 v 9.71
v 3 l 9.76
9.74 est = 9½ ✓

9 43 Y Virg
f 3 v 9.20
v 1-2 g 9.04
9.12 est = ~~9~~ 8½ ✓

9 50 R Virg.
10.61 p 4 v
10.49 v 1 q
10.55 est = 10½ ✓

May 1, 1902.

1605 U Virginis

✓

O 4 v

v 0–1 p $\begin{array}{c}10.48\\ \underline{10.39}\\ 10.44\end{array}$ est = 10

18 (865)

(2) #(2, 2)

L. P. P.

Friday, May 2, 1902

8 20 T Persei
c5v
v1d est = 9 8.88
8.58
8.73 ✓

25 S Persei
k3v
v 0-1 l est = 11 1/2 10.98
11.28
11.13 ✓

8 30 U Orionis
(in finder) ✓
& d3v
v2e est = 6.10
5.81
5.96

8 40 S Urs. Maj.
n1v
v30 11.18
11.28
11.23 est = 11 1/2 ✓

8 50 T Urs. Maj.
a4v 6.82
v1k 6.86
6.84 est = 6 ✓

9 R Can. Venat.
Hagen's notation used.
v = 2 11.69
v5 2 11.64
11.66 est = 11 1/2
Notation entirely diff. on Hagen & enlargement.

May 2, 1902.

9 05 S Bootis
e 3 v 9.32
v 1 f 9.57 est = 9 ✓
9.44

9 08 R Camelop
v = b 8.45
v 5 c 8.52 est = 8 ✓
8.48

S Coronae Bor.
h 1 v 8.24 ✓
9 25 v 3 k 8.17 est = 8
8.20

9 35 S Serpentis
q 2 v 11.95
v 2 r 11.86 est = 10 1/2 ✓
11.90

9 40 R Herculis
Clouds too near.

(20) (885)
L.P.P.

Monday, May 5, 1902

8 10 S Can. Min.

v = b 7.06 ✓
v 4 c 7.04 est = 7½
7.05

8 15 R Cancri
t 3 v 11.08
v 2 t 10.95 est = 11
11.02

✓ R Hydrae

8 20 r 2 v 8.02 ✓
v 1 s 7.94 est = 8
7.98

8 30 R Bootis
p 1 v 10.97
v 3 q 10.98 est = 10 ✓
10.98

8 40 R Herculis ✓
p 2 v 11.58
v 2 q 11.68 est = 11
11.63

8 47 U Herculis
p 3-4 v 9.64 est = 9½
v = q 9.76 ✓
9.70

May 5, 1902.

8 50 R Urs. Min's

a 3 v 9.66
v 1 e 9.52
9.584 est = 9 1/2 ✓

8 52 R Draconis

h 4 v 9.46
v = k 9.40
9.43 est = 8 1/2 ✓

~~8~~ 9 05 S Herculis

8.61 h 3 v
8.63 v 1-2 k est = 8 ✓
8.62

9 20 T Cephei

In telescope

e 4 v 7.52
v 2 f 7.49
7.50 est = 7 ✓

Tried to observe this in finder but the stars were too indistinct so I made the observation in the telescope by indirect vision

9 25 S Cephei ✓

d 2 v 8.88
v 2 e 8.84
8.86 est = 9

v very red.

May 5, 1902.

9 25 RT Cygni ✓

e 2 v
v 1 f est = 8 1/2

9 35 T H Herculis ✓

var. invis.
u seen

9 50. SS Cygni ✓

var. not seen. Field low

Star near g, old α, glimpsed

(24) (909)
L. P. P.

Thursday, May 8, 1902

8 10 V Cancri ✓
t 2 v
v 3 u est = 12 1/2 12.53 / 12.46 / 12.50

Obs. diff. is very faint

8 15 T ~~H~~ Hydrae ✓
k 2 v 9.57 / 9.45 / 9.51
v 2 l est = 9 1/2

8 30 R Leonis Mi, ✓
v = u 12.39
v 3-4 w 12.43 / 12.41 est = 12 ~~1/2~~ 1/3

8 35 ✓ R Leonis
u 3 v + 9.28 / 9.04 / 9.16
v 1 w est = 9 1/2

S Librae
8 45 v = z
v 4 y est = 9 8.44 / 8.23 / 8.34 /

~~12~~ 9 00 R Urs. Maj
r 4 v 11.88 / 11.97 / 11.92 ✓
v 0-1 a est = 12

May 8, 1902

9 20 R Sextantis

a much brighter than b

d 1 b
b 3 c
c much > e

b 4 v
v = c   est = 9 1/2 ✓

9 35 J Hydrae

var. very bright & red.
Too bright to compare with
any of the photog. sequence.
It should be observed with
field glass to better advantage
as there are no very good
comp. stars near.
est = 7 or brighter.

9 50 V Cygni
p 3 v
v 1 g   11.58
11.65
11.62   est = 12 ✓

May 8, 1902

9 50 T Cass

k 1 v
v 2 l $\dfrac{9.46 ✓ \quad 9.61 ✓}{9.54 ✓}$ est = 10 ✗ ✓

5/10 00 R S Cygni

d 3 v
v 2 l $\dfrac{7.81 \quad 7.55}{7.68}$ est = 7½ ✓

U Cygni

10 03 g 1 v
v 3 h $\dfrac{8.92 \quad 8.95}{8.94}$ est = 9½ ✓

10.05 S S Cygni ✓

γ 2 v
v 1 δ $\dfrac{11.97 \quad 12.04}{12.00}$ est = 12

þ R Cass
too low

(24) (933)
L. P. P.

Friday, May 9, 1902

8 08 U Persei
chart ⓐ.
e' 1 v
v 2 e est = 9 ✓
old vis. notation

Seeing poor. Wind high.

8 20 S Urs. Min.
b' 3 v
v 4 b est = 8 ✓

— Cam. Min. +5° 1797
8 30 a 4 v
v 2 b est = 9 1/2 ✓

8 35 V Cam. Min.
var. invis.
m & n seen distinctly ✓
and stars fully 0.5 fainter.

8 40 R Gem.
v invis.
u seen distinctly
w glimpsed. ✓
No trace of the var.

May 9, 1902.

8 50 S Virg.
t 4 v
v 1 u $\frac{11.92 \\ 11.94}{11.93}$ est = 12½ ✓

9 05 W Herculis
v = n $\frac{11.16 \\ 11.20}{11.18}$ est = 11½ ✓
v 4 o

R Oph. & R Delphini
Too low

9.20 RT Cygni
e 4 v
v 1 f est = 8 ✓

final notation in pencil

Light Clouds near, but the field was perfectly clear.

(12) (945) L.P.P.

Tuesday, May 13, 1902 m

— Cam. Min. +5°1797

7 50 a 3 v
v 2 b
est = 9 ✓

Moon near.

RT Virg.
b 3 v
v 3 d
8 est = 8 ✓
d > c

Ext. of photo. sequence
~~a about 1m br. than d~~
~~d~~
a 8 b
b 6 d
d 2 c
Interval bet. c & e too large to compare

8 30 RS Virginis
k 3 v
v 1 m
est = 10½ ✓

b 7 a
a 5 c
c 3 e
e 6 d

d 8 g
g X 3 f
f 1 ~~k~~ h
~~k~~ h 4 k

k 2 ~~l~~ m
m 1 l
l 5 n

May 13, 1902.

