



W. W. M.

Do you know what lens
Mr. Sullivan used to make
these negatives with. When
I asked him he couldn't tell
me the exact dimensions
of the lens or the maker.

He said he had talked
about these negatives with
you & seemed to think you
might know what lens
it was !!

M. R. C.

Photographs taken with
Camera attached to the
40" Refractor.

F. R. Sullivan

Sept. 13; 1904

Plate μ Tauri; - $4^h 10^m + 80^\circ 39'$
No. 1 ✓ Exposure 75^m Began at 15:05 C.S.T.

Sept. 13; "

Plate ξ Persei; - $3^h 53^m + 35^\circ 30'$
No. 2 ✓ Exposure 55^m Began at 12:43 C.S.T.

Sept. 16; "

Plate ϵ Pegasi; - $21^h 39^m + 9^\circ 25'$
No. 3 Exposure 70^m Began 11:05 C.S.T.

Sept. 16; "

Plate γ Piscium; - $23^h 12^m + 2^\circ 44'$
No. 4 Exposure 162^m Began at 12:34 C.S.T.

Oct. 28; "

Plate Possible var. east of T.
No. 5 T Vulpeculae; - $20^h 47^m + 27^\circ 53'$
Exposure 80^m Began at 6:30 C.S.T.

Nov. 1; "

Plate T Vulpeculae; - $20^h 47^m + 27^\circ 53'$
No. 6 Exposure 47^m Began at 6:20 C.S.T.

Nov. 1; 1904

Plate 16 Pegasi; - $21^h 48^m + 25^\circ 27'$
No. 7 Exposure 60^m Began at 7:25 C.S.T.

Nov. 1; "

Plate 10 Lacertae; - $22^h 35^m + 38^\circ 32'$
No. 8 Exposure 60^m Began at 8:42 C.S.T.

Nov. 1; "

Plate 49 Cassiope; - $0^h: 31^m + 53^\circ 38'$
No. 9 Exposure 55^m Began at 11:10 C.S.T.

Nov. 1; "

Plate H.P. 470; - $2^h 54^m + 51^\circ 57'$
No. 10 Exposure 56^m Began at 13:28 C.S.T.

Nov. 8; "

Plate γ Canis Majoris; - $6^h 59^m - 15^\circ 29'$
No. 11 Exposure 30^m Began at 16:02 Nov. 8, C.S.T.

Nov. 11; "

Plate 10 Lacertae; - $22^h 35^m + 38^\circ 32'$
No. 12 Exposure 58^m Began at 8:02 C.S.T.

Nov. 11; 1904

Plate 49 Cassiope; - $0^h 31^m + 53^\circ 38'$
No. 13 Exposure 48^m Began at 9:23 C.S.T.

Nov. 11; "

Plate 68 Cassiope; - $0^h 39^m + 47^\circ 19'$
No. 14 Exposure 70^m Began at 10:30 C.S.T.

Nov. 11; "

Plate 29 Persei; - $3^h 12^m + 49^\circ 51'$
No. 15 Exposure 50^m Began at 12:20 C.S.T.

Nov. 11; "

Plate τ Arietis; - $3^h 16^m + 20^\circ 47'$
No. 16 Exposure 63^m Began at 13:33 C.S.T.

Nov. 11; "

Plate 25 Orionis; - $5^h 20^m + 1^\circ 45'$
No. 17 Exposure 45^m Began at 15:01 C.S.T.

Nov. 11; "

Plate γ Orionis; - $5^h 22^m + 3^\circ 1'$
No. 18 Exposure 46^m Began at 16:08 C.S.T.

Nov. 15; 1904

Plate Bond 619; - $5^h 30^m - 5^\circ 30'$
No. 19. Exposure 172^m Began at 13:45 C.S.T.

Nov. 15; "

Plate 16 Argus; - $8^h 05^m - 18^\circ 57'$
No. 20 Exposure 40^m Began at 16:58 C.S.T.

