NEGATIVES WITH THE 24-INCH REFLECTOR

		Pages
R 1952 - 2832	1907 Nov.30 to 1912 Dec.31	12 - 157
R 2833 - 3519	1913 Jan. 8 to 1916 Dec.13	188 - 295

Observers:- Parkhurst, Jordan (R 300 - 2116), Stetson, Lee, Slocum, Mitchell, Gingrich, Joy, van Maanen, Alden, Gushee, Hubble

M 31. Andromeda Nebula	0h 37m 17s	+40° 43' 4	
M 41 Cluster in Can Maj.	6 42.7	~~+~~ −20° 38'	
M 35 " " Gemini	6 2.7	+24 21	
Group of Nebulae	7 22.4	+34 1	
χ Persei	2 15	+56	
Pleiades	3 41	+24	
Praesepe	8 35	+20	
Ring Neb. in Lyra	18 50	+32 54	
" " " Cygnus	20 12	+30 15	

Focus Plates, con. on page 56

1907	Settings	Offset	Aper	Exp.	Plate	Temp.	Holder	Star	Sid T.	IV	Dec	Results &c.
Nov 27												
No 1	36, 39, 42, 45, 48, 51, 54, 57	60	24"	10^s	Crown	+5°	2	extraconic				Best focus about 51
" 2	48, 51, 54, 57, 60, 63, 66, 69	72	"	30^s	I.P.	"	1	"				Screen λ 6150 Red " 63
" 3	36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69	72	"	30^s	Seed 27	"	1	"				Green Screen " " 63
1908												
June 22	30, 33, 36, 39, 42, 45,		24	30^s	Seed 27	+28	1					
23	24, 27, 30, 33, 36, 39, 42, 45, 48 (over)	48	"	30	" "	+25	2		15^h			Best focus 40-41
"	24, 27, 30, 33, 36, 39, 42, 45, 48	51	"	30	" "	"	1	+	16		$\alpha = 3^h 40^m$	" " 31 !
July 4	30, 33, 36, 39, 42, 45, 48, 51.	54	"	20^s	" "	+20	2				+78°	" " 43
Oct 28, 1	39, 42, 45, 48, 51, 54, 57, 60, 63	63	24	30^s	Seed 27	+8	2	near Polaris	W 0:24 +87.9		7:10 S.T.	?
" ", 2	30, 33, 36, 39, 42, 45, 48, 51, 54	54	24	30^s		5.5	3	" "				49-50
1909												
June 5	33, 38, 42, 46, 51	51	24	45	Seed 27	+20	2	$13^h 20^m$ -3°	$13^h 50^m$	+0.5	-3°	
10	36, 40, 44, 48, 52, 56	56	"	30^s	" "	+18	3					best 45½ (2½ above curve)
	Flat resilvered June 18											
27	30, 34, 38, 42, 46, 50	50	24	30	" "	+26 +2	2	$15^h 19^m$ +83½°	$15^h 24$	+37"	+88½	
"	40, 44, 48, 52, 56, 60	64	"	"	" "	26	2	"		$+1^h 35^m$	"	best 55
	Mirror resilvered July 5, adjusted July 6					+18						
July 7	36, 42, 48, 54, 60,	66	24	2		+19.7	2					best 47
"	42, 45, 48, 51, 54	57	"	3		+18.6						" 46

Focal Settings. Jordan 1908 april

Temp C.	Scale
−10°	57
8	56
6	55
4	54
−2	53
0	52
+2	51
4	50
6	49
8	48
+10	47
12	46
14	45
16	44
18	43
20	42
22	41

With Filter B7, same
" " λ6150, add 10
" " green " 10

Plate holder centers
at 8ᵈ in R.a
" 14 " Dec.

New camera mounted 1909 Nov. 8.

Position circle graduated counter-clock-wise to single degrees read by zero mark (Parallel = 38°.5 Nov. 8)

Focussing ring has 270 divisions (=teeth), one division = $\frac{1}{32} \times \frac{1}{18} = \frac{1}{576}$ inch = 0.044 mm = $\frac{1}{22.7}$ mm

Focus with comet follower about 60ᵈ (1909 Nov 8)

Focus without " " is $\frac{1}{4}$ inch = 144ᵈ further out, that is larger readings = 204ᵈ±

Head of Comet screw had 16 notches (1ᵐ = 4ˢ.34) till Nov. 15

" " " " " 32 " (1ᵐ = 2ˢ.17) from Nov. 15 to

New Aluminum plate-holders. 4. 5. 6. 7. and 8. used from 1911 Sept. 5.

Focus Plates con from page 2

1909 Mirror tilted Sept 3, flat + plate collimators Sep

	Settings.	Temp	Offset	Aper.	Exp	Plate	Temp C.	Holder	Star	Sid T	H	δ	Best focus
Sept. 5	36.39.42.45.48.51		54	24	60	Seed 27	16.5						
" 4	24, - - -			18	30	Seed 27	16.5						
" 4	38.39.40.41.42, etc - 48		48	18	15	" "	15.5						
5	36.39.42.45.48.51		54	24	60	" "	16.0						46 ± 47
Nov.	New Camera with position circle + comet fol												
8	130,120,110,100,90,80,70,60		50.40	24	30	" "	8.0	2					60
8,	69.66.63.60.57.54		51	"	20	" "	+5.5	2					63 ± 2
13	80,75,70,65,60,55,50,45		40	"	20	" "	+16.0	2					60
	Camera recollimated Nov. 18												
19	80,75,70,65,60,55,50,45		40	"	20	" "	+7.0	2					77
22	90,85,80,75,70,65,60,55		50	"	15	" "	-1.0	2					78 or 77
1910 Feb 5	95,91,87,83,79,75,71,		67	"	10	" "	-3.0	2	Polaris.				77
" 27	80,78,76,74,72,70,68,66,64,62		60	24	15	" "	-4.0	2					67?
Mar 2	90,86,82,80,78,76,74,72,70,6866,64,62,60,		58	24	20	" "	+2.0	2					77 clamped for each setting not clamped
" "	90,87,84,81,78,75,72,69,66,63		60	24	15	" "	+2.0	2					81
	Focus for camera without comet follower.												
April 6	200,205,10,13,16,19,22,25,28,31,34,37,40		200	24	10	" "	+8.5	3					223
Sept 21 1911	215 - then 212.209.206.203.200.197.4.1		215	24			+17						200
Aug. 25	220,217,214,211.208,205.202		199	24	20	" 30	+19½	2					
Sept. 21	220,216.212,208.204,200		196	"	120	Tri	+18	8	Polar				

		Offset	Ap.	Exp.			Holder			
Sept 29	224, 221, 218, 215, 212, 209, 206, 203	200	12	15s	Seed 30	12.78 11.5 – 10.5	6		v. M.	best focus – 200
"	212, 209, 206, 203, 200, 197, 194, 191	188	12	25s	"	" 10 – 9.5	5		v. M.	best focus – ± 193
Oct 3	208, 204, 200, 196, 192, 188, 184, 180	176	16	15s	"	" 20 – 19	5	W	v. M.	best focus 203
"	216, 212, 208, 204, 200, 196, 192, 188, 184		16	15s	"	" 19 – 19	2	W	v. M.	best focus
"	216, 212, 208, 204, 200, 196, 192, 188, 184		16	20s	"	" 18.5 – 18	6	E	v. M	best focus 212

Gitters.

Knife edges.

No	Field		Date	Exposure Central Standard Begin	End	Time	aperture	Temp.	Focus	Hold	ate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
			1907															E		
✓ 1952	4h 46m	meas 55° 30′	Nov 30	1m 3m 10 52	10 56	4	12′	-4°	56	2	Sed 27	11431	Hydro	19°	10m	8	14	18	Very good	13
✓ 1953	"	meas "	" "	5m 15m 10 57	11 17	20	"	"	"	1	UP							E		
✓ 1952	4h 52m	meas 60° 30′	" "	10, 30, 60s 11 32	11 34	2	"	"	"	2	Sed 27					8	17	19	" "	
✓ 1953	"	meas "	" "	1, 2 3m 11 35	11 41	6	"	"	"	1	UP									
✓ 1954	37° 3636 19h 48m	meas 37½°	Dec 4	2, 3m 6 56	7 01	5	"	-3°	"	2	Sed 27			19°	10m	8	12	10	Good. Quiet	
✓ 1955	"	meas "	" "	7 02	7 17	15	"	"	"	1	UP									
✓ 1954	20h 56m	meas 59°	" "	½, 1, 2m 7 25	7 29	4	"	"	"	2	Sed 27					8	12	25	" "	
✓ 1953	"	meas "	" "	5, 15m 7 30	7 51	21	"	"	"	1	UP								Becoming dull	
✓ 1956	21h 21m	meas 57° 30	" "	2, 3m 8 08	8 13	5	"	-4°	"	2	Sed 27					8	10	32	Dull	
✓ 1957	"	meas "	" "	10, 16m 8 14	8 40	26	"	"	"	1	UP									
✓ 1958	Selv. 249a		" "	8 51	9 01	10	"	"	"	2	Sed 27					8	14	12	Very dull	
✓ 1957	"		" "	9 02	9 30	28	"	"	"	1	UP								Becoming clearer	
✓ 1948	76° 833 21h 18m	meas 76½°	" "	½, 1, 2m 10 03	10 07	4	"	-5°	56½	2	Sed 27					8	17	48	Good	
✓ 1959	"	meas "	" "	3, 5, 10m 10 08	10 27	19	"	"	"	1	UP								"	
✓ 1958	79° 707 21h 30m	meas 80°	" "	1, 2m 10 39	10 42	3	"	"	"	2	Sed 27					8	14	25	a little dull	
✓ 1959	"	meas "	" "	5, 11m 10 43	11 00	17	"	"	"	1	UP								Becoming very dull	
✓ 1960	78° 768 21h 57m	meas 79°	" "	1, 2m 12 31	12 34	3	"	"	"	2	Sed 27					8	18	18	Good	
✓ 1961	"	meas "	" "	5, 10m 12 35	12 50	15	"	"	"	1	UP								"	

No	Field		Date	Exposure Central Standard t Begin	End	Time	aperture	Terrets	Focus	Holds	ate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
				1907 ✓																
✓		meas	1907	10, 30, 60s		20413														
1960	4h 52m	60° 30'	Dec 4	13 06	13 08	2	12"	-5°	56½		ed 27	11431	Hydro			8	14	19 W		Good
✓		meas		1, 2, 5m																
1961	"	"	" "	13 09	13 17	8	"	"	"		WP.					"	"	"		"
✓		meas		½, 1, 2m																
1962	4h 46m	58° 30'	" "	13 35	13 39	4	"	"	"		ed 27					8	14	28 W		"
✓		meas		5, 13m																
1963	"	"	" "	13 40	13 58	18	"	"	"		WP.					"	"	"		"
✓				1, 2m																
1962	4h 58m	55° 30'	" "	14 08	14 11	3	"	-6°	"		ed 27					8	14	30 W		Very good
✓				5, 10m																
1963	"	"	" "	14 12	14 27	15	"	"	"		WP.					"	"	"		" "
✓		Hagen																		Images Elong.
1964	V Aurigae		" "	14 41	15 41	60	18"	"	"		ed 27					8	14	25		Good.
✓		meas		½, 1, 2m														preceding		
1965	34° 36' 37" tc		" 5	6 21	5 25	4	12"	0°	53		" "			19°	10m	8	13	30		Good. Windy
✓		meas		2, 5, 10m																
1966	"	"	" "	5 26	5 43	17	"	"	"		WP.					"	"	"		Following centre Sanguinaster
✓		meas		1, 2m																
1965	"	"	" "	5 52	5 55	3	"	-1°	"		ed 27					8	10	10		"
✓		meas		5, 10m																
1966	"	"	" "	5 56	6 12	16	"	"	"		WP.					"	"	"		"
✓		meas		1, 2m																
1967	34° 37' 01"		" "	6 24	6 27	3	"	"	"		ed 27					8	14	25		"
✓		meas		5, 10m																
1968	"	"	" "	6 28	6 43	15	"	"	"		WP					"	"	"		"
✓		meas		½, 1, 2m																
1967	34° 36' 41"	tc	" "	6 50	6 54	4	"	"	"		ed 27					8	11	33		"
✓		meas		2, 5, 10m																
1968	"	"	" "	6 55	7 13	18	"	"	"		WP.					"	"	"		"
✓		meas		½, 1, 1½m																Preceding Centre
1969	34° 36' 37"	tc	" 6	5 33	5 37	4	1	+3°	52					19½°	10m					Good
✓		meas		2, 5, 8m																
1970	"	"	" "	5 37	5 53	15	1,	"	"					"	"					"

20622

No	Field		Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Field	Seeing & Remarks
						20622														
✓ 1969	34°	3637+c	meas 1907 Dec 6	1, 1½ 5⁻ 56	6⁻ 59	3	12	52°	53		Seed 27	11431	Hydro	19½°	10ᵐ				Center 2	
✓ 1970			meas	5⁻, 8ᵐ 6 00	6 13	13	"	"	"		WP								Ford	"
✓ 1971	34°	3701	meas	½, 1, 1½ᵐ 6 26	6 30	4	"	"	"		Seed 27					8	14	25⁻		"
✓ 1972			meas	2, 5, 8ᵐ 6 31	6 46	15⁻	"	"	"		WP					"	"	"		"
✓ 1971	34°	3691	meas	1, 1½ᵐ 6 5⁻5	6 58	3	"	"	"		Seed 27					8	11	38	Very good	
✓ 1972			meas	5⁻, 8ᵐ 6 59	7 12	13	"	"	"		WP					"	"	"		
✓ 1973	19ʰ	54ᵐ 38°	meas	10, 20, 40ˢ 7 24	7 26	2	"	"	"		Seed 27					8	16	25⁻	Center 1	
✓ 1974			meas	1, 2, 3ᵐ 7 27	7 33	6	"	"	"		WP					"	"	"		" 1
✓ 1973			meas	1, 2 7 41	7 44	3	"	"	"		Seed 27					8	15⁻	10	Center 2	
✓ 1974			meas	5⁻ 10 7 45	8 00	15	"	"	"		WP					"	"	"		" "
✓ 1975	21ʰ 18ᵐ 76° 8 33	35'	meas	½, 1, 1½ᵐ 8 15⁻	8 19	4	"	"	"		Seed 27					8	17	48	Very good	
✓ 1976			meas	3, 5⁻, 8ᵐ 8 20	8 37	17	"	"	"		WP					"	"	"		
✓ 1975	21ʰ 30ᵐ 79° 7 07	80°	meas	1, 1½ᵐ 8 46	8 49	3	"	"	"		Seed 27					8	17	0		
✓ 1976			meas	5⁻ 8ᵐ 8 50	9 03	13	"	"	"		WP					"	"	"		
✓ 1977	21ʰ 53 78° 76 8	740 tc	meas	1, 1½, 2ᵐ 9 17	9 22	5⁻	"	"	"		Seed 27					8	18	18	"	"
✓ 1978			meas	3⁻ 8, 10ᵐ 9 23	9 47	24	"	"	"		WP					"	"	"		
✓ 1977	21ʰ 57ᵐ 74° 9 46	74½°	meas	1, 2ᵐ 9 55	9 58	3	"	"	"		Seed 27					8	15⁻	18	"	"
✓ 1978			meas	5⁻ 10ᵐ 9 59	10 14	15⁻	"	"	"		WP					"	"	"		

20784

No	Field	Date 1907 ✓	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
																			20784
✓	22h 35m 78°	1907	1, 1½, 2m																
1979	74° 9'8 meas	Dec 6	10 29	10 34	5	12"	+2°	52	red 27	11431	Hypo	19½°	10m	8	12	1	Very good		19
✓	meas		5, 8, 10m																
1980	" "	" "	10 35	10 39	24	"	"	"	W						"	"	"	"	"
✓	27h 51m meas		1, 3m																
1979	78° 8'3	" "	11 09	11 03	4	"	"	"	red 27						8	12	52	"	"
✓	meas		5m	15m															
1980	"	" "	11 14	11 35	21	"	"	"	W						"	"	"	"	"
✓	Pleiades meas		10, 20, 40, 60s																
1981	Seat of atlas	" "	12 33	12 36	3	"	"	"	red 27						8	9	35	"	"
✓	meas		1, 2, 3, 5m																
1982	"	" "	12 37	12 48	11	"	"	"	W						8	9	23	"	"
✓	" meas		20, 40, 60s																
1981	N of Pleiades	" "	12 52	12 55	3	"	"	"	red 27						8	15	25	"	"
✓	meas		2, 3, 5m																
1982	" "	" "	12 56	13 06	10	"	"	"	W						"	"	"	"	"
✓	" meas		½, 1, 2m																
1983	S of Alcyone	" "	13 09	13 13	4	"	"	"	red 27						8	15	30	"	"
✓	meas		3, 5, 10m																
1984	" "	" "	13 14	13 32	18	"	"	"	W						"	"	"	"	"
✓	meas		1, 2m																
1983	N. "	" "	13 36	13 39	3	"	"	"	red 27						8	15	0	"	"
✓	meas		5, 10																
1984	" "	" "	13 40	13 55	15	"	"	"	W						"	"	"	"	"
✓	meas		½, 1, 2m																
1985	Alcyone	" "	14 08	14 12	4	"	"	"	red 27						8	15	42	"	"
✓	meas		2, 5, 10m																
1986	"	" "	14 13	14 31	18	"	"	"	W						"	"	"	"	"
✓	Pleiades meas		1, 2																
1981	Near Maia	" "	14 36	14 39	3	"	"	"	red 27						8	15	47	"	"
✓	meas		5, 10m																
1986	"	" "	14 40	14 56	16	"	"	"	W						"	"	"	"	"
✓	meas		1, 2m																Preceding center
1987	34° 36' 37" 19h 34m	" "	5 26	5 29	3	"	−2°	54	red 27	"	"	"	20°	10m	8	10	30	Vanguard	
✓	meas		5, 10m																Becoming hazy
1988	"	" "	5 20	5 46					W										

20965

No	Field	Date 1907	Exposure Central Standard t Begin	End	Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
✓ 1987	19h 34m 34°36'37"	meas Dec 11	½, 1, 2m 5h 53	5h 57	4	20965 12°	-2°	5.4	ed	27	11431	Hydro	20°	10m	8	10	10		Following Center Good.
✓ 1988	"	meas " "	2, 6, 10m 5 58	6 17	19	"	"	"	N	"	"	"	"	"	"	"	"		a typology.
✓ 1989	19h 41m 34°36'91	meas " "	1, 2m 6 29	6 32	3	"	-3°	"	ed	27	"	"	"	"	8	11	38		" "
✓ 1990	"	meas "	5m, 10m 6 33	6 48	15	"	"	"	N	"	"	"	"	"	"	"	10		" "
✓ 1984	19h 42m 34° 37'01	meas " "	½, 1, 1½m 6 5.6	6 59	3	"	"	"	ed	27	"	"	"	"	8	14	25		Good
✓ 1990	"	meas " "	2, 5, 10m 7 00	7 18	18	"	"	"	N	"	"	"	"	"	"	"	"		"
✓ 1991	21h 30m 79° 707	meas " 15	½, 1, 2m 7 14	7 18	4	"	-2°	5.3	ed	27	"	"	"	"	8	17	40		Bright Moon
✓ 1992	"	meas " "	5m, 10m 7 19	7 34	15	"	"	"	N	"	"	"	"	"	"	"	"		"
✓ 1993	19h 31m	meas 33½° " 18	1, 2-3m 5 44	5 50	6	"	-5°	5.5	ed	27	"	"	"	"	8	13	10		Full Moon. Very good
✓ 1994	"	" meas " "	10-15m 5 51	6 16	25	"	"	"	N	"	"	"	"	"	"	"	"		" "
✓ 1995	21h 18m 78° 833	meas " "	½, 1, 2m 6 33	6 37	4	"	-7°	5.6	ed	27	"	"	"	"	8	17	48		Good
✓ 1996	"	meas " "	2, 5, 8m 6 38	6 49	11	"	"	"	N	"	"	"	"	"	"	"	"		Stopped by clouds.
✓ 1997	Preceding center 34°36'37"	meas " 19	½, 1, 1½m 5 22	5 26	4	"	-3°	5.5	ed	27	"	"	"	"	8	13	30		Very good Windy
✓ 1997	Following center "	meas " "	1, 2m 5 27	5 30	3	"	"	"	"	"	"	"	"	"	8	10	10		" "
✓ 1998	19h 31m	meas 33½° " "	1, 2m 5 37	5 40	3	"	"	"	"	"	"	"	"	"	8	13	10		" "
✓ 1999	"	meas " "	5m, 10m 5 41	5 56	16	"	"	"	N	"	"	"	"	"	"	"	"		"
✓ 1998	19h 48m 36° 10'	" "	½, 1, 1½m 6 07	6 12	5	"	"	"	ed	27	"	"	"	"	8	16	33		" "
✓ 999	"	" " "	2, 5, 10m 6 17	6 30	17	21140	"	"	N	"	"	"	"	"	"	"	"		clearing

No	Field	Date	Exposure Begin (Central Standard T)	End	Time	aperture	Temp.	Focus	Holder	Date	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		1907 ✓																	
✓	✓ 2000	meas 19h 31m 33½° Dec 20	1907 ± 1, 2m	5m 22	5m 26	4	12°	+1°	53	ed 27	11431	Hydro	19°	10m	8	13	10	Very good -	(23)
✓	✓ 2001	meas " " " "	2, 6 10m	5m 27	5m 45s	18	"	"	"	D-L	"	"	"	"	"	"	"	"	"
✓	✓ 2000	19h 48m meas 37° 3636 " "	2, 3m	5m 55	6 00	5m	"	"	"	ed 27	"	"	"	"	8	12	10	"	"
✓	✓ 2001	meas " " " "	10, 15m	6 01	6 26	25m	"	"	"	D-L	"	"	"	"	"	"	"	"	"
✓	✓ 2002	21h 53m 78° 768 " "	1, 1½ 2m	6 54	6 59	5m	"	0°	"	ed 27	"	"	"	"	8	15	18	"	"
✓	✓ 2003	" " " "	5m 7 10m	7 00	7 22	22	"	"	"	D-L	"	"	"	"	"	"	"	"	"
✓	✓ 2004	19h 48m 37° 3636 meas " 28	2, 3m	5m 35	5m 40	5m	"	+1°	52	ed 27	"	"	"	"	8	12	10	"	"
✓	✓ 2005	meas " " " "	10, 15m	6m 41	6 08	27	"	"	"	D-L	"	"	"	"	"	"	"	"	"
✓	✓ 2006	Hagen V Anngal " "		6 25	7 25	60	18°	-1°	53	ed 27	"	"	"	"	8	12	-1	"	"
✓	✓ 2007	Hagen R Lyncis " "		8 06	9 06	60	"	+2½°	53	"	"	"	"	"	8	15	51	"	"
✓	✓ 2008	Hagen I Geminorum " "		9 33	10 33	60	"	"	"	"	"	"	"	"	8	15	50	+Becoming cloudy. a little hazy.	
✓	✓ 2009	Hagen S Lyncis " 30		6 37	7 37	60	"	-4	54	"	"	"	"	"	8	15	25	Very good.	

1906

1073 Plates

1 21491 mins. Exp.

20m. average.

(Probably 1907)
The year 1907 is marked on all above plates

No	Field	Date	Exposure Begin (Central Standard)	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
			1908																
2010	Orion Nebula	Jan 8	8 00	14 00	360	24	-4 to -9	64 65		i.		Rodinal 1/24	20.5	10m					Seeing very good Screen λ 6150
2011	S Leonis (Hagen)	" "	15 03	16 03	60	18	-9	57		ed 27		Hydro	18½°	10m	8	14	38		Very good Enid Star faint
2012	T Virginis (Hagen)	" "	16 20	17 20	60	"	"	"		"		"	"	"	8	13	27		Very good.
2013	Orion Nebula	" 13	6 47	8 47	120	24	-3 to -5	65		Sensitive		Rodinal 1/24	20.5	10m	8	14	Wait 22		Bright Moon. Very good - Green screen
2014	" "	" "	9 18	10 18	60	"	-5	"		"		"	"	"	"	"	"		" " Screen λ 6150
2015	" "	" "	10 25	10 55	30	"	-6	"		"		"	"	"	"	"	"		" " " "
2016	Schy 247	" 16	1, 2, 3m 5 56	6 02	6	12	-7°	55		d 27		Hydro	19°	10m	8	12	29		" " Windy
2017	" "	" "	5, 10, 15m 6 03	6 34	31	"	"	"		i		"	"	"	"	"	"		" " "
2018	" 7	" "	2. 3m 6 47	6 52	5	"	-8°	"		d 27		"	"	"	8	12	9		" " "
2019	" "	" "	10, 15m 6 53	7 18	25	"	"	"		i		"	"	"	"	"	"		" " "
2020	Orion Nebula	" "	7 55	7 57	2	"	-9°	57		d 27		"	"	"	8	20	6		Hazy "
2021	" "	" "	7 58	8 08	10	"	"	"		i 27		"	"	"	"	"	"		Hazy "
2022	" "	" "	8 16	8 21	5	"	"	"		d 27		"	"	"	"	"	"		Very good " clouding in West
2023	" "	" "	8 22	8 47	25	"	"	"		27		"	"	"	"	"	"		" " "
2024	" "	" 18 17	8 24 7 47	10 24 4 47	120	24	-2° -8	63 64		λ 6150 Screen.		Rodinal 1/24	21°	10m	8	19	28		" " Windy
2025	" "	" 21 "	7 42 10 13	8 42 11 13	60	"	+4° 6 4°	62		ocol plate		"	"	"	"	"	"		" " Very windy
					979														

27

No	Field	Date	Begin	End	Time	Aperture	Temp	Focus	Holder / Plate	Emulsion	Developer	Temp	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
✓ ✓ 2026	21h 57m 74° 946 meas	1908 Jan ~~20~~ 23	1, 2m 5 59	6 02	979 3	12"	-6° ~~-14°~~	56	ed 27	11431	Hydro	20°	10m	8	15	18			Very good. ~~Good~~.
✓ ✓ 2027	" " meas	" "	5, 10m 6 03	6 18	15	"	-7°	"	"	|	"	"	"	"	"	"			"
✓ ✓ 2028	" " meas	" "	8, 15m 6 23	6 46	23	"	-8°	"	Tr.	"	"	"	"	"	"	"			"
✓ ✓ 2029	22h 33m 74° 978 meas	" "	1m, 2m 6 58	7 01	3	"	-9°	57	d27	"	"	"	"	8	12	1			Large space between images Very good
✓ 2030	" " meas	" "	5m 10m 7 02	7 17	15	"	"	"	"	"	"	"	"	"	"	"			" "
✓ 2031	" " meas	" "	8 15m 7 22	7 45	23	"	"	"	Tr.	"	"	"	"	"	"	"			" "
✓ 2029	22h 57m 78° 813 meas	" "	1, 3m 7 59	8 03	4	"	"	"	d27	"	"	"	"	8	12	52			Small space between images.
✓ ✓ 2030	" " meas	" "	5, 15m 8 38	8 58	20	"	"	"	"	"	"	"	"	"	"	"			" "
✓ 2031	" " meas	" "	8 23m 8 04	8 35	31	"	"	"	Tr.	"	"	"	"	"	"	"			" "
✓ 2032	Orion Nebula	" "	9 42	10 42	60	24	-10°	68	Platy nocol.	"	Rodinal 1/24	20.8	10m	8	19	29			Green Screens "
✓ ✓ 2033	" "	" 28	6 12	6 36	24	"	-9°	57	d27	"	Hydro	20	"	8	18	East 28			Very good.
✓ ✓ 2034	" "	" "	6 45	9 45	180	"	-9° to -14°	"	β7	"	"	"	"	"	"	East "			Very transparent " " Screen β7
✓ 2035	U. Puppis Hagen	" "	10 45	11 45	60	18	-15°	59	ed 27	"	"	"	"	8	15	West. 25			Out of Focus. " "
✓ ✓ 2036	Orion Nebula }	Feb 3	6 11	11 11	300	24	-6° to -10	66	Screen nocol }	"	Rodinal 1/24	20,4	10	8	19	29			Very transp. 1st 2 hrs. then stopped by haze. hazy at intervals.
✓ 2036	Continued }	" 6	6 23	11 23	300	"	-7°	67		"	—	—	—	"	"	"			Very good.
✓ 2037	74° 4h 52m meas	Mch 11	½, 1, 1½m 8 32	8 37	5	12"	+8°	49	ed 27	"	Hydro	20°	10m	8	11	42			Bright Moon a trifle hazy
✓ 2038	meas	" 15	3, 5, ~~7~~ 9 50	10 00	10	"	+3°	51	"	"	"	"	"	^	"	"			" "

2061

12

No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
			1907	1908															
✓ 2039	78°	meas 5h 14m	Mch 11	½, 1, 1½m 9 07	9 12	5"	12"	+7°	Td 49	ed 27	1431	Hydro	20°	10m	8	8	34	Bright moon a trifle hazy	(29
✓ 2040	"	meas "	" 15"	3, 5, 7m 9 13	9 39	16	"	+3°	51	"	"	"	"	"	"	"	"	"	"
✓ 2041	"	meas 6h 22m	" 11	1, 2m 9 42	9 45"	3	"	+7°	49	ed 27	"	"	"	"	8	13	48	"	"
✓ 2042	"	meas "	" 15	~~10~~ 5, 10m 9 47	10 58	~~12~~ 15	"	+3°	51	"	"	"	"	"	"	"	"	Becoming dull.	
✓ 2043	73° 45'	meas 8h 33m	" 15	1, 2m 10 16	10 19	3	"	"	"	ed 27	"	"	"	"	8	14	42	"	"
~~2044~~	"	"	" 15	~~10~~ 5, 10m 20	10 35	15	"	"	"	"	"	"	"	"	"	"	"	"	"
✓ 2045	77° 45'	meas 12h 03m	" 11	1, 2m 10 53	10 56	3	"	"	Td	d 27	"	"	"	"	8	5"	14	"	"
~~2046~~	"	"	" "	5", 10m 10 57	11 12	15"	"	"	"	"	"	"	"	"	"	"	"	"	"
✓ 2047	76°	meas 16h 17m	" 11	1 sec 30 sec 14 17	14 18	1	"	+6°	50	d 27	"	"	"	"	8	11	28	Good	
~~2048~~	"	"	" "	1m 3m 14 19	14 23	4	"	"	"	"	"	"	"	"	"	"	"	"	"
✓ 2049	U Serpentis	Hagen "	" 11	14 34	15 34	60	18"	"	"	d 27	"	"	"	"	8	12	20	Very good.	
✓ 2050	R Libræ	Hagen "	" 11	15 53	16 53	60	"	"	"	"	"	"	"	"	8	17	46	"	"
2051	Wolf Rayet 56° 686	meas "	" 13	7 00	7 05	5"	12	+6°	"	"	"	"	19½°	"	8	10	25"	Bright moon a little hazy	
2052	"	" meas	" "	7 06	7 31	25"	12	"	"	"	"	"	"	"	"	"	"	"	"
✓ 2053	74°	4h meas 52m	" 15"	½ 1m 9 50	9 52	2	12	+3°	51	d 27	H539	"	-	"	8	11	42	Bright moon a little hazy	
✓ 2054	78°	5h meas 14m	" "	1, 2m 10 11	10 14	3	"	6	"	"	H539	"	-	"	8	8	34	"	"
✓ 2055	78°	6h meas 22m	" "	1, 2m 10 37	10 40	3	"	"	"	"	"	"	-	"	8	13	48	"	"
						2296													