840 Z Bootis
var. not seen distinctly, '
but perhaps glimpsed b'
Clouds forming over region
h seen distinctly

Clouds.

9.10 Sky clear.

T Virg. 10.16
b 0-1 v 10.22
v 4 m 10.19 est = 10 ✓

913 R Coroni
c 1 v 7.50
v 2 d 7.76
7.63 est = 7 '

916 S Virg
f ~~4~~ 3 v 9.20
v 2 g 8.99
9.10 est = 8 1/2 '

921 R Virg 10.56
p 3-4 v 10.59
v = g 10.58 est = 10 1/2 '

May 13, 1902

9 30 U Virg
s 1 v
v 4 t
11.62
11.35
11.48
est = 11½

9 40 S S Cygni
l 2 v
v 4 n
11.12
10.92
11.02
est = 11½

Field very hazy but var. certainly brighter than ordinary, o & p are not distinctly seen

m $\overset{4}{\#}$ l.

(18) (963) L.P.P.
(#15) (#27)

Thursday, May 15, 1902

M

8 30 R Hydrae

8.12 r 3 v ✓

7.94 v 1 s est = 8

8.03

v very red.

8 35 S Bootis

v = c 8.36 ✓

b 4-5 v 8.39 est = 8

8.38

8 38 R Camelop.

a 7 v 8.57 ✓

v 0-1 b 8.40 est = 7½

8.48

8 50 R Bootis

l 3 v 9.54 ✓

9.58

v 1 m 9.56 est = 10

9 10 S Coronae

h 1 v 8.24

8.07

v 4 k 8.16 est = 8 ✓

S Librae

9 15 8.54 f 1 v ✓

8.33

8.44 v 3 g est = 8

seeing poor

May 15, 1902

9 18 U Herculis
v = g
v 4 h
9.76
9.96
9.86
est = 9 1/2 ✓

9 30 R Draconis
l, v
v 3 m
9.90
9.86
9.88
est = 9 1/2 ✓

9 35 T ~~H~~ Cephei
e 3 v
v 0 f
7.42
7.49
7.46
est = 7 ✓

9 38 S Cephei
d 1 v
v 3 e
8.78
8.74
8.76
est = 8 1/2 ✓

10 05 SS Cygni
h 1 v
v 3 k
10.08
10.13
10.10
est = 10 ✓

(22) (985) L.P.P.

Sunday May 18, 1902

9 48 SS Cygni M

d 2 v 8.80
8.75
v 1-2 e 8.78 est = 9 ~~x~~

Seeing very poor. Sky light from moon and clouds near and rising towards region.

(Z)(987) L. P.P.

Tuesday, May 20, 1902

8 15 S Can. Min. M

v = b   7.06
v 4 c   7.04   est = 7 1/2 ✓
         7.05

Region low.

8 20 U Orionis
Too low. Can not see any stars.

8 45 S Urs. Min.
v = b
~~v 5 c~~   est = 8 1/2 ✓
v 7 c

a is too far N to use with such poor seeing as there is to-night.

9 00 S Coronae   8
h 3 v   8.44
v 2 k   8.27   est = 8 1/2
         8.36

9 35 SS Cygni
Clouds over region.

6 (993) L.P.P.

Wednesday, May 28, 1902

8 45 R Aurigae
v glimpses 12.5 ✓
p seen.

R Lyncis
848 p 4 v
v 1 q est = 12 1/2 12.28
12.32
12.30 ✓

R Cancri
8 55 s 2 v 10.98
v 3-4 t 10.80
10.89 est = 11 1/2 ✓

9 10 V Cancri
v seen by glimpses ✓
u 4 v 13.16
Obs. uncertain
w not seen

9 15 R Leonis Mi ✓
t 3 v 12.33
v 2 u 12.19
12.26 est = 12

9 18 R Leonis
y 1 v 9.76 ✓
v 2 z 9.92
9.84 est = 9 1/2

May 28, 1902

9 30 R Urs. Maj.
s 2 v
v 3 t est = 12 ~~½~~
12.22
12.23
12.22 ✓

9 35 R Comae
12.66
12.53
12.60
v = t
u not seen distinctly ✓
s 5 v
est = 12½

9 ~~4~~5 0 T Virg.
l 5 v
v = m
10.56
10.62
10.59
est = 10½ ✓

9 ~~4~~5 3 R Corvi
c 4 v
v 0-1 d
7.80
7.91
7.86
est = 8 ✓

10 00 Y Virg
k 2 ~~v~~
v 2 l
9.88
9.79
9.84
est = 9 ✓

(19) (1012) L. P. P.

Thursday, May 29, 1902

8 40 R Virginis
l 2 v   9.15
v 2 m   9.14
9.14   est = 9 ✓

8 45 U Virg.
u 3 v   12.47
v 2 w   12.29
12.38   est = 13 ✓

~~Star~~ var. & w very faint but distinctly seen.

8 55 V Virg.
v invis.
t seen   12.8 ✓

9 00 R Hydrae
8.79 t 3 v ✓
8.80 v 1-2 u   est = 9
8.80 v quite red

9 08 S Virg.
11.35 s 3 v
11.42 v 1 t
11.38   est = 11 1/2 ✓

May 29, 1902

9 12. S Urs. Maj. ✓

8.88 g 0-1 v
8.72 v 5 h est = 8
8.80

9 15 T Urs. Maj. ✓

7.30 v = c
7.08 v 5 d est = 6 1/2
7.19

9 22 R Camelop. ✓

8.75 b 3 v
8.72
8.74 v 3 c est = 8

9 30 S Librae

8.83 g 2 v ✓
8.72 v 1-2 h est = 18
8.78

9 40 S Serpentis

11.64 v = q est = 10 1/2
11.31 o 4 v ✓
11.75 v 2 p
11.57

q 2-3 p

May 29, 1902.

9 45 - SS Cygni ✓

o a v 11.97
v 1 p 12.04
12.00 est = 12

R Herculis

9 55

v very faint but seen distinctly
s 3 r

ε 4 v 12.75
v a t 12.70
12.72 est = 13 ✓

z 3 (035)

Friday, May 30, 1902

9 10 S Coronae ✓
h 5 v 8.64
v 1 k 8.37 est = 8
8.50

9 20 U Herculis ✓
q 4 v 11.49
v 0-1 r 11.78 est = 10
11.64

9 25 R Urs. Min. ✓
a 5 v 9.76
v = e 9.62 est = 9½
9.69

9 30 R Draconis ✓
n 2 v 10.76
v 1 o 10.87 est = 10½
10.82

9 35 W Herculis ✓
l 5 v 10.72
v 1 m 10.56 est = 10
10.64

9 40 S Herculis ✓
k 4 v 9.18
v 1 l 9.06 est = 9½
9.12

9 50 R Ophiuchi ✓
n 1 v 9.92
v 1-2 o 10.05 est = 10½
9.98

May 30, 1902.