Nov. 18; "

Plate ϵ^1 Orionis; - $5^h 30^m - 4^\circ 54'$
No. 21 Exposure 45^m Began at 15:06 C.S.T.

Nov. 18; "

Plate 64 Orionis; - $5^h 58^m + 19^\circ 41'$
No. 22 Exposure 65^m Began at 16:07 C.S.T.

Nov. 29; "

Plate γ Cephei; - $23^h 35^m + 77^\circ 5'$
No. 23 Exposure 95^m Began at 5:51 C.S.T.

Dec. 6 "

Plate γ Cephei; - $23^h 35^m + 77^\circ 5'$
No. 24 Exposure 75^m Began at 5:22 C.S.T.

Dec. 6; 1904

Plate α Arietis; - $2^h 02^m + 23^\circ 0'$
No. 25 Exposure 35^m Began at 6:59 C.S.T.

Dec. 6; "

Plate β Geminorum; - $7^h 39^m + 28^\circ 16'$
No. 26 Exposure 25^m Began at 15:45 C.S.T.

Dec. 6; "

Plate γ Geminorum; - $6^h 32^m + 16^\circ 29'$
No. 27 Exposure 15^m Began at 16:25 C.S.T.

Dec. 13; "

Plate ϵ Hydrae; - $8^h 42^m + 6^\circ 50'$
No. 28 Exposure 135^m Began at 12:00 C.S.T.

Dec. 30; "

Plate τ Arietis; - $3^h 16^m + 20^\circ 47'$
No. 29 Exposure 64^m Began at 5:48 C.S.T.

Dec. 30; "

Plate ξ Persei; - $3^h 53^m + 35^\circ 30'$
No. 30 Exposure 46^m Began at 7:08 C.S.T.

Dec. 30; 1904

Plate τ Tauri; - $4^h 36^m + 22^\circ 46'$
No. 31 Exposure 48^m Began at 8:11 C.S.T.

Dec. 30; "

Plate θ Orionis; - $5^h 30^m - 5^\circ 30'$
No. 32 Exposure 90^m Began at 9:13 C.S.T.

Dec. 30; "

Plate ι Monocerotis; - $6^h 23^m - 4^\circ 42'$
No. 33 Exposure 65^m Began at 11:22 C.S.T.

Nov. 24; 1905

Plate τ Monocerotis; - $6:20 + 7^\circ 8'$
No. 34 Exposure 200^m Began 13:48 C.S.T.

Nov. 24; 1905

Plate μ Orionis $5^h 57^m + 9^\circ 39'$
No. 35 Exposure 60^m Began 12:22 C.S.T.

Dec. 29; 1905

Plate ι Ursae Maj $8^h 54^m + 42^\circ 11'$
No. 36 Exposure 120^m Began 14:53 C.S.T.

March 16; 1906

Plate μ Orionis; - $5^h 57^m + 9^\circ 39'$
No. 37 Exposure 120^m Began 7:10 C.S.T.

March 16; "

Plate α Crateris; - $10^h 55^m - 17^\circ 46'$
No. 38 Exposure 180^m Began at 9:29 C.S.T.

June 26; 1905

Plate γ Aquilae; - $19^h 42^m + 10^\circ 22'$ Very faint
No. 39 Exposure 150^m Began at 11:27 C.S.T.

Aug 5; 1905

Plate γ Aquilae; - $19^h 42^m + 10^\circ 22'$
No. 40 Exposure 150^m Began at 10:40 C.S.T.

July 31; 1905

Plate γ Aquilae; - $19^h 42^m + 10^\circ 22'$
No. 41 Exposure 150^m Began at 10:32 C.S.T.

May 10; 1907

Plate ξ Scorpii; - $15:59 + 11^\circ 6'$
No. 42 Exposure 47^m Began at 11:12 C.S.T.

April 19: 1907

Plate ξ Scorpii 15:59 - $11^{\circ} 6'$
No. 43 Exposure 46^m Began at 13:34 C. S. T.

April 22: 1907

Plate 5 Serpentis 15:14 + $2^{\circ} 9'$
No. 44 Exposure 180^m Began at 10:57 C. S. T.