No	Field	Date	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	ste	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
✓		$6^h\ 5^m\ 47^s$	1908																
2056	31. 1907	Aurgae	Mch 20	7 04	7 49	45	18"	+2°	51	d	27	10431	Hydro	19½°	10m	8	14	46	Very good. (31)
✓ 2057	R Monoceros	Hagen	" "	8 09	9 09	60	"	+1°	"	"	"	"				8	9	23	mon Focus leaning up. " "
✓ 2058	74°	meas $4^h\ 52^m$	" "	½, 1, 1½m 9 47	9 51	4	12	"	"	"	"	"				8	11	42	" "
✓ 2059	"	meas "	" "	3, 5, 7m 9 52	10 07	15	"	"	"	L	"	"				"	"	"	" "
✓ 2058	78°	meas $5^h\ 14^m$	" "	½, 1m 10 17	10 19	2	"	"	"	d	27	"				8	8	38	" "
✓ 2059	"	meas "	" "	3, 5m 10 20	10 28	8	"	"	"	L	"	"				8	8	"	" "
✓ 2060	"	meas $6^h\ 22^m$	" "	½, 1, 2m 10 41	10 45	4	"	"	"	d	27	11539				8	13	48	" "
✗ 2061	Forged	"	" "	3, 5, 10m 10 46	11 05	19	"	"	"	L	"	11431				"	"	"	" "
✓ 2062	73°45'	meas $8^h\ 33^m$	" "	½, 1, 1½m 11 16	11 20	4	"	"	"	d	27	"				8	14	42	" "
2063	plate no good.	"	" "	3, 5, 7m 11 21	11 38	17	"	"	"	L	"	"				"	"	"	" "
✓ 2064	77°45'	meas $12^h\ 03^m$	" "	½, 1m 11 54	11 56	2	"	"	"	d	27	"				8	14	24	" "
✓ 2065	"	meas "	" "	3, 5m 11 57	12 06	9	"	"	"	L	"	"				"	"	"	" "
2064	76°	meas $16^h\ 17^m$	" "	15s, 30s 12 17	12 18	1	"	"	"	d	27	"				8	11	28	" "
2065	"	meas "	" "	1½, 3m 12 19	12 24	5	"	"	"	L	"	"				"	"	"	Hazy "
✓ 2066	R Can Maj	meas	" 23	½, 1m 7 05	7 07	2	"	+8°	48	d	27	11431				8	10	45	Very Windy Unsteady
✓ 2067	"	meas "	" "	3m 5m 7 08	7 16	8	"	"	"	L	"	11539				"	"	"	Interrupted by clouds.
✓ 2068	V Leonis	Hagen	" "	7 53	9 29	60	18	+6°	49	d	27	11431				8			" " "
✓ 2069	R Canae	Hagen	" "	10 15	11 15	60	"	+4	51	"	"	"				8	17	50	Very good

2296

2621

No	Field	Date	Exposure Begin	Exposure End	Time	aperture	Terms	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding eyepiece	Telescope Circle	Seeing & Remarks
			1908																
2070	R Camelop.	Hagen Mch 23	11 47	12 47	60	18"		+3°	50	Red 27	1/539	Hydro	19°	10m	8	17	25		Stopped by clouds
2071	S Geminorum	Hagen " 24	8 33	9 33	60	"		+2°	51	"	"	"	"	"	8	14	42		Dull
2072	W Cancri	Hagen " "	9 50	10 50	60	"		-1°	53	"	"	"	"	"	"	"	"		"
2073	73° 45' 8h 33m	Meas " "	½, 1, 1½m 11 54	11 59	5	12		"	"	Red 27	"	"	"	"	8	5	6		"
2063	"	Meas " "	3, 5, 4m 12 00	12 13	13	"		"	"	Pl	"	"	"	"	"	"	"		"
2074	U Cancri	" 28	10 20	11 26	55	18		0°	52	Red 27	"	"	"	11m	8	14	25		Very good
2061	78° 6h 22m	Meas " "	3, 5, 8m 12 06	12 23	17	12		"	"	"	"	"	"	"	8	8	38		" "
2075	Orionis Nebula	" 29	7 18	8 18	60	24		+3°	50	"	"	"	"	"	8	12	36		" "
2076	γ Monocerotis	" "	8 50	9 50	60	18		+2°	51	"	"	"	"	"	8	12	5		" "
2077	T Geminorum	" "	10 15	11 15	60	"		"	"	"	"	"	19½	10m	8	10	35		" "
2078	S Leonis	" "	11 34	12 36	62	"		"	"	Red 27	"	"	"	"	8	14	24		Good
~~1210~~ 2079	R R Virginis	" "	13 21	14 21	60	"		"	"	Pl	"	"	"	"	"	"	"		"
2080	R S Virginis	" "	14 44	15 44	60	"		"	"	Red 27	"	"	"	"	8	7	33		Very good
2081	Pleiades	Apl 1	2', 10', 30', 60', 4m 7 22	7 25	6	12		"	"	Pl	"	"	"	"	"	"	"		" "
2082	"	" "	10', 60', 2½m, 5m, 20m 7 29	7 59	30	"		"	"	Red 27	"	"	"	"	8	11	28		" "
~~2079~~ 2082½	V Cam Vir	" "	8 15	9 15	60	18		"	"	Pl	"	"	"	"	"	"	"		" "
2083	T Virginis	" "	10 05	11 05	60	"		0°	52	Red 17	"	"	"	"	8	18	28		" "
2084	Z Virginis	" "	12 17	13 17	60	"		-2°	53	Pl	"	"	"	"	"	"	"		" "
					3469														

35

No	Field		Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp	Focus	Holder / Emulsion
			1907 ✓ / 1908			3910				
✓ 2098	S Librae		Apr 5	13 37	14 37	60	18"	~~4~~8°	48	Seed 27
✓ 2099	R+S Scorpii		" "	14 57	15 57	60	"	+8°	"	"
✓ 2100	12h 03m	meas 77° 45m	" 11	½, 1, 1½m 10 29	10 33	3	12	+8	"	"
✓ ~~2093~~	Fogged.		" "	3, 5, 7m 10 34	10 50	16	12	"	"	P-1
✓ 2094	13h 33m	76° 40m	" "	1, 2m 11 04	11 07	3	"	"	"	Seed 27
✓ 2095	"	"	" "	5, 10m 11 08	11 23	15	"	"	"	P-1
✓ 2094	16h 17m	meas 76°	" "	10, 20, 30s 11 30	11 31	1	"	"	"	Seed 27
✓ 2095	"	meas "	" "	1, 2, 3m 11 32	11 39	7	"	"	"	P-1
✓ 2103	16h 45m	77° 45'	" "	½, 1, 1½m 11 52	11 56	4	"	"	"	Seed 27
✓ 2097	"	"	" "	3, 5, 7m 11 57	12 13	16	"	"	"	P-1
✓ 2101	19h 24m	meas 76° 30'	" "	12 26	12 32	6	"	"	"	Seed 27
✓ 2102	"	meas "	" "	12 33	12 43	10	"	"	"	P-1
✓ 2104	12h 05m	meas 77° 45'	" 13	3, 5, 7m 8 21	8 37	16	"	+10°	47	"
✓ 2105	13h 33m	76° 40'	" "	1, 2m 8 46	8 49	3	"	+9°	"	Seed 27
✓ 2104	"	"	" "	5, 10m 8 50	9 05	15	"	"	"	P-1
✓ 2106	16h 17m	meas 76	" "	10, 20, 30s 12 48	12 49	1	"	"	"	Seed 27
✓ 2107	"	meas "	" "	1, 2, 3m 12 50	12 56	6	"	"	"	"
						4152				

Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
11539	Hydro—				8	14	40			Very good

The records for the following plates seems to be missing from the book.

R		1908	Begin Exp		End Exp		Time
2085	U Puppis	Apr. 2	7h	18m	7h	45m	17m
2086	{8h 33m +73° 45' / 12 03 77 45}	" 2					
2087	SS Herculis	" 5	12	18	13	18	60
2088	U Puppis	" 3	7	30	8	30	60
2089	T Hydrae	" 3	8	49	9	49	60
2090	R Cancri	" 3	10	6	11	6	60
2091	RT Librae	" 3	13	40	14	40	60
2092	12h 03m +77° 45'	" 4	7	26	7	30	Var
2093	12 03 +77 45	" 4	7	31	7	47	"
2094	{13 33 +76 40 / 16 11 +76}	" 5					
2095	" "	" 5					
2096	16 45 77 45	" 5	11	37	11	41	Var

See page fol. p66. pp 33+34 have, accidentally, been inserted there.

No	Field	Date	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		1907 ✓ 1908				3910													37
✓ 2098	S Librae	Apr 5	13 37	14 37	60	18"	48°	48		Seed 27	11539	Hydro			8	14	40		Very good
✓ 2099	R+S Scorpii	" "													8	15	27		" "
✓ 2100	12h03m 77°45m meas	" "													8	14	24		Bright moon " "
✓ 2093	Fogged.	" "													"	"	"		" "
✓ 2094	13h33m 76°40m	" "													8	7	33		" "
✓ 2095	" "	" "													"	"	"		" "
✓ 2094	16h17m meas 76°	" "													8	11	25		" "
✓ 2095	" "	meas " "													"	"	"		" "
✓ 2103	16h45m	77°45'	" "												8	18	28		" "
✓ 2097	"	"	" "												"	"	"		" "
✓ 2101	19h24m	meas 76°30'	" "												8	12	8		" "
✓ 2102	"	meas "	" "												"	"	"		" "
✓ 2104	12h03m	meas 77°45'	"	13											8	14	24		" "
✓ 2105	13h33m	76°40'	" "												8	7	33		" "
✓ 2104	"	"	" "												"	"	"		" "
✓ 2106	16h17m	meas 76°	"	"											8	11	28		Slightly hazy
✓ 2107	"	meas "	"	"											"	"	"		" "

No	Field		Date 1907 / 1908	Exposure Central Standard t Begin	End	Time	Aperture	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
✓ 2106	10h 45m	78° 45'	Apr. 13	½, 1, 2m 13 0 4	13 05	4152 4	12"	+9°	3	Seed 27	11539	Hydro	19½°	10m					Slightly hazy
✓ 2107	"	"	" "	3 5s 10m 13 09	13 28	19	"	"	1	P.i			"	"					" "
✓ 2108	19h 24m	76° 30'	" "	3.5m 13 45	13 53	8	"	"	3	Seed 27			"	"					" " "
✓ 2109	"	"	" "	10, 15m 13 54	14 20	26	"	"	1	P.i			"	"					Becoming dull.
✓ 2110	21h 20m	76° 20'	" "	1, 2m 14 36	14 39	3	"	"	3	Seed 27			"	"					Dull hazy
✓ 2111	"	"	" "	5s, 10m 14 40	14 55	15	"	"	1	P.i			"	"					" "
✓ 2110	22h 07m	71° 45'	" "	1, 1½m 15 05	15 07	2	"	"	3	Seed 27			"	"					" "
✓ 2111	"	"	" "	5s, 8m 15 08	15 21	13	"	"	1	P.i			"	"					" "
✓ 2112	V Geminorum	" 18		7 43	8 43	60	18"	+14°	45s 3	Seed 27	11539		19½°	10m	8	14	16		Very good.
✓ 2113	T Canis Min.	" 19		7 47	8 47	60	"	+15°	" 2	"	"		"	"	8	14	48		Smoky.
✓ 2114	X Hydrae	" 20		7 40	8 40	60	"	+14	" 2	"	"				8	18	25		Very unsteady. Poor images. Very good
✓ 2115	U Geminorum	" "		9 25	10 25	60	"	+9°	48 3	"	"				8	16	57		" "
✓ 2116	S Hydrae	" 21		7 50	8 50	60	"	+12	" 2	"	"								Some Wind Smoky.

All plates from 300 to 2116 were taken by F. C. Jordan
Jordan left for Allegheny Observatory Apr. 27, 1908

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2117	T Librae	15h 5m −19° 38′ 1908 June 24	9h 0m	10h 0m	60m	18	20	43		Lumière	3452	Hydro	19±	6m					(41) P Good, some floating clouds
2118	Z Scorpii	"	10 15	11 10±	50±	"	20	"		"	"	"	"	8					" stopped by clouds P
2119	X "	" 25	9 56	10 56	60	"	19	"		"	"	"	18	6					" very P
2120	R Ophiuchi	"	11 13	12 13	60	"		"		"	"	"	"	"					" " P
2121	RS Librae	" 28	9 0	10 0	60	"	2	41½		"	"	"	18+	6					Good for 30m then cloud Exp = 40m ± P
2122	U "	29	9 24	10 27	62	"	19	41½		"		"							Good P
2123	S Ophiuchi	" "	10 46	11 46	60	"	17	44½		"		"							" P
	R Draconis	July 4	9 55	10 17	22	12	20	43		Seed 27	11539	"							HE Buchanan reversed
2124	RY Herculis	8	8 44	9 4	20	18	21	"		"	"	"							" small moon
2125	W Lyrae		9 20	9 30	10	"	"	"		"	"	"							good " V 1-2a
			10 16	10 17	1														" " P
2126	RT Cygni	"	10 5	10 15	10	"		"		"	"	"							HEB " "
2127	U Ophiuchi	9	9 30	9 40	10	12	21	42		"	"	"						33	
2128	" "	"	9 48	9 50	2	"	"	"		Tri	582	"							β7
			9 52	9 56	4														
			9 58	10 6	8														
			10 8	10 24	16														
2129	U Ophiuchi	10	8 56	9 1	5														near slide end
			9 2	9 8	6	"	25	43		Seed 27	11539	"	18½	5					Centered on C, moon
2130	"	"	9 19	9 29	10														
			9 31	9 41	10	"	"	40½		Tri	582	"	"	10					β7 " " " "
2131	"	"	9 48	9 54½	6½														
			9 56½	9 60	4	"	"	"		Seed	11539	"	"	5					" " " "
21	Y Ophiuchi	" 22	9h 15m	9h 35m						Tri									3296 is 1-2° > C,
			9 43	9 45															
			11 10	11 30															

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2132	γ Cygni meas	July 22 1908	10h 15m	10 40	25m	12in	25	40½	C. Tri	11596	Hydro	19	10					Filter B7
			10 45	11 10	"	"	"	"	"	"								
			11 14	11 39	"	"	"	"	"	"								
			11 41	12 06	"	"	"	"	"	"								
			12 10	12 35	"	"	"	"	"	"								
			12 40	1 05	"	"	"	"	"	"								
2133	ξ U Ophiuchi meas	July 25	910	9 20	10m	12in	25	40½	C Tri	11596	"	"	"					B7
			925	935														
			939	9.46														
			9.54	10.04														
			1009	10.19														
			10 25	10.35														
			1039	1049														
			1053	1103														
			1107	11.17														
			1120	11.30														
2134	RZ Draconis	July 27	9.55	5.54	4in	24in	26	40½	Feed 27		"	"	"					
2135	ZZ Cygni	" "	1010	1015	5	24in	"	"	" "		"	"	"					
2136	γ Cygni meas	July 28	9 25	9 45	20	12in	"	"	Tri		"	"	"					B7
		"	9 53	10 15	20	12in	"	"	" "		"	"	"					
		"	10.25	10.45	20	"	"	"	" "									

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No	Field	Date 1907 / 1908	Exposure Central Standard T Begin	End	Time	Aperture	Terrels	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2136	γ Cygni	July 28	11 20	11 38	18	12	26	40½	1	ETri		Hydro							
		"	11 50	12 06	16	"	"	"	"	"									
2137	21h25 +29° TW Cygni	" 31	10 30	11 30	60	18	18	44	2	Lumiere ½	3610	"	19	10					Good, clear, steady
2138	RT Cygni	Aug. 5	8.52	8.56	3	12	25	44	2	Seed 27		"	"	"					
		" "	8 59	9.04	5	12	"	"	"	"		"	"	"					
2139	RT Cygni	" "	9.15	9.55	40	12	"	40½	1	Tri.		"	"	"					
2140	RT Cygni	" 6	8 35	8 38	3	24	11	11	2	Seed 27		"	"	"					
	"	Mean " "	8 40	8 45	5	12	"	"	"	"		"	"	"					
2141	"	" "	8 50	9 30	40	12	"	"	1	Tri.		"	"	"					
2143	χ Cygni	" "	10 20	10 22	2m	12	"	"	2	Seed 27		"	"	"					
		Mean	1024	1025	1	"	"	"				"	"	"					
2144	" "	" 7	9 25	9 29	4	24	20	42	2	Seed 27		"	"	"					This is too short. give 40 min
			9 30	9 34	4	12	20												
2142	RT. Cygni	" 6	9 40	9 45	5	12	25	40½	2	Seed 27		"	"	"					
2145	χ Cygni	" 7	9 35	10 10	35	12	20	42	1	Tri		"	"	"					
2146	χ Cygni	Mean " 17	8 25	8 32	7	12	25	40	2	Seed 27		"	"	"					
2147	" "	" "	8 45	9.45	60	"	"	"	1	Tri		"	"	"					
2148	δ χ Cygni	" 18	8 29	8 30	1	18	23	41	2	Seed 27		"	"	"					
2148	" "	" "	8 30	8 32	2	"	"	"	"	"		"							
			8 32	8 36	4	"													

No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2149	δ X Cygni	1908 Aug. 18	8 40	9 00	40	18	24	41	1			Tri		Hydro 19 16					(49)
2150	Andron. neb.	" "	9.05	9 20	15	"	"	"	"			Seed 27		" " "					Clouds
2151	X Cygni	Aug 16	8 45	9 45	60	12	"	40	1			Tri		" " "					
2152	δ X Cygni	Aug 20	1024	1025½	1½	18	19	43	2			Seed 27							Excellent
2153	" "	" "	1030	1055	25	"	"	"	1			Tri							"
2154	T Capricorni	" "	1220	1 15	55	"	"	"	3			Seed 27							"
2155	γ Cygni	Aug 21	9 5	917	12	15	19	"	1			Tri							watch 0m 45s fast
			925	937	12	"	"	"	"										
			942	954	12	"	18	44	"										
			956	1010	12	"	"	"	"										
			1015	1027	12	"	"	"	"										
			1032	1044	"	"	"	"	"										
			1047	1059	"	"	"	"	"										
			1103	1115	"	"	"	"	"										
			1117	1129	"														
			1130	1143	"	"	"	"	"										

Plates 2132-6 and 2138 to 2155 were taken, developed and measured (part) by Herbert Earle Buchanan.

No	Field	Date	Exposure Central Standard T Begin	End	Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907 ✓																		
✓ 2156		1908 Aug 26	10h 0m	14h 0m	240m	24				Lumiere		11								Thick DW Morehouse (49)
			8 41	8 46	5															
✓ 2157	B Cygni	Sept. 23	8 49	9 0	11	12	25	39	2	Seed 27	11539	Hydro.	19½	10m						good
✓ 2158	"	"	9 7	10 10	63	"	27	"	1	C Tri. B7	620	"	"	"						partly dull
✓ 2159	"	25	7 14 27	7 24 42	10 15	"	26		2	Seed	11539	"	"	10						good good plate
✓ 2160	"	" "	7 52	9 22	90	"			1	C. Tri	620	"	"	"						" "
✓ 2161	γ Capricorni	Oct 29	6 57	7.57		18	7	49	2	Seed 27	11539	Hydr	20	4±						good.
✓ 2162	TW Cygni.	" "	9 18	10 18	60	"	3	49	3	"	"	"	"	4±						Field not identified.
✓ 2163	γ Cass	" 30	8 50	9 32		24	3	50	2	"	"	"	"	50 7						24" too much.
✓ 2164	52 TV Cygni	Nov. 4	7 23	7 29	6	18	0	52	2	"	"	"	"	195 5±						bad focus
✓ 2165	"	" "	7 48	8 48	60	18	-2	52	1	Trichr		620	"	" 6±						spoiled in developing.
✓ 2166	52 TV Cygni	" 5	7 9	7 15	6	18	+2	51	3	Seed 27		11539	"	" 5						good
✓ 2167	"	" "	7 21	8 21	60	18	+2	51	1	Trichrom		620	"	" 8						good
✓ 2168	α 6h 34m δ +11° 28'. Halley region	" 6	3 50	5 0 GM	70	24	+2	51	3	Lumiere Σ			Ed.	5+						good

No	Field	Date 1907✓ (1908)	Exposure Central Standard T. Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
✓2169	60 Kruger	Nov. 18	7.45	7.46	$1\frac{1}{2}^m$	18	+10	47	2	Seed 27		Hyd.	20-	9^m						Plates are marked δ Cephei. Lee
✓2170	"	"	7.50	8.05	15	"	"	"	1	Trich.	620			10^m						"
✓2171	Y Cass	"	9:15	10.15	60	"	"	"	2	Seed 27				8						~~not Y Cass.~~ "
2171	Pleiades.	Nov. 19	8:37	8.47	10	18	+7	49	2	" "										} same plate. "
	"	" "	8.53	9.05	12	12	7	49	2	" "										} "
2172	Neb. Androm.	" "	9:25	9.55		19		49	3	Seed 27										"
✓2172	Halley Field	Nov. 28	12.05 a.m.		60	24	+4	50	1	Σ		Ed.			$6^h\ 19.5^m$	+11° 3'				dα for D.M. Ch. = $+3^m$ Lee
✓2173	"	" "	13:20 "		60	"		50	2	"					$6^h\ 17.5^m$	+11° 18'				dδ " " " = −2' "
✓2174	"	" "	14.39 "		60	"		50	3	'					$6^h\ 25^m$	+11° 8'				2174 & 2176 } compared carefully in Stereo. Dec 2 "
✓2175	"	" "	15:42 "		60	"		50	4	"					$6^h\ 20^m$	+10° 28'				2172 & 2177 }
✓2176	"	Dec. 1	11.36		60	24	−9	57	1	"					$6^h\ 20.5^m$	+11° 6'				Lee
✓2177	"	"	13.21		60	"	"	"	2	'					$6^h\ 19.5^m$	+11° 3'				"
✓2178	"	" 22	8.40	11.40	3^h	24	0	52	2	Σ	~~[illegible]~~	Hydr.		10 ±	$5^h\ 58^m$	+11° 20'				"
✓2179	"	" 22	13.01	15.31	$2\frac{1}{2}^h$	"	−2	52	3	"				"	$5^h\ 51^m$	+12° 20'				"
✓2180	"	" 24	9:12	11.42	$2\frac{1}{2}^h$	"	0	52	2	"				"	$5^h\ 52^m$	+10° 10'				"
✓2181	"	" 24	12.16	14.46	$2\frac{1}{2}^h$	"		52	3	"				"	$5^h\ 58^m$	+11° 20'				"
✓2182	"	" 26	10.45	13.45	5^h	24	+2	51	2	Σ		.			$5^h\ 51^m$	+12° 20'				Lee

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No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907																		
2183	Halley Field	1908 Dec 28	11:40	14:40	3^h	24	+2	51	2	Σ		Hydro.		$10^m \pm$	$5^h\ 57^m$	+11° 25′				good elps till last five min. (53)
2184	" "	1909 '09. Jan 12	7:34	10:37	183^m	24	−10	57	2	Σ		"		$10^m \pm$	$5^h\ 43^m$	+11° 8′				
2185	" "	Jan 17	7:28	10:28	3^h	24	−2	53	2	Σ		"		$10^m \pm$	$5^h\ 38.7^m$	+11° 40′				v. b. seeing. hazy at end.
2186	" "	'09. Jan. 19.	7:20	10:20	3^h	24	−2	53	3	Σ		"		10 "	$5^h\ 41^m$	+11° 30′				
2187	" "	" 19	11:25	12:00	35^m	24	−4	54	2	Σ		"		"						shut off by hazy air, then dense fog.
2188	N.G.C. 2537	Feb. 21.	7:25	9:25	2^h	24	+4°	50	2	Σ		"		$10^m \pm$	$8^h\ 2^m$	+46° 20′				(1855) A.N. 161, 127.
2189	"	" "	10:48	12:48	2^h	24	+4	50	3	Σ		"		$10^m \pm$	$12^h\ 53.3^m$	+28° 35′				(1855) A.N. 155, 127, 1901.
2190	"	Mar. 17	9:08	10:25		24	−2	53	2						12^h "	"				v. p. plate.
2191		Mar 25	11:30	15:30	4^h	24	+2	51	2	Σ		"		$7^m \pm$	$12^h\ 53.^m$	+28° 30′				bad plate emulsion filthy.
2192	Daniel's ☄ Field	April 25	13:15	14:20	65^m	24	+6	49	2	Seed 27		"			$15^h\ 17^m$	−7° 42′				
2193	" "	May 16	10:56	11:56	60	24	+14	.45	3	Σ		"		$8^m \pm$	$15^h\ 1.5^m$	−6° 37′				(1910) Corr. to B.D. {α +3^m, δ −12′}
2194	" "	" "	12:02	13:02	60	24	12	45	3	Σ		"		10 ±	$15^h\ 1.5^m$	−6° 37′				(1910)
2195	" "	May 19.	10.07	11:10	63	24	13	46	2	Σ		"		9 ±	$15^h\ 4.4^m$	−6° 42′				(1910) {Compared and no comet found. May 20. 09
2196	" "	" "	11:18	12:18	60	24	13	46	3	Σ		"		9 ±	$15^h\ 4.4^m$	−6° 42′				(1910) See Wolf A.N. 168, 75
2197	S shaped Neb.	May 20	9:38	11:38		24	16	44	3	Σ		"		5 ±	$14^h\ 1^m$	−10° 6′				(1900) plate images distorted
2198	Hagen V Virginis	June 15	9:35	11:05	90	24	+17	46	1	Seed 27	11624	"	+20	10	$13^h\ 22$	−2 39				low, fair, good guiding star
	Flat silvered June 18, focal setting increased																			
2199	N pole	" 29	9:25	10:25	60	18	+24	54	1	Tri β7	644	"	+20	10^m	$H = +2^h$	90°				star drifts to left. Moon, good

No	Field	Date 1907 / 1909	Exposure (Central Standard T) Begin		End		Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
	24-inch mirror silvered July 5. adjusted July 6 Plate-holder centers at 9. in R. A. and 14 in Dec.																					Collimation good
✓ 2200	N pole	July 7	10h	43	11	28	45	24	18	45	2	Seed 27	11624	Hydro	+20	10m	H = +3h 14m Sid T 18h 37m	dec. 90°.0				Sent to Pickering 09/10/9 good moon rose at 11
✓ 2201	15h 32m − 15°.8 W Librae	8	8	56	9	57	61	18	+22	43	2	"	"	"	"	"						"
✓ 2202	16h 16m, − 7°.5 W Ophiuchi	"	10	10	11	10	60	"	20	43	3	"	"	"	"	"						" thick lower.
✓ 2203	15h 41m Z Librae	9	9	3	9	30±		18	25	43	2	"	"	"	"	"						fair stopped by clouds plate fogged in development
✓ 2204	Z Librae	12	9	10	9	20±		"	23	"	2	"	"	"	"	"						clouds fair plate
✓ 2205	Z Librae	13	8	52	9	52	60	"	25	43	2	"	"	"	"	"						good
✓ 2206	N Pole	"	11	6	12	6	60	"		"	3	"	"	"	"	"						clock did not carry, images " (triple
✓ 2207	" "	15	9	5	10	52	107	"	22	44	2	"	"	"	19+	12						Guiding star faint images wandered
✓ 2208	RR Librae	16	9	5	10	9	64	"	23 22	44	2	Cramer Σ	recd 09-2-18 4526	Hydro B	20	4½						a 2 v, v 2 b. good
✓ 2209	W Scorpii	17	8	54	10	0	66	"	24	43	2	"	"	"	19	10						plate-limit 15m.1 (1919) dull
✓ 2210	Y "	18	8	55	10	10	75	"	19.8 18.3	46	2	"	"	"	"	9						air very good guiding star very faint
✓ 2211	W Scorpii	20	8	50	10	5	75	"	23.0 22.0	44	2	"	"	"	18	7						" " bright air clear, unsteady
✓ 2212	T Ophiuchi	21	9	10	10	15	60±	"	25.0	"	3	"	"	"	20	6						good between clouds guiding star faint
✓ 2213	N Pole	23	9	34	10	34	60	"	21 20	44½	1	Tri	644	Hydro A	20	10	H = 5h E at end 18h.8 S.T.					good, small moon setting, bright guiding star star drifts to right = N
✓ 2214	"	Aug 5	9	0	9	50	50	"	28 26	42	3	Seed	11624	" "	20±	10						∴ tel " • left = S ∴ axis is too low good
✓ 2215	20h 41m +38°.5	" 17	8	52	8	52½	½m	12	22	45	2	"	"									good
✓ 2216	"	" "	8	53	8	54	1m	"	"	"	3	"	"									"