9 00 T Herculis ✓
0 2 v 10.60
v 2 p 10.77
10.68 est = 10

9 10

R Scorpii ✓
0 3 v 10.46
v 1 f 10.36
9 18 10.41 est = 10½

S Scorpii ✓
z 1 v 12.76
α not seen est = 12.8

19 (1054)

Saturday, May 31, 1902

9 R Cygni
r 3 v 11.23
v 1 s 11.22 est = 11 1/2 ✓
11.22

9 05 S Cygni
v invis ✓
p seen distinctly. 13.0

9 10 RS Cygni ✓
c [illegible] 3 v 7.50
v 0-1 [illegible] d 7.46 est = ~~8~~ 7 1/2
7.50

9 23 U Cygni
g 3 v 9.18 ✓
v 2 h 9.05
9.12 est = 9 1/2

9 30 V Cygni ✓
q 2 v 11.95
v 1-2 r 12.00
11.98 est = 12 1/2

9 37 T Cephei ✓
h 1 v 7.88
v 3 g 8.28 est = 8
8.08
h > g

May 31, 1902.

9 40 S Cephei
c 6 v
v 1 d 8.75
8.58
8.66 est = 8 ✓

9 55 R Cass: ✓
v invis.
u seen. 12.5

Is there a Hagen? Can not find it. Old chart @ used for identification.

1.0 T Cass.
f 3 v
v 1 g 8.47
8.46
8.46 est = 9 ✓

10 05 S Persei
k 4 v
v 0-1 l 11.08
11.28
11.18 est = 11 1/2

10 08 T Persei
c 3 v
v 2 d 8.68
8.48
8.58 est = 8 1/2 ✓

May 31, 1902.

10 15 R Delphini

n 2-3 v 11.01
r 10 10.89
10.95 est = 11 1/2 ✓

R + S Sag.
Too low.

(20) (1074)
L.P.P.

Thursday, June 5, 1902

8 15 S Bootis

✓

b 2 v 8.11
v 3 e 8.09 est = 7½
8.10

8 25 Field high.

R Bootis

✓

c 5 v 7.40
v 5 e 7.38
7.39 est = 7

d not on chart.

S Urs. Min ✓

v = c
v 5 d' est = 8½

W Cancri
Est. of photog. sequence

b 3 ~~4~~ a
a ~~6~~ 8 c
c 1 d d is reddish
d 5 e
e 3 f
f 4 g
g 7 h
k + l can not be identified from phot. chart

June 5, 1902

9 10 W Cancri
a 6 v
v 3 c est = 8 ✓

9 15 X Virg
l 3 v
v 1 m ~~11.12~~ ~~10.96~~ ~~10.59~~ ~~121~~ est = 10 1/2 — 11.12 / 11.06 / 11.09 ✓

RT Cygni
9 30 (phot) c 5 v
v 3 d (phot) est = 11 ✓

Probably about min. magnitude

9 40 RT Virg
b 1 v
v 4 d est = 8 ✓

9 50 S Cass. ? 1325
t 3 v ?
v not seen distinctly ✓
est = 13 or less.
Stars extremely faint, so
that obs. is uncertain

June 5, 1902.

1000 R Vulpec.
g 3 v
v 1 h $\frac{\begin{matrix}9.07\\9.02\end{matrix}}{9.04}$ est = 9½ ✓

1015 χ Cygni
α 2 v
v 2 β $\frac{\begin{matrix}10.73\\10.59\end{matrix}}{10.66}$ est = 12 ✓

1025 γ Cass.
var. not seen
l seen ✓

1035 R Sagittarii
r 3 v
v 1 s $\frac{\begin{matrix}10.72\\10.76\end{matrix}}{10.74}$ est = 11 ✓

1040 S Sag.
v invis ✓
t seen 11.3

21 (1095) L, P. P.
✱(8) ✱(235)

Monday, June 9, 1902

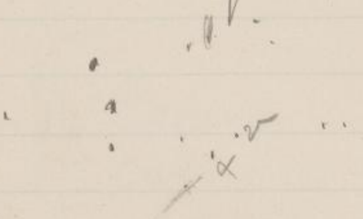
9 00 RT Virg
b ~~[illegible]~~ 5 v
v 3 d
est = 8
v very red.

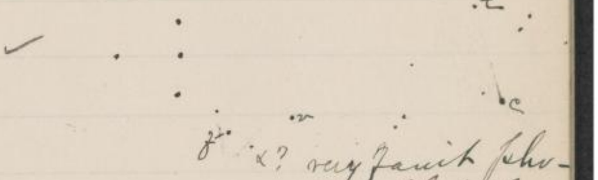
9 10 Z Bootes
var. invis.
m seen

9 20 RS Virg.
m 3 v
v 1 n
est = 11 1/2

9 40 v Delphini.

I2371 V Del.





very faint photographically.

If the identif. is correct.
v 2 α
est = 12

Photog. γ not seen.
e & c are too faint and
not easily identified from
the chart I have.

June 9, 1902.

10 00 S Lacertae ✓
b 4 a v
v 2 c est = 10 1/2

10 10 R. Can. Venat.

✓
n 1 v 9.87
v 2 o 9.97
9.92 est = 10 1/2

~~Notation of photo.~~
~~enlargement~~
Notation of p differs on photo
and Hagen n + o are
the same

(9) (1104)

L. P. P.

Tuesday, Sept. 23, 1902

7 10 T Androm.

a 3 v   8.70
        8.55
v 2 f   8.62   est = 9

I do not like comp. star e.

7 15 T Cass.

a 5 v   7.74
        7.82
v 0-1 e   7.78   est = 8

v is lower than e

7 35 R Andromedae

        13.27
z 4 v

z seen distinctly, but v only after looking some time.

7 40 S Cass.

v invis.   12.7
k seen

8 S Persei

f 4 v   9.47
        9.43
v 1 g   9.45   est = 18

Sept. 23, 1902.

8 03 T Persei
C 3 v 8.68
v 1 d 8.58
8.63 est = 8 1/2 ✓

8 10 R Urs. Maj.
p 2 v 10.66
v 2 q 10.82 est = 11. ✓
10.74

8 15 S Urs. Maj.
f, v 8.60
v 1-2 g 8.68 est = 9 1/2 ✓
8.64

8 20 T Urs. Maj.
v not seen 12.2 ✓
p seen

8 25 R Can. Venat. ✓
v 3 e 7.83 est = 8
d not on chart

8 40 S Bootis
m 3 v 12.34 ✓
v 2 n 12.30 est = 12 1/2
12.32 obs. difficult

Sept. 23, 1902

8 50 R Camelop.
v invis.
There are no fainter comp.
stars than g marked.

8 55 S Cor. Bor.
a 3 v 12.13
v 1 e 12.31
12.22 est = 11 1/2
Seeing poor.

9 R Cor. Bor.
Too bright to compare
w. any comps. stars on chart.

9 05 R Herculis
v invis. 11.5
p seen

9 10 U Herculis
a 5 v 11.38
v = t 11.60
11.49 est = 12 1/2

9 12 R Urs. Min
d 3 v 9.56
v 1 e 9.52
9.54 est = 9 1/2

Sept. 23, 1902.