June 10: 1907

Plate 10 Lacertae 22:35 + $38^{\circ} 32'$
No. 45 Exposure 68^m Began at 14:12 C. S. T.

June 14: 1907

Plate η Virginis 12:15 - $0^{\circ} 7'$
No. 46 Exposure 120^m Began at 8:28 C. S. T.

June 16: 1907

Plate γ Aquilae 19:42 + $10^{\circ} 22'$
No. 47 Exposure 178^m Began at 11:00 C. S. T.

May 12: 1907

Plate R.T. Aurigae 6:22 + $30^{\circ} 33'$
No. 48 Exposure 90^m Began at 8:40 C. S. T.

June 2: 1905

Plate z Herculis 17:54 + $15^{\circ} 7'$
No. 49 Exposure 180^m Began at 8:56 C. S. T.

June 17: 1907

Plate τ Cygni 21:11 + $37^{\circ} 36'$
No. 50 Exposure 160^m Began at 13:03 C. S. T.

July 29: 1907

Plate β Cephei 21:27 + $70^{\circ} 07'$
No. 51 Exposure 120^m Began at 9:21 C. S. T.

Exposures on Mars. 1924.

- No. 1 Aug 12; Ended at 22:00 sid. time exp. 2 sec.
Cramer Inst. Iso. plate, telescope scale
= 300 Plate scale = 33. Aper = 25 inches
- No 2 Aug 12; Ended at 23:24 sid time, exp 2 sec.
Cramer Inst. Iso plate telescope scale
= 300 Plate scale = 34 Aper = 25 inches
- No 3 Aug 13 Ended at 22:20 sid time exp 3 sec.
Cramer Inst Iso plate telescope scale
= 300 Plate scale = 33 Aper = 27 inches.
- No 4 Aug 13 Ended at 23:20 sid time exp 3 sec.
Cramer Inst Iso plate telescope scale
= 300 Plate scale = 32 Aper = 27 inches.
- No 5 Aug 17; 1924 Began at 22:20 End at 22:53
Sid. time, exp = $2\frac{1}{2}$ ". Cramer Inst. Iso
Plate, telescope scale = 300 Plate scale = 33
Aper = 40"
- No 6 Aug 17; 1924 Began 23:20 End 23:30 sid time.
Plate & scale same as above. Aper. 27"
Exp = 3"

No 7 Aug 17; 1924; Began 0:10 End 0:30 sid time.
Same Plate, telescope scale = 290 Plate scale =
65. Aper = 27" Exp = 3"

No 8 Aug 21; 1924; Ended at 17:37 Sid time =
Jupiter Cramer Inst. Iso plate, telescope scale = 300
Plate scale = 33 Aper = 27" Exp = 10 & 12"

No 9 Aug 22; 1924 Ended at 22:20 Sid time
telescope scale = 300 Plate scale = 33 Aper = 27"
Exp = 3" Cramer Inst. Iso plate.

No 10 Aug 22; 1924 Ended at 22:42 Sid time
Cramer Inst Iso plate telescope scale = 300
plate scale = 33 Aper 27" Exp = 4 & 5 sec.

No 11 Aug 22; 1924 Ended at 23:50 Sid time.
Cramer Inst Iso plate telescope scale = 300
Plate scale = 33 Aper = 27" Exp = 5 sec.

No 12 Aug 23; 1924 Ended at 23:15 sid time.
Second lens. Exp = 2" & 1 of 3"
Cramer Inst. Iso plate, Aper = 27"

No 13 Aug 24; 1924 Ended at 22:10 Sid time
Cramer Inst. Iso plate telescope scale
300 Plate scale = 33 Aper = 27" Exp = 5 sec.

No 14 Aug 24; 1924 Ended at 23:00 Sid time
Second lens. Exp = 3 sec. Aper = 27"
Seeing very poor.

No 15 Aug 26; 1924 Began at 22:15 Ended at
22:22 sid time. telescope scale = 300
plate scale = 37 Aper = 27" Exp = 5 sec.
Lens No 1.