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No	Field	Date		Exposure (Central Standard T) Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907✓																			
✓ 2217	N Pole	1909 Aug	23	12h 46m	14h 50m	120m	18	+23	42	2	Seed 27	11624	Hydro	20	10m						Sent to Pickering 09/10/19 [57] H.T. Stetson steady to unsteady
✓ 2218	Neb. And. M31	Aug	24	12h 35	14 55	140	18	24	43	2	Seed 27	"	"	20?	10						unsteady – H.T. Stetson
✓ 2219	X Cygni	"	28	9h 8m	11h 9m	120	18	20	45½	1	n. Trichro	644	"	20	10	(Exp. time color filter)					unsteady — Plate fogged by red light development H.T. Stetson
✓ 2220	V Cassiopeiae	"	31	9h 5m	11 6m	120	18	14 / 11.5	46		"	"	"	20	10	"					H.T.S
✓ 2221	Mars & moon	Sept	1				18		48	2	Seed L S	"									
✓ 2222	" "	"	"							3	"	"									
✓ 2223	neb. Dumbbell	"	6	9 15	9 53	~~38~~ 40	"	16	46	2	" 27	11624									clouds H.T.S.
	1909 Sept 3-4 Mirror, flat + plate recollimated																				
✓ 2224	neb. Dumbbell	"	10	7 58	8 28	30	18	+23	43	2	Lumiere Σ	4803	Rodinal 1/15	20	10						fair to good
✓ 2225	Kapteyn 114 } 22h38m +0° }	Sept	10	10h 0 10 20	10 20 10 40	20 } 20 }	18	20	44	3	"	"	Rodinal 1/15	"	"						" " "
✓ 2226	N Pole	"	11	7 38	8 50	80	18	21.3 / 20.1	44	2	" "	"	Hydro B		7m						" " "
✓ 2227	NGC 650 (1h36m +51)		"	9 19	9 54	35	24	20	45	3	" "	"	Rodinal 1/15	20	10						" " "
✓ 2228	Kapteyn 115 (23h38, +0°)	"	"	10 35	10 49	14±	"		"	3	" "	"	"	"	"						stopped by clouds
✓ 2229	Halley Field	"	14	14 12	15 20	68	24	18	45	3	" "		Hydro.		7m ±						Stopped by clouds Lee
✓✓ 2230	"	"	15	13 40	16 20	160	24	17	46	3	" "	5730	"		8m ±	6h 18	+17 10				Lee
✓✓ 2231	"	"	16	13 15	16 15	180	24	17	46	3	" "	"	"			6 20	17 10				Lee
✓✓ 2232	"	"	17	13 05	15 15	130	24	17	46	3	" "	"	"			6 18	17 10				Lee

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No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
R2233	Pleiades	Sept. 24	12:26	1, 2, 4, 9½ m		24	13	47	1	E	5730	Hyd.	16	7					59 Lee
2234	"	" "	12:43	1½ & 15m		24	13	47	2	"	"	"	16	7					
2235	Halley	" "	13:12	15:42	2½h	"	"	48	3	"	:	Hydr.		7	6h 19m 24	+17 5			E 2:13
2236	"	" 25	13:45	15:12	87m	24	13	48	1	"	"	"	19°	7+	6 18	17 5			clouds 14:47 to 55. E 2:39
2237	"	" "	15:17	15:32	15m	24	13	48	3	"	"	"	19°	7	6 18	17 0			
2238	"	" 26	14:28	14:43	15m	24	10	49	2	"	"		20°	7	6 18	17 0			moon fogged
2239	"	" "	14:47	15:47	1h	24	10	49	3	"	"		20°	7	6 18	17 0			E 2:10
2240	Pleiades	" 29	11:05	15, 30 & 60s 11:08	3m	24	13		3	"	"	"	20°-	6+					
2241	Halley	Oct. 8	12:25	13:29	64m	24	18	46	2	"	"	"		5	6 13	16 50			
2242	"	" 13	12 20	13:20	1h	24	3	52	3	"	"	"	20.4	7	6 14	16 50			
2243	"	" "	13:30	14:10	40m	24	3	"	2	"	"	"	"	8	6 12	16 50			
2244	"	" "	14 20	15:00	40m	24	2	"	1	"	"	"	"	8	6 13	16 50			Holder tilted, out of focus
2245	"	Oct. 14	14 20	15:20	1h	24	3	52	2	"	"	"	20.0	5	6 11	17 0			
2246	"	" 15	13:47	14:17	30m	24	5	51	3	"	"	"	20.4	5	6 10	17 5			fogged in developing.
2247	Field	" "	14:40	14:50	10m	12	5	57	1	Seed 27					6 17	17 0			
2248	Pl	" "	10, 20, 40 & 80s			24	5	51	2	E	5730	Hydr.	20.4	5					
2249	Halley	" 16	14:55	15:25	30m	24	5	51	1	"	"	"	20.4	3½	6 9	17 0			E 0:56 Lee.
2250	Pleiades	" "	15:40	2, 5, 10, 20, 40, 80s		24	5	51	3	"	"								

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	Aperture	Screen	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Building Eyepiece	Telescope Circle	Seeing & Remarks
		1909.																	(61 Lee
2251	Halley ☄	Oct. 18	12:45	13:35	50m	24	6	51	3	Seed 27.	12040	Hydro	21.5	6	6h 8m	+17° 0′			
2252	"	" "	13:48	13:59	11m	12	6	51	2	" "	"	"	20.5	10	6h 18	+17.0			
2253	Pleiades	" "	14:10	30,40,20,10,5,2		24	6	51	1	☄	5730	"	20.5	4±					Out of focus
2254	Halley's ☄	Oct. 19	12:37	13:17	40m	24	6	51	3	Seed 27	12040	"	20.0	9m	6 7	17 0			All Seed Plates developed with Mr. Parkhurst's Hydrochinon Developer.
2255	" "	" 25	15:52	16:12	20	24	7	57	2	" "	"	"	20.1	10m +	6 2	16 50			
2256	" "	" "	16:20	16:40	20	24	7	57	3	" "	"	"	20.1	10m +	6 1	17 0			
2257	" Field	" "	16:58	17:08	10	12	7	57	4	" "	"	"	20.1	10m +	6 18	17 0			
2258	Halley's Comet	" 26	16:27	16:42	15	24	6	51	2	" "	"	"	20.0	10m +	5h 59	+17° 0			
2259	"	" "	16:45	17:00	15	24	6	51	3	" "	"	"	20.0	10m +	5 59	+17° 0			Lee
2260	Pleiades	" 27	8:00	20s, 10, 5, 3, (2±)s		24	3	53	3	☄	5813	"	20.0	3m ±					"
	1909 Nov. 8 New camera with position circle & comet follower mounted																		
2261	"	Nov. 8				18	+5.5	64	2	Seed 27									Arcle 40°.2 (Zero=38°.5) Comet screw + trails.
2	5h 37m +16°.8 "	" "	10 30	11 0	30	"	+5	"	2	"	12040				5 37	+16.8			" " 1 click in 3m/4
3	0h± +5°±	10	7 40	8 0		"	+15	63	2	"	11624								trails, moved screw 1 notch
4	5h 30m +16°.8	11	11 29	11 49	20	"	+11	64	2	"	12040								2 " guided on star good
5	"	"	12 0	12 40	40	24		"	2	"	"								" at first. dull later. 1 notch every 3m 1 notch in 2m 55s
6	5h 25m +16.7	13	10 46	11 46	60	"	+16	"	2	"	"	Hydro	21.8	10					good, a little dull
7	5h 7m + 16.5	19	10 5	10 25	20	"	+6	77	2	"	"								1 notch in 6 9s

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Terrels	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
✓ 2268	Halley 5h 4m +16°.5	1909 Nov. 19	10h 35m	11h 5m	30	24	+7°	77	2											63
✓ 9	4 5 +15.2	Dec. 7	7 57	8 10	13	18	-11	82	2	Seed	12029									good
✓ 2270	4 0 +15.2	"	9 24	9 34		24		"	2	"	"									1 notch in 100s
			9 36	9 46		"		"												more plate 3mm
																				1 " " 50s
✓ 2271	6 16 +34.6	"	~~11~~ 4	~~11~~ 34		"	-12	"	2	"	"									Pa 138°
	Halley	1910																		1 notch in 65s6
✓ 2272	2h 10m +11°10	Jan 3	6 54	8 7	73	"	-15±	84	2	"	"									Circle 28°
✓ 2273	2 0 +10 43	6	6 45	8 0						Seed	12040									1 notch in 63s3
✓ 4	1 5 +10.4	8	7 45	8 45	60	"	-12	82		"	"									
✓ 2275	1 37m + 9.6	14	8 15	9 50		"	-10	80												
2276	1910a	Jan. 24			75°	24	-10	80												about half the aperture covered up by wind shield tho folded closely Lee
2277	Halley	Feby 1	8 10	8 40±	30	24	0	78												Nelson
2278	2h 46m +22 37	Feby 4	8 25	8 55	30	18	-3	75												W 3:17 at 6:02 Sidt. Lee
2279	" "	" 6	8 44	9 29	45	18	-10	81												
	Pleiades	" 9	1,1.	5,8,10,15,20		18	-6	79												
2280	6R 18m +17.0	" "	9 3	10 3	1h	12	-6	79												Hydr. 10m 19.5° C
2281	" "	" 10	8 5	9 5	1h	18	-7	79												" 10 20.1
2282	" "	Mar 1	8 38	9 32	54m	18	+1	64												

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Screen	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2283	$6^h 18^m$	+17° Mar 6. 1910	8:15	9:30	75m	18	+12°	76		27	12040	Hydro	19.8	10m					65
2284	6 10	+17 " 6	7:36	8:30	54m	12	+4	80		"	"	"	"	"					clouded up
2285	"	" " 8	7:35	8:28	53	12	0	82		"	"	"	"	20.4	10				
2286	"	" " 8	8:40	9:20	40	18	0	82		"	"	"	"	20.4	10				
	Comet slide removed																		
2287	TW Cygni	Apr. 12	15:10	15:55	45	24	6	224		um E	5813	Ed.							
2288	Halley's Comet	" 29	14:48	15:00	10m	24	16	219		Red 27.		"							Sweeping clouds.
2289	"	" " 29	15:03	15:07	4m ±	24	16	219		"		"							" " "
2290	"	" May 3	15:18	15:13	5	24	+3	226		Ort. S.		Hydro.							"
2291	"	" "	15:17	15:22	5	24	+3	226		Red 27		"							"
2292	"	" "	15:26	15:29	3	24	+3	226		"		"							"
2293	"	" "	15:31	15:33	2	24	+3	226		"		"							"
2294	"	" May 4	15:14		5	24	+5	226		E. S.		"							"
2295	"	" "	15:21		5	24	"	"		Red 27		"							"
2296	"	" "	15:28		70s		"	"		E. S.		"							"
2297	"	" "	15:31		4m		"	"		Red 23		"							"
2298	"	" "	15:36		4m		"	"		"		"							"
2299	"	" "	15:41		40s		"	"		S.		"							"

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No	Field	Date 1907	Exposure Begin (Central Standard T)	Exposure End (Central Standard T)	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		1911																	Norm rose during 24/7
66 2300	Nova Lacertae 2h E, +84°	Jan 3	6 23	8 26		24	-14 +167	215 240 to	2	Red 27	11431	Hydro	20°	10m	8	14	47	Very good (33)
2301	Focus Polaris	17	9 0	9 10		"	-8 -7	200	2	"	"	"	"	"	8	15	0	Good. Unsteady
2302	Nova Lacertae	22	6 50	7 25		"	-2	200	3	"	"	"	"	"	8	18	24	" Dull at close,
2303	Nova Lacertae	23	6 18	8 25		"	-1.5	202	3	"	"	"	"	"	8	14	42	Good "
2304	29 Persei for focus	" 29	6h 5-0	7h 0	30 sec	"	+3.5	215 to 182	3									
2305	Halley's Comet	" 29	15 15	16 15		"	-6	220	3	Red	11539	"	"	"	"	"	"	Becoming dull.
2306	Nova Lacertae	" 30	6 25	6 5-0	25m	"	-4.6	218	2	Red 27	"	"	"	"	8	14	24	Interrupted by clouds. Clouded at close
2307	Nova Lacertae	Feb. 2	6h 22m	7h 18m		"	-0.5	216	2	"	"	"	"	"	8	13	48	Good.
2308	α 4h 41m for Focus δ 52° 15'	Feb. 2	7h 25	7h 40	20 sec	"	-2.0	230 to 197	3	"	"	Rodinal 1+24	20.6	10m	8	14	30	Very good
2309	Nova Lacertae	Feb. 4	6 27 / 6 5-0	6 47 / 7 00	20m 10m	18	-2.5	218	2	Red 27	"	Hydro	19½°	"	8	15	16	" "
2310	9 Lacertae for Focus	"	7h 12m	7 33	20 sec	18	-4	230 to 185	3	"	"	"	"	"	8	16	15	" "
	δ 53° 6' 24h 41m	"	7h 5-0	8h 0m	30 sec	18	-4	130 to 182		"	"	"	"		8	9	33	" "
	adopt focal setting 208 for temp. -4.0														8	19	31	" "
2311	Nova Lacertae	Feb. 8	h m 6.28	h m 6 39	11m	18	-3	208	2	"	"	"	"					Becoming dull.
2312	" "	Feb. 9	6 23	6 33	10m	18	-6	219	3	"	"	"	19°	10m				Very Windy Very good. aby
2313	" "	Feb. 22	6 46	6 5-6	10	18	-1	217	2	"	"	"	"	"				" "
2314	Focus plate +62° 0'	"	H.A. 30m to 40m W		30s	24	-2	230 to zero	2	Red 27	"	"	"	"	8	14	31	" " "
	For plate holder 2 adopt 218 for temp									"	"	"	"	"	8	14	43	" " "
										"	"	"	"	"	8	17	13	Hazy at intervals

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	aperture	Terms	Focus	Holdback	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
			1908				3469												67
✓ 2085	U Puppis		apr 2	7 18	7 45	27	18	-1°	5-4		6432	Hydro B	20	3m					good - transparent 240.235 + ee to
✓ 2086	8h 33m	meas 73° 45'	" "	½, 1, 2m 11 12	11 16	4	12	-2°	"										offset 200, Exp. 30s
✓ 2044	"	meas "	" "	3, 5, 10m 11 17	11 36	19	"	"	"		6432								Slocum stopped by clouds
✓ 2086	12h 03m	meas 77° 45'	" "	1, 2½m 12 05	12 09	4	"	"	"		"								Slocum
✓ 2044	"	meas "	" "	5, 10m 11 48	12 04	16	"	"	"		"	offset at 182		best focus at 215 to 212					" 2m series stopped by clouds
✓ 2088	U Puppis	"	" 3	7 30	8 30	60	18	+4°	5-1		"	Ed. - Hydro							Lee.
✓ 2089	T Hydrae	"	" "	8 49	9 49	60	"	"	"		"	Hydro B							Slocum stopped by clouds
✓ 2090	R Cancri	"	" "	10 06	11 06	60	"	+2°	5-2		"	"		sky very thick after first 10 or 15 minutes					Slocum "
✓ 2091	RT Hydrae	"	" "	13 40	14 40	60	"	0°	5-3		"	offset at 197		best focus at 203					?, owr acc. of increasing clouds
✓ 2087	SS Hydrae	"	5	12 18	13 18	60	"	+8°	4-8		12168	Hydro A	10m						Slocum
✓ 2092	7h 45'	12h meas 03m	" 4	½, 1, 1½m 7 26	7 30	4	12	+12°	4-7		"	"	10m	interval 3 div. offset at 145					" near horizon
✓ 2093	Fogged.		" "	3, 5, 7m 7 31	7 47	16	12	"	"		"	"	10m	interval 6 div. corresponding to above					" Zenith
✓ 2094	Fogged 13h 33m	76° 40'	" 5	½, 1, 2m 10 27	10 31	4	"	+9°	4-8		"	"	7m	Moonlight & flying clouds					bars from Slo.
✓ 2095	"	"	" "	3, 5, 10m 10 22	10 41	19	"	"	"		"	"	6m	"					Slo.
✓ 2094	13h 17m	76°	" "	10s 20s 30s 10 49	10 50	1	"	"	"		"	"	10m	clear					Slo
✓ 2095	"	"	" "	1m, 2m, 3m 10 51	10 58	7	"	"	"		"	"	10m	" interval 2 div. offset at 202					218 best Slo.
✓ 2096	16h 45m	77° 45'	" "	½, 1, 1½m 11 37	11 41	4	"	"	"										
✓ 2097	Fogged.		" "	3, 5, 7m 11 42	11 58	16	3410	"	"										

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
			1911																
2315	Nova Lacertae	Feb. 23	6h 41m	6h 51m	10m	18		+2	216		mer Tric	719	Hydro A	10m	with vis. color filter, rising clouds				
2316	Nova Lacertae	"	6h 53m	6h 57m	2m	18		+2	216		ed	27	12168	"	"				Slo.
2317	"	Feb 24	6h 43m	6h 53m	10m	18		+5.5	214		mer Tri	719			clear but unsteady				Slo
2318	"	"	6 53	6 57	2	18		+5.5	214		ed	27	12168		" " "				Slo
2319	Halley's Comet	10h 44m −15° 20'	Feb 28	11h 13m	12h 13m	1h		24	−5	219	mire E	6425	Hydro B	3m	clouds just below field, clear above				Slo
2320	Nova Lacertae	Mar 2	6h 52	7h 2	10m	18		+2	216		mer Tri	719	Cramer con. dense.	5min	twilight, fair				Slo
2321	"	"	7h 4	7h 6	2m	"		"	"		ed	27	12168	Hydro A	10m				Slo
2322	17 Lyrae	19h 4m +32° 22'	Mar. 9	15h 47	16h 4m	3m 5 7		12	+3.5	215	ed	27	"	"	"	clear			Slo
2323	"	"	"	16 18	16 38	20		12	+3.2	215	ed	27	"	"	"	"			Slo
2324	"	"	"	16 45	17 12	27		12	+3	215	mer Tric	733	Cramer con. dens.	10m		"			Slo.
2325	Pleiades	Mar 12	7h 40	7 50	1m 2 4		18	+2	216		"	"			Moonlight	"			"
2326	"	"	8h 0m	8h 5m	15 30 60		12	+2 +2	216		ed	27	12168			"			"
2327	S Orionis	" 18	7 13	8 14	60m		18		216		"		"						Parts
2328	Nova Lacertae	α = 22h 32m δ = +52° 15'	Mar 19	7h 5m	7h 10m	5m		18	+7	214	"		"	Hydro A	10m	Star very low. Images unsteady			Slo
2329	"	"	7 13	7 28	15m		"	+6	"		mer Tri	733	Cram. Con.	11.5	"	"	"	"	"
2330	Halley's Comet	10h 21m −12° 36.6	"	9 26	10 26	60m		24	+4	215	mire E	6425	Hydro B	4m	Flying clouds towards close				
2331	μ Orionis	5h 37m +9° 39'	Mar. 23	7 40	7 53	15m		12	+6	214	ed	12168	Hydro A	10m		clear			Slo
2332	"	"	"	8 05	8 35	30m		18	+5	214.5	mer Tri	733	Cram. Con	10		"			Slo

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2333	17 Lyrae	19h 4m +32° 21m	1911 Mar 31 13h 48m	14h 48m	60m	18	-0.5	217	2	Seed 27	12168	Hydro A	19.5	10m				Seeing v. g.	71 Slo
34	"	"	"	15h 0m	16h 0m	60	18	-2.0	218	1	Cramer Tri	733	Cram. Cont.	"	"			"	"
35	Ngra Lacerbe	22h 32m 52° 15'	"	16 21	16 24	3	18	-2.0	218	3	Seed 27	12168	Hydro A	"	"			"	"
36	"	"	May 3	14h 37	14 42	5	18	+7.0	214	2	"	"	"	20	10				"
37	"	"	"	14 50	15 12	22	"	"	"	1	Cramer Tri	733	Cram Con	"	"			Without filter by mistake	Slo
38	B II 51.3414-6		"	15 24	15 29	5	"	"	"	3	Seed 27	12168	Hydro A	"	"				"
39	"		"	15 35	15 50	15	"	"	"	1	Cramer Tri	733	Cramer Co	"	6			Somewhat fogged by daylight	" " " "
40	Focus plate	10h 35m ± 69° 50' ±	May 7	8 50	9h 5m	30s	"	19.8 19.2	215 to 193	2	Seed 27	12168						off set at 193	201 best, at 19.5°

Adopt setting 201 for 19.5°

41	Nova Lacerbae	22h 32m 5° 20' 15"	May 8	14 50	14 57	7	18	17	202	2	Seed 27	12168	Hydro A	20	6			Sky dull	Slo
42	"	"	"	15 0	15 29	29	18	17	202	1	Cramer Tri	733	Cram. Con	"	8			"	Slo
43	Halley's Comet	9h 47m -5° 14'	May 23	9h 0m	10h 10m	70m	24	17 16.5	202.5°	2	Seed Xtra	213	"	19	5				"
44	"	9h 47m -5° 11'	May 24	8h 52m	9h 42m	50m	24	23 22	199.5°	2	"	"	"	19	4				"
45	Focus plate	13h 52m 62° 55' ±	"	9 55	10 10	20s	24	22 21.5	210 to 188 by 2	3	Seed 27	12168	"	19	6	offset = 188		204+206 best	how plate

Adopt setting 205 for 22°

46	Halley's comet	9h 47m -5° 0'	May 25	8h 50m	10h 5m	75m	24	26.3 25.2	204	3	Seed Xtra	213	"	20	4				
47	"	9h 47m -5° 4'	May 26	8 53	10 5	70	24	26	203	2	"	"	"	19	4				
48	Focus plate	14h 24m +70° 15'	"	10 10	10 45	15s	24	26	220 to 181 by 3	Seed 27	12168				6			offset over 220 Adopt 210 at 26°	

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No	Field		Date	Exposure Central Standard T. Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
			1907																		73
2349	Nova Lacertae (~~Persei~~) ?	22h 32m +52° 15'	June 4	13 29	13 39	10m	18	20	213	2	Seed 27	12168	Hydro A	19	10						Slocum
50	"	"	"	13 45	14 15	30	18	20	213	1	Cramer Tri	733	Cram Con.	"	10						"
51	Focus	18h 44m +13° 20'	June 21	11 hrs —		15s	24	26	220 to 199	3	Seed 27										Offset 199 interval 3 div "
52	Comet Wolf	18h 44m 13° 35'	"	11h 45m	12h 45m	60	24	26	204	3	Lumiere Σ	7213									Adopt 202 at 26° "
53	"	18h 50 13 58	June 22	10 27	11 27	60	24	28	203	3	"	"									"
54	Near ρ Ophiuchi	16h 18m −24° 10'	June 23	9 35	11 35	120m	24	26	202	3	"	"									"
55	Focus		" 29	9 0	9 5	30s	24	23.0 23.0	220 to 190	2	Seed 27	12168									fair Adopt 207 at 23.0
56	R Coronae	15h 45m +28° 30'	" 29	10 24	11 25	61	18	22.0	208	2	Seed 27	"									
57	δ Scorpii	16h 5m −18° 16	" 30	9 38	11 35	117	24	29	204	1	Cramer Tri	733									Mitchell
58	δ Cygni	20h 3m +57 41	July 11	9 25	9 35	10	12	28	220	2	Seed 27	12168	Hyd	20	10						{Focal CHG, Setting wrong.
59	"	"	"	9 44	9 49	5	12	27.5	220	3	" "	12168	"	"	"						"
60	"	"	July 12	8 57 / 9 70	9 7 / 9 15	10 / 5	12	24	206	2	Seed 27	12168	"	"							good, some streaks moon rising
~~61~~	36° 3443	18hr 39 +36° 51	July 14	9 6, 8, 12, 16	9 7, 9, 14, 20	1, 1, 2, 4	12	24	206	2	Seed 30	12630	"	"	10						bad guiding } discarded A.H. Joy
~~62~~	"	"	14	9 29, 54	9 53 / 10 6	24, 12	12	24	206	1	Cramer Tri	733	Cram Con	"	6						p7 filter " } " "
61	"	"	16	9 53	4 exp.	1½m	12	20	208	2	Seed 30	12630	Hyd								clouds " "
62	"	"	16	10 18	10 33	15m	"	"	"	1	Cram Tri	733	Cram Con	"							" "
63	6° 3898	18h 37m +6° 43'	17	9 15 / 9 40	9 19 / 9 44	4 / 4	12	22	207	2	Seed 30	12621	Hyd								Clear "
64	"	"	17	9 40	11 15	35	12	22	207	1	Cram Tri	733	Cr Con								" "

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No	Field		Date	Exposure Central Standard T		Time	Aperture	Tensh	Focus	Holder		Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks	
			1907	Begin	End																		
2365	-15°49'23	18h 15.6 -15 39	1911 July 17	9 45 9 49	9 48 9 52 }	3 3	12	21	207	3	Seed 30	12630	Hyd	20	10						clear	H H Toy
66	-2° 39 39	14h 58.8 -2° 28'	19	8 57 9 07	9 06 9 16 }	9	12	22	207	3	" "	"	"	"	"						"	Toy
67	" "	" "	19	9 17	10 07	50	"	"	"	1	Cra Tri	733	Cr Ext Con	"	6						"	"
68	+36°32'43	+18 39 +36°51.6	19	10 26 10 33	10 32 10 39 }	6 6	"	"	"	2	Seed 30	12630	Hyd	20	10						"	"
69	-10° 50 57	19h 17.7 -10 53	19	11 20	12 00	40	"	21.5	"	1	Cra Tri	733	Cra E Con	"	6						small moon	"
70	" "	" "	19	12 02 12 08	12.07 12 13 }	5 5	"	"	"	3	Seed 30	12630	Hyd	"	10						" "	"
71	18h 13.6	-15° 39	20	9 30	10 05	35	"	25	205	1	Cra Tri	733	Cra E Con	"	6						thick sky	"
72	12h 55m	+38° 22	21	9h 17	9h 52	35	"	22	207	1	" "	"	" "	"	"						Good ✓✓	"
73	" "	" "	21	9h 54 10 00	9h 59 10 5 }	5 5	"	"	"	2	Seed 30	12630	Hyd	"	10						" ✓✓	"
74	19h 39	+36° 52	21	10h 23m 10h 29	10h 28 10h 34m }	5 5	"	"	"	3	" "	"	"	"	"						" f ✓	"
75	19h 13m	-16° 5'	21	11 20	11 31	3 exh. 3, 2 & 3 min	"	"	"	2	" "	"	"	"	"						" ✓✓	"
76	"	"	21	11 33	11 48	15	"	"	"	1	C Tri	733	Cra Con	"	6						" ✓✓	"
77	20h 26m	-12° 13	21	12h 30	13h 5	35m	"	20	208	1	" "	"	"	"	"						"	"
78	" "	" "	21	13 9 13 16	13 15 13 21 }	6 6	"	"	"	3	Seed 30	12630	Hyd	"	10						" fogged repeat	"
79	21h 38	+35° 5'	21	14 2	14.10	3 exh 2m each	"	"	"	3	" "	"	"	"	"						✓ strong ✓	"
80	" "	" "	21	14 18	14 30	12	"	"	"	1	C Tri	733	Cra Con	"	6						" " ✓	"
81	12h 55m	+38° 22	24	9 10	9 55	45	"	16	210	1	" "	"	"	"	"						"	"
82	" "	" "	24	9 58 10 04	10 03 10 09 }	5 5	"	"	"	3	Seed 30	12630	Hyd	"	10						"	"

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
383	18h 39m +36° 5'	July 24	10 50	11 20	30m	1"	16	210	1	C Tri	733	C Con	20	6					clear
84	19h 56 +9° 43	" "	12 03	12 33	30m	"	14	211	1	"	"	"	"	"					"
85	" " " "	" "	12 39 12 45	12 44 12 50	5m 5m	"	"	"	3	Seed 30	1266 30	Hyd	"	10					"
86	19 Piscium 23h 39m +2° 41'	" "	13 50	14 10	20m	"	"	"	1	C Tri	733			6					clock stopped
87	12h 40m +45° 59	" 25	9 20	9 45	25m	"	16	210	1	C Tri	733			6					clear dark bad
88	" " " "	" 25	9 46	9 50	4m	"	"	"	2	Seed 30	1266 30			10					"
89	19h 3m -17° 26	" 25	10 25	10 55	30m	"	"	"	1	C Tri	733			6					" "
90	" " " "	"	11 00	11 07	7	"	"	"	2	Seed 31	1266 30			10					" "
91	23h 39m +2° 41'	" "	12 29 12 35	12 34 12 40	5 5	"	"	"	3	" "	"			10					"
92	23h 55m +59° 48	" "	13 00 13 06	13 06 13 12	6 6	"	"	"	2	" "	"			10					"
93	" " " "	" "	13 15 13 20	13 20 13 55	5 35	"	"	"	1	C Tri	733			6					" "
94	12h 40m +45° 59'	July 26	8 50	9 20	30	"	22	207	1	" "	"								"
95	" " " "	" "	9 22 9 26	9 26 9 31	4 4	"	"	"	2	Seed 30	1266 30								"
96	18h 14m -15° 39'	" "	10 05 10 09	10 09 10 14	4 5	"	20	208	3	" "	"								"
97	" " " "	" "	10 17	10 52	35	"	"	"	1	C Tri	733								"
98	19h 18 -10° 53	" "	11 28	11 58	30	"	19	207	1	"	"								"
99	" " " "	" "	12 04 12 08	12 08 12 12	4 4	"	"	"	3	Seed 30									"
2400	Novalac 24h 52m +52° 15'	" "	13 03 13 13	13 13 13 23	10 10	18	"	"	3	" "									"

No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Tenax	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2401	Nova Lac.	22h32m +52°15' July 26	13 25	14 25	60m	18	19	209	1	CTri	733	Con	20	6					good Joy
2402	18h37m	+6°43' " 28	11 20	12 05	45	12	20	208	1	"	"	"	"	"					thick "
03	" "	" " " 28	12 07 12 13	12 13 12 19	6m 6	"	"	"	3	Seed 30	1236	Hyd	"	10					" "
04	21h38m	+35°3' " 29	14 20	14 50	30m	"	22	207	1	CTri	733	Con	"	6					slide not fully drawn
05	" "	" " "	14 52 14 56	14 56 15 00	4m 4	"	"	"	3	Seed 30		Hyd	"	10					Thick "
06	19h44m	+85°9 " 30	10 36 10 41	10 41 10 46	5 5	"	26	205	3	"		"	"	10					" "
07	" "	" " "	10 50	11 25	35	"	"	"	1	CTri	750	Con	"	6					" "
08	20h43m	−19°24' "	12 00	12 45	45	"	"	"	1	"	"	"	"	6					" "
09	" "	" " " "	12 48 12 54 13 04	12 54 13 04 13 10	6 10 6	"	"	"	3	Seed 30		Hyd	"	10					fair "
10	0h19m	+53°46' " "	13 47 13 51	13 51 13 56	5 5	"	24	206	3	"	"	"	"	10					" "
11	"	" " " "	14h0	14h35	35	"	24	206	1	CTri	750	Con	"	6					" "
discarded	21h38m	+35°3' Aug 1	12 55	13 40	45	"	20	208	1	"	"	"	"	"					v thick nothing "
13	23h56m	+59°48' " "	14 05	14 40	35	"	"	"	1	"	"	"	"	"					thick "
14	" "	" " " "	14 50 14 55	14 55 15 0	5 5	"	"	"	3	Seed 30	1236	Hyd	"	10					" "
15	19h13m	−16°51' " 2	10 20	10 45	25	"	"	"	1	CTri	750	Con	"	6					moon "
15	" "	" " " 2	10 57 11 00	11 00 11 03	3 3	"	"	"	2	Seed 30	1236	Hyd	"	10					" "
16	19h44m	+85°9' " "	11 02 11 08	11 08 11 14	6 6	"	"	"	3	"	"	"	"	"					good "
17	" "	" " " "	11 40	12 15	35	"	"	"	1	CTri	750	Con	"	6					" "

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2418	20h 26m	-12°13'	Aug 2	13 45	14 20	35m	12	20	208	1	Ctri	750	cCon	20	6				good
19	" "	" "	" 2	14 30 14 35	14 35 14 40	5 5	"	"	"	2	Seed 30	1263o	Hyd	"	10				"
20	10h38	+67°56	" 4	10 24 10 27	10 27 10 30	3 3	"	25	206	2	" "								moon
21	"	"	" "	10 35	11 00	25	"	"	"	1	Ctri	750	cCon	20	6				"
22	21h38m	+35°3'	" "	11 35	12 00	25	"	"	"	1	"	"	"	"	"				"
23	20h43	-19°24'	" "	12 55	13 40	45	"	24	"	1	"	"	"	"	"				"
24	" "	"	" "	13 44 13 54	13 54 14 00	10 6	"	"	"	3	Seed 30	1263o	Hyd	20	10				clear
25	22 00	+20°34'	" "	14 35 14 42	14 41 14 48	6 6	"	22	207	3	Ctri?	750	cCon	"	6				"
26	" "	" "	" "	14 50	15 20	30	"	"	"	1	Seed 30	1263o	Hyd	"	10				"
27	10 38	+67°56'	" 5	9 22 9 25	9 25 9 28	3 3	"	"	"	2	" "	"	"	"	"				moon
28	" "	" "	" 5	9 55	10 18	28	"	"	"	1	Ctri	750	cCon	"	6				light clouds
29	22°0	+20°34'	" "	10 55	11 30	35	"	"	"	1	" "	"	"	"	"				moon clear
30	"	"	" "	11 32	11 38	6m	"	"	"	3	Seed 30	1263o	Hyd	"	10				"
31	19 Piscium	23h39 +2°41	" "	12 39 12 42	12 42 12 45	3 3	"	"	"	2	" "	"	"	"	"				clear
32	" "	"	" "	12 55	13 30	35	"	"	"	1	Ctri	750	cCon	"	6				"
33	0h19m	+53°46'	" "	14 00	14 25	25	"	21	205	1	CTri	750	"	"	"				"
34	" "	" "	" "	14 28 14 33	14 33 14 38	5 5	"	"	"	3	Seed 30	1263o	Hyd	"	10				"
35	12h40	+45°59'	" 8	8 30	8 45	15	"	26	205	1	Ctri	750	cCon	"	6				full moon off.