9 25 R Draconis

g 4 v 8.68
v 1 g 8.46
8.57 est = 8½

9 35 W Herculis

o 1 v 11.70
v 3 p 11.72 est = 12 ✓
11.71

Sky hazy. obs. difficult

(26) (1130) L.P.P.

Saturday, October 4, 1902

1D·6027.

~~10 4~~

7 25 R Bootis

s 3 v 12.56 ✓

est = 13

30 S Serpentis

k 2 v 9.88 ✓

v 1 l 9.98 ✓ est = 10

9.93 ✓

35 Cloud in s. w.

Stopped by clouds

(3) (3) L. P. P.

Monday, October 6, 1902

7 03 T Cephei ✓

v = l 9.18 ✓
v 3-4 m 9.30 ✓
9.24 ✓ est = 8 1/2

7 10 S Cephei ✓

a 3 v 7.70 ✓
v 3 b 7.53 ✓
7.62 ✓ est = 7 1/2

7 18 SS Cygni ✓

v 0-1 p 11.72 ✓
v 3 p 11.86 ✓ est = 12
11.78

7 35 R Cass. ✓

10.60 ✓ p 1 v ~~10.60~~
10.78 ✓ v 2 q ~~10.30~~ est = 10 1/2
10.69

Could not find Hagen
and had to use old chart
Comp. stars must be checked
from Hagen.

Oct. 6, 1902.

7 45 R Pegasi
k 2 v 8.65
v 2 k 8.50 est = 9 1/2 ✓
8.58

8 05 S Pegasi
u 2 v 12.69
v 1 w 12.84 est = 13 ✓
12.76

8 10 T Aquarii
t 3 v 11.82
v 1 u 11.78 est = 12 ✓
11.80

8 23 S Herculis
q 3 v 11.16
v 1-2 r 11.17 est = 10 1/2
11.16

8 40 T Herculis
t 4 v 13.70 est = 13
obs. difficult.

8 43 R Scupi
Too bright to compare w. f.

Clouds passing

9 R Sagittarii
p 1 v 9.97 ✓
v 3 q est = 10 9.93
9.95

Oct. 6, 1902

S Sag
Can not find any Hagen for this star. There seems to be a star at or near position of var. on photo. enlargement but I can not tell whether it is the variable.

9 05 R Cygni
l 2 v 8.55 ✓
v 3 m 8.46 ✓
8.50 ✓ est = 9 ✓

9. 10 X Cygni
Too bright to compare with any comp. stars marked

9 30 R Delphini
o 3 v 11.29 ✓ ✓
v 3 p 11.32
11.30 ✓

Inquire about comp. stars. I think wrong star is marked in Hagen as it is 7 p. There is a fainter star near q

Oct. 6, 1902,

9 40 S Cygni ✓ ✓

v = e 9.48 ✓
v 4 f 9.57 est = 9
9.52 ✓

9 42 RS Cygni

b 3 v 7.20 ✓
v 1 c 7.15 ✓ est = 8 ✓
7.18

9 50 U Cygni

8.17 ✓
e 4 v 8.31 ✓ ✓
v 1-1 f 8.24 ✓ est = 9

(29) (32) L P P.

Tuesday, Oct. 7, 1902

M

7 00 R Ophiuchi
var not seen
Seeing very poor. Field near moon & m barely seen.

7 15 T ~~A~~ Aquarii ✓
t 2 v 11.72
v 3 u 11.58
11.65 est = 11 1/2

7 20 S Aquarii ✓
k 3 v 8.91
v 1 l 8.76
8.84 est = 9 1/2

8 00 R Arietis
v = q 11.90
v 3 r 12.02
11.96 est = 12 ✓

Seeing very poor, sky hazy in region & stars not distinct

8 02 R Aurigae ✓
g 1 v 9.38
v 2-3 h 9.47
9.42 est = 9 1/2

Oct. 7, 1902.

810 R Lyncis
d 4 v 8.42
v 1 e 8.50 ✓ est = 8 ✓
8.46

815 R Piscium
v = e 7.98
v 3 f 7.89 est = 8 ✓
7.94

835 T Cass
v = g
v 3 h ✓ est = 10

845 U Persei ✓
c 2 v
v 4 d est = 10

Notation marked on Hagen used

856 U Cygni
e 3 v 8.07
v = f 8.36 est = 8½
8.22

Oct. 7, 1902.

9 15 R Vulpec

h 3 v 9.42

v 2 k 9.14 est = 9

9.28

9 V Cygni

Can not find Hagen.

9 20 SS Cygni

o 2 v 11.97

v 1 p 12.04 est = 12

12.00

9 30 S Ceti

l 1 v 9.97

v 2 m 9.99 est = 9½

9.98

9 42 R Aquarii

n 3 v 10.11

v 0-1 0 10.09 est = 10

10.10

(26) (58) L.P.P.

Wednesday, Oct. 8, 1902

M

7 30 S Lacertae

photog. e 3 v ✓
v 3 f est = 12

The photog. sequence marked on chart extends only to ~~f~~. e. I selected f and have marked it on Hagen.

7 45 R Trianguli
e' 3 v
v 3-4 m est = 11 ✓

(Notation marked on Hagen)

7 55 S Urs. Min.
f 3 v
v 2 g est = 11 ✓
Photog. f + g.

8 08 R S Capricorni
d' 3 v
v 1 d est = 8½ ✓

Oct. 8, 1902

8 15 — Aquarii 21 7,3 -14 48 ✓

a 3 v
v 4 d est = 8

8 25 W Aquarii
v 2 e est = 12 ✓

8 38 V Pegasi
var invis. ✓
b seen clearly.

8 50 V Delphini
Est. of photog. sequence &
stars selected to fill gaps.

~~a 5 b~~
~~b 4 d~~ c^2 3 e ✓
a 5 d
d 4 b c^2 3 a.
b 1-2 e v 1 e est = 10½
c 3 c^1
c^1 2 c^2

Oct. 8, 1902

9 10 RT Cygni

e 1 v ✓

v 3-4 f est = 7½

Notation in pencil (final)

9 15 Z Aquarii

c' 5 v ✓

v 1-2 e est = 8½

9 20 SS Cygni

o 2 v 12.00 ✓

v 1 p est = 12

9 24 R Ceti

g ~~3~~ 4 v ✓

g v 1 h ~~9.1~~ ~~9~~ 9.10 8.87 8.98 est = 9½

9 30 R Vulpec.

h 4 v ✓

v 1 k 9.52 9.24 9.38 est = 9

Oct. 8, 1902.

9 33 o Ceti

α 3 v   7.58:
v 3 β   7.72
         765   est = 8 ✓

(25) (83)
* (5) (5)

Thursday, Oct. 9, 1902

7 55 T Androm.
f 2-3 v 9.33
v 1 g 9.19
9.26 est = 9 1/2

7 58 T Cass
d 3 v 7.54
v 2 e 7.67
7.60 est = 8 1/2

8 10 R Androm.
w 2 v 12.17
v 1 y 12.28
12.22 est = 12

8 15 S Persei
f 4 v 9.47
v 2 g 9.33
9.40 est = 9 1/2

8 20 T Persei
c 5 v 8.88
v 1 d 8.58
8.73 est = 8 1/2

8 23 R Urs Maj 8.28
h 1 v
k is too far off.
Rising very rapidly

Oct. 9, 1902.