No 16 Aug 28; 1924 Ended at 21:30 sid time
Prim. focus of 40" Aper = 24" & 27"
Exposure = $\frac{1}{2}$ & 1 sec. scale on brass
rod = 174. Regular plate holder &
8x10 ray filler used in this case.

No 17 Aug 30; 1924; Ended at 23:15 sid time
40" aper, telescope scale = 300 plate scale =
33 Exp = 6 sec. sky thick & cloudy.

No 18 Aug 30; 1924; Ended at 23:50 sid. time. A_{per} = 40" telescope scale = 300 plate scale = 33 Exp = 6 or 12 sec through clouds.

No 19 Aug 31; 1924 Ended at 2:40 sid time Venus A_{per} = 27" telescope scale = 300 & plate scale = 37; 1/2 or 1 sec. exp. seeing bad.

No 20 Aug 31; 1924 Ended at 3:08 sid time Venus A_{per} = 30" telescope scale = 300 plate scale = 37; Exp = 1 sec. seeing bad.

No 21 Sept 2; 1924 Ended at 22:32 sid time A_{per} = 27" telescope scale = 300 plate scale = 34. Exp = 5 sec.

No 22 Sept 2; 1924 Ended at 23:11 sid time. A_{per} = 27" telescope scale = 300 & plate scale = 34. Exp = 4 sec. Second lens.

No 23 Sept. 9; 1924; Ended at 23:03 sid. time A_{per} 27" telescope scale 300; plate scale 33 & 37 Exp. 5 sec & 6 sec.

Rose Var. or ast. 202-10	8:57	1930	V; M. Seen
5+3°4'	Feb. 18		
Rose Var. 202-6	9:02	1930	V; Br. in field. 3 br. than ^e _{1/2}
5+10°4'	Feb. 18		
Rose Var. or ast. 223-26	11:45	1930	V; M. S
5+5°7'	Feb. 18	12:15 P.M. C.S.T.	
Rose Var. 225-19	12:29	1930	V = a - .2
5-18°0'	Feb. 18	13:08 P.M. C.S.T.	
Rose Var. 225-7	12:17	1930	V = a - .3; V = e ^e _v
5-13°2'	Feb. 18	12:54 C.S.T. 5 = -13°15'	
Rose Var. or ast. 225-13	12:34	1930	V; M. S. Moonlight
5-18°0'	Feb. 18	13:30 C.S.T.	

Rose Var. α 9:02 1930 $V = a + 0$
202-6 $\delta + 10^{\circ} 4'$ Feb. 22 12:03 C.S.T.

Rose Var. α 12:29 1930 $V = a + 4$
225-19 $\delta - 18^{\circ} 0'$ Feb. 22 4:03 A.M. C.S.T.

Rose Var. α 12:17 1930 $V = a - 3$
225-7 $\delta - 13^{\circ} 2'$ Feb. 22 4:34 A.M. C.S.T.

Rose Var. α 6:35 1930 $V = a - 1.0$ or $= 13^m$
212-9 $\delta + 13^{\circ} 1'$ Mar. 6 8:35 C.S.T. $\delta = +13^{\circ} 18'$

Rose Var. α 8:57 1930 V M.S.
or ast.
202-10 $\delta + 3^{\circ} 4'$ Mar. 6 9:17 C.S.T. $\delta \pm 2^{\circ} 41'$

Rose Var. α 8:07 1930 $V = 15^m$
187-6 $\delta + 14^{\circ} 3'$ Mar. 6 9:55 C.S.T. Prov. obs. field?

Rose Var. α 12:17 1930 $V = a + 3$
225-7 $\delta - 13^{\circ} 2'$ Mar. 6 14:30 C.S.T. $\delta = -13^{\circ} 44'$

Rose Var. α 12:29 1930 $V = a - .5$
225-19 $\delta - 18^{\circ} 0'$ Mar. 6 14:42 C.S.T.