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No	Field	Date 1907	Exposure Central Standard t Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Building Eyepiece	Telescope Circle	Seeing & Remarks
✓2436	12h 17m 40	+45° 59' Aug 8	8 47 8 50	8 50 8 53	3 3	12	26	205	2	Seed 30	126 30	Hyd	20	10					moon H.W.S. 83
✓37	" "	" " " 9	8 52	9 10	18	"	"	"	1	CTni	750	Ccon	"	6					" "
✓38	" "	" " " 9	9 12 9 15	9 15 9 18	3 3	"	"	"	3	Seed 30	126 30	Hyd	"	10					" "
✓39	19 56	+90 14 " 14	13 15	13 41	26	"	20	208	1	CTni	750	Ccon	"	6					clear "
✓40	" "	" " " "	13 44 13 48	13 48 18 52	4 4	"	"	"	2	Seed 30	126 30	Hyd	"	10					" "
✓41	21 39	+35° 3 " "	14 10	14 35	25	"	"	"	1	CTni	750	Ccon	"	6					" "
✓42	" "	" " " "	14 37 14 41	14 41 14 45	4 4	"	"	"	3	Seed 30	126 30	Hyd	"	10					" "
✓43	15 28 obj 12 40	45° 59 " 15	8 36 8 40	8 38 8 50	12 10	"	28	204	1	CTni	750	Ccon	"	6					rotated 34° clear "
✓44	" "	" " " "	8 52	8 56	2 2	"	"	"	2	Seed 30	126 30	Hyd	"	10					" " " "
✓45	12h 55m	38° 27 " "	9 26	10 14	48	"	"	"	1	CTni	750	Ccon	"	6					clear, low west "
✓46	" "	" " "	10 15 10 21	10 21 10 27	6 6	"	"	"	3	Seed 30	126 30	Hyd	"	10					" " " "
✓47	-10° 50 57 19h 18m -10° 53	" "	11 00	11 30	30	"	26	205	1	CTni	750	Ccon	"	6					thickish "
✓48	" "	" "	11 32 11 35	11 35 11 38	3 3	"	"	"	2	Seed 30	126 30	Hyd	"	10					" "
✓49	34° 45 00 249a 21h 38m	" 16	9 40	10 10	30	"	22	207	1	CTni	750	Ccon	"	6					thick "
✓50	+35° 3'	" 16	10 12 10 16	10 16 10 20	4 4	"	"	"	3	Seed 30	126 30	Hyd	20	10					clear "
✓51	20h 26m -12° 13'	" 16	11h 10 11 14	11 14 11 18	4 4	"	"	"	3	" "	"	"	"	"					thick "
✓52	12h 55m +38° 22	" 17	9 05 9 9	9 9 9 13	4	"	24	206	3	" "	"	"	"	"					clear "
✓53	19h 56 +9° 14	" 17	10 09 10 12	10 12 10 15	3 3	"	"	"	2	" "	"	"	"	"					thick "

No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2454	R. K. area 10	28 Aug.	9h - 8m	9h - 58m	50m	12	18	209	2	Seed 30	12548	Hyd		10m	22h-24m	+8°37	18	Clear E	Tel. v. Maanen
55	R. K. area 1	"	11 - 13	12 - 3	50m	12	15	211	3	" "	"	"		"	0-36	+8-48	4	fairly good E	v. Maanen
56	R. K. area 2	"	13 - 25	14 - 15	50m	12	12	212	3	" "	"	"		"	2-51	+7-59	32 Ea. al.	" " E	v. Maanen
2457	γ Cass	Aug. 29	10 15	10 25	10	12	+15.0	211	1	C Tri	750				23h58	+55°7'		Good	G
58	γ Cass	" "	10 34	11 34	60	12	+14.5	211	1	" "	"				"	"		"	G
59	γ Cass	" "	11 40	12 40	60	12	+13.8	211	2	Seed 30	12548				"	"		"	G
60	γ Cass	" "	12 50	13 00	10		+13	211	3	" "	"				"	"		"	G
61	9 Lac B.D. +56° 344	Aug. 31	11 - 15	11 - 35	20m	24	+22	209	3	Seed 30	12548				—	+90°	39	E	v. Maanen
2462	23h29m; +86.7	Sept. 5	8 5	8 8	3m	18	+24	206	4	" "	"							16 ext. 10s; 8 screw moved 1 turn	
3	"	"	" "	8 14	8 20	6	18	22	207	5	" "	"						16 " 20s	" "
4	"	"	" "	8 28			12	+21.5	"	6								16 " 15s	"
					8 39		"											16 " 25s	"
2465	V Delphini	Sept 18	9 - 23	11 - 3	1h-40m	12	+18	209	4	Seed 30	12548				20 - 43	+18-8	19	Hazy & cloudy W	v. Maanen
2466	Nova Lacertae	Sept 19	8 45	9 50	1h 5m	24	+18	209	2	"	"							Stopped by clouds	
			7 15	7 20	5m	16	+18	209										Stopped by clouds	
2467	0² Cygni	21	7 22	7 27	5m	"	"		4	" "	"							Seams gutter & clears	
2468	- - -	"	7 45	8 57		24	18	220 to 196	8									focus plate with filter B7, best 214	
2469	Nova Lac	Sept 21	8 20	11 20	3 hrs	24	17	210	2	"	"								
2470	"	"	11 50	12 30	40m	18	16	214	5	C. Tri	550							(filter)	

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No	Field	Date 1907 (1911)	Exposure Central Standard T. Begin	End	Time	Aperture	Temp	Focus	Holder		Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks	Obs.
2471	V Delphini	27 Sept	8-15	±8-18	±3m	12	+18	209	4	Sed 30	12548				20-43	+18-58	19			W Stopped by clouds	[87] v. Maanen
2472	Y Cass.	"	11-55	13-20	1h-25m	12	+15	211	5	"	"				23-5-8	+55-7	31			W " " "	v. Maanen
2473	Pr.-k. area 1	Oct. 3	13-25	14-10	45m	16	+17	200	5	"	"				0-36	+8-48	55/24			with wire gauze W	v. Maanen
"	"	"	14-15	15-0	45m	16	+15	210	5	"	"				-	-	"			no gauze W	"
2474	comet Beljawski 11h43m +11°40'	Oct. 3	16h53m		5s	"	+15	216	7	"	"										Slocum
2475	"	"	16h55m		10s	"	"	"	6	"	"										
2476	Focus	Oct 7	7h45m	7h50m	20s each	24	+9.8	220 to 188	5		"						Full Moon			Less image separated further. Focus at 220, 216, 212, 208, 204, 200, 196, 192, 188	Best focus 200 Gingrich
2477	20h30m +84°39m	Oct. 7	9 15	9 30	15 sec each	18	+9.5	200	5	"	"									16 exposures. Calibration δ screw moved 1 turn	
2478	" "	" "	9 35	9 50	25s each	12	+9.5	200	6	"	"									16 exposures. Calibration δ screw moved 1 turn	
2479	Calibration plate	Oct 11	7-5	7-44	16 × 60s 16 × 20s 16 × 7s	16	+16°	202	5	"	"				21-24	+80°0	×			Calibration plate 16 exp. 60s. 16 exp. 20s 16 exp. 7s. δ screw 1 turn	v. Maanen
2480	~~Focus~~	Oct 11	12-6	12-19	10s each	16	+14°	216-212 offset 180	6	"	"				1-17	+88-50	×			best focus 207	v. Maanen
2481	V Delphini	Oct 12	6-40	8-25	1h-45m	12	+18/+16	205	5	"	"				20-43	+18-58	37/10			W. last 15m hazy and moon.	v. Maanen
2482	X Cygni	Oct. 14	9 50	10 00	10m	12	+13	198	6	"	"									Fog rising.	Gingrich
2483	Pleiades	17	8 35	8 40	5	12	+14	206	4	" 30	"									Sch. gitter on pre. side of field 3/16 inch in.	
2484	"	17	9 45	9 ~~50~~ 49	~~5~~ 4	"	+13.3	"	4	-	-									Gitter flush in	
2485	focus plate	Oct 23	±7-10	±7-30	20s each	16	+6.3 +6.1	220: 216: 212: 208: 204: 200...180	5	"	"				/	/	/			220 dubbel.. clouds!! best focus 208??	W. v. Maanen

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No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Focus	Holder		Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Seeing & Remarks	Tel.	
✓ 2486	Pritchard Kapteyn 3	1911 Oct. 23	10-34	11-24	50m	16	+5.2	209	5	Seed 30	12548	Hyd	+20°	10m	4h-34m	+7°-40'	6°/40	S. 3-4; T 3	E	v. Maanen
"	"	"	11-27	12-17	50m	"	.	"	"	"		.						faint guiding star with y gauze.	"	"
"	"	"	12-21	12-43	22m±	"	+3.2	"	"	"								trouble with the clock!	"	"
⊗ 2487	focus plate		1-35	1-45	20s each	16	+3.1 +3.1	224.220 — 184 offset 180	4	"	"	"	"	"	1-1	+88-32	—	best focus 205	E	"
✓ 2488	Pritch-Kapteyn 4	"	2-53	3-43	50m	16	+2.7 +2.2	208	6	"	"	✓			8-21	+7-53	22°/8	S 3 T 3.	E	"
"	"		3-46	4-36	50m	16		"	"	"	"				"	"	.	1 with gauze, 2 not.	"	"
✓ 2489	R Vulpeculae		7-3:+ 8-35	7-35 10-3	2h-0m	12	+6.2 +4.9	203	6	"	"				20-59	+23-25	42°/24	S. 4 T 3-4	W	"
✓ 2490	Pr.-K. area 3		11-17	11-37	20m	16	+4.2	206	5	"	"				4-34	+7-40	5°/40	no gauze S 3 T 3	E	"
			11-41	12-1	20m	"	"	"	"	"	"				"	"	"	gauze, guid. star v. f.	E	"
			12-6	12-26	20m	"	"	"	"	"	"				"	"	"	no gauze	E	"
⊗ 2491	Focus plate 21h30m +66°	Oct 27	7h 34m	7h 44m	30s	24	+5 +4.5	220 to 193 offset	"	"	"								E	Slocum
✓ 2492	Asteroid 1h26m MT -13°11'	"	8h 55	9 35	40m	15	+4	199	5	Lumière Σ	7213								E	"
✓ 2493	γ Cassiopeiae		10-33	12-13	1h-40m	12	+3.5 +2.3	199	6	Seed 30	12548	"	"	"	23-58	+55-7	39°/40	S 3 T 2-3 haze	W	v. Maanen
⊗ 2494	Pole region, Focus	Oct. 28	8 30	9 00		24	+3.5	221 to 188	3s 6	Seed 30	12548							Last separated Moved R.A. screw Best at 200	W	Gingrich
✓✓ 2495	γ Cassiop	Oct. 28	11 10 / 11 32	11 30 / 11 42	20 / 10	12	+3.0	200	6	"	"						9 / 12		W	G.
[2] 2496	Pleiades	Oct 28	12 15	12 30	2s 4s 8s 16s 32s 64s	12	+2.5	200	6	"	"								W	G
⊗ 2497	Pole Region Focus	Oct. 29	7 00	7 15		24	+7.5	230 to 191	3s 8	Filter cracked C. Tri 37	750							Moved R.A. Screw offset at end	W	G Best at 221
✓ 2498	Pleiades	Oct 29	8 8	8 13	5	12	+7.0	200		Seed 30	12548	"	20±	10m				Scr. ½ Gitter out. seated	E	P

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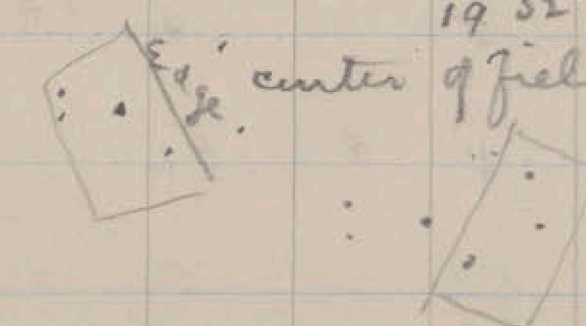
No	Field	Date 1907	Exposure (Central Standard T) Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2499	χ Cygni	Oct. 29	9 10	9 40	30	12	+5.7	224	8	C Tri β7	755				~~19 32~~		20	W		Wind. Unsteady. G
2500	Pleiades	Oct. 29	10 10	10 20	10s 20s 40s 60s [illegible]	12	+5.5	225	8	C Tri β7	755							E		Good. Center near η. Alcyone. G
2501	V Delphini	Oct 31	9 55	10 25	30	12	+4.0	223	8	C Tri β7	755						12.5	W		Moon. Fairly low [?] G
2502	R Pegasi	Oct. 31	10 53	11 23	30	12	+3.5	223	8	C Tri β7	755						9	W		" " " G.
3	Polar focus (plate)	Nov. 2	8 3	8 8	20s	14	0.0	220 to 180	6	Seed 30	12548									220, 216, 212 + c offset 180 best focus 212 P.
4	Pleiades "	"	9 25	9 30	10s	"	-0.8	220 to 180	5	" "	"							E		220, 216, 212 + c to 180 best (208) 213
5	"	"	10 56	10 59	3	12	-1.0	208	5	" "	"									5ch ½ gitter edge on c gitter [illegible] following good moon
6	"	"	11 10	11 13	3	"	-1.2	"	6	" "										gitter edge on c " preceding
7	Zenith field	15	5 30	5 36	—	24	-2.0	220 to 184	5	" 27	12783									220 - 184, 10s exp. Focus, best 190
8	" "	"	5 38	5 53		4	-2.0	220 to 184	8	Tri β7	750									220 - 184 Focus, best 208 } F.C.J.
2509	" "	"	6	6		"	-2.5			Seed 27	12783									Focus, best 190
2510	UV Vulpec	Nov 15	7 20 7 07	7 28 7 09½	8 2½	18 18	-3.8 -3.6	191 191	5 5	"	"				19h 32'	20° 6'				8m exp with gitter on West half of field
												 Edge center of field near 8+9.								10s & 3m with gitter 5s + 1m without.
2511	Pleiades	" "	7 48	8 02		12	-3.4	191	6	" "	"									
2512	"	" "	8 15	8 27		12	-3.4	191	5	" "	"									10s + 3m with gitter 6s + 1m " "
2513	Pritch. Kapt. area 3	Nov. 15	11 - 48	12 - 28	40m	16	-5	191	5	" 30	12805				4-34	+7.40	65/14	E		
"	"	"	12 - 33	13 - 13	40m	"	-5	"	"	"	"					"		E		With gitter.
2545	Pole Region (Focus)	Nov. 20	6 20	6 40	20s each	24	-2.5	210 to 180	6	" "	"									Increasing cloudiness. Last image separated. Move focus by 3's. Best at 207

No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
⊕ 2516,	Focus.	1911 Nov 21	6 04	6 12	2	4"	-1.5	best 204	5	Seed 27										settings 216 to 188 by 4s.
⊕ 2517	"	" "	6 13	6 20			-1.5	best 216	8	C. Tri β7	750									Same as above
↓ 2518	S Sagittae	" "	7 08 7 11	7 10 7 21	2 10	12" "	-1.5	204	5	Seed 27	12783	Hydro	21°	10m	19h51m	16°22'				{without gitter With gitter} Dull
↓ 2519	Pleiades	" "	8 00 8 10	8 06 8 21	6 11	" "	-2.0	204 "	6	" "	"	"	"	"						{without + with gitter} Stopped by haze
↓ 2520	"	" "	9 05 9 10 9 21	9 08 9 20 9 31	5	"	-2.0	"	5	" "	"	"	"	"						1 free, 2 exp with gitter cloudy at close
⊕ 2521	Polar Region Focus	" 24	5 20	5 30	10	24	-1.5	220 to 181 3's	6	" 30										20s each. Offset at end, Best at 210
↓ 2	Pleiades	" "	6 34 15	6 37 15	3m	12	-2.5	210	3	" 27	12763							E		Free, clouds coming
↓ 3	{ " "	25	7 40 0 7 47 5 8 2 20 8 15 38	7 43 0 7 57 5 8 12 20 8 18 38	3.0 10.0 10.0 3.0	12 " " "	+2.5	208	6	" "	"							E E		(Free good sky) images too close together Gitter, fol. side " pre " Free,
↓ 4	"	"	8 27 5 8 40 30	8 37 5 9 10	10.0 30	" "	+2.5	218	8	C. Tri β7	750							E		Free Gitter fol side
↓ 2525	Pleiades "	" 26 "	7:00 ~~7:20~~ 7:22 8 30	7 20 8 22 9 30	20.0 60 60	12	+4°	218 " "	8 " "	C Tri β7 " " " "								E E		Free Gitter below (East) " above (West)
↓ 2526	Pritchard-Kapteyn area 3	Nov 26	11-4	11-44	40m	16	+5.0	206	6	Seed 30	1280 v				4-34	+7-40	650/14	E.		(2-3S; 2-3T; v. Mann.
	"	"	11-49	12-29	40m	16	+5.0	206	6	"	"				"	"	"	E.		(first exp.) With gitter. hazy
↓ 2527	W Aurigae	"	13-27	15-7	1h40m	12	+5.0	206	5	"	"				5-20	+36.49	380/6	W.		S:3 T:2-3. v.M.
⊗ 2528	Polar region Focus	Nov. 29	5 20	5 35	1m each	24	-5.5 -6.0	230 to 210 3's	8	O Tri	755							W		Offset at end, Ring Best at 221
↓ 29	Pleiades	" "	7 33 8 22 8 41	8 18 8 37 9 22	45		-6 to -8.5	221 222	8	" "	750									Gitter West Free Gitter East
↓ 2530	"	" "	9 35 9 42 9 49	9 41 9 48 9 51			-8.5	211	5	Seed 27										Gitter East-West " Free

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No	Field	Date 1907	Exposure Central Standard T: Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
⊗ 2531	Pleiades. Focus	Nov. 29	10 35	10 45	4s each	24		-6.5	221 / 191 3's	6 Seed 27	12763									offset at end. Giving Best at 206
2532	"	Nov 30	7:05 / 7:13 / 7:20	7:11 / 7:19 / 7:22	6 / 6 / 2	12		-2.0	208	5 " "	12763		10m	20°						Gitter East / " West / free.
2533	"	" "	7:32 / 8:25 / 9:16	8:22 / 9:15 / 9:33	50 / 50 / 17	12		-2.0	218	8 C Tri, β7	755		6m	20°						Gitter East / " West / free.
⊗ 2534	Polar Region Focus.	Dec. 1	5 20	5 30	60s each	24		+2.0	230 / 209	8 C Tri β7	755									Changed by 3's. offset at end, Best at 221
2535	Pleiades	" "	9 55	10 15	1m 1m 2m 3m 5	18		+2.0	221	8 C Tri β7	755									
2536	"	" "	10 38 / 10 59	10 41 / 11 16	3 / 27	18		+1.0	221	8 C Tri β7	755									free / Gitter clamps stopped Exp.
⊗ 2537	focus plate	" 12	± 7	± 7-30	15s each	16		+0.5	220 / 217 / offs. 190	5 Seed 30										best focus 205. S T
2538	Pr. K. area 2	" "	8-31	9-21	50m	16		+0.4	205	"					2-51	+7-59	41/6			with gitter. E. v.M. 3 3
	"	" "	9-24	10-14	50m	16		0.0	"	"					2-51	+7-59	41/7			without " E. v.M. 2-3 2-3
2539	Pleiades	" "	11-4	11-14	10m	16		-0.6	205	"	12805				3-42	+23-50	41/39.5			E v.M. 3. 3
"	"	" "	11-18	11-28	10m	16		"	"	"	"				3 "	"	41/38			with gitter E 3. 3
"	"	" "	11-32	11-42	10m	16		"	"	"	"				"	"	41/36.5			E 3. 3
2540	Pleiades	" 12	12 15	12 23	8m	12		-0.5	"	"	12805						40W			Gitter lower half. flush with inside edge of ring. G
			12 26	12 29	3m												36			Free (double exp.)
			12 37	12 45	8												33			Gitter upper half flush with inside edge of ring.
2541	Pleiades	" "	13 00	13 30	30m	12		-1.0	215	C Tri	755						33W			Gitter upper half. Set in against. G
			13 35	13 40	5												36			Free
			13 50	14 20	30												40			Gitter lower half Set in against. G

No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907																		
2542	χ Cygni	Dec. 13	6 40	7 00	20	12	+2.0	204	5	Seed 27	12763							W		Good. Lowe. G
2543	{ Y Cassiop.	" "	7 30	7 45	15	12	+2.0	204	6	" "							26	W		
	{		7 52	8 02	10	"	"	"	6	" "							24	W		Very good. G
2544	Pr. K. area 2	Dec 13	8 - 27	9 - 17	50m	16	+1.0	204	7	Seed 30	12805	Hyd.	20°	10m	2-51	+7-59	37°/6	W		without gitter v.M. 3:3
	~	~	9 - 21	10 - 11	50m	16	+1.0	~	7	~	~						37°/7	W		with gitter " 3:3
2545	Pleiades	~	10 - 35	10 - 39	4m	16		204	4	Seed 27	12763	~	~	~	3-42	+23-50				no gitter v.M. 3:3
~	~	~	10 - 43	10 - 47	4m	16		~	~	~	~									with gitter. ~ ~
~	~	~	10 - 53	10 - 57	4m	16		~	~	~	~									no gitter ~ ~
2546	W Aurigae	~	11 - 49	13 - 29	1h 40m	12	+0.7	204 / 215	5 / 7	Seed 30	12805	~	~	~			37°/7	W		v.M. 3 : 3
⊕ 2547	Polar Region	Dec 14	5 20	5 30	25s each	16	+3.3	191 by 3.5		Seed 27	12763									Best focus 203
2548	{ R Lacertae	" "	7 07	7 27	20	12	+2.5	206	4	" "	"						10	W		Good
	{	" "	7 32	7 42	10												12			"
2549	Y Cassiop	" "	7 55	8 15	20	12	+2.0	206	5	" "	"						40	W		Good
			8 19	8 29	10	12	+1.8	"									41			"
2550	P. K. area 2	Dec 14	8 - 52	9 - 12	20m	16	+2.0	205	7	Seed 30	12805				2-51	+7-59	37/6	W		without v.M. S 3 : T 2
	~	~	9 - 15	9 - 35	20m	16	~	~	~	~	~				~	~	37/7	W		with gitter ~ 3 : 2

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2551	Pleiades	Dec 14 1911.	9-47	9-50	3m	16	+1.0	205	6	Sed 30	12805				3·42	+23 30	37/33	W		without v.m. 3|2 (99) S T
	"	"	9-53	9-56	3m	16	"	"	"	"	"						37/38	W		with jitter " 3|2
	"	"	9-59	10-2	3m	16	"	"	"	"	"						37/37	W		without " 3|2
2552	"	"	10 35	10 43	8m	12	+1.0	205	4	Sed 27	12763						40	W		Gitter lower side
	"		10 49	10 57	8m												36½			Gitter upper side.
	"		11 01	11 04	3m												34			" " "
2553	Pleiades	" "	11 24	11 30	6m	18	+0.5	207	5	"	"						40	W		Gitter upper side
	"		11 35	11 41	6m												38			Gitter lower side
	"		11 43	11 45	2m												36			Free.
2554	R Lacertae	Dec. 18	6 58	7 18	20	12	-1.0	207	5	" 30	12805							W		Seeing good
2555	" "	" "	7 26	7 46	20	12	-1.2	"	4	" "	"									" "
2556	γ Cass	" "	8 04	8 24	20	12	-1.5	"	6	" "	"							W		" "
2557	γ Cass	" "	8 32	8 52	20	12	-2.0	208	7	" "	"									" "
2558	Pleiades	" "	9 34	9 37	3	12	-1.5	207	4	" "	"									Free.
	"	" "	9 43	9 51	8					" "	"									Gitter lower side
			9 54	10 02	8					" "	"									Gitter upper side.
2559	Pleiades	Dec. 19	9 28	9 36	8	12	0.0	209	7	" "	"						Seeing so slightly passed by mistake.	E		Gitter upper side
			9 45	9 53	8	"														Gitter lower side
			9 55	9 58	3	"														Free.

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No	Field	Date 1907	Exposure Central Standard T: Begin	End	Time	Aperture	Temp	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2560	Pleiades	Dec. 19	10 02	10 05	3	12	-0.4	207	6	Seed 30	12805							E		Free
	"	"	10 10	10 18	8	"	"	"	"	"	"									Gitter lower half
	"	"	10 22	10 30	8	"	"	"	"	"	"									Gitter upper half.
2561	"	"	11 06	11 36	30	12	0.0	218	8	C Tri	755							W		Gitter upper half
	"	"	11 45	12 15	30	"	-1.0	"	"	"	"									" lower half
2562	Nova Lac.	Dec 24	6-8	6-48	40m	16	+3.0	205	6	Seed 30	12805	Hyd	20°C	10m	22-32	+52-15	37°/25	W		v. Maanen. S 1-2. T 3.
2563	P.K. 2	"	8-17	8-32	15	16	"	205	5	"	"	"	"	"	2-51	+7-59	37°/13	W		with gauze } v.M. S 1-2
	"	"	8-34	8-49	15	16	+2.9	"	5	"	"				"	"		W		without } T 3
2564	Pleiades	"	9-6	9-11	5	16	"	205	6	"	"	"	"	"	3-42	+23-50	37/40	W		with gauze } v.M. S 1-2
	"	"	9-14	9-19	5	16	"	"	6	"	"						37°/39	W		without } T 3
2565	focus plate	1912 Jan 18	7-17	7-30	20sec each	24	-9.0 -9.6	220 216 off 180	6	"	"	"	"	"		+85°		W		S 2 T 2 v.M. 216 2 times. best focus 180±
2566	focus plate	March 13			15s each	16	0.0 -0.2	220 216 off ~~81~~ 180	5	"	"	"	"	"	Polar region			W		S 3 T 3 v.M. best focus
2567	Orion " "	" 18	7h		15s	24	+4		5	" 27		Hydro								220, 216 .... to opset at 176, best 176
2568	" " "	" "	8h		"	24	"		5	" "		"								210, 206 .... to opset at 174, best 174
2569	Orion	" "	8 32	8 37	5	12	+4		5	" 30		"								
2570	∇ " focus	21 " +9			15s	24	-3.0 ~~+6~~		8	C. Tri	784	CEC								Focus plate with β7 210, 205 .... 180 best 210, but use 215 β7
71	Orion	21	7 50	8 20	30m	12	-6	215	8	"	"	CEC	+18	10				W		
72	C. Min	" "	9		15s	24	-7		8	" β7	"	"								230-225 .... 195 Best focus

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No	Field	Date	Exposure Central Standard T Begin		End		Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907✓																				
⑧ 2573	1912 Mar. 22	σ Orionis	7	5			15s	24	-1.6	240 190	8	C. Tri B7	784	CEC	+17±	7m				W		focus 240, 235 ···· 190 best 223 (103)
74	"	Orion	8	0	8	31	31m	12	-3.2	4 22(3)	8	" "	"	"						"		good
75	Orion	Mar. 24	7	10	8	0	50m	12	+1.0 -1.0	223	8	" "	"	"	20	8				"		" moon stopped by clouds
		27							+5										Knife edge No 1			{ Knife-edge focus 211 ± 1 " " " 212
76	Orion	27	7	15	7	45	30m	12	+5.0	220	8	C. Tri B7	784									done cutting off on fol side, moon only 1 guiding wire
77	"	29	7	20	7	50	30m	"	+2.7	220	8	" "	"									poor guiding good moon
78	"	"	8	6	8	9	3m	"	+1.0	213	4	Seed 30										poor guiding " "
79	"	"	8	13	8	18	5m	"		"	7	" "										poor guiding " "
80	18h 6m +86°	"	8	52	9	6	45s	"	-1.0	220	8	C. Tri B7	784									15 turns δ screw to calibrate field, poor
81	Orion	30	7	29	8	9	40	"	+6.0	"	8	" "	"	CEC	20	9						sky dull, guiding difficult
82	"	"	8	13	8	16	3	"	+5.3	210	4	Seed 30		Hydro	"	8						" " "
83	18h 6m +86°.8	"	8	46	9	1	—	"	+5.1	220	8	C. Tri B7	784	CEC	"	9						" 45s exp. moved dec. 1 turn. 20 times
84	Orion	Apr. 1	7	30	8	2	32	"	+2.5	222	8	" "	"									good full moon
85	"	"	8	4	8	9	5±	"		211	5	Seed 30										" " "
86	Pole Region	"	8	25	9	0±	45s each	"	+2.0	211	8	C. Tri B7	784	CEC	"	6				W		" " " 20 Exp. Decl. 1 turn. 45 sec.
87	Pleiades	3	7	45	7	47	2, 4, 16, 64, 8	12	+7.0	210	4	Seed 30	12546	Hydro	"	10				W		Good sky. Moved in R.A. order of exposures 2s, 4s, 16s, 64s, 8s
88	"	3	{8 {8 8	03 09 22	8 8 8	06 15 29	3 6 9	12 " "	+6.0	210	4	" "	"	"	"	"				W		Free. Jitter lower side. Cloud? Jitter upper half.
89	18h 6m + 86°.8	3	8	55	9	05	6s each	12	+6.0	210	4	" "	"	"	"	"				W		21 exp. 6s each Moved decl. screw 1 turn.