8 35 S Urs. Maj
k 1 v 9.84
v 1 l 9.99 est = 9½
9.92 ✓

9 S Bootis
v not seen 12.1
m seen ✓

9 03 SS Cygni
λ 03 v 12.07
v = p 12.04 est = 12
12.06 ✓

9 08 S Cephei
a 4 v 7.80
v 1 b 7.73 est = 7½
7.76 ✓

(17) (100)

Friday, October 10, 1902

U Persei

7.30 Est. of comp. stars.

—

Int. bet. c & d marked on

8.40 Hagen is too large.

(Inter-rupted 3 times)

c 3 f chart (a)   f = Hagen 8
f 6 d
d = e or 1 <
e 4 f (photographic)
f 4 g
g 3 h
h 5 k
k 5 l
l 3 m
m 2 n

Look for comp. stars l on photog. chart.

photographic c 1 v
v 2 f (f marked on chart (a)] est = 9 ✓
f = Hagen 8

8.45 to 9.05

Oct. 10, 1902.

R Trianguli

Est. of revised sequence comp. stars, commencing with h, see Hagen.

h 6 k
k 4 l
l 5 l'
l' 3 (29 Hagen)
(29 Hagen) 5 m
m 2 n
n 7 ψ
ψ

43 & 44 Hagen are too faint to get a good est. in the moon-light, I think this seq. is good except n & ψ, where the interval is rather large.

~~17 — 22)~~

Oct. 10, 1902.

9 20 X Ceti

α 1 v
v 1 β

Is e D. M. −1°471
I think it is wrongly identified
on the photographic chart!

Oct. 11, 1902. Comp. star e looked up on B12613. It is not D. M. −1°471.

9 30 S S Cygni

0 X 1-2 v
v 1 f

11.92
12.04
11.98

est = 12

9 35 R Draconis

c 3 v
v 2 d

7.74
7.46
7.60

est = 7 1/2

9 38 S Cygni

c 3 v
v 1 f

~~9.08~~
~~9.06~~
~~9.07~~

9.78
9.87
9.82

est = 9

v is quite red.

9 40 R Cygni
c 3 v
v 1 m

8.65
8.66
8.66

est = 9 (#17 22)(2)(112)

Tuesday, Oct. 14, 1902

M

7 35 T Androm.
f 2 v 9.28
v 1 g 9.19
9.24 est = 9½ ✓
very near moon

7 38 R Urs. Maj.
g 2 v 7.91 ✓
v 3 h 7.88
7.90 est = 8½

740 S Sagittarii
Too near moon. Var. is glimpsed (if identif. is correct.

8 02 RS Cygni ✓
b 3 v 7.20
v 1 c 7.15
7.18 est = 7½

8 05 U Cygni
e 4 v 8.17 ✓
v 1 f 8.26
8.23 est = ~~9~~ 8½
v is so intensely red that comparison is difficult

Oct. 14, 1902

9 SS Cygni

o γ 3 v 12.07 ✓

12.14

12.10

v = p. est = 12

(10) (22) L. P. P.

Friday, October 17, 1902.

T ~~X~~ Andrm

M

7 30 Moon very near, field very bright

h 3 v 9.76
v 1 k 9.72
9.74 est = 10? ✓

T Cass

32

d 4 v 7.64
v 2 e 7.67
7.66 est = 8 ✓

R Piscium
too near moon.

35 S Persei

f 2 v 9.27 ~~8.58~~
v 4 g 9.13 ~~8.36~~
9.20 ~~8.47~~ est = 9½ ✓

38 T Persei

c 1 v 8.48
v 5 d 8.18
8.33 est = 8 ✓

T looks brighter than usual

Oct. 17, 1902

7 50 R Urs. Maj.
g 1 v 7.81
v 4-5 h 7.73
7.77 est = 7 1/2 ✓

7 54 R Urs. Min.
d 3 v 9.56
v 1 e 9.52
9.54 est = 9 ✓

8 20 R Draconis
b 2 v 7.39
v 3 e 7.14
7.26 est = 7 ✓

8 25 R Cygni
b 1 v 8.45
v 3 m 8.46
8.46 est = 8 1/2 ✓

8 30 S Cygni
f 2 v 10.17
v 3 g 9.96
10.06 est = ~~8~~ 10 ✓

8 33 R S Cygni
b 3 v 7.20
v 2 c 7.05
7.12 est = 7 ✓
v very red

Oct. 17, 1902.

8 40 U Cygni

e 3 v 8.07

8.26

r 1 f 8.16 est = 8½ ✓

8 43 T Cephei

v = k 8.78

8.98

v 2 l 8.88 est = 9½ ✓

8 45 S Cephei

a 2 v 7.60

7.43

v 4 b 7.52 est = 7 ✓

8 50 SS Cygni

var not seen ✓

o seen 11.8

(26) (148) L. P. P.

Monday, October 20, 1902

6 40 R Ophiuchi
v not seen
o seen
1.0.3
Field low

7 05 S Coronae
s 3 v
12.71
"not" on chart (Hagen)
est = 12.8

7 15 R Herculis
var. not seen ✓
Hagen chart not in place
so I can not give faintest
comp. star. Sky clear, stars
of 12ᵐ.5 certainly seen

7 25 U Herculis
s 2 v
v 3 t
11.08
11.30
11.19 est = 12 ✓

7 3$\overset{0}{5}$ W Herculis
s 1 v
13.29 est = 13
t not seen

Oct. 20, 1902

7 35 S Herculis
o 3 v 10.36
v 0-1 p 10.47
10.42 est = ~~10~~ 9½ ✓

7 40 R Delphini
m 2 v 10.34
v 1 n 10.66
10.50 est = 10 ✓

7 50 T Aquarii
s 1 v 11.12
v 3 t 11.22
11.17 est = 10½ ✓

7 55 S Aquarii
f 3 v 8.67
v 0-1 g 8.48
8.58 est = 8½ ✓

~~7~~ 8 05 R Pegasi
k 1 v 8.80
v 4 l 8.67
8.74 est = 8 ✓

8 15 S Pegasi 12.79 ✓
u 3 v
est = 13

Oct. 20, 1902.

8 20 R Aquarii
n 2 v 10.01
v 1 o 10.04 est = 9 ✓
10.02

Sky very hazy. Moon in east.

8 25 S Ceti
h 1 v 9.13
v 2 k 9.14 est = 9 ✓
9.14

8 28 R Piscium
f 3 v 8.49
v 1 g 8.47 est = 8½ ✓
8.48

8 45. V Cygni
v invis.
s seen 12.6 ✓

8 48 SS Cygni
o 3 v 12.07
v = p 12.14 est = 12 ✓
12.10

8 55 U Persei
e 2 v
v = f chart ⓐ ✓ est = 8½

L.P.F. Ha visual seminar (25) (173)

Tuesday, Oct. 21, 1902

7 15 R Cass.

s 1 v 11.88
v 3 t 11.82
11.85 est = 11 1/2 ✓

7 30 R Camelop.

h 1 v 11.32
v 2 k 11.60
11.46 est = 10 1/2 ✓

h & k are not marked on Hagen, but on back of old photo. l is very faint, and I can not see it.