Rose Var. α 12:34 1930 $V = a + 3$
or ast.
225-13 $\delta - 18^{\circ} 0'$ Mar. 6 15:00 C.S.T. $\delta = -17^{\circ} 17'$

Rose Var. α 12:34 1930 $V = a + 5$
or ast.
225-13 $\delta - 18^{\circ} 0'$ Mar. 8 12:25 C.S.T. $\delta = -17^{\circ} 17'$

Rose Var. α 12:29 1930 $V = a - 3$
225-19 $\delta - 18^{\circ} 0'$ Mar. 8 12:35 C.S.T.

Rose Var. α 14:12 1930 $V = a + 5$
340-9 $\delta - 5^{\circ} 6'$ Mar. 8 12:50 C.S.T. $\delta = 5^{\circ} 31'$

Rose Var. α 13:16 1930 $v = m. 5.$
148-12 $\delta - 3^{\circ} 0'$ Mar. 8 13:17 C.S.T.

Rose Var. α 13:40 1930 $v = b + .1$
148-3 $\delta + 1^{\circ} 2'$ Mar. 8 13:27 C.S.T. $\delta = + 1^{\circ} 5'$

Rose Var. α 13:6 1930 $v = 15 m$
201-2245-24 $^{\circ} 7'$ Mar. 8 13:53 C.S.T.

Rose Var. α 9:9 1930 $v = a + 1.0$
202-11 $\delta + 3^{\circ} 0'$ Mar. 18 11:11 C.S.T.

Rose Var. α 12:17 1930 $v = 14 m$
225-7 $\delta - 13^{\circ} 2'$ Mar. 18 11:55 C.S.T.

Rose Var. α 12:18 1930 $v = a - .3$
139-14 $\delta - 2^{\circ} 3'$ Mar. 18 12:10 C.S.T.

Rose Var. α 12:34 1930 $v = a + .7$
225-13 $\delta - 18^{\circ} 0'$ Mar. 18 12:38 C.S.T.

Rose Var. α 13:40 1930 $v = b - .3$
148-3 $\delta + 1^{\circ} 2'$ May 3 10:45 C.S.T.

Rapid Developer (Parallax Plates)

1 { Water 16 oz.
Metol 40 grains
Hydrochinon 40 grains
Adinol 80 grains
Soda Sulph 2 oz.

2 { Water 16 oz.
Caustic Soda 240 grains or (KOH)
Potas Bromide 20 grains.

Use equal parts

2
2
2

of ... I will lease your land for the
next three years. and will give you the
usual share rent whitch is $\frac{1}{4}$ the crop
delivered in town. would put what is broak
to corn this sprind. if you decide to allow
me to break some. let me know at once
and how much. because it will be late
when I can get your reply. (Over)

1526
 174
 200
 100
380
 2380
416
 1964

amount in
 First N. at. Bk

350
150
 500
50
 450
 34
4.16

1204
 3204
 2000

1964
1240
 3204

something over
 906.

500
84
 4.16
 50
34
 84

~~1964~~
~~3~~
~~58,92~~

92
 242
906
 1240
 in U.S. Bk.

Water 64 oz. ✓
 Metol 160 grains ✓
 Hydro 160 " ✓
 Aduro 320 " ✓
 Soda Sulph. ^{crystals} 8 oz. ✓
 $\frac{1}{2}$ for any 1

Water 64 oz.
 Caustic Potash 960 grs. ✓
 Potas Bromide 80 grs. ✓

320
 280
 40 80 / 480 \ 6
 480
 24
 20
 480

F. P. Sullivan Dec

$$\begin{array}{r} 24 \overline{) 960} \quad (40 \\ \underline{96} \end{array}$$

$$20 \overline{) 40} \quad (2$$

$$\begin{array}{r} 24 \overline{) 160} \quad (7 \\ \underline{8} \end{array}$$

160

Sept 9; 1923

Ring Nebula in Lyra

Began C.S.T. 8:10 ended 11:40 P.M.

Exposure 3 h 30. Temp 14°C Focus

181 Graflex Plate without filter.