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No	Field	Date 1907 ✓	Exposure Central Standard t Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
↓2590	Pleiades	1912 April 5	7-27	7-37	10m	16	+17.8	214	8	C Tri B7		C.E.C	20°	6m	3-42	23-50	39	W		(105) v.m. with wire gauze
			7-39	7-49	10m	16	+17.3	"	8								36	W		without " "
↓2591	18h6m +86.8 P 657,661	" 5	9 35	9 42	10s each exposure	12	+16.5	207	4	Seed 30		Hydro.	20°	10m				W		Moved declination screw 1 turn, Thick
↓2592	Pleiades	" 8	7-17	7-27	10m	16	+12.6	216	8	C. Tri B7		C.E.C	20°	6m	3-42	23-50	39	W		without wire gauze v.m. very strong wind!
			7-30	7-40	10m	16	+		8	"							36	W		With " "
↓ 93	18h6 +86°8	8	8 54	9 9	—	12	+11.0	216	8	" "	784									20.45s exp.
↓ 94	" "	"	9 20	9 30	—	"		205	7	Seed 30										20.5s exp. } high 20.10s " } wind 20.4s
↓ 95	" "	"	9 49	9 51	—	18	+10.8	"	4	" "										
↓ 96	" "	"	10 8	10 18	—	"	+10.5	216	8	C. Tri B7	784									20. 30s exp. clear, high wind clouds very unsteady
			9 8 30	Knife edge	24	+10.5	203-4									Knife edge № 2				220, 215, 210 — 180 unsteady, best 200
⊕ 97	BCam. min. Focus	"	9 0		24	+9.5 "	200 220-180	4		Seed 27	12763	Hydro								good clock stopped " several times
↓ 98	Orionis	10	7 49	7 52	3	12	+14	203	4	" "	12763	"	20°-9							
↓2599	Nova Gem	"	8 30	11 0	150-	24	+12.0	204	6	" 30	12636	"	"	6						
		14	8 00	Knife edge 2		24	+17.0	184.5								Knife edge No 2.				Good star. Tried twice. Clock did not run. Test for above focal setting. Focus probably wrong
⊕ 2600	Focus trails	14	8 45	8 48	3	12	+16.0	185	6	" "		C.E.C.	"	7						clouds.
	Knife edge focus	apr. 18	7 45	7 55		24	+5.0	214 212 212.5								Knife edge No 2				Three Trials, Capella. Hazy at first Better at end.
↓2601	U Cancri	apr. 18	8 45	9 30	45	15	+4.0 +3.0	212	4	" "	"	Hydro	+20	10						

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No	Field	Date 1907 ✓	Exposure Central Standard T Begin		End		Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2602	Praesepe Cluster	Apr 18 (1912)	10	05	10	20	16	12	3.0	214	5	Seed 27	12763	Hydro	+20	10				W		Gitter North Side
			10	24	10	39	15	12	3.0	214	5	" "								W		Gitter South Side
			10	40	10	43	3	"	2.5	"	"	" "								W		Free. Seeing good.
	Knife Edge	Apr. 18	11	15	11	20		24	3.0	215				Knife Edge No. 2.								Seeing steady.
2603	18h 6m +86°.8	Apr. 18	11	30	11	38		12	3.0	215	7	" "		Hydro	+20	10						20 Exp. 6s each.
			11	42	11	55		18	2.0	215		" "										20 Exp. 6s each.
⊕ 4	Polar focus	20							+9.5		6	" "										224, 221, 218 ---- ~~203~~ clock stopped
⊕ 4	" "	22							+8.7		6	" "										224, 221, 218 --- 203 best ~~207~~ or 8 (Knife 210) (faint star)
		24	8	12					+14.0	210	Knife edge											
⊕ 5	" "	"								220 to 202	4	Seed 30										220, 217, 214, ---- 202 best 206
⊕ 6	" "	"			8	38			+13.3	230 to 209	8	C. Tri B7										230, 227, 224 --- 209 best 223
	Rotating circle removed and cleaned and oiled and readjusted											E.H.G. + J.A.P.										
		Apr. 26	8	00	Knife Edge				+12.0	183				Knife Edge No. 2.								3 trials {Plate 2608 contradicts this setting}
7	U Cancri	" 26	8	35	10	03	87	12	+12.0 +9.5	196	5	C Tri B7	784	CEC	20	6	8h 30m	+19.2	17	W		Circle set at 56 Sky good. Clouds flying.
⊕ 8	Polar Focus	Apr. 26	11	00	11	20		24	+9.0	225 to 170	5	" "		"	"	"						225, 220, 215 --- 170 Clouds. Best at 223±
		Apr. 27	7	35				24	+8.2	195 196 198				Knife Edge No. 2								
⊕ 9	Gemini (Focus)	" "	8	15	8	20	15s each	24	+7.0 +8.8	215 to 194 198 P.	7	Seed 27	13105	Hydro	20	6				W		Best at 198. 215, 212, --- 194 offset at end.
⊕	Apr. 29	Knife Edge	8	00				24	+8.0													
10	Focus "	Apr. 29			8	35	15s each	"			4	" "		"	"							218, 215, 212 ---- 197 best 204

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No	Field	Date 1907✓	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Date	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2611	U Cancri	1912 Apr. 29	8 50	9 50	60	12	+7.3	221	5	C Tri	784	CEC	20	6			17	W		circle at 56 Diffl. Lower. (109 Try circle 83
	Knife Edge.	" "	10 20			24	+6.8	212 210.5				Knife Edge No. 2.								
2612	18h 6m +86.8	" "	10 44	11 30		12	+6.7	222	5	" "	755	CEC	20	6						Circle at 44 1 Series 20 Exp. 40 Sec. 1 Series 20 Exp 60 Sec,
13	"	" "	11 40	11 55		12	+6.0 +5.8	215	5	" "	"	"	"	"						Circle at 44, 20 Exp. 50s.
			7 55	Knife edge tr		24	+19.0	198				Knife Edge No 2								P+G. 198 repeated trials.
14	U Cancri	May 5	8 40	9 40	60	12	+19.0 +18.0	194	6	Seed 27	13105	Hydro	20	10				W		Circle set at 83 variable in axis. Sky good.
			10 05	Knife Edge tr		24	+18.0	204½				Knife edge No 2.						W		
15	{18h 6m +86°8	May 5	10 25	10 35	5s each	18	+17.0	200	6	" "	"	Hydro	20	10						20 ~~exposures~~ 5s each.
			10 40	10 47	"	18	+17.0	190	6	" "	"	"	"	"						Stopped clock 100 sec, 19 Exp. 5s each omitted one exp in this series
		" "	10 50	Knife edge tr		24	+16.5	205												Pole.
16	{18h 6m +86°8	" "	11 10	11 20	7s each	12	16.5	201	6	" "	"		"	"						20 exp. 7s each,
			11 25	11 36	7s each	12	+16.2	191	6											Stopped clock 100sec. 19 exp. 7s each omitted one to each series.
		" "	11 45	Knife edge tr		24	+15.5	205										E		
17	H Herc.	" "	13 00	14 00	60	12	+13.5	218	5	C Tri	755	CEC	20	6				E		Circle at 182.5 Clouds at 14:15
		May 6	8 15	Knife edge tr		24	+19.0	200												Two trials. Unsteady.
18	W Cancri	" "	8 45	10 00	75	12	+19.0 +17.5	196	7	Seed 27	13105	Hydro	20	6				W		Circle at 84. variable in axis. Sky good, fills lower
		" "	10 30	Knife edge tr		24	+17.8	201										E		

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No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder		late	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2619	W Herc.	1912 May 6	11 02	11 27	25	12	+17.5	197	6		Seed 27	13105	Hydro.	20	10				E		Circle at 181 Good 19 on axis. sky
2620	" "	" "	11 35	12 00	25	12	+17.2	197	4.		" "	"	"	"	"				E		" " "
		" 7	8 15	Knife Edge #2		24	+18.5	203 204							Knife Edge No 2				W		
21	U Cancri	" "	8 40	10 00	80	12	18.0 15.7	200	6		Seed 30	13081						17	W	83	Variable in axis Sky good. Field low.
		" "	10 45	Knife Edge #2		24	+15.5	200											E		
22	W Herc.	" "	11 40	12 05	25	12	+15.0 +14.6	196	4		" "	"						18	E	169.2	Center at 19. Very bright meteor. Sky good. 11:38
23	" "	" "	12 10	12 35	25	12	+14.0	196	7		" "	"						"	"	"	" "
24	" "	" "	12 46	13 11	25	12	+13.8	196	6		" "	"						"	"	"	Moon rising
		" "	13 30	Knife Edge #2		24	+13.0	204							Knife Edge No. 2				W	7	
25	RU Herc.	" "	14 14	15 14	60	24	+11.9	217	5		C 9 w β7	804						13.5	W	242.5	Good sky.
		" 8	8 08	Knife Edge #2		24	+14.2	201.5 202.0													
26	U cancri	" 8	8 35	10 00	85	18	+13.8	198	7		Seed 30	13081						17	W	83	Good sky. Low.
		" 9	8 15	Knife Edge #2		24	+18.2	204											W		
27	U Cancri	" 9	8 35	10 00	85	18	+17.6	200	4		" "	"						17	W	83	Good. Field low.
		" 9	10 15	Knife Edge #2		24	+15.2	201											E		
28	RU Herc.	" 9	11 10	11 40	30	12	+15.0 +14.5	197	7		" "	"						34	E	64	Good.
		13	8 30	Knife Edge #2		24	+11.2	207.5							Knife Edge No. 2				E		

No	Field	Date 1907 / 1912	Exposure Central Standard t Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2629	R.H. Herc.	May 13	9 40	10 20	40	12	+9.5 +9.0	204.5	6	Seed 30	130 81						13	E	54	center of 30 (113) Fairly good Sky.
30	" " "	" "	10 40	11 20	40	12	9.0 8.2	204.5	6	"	"	"					"	E	"	" "
31	" " "	" "	11 30	12 00	30	12	+8.2 +7.8	205.5	6	"	"	"					"	E	"	" Good Sky
		17	10 25	Knife Edge #2		24	+14.5	207.0										E		
32	W Herculis	"	11 45	12 45	60	18	+14.0 +13.0	203	6	"	"	"					31	E	77	Somewhat Dull
		18	8 30	Knife Edge #2		24	+16.4	184										E		offset east two Best focus 200
⊕ 33	Focus plate	18	8 45		5s each	24	+16.4	210 to 180	5's	6								E		
34	R.H. Herculis	18	11 28	12 09	41	12	+13.0	201	4	"	"	"					16.5	E	311	Good Sky.
35	R Camelop	18	12 45	13 15	30	12	+10.2 9.9	203	7	"	"	"					17.5	W	272	Good.
36	" "	18	13 24	13 54	30	"	9.9 9.2	203	7	"	"	"					"	W	"	" "
37	" "	18	14 00	14 30	30	"	9.2 8.8	203	7	"	"	"					"	W	"	" "
38	" "	18	14 42	15 07	25	"	8.8 +8.2	203	7	"	"	"					"	W	"	" Dawn.
	Pole Region	22	10 15			24	+23	210		Knife Edge No 2								W		2 trials.
⊕ 39	Pole Region 2 trials	22	10 45	10 50	20s	24	+23	215 212 185		"	"	"						W		offset at ends 205 each. Best at 198
	Pole Region	22	11 00			24	23	207.5		Knife Edge No 2										
	Pole Region	24	9 00	Knife Edge #2		24	+19.2	204.										W		2 trials.
40	20h 30m +84° 39'	24	9 18	9 24	15s each	18	19.0	200	6	"	"	"						W		16 Exp. Mean.
41	" "	24	9 30	9 37	20s each	12	18.8	200	6	"	"	"						W		16 Exp.

No	Field	Date 1907	Exposure Central Standard t Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
	1h 2m East + 27°	May 24 1912	9 55	Knife Edge	±2	24		+19.5	205									E		
2642	R Canelop	24	11 58	13 00	62	18		+17.8 +16.8	215	5	C Tro	B7	755					W	272	Good Sky.
43	W Herculis	24	13 30	14 30	60	12		+16.2 +15.9	215	5	"	"	"					W	257	" "
		June 6	12 30	Knife Edge	±2	24		+14.5	206									E		
44	S Cygni	6	12 55	13 05	10	12		+14.5	202	6	Seed	30	13081				16	E	332	Good.
			13 06	13 16	10	"		"	"	"	"	"	"				18	"	"	Moon rising.
45	" "	" "	13 21	13 31	10	"		+13.8	"	4	"	"	"				18	"	"	" "
		" 7	8 45	Knife Edge	±2	24		+17.0	206.5											2 trials.
46	R W Herc.	" 7	9 14	9 50	36	12		+15.0 +15.0	203	8	"	"	"				27	E	322	Good
47	W Herc.	" 7	10 08	11 38	90	18		+15.0 +14.5	"	7	"	"	"				27	E	74	Good.
		7	11 55	Knife Edge	±2	24		+15.0	207								~~27~~	~~W~~	~~317~~	
48	R Canelop	7	12 30	13 00	30	12			203	8	"	"	"				27	W	317	Haze coming on.
		8	8 55	Knife Edge	±2	24		+19.8	206.5											Two trials.
49	R Canelop	" 8	9 15	9 55	40	12		+19.5 +18.5	202	6	"	"	"				27	W	351	Good.
50	" "	" 8	10 00	10 40	40	12		+18.5 +17.9	202	4	"	"	"				"	"	"	"
51	" "	" 8	10 45	11 25	40	12		+17.9 +17.8	202	7	"	"	"					"		"
52	R W Herc	8	11 54	13 24	90	18		17.8	202	7	"	"	"					"		Good Moon Rising

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Building Appliés	Telescope	Circle	Seeing & Remarks
		June 10	9 30	Knife Edge #2		24	+20	203												
2653	W Herc.	June 10	9 48	11 18	90	18	+20 +18.5	200	4	Sept 30	13081							E	74	Fairly good.
		" 15	9 10	Knife Edge #2		24	+22.8	207												
54	Focus plate	" "	9 15	9 20	10^s	24	+22.8	215 197	4	Sept 30	13081				15^m E	+33				Moved focus early 3 divisions offset at end.
55	RU Herc.	" 15	9 45	10 25	40	12	22.8 21.4	203	6	" "	" "							E	318	Good,
56	X Cygni	" "	11 25	11 50	25	12	20.8 20.5	204	6	" "	" "									Good, Haze coming on.
57	" "	" "	11 58	12 23	25	12	20.5 20.2	204	6	" "	" "									
		" 16	10 00	Knife Edge #2		24	+19.5	203.5 202												
58	X Cygni	" 16	11 11	11 31	20	12	+17.3 +17.2	200	6	" "	" "									
59	" "	" 16	11 59 13 08	12 50 13 48	51 40	18	17.2 16.0	200	6	" "	" "				18	E	197			Very good. clouds. Very good.
		" 16	14 00	Knife Edge #2		24	+14.0	203												
		" 19	9 40	Knife Edge #2		24	+16.8	206.5 205												
60	X Cygni	" 19	10 17	10 37	20	12	+16.8 16.2	205	6	Sept 27	13105							E		Good, Small moon
		" 19	10 55	Knife Edge #2		24	+15.8	204												
61	RH Herc.	" 19	11 15	11 55	40	12	+15.4	203	6	" "	" "							W		Fairly good.
62	" " "	" 19	12 04	12 44	40	12	+15.0	203	6	" "	" "							W		" "
		" 19	13 05	Knife Edge #2		24	+15	209.5 207.5												
63	W Herc.	" 19	13 42	14 47	60	18	+15 +14.8	204	6	" "	" "				27	W	31			" " Dawn

No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Tenth	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907																		
2664		1912 June 21	9 15	Knife Edge #2		24	+ 20.0	199 198												
⊕ 2664	Focus Polar Region $1^h 25^m E$ $+37^\circ.0$	June 21	9 20	9 25	5^s each	24	20.2	212 to 191		Seed 27	13105				Pole Region					212 to 191 by 3's long interval at end, lengthwise on plate. Best at 200
			9 40	9 45	6^s each	24	+20.2	212 to 191												212 to 191 by 3's long interval at end, crosswise on plate. Buffalo
		" "	9 50	Knife Edge #2		24	+20.2	201 201.5												
2665	$20^h 30^m$ $+84^\circ 39'$	" 21	11 00	11 04	15^s	18	201	+18.0	6	"	"	"								moves declination screw 1 turn, 16 exp. 15^s each.
			11 07	11 12	20^s	18	"	+17.2	"											moves declination screw 1 turn. 17 exp. 20^s each
2666	$20^h 30^m$ $+84^\circ 39'$	" "	11 30	11 37	25^s	12	"	+17.2	6	"	"	"								moves decl. screw 1 turn. 16 exp. 25^s each
		" "	11 40	11 48	30^s	12	"	+17.5	6	"	"	"								moves decl. screw 1 turn 16 exp. 30^s each
2667	V Delphini	" "	12 45	13 10	25	12	201	+17.2	6	"	"						27	E	13	Thick. Variable on axis
68	" "	" "	13 16	13 41	25	12	201	16.9 16.9	6	"	"	"					"	"	"	" "
69	" "	" "	13 47	14 12	25	12	201	16.9 16.8	6	"	"	"					"	"	"	" "
		June 22	10 20	Knife Edge #2		24	200	+20.2												
70	X Cygni	" 22	11 45	12 10	25	12	200	20.5 20.0	6	"	"	"								Fairly good. Half Moon low in west.
71	X Cygni	" "	12 23	13 53	90	18	200	20.0	4	"	"	"					27	E	60	Fairly good.
72	Vega	" 24	10 31	10 37	6	24	203	25	7	"	30									
		" 24	10 50	Knife Edge #2		24	201 200	+24.5												
73	$18^h 6^m$ $+86^\circ.8$	" 24	11 20	11 30	5^s each	18	200	24.4	4	"	27	13105								20 exp. 5 Sec. each Moved δ 1 turn.
			"	"	7^s each	"	"	"	"	"	"	"								20 exp. 7 Sec. each Moved δ 1 turn omitted one exp.

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
↓2674	$18^h 6^m$ +86.8	June 24	11 47	12 00	5s each	18	23.8	200	4	Sept 27	13105									20 exp 5s each (121) Moves δ screw 1 turn.
	"	" 24	"	"	7s each	18	"	"	4											20 exp 7s each. Moves δ screw 1 turn omitted one exp.
↓2675	"	" 24	12 15	12 25	8s each	12	23.5	"	4											20 exp 8 sec each Moves δ screw 1 turn
	"	" 24	"	"	10s each	12	23.5	"	4	"	"	"								20 exp 10 sec. each Moves δ screw 1 turn, omitted one exp
⊛ 76	Pole	25	9 55	10 3	15s each	24	26.5 26.1	220 to 196	6	" 30		Plate focus 210 at Temp 26.3 Knife edge 211 at Temp 26.7								220. 217, 214 etc to 196 Tel East.
⊛ 77	"	"	10 35	10 40	15s each	24	25.3 25.2	220 to 196	7	" "		Plate focus 200± at Temp 25.3								220. 217. 214 + etc to 196 Tel west
↓ 78	X Cygni	27	10 36	11 17	41m	18	+18.4	209	5			" " 204 ± " 25.3								
		July 1	8 35	Knife Edge #2			(198 197)	210		C. Tri	813	" " 195 ± " 18.1					E	37	Clouded over.	
												1h W +28								212 to 185, 3's. offset at end.
⊛ 79	Focus Plate	" 1	8 45	8 50	5s	24	(212 to 185)	+21	5	Sept 20	13081	" "								Thick
↓ 80	RU Herculis	" 1	9 37	10 20	43	18	(194)	+21. +19.5	8	" "					38	W	143	Moon rising.		
		" 2	9 25	Knife Edge #2		24	(204 204)	+24												Fairly good. Variable in axis
↓ 81	RU Herculis	" 2	9 37	10 37	60	18	(200)	+24 +23.4	8	" "		"			38	W	142	Moon Rising		
		" 3	8 35	Knife Edge #2		24	+24.0	203 202												
↓ 82	RU Herculis	" 3	9 05	10 05	60	18	+23.6 24.4	199	8	" 27	12673				38	W	138	Good.		
↓ 83	" "	" 3	10 14	11 14	60	18	22.4 22.0	199	7	" 30	13081				"	"	"	Good Moon Rising		
		" 4	9 00	Knife Edge #2		24	+24.5	204 203				30m W. +80								
		" 4	9 45	Knife Edge #2		24	23.8	202 202				2h 15m E +32° 40'								

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2684		July 5	9 10		Knife Edge #2	24	28.4	204											Plate Scale 13 to Knife Edge. Clouds passing.
2684	R Camelop	" 5	9 38 10 25	10 08 10 40						Seed 27	12673						26	W 344	Moon Rising.
			11 08	11 23	60	18	28.2 28.8	200	7										
		" 7	8 45		Knife Edge #2	24	+25.2	198 199 200							Polaris				
85	R Camelop	" 7	9 12	10 27	75	18	+25.2 +24.2	196	8								26	W 344	Very thick
		" 7	10 45		Knife Edge #2	24	+24.2	199 200							$2^h 15^m$ E +35°				
		" 9	8 30		Knife Edge #2	24	+28.4	199.5 200.0 198.5							α Lyrae				
86	χ Cygni	" 9	9 00	10 30	90	18	+28.2 +27.1	195	7	"	27	12673							Very thick Lightning.
		" 10	10 45		Knife Edge #2	24	+23.5	199. 198.5							α Cygni				
87	χ Cygni	" 10	11 12	12 22	70	18	+23.5 +22.5	195	8										Thick
89	R Lacertae	" 10	13 05	13 10	5	18	+22.0	195	8	"	27	13185							Clouds at times. Clouds Patchy
			13 45	14 00	15	12	+22.0	195	6	"	"	"					28	E 144	Moon rising
		" 11	8 25		Knife Edge #2	24	+21.5	189 190 189											Intermittent Clouds
269	Focus α Cygni	" "	9 00±		3^s	24	+21.2	210 207 180	4						α Cygni				
					Knife Edge #2	24		189											Double dist at end. Crosswise
	α Lyrae	" 11	9 15±		2^s	24	21.0	210 207 180	4										Double distance at end. Lengthwise
		" 11	9 20		Knife Edge #2	24	21.0	196 197 194 195							α Lyrae				
91	χ Cygni	" 11	9 57	10 57	60	18	+20.2 +20.2	188	6	"	"	"							Good.

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2692	χ Cygni	July 11	11 30	12 30	60	18	20.2 19.6	192	8	Sed 27	13185								Good, (125)
		" 11	12 50	Knife Edge #2	24	+19.5	204 205 206								2h 45m E +42°				
2693	R Lacertae	" 11	13 12	14 12	60	18	+19.7 +19.5	200	7	" "	"								Good,
		" 12	8 25	Knife Edge #2	24	+25.8	200 200								Cygnus				
		" 12	8 35	Knife Edge #2	24	25.8	204 203 205								& Lyrae				
94	χ Cygni	" 12	9 57	10 07	10	12	25.8	198	8	" "	"								Clouds
		" 13	8 12	Knife Edge #2	24	+26.8	203 204								& Lyrae				
		" 13	8 22	Knife Edge #2	24	+26.8	201.5 202.5								Cygnus				
95	χ Cygni	" 13	9 00	10 00	60	12	+26.0	198	6	Sed 27	13185								Very good.
96	" "	" 13	10 03	11 03	60	12	+25.0 24.8	198	4	" "	"								Very good.
97	" "	" 13	11 09	12 09	60	12	24.8 24.0	198	8	" "	"								Very good.
98	R Lacertae	" 13	12 32	13 32	60	12	+23.8 +23.6	199	7	" "	"								Very ~~Good~~.
99	" "	" 13	13 42	14 42	60	12	23.0 +22.8	199	7	" "	"								Very good.
2700	R Pegasi	" 13	14 02	14 17	15	12	+23.0	199	7	" "	"								" " Dawn,
		" 14	8 45	Knife Edge	24	28.6	204 202								Cygnus				
01	δ Cygni	" 14	9 10	10 10	60	12	28.6 28.0	198	7	" "	"								Good. High wind, Lightning.
02	" "	" 14	10 20	11 20	60	12	28.0 27.4	198	6	" "	"								" " "

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	aperture	Temp.	Focus	Holder		Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2703	V Delphini	July 14 1912	11 52	12 52	60	12	27.5 27.0	198	8		Seed 27	13185						25	E	12	Fairly good (127
		" 15	8 40	Knife Edge #2		24	+16.8	196 197								1h W	+30°				
04	R W Here.	" 15	9 08	10 08	60	12	+16.8 +16.4	195	4		Seed 27	13185							W		Good
05	W Herculis	" 15	10 48	11 48	60	12	16.2 15.6	195	7		" "	"						26	W	33	Good
		" 15	12 00	Knife Edge #2		24	+14.0	198								Polar.					
06	R Camelop	" 15	12 30	13 30	60	12	+14.0 +13.3	195	8		" "	"	"						W		Good.
		" 16	8 30	Knife Edge #2		24	+20.2	204 202 204			"					Polaris.					
07	R Camelop	" 16	9 15	10 15	60	12	+19.5 +18.8	200	7		" "	"	"					14	W	335	Fairly good.
08	V Delphini	" 16	11 02	12 02	60	12	+18.0 +17.8	200	6		" "	"	"						E		" "
09	V "	" 16	12 05	13 05	60	12	+17.8 +17.5	200	4		" "	"	"					26	E	331	" "
10	γ Cassiop	" 16	13 35	14 25	50	12	+17.5 +17.5	200	8		" "	"	"						W		" "
11	γ Cassiop	" 18	10 15	11 15	60	12	+16.0 +15.8	200	8		" "	"	"								" " Low.
12	γ Cassiop	" 18	11 25	12 25	60	12	+15.0	200	7		" "	"	"					25	E	117	Plate Scale R.A. at 3 variable on guiding holder.
		" 21	12 00	Knife Edge #3		24	+18.0	204													New brass Knife Edge
		" 24	10 10	Knife Edge #3		24	+26.5	190.5 190.5								4h 20m E	+5°				
13	Focus plate 4h 20m E +56.0	" 24	10 20	10 25	10s each	24	+25.0	212 to 182 by 3's	8		" "	"	"								Offset at end.
		" 24	10 40	Knife Edge #3		24	+25.2	197 195.5 195.5								30m E	0°				
14	Focus Plate 30m E 0°	" 24	10 50	10 55	10s each	24	+25.0	212 to 182 by 3's	7		" "	"	"								Offset at end.