S Serpentis
Too low.

7 40 T Androm

h 1 v 9.56
v 2 k 9.62
9.59 est = 9 1/2 ✓

Oct. 21, 1902

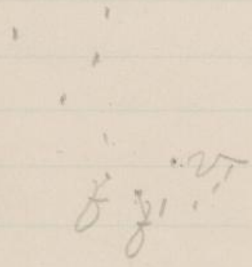
7.42 – 8.08 Cas.
Fast. photog. sequence.

High power { c 2 d, d 3 e, e 1 h, h 2 g, g 3 k, k 5-6 l, l 4 m ; m very near var, n seen but not faintest—

a 6 b, b 4 f, f 2 c } Low power

g 3 v
v = k est = 10½

8.08 to 8.25 V Delphini



f' 1 v
v ~~2~~ 3 f est = 11
or
e 5 v
v 3 f

The difference is large bet. e & f.

Oct. 21, 1902.

8 33 S Urs. Min
e 4 v
v = f   est = 10 ✓

8 40 R T Cygni
d 1 v ✓
v 3 e   est = 8
(Pencil final notation)

8 45 R S Capricorni
a 4-5 v ✓
v 2 d'   est = 8 1/2

8 50 – Aquarii   21 7 – 14 48
c 0-1 v
v 4 d   est = 8 1/2 ✓

V Pegasi
9 00 g 4 v
v 5 h   est = 10 1/2 ✓

Oct. 21, 1902.

9 08 W Aquarii
var. invis ✓
d seen
e not seen

d seems to be very faint for a Durchmusterung star.

9 15 SS Cygni
o 2 v
v 1 p est = 12 12.00 ✓

9 30 Z Aquarii

~~[illegible]~~ est = 9 1/2 ✓
v 4 b
a is far too bright.
There is no star on my chart which is a little brighter than the var.

9 35 R Urs. Maj.
~~[illegible]~~ v 2 g est = 7 1/2 7.51 ✓

Oct. 21, 1902

9 40 R Draconis ✓

v = b 7.19:

v 3 c 7.14 ✓

7.16 est = 7

(26) (199) L.P.P.

(10) (22)

Wednesday, Oct. 22, 1902

7 07 T Cass
d 3 v 7.54
v 3 e 7.57
7.56 est = 8

(R Androm.
7 15 t 4 v 11.44 ✓
v 2 u 11.36
11.40 est = 12 1/2

~~9~~ 7 20 R Arietis
l 2 v 10.25
v 1-2 m 10.12
10.18 est = 10 ✓
✓

7 23 S Persei
v = f 9.07
v 5 g 9.03
9.05 est = 9 ✓

7 25 T Persei ✓
c 1 v 8.48
v 3 d 8.38
8.43 est = 8

7 35 R Sagittarii
v = s 10.86 ✓
v 4 t 10.76
1081 est = 12

Oct. 22, 1902.

7 50 S Sagittarii

11.46?

t 3 v

est = ~~13~~ 12½

Var. identified with photographic enlargement merely. This is of course extremely uncertain and the star observed may not be the var. Also the faint stars in sequence are too far N. There is nothing any brighter in position of the variable

55 S Boötis

v invis. 11.7 ✓

l seen

8 00 R Cygni

v = m 8.76

v 3 n 8.84

8.80 est = 9½ ✓

R S Cygni

a 5 v 6.73

v 1 b 6.80

6.76 est = 7 ✓

Oct. 22, 1902.

8 30 S Cygni

g 4 v —— 10.66 ✓

est = 10 1/2

I can not quite chart what has ft. stars marked ——

g 1 f ——

8 32 SS Cygni

o 2 - 3 v —— 12.02 ✓ 12.14 ✓ 12.08 ✓

~~v = f~~ v = f est = 12

8 40 R Trianguli

Final sequence ——

h 5 k
k 3 l

Cloud forming over region

Stopped by clouds.

(~~4~~2) ~~4~~(24) (20) (219) L. P. P.

Thursday, Oct. 23, 1902

7 10 T Andromedae
2 3 v
v 0-1 k 9.76 ✓ 9.77 ✓ 9.76 ✓ est = 10 ✓

R Trianguli

Est. of ~~plotting~~ visual sequence from
f f down
f 4 g
g 2 h
h 5-6 k
k 3-4 l
l 4-5 l'
l' 3 (29)
(29) 4 m
m 1 n
n 3 ψ
ψ (43)
(43) 2 ρ

7 40 ~~Hagen 29~~ Hagen (29) 3 v ✓
v 7 m est = 11

Oct. 23, 1902

7 55 R Cass
r 0-1 v ~~11.36~~
v 4 s 11.41
11.38
11.40 est = 11 1/2 ✓

8 0? o Ceti
α 4 v 7.68
7.92
v 1 β 7.80 est = 8 ✓

8 08 R Ceti
v = g 8.70
8.67
v 3 h 8.68 est = 9 1/2 ✓

8 20 R Aurigae
g 1 v 9.38
9.52
v 2 h 9.45 est = 10 ✓

8 27 R Lyncis
d 4 v 8.42
8.55
v 0-1 l 8.48 est = 8 ✓

8 30 X Ceti
v = e
v 3 d est = 8 1/2 ✓

Hazy. photo, c not clearly seen. Star near seems to be the D.M. star

Oct. 23, 1902.

~~9 10~~
8 50 X Aquarii

v miss ✓
k seen b = 12.5 ~~[illegible]~~
Sky a little hazy

Est. of photog. sequence

a – b too large
b – c much too large
c 4 d
d 3 e
e ~~f~~ 1 f
~~f~~
f 1 g
~~g 2 h~~
g 3 h
h 4-5 k

9 00 T Cephei

v = k 8.78 –
v 4 l 8.78 ✓ 8.78 ✓ est = 9 ✓

9 02 SS Cygni

O2 v 11.97 ✓
v = p 12.14 ✓ 12.06 ✓ est = 12 ✓

Oct. 23, 1902.

9 20 U Orionis
q 2 v 10.38
v 1 r 10.46 est = 10½ ✓
10.42

S Lacertae
Photog. comp. stars
a 2 b
b 5 c
~~c~~ 3 d
d 1 e
e 4 f

e 1 v
9 55 v 3 f est = 12½ ✓

Field very high.

~~#~~(24) (243)
~~#~~(22) #(46)

L. P. P.

Tuesday, Oct. 28, 1902

8 15 SS Cygni

o 2 v $\frac{11.97 :}{12.14 =}$ ✓
v = p 12.06 est = 12

8 25 T Cephei

g 3 v 8.48 :
v 2 k 8.58 : ✓
8.53 est = 8 1/2
v red.

~~h > g~~

h 3 g

8 50 U Persei chart (b)

b 4 v ✓
v 2 c est = 8 1/2

Final sequence

chart (b) & Hagen

a 4 b
b 3 c (vis)
vis c 4 ~~phot.~~ c (marked on Hagen)
(~~phot. c 1-2 vis d chart (k)~~)
(vis d 1-2 ~~phot.~~ c (Hagen)
~~Hagenphot.~~ c 1 vis e
vis e 5-6 ~~phot.~~ Hagen d
Hagen d 1 Hagen e
e is not a D.M. Star.

Oct. 28, 1902

R S Capricorni

9 10 a 3 v
v 4 d

est = 8 1/2
Seeing poor in region

V Pegasi

9 30 a 4 b
b 3-4 c
c 5 d
d 5-6 e
e 1 f
f 2 g
g 5 k
k 2 h
h 2 l

d 5 v
v 1 e

est = 10

Oct. 28, 1902,

9 40 R Geminorum

m3v 9.17 9.23

v0-1n 9.20 est = 9½

Field corr.

9 43 S Ceti

g2v 8.91 8.78

v2-3h 8.84 est = 8½

9 46 R Piscium

v=g 8.57 8.52

v2gh 8.54 est = 9

9 55 R Arietis

k3v 10.05 10.05

v=l 10.05 est = 10

(18) (261)

#(16) #(62)

L.P.

Wednesday, October 29, 1902

715 Y Cass.
Clouds formed over it before estimate could be made

730 g 3 v
v 0-1 k est = 10½ ✓

735 T Androm
k 2 v 10.02 ✓
v 1 l 9.94 ✓ est = 10 ✓
9.98

750 R Androm.
t 5 v ✓
v 0-1 u 11.50 :
11.51 :
~~1~~1.50 est = 12

752 T Cass.
d 3 v 7.54 ✓
v 2 e 7.67 ✓ est = 8 ✓
7.60

758 T Persei
b 1 v 8.20 :
8.18 : ✓
v 2 c 8.19 : est = 8

Oct. 29, 1902

8 00 S Persei
e 3 v
v = f
8.88
9.07
8.98 est = 9

o Ceti
8 05 α 3 v
v 1 β
7.58
7.92
7.75 est = 8. ✓

R Ceti
8 15 g 1 v
v 3 h
8.80
8.67
8.74 est = 8½ ✓

R Aurigae
8 20 f 4-5 v
v 1 g
9.27
9.18
9.23 est = 9 ✓

R Lyncis
8 23 e 1 v
v 4 f
8.70
8.62
8.66 est = 8½ ✓

R Urs. Maj.
too bright to compare
with g

Oct. 29, 1902.

8 35 SS Cygni ✓

o 2 v 11.97

v 1 p 12.04 est = 12

12.00

S Bootis.

8 40 v viris 12.5

n glimpsed

m seen steadily

8 55 R Camelop.

~~v~~

f 3 v 10.62

v = g 10.80 est = 10

10.71

9 00 R Urs. Min

d 4 v 9.66

v = e 9.62 est = 9½ ✓

9.64

R Draconis

9 05 a 1 v 6.98 ✓

v 2 b 6.99 est = 6½

6.98

R Cygni

9 07 n 2 v 9.34 ✓

v 1 o 9.52 est = 10

9.43

Oct. 29, 1900

9,5 R Delphini ✓

m 3 v 10.44

v 0-1 n 10.71

.115

10.58

est = 10½

(32) (293) L. P. P.

Friday October 31, 1902

7 25 S Urs. Maj.
n-0-1v 11.13
v 4 0 11.18
11.16 est = 11 ✓

7 35 T Urs. Maj.
Can not find Hagen's a group of faint stars near position of var. but I can not identify var.

S Coronae
7 40 v invis. 11.2 ✓
q seen Field low.

7 55 W Herculis
v invis. 12.5 ✓
q seen

8 00 T Aquarii ✓
p 1 v 9.89
v 2 q 9.96
9.92 est = 10 1/2

8 15 S S Cygni ✓
p 1 v 12.24 est = 12

Oct. 31, 1902

The index on west pier got out of place. Could not find any field. Had to set by known star in ephemeris

8 45 R Pegasi
k 2 v 8.90
v 4.5 m 8.89 ✓
8.90
b is too far away
est = ~~10~~ 9½

8 47 S Aquarii
f 2 v 8.57
v 1 g 8.43
8.50 est = 9 ✓

R Aquarii
8 50 n 1 v 9.91 ✓
v 3 o 9.84
9.88 est = 10½

S Pegasi
9 07 u 3 v 12.79
v = w 12.94
12.86 est = 13 ✓
Stars seen very distinctly

Oct. 31, 1902.

U Cygni ✓
9 10 e 2 v 7.97:
v 2 f 8.16:
8.06 est = 8½

U Ceti ✓
9 25 p 2 v 10.74:
v 2 q 10.85:
10.80 est = 10½

9 50 R Trianguli ✓
(29 Hagen) 3 v
v = m (photographic)
est = 11

9 55 U Orionis ✓
r 1 v 10.66
v 3 s 10.75
10.70 est = 11½

(21) (314)

L. P. P.

Monday, Nov. 3, 1902

7 23 R Cass ✓

04 v
v 0-1 p
10.33
10.45
10.39
est = 10 1/2

7 30 S Cygni ✓

h 1 v
v 2 k
10.76
10.88
10.82
est = 11

obs. difficult.

Diff. bet g + h seems large

8 7 h

On looking at the sky I find it ~~nearly~~ well covered with haze or thin cloud, so that the obs. of S Cygni may be uncertain.

Clouds + haze.

8 35 SS Cygni ✓

γ.1 b 3 v
v = p est = 12
12.07
12.14
12.10

Seeing fair

November 3, 1902.

8 38 S Persei ✓

g 1 v 9.17

v 3 g 9.23

9.20 est = 9 1/2.

8 40 T Persei ✓

b 3-4 v 8.45

v 1 c 8.28

8.36 est = 8

(10)(324) L.F.P.

Wednesday, Nov. 5, 1902

7 35 SS Cygni

n 7-3 v 11.57

v 1 o 11.67 est = 11.7 ✓

11.62

Sky hazy, but var. certainly a little brighter than usual.

T Cass. 7.54 ✓

d 3 v 7.67

v 2 e 7.60 est = 8 c

4 (328)

Friday, November 7, 1902

M

7 05 S Cygni
k3v 11.32 ✓ C
v = ~~8~~ l 11.36 Mr. Wendell's
11.37 chart
est = 10½

S S Cygni ✓
c0-1v 8.55
7 10 v4d 8.20 est = 8
8.32

T Andromedae
7 15 p3v 11.20
v1q 11.14 est = 12 C
11.17 ✓

7 20 R Andromedae
t2v 11.24 e
v3u 11.26 est = 11½
11.25 ✓

R Piscium
7 24 h1v 8.82
v2k 8.75 est = 8 C
8.72 ✓

R Arietis C
7 30 k1v 9.85
v2l 9.85 • est = 9
9.85

Nov. 7, 1902,

735 o Ceti
β 4 v
v 1 γ
8.42
8.48
8.45
est = √ 8 c

7.42 R Ceti
δ 2 v
v 1 h
8.90
8.87
8.88
est = ✓ 9½ C

745 R Aurigae c
f 4-5 v
v 1 g
9.27
9.18
9.22
est = 9 ✓ C

748 R Lyncis
e 3 v
v 1 f
8.90
8.92
8.91
est = 9 ✓ C

R Urs. Maj.
Too bright to compare with g.