No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A. Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		July 24	12 30	Knife Edge	#3	24	23.5	198 199							$3^h 15^m E +55.0°$			(129)
		" 24	13 40	Knife Edge	#3	24	23.0	204 204							$2^h E +55.0$			
2715	Y Cass.	" 24	14 00	15 00	60	12	23.0 22.0	200	8	Sed 27	13185				Hour angle.			Very good.
		" 25	8 50	Knife edge	#3	24	22,5	197							$40^m E +58.5°$			
		" 25	9 10	Knife edge	#3	24	22.5	200							$28^m E +51.5°$			
2716	Focus plate	" 25	9 25	9 30	20s each	24	22.0	21s 212 to 185	6						$5^m E +48.5°$		E	Best focus 197
		" 25	11 45	Knife edge	#3	24	20.5	202							$1^h 35^m E +57°$			
2717	Focus plate	" 25	11 50	12 10	10s 20s	24	20.0	21s 212 to 188. 185	4						$1^h 16^m E +50°$		E	Best focus 197
		" 25	12 45	Knife Edge	No 3	24	19.4	195 195 195							$3^h 30^m E +55.0°$			
18	Focus plate	" 25	13 00	13 05	20s	24	19.1	212 to 182	6 by 3s	"	"	"			$2^h 15^m E +55.0°$			Offset at end 20s each.
19	Y Cass.	" 25	13 55	14 55	60	12	+18.7 +18.2	196	7	"	"	"			$0^h 58^m +62.0°$			Very good.
		" 26	9 20	Knife Edge	No 3	24	+19.	186 184.5 184.5							$3^h 30^m E +66.0°$			
		" "	9 30	Knife Edge	No 3	12	+19.0	178 177							$3^h 20^m E +66.0°$			Uncertain because of jumping screw of plate holder.
2720	Focus plate	" 26	9 45	9 50	20s	12	+19.0	210 to 170	6 by 5s	Lantern Slide					$3^h E +66.0°$			Crosswise. Double distance at end, but at 190 Lengthwise. Double distance at end. best at 192
		" "	9 55	10 00	12s	24	+19.0	210 to 178	6 by 4s	"	"				$2^h 50^m E +66.0°$			
						24 → 12		198 197										
		Aug. 2	8 10	Knife Edge	#3	12	+17.0	195							$1^h 15^m E +20°$			
21	V Delphini	" 2	8 40	9 40	60	12	+17	195		Sed 27	13185							Good.
		" "	" 2 9 42	9 52	10	12	+15.9	195		"	"							

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No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder		Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907✓																			
		Aug. 3	8 45	Knife Edge		# 3	24	+17.9	200 200							$2^h 45^m$ E	+48.				Gingrich
~~2722~~	~~V De~~	" 3	8 55	Knife Edge		# 3	24	+17.9	204 203							"	"				Alden.
2722	V Delphini	" 3	9 23	10 23	60m		18	+17.0	200	7	Seed 27	13185									"
		Aug 11	8 25	Knife Edge		No. 3.	24	20.0	~~20~~6.5 ~~20~~6.5												Seeing steady.
2723	V Delphini	" 11	8 45	9 45	60		12	+20.0 +19.8	206.5	7	" 27	"									Good.
24	V "	" 11	9 56	10 56	60.		12	+19.8 +19.2	206.5 ~~206~~	7	" 27	"									"
		" 11	11 15	Knife Edge		No. 3	24	19.0	206		" 27	"									"
25	R Pegasi	" 11	11 36	12 36	60		12	19.0 18.8	206	7	" "	"							#	250	"
26	R "	" 11	12 46	13 46	60		12	18.8 19.5	206	7	" "										"
		" 14	11 25	Knife Edge		# 3	24	205	204												Steady
27	R Pegasi	" 14	11 45	12 45	60		12	20.5 +21.0	204	7	" "					Hour angle.					Haze at end.
		Sept 4	11 0	Knife Edge		# 1	24	24.6	214	In holder with filter.						$3^h 25^m$ W	+39°		W		
28	Focus plate vega	" "	11 5	11 15	15s each		24	24.6	230 227... 206	5	Cramer Tri β7	833				"	"		W		offset ~~between~~ 215 & 212 " at end – 215,
29	Calibration plate.	" "	12 30	12 55	25s 15s		24	25	218	5	C Tri. β7	833				$3^h 15^m$ W	+45		W		
30	Polar focus	" 5			# 1			+29.5	Knife edge 213		" "	"									
	" Focus plate	" 5	8 45	8 55	30s		24	+29	230 227 ... 203	5	C. Tri β7	"							W		offset at end seeing good. best 219±
31	Polaris	" "	10 30	10 55	15s 10s		12	+27	218	5	C. Tri β7	"									" " Calibration. Plate shifted in declination good,
	Knife Edge	" 6	8 20	Knife edge		# 1		+25.6	~~206~~ 207												Alden 208

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No	Field	Date 1907	Exposure Central Standard T Begin	End	Time	Aperture	Temp	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2732	Polaris. Focus	Sept. 6	8h 25m	8h 40	15s 20s	24in	25.2	~~23~~ =		C. Tri β7	833									Focus 230, 227 ... 204 moved in dec. 218, 216 ... 206 Offset at end.
	〃	〃 〃	8 50	Knife edge		24	25	208												
2733	〃	〃 〃	10 0	10 50	10s, 15, 20, 25, 30 }	24 / 12	23.5	212	5	〃	〃								E	Shifted stern of dec. screw.
	〃	〃 〃	11 10	Knife edge		24	23	213												
34	〃 Focus	〃 〃	11 15	11 25	15s	24	23	230, 227 to 212	5	〃	〃									Moved in declination
2735	various parts of C. Tri plate exposed to developer light for ~~8~~ 5, 4, 3, 2, 1, & 0 ~~min~~ respectively while in developer to note fog.																			
	Polaris	Sept. 7.	8 20	Knife edge #1		24	24.5	214												
36	〃 focus.	〃 〃	8 35	8 45	15s	24	24	230, 227 to 208; 224, 222 to 210	5	C. Tri β7	833	Offset at end.								good.
	〃	〃 〃	9 50	Knife edge #1		24	23.6	213												
37	〃	〃 〃	9 55	10 20	10, 15, 20, 25 }s	18	23.4	216	5	C. Tri. β7	833									Calibration plate moved in dec. some lightning.
38	〃	〃 〃	10 25	10 45	10, 15, 20 }s	24	23.3	216	5	〃	〃									〃 〃
	〃	〃 〃	10 52	Knife edge #1		24	23.2	217												
39	〃 focus.	〃 〃	10 55	11 2	15s	24	23.2	230, 227 ... to 206	5	〃	〃									Offset at end.
	〃	〃 9	8 5	Knife edge #1		24	28.5	194		without filter										
40	〃 focus	~~〃~~ ~~9~~	8 25	8 25	25s	24	28.3	215, 212 ... to 188	5	Seed 27	13185									Seeing unsteady. Offset at end.
41	〃	〃 9	9 40	10 10	10s, 8s, 6s, 5s }	24	27.5	199	5	〃 〃	〃									
	〃	〃 〃	10 15	Knife edge #1		24	27.5	197												
42	〃	〃 〃	10 20	10 50	10s, 12s, 8s	18	27.3	202	5	〃 〃	〃									

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No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2743	No. 443	Sept. 9.	11h 5m	11h 30m	25s 30s	18in	26.5°C	202	5	Sed 27	13185								lightning in north. (135)
	Sept. 10. 1912, Flat mirror silvered according to Lundin's formaldehyde method.																		
	" 12 "		24-inch "		"			and reexamined, scale readings α = 10, δ = 10											
	Pole,	" 12	8h 15m	Knife edge	#1 20s	24in	22°C	215 230 to 203											
⊕ 2744	" 443	"	8 30	8 35	—	24	21.5		4	Sed 30	13256								230. 227 rec to 203 Best at 223.
	Pole	Sept. 17	11 30	Knife edge	#1	24	14.7	217	5	—									
⊕ 2745	Polaris	" "	11 37	11 42	8s each	24	14.7	236 233 to 209	6	Sed 30	13256								offset at end. Seeing very unsteady.
2746	" 443	" "	11 55	12 20	15 20 25s	24	14.8	223	8	"	"								" " "
	"	" "	12 25	Knife edge	#1	24	14.8	218	5	—									
	Sept. 26 1912, 24-inch mirror silvered with formaldehyde reducer, no tin chloride																		
Sept. 27.	Collimation scale readings α = 10.									δ = 11									
	Polaris	Sept 30	7 20	Knife	#1 edge	24	+11.3	217	5	—	—								good.
⊗ 2747	"	" "	7 30	7 35	10s	24	+11.3	231 227 to 212	5	C. Zeiß 7	833								Offset at end.
2748	"	" "	8 45	9 05	5s 8 10 sec	12	+10.2	220	5	"	"								Calibration plate.
2749	"	" "	9 10	9 40	12s 15 20 "	12	+10.0	220	5	"	"								" "
	"	" "	10 50	Knife edge	#1	24	+9.7	219	5	—									
2750	"	" "	11 00	11 20	5s 8 10 seconds	24	+9.4	222	5	C. Zeiß 7	833								" "
2751	"	" "	11 25	11 40	5s 8 10 seconds	18	+9.1	222	5	"	"								

No	Field	Date 1907	Exposure Central Standard t Begin	End	Time	aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
2752	Polaris	1912 Sept 30	11h 45m	12h 05m	10s each	18in	+9.0	225 222 219	5	C. Trip 7	833	C.E.C.	21	5m					B	Moved in declination One row at each focus
	"	" "	12 15	Knife edge	#1	18in	+9.0	218	5	—	—									B7 (137)
	"	Oct. 1	7 00	"	"	24	+15.8	218	5	—										B7 good.
2753	"	"	7 10	"	"	24	15.7	200	5	No filter										
53	" focus.	" "	7 15	7 30	5s each	24	15.5	215 212 ... to 194	7	Red 30	13256									effect at end.
54	"	" "	7 25	8 05	15 20 25 30	18	15.0	221	5	C. Trip 7	833									
55	"	" "	8 20	8 40	10s 15 12	24	14.6	221	5	" "	"									B7.
	"	" "	8 45	Knife edge	#1	24	14.5	218	5											
56	"	" "	9 00	9 25	15s 20 25	12	14.0	221	5	C Trip 7	833									
57	"	" "	9 30	10 05	30 35 40	12	13.6	221	5	" "	"									
2758	" focus.	" "	10 15	10 35	10s each	24	13.6	224 220 218	5	" "	"									one row at each focus.
	"	" "	10 45	Knife edge	#1	24	13.5	217	5	B 7										
	"	" 2	7 45	" "	#1	24	17.0	201	5	without filter.										seeing very unsteady
59	focus. "	443 " 2	7 48	7 53	15s 5 8 10 12	24	17.0	215 212 ... to 194	5	Red 30	13256									" "
60	"	" " "	8 02	8 24	5s	24	16.3	206	4	" "	"									" "
61	"	" " "	8 30	8 37	10 15s	24	16.2	206	5	" "	"									" "
62	"	" " "	8 40	9 00	10 15 20s	18	16.1	206	4	" "	"									" "

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Screen	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
	Polaris	Oct 3 1907	7h 15m		Knife edge	#1	24	+16.5	201	5	—									Unsteady. (139)
2763	Pole	443	" "	7	20	7 30	15s	24	+16.4	221 218 to 197	7	Seed 30	13256							
	"		" "	8	30	Knife edge	#1	24	16.0	203	5	—								
2764	"		" "	9	18	9 48	30-m.	18	15.0	212	8	Seed 30	13256		Hour angle. 2h 0m	90°	37.5 E	116°		
	Polaris		" 4	7	15	Knife edge	#1	24	20.0	197	5	—								
2765	Pole	443	" 4	7	20	7 30	30s	24	19.5	218 215 to 194	6	Seed 20	13256							Good. Cart row closer in middle, One row at each focus " " " " "
66	"	"	" "	8	30	9 12	each 15-s	18	18.5	217 212 207 202 197	4	"	"	"						
67	"	"	" "	9	15	9 50	20s each	18	17.9	215 207.5 200	5	"	"	"							
68	Pleiades		" "	10	25	10 30	15-s 30 walk 45	18	17.7	197	5	"	"	"						
69	"		" "	10	35	10 50	60 15 sec 30 " 45 "	15-m.	18	17.5	208	5	"	"	"						
	Vega		" 5	7	20	Knife edge	#1 15-s 30 s	24	22.2	200	5									a little unsteady.
2770	Pleiades		" "	9	40	10 00	1 2 3	12	19.7	208	5	Seed 30	13256							
2771	"		" "	10	22	10 30	8-m	12	17.5	208	5	"	"		flush up.					gitter upper half,
	"		" "	10	32	10 35	3-m	"	"	"	"	"	"							free
	"		" "	10	39	10 47	8-m	"	"	"	"	"	"		"					gitter lower half.
	Vega		Oct 7	7	20	Knife edge	#1	24	+12.2	193	5	—								unsteady.
72	U Serpentis		Polaris "	7	45	8 10	1/4 min.	12	10.7	200 198	5	Seed 20	13256							
73	Pole		" "	9	55	10 25	8 30-m.	12	11.0	205	5	"	"			26	E 190°			

No	Field	Date 1907	Exposure Central Standard Begin	Exposure Central Standard End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
	Alcyone	Oct 7	10h 45m	Knife edge	#1	24	+11.1	200	5	—									
2774	Pleiades	" 7	10 55	11 30	5m 5m 5m	12	10.5	209	5	Seed 30	13256								Floating clouds.
	Vega	Oct 12	7 10	Knife edge	#1	24	+11.8	203	5	—									gitter lower half free / " upper "
2775	U. Serpentis	" "	7 30	8 0	30m	12	+10.7	210	5	Seed 30	13256					11	W	20°	Unsteady, fields low
2776	S. Herculis	" "	8 25	8 50	25m	12	+10.3	210	5	"	"					16.5		18°	" "
	Polaris	" "	9h 35m	Knife edge	#1	24	10.1	203	5	—									"
2777	Pole	" "	10 00	10 30	30m	12	+9.7	210	5	Seed 30	"					39.5	E	215	"
	Alcyone	" "	10 50	Knife edge	#1	18	9.9	200 221,218	5	—									
2778	Pleiades	" "	11 00	11 05	10s each	18	9.8	" " " " 194	5	Seed 30	"	Focus plate.							Offset at end.
2779	"	" "	11 30	11 45	3m 4m 3m	12	9.7	207	5	"	"	"				34	E	351	Gitter upper half free. (Flare up)
2780	"	" "	11 55	12 15	5m 3m 3m	12	9.5	207	5	"	"	"				"	"	"	1 " gitter lower half free " 2 " free " 3 " upper "
	Polaris	" 14	7 25	Knife edge	#1	24	+13.8	204	5	—									
2781	Pole	" "	7 50	8 15	20m	12	13.4	210	5	Seed 30	"								good.
2782	"	" "	8 50	9 40	45m	12	13.0	210	5	"	"	"				29	E	308	
	Polaris	" 15	7 15	Knife edge	#1	24	12.0	200	5	—									Fair.
2783	Pole	" "	7 00	8 45	55m	12	11.8	208	5	Seed 30	13256					18		183	
	Alcyone	" "	9 35	Knife edge	#1	24	10.2	197	5	—									Unsteady.
2784	Pleiades	" "	9 45	10 12	10s 15s 20s	24	9.7	205	5	"	"	"							Calibration.

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
2785	Pleiades	Oct. 15 1912	10h 15	10h 35m	5m 10m 20m	18	9.7	205	5	Seed 30	13256			Calibration plate.				Unsteady gitter right half.
2786	"	" "	11h 00	11 15	3m each	12	9.8	205	5	" "	"							" left " .
	Alcyone	" 16	10h 20	Knife edge	#1	24	13.6	203	5									Very unsteady. gitter upper half. like
2787	Pleiades	" "	10h 30	10h 50	3m each	12	13.0	210	5	" "	"							" lower " .
	Polaris	" "	11 00	Knifeedge	#1	24	13.0	202	5									very unsteady.
2788	Pole	" "	11 15	13 00	105m	12	12.4	210	5	" "	"					28	327°	
	Oct. 17, 1912	Telescope 5 hrs. east and 75° north. clocks ran for 1 hr. and star trailed north a distance equal to 1/3 the radius of the field of the guiding eyepiece. Axis too high apparently.																
2788	Polaris	Oct. 17, 8	10	Knifedge	#1	24	15.8	202	5									very unsteady.
2789	Pole	" "	8 25	8 42	17m	24	15.3	209	5	Sed 30	13256					22	205°	"
2790	"	" "	8 55	9 55	60m	18	14.7	209	5	" "	"							"
2791	"	" "	10 10	11 10	60m	24	14.4	209	5	" "	"							"
	(Oct. 18, 1912. Telescope 5 hrs. (?) west and 75° north trail in declination. ?) Telescope clock ran for one houre and star did not not set correctly.																	
	Oct. 19, 1912 Telescope 5½ hrs. east and 75° north. distance equal to 1/3 the radius of the clock ran for one hour and star trailed north a guiding eyepiece. Axis apparently too high.																	
	Oct. 19, 1912 Telescope 4½ hrs. west and 75° north a distance equal to 1/3 of radius of guiding clock ran for one hour and star drifted south eyepiece.																	

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
	Alcyone	Oct. 19 1912	12h 00m	Knife edge	#1	24	+9.1	C	216	5	67						I	gitter upper half.	Very steady. 145
2792	Pleiades	" "	12h 15m	1h 05m	each 20m	12	8.8		220	5	C. Iris	7	833				II	" lower "	" " "

South end of polar axis raised one quarter turn of adjusting screws. Oct. 23, 1912
Telescope 5½ hrs. east and 75° north. Clocks ran for 1 hr. and star drifted north a
distance equal to ¼ the radius of the field of the guiding eyepiece. Oct. 23, 1912.
Oct. 23. South end of polar axis raised three ¾ quarter turns of adjusting screw.
" " 1912 Telescope 4½ hrs. west and 75° north. Clock ran for 1 hr. and star did not drift from
crosswires.
Oct. 24. Telescope ½ hr. east and 0° dec. Clocks ran for hours and star drifted slightly to the south,
South end of polar axis evidently a little too far west. Adjusted slightly.
Oct. 25 Telescope ½ hr. east and 0° dec. Clocks ran for one hour and star did not drift in declination
" " Telescope 4½ hrs. west and 75° north. " " " " drifted south a distance equal
to about one tenth the radius of the field of the guiding eyepiece.

	Polaris.	Oct. 26,	7h	50m	Knife edge	#1	24	+13.7	202	5									Fair.
2793	Pole	" "	8	09	8	10	1m	24	+13.5	210	5	Seed	30	13256					
279	"	" -	8	24	8	25	1m	"	"	"	-	"	"	"					
			9	50	9	51	"	"	11.8	"	"	"	"	"					
			11	36	11	37	"	"	11.0	"	"	"	"	"					

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		Oct. 28, 1912																	
		South end of polar axis raised slightly.																	
		Oct. 28, 1912. Telescope 5½ hrs. east and 75° North. Clock ran one hour. Star drifted south a short distance.																	
		" Axis evidently too low. South end lowered slightly. Clock a little fast.																	
		" Telescope 4½ hrs. west and 75° north. Clock ran one hour and star did not drift in declination.																	
		" Telescope ½ hr east and 0° declination. " " " " " drifted south a very slight distance																	
		showing very small azimuth error of polar axis. Clock a little fast.																	
	Polaris	Oct 28.	$10^h\ 30^m$	Knife edge #1		24			200	5									Unsteady.
2794.	Pole	" "	$10^h\ 44^m$	$10^h\ 45^m$	1^m	24			207	5	Red 30	13256							
			$11^h\ 44^m$	$11^h\ 45^m$	1^m	24	8.0	"	"		"	"							
			$12^h\ 44^m$	12 45	1^m	"	7.0	"	"		"	"							
		Oct. 29, 1912 South end of polar axis raised slightly.																	
		Nov. 1, 1912. Telescope 5½ hrs. east and 75° North. Clock ran one hr. and star trailed very slight distance south.																	
		" " " ½ hr east and 0° dec. " " " " " " " "																	
	Polaris	Nov. 1.	$9^h\ 35^m$	Knife edge #1		24in.	-1°c		197										seeing fair.
2795	Pole	" "	$9^h\ 40$	9 42	2m.	24in.	-1.0		205	5	Red 30	13256							
		" "	10 29	10 30	1m	"	-1.0		"	"	"	"							
		" "	11 29	11 30	1m	"	-1.2		"	"	"	"							

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
	Pleiades	1912 Nov. 1	11h 40m	Knife edge	#1	24	-1.0	199	5	-									(149) Fair to medium, gitter right half.
2796	"	" "	11h 55m	12 10	3mm each	12	-1.9	206	5	Seed 30	13256								gitter left "
	Alcyone	" "	12 15	Knife edge	#1	24	-1.0	218	5	-B7.									fine.
2797	Pleiades	" "	12 30	13 85	30mm each	12	-1.0	222	5	Tri B7	833								gitter right half
	Polaris	Nov. 2	7 45	Knife edge	#1	24	+2.1	204	5	-									" left half
2798	Pole	" "	8 00	9 00	60m	12	+1.7	211	8	Seed 30	13256								good.
"	"	" "	9 05	10 05	60m	12	+0.6	211	8	"	"								gitter right half
	Polaris	" "	10 25	Knife edge	#1	24	+0.5	205	5	-									" left ".
2799	Pole	" "	11 15	12 15	60m	12	+0.2	213	7	"	"								fair.
	18h 6m + 86° 8'	" 4	4 55	Knife edge	#1	24	+8.8	204	5						31.0	E 285			
2800	" "	" "	7 45	8 10	5 sec 10 sec 20 sec	24	+8.5	212	4	Seed 30	13256			Moved in declination.					just steady
	Alcyone	" "	8 20	Knife edge	#1	24	+8.4	204	5	-									calibration.
2801	Pleiades	" "	8 40	9 00	5 min each	12	+8.0	211	6	"	"	gitter flush up.							unsteady. wipe gitter
	Polaris	" 6	7 55	Knife edge	#1	24	+6.0	216	5	B7									free whole gitter
2802	Polaris.	" "	8 05	8 45	5 10 20 40 sec each	24	+5.4	220	5	Tri B7	833								unsteady.
	Alcyone	" 6	8 50	Knife edge	#1	24	+5.4	217	5	B7									calibration.
2803	Pleiades	" "	9 20	9 50	30 min	12	+5.3	221	5	Tri B7	833								unsteady.
			9 55	10 25	30 "	12	"	"		"	"								gitter right half.
																			" left "

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks
		1912.																	
		From seven focus plates, Seed 27 and 3 seven (7) scale divisions greater than the focus for the plate was found to ~~be~~ average time. (Knife edge #1 used in plate holder No. 5.)																	
		Seven C.Z. B7 focus plates showed the scale divisions greater than the ~~No.~~ #1 used in holder No. 5 with B7 filter) the average focus for the plate was four (4)																	
	Polaris	Nov. 14	7h	30m	Knife edge	#1	24	+2.4	203	5	corresponding knife edge readings. (Knife edge								very unsteady.
2804	"	" "	7	45	8	10	5 10 20 sec	24	+2.0	210	5	Seed 30	13256			Calibration			Calibration.
2805	"	" "	8	15	8	35	6 12 18 Dec.	24	+1.8	210	5	" "	"			"			"
	Alcyone	" "	9	00	Knife edge	#1	24	+1.5	203	5									whole gitter.
2806	Pleiades	" "	9	15	9	45	8 min each	12	+1.3	210	5	" "	"						full whole gitter
2807	"	" "	10	00	10	30	8 m. each	12	+1.3	210	5	" "	"						right half. " left "
	Vega	" 15	7	40	Knife edge	#1	24	+3.7	220	5	B7								very unsteady
2808	"	" "	7	50	8	25	5 10 20 40 sec	24	3.5	224	5	Cri B7	836			Calibration			
	Capella	" "	8	40	Knife edge	#1	24	3.4	220	5	B7								" "
2809	"	" "	8	50	9	20	5 10 20 40 sec	18	3.0	224	5	Cri B7	"			"			
2810	"	" "	9	25	9	45	5 10 20 sec	24	2.9	"	"	"	"			"			

12

No | Field | Date | Exposure Central Standard T — Begin | End | Time | Aperture | Temp. | Focus | Holder | Plate | Emulsion | Developer | Temp. | Time | R.A. | Dec. | Guiding Eyepiece | Telescope | Circle | Seeing & Remarks

1907

	Polaris.	1912 Nov. 15	10 25	Knife edge #1		24	+2.9	208	5	—						very unsteady.
2811	Pole (443)	" "	11 00	11 45	10 20 30 40 } s	24	2.8	210	7	Seed 30	13256					Calibration.
2812	" "	" "	11 50	12 20	8 16 24 32 } s	24	2.5	210	6	" "	"					Calibration.
	Capella	Nov 21	10 40	Knife Edge #1		24	+5.5	218	5	β7.						Unsteady.
2813	"	" "	10 50	11 20	10 20s 40s	18	+5.5	222	5	C. Tri β7	836					Calibration.
	Alcyone	Dec. 2.	8 55	Knife edge #1		24	0.0	198	5	—						Unsteady.
	Polaris	" 6	7 30	"	#1	24	-2.8	206	5	—						very unsteady.
2814	Pole 443	" "	7 50	8 30	10s	24	-3.0	210	6	Seed 30	13256	Calibration				
	"	"	"	"	20s	18	-3.3	"	"	"	"	"				
	"	"	"	"	40s	12	-3.8	"	"	"	"	"				
	Capella	" "	9 00	Knife edge #1		24	-4.0	221	5	β7						Unsteady
2815	"	" "	9 15	9.45	~~5~~5s 10s 20s	-24 -18 -12	-4.3	228	5	C. Tri β7	836	Calibration				
	Alcyone	" "	9 50	Knife edge #1		24	-4.7	205	5	—						{ gitter right half free.
2816	Pleiades	" "	10 00	10 30	7m each	12	-5.0	209	7	Seed 30	13256					" left " } gitter [illegible] 2.
2817	"	" "	11 00	11 30	7 min. each	12	-5.5	209	4	" "	"					free gitter " '
	Alcyone	" "	12 00	Knife edge #1		24	-6.0	203	5	—						very unsteady.
2818	R. Tauri	" "	12 30	13 00	30m	12		207	5	Seed 30	13256		30.5	~~30.5~~ W	100	Clouds.

12

No	Field	Date	Exposure (Central Standard T) Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907																		
	Alcyone	1912 Dec. 9.	7h 40m	Knife edge #1		24	0.0C	?	5	Focus for knife edge somewhere between 200 and 210										very unsteady. No seeing at all X55
2819	R Tauri	" "	8 05	8 35	30m	12	-0.1	210	4	Seed 30	13256						140°	E	30	very unsteady.
2820	V Tauri	" "	9 10	9 40	30m	18	-0.3	210	6	" "	"							"		" "
	Alcyone	" 11	10 30	Knife edge #1		24	-10.7	205	5	—										very unsteady.
	"	" 13	7 30	" " #1		24	+0.2	225	5	β 7										Fair.
2821	Pleiades	" "	7 48	8 18	30m	12	±0.0	229	5	C Tri β 7	836							E	37 half	gitter scht. right half
	"	" "	8 25	8 55	30m	12	-0.5	"	"	"	"							"		gitter left half.
	Alcyone	" "	9 10	Knife edge #1		24	-0.6	208	5	—										
2822	R. Tauri	" "	9 28	10 00	10m 20m	12	-0.6	215	4	Seed 30	13256							E	37	
2823	"	" "	10 10	11 00	50m	12	+0.2	215	6	"	"							"	37	
2824	R Leonis Minoris	" "	13 00	13 30	10m each	12	0.0	215	7	"	"						not guided.			
	Polaris	" "	13 35	Knife edge #1		24	0.0	208	5	—										
	Alcyone	" 27	6 40	"	"	24	-2.8	205	5	—										Unsteady.
2825	Pleiades	" "	6 50	6 58	1m. each	12	-3.0	212	4	Seed 30	13256								357	I whole gitter, II " free, III " "
2826	"	" "	7 05	8 00	15m each	12	-3.2	"	6	"	"								3570	I whole gitter, II free, III whole gitter right half.
2827	"	" "	8 05	8 40	8m each	12	-3.3	"	7	"	"									I, II free, III " left ".
	Polaris	" 28	7 25	Knife edge #1		24	+3.9	207	5	—										Unsteady
2828	Pole	" "	8 00 9 15	9 00 10 15	1 hr. 1 hr.	12	+3.8	214	4	Seed 27	13417									I gitter upper half. II " lower "

No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
		1907																		
		1912																		series I gitter.
2829	18h 6m and 86° 87'. Calibration.	Dec, 28	10	40	10	55	15 sec each	12	3.5	214	6	Seed 27	13417							" II free. 157
	Alcyone	Dec 30	10	55	Knife edge #1		24	+2.5	206	5	—									very unsteady.
2830	Pleiades	" "	11	00	11	15	60 sec each	12	+2.5	213	4	Seed 27	13417					W		whole gitter and free alternately.
2831	R. Tauri.	" "	11	50	12	20	30 m.	12	+2.2	213	6	"	"					W		
	Polaris.	" 31	7	40	Knife edge #1		24	+1.7	203	8	—									Excellent,
2832	Pole	" "	8	00	10	00	2 hr	12	+1.5	210	7	Seed 27	13417							gitter right half.
	"	" "	10	00	12	00	"	"	+0.5	"	"	"	"							" left " .
		1913																		
	Polaris	Jan. 8.	7	30	Knife edge #1		24	-7.6	209	5	—									fair.
2833	18h 6m +86° 8 Calibration	"	8	00			20 sec each	12	-8.0	216	4	Seed 27	"							whole gitter
			—	9	10		40 s each	12	-9.0	"		"	"							free
																				whole gitter
2834	P Lev. Min.	"	10	18	10	40	10 m each	12	-10.6	"	6	"	"				19	W	169	free
	Polaris	"	11	30	Knife edge #1		24	-11.5	202	5	—									unsteady.
			transferred to new book.																	

No	Field	Date 1907	Exposure Central Standard Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope	Circle	Seeing & Remarks
12																				
	α Cyg.	June 29 1914	11 05							24	17.1	192								
			11 21	11	28	10						199								
			11 29	11	36	7														
			11 37	11	43	6														
			11 45	11	51	6														
			11 52	12	00	8														
			12 03	12	13	10														
			12 15	12	25	10														

No	Field	Date	Exposure Central Standard T Begin	End	Time	Aperture	Temp.	Focus	Holder	Plate	Emulsion	Developer	Temp.	Time	R.A.	Dec.	Guiding Eyepiece	Telescope Circle	Seeing & Remarks

(167)

Bath for Wallace Panchromatic Plates

Piracyanol	50 M
Pinacryptol	40 M
Hanocal	40 M
Ammonia	120 M
Alcohol	3 oz.
Distilled Water	40 oz.

Bathe 4m at 23°-24° and
wash 30 sec. in alcohol.

No

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Table of Contents.

Filters

B7 used till 1914 Sept. 30 plate 3002
cracked by fall (Engrich)
W 12 used from 1914 Sept 30, plate 3004

con. on p. 16. = 184

Wire Gitters.

No.	Material	Diam. wire.	total mesh.	Free space	Absorption	Aperture	used. when	by
Seares ~~No 1~~.	Wire gauze					16 in.	Sept. 21, '11 to Oct. 17, 1911	Park. Van Maanen.
Sch. I.	Wire cloth				1.87 M	Halffield.	Park. ging to Nov. 4, 1912	Leeden.
Sch. II.	"				1.87 M	Wholefield.	to	Leeden.
A I.	No. 14. B & S. Aluminum wire	0.064"	0.20 in	0.136	0.85 M ΔM 2.00 *	12 in.	apr. 4, 1914	Alden.
No 38. Drill Rods A II.	No. 10. B & S. Steel Rods	Normal gitter. 0.1007 cm	0.2014 cm	0.1007 cm	1.50 M ΔM 0.98	13 in	May 6, 1914	Alden.
A III.	No. 25. Drill Rods.	Normal gitter. 0.149	0.298	0.149	1.50 ΔM = 0.98	14 in	May 28, 1914	Alden.
A III. partial	24 oz the above rods						1916/3/4	
P7	Nr 23 Stubbs 56 drill rods	0.153 or 0.154 inch 3.93 mm	0.307 inch 7.80 mm	3.87	ΔM = 0.99 1.50	17 ½ inch		
P76	= 2 of P7 rods							

* ΔM is the difference between the central image and first order spectrum

No

Relation of Knife Edge to Plate Focus.

With Knife Edge No. 1. in Holder No. 5 focus for Seed plates found to be seven (7) scale divisions greater than knife edge focus. (1916. Nov. + 4)

With same knife edge used with filter β 7 in Holder 5, focus for C. Tri. plates was four (4) scale divisions greater than the knife edge reading.

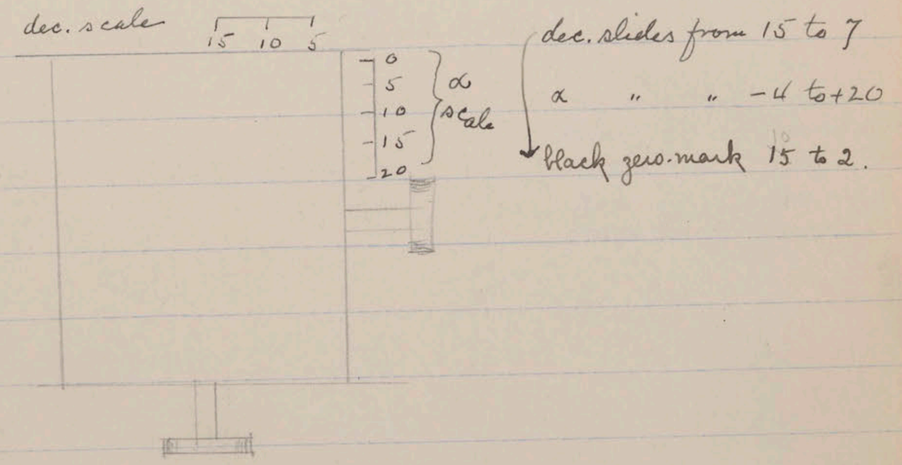
From focus plates taken Feb. 21, 1915 focus for Filter W_{12} is 1 div. greater than knife edge.

" K_3 " 0 " " " " " ".

Knife Edges.

No.

1. Fits into notch in Holder 5.
2. Used without plate holder. Aluminum plate.
3. Clamp on in place of plate holder. Brass plate.



Range of slides of double-slide plate holder

6 turns of α screw = 5'. One turn of screw is sufficient to separate images for scale plate.

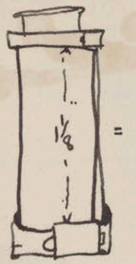
Silvering of Mirror.

Date	Time	Temp.	Process	Remarks.
Jan, 23, 1913.	> 3 Min.	+ 19°C.	Lundin's Formaldehyde.	Scale readings $\alpha = 8$. $\delta = 11$. Coat contained some bloom but burnished off well. Film fairly thick.
1914 June 12	3 min	+ 2 °C	Brashear's.	$\alpha = 9$ $\delta = 16$ Coat badly scratched Cleaned with French chalk.
Sept. 29, 1916				Replaced Sept. 30. Centering about right. Collimation off by $1\frac{3}{4}$ in δ + $1\frac{1}{2}$ in α the units of paper circle in center of mirror.

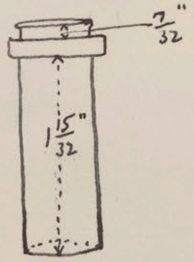
No 4.

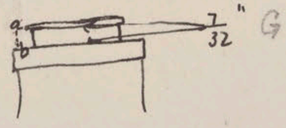
Examination of Guiding Eyepiece Nov. 15, 1916 (preparatory to readjustment)

Guiding Eye-piece of Reflector



= Miss Gushee's focus.





Focus setting = distance a --- b

G	8/64
P	13/64
F	10/64

No

Collimation of 24-inch Reflector Oct 28, 1916

Tel. E. pointing N.

Scale readings for optical axis.

A. R.	Decl.
11	9.0
8	9.5
10	9.6
10	9.0
Mean 10	9.3

The distance of images of paper circle in center of mirror from intersection of cross wires in collimating telescope was estimated and recorded in units of the diameter of the paper circle. a and b represent the two positions of the collimating telescope which was reversed between readings.

		Vertical distance	Horizontal distance
1	a	½ below	3 left
	b	1 above	½ right
2	a	2 below	2½ left
	b	1½ above	½ right
3	a	2½ below	2½ left
	b	1 above	2½ right

		Vertical	Horizontal	Mean of 5
4	b	1½ above	½ right	
	a	2½ below	2½ left	
5	b	1½ "	½ "	1½ above ½ right
	a	2 "	2 + "	2 below 2½ left.

Screw No. 1 was turned out ¼ rev.

" 3 " " in ¼ "

1	b	2 above	1 right	
	a	1½ below	1½ left	
2	b	1½ "	1 "	
	a	1½ "	2 "	
3	b	1½ "	1½ "	1½ above 1 right
	a	1½ "	1½ "	1½ below 1½ left

(over)

Telescope E. Pointed N.

		Vertical	Horizontal	Mean
1	b	$1\frac{1}{2}$ + above	$1\frac{1}{2}$ - right	
	a	$1\frac{1}{2}$ + below	$1\frac{1}{2}$ + left	
2	b	$1\frac{1}{2}$ above	$1\frac{1}{2}$ - right	
	a	$1\frac{1}{2}$ below	$1\frac{1}{2}$ + left	
3	a	$1\frac{1}{2}$ below	$1\frac{1}{2}$ left	
	b	$1\frac{1}{2}$ above	1+ right	
4	a	$1\frac{1}{2}$ below	$1\frac{1}{2}$ left	
	b	$1\frac{1}{2}$ above	$1\frac{1}{2}$ - right	
5	a	$1\frac{1}{2}$ below	$1\frac{1}{2}$ + left	
	b	$1\frac{1}{2}$ above	1+ right	
6	a	$1\frac{1}{2}$ above	1+ right	$1\frac{1}{2}$ above $1\frac{1}{2}$ right
	b	$1\frac{1}{2}$ below	$1\frac{1}{2}$ left	$1\frac{1}{2}$ below $1\frac{1}{2}$ right

Conclusion: Collimation nearly right for this position of telescope.

Telescope reversed W of Meridian pointed N

		Vertical	Horizontal	Mean
1	b	$2\frac{1}{2}$ above	$1\frac{1}{2}$ right	
	a	$\frac{1}{2}$ - below	1 - left	
2	b	$2\frac{1}{2}$ above	2 - right	$2\frac{1}{2}$ above $1\frac{1}{2}$ right
	a	$\frac{1}{4}$ below	1 left	$\frac{1}{3}$ below 1 left

Telescope W pointed S

a	$1\frac{1}{2}$ below	$1\frac{1}{2}$ left	
b	$1\frac{1}{2}$ above	$\frac{1}{2}$(-) right	

Telescope E. pointed S

1	b	$2\frac{1}{2}$ above	$1\frac{1}{2}$ right	
	a	$\frac{1}{4}$ below	1+ left	
2	b	2 above	$1\frac{1}{2}$ right	2 above $1\frac{1}{2}$ right
	a	1- below	1+ left	$\frac{1}{2}$ below 1+ left
		pointed N.	$1\frac{1}{4}$ right	Zenith: practically correct.
	b	$1\frac{1}{2}$ above		
	a	$1\frac{1}{4}$ below	$1\frac{1}{2}$ left	

Adjustment of Optical Axis. Nov., 1916.

Radius of guiding eye-piece 7'.

Drift of 7' per hr. = 7" per min.

Error = 229 drift per min. = 3.8 13740 times drift per hour

∴ error = 229 × 7" = 26.'7

Alt. Screw Dist. betw. screws = 24"
Pitch of screw = 16

∴ one turn of screw raises axis $\frac{1}{16} \times \frac{1}{24} = \frac{1}{384}$ of radius.
= 53 7".0

$\frac{1}{384}$ rad. = 8.'95 = 537".0 3 × 8.95 = 26.'85

l. ρ'	3.5363
l. 384	2.5843
	0.9520
	8.95

∴ 3 turns of alt. screw correct error in optical axis corresp. to drift of 1 radius of guiding eye-piece per hr.
1° of turn of altitude screw moves axis 1".5 (1".49)

Az. Screw Dist. betw. screws = 26½"

Pitch of screw = 12

$\frac{1}{12} \times \frac{1}{26\frac{1}{2}} = \frac{1}{318}$ 648" $\frac{648}{360} = 1.8$" i.e. 1° turn of azimuth screw moves axis 1.8".

$\frac{1}{318}$ rad. = 10.'8 = 900° are this' which one turn of screw moves axis. 2½ × 10.'8 = 27'.

∴ 2½ turns of az. screw correct error in o.a. corresponding to drift of { 1 radius of guiding eye-piece per hr. / 7' = 420" " "

∴ 1° of azimuth screw corrects for 0."477

Constants of Gratings for 2-foot

Con. from p. 3 = 171

Name	Material	d Diam. of wire inch	d Diam. of wire mm	Gauge Stubbs	Gauge B+S	a Free space inch	a Free space mm	a+d inch	a+d mm	No. of rods	N(a+d) inch	N(a+d) mm	d/(a+d)	Absorption (c-f)/N	ΔM (s-c)/N	Date made	abs. + ΔM
Sears	wire cloth																
Sch. I																	
Sch. II																	
A I	alum. wire	0.064			14	0.136		0.200			12			0.85	2.00		
A II	Drill rods	0.1007		38	10	0.1007		0.2014			13		0.500	1.50	0.98		
A III	"	0.149		25		0.149		0.298		48	14		0.500	1.50	0.98		
A III partial	"									24							
P7	"	0.153+	3.93 3.85	23			3.87		7.80	56	17½		0.504	1.50	0.99	1916 Nov. 14	
P7a	"	"		"										0.35	3.04		
P7b	"	"		"						21				0.53	2.54		
	"	0.092		42		0.208		0.300					0.307	0.78	2.12		
P8	"	0.0907			11	0.209		0.300		57	17½		0.303	0.77	2.14		
9		0.088		43				0.300					0.293	0.75	2.23		
10		0.085		44									0.285	0.73	2.32		
11		0.081		45									0.270	0.68	2.43		
V I	Drill rods	0.0808			12										1.048		
		0.0387	0.982	60			1.04		2.02	216	~~43~~	436	0.486	1.437	0.[illegible]	1924 Nov. 1	2.485

No

No.	Field.	Date.	Exposure. Central Standard Time Begin,	End.	Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.												
		1913.																			
	Polaris	Jan. 8	7h 30m	Knife edge	#1	24	-7.6	209	5	—											fair.
2833	Calibration 18h 6m +86°.8	" "	8h 00m	—	20 sec each	12	-8.0	216	4	Seed 27	13417	Hydro	20°C	10m				E	37	Sch. 2	I whole gitter } II. free }
			—	9h 10m	40 sec each	12	-9.0	216	"	"	"							"	"	"	III whole gitter IV free.
2834	R Leo. Min.	" "	10 18	10 40	10 min each	12	-10.6	"	6	"	"	"	"	"			19	W	169		
	Polaris	" "	11 00	Knifeedge	#1	24	-11.5	202	5	—											Unsteady.
	Alcyone	Jan. 13.	7 50	Knifeedge	#1	24	-11.0	224	5	β7.										.	Fair seeing.
2835	Pleiades	" "	8 20 9 30	9 20 10 30	60m. each	12	-11.0 -11.2	227	5	C. Tri β7	836	C.E.C	20°C	6m.			— 39	W	217	Sch I	guiding star faint. I gitter right. II " left.
	Polaris	" "	11 40	Knife edge	#1	24	-11.6	209	5	—											Seeing fair.
2836	Pole	" "	12 05	13 05	60m	12	-11.7 -12.4	216	7	Seed 27	13417	Hydro	20°C	10m			47	W	106.5		Sky became thick.

Jan. 23. Mirror (24 in.) resilvered by formaldehyde process. Recollimated. Readings α = 8. δ = 11. Jan. 23, 1913.

No.	Field.	Date.	Begin	End	Time	Aperture	Temp.	Focus	Holder No.												
	Polaris	Jan. 24.	6h 10m	Knifeedge	#1	24	±0.0	235	5	—							"	W	37		Unsteady.
2837	Pole	" "	6 25 7 15	7 11 8 02	46m 47m	12 12	0.0 -0.4	242 "	6	Seed 27	13417?	Hydro	20°	10m	1 4	9 9	0	W	37	Sch I,	I gitter upper half. II free. Out of focus.
	Polaris.	" 25	6h 00	Knifeedge	#1	24	+2.3	202	5	—											Unsteady.
⊗ 2838	Pole (+43) Focus	" "	6h 10m	6 15	10s each	24	+2.3	221 218.. ..-201	4	Seed 27	13417?	Hydro	20.5	10m	Best focus about 209. —	—	—	W	37	—	Offset at end. Clouded over at end.
	Polaris	" "	7 00	Knife edge	#1	24	+2.4	202	5	—	—										
2839	Pole	" "	{ 7 12	8 12	60m	12	+2.4	209	8	Seed 30	13256				8	11	23	W	37	–	free,
	P.		{ 8 14	9 14	60m	"	+2.0	"	"	"	"				11	11	27			Sch I.	gitter upper half.
	Polaris	Jan. 28	6 35	Knifeedge	#1	24	-8.8	208	5	—											seeing fair.

No

No.	Field.	Date.	Exposure. Central Standard Time Begin	End.	Time.	Aperture. (in)	Temp. (cc)	Focus.	Holder No.												
		1913																			
2840	Pole	Jan 28	$6^h 45^m$	$7^h 45^m$	60^m	12	-8.8	215	4	Seed 30	13256	Hydro	20°	10m.	8	11	33	W	8	-	gitter,
			7 50	8 50	60^m	"	-8.0	"	"	"	"				10	11	35	W	"	Sch I.	Lower half ~~clouded over~~
~~N.G.~~	~~Pole~~	~~"~~	~~9^h 08~~	~~10 36~~	~~98^m~~	~~"~~	~~-7.3~~	~~"~~	~~6~~	~~"~~	~~"~~	~~No good.~~			~~8~~	~~11~~	~~47~~	~~—~~	~~19~~	~~—~~	during last half.
	Polaris	Jan. 29	7 25	Knife edge	#1	24	+0.3	202	5	—	—										fair.
2841	Pole	" "	7 43	8 43	60^m	12	+0.1	209	7	Seed 30	13530	Hydro	20°	10^m	8	11	36	W	38.5	—	Cross hair in guiding eyepiece & broken
	Polaris	" "	10 50	Knife edge	#1	24	-0.3	203	5	—											Unsteady.
2842	$18^h 6^m$ +86.8 Calibration	" "	11 00.	—	10^s each	12		210	8	Seed 30	13530				8 12	11	-	W	"	I free II Sch II	Moved 1 turn of dec. screw.
			—	11 45	20s each	12	-0.4	210	"	"	"				16 20	"	-	W	"	III free IV Sch II.	
2843	"	" "	11 50	~~12 30~~	15s each	12		"	7	"	"				0 5	11	-	W	"	I free II Sch II.	"
			—	12 30	30s each	12	-0.5	"	"	"	"				10 15	11	-	W	"	III free IV Sch II.	
	Polaris	Feb. 1.	11 00	Knife edge	#1	24	-13.5	205	5	—											Very unsteady.
2844	$18^h 6^m$ +86.8 Calibration	"	11 15	—	10 sec each	12	-13.5	212	4	Seed 30	13530									I free II Sch II.	
			—	12 00	20 sec each	12	-13.5	212	"	"	"									III free IV Sch II.	
	Polaris	Feb. 3	11 00	Knife edge	#1	24	-13.0	197	5	—	—										Very unsteady
2845	Pole	" "	11 30	13 30	1 hr each	12	-15.5	204	6	Seed 30	13530					13		W	80	I Sch I II. free	upper half.
	Polaris	" 5	10 00	Knife edge	#1	24	-14.5	207	5	—											Unsteady.

No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.
2846	Pole	1913 Feb. 5	10h 10m	11h 10m	1hr each	12	-14.0 -15.0	214	7
	Polaris	Feb. 7	8h 00	Knife edge #1		24	-6.1	202	5
2847	Pole	" "	8 18	8 13	60m	12	-6.1	209	8
			9 15	10 15	60m	12	-6.5	"	"
	Polaris	" "	11 45	Knife Edge #1		24	-6.5	205	5
			13 55	13 25	90m	12	-6.5		
2848	Pole	" "	13 30	15 00	90m	12	-7.0	212	7
	Alcyone	" 8	7 15	Knife edge	#1	24	-6.0	203.5	5
			7 50	8 05	15m each				
2849	R Tauri	" "	8 15	8 30		12	-6.6	210.5	8
	Polaris	" "	8 40	Knife edge	#1	24	-6.7	207	5
			8 50	9 50	60m		-7.2		
2850	Pole	" "	9 55	10 55	60m	12	-7.6	210	6
			11 30	12 00	30m				
2851	Pole	" "	12 00	12 20	20m	12	-8.0	210	7
	Polaris	" 11	10 30	Knife edge	#1	24	-12.5	191	5
			11 20	12 20	60m	12	-14.5	199	
2852	Pole	" "	12 40	13 40	60m		-15.6		6
	Polaris	" 12	11 40	Knife edge	#1	24	-13.4	204+	5
			11 52	12 52	60m		-14.0		
2853	Pole	" "	12 55	13 55	60m	12	-14.5	211+	7
	Polaris	" 24	7 40	Knife edge	#1	24	-3.5	195	5
2854	Pole	" "	7 55	8 55	60m	12	-3.5 -8.0	202	7
			9 00	10 00	60m	12	-8.0	"	
					Mean		-9.1	205	

Liquid 30	13530	Hydro	205	10m	8	11	38	E	38.5	I free. II Sch I. Q. upper half. very unsteady.
—										
Liquid 30	13530	"			8	11		W	38.5	free,
"	"							"	"	Sch I upper half.
—										unsteady.
Liquid 30	13530.	"			8	11			"	I free II Sch I lower half.
—										unsteady.
Liquid 30	13530	"					17 20	W	211	I free II Sch I. lower half.
—										fair.
Liquid 30	13530	"			8	11		W	38.5	I free. II Sch I. lower half.
" "	"				8	11		W	"	I free II Sch I. lower half.
—	—									unsteady.
Liquid 30	13530	"			8	"		E	38.5	I free. II Sch I lower half.
—	—									unsteady.
Liquid 30	13530	"			8	11		E	38.5	I free. II Sch I lower half.
—	—									very unsteady.
Liquid 30	13530	"						E	66	" "
"	"									Sch I.

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No.	Field	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C.)	Focus.	Holder No.									
	Polaris	1913 Mar. 4.	7h 25m	Knife edge #1	24	-4.0	200	5	—	—								good.
2855	Pole	" "	7 40	8 40	60m	12	-4.0 -5.0	208	6	Lud 30	13530	Hydro	20°	10m	8	11		38.5 Schl upper half.
			8 45	9 45	60m	"	-6.0 -6.4	"	"	"	"	"	"	"	11	11		" free.
	Polaris	" "	10 45	Knife edge #1	24	-7.6	201	5	—	—								unsteady.
2856	Pole	" "	11 00	12 00	60m	12	-7.3	208	7	Lud 30	13530	"	"	"	8	11		" free clock stopped
			12 20	13 05	45m	"	-7.2	"	"	"	"				11	11		" Schl lower half.
	γ Geminorum	" 6	7 25	Knife edge #1	24	-10.1	202	5	—	—								unsteady.
2857	Nova Gem (2)	" "	7 50	8 10	20m	12	-11.8	209	4	Lud 30	13530	"	"	"	7	11	32 W	15.2 free
			8 15	8 35	20m	12	-12.1	"	"	"	"				11	11	28 W	15.2 Schl prec. half.
	Polaris	" "	9 00	Knife edge #4	24	-11.6	199	5	—	—								Fair.
2858	Pole	" "	9 15	10 15	60m	12	-12.0	207	6	Lud 30	13530	"	"	"	5	11	E	38.5 free
			10 00 (10 20)	11 50 (11 30)	"	"	-11.8	"	"	"	"				11	11	E	" Schl lower half.
	λ Leonis	" 9	10 25	Knife edge #1	24	+0.7	202	5	—	—							W	38.5 — fair.
2859	R Leonis	" "	10 32	10 47	15	12	+0.8	209	7	Lud 30	13530	"	"	"	8	10	24 W	" free
			10 53	11 08	15	"	+0.5	"	"	"	"				12	"	28 "	" Schl. right half.
			11 14	11 24	10	"	+0.4	"	"	"	"				16	"	31 "	" free.
			11 25	11 35	10	"	+0.4	"	"	"	"				20	"	34 "	" Schl left half.

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No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C.)	Focus.	Holder No.									
	Polaris	1913 Mar. 9	11h 50m	Knife edge #1	24	+0.4	201	5	—	—				8	4	- E	38.5	—
2860	Pole	" "	12 05	13 25	70m	12	+0.4 +0.0	208	6	Seed 30	13530	Hydro	20°	10m.	8	11	"	" —
			13 30	14 40	70m	"	-0.3	"	"	"	"				10	12	"	Sch I lower half.
	β Gem	Mar 29	8 00	Knife edg	#1	24	+8.7	216	5	β7	—							Very unsteady.
~~2861~~	Nova 2 Gem	"	8 30	9 00	30m	12	+8.5	220	5	CTriβ7	836	C.E.C	20°	5m			30 W	149 Clock stopped.
	Polaris	" "	9 40	Knife edg	#1	24	+7.8	199	5	—	—							very unsteady.
	Alcyone	" 31	7 00	" "	"	24	+8.8	197	5	—	—							unsteady.
2861	Pleiades	" "	7 25	7 35	1 min each	12	+8.5	204	7	Seed 30	13530						W 38.5	I Sch II III free III Sch II IV free IV Sch II.
2862	"	" "	7 40	7 50	1 min each	12	+8.3	204	6	"	"							I Sch II III free III Sch II
	~~Gem~~	~~Mar~~	~~7 55~~	~~Knife~~														
	β Gem	Mar 31	7 55	Knife edge	#1	24	+8.9	219	5	β7								unsteady.
2863	Nova Gem (2)	" "	8 20	9 35	60m	12	+7.8	223	5	CTriβ7	836				6	10	20 W	149 - "
2864	" "	" "	9 45	10 20	15 min each	12	+7.5	204	4	Seed 30	13530						W "	I free II Sch I. "
	Alcyone	Apr 5	7 25	Knife edge	#1	24	+6.1	194	5	—	—							fair.
2865	Pleiades	" "	7 35	7 45	1 min each	12	+6.0	201	7	Seed 30	13530						W 38.5	I Sch II III free III Sch II.

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No.	Field	Date. 1913	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (C°)	Focus.	Holder No.													
	β Gem.	april 5	7 55	Knife edge #1	24	+5.8	210	5	B7												fair.	199
2866	Nova Gem 2	" "	8 10	9 10	60m.	12	+4.9	215	5	Zu B7	836						27	W	15C	—	unsteady.	
2867	" "	" "	9 19	9 44	25m	12	+4.5	202	6	Seed 30	13530							"	"		free.	
		" "	9 50	10 15	"	"	+4.3	"	"	"	"							"	"		Sch I. lower half.	
	Polaris	" "	10 40	Knife edge #1	24	+3.8	195	5	—	—											unsteady.	
2868	Pole	" "	10 55	11 55	60m	12	3.1	202	4	Seed 30	13530	Hydro	20°	10	8	11		E	38.5	—		
		" "	12 00	13 00	"	"	+2.5	"	"	"	"				11	11		"	"		Sch I. left half.	
	β Leonis	April 14	7 25	Knife edge #1	24	+8.6	193	5	—	—					8	11		E	"		Fair.	
	"	" "	7 30	"	"	"	"	212	5	β7	—				"	"		"	"		"	
2869	Coma Cluster	" "	7 45	7 48	1m	12	8.0	290	7	Seed 30.	13530				"	"		"	"			
2870	" "	" "	8 02	8 32	30m	"	6.8	216	5	Zu β7.	867				7	7	24	"	77			
2871	" "	" "	8 38	8 48	10m each	"	6.2	216	5	Seed	7582				~~8~~ 11	"	"	"	"		I free Sch I II gitter left half.	
	Polaris	" 15	7 20	Knife edge #1	24	16.6	195	5	—	—									38.5		Good.	
	"	" "	7 25	" "	"	"	"	211.5	5	β7	—								"		"	
2872	$10^h 25^m +81°$	" "	7 40	7 50	1m	12	16.0	202	7	Seed 30	13530				12	10	23	E	102		Sch II free Sch III	
	Polaris	" "	9 45	Knife edge #1	24	13.0	190	5	—	—					8	11		E	38.5		Fair.	
	"	" "	9 40	" "	"	"	"	209	5	β7	—										"	

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No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C°)	Focus.	Holder No.									
2873	10h 25m +81°	1913 Apr. 15	10h 07m	10h 12m	1m each	12	12.7°	197	6	Red 30	13530				8	11		W	12	Sch II. 201 I Sch II.
2874	" "	" "	10 20	10 50	30m	"	12.6	211	5	C Tri B7	867				8	11		W	12	—
2875	" "	" "	11 05	11 40	10m each	"	"	"	5	C.S.S.	7582	C.E.C.	20	10m				W	"	I Sch II. II Fret. III Sch II.
	Procyon	" 16	7 10	Knife edge	#1	24	16.5	207	5	B7	—				8	11		W	38.5	— Unsteady.
2876	Nova Gem 2	" "	7 ~~31~~	7 50	19m	12	16.0	211	5	C.D.B7	7582	C.E.C	20	10m	11	9	25	W	156	— "
			7 51	8 10	"	"	15.7	"	"	"	"	"	"	"	8	11	28	"	"	Sch I. "
	~~20 40~~ 60 +45 α Cygni	" "	15 30	Knife edge	#1	24	17.5	196	5	—	—									Very unsteady.
2877	Rz Cygni	" "	5 52	16 02	10m	12	11.3	203	4	Red 30	13530	Hydro	20	10			24	E	356	— " "
			16 05	16 10	5m	"	"	"	"	"	"	"	"	"						Sch I.
	Polaris	" 26	10h 00	Knife edge	#1	24	9.2	194	5	—	—							E	38.5	Unsteady.
	"	" "	" 05	"	"	"	"	193	5	—	—								"	Sch II. "
	"	" "	10 10	"	"	"	"	210	5	B7		C.E.C	20	6m					"	— "
	B Gem.	" 28	7 30	"	"	"	"	11.1	192	—					8	11		W	"	fair.
	"	" "	7 35	"	"	"	"	210	5	B7	—				"	"		"	"	"
2878	Nova Gem (2)	" "	7 54 8 29	8 24 8 59	30m each	12	10.0 8.8	214	5	C.D.B7	7615	C.E.C	20°	10m	8	11	24	W	148	Sch I lower half — Unsteady.
	Polaris	" "	9 40	Knife edge	#1	24	8.5	196	5	—								E	38.5	Very unsteady.
2879	Pole	" "	9 55 10 27 11 00	10 25 10 57 11 30	30m " "	12 " "	7.7 7.0	203	6	Red 30	13530	Hydro	"	"	8	11		E	"	I Sch II II Free III Sch II.

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No.	Field.	Date.	Exposure. Central Standard Time Begin	End.	Time.	Aperture (in)	Temp. (°C)	Focus.	Holder No.											
	Polaris	1913 Apr. 28	12 00	Knife edge	#1	24	6.9	197	5	—								W	38.5	– Unsteady. 203
2880	Pole	" "	12 15 13 17	13 15 14 17	60m 60m	12	6.4 6.0	204	7	Seed 30	13530	Hydro	20°	10m	8	11	20	W	202	I free II Sch I lower half.
	β Gem.	" 29	7 30	Knife edge	#1	24	15.5	189	5	—	—				8	"	—	W	385	– good.
	"	" "	7 40	"	"	"	"	204	5	β7	—				"	"		"	"	"
2881	Nova Gem (2)	" "	7 54 8 26	8 24 8 56	30m	12	13.8 13.1	208	5	C.D. β7	7615	C.E.C	20°±	10m	8	"	20	W	144	I free II Sch I lower half.
2882	" "(2)	" "	9 01 9 12	9 11 9 22	10m	12	13.0	197	4	Seed 30	13530	Hydro	"	"	8	11	20	W	144	I Sch I " " II free (field low).
	Polaris	" "	9 45	Knife edge	#1	24	12.7	193	5	—	—							E	38.5	– Unsteady.
2883	Pole	" "	10 05 10 28 10 50	10 25 10 48 11 10	20m	12	12.5 12.2 12.0	201	6	Seed 30	13530	"	"	"	8	11	45	E	"	I Sch II, II free III Sch I. A
	Polaris	" "	11h 20	Knife edge	#1	24	11.8	195	5	—	—									Very unsteady.
	"	" "	11 30	" "	"	"	"	210	5	β7										" "
⊗ 2884	Pole focus	" "	11 45	11 55	5s 10s	"	11.7 11.6	See last column	5	C.D. β7	7615	C.E.C	20±	10m	{I free II gitter Sch II					224·222·218·217, 216, 215, 214, 213, 212, 209 206 " " "
	β gem.	" 30	7 45	Knife edge	#1	"	20.0	194	5	—	—									Unsteady
	"	" "	7 50	" "	"	"	19.9	212	5	β7	—									"
2885	Nova Gem (2)	" "	8 10 8 43	8 40 9 13	30m	12	19.1 18.7	216	5	C.D. β7	7582	"	"	"	8	11	15	W	140	I Sch I lower half, II free.
	Polaris	" "	9 30	Knife edge	#1	24	18.7	196	5	—	—									Very unsteady.
2886	Pole	" "	{9 42 10 15 10 47	10 12 10 45 11 17	30m each	12	17.8 17.2	203	7	Seed 30	13530	Hydro	"	"	8	"		E	385	I Sch II. II free III Sch II. Windy.

May 1. Telescope 5¼ hrs. east and 75° north. Clock ran ½ hr. and star drifted north a little bit.

" " " 4¾ " west " " " " " " " " " " " " Axis apparently too high.