T Urs. Maj.
Too low. C

8 00 R Camelop.
g 1 v
v 3 g
10.62
10.50
10.56
est = 9½ ✓ C

Nov. 7, 1902,

8 v R Trianguli

photog. m # 2 v
v = n   photog. est = 11 1/2

adopted sequence,

a
b
c (Mr. Campbell's plac since it is nearer than the one letter μ, & the magn. is approx. the same)
d
e'   d 3 e'
e   e' 4 e
f
g
h
k
l   but l — l' rather large
l'' inserted
l'
l 3 l''
29 Hagen   l'' 4 l'
m
n
φ

Nov. 7, 1902.

8 40 V Pegasi
Est. photog. sequence

a 2 b
b 3 c
c 4 d
d 2 d'
d' 4 e

d' 1 v
v 4 e est = 9 1/2

Moon near.

9 05 S Tauri ✓ C
v invis
c seen

9 08 R Tauri ✓ C
v invis
c seen

9 15 R Gem. C
v = n 9.28 ✓
v 3 o 9.35 est = 9 1/2
9.32
Low

9 30 U Ceti C (30) (358)
o 1 v 10.40 ✓
v 1 p 10.34 est = 10
10.37

1901phae.proj..78IC

Wednesday, Nov. 19, 1902

7 00 T Androm.
v = s 11.77 ✓
v 4 t 11.65 est = 11½
11.71

7 03 T Cass
a 4 v 7.64 ✓ a
v 2 e 7.61 est = 8
7.62

R Androm
7 10 q 4 v 10.20 ✓
v 1 r 10.07 est = 10½ c
10.14

S Ceti
7 13 f 1 v 8.62 ✓
v 2 g 8.51 est = 8½ c
8.56

7 20 R Piscium
k 2 v 9.15 ✓ c
v = l 9.25 est = 8½
9.20

7 30 R Arietis
g 3 v 9.46
v 1 h 9.31 est 9 ✓ c
9.38

Nov. 19, 1902.

735 S Persei
e 1 v
v 1-2 f 8.92
8.92
8.95 est = ~~8~~ 9 ✓ C

737 T Persei C
b 1 v 8.20
v 3 c 8.08 est = 8
8.14

R Aurigae ✓ C
740 f 3 v 9.12
v 1-2 g 9.13 est = 9½
9.12

R Lyncis
745 v - f 9.02 ✓ C
v - 4 g 8.96 est = 9
8.99

750 R Urs. Maj.
v 4 g 7.31 est = 8 7.31
f not on chart. ✓ C

(That old watch [illegible] is again out of order)

805 SS Cygni ✓ C
f 1 v 9.49
v 2 f 9.42 est = 9½
9.46

Nov. 19, 1902.

8.15 R Camelop
v = e 9.82 ✓ C
v 3 f 10.02
9.92 Air very smoky.
Smell of coal gas very strong
in the dome. Definition does
not seem very sharp. Is this
due to coal gas?

8 20 R Urs. Min. ✓ C
d 3 v 9.56
v 1 e 9.52 est = 9½
9.54

8 30 R Draconis ✓ C
c 2 v 7.64
v 3 d 7.36 est = 7½
7.50

8 35 S Cygni
var invis. C
0 seen

R S Cygni
8 38 b 3 v 7.20 C
v 1 c 7.15 ✓ est = 7
7.18

Nov. 19, 1902

8 45 U Cygni
e 1 v 7.87
v 3 f 8.06
7.96 est = 8½ ✓ C

8 55 V Cygni
var invis.
s seen C

9 00 R Vulpec
v = f 8.27
v 3 g 8.47
8.37 est = 9½ ✓ C

9 08 T Cephei
f 1 v 7.79
v 3 g 8.88
8.84 est = 9 ✓ C

9 15 S Cephei
b 1 v 7.93
v 3 c 7.85
7.89 est = ~~8~~ 7½ ✓ C

Moon up. The sky has become so hazy that it is impossible to continue observations

(39) (397)

Thursday, Nov. 20, 1902

6 00 S Urs. Maj.
v not seen — C — Field hazy
n seen

6 03 T Urs. Maj.
v not seen. C Seeing very poor
l seen.

S Coronae
too low.

R Herculis
Field too hazy.

6 15 W Herculis
v invis — C
n seen

T Herculis ✓ C
6 20 m 3 v 9.74
v 1 n 9.72 est = 10
9.73

6 30 R Cygni
v = p 10.02 ✓ C
v 4 q 10.13 est = ~~9½ 10~~ 9½
10.08

6 40 R Delphini ✓ C
l 2 v 10.01
v 1 m 10.04 est = ~~9½~~ 10.
10.02

Nov. 20, 1902.

645 T Aquarii
m 2 v 9.10
v 1-2 n 8.91 est= 10 ✓ C
9.00

650 S Aquarii
f 2 v 8.57
v 2 g 8.33 est= 9 ✓ C
8.45

708 SS Cygni
v = g 9.62
v 3 h 9.68 est= 10 ✓
9.65

708 R Pegasi
v = o 9.83
v 4 p 9.68 est= 10½ ✓ C
9.76

725 S Pegasi
s 4 v 12.14
v 1 t 11.98 est= 12 ✓ C
12.0[illegible]

730 R Aquarii
m 1 v 9.70
v 1 n 9.71 est= 9½ ✓ C
9.70

735 o Ceti
γ 1 v 8.68
v 3 δ 8.52 est= 9 ✓
8.60

738 R Ceti
k 3 v 9.72
v 0-1 l 9.70 est= 9½ ✓
9.71

Nov. 20, 1902.

7 50 U Ceti
h 4 v
v 0-1 k   9.19 / 9.06 / 9.12   est = ~~9~~ 10 ✓ c

8 00 V Pegasi
d 3 v
v 3 e   est = 10

8 05 U Persei
b 3 v
v 2 c   vis. ch. (b)   est = 8½
b = phot. false

8 15 R Trianguli
l' 2 v
v 1 (29 Hagen)   est = 10½

8 22 S Urs. Min.
c 2 v
v 1 c'   est = 9½

8 30 U Orionis
s 2 v   11.2 v ✓ c
v 2 t   11.37 / 11.31   est = 12½

Nov. 20, 1902

8 40 R Gem.

0 3 v 9.95
v 2 p 10.02
9.98

√ c
est = 11

8 45 X Ceti

a 3 v
v 1 d est = 9

Star marked e on plate, which agrees in pos. w. D.M. star is not seen with low power. Star near is bright, and must have been obs. at Bonn unless e on photo. is var.

(38) (+35)

~~cell~~

Posted, Plotted, Ledgered.

Dec.

Tel. west Set 1° less dec.
for south ~~south~~ of 0°