No.	Field	Date	Exposure. Central Standard Time. Begin	End	Time	Aperture (in)	Temp. (°C)	Focus	Holder No.												
		1913																			
	β Gem.	May 6	8h 00m	Knife edge	#1	24	13.7°	209	5	β7								W	38.5	–	Fair.
2887	Nova Gem(?)	" "	8 12 8 45	8 42 9 15	30 min	12	13.5 12.8	213	5	C.I.β7	7582	C.E.C	20	10m	10	11	12	W	140	I Sch I lower half. II free	
	Polaris	" "	9 55	Knife edge	#1	24	12.5	193	5	–								W	38.5	–	Unsteady.
	~~Pole~~	" "	10 15 11 17	11 15 —	60 min	12	12.0 11.8	200	8	Seed 30	13530	Hydro	20	10m	8	11	12	W	193	I Sch I lower half. II free	Sights out.
	Polaris	" 9	11 00	Knife edge	#1	24	4.9	185 to 190	5	–	–										very unsteady.
	"	" 23	8 40	"	"	"	13.5	198	5	–	–										Unsteady.
	~~Pole~~	~~" "~~	~~9 00 10 00~~	~~10 00 11 00~~	~~60m "~~	~~12m~~	~~13.0 12.7 12.2~~	~~205~~	~~6~~	~~Seed 27~~	~~13417~~	No good			~~8~~	~~4~~	~~25~~	~~W~~	~~208~~	I Sch I lower half. II free.	
	Polaris	" ~~23~~	[illegible] 05	Knife edge	# 1	24	12.1	193	5	–	–				"	"	–	W	38.5		fair.
	"	" "	11 10	" "	"	"	"	212	5	β7					"	"	–	W	"		"
2888	19h 24m +76.5°	" 23	11 30	11 40	3m each	12	12.0	200	4	Seed 27	13417	Hydro	20	10m	8	11		E	"	I Sch II, II free, III Sch II.	
2889	"	" "	11 49 12 00 12 12	11 59 12 10 12 22	10 m each	18	11.7	"	5	C.I.β7	7613	C.E.C	"	"	Wrong focus.					I Sch II II free III Sch II.	
	Polaris	June 3	8 30	Knife edge	#1	24	18.4	192	5	–	–										Unsteady.
	"	" "	8 35	"	"	"	"	211	5	β7	–										"
2890	19h 24m +76.5°	"	9 00	9 10	each 1m	18	18.0	199	4	Seed 27	13417				8	11	–	E	38.5	I gitter Sch II, II free III " " " IV " " " V " "	
2891	"	" "	9 20	9 45	each 5m.	18	17.2	215	5	C.I.I.β7	7613				"	"		"	"	Sch I g II. II " III g II	
2892	"	" "	9 55 10 13 10 30	10 10 10 28 10 45	15m each	18	16.7	215	5	C.Tri β7	867				"	"		"	"	Sch II free Sch II.	
					mean		13.8	202													

No.	Field	Date	Exposure, Central Standard Time: Begin	End	Time	Aperture (in)	Temp. (cc)	Focus	Holder No.												
2893	Pole	June 3	11 28 12 25	12 ~~13~~ 13 10	~~45~~m each	12	15.7 15.0	199	6	Seed 27	13417	Hydro	20	10	8	11	30	W	335	Sch I.	right half. free.
	Polaris	June 11	12 45	Knife edge	#1	24	17.8	194	5	—								W	38.5		Unsteady.
2894	Pole	" "	12 55 14 00	13 55 14 30	60m each	12	16.6	200	6	Seed 27	13417	"	19°	10	8	11		W	332	Sch I	I free II, Sch I right half.
	Polaris	" 12	12 40	Knife edge	#1	24	19.2	195	5	—								W	38.5		jagged.
2895	Pole	" "	12 52 13 45	13 3 14 30	45m each	12	18.9 18.9	202	6	Seed 27	13417	"	20°	10	8	"	37	W	341	Sch I	I free II Sch I right half.
	Polaris	" 13	12 55	Knife edge	#1	24	22.2	197	5	—	—							W	38.5		Unsteady.
2896	Pole	" "	13 00 13 45	13 45 14 30	45m each	12	21.0 20.8	204	6	Seed 27	13417	"	19°	"	8	"		W	340	Sch I	I free right half.
	Polaris	" 21	9 15	Knife edge	#1	24	19.0	208	5	β 7					-	-	.	W	38.5	-	Fair.
2897	$19^h 24^m +76.5^\circ$	" "	9 36 9 59 10 23	9 57 10 20 10 44	21 min each	12	18.5 18.2 17.9	212	5	[illegible], β 7	7613				8	11		W	"	Sch II free Sch II	
	Polaris	" 26	9 15	Knife edge	#1	24	28.0	190	5	—	—										Fair.
2898	Pole	" "	9 23 10 27	10 23 11 27	1 hr "	12 "	27.8 27.0 26.7	197	6	Seed 27	13417				7	11	44 ~~42~~	W	340	—	Sch I, right half.
	Polaris	" 27	10 00	Knife edge	#1	24	29.0	191	5	—					7	11		W	38.5		good
2899	Pole	" " " "	10 13 11 15	11 13 12 15	1 hr 1 hr	12	28.9 28.5 27.9	198	6	Seed 27	13417				7	11	27	W	332	–	

No appreciable azimuth error of axis. Sch I right half.

Telescope 0° Declination & 15 min east. Clock ran 1hr. Star did not trail N. or S. Clock too slow. Rate increased slightly.

No.	Field.	Date.	Exposure. Central Standard Time. Begin.		End.		Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.								
	Clock rate increased.																		
	Polaris	1913 July 5	9	30	Knife edge	#1	24	23.8	190	5									Unsteady.
2900	Pole	"	9	40	10	25	45m	12	23.0										I Sch II.
			10	25	10	51	26m		22.6	197	6	ed 27	13417	Hydro		10m	8	11	W — Interrupted by clouds.
	Polaris,	" 10	11	40	Knife edge	#1	24	15.5	189	5	—	—							W 38.5 — Unsteady.
			11	50	12	50	60m	12	15.3										—
2901	Pole	" "	12	55	13	55	each		14.7	196	6	ued 27	13417	"		"	8	11	32 E 188 Sch I. good.
	Polaris	" 28	10	10	Knife edge	#1	24	23.9	193	5	—	—					8	11	— 38.5 — Fair. Lightning in north + west.
2902	Pole	" "	10	15	11	15	60m	12	23.1 22.5	200	6	ued 30	13759	"	20°	"	8	11	E —
			11	20	12	20	"		22.4										339 Sch I right half.
	Polaris	" 29	10	00	Knife edge	#1	24	27.2	191	5	—	—					8	"	38.5 — good. Lightning in
2903	Pole	" "	10	15	11	00	45m	12	26.6	198	6	ued 30	13759	"	"		8	"	E 318 Sch II. east.
			11	05	11	58	"		26.0										—
			11	54	12	39	"		25.5										~~21~~ Sch II.
~~21~~	Polaris	Aug 1	11	30	Knife edge	#1	24	21.8	194	5	—	—							38.5 good.
2904	Pole	" "	11	40	12	25	45m	12	21.6	201	6	eed 30	13759				8	"	35 E 342 —
			12	30	13	15	"	"	20.9										Sch I Right half.
2905	Comet Westphal Hussey	Sept. 27	9	5	9	16	11m	24	15.2	202	5	Seed 30	13759	Ed.					E Lee 21h 07m -2° 0′
2906	"	"	10	15	10	45	30	24	14.0	202	5	"	"	"					E Lee "

No.	Field.	Date.	Exposure. Central Standard Time Begin.	End.	Time.	Aperture. (in.)	Temp. (C)	Focus.	Holder No.									
2907	Comet Neujmin	1913-14 Sept 27	11 38	12 8	30m	24	13.3	202	5	Seed 30	13759	Ed				E		(21) 23h 37m Lee +7° 30'
	Vega	Nov 21 1914	7 30	Knife edge	#1	24	16.0	197	5	—	—	—				W	38.5	Alden
	Alcyone	Feb. 7	7 30	"	#1	"		189	5	—	—					E	"	Very unsteady
2908	Pleiades	" "	7 35	7 36	60s	"		195	5	Seed 30	13759	Hydro	18	4m				Trail in R.A.
	α Cass	Mar 11	7 15	Knife edge	#1	24		198	5	〃								
2909	B.g.c. 12740 B.D. +45°4408	" "	7 20	7 25	1m 2m	24		205	5	"	"	"	20°	4m		W	38.5	field low. moon
2910	"	" "	7 30	7 35	30s 3m	24"	-1.3	"	5	〃	"	"	20	"				
	α Cass	" 13	7 05	Knife edge	#1	"	+5.4	200	5	—	—					"	"	- good
2910a	B.D. +45°4408	" "	7 20 - 7		30s 1m 2m 5	12"	"	206	5	"	"					"	"	field low.

Mar. 13, 1914 Telescope ½ hr east and 0° Dec. Clock ran one hour and star trailed very slightly in declination. No appreciable error in azimuth of axis.

2nd	Alcyone	Mar 23	8-05	Knife edge	#1	24"	+3.8	193	5	—									
2911	Pleiades	" "	8 10	8 25	20s each	12"	+3.3	200	5	Seed 30	13759	Hydro	Trailed 15s in R.A. between exposures. Col. in R.A.			W	38.5	-	good very transparent
2912	"	" "	8 35	8 50	60s each	12"	+2.8	"	5	"	"	"	"	"	Dec.	W	"	-	
2913	Arcturus	Apr. 4.	8 00	8 05	2s 5 10 5	sec 12"	+1.6	"	6	"	"	C.E.C				E	"	AI	
2914	Kritzinger Comet	" "	15 37	16 02	25m	24"	-2.3	"	5	"	"	"	12	10	51	E	33.1	—	16h 32m −6°
2915	α Bootes	" 8	10 10	10 12	1 3 9 27	S 12"	-4.6	"	"	"	14392	"	"	"		E	38.5	AI	Moon.

No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C.)	Focus.	Holder No.											
2916	~~Kapteyn's~~ N.G.C. 6254	1914 apr 8	16h 15m	16 20	5m	24	-2.8	200	5	Seed 30	14392	C.E.C	6m			21	E	107	—	Moon, 16h 50m −4° (213)
2917	Pleiades	apr 11	7 45	7 50	15 30 60 120 sec	12"	+3.4	"	5	"	"	Hydro	18°	10m		—	W	38.5	A1	field low
2918	"	" "	7 55	8 00	5m	12"	"	"	6	"	"	"	"	"	17	7	04	W	234	"	
2919	Praesepe	" "	8 55	8 56	1m	"	+2.4	"	7	"	"				14	9	20	W	314	"	windy.
	Polaris	" 14	7 50	Knife edge	#1	24	+14.5	197	5	—	—				8	16	-	E	38.5	—	very unsteady.
	"	" "	8 00	"	"	"	+14.2	213	5	B7	-				"	"		"	"		" "
	"	" "	8 15	"	"	12"	+13.8	193	5	Sutter	A1				"	"		"	"	A1	" "
2920	"	" "	8 30	9 00	10 sec each	12"	+13.6	212 209 200 200 197 194 191	5	Seed 30	14392	Hydro		10m	"	"		"	"	"	
	Calibration in declination				10 sec each		+13.2	→ 200													
2921.	Nova Gem (2)	apr. 15	8 05	8 15	10m	12"	+15.8	200	5	"	"	"	20°	8	8	16	36	W	306	"	Thick sky.
2922.	Praesepe	" "	8 28	8 37	9m	"	+15.0	"	"	"	"	"	"	8	"	"	50	W	07	"	" "
	Procyon	" 16	8 20	Knife edge	#1	12	+14.9	190	"	—	—									"	Unsteady.
2923	Praesepe	" "	8 30	8 45	→	"	+14.2	200	4	Seed 30	14392	"		8				W	38.5	"	1½ 1.7 3 5 2 9 16 27 47 81 sec.
2924	"	" "	8 52	8 57	5m	"	+13.8	"	6	"	"	"		9	8	16	52	W	306	A1.	
			9 05	9 10	5m	"	+13.5	"	"	"	"	"			6	16	50	W	"	—	
			9 14	9 19	5m	"	+13.4	"							3	16	48	"	"	Sch II	
			9 26	9 31	"	"	+13.5								1	16	46	"	"	Sch I	North half covered.
			9 34	9 39	"	"	"								-1	"	44			—	
			9 45	9 50	"	"	"								-3	"	42	"	"	A1	
2925	Coma Cluster	" 16	11 05	11 25	1 3 9	"	+12.3	"	7	"	"				8	12	18	"	38.5	"	

No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C.)	Focus.	Holder No.
		1914							
2926	Kritzinger ☌ 17h 15m +3°	Apr. 16	15 00	15 05	5m	24	+10.6	200	7
2927	Praesepe	" 20	8 30	8 41	11m	12"	+9.2	202	6
	β Geminorum	" 25	8 20	Knife edge	#1	24"	+16.1	193	5
2928	Praesepe	" "	8 38	8 42	5m	12"	+16.2	200	7
			8 44	8 49	"	"	"	"	
			8 57	9 02	"		15.8	"	
			9 06	9 11	"				
			9 19	9 24	"		15.4		
2929	Pole	" "	10 40	11 40	60m	12"	14.6	"	8
2930	Praesepe	May 1	8 19	8 24	5m	"	+14.8	"	7
2931	"	" "	8 32	9 22	50m	"	+9.9	214	7
	Regulus	" "	9 40	Knife edge	#1	"	+10.0	192	5
2932	Coma Ber.	" "	10 05	10 15	3/5m	"	+10	199	5

Telescope 4½ hrs west and 75° north. Ran 10:25 – eyepiece. Axis too high.

2933	Coma Ber	" "	11 50	12 15	5/15m	12"	+8.0	215	7
2934	"	" "	12 35	12 50	2m each	"	+8.3	200	5
2935	Kritzinger ☌	" "	13 18	13 23	5m	24"	+8.3	"	5
2936	"	" "	14 03	14 08	"	"	+8.0	"	"
2937	XX Cygni	" "	14 35	14 50	15m	12"	+7.7	"	"
			15 05	15 20	"	"	"		

Aug 27	13717	Hydro	1	09m	8	16	17	E	357	–	Moon & wind unsteady; could not see point						
" 30	14392	C.E.C		07m	8	12	22	W	317	AI.							
—	—				8	16	–	W	385	–	—						
					16	11	42			–							
"	"	Hydro	20°+	6m	14	11	40	W	311	Sch II	good.						
					12		38			–							
					10		36			Sch I	gitter N half.						
					8		34			AI							
"	"	"	"	"	15m	8	16	-3	W	159	"						
"	"	"	"	"	"	8	14	16	W	300	"	Moon.					
Aug 29	7613	C.E.C	"	6m	7	13	16	W	300	"	"						
—	—	—			8	16	–	W	385	AI	"						
Aug 30	14392	Hydro	"	10m	8	16	32	W	122	"	"						

1125 C.S.T. and star trailed south 1/10 radius of

Aug 29	7613				8	16	10	W	113	AI
Aug 30	14392				8	16	10	W	113	I AI 2 3 Sch II 4 —
"	"				"	"	46	E	29	–
"	"				"	"	"	"	"	–
"	"				"	13	20	E	344	–
					10	"	22	"	"	AI

18h 20m +18°

No.	Field	Date	Exposure Central Standard Time Begin		End		Time	Aperture (in)	Temp. (°C)	Focus	Holder No.													

May 1, 1914 Telescope ½ hr east and 0° Dec. Clock ran 15h 30m – 16h. Star drifted north a very little. North end of axis too far west.

2938	Praesepe	May 6	8	04	8	09	5m	12"	15.5	200	7	Seed	30	14392	C.E.C.	20°	6m	8	15	18	W	301	A2	Moon, Clouds guiding star faint.
2939	"	" 8	8	20	8	25	"	"	13.4	"	5	"	"	"				8	14	30	W	310	"	Moon "
2940	"	" "	8	32	8	37	"	"	13.2	"	"	"	"	"				8	13	"	"	"	"	
2941	"	" "	8	48	8	53	"	"	13.1	"	"	"	"	"				"	"	28	"	"	AI.	

May 8, 1914 Telescope 4½ hrs. west and 75° Declination. Clock ran one hour and star drifted south 1/7 radius of eyepiece. Axis too high.

	β Gem.	May 13	8	25	Knife edge #1			24	13.8	200	5	]		—				8	16	—	W	38.5	—	
2942	Praesepe	" "	8	44	8	49	5m	12"	13.3	207	5	Seed	30	14392				8	18	0	W	329	AII	Mars in field.
			9	11	9	16	"	"	12.9	"	"	"		"				10	18	2			free	centered on Hall 96
			9	22	9	27	"	"	12.4	"	"	"						12	18	4	"	"	AI	
2943	"	" "	9	35	10	05	30m	"	12.2	223	7	Id.d β7		7613				12	17	4	"	"	AII.	Unsteady.

South end of polar axis raised slightly.

May 13, 1914 Telescope 4¾ hrs west and 75° north. Clock ran 10:30 – 11:00 C.S.T. Telescope drifted north one seventh radius of eyepiece. Axis still too high.

Telescope 15m east 0° Dec. Clock ran 11:10 – 11:40 C.S.T. Telescope drifted very slightly south.

South end of axis raised

Telescope 5¼ hrs east and 75° north. Ran 30 min. Telescope drifted south a little.

No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (ce)	Focus.	Holder No.										
	Regulus	1914 May 15	8 25	Knife edge	#1	24	13.4	195	5	—	—			8	16	-	W	38.5	— good.
2944	Praesepe	" "	8 55	9 25	30m	12	12.5	215	7	2297	7613	C.E.C	20+	6m	8	10	30	W	304 FI.
2945	"	" "	9 31	9 41	10m	"	12.1	200	5	Red 30	14392	Hydro	"	10m	8	10	30	W	" "

Guiding star not centered on Hall 90

South end of polar axis raised slightly.

Telescope 4¾ hrs west and 75° north. Clock ran 9:55 - 10:35 C.S.T. Telescope drifts north 1/10 radius of eyepiece. South end of axis raised.

Telescope 5⅓ hrs east and 75° N. Clock ran 10:45 - 11:20 C.S.T. Telescope drifted south. South end of axis lowered slightly.

Telescope 5⅓ hrs east and 75° N Clock ran 11:30 - 12:00 C.S.T. Telescope drifted south. South end of axis raised

Telescope 5⅓ hrs east and 75° N Clock ran 12:10 - 12:40 C.S.T Telescope drifted south.

2946	Praesepe	May 16	8 32	9 17	45m	12"	15.4	215	7	2297	7613	C.E.C	20+	6m	8	11	27	W	302 FI.

Centered on 90.

May 18 Axis raised slightly (south end) making a total of 1/4 turn of levelling screws.

Telescope 5½ hrs east and 75° North Ran 8:50 - 9:30 P.M. C.S.T. Telescope drifted south 1/5 radius of guiding eyepiece. South end of axis raised slightly

Telescope 5½ hrs east and 75° North Clock ran one hour Telescope drifted south a very little

Telescope ½ hr east and 0° Dec. " " " " Telescope drifted south a little

Axis still points a little too high and too far west.

No.	Field.	Date.	Exposure. Central Standard Time Begin,	End.	Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.												
	Polaris	1914 May 22	9 45	Knifeedge #1		24	17.5	186	5	—	—							W	38.5	—	unsteady.
2947.	Pole	" "	10 15	11 15	60m	12	16.7	193	7	Seed 30	14392				8	15	28	W	345	AI	
2948	α Lyrae	" 28	10 55	11 00	19 9 27 5 3 81	12	24.0	200	5	"	"							E	38.5	AIII	Clouds.
	Polaris	" 29	9 15	Knifeedge #1		24	20.5	207	5	β7	—				8	16	—	W	"	—	Clear but unsteady.
2949	Pole	" 29	9 33	10 35	62m	12"	20.6 19.2	211	5	D.D. β7	7613	C.E.C.	20°	6m	8	14	28	W	333	—	(centered half way between 5S and 15.)
2950	"	" "	11 30	12 30	60	12"	17.5	197	7	Seed 30	14392	Hydro	20°	10m	8	14	28	W	"	AI	"
	Polaris	" "	12 50	Knifeedge #1		12"	17.3	197	5	—	—				~~8~~	—	-	W	38.5	"	good.
2951	~~XX~~ Cygni	" "	13 17	13 37	20m	"	17.6	198	5	Seed 30	"	"	"	"	8 ~~9~~	11	28 ~~28~~	E	349	AI free.	
			13 42	13 52	10m			"							10		30			"	
			13 54	14 04	"										11		31			"	
			14 07	14 17	"																
2952	" "	" "	14 24	14 34	"	"	16.9	"	7	"	"	"	"	"	5		25				
			14 37	14 47	"										7	11	27	"	"	"	
2953	" "	" "	14 50	15 00	"	"		"	5	"	"	"	"	"	7	12	27	"	"	"	dawn,
2954	Praesepe	June 1	8 42	8 47	5m	"	17.4	200	"	"	"	"	19°	"	8	13	17	W	300	AIII	field low. moon.
5	"	" "	8 52	8 57	"	"	"	"	"	"	"	"		"	"	"	"	"	"	"	"

Large mirror and flat removed to basement for silvering June 9. 1914. Both silvered by Brashear process (flat on June 11th large mirror on June 12th) Remounted on June 12 and telescope recalibrated and recollimated. Readings $\left\{ \begin{matrix} \alpha = 9 \\ \delta = 16 \end{matrix} \right.$

No.	Field	Date	Exposure. Central Standard Time Begin	End	Time.	Aperture. (in)	Temp. (°C)	Focus.	Holder No.											
	Polaris	1914 June 17	10 05	Knifeedge #1		24"	20.3°	193	5	—				9	16	—	W	38.5	—	fair.
2956	Pole	" "	10 30	11 45	75	12"	19.6 19.0	200	5	Sed 30	14392	Hydro	10m	9	13	24	W	321	AI	fair. Centered between 5.5 and 15.
7	"	" 18	10 15	11 20	65	"	20.5	"	5	" "	"			10	8	28	W	209	AIII	
	α Cygni	" 19	9 15	Knifeedge #1		24	12.5	185	5	—	—			9	16	—	E	38.5	—	unsteady.
2958	XX Cygni,	" "	9 38	9 44	6 min each	18	10.5	194	5	Sed 30	14392	Hydro	10m	8	11	23	"	346	—	
			9 47	9 53			10.2							10		25				
			9 54	10 00										11		26				
			10 06	10 12										12		27				
			10 15	10 21										13		28				
			10 23	10 29			9.6							14		29				"
59	"	" "	10 48	10 54	"	"	9.4	"	7	"	"	"	"	0	12	14	"	"	—	very
			10 55	11 01										2		16				
			11 33	11 39			8.8							3		17				"
			11 40	11 46										4		18				transparent.
			11 54	12 00										6		20				
			12 03	12 09										7		21				
60	"	" "	12 15	12 21	"	"		"	5		"	"	"	8		22	"	"	—	
			12 25	12 31										10		24				
			12 32	12 38										11		25				
			12 56	13 02										12		26				
			13 03	13 09										13		27				
			13 14	13 20										15		29				
2961	"	" "	13 40	14 00	20 m	12"	7.8	"	7	"	"	"	"	15		29	"	"	AIII.	
	α Cygni.	" 23	9 55	Knifeedge #1		24	29.2	191	5	—	—			8	16	—	E	38.5	—	
	"	"	10 00	" "	"	"	18.6	206	5	B7	—			"	"		"	"	—	
2962	XX Cygni	" "	10 25	11 55	90 m	12	27.7 26.6	210	5	Sd/B7	7615						"	346	AIII.	

No.	Field.	Date.	Exposure. Central Standard Time. Begin.		End.		Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.
	α Cygni	1914 June 25	9	50	Knifeedge	#1	24	20.6	187	5
↓ 2963	XX Cygni.	" "	10	13	10	23	10m	18"	20.4	195	4
			10	37	10	47	"			"	
			10	50	11	00	"		19.9		
			11	16	11	26	"		19.4		
			11	31	11	41	"				
			11	47	11	57	"		19.1		
↓ 2964	"	" "	12	- 05	12	15	"	"	18.9		
			12	34	12	44	"	"	18.4	195	5
↓ 5	"	" "	12	53	13	01	8m	"		"	6
	α Cygni	" 29	11	05	Knifeedge	#1	24	17.7	192	5
↓ 2966	~~XX~~ Cygni	" "	11	18	11	28	10	18	17.5	199	7
			11	29	11	36	7				
			11	37	11	43	6				
			11	45	11	51	6				
			11	52	12	00	8				
			12	03	12	13	10				
			12	15	12	25	10				
	α Cygni	July 1	11	20	Knifeedge	#1	24	19.7	213	5
↓ 2967	XX Cygni	" "	11	31	12	31	60m	18	19.7	217	5
	Polaris	" "	13	00	Knifeedge	#1	24	19.2	193	5
↓ 2968	Pole	" "	13	13	14	43	90m	12	18.1	200	6
	Polaris	" 15	9	20	Knife edge	#1	24	26.6	191	5
↓ 2969	Pole	" "	9	54	11	54	120m	12	25.6 25.0	198	5
↓ 2970	Field in Cygnus 21h 28m +48°	" "	12	23	12	33	10m	"	24.9	"	6
			12	48	12	58	"	"	"	"	
			13	07	13	17	"	"	"	"	

—	—				9	16	—	E	38.5	—	clear but unsteady.
ed 30	14392	Hydro		10m	9 11	11	24 26	"	346	—	— (225)
					12		27				
					13		28				
					14		29				
					15		30				
"	"	"	"	"	Same setting			"	346	—	lightning in S.W. clouds.
"	"	"	"	"				"	"		stopped by clouds.
—	—				9	16	—	E	38.5	—	good.
ed 30	14392	Hydro	21°	8m	9 11 12 13 14 15 16	11	"	E	346	—	
37	—				9	16	—	E	38.5	—	
3927	7595	C.E.C			8	12	27	E	349	—	good.
—	—				9	16	-	E	38.5	—	unsteady.
ed 30	14392	Hydro	20.5	10m	6	7	23	W	343	AI	fair.
—	—				9	16	-	W	38.5	—	fair.
ed 30	14392	"	"	"	9	9	41	W	219	AI	
"	"				9	16		E	38.5	AI	Moon.
					"	"		"	"	—	
					"	"				AIII	

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No.	Field	Date. 1914	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in.)	Temp. (C)	Focus.	Holder No.									
2971	61 Cygni.	July 17	10 24	10 44	20m	12	23.0	200	5	ed 30	14392	Hydro	20.5	10m	8	12	18	E	319	AIII	Windy.
			10 53	11 13	"		21.0								10	"	20			—	
			11 31	11 51	"	"	20.3	"	"						12	"	22	"	"	AI	transparency excellent.
2972	"	" 18	10 00	10 15	15m	"	19.7								9		20			AI	
			10 21	10 36	"		21.8	"	6	"	"				10	10	21	E	319	—	excellent.
			10 44	10 59	"		21.3								11		22			AIII	
	Polaris	" "	11 50	Knife edge #1		24	20.9														
							20.3	214	5	37					9	16	—	E	38.5	—	good.
2973	Pole	" "	12 08	13 08	60m	12	19.3	218	5	37	7595	C.E.C		6m	9	11	71	E	325	—	Stopped by clouds.
								192													
	α Cygni	July 20	9 25	Knife edge #1		24		208	5	37					9	16	—	E	38.5	—	good.
2974	61 Cygni	" "	9 45	10 45	60m	12	26.0	212	5	37	"	C.E.C		"	10	8	14	E	314	AI	
	Clock and telescope cleaned and oiled in M. Clock ran too fast. Slowed it very slightly.																				
2975	61 Cygni	July 21	9 45	11 00	75m	12	28.7 28.1	212	5	37	7595	C.E.C	20.5	6m	10	10	22	E	319	AI	Not very transparent.
6	"	" "	11 10	11 30	20m	"	28.0	200	6	ed 30	14392	Hydro	"	10m	"	"	"	"	"	"	
	Polaris	" 25	10 00	Knife edge #1		24	27.2	192	5	—	—				9	16	—	W	38.5	—	unsteady.
2977	Pole	" "	10 24	11 26	62m	24	27.0 26.4	200	5	ed 30	14392	Hydro	"	10m	9	11	21	W	345	—	Centered on 5s. Sunforming.
2978	"	" "	11 50	12 45	55m	"	26.0	"	6	"	"	"	"	"	"	"	"	"	"	"	
2979	"	" 28	11 30	13 50	140m	"	18.8 17.0	"	5	"	"	"	19.8	9m	10	10	17	W	7		"
	Polaris	" 29	10 45	Knife edge #1		"	19.5	194	5	—	—				9	16	—	W	38.5	—	good.
2980	Pole	" "	10 55	15 05	250m	"	19.5 17.2	200	5	"	14392				9	11	24	"	341	—	Centered on 5s

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No.	Field	Date. 1914	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (cc)	Focus.	Holder No.									
✓ 2981	Encke's Comet	Aug. 3	14h 20	15h 40	80m	24	19.4	200	6	used 30	14392	10	14	28	E	218	0	2h 30m +24° 15'
✓	Polaris	" 14	9 00	Knife edge #1	"		23.0	196	5	—	—	9	16	—	W	38.5	—	transparency excellent.
✓ 2982	Pole	" "	9 10	10 40	90m	"	20.9	203	6	used graflex	—	9	13	29	W	259	—	
2983	α Cygni	Sep. 2.	8h 15			"	Knife edge 190	210 207	6	used 27	Best focus —	198.						1st exposure at 190 by mistake
	1° south			8 40			19°	183	6									
✓ 2983	γ Cephei π	"	10h 7m 40s	10h 15m 20s	7m 40s	12	+18	198	7	" "		9	4	28	E	17°		Moon good
84	85 Pegasi π	"	11 20 30	11 26 30	6 0	"	+17½	195	6½	" "		10	14	-1	E	39		" "
✓ 85	ε Cephei	" 4	11h 35m	11h 41m	6m 0	"	+17	199	6	"		9	16	.	W	41		Bright moon,
✓ 86	61 Cygni	" 5	9h 30m	9h 34m	4m	"	14	201	6	"		9	16	41	E	17		"
87	Andromedae nebulae	" 17	8h 44	10h 15m	1h 15m	24	21	200	4	used 30		16	10	9	E	41		Transparent
✓ 88	Kapteyn Field N° 20	" "	11h 0m	12h 5m	3 exp. 15m each	12"	19	200	7	" 27		6	8	23	E	23	A, AIII	"
✓ 89	ε Cephei	" 18	9h 20m	10m 0.	3 exp. 10m each	12"	19	200	6	" 27		8	14	18	E	37	A,	"
✓ 90	ε Cephei	" 18	10h 30m	11h 15m	3 exp. 15m each	12"	19	200	4	" 30.		7	11	18	W	32	A, AIII	"
✓ 91	ε Cephei	" 20	9h. 15m	10h 0m	2 exp. 5m each.	12"	24	202	7	" 27		10	15	~~23~~	E	15	A,	"
✓ 92	Kapteyn Field N° 20	" 20	10h. 30m	11h 30m	4 exp. 10m each.	12"	24	202	6	" 27		11	14	16	E	3	A, AIII	"
✓ 93	ε Lyrae	" 25	9h 0m	9h 45m	2 20m	12"	14	203	6	" 27.		10	14	41	W	46	A,	"
94	Nebelfleck Haufen in Persei α = 2h 5m δ = +41° 6'	" 24	11h 30m	3h 00	3 hours	24"	15	203	6	Graflex	14750	10	17	0	E	41	—	good.

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No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.
		1914							
✓ 2995	ε Lyrae	Sept 26	10 30	11 45	2 exp. 20 sec each	12"	15	216	8
2996	Kapteyn 41	" "	12 15	1 00	2 exp 20 sec each	12"	15	206	6
2997	" "	" 27	12 00	12 45	2 exp 20 sec each	12"	18	206	4
2998	ε Lyrae	" 29	11 45	12 05	50 sec	12"	18	157½	6
2999	?	" 29	1 00	1.30	2 exp. 10 sec each	24"	18	214	4
3000	Pleiades.	" 29	2 00	2 30	3 exp 5 min each	12"	16	205	8
3001	β Andromedae	" 30	11 00	11 35	40 sec each	24"	18	215½ 173	4
3002	"	" 30	11 20	11 30	"	24"	18	220 193	6
✓ 3003	Kapteyn 41	Oct 17	8:00	9:00	58 min	12"	13	203	8
3004	Pleiades	"	1:30	2:00	4/4	12"	11	"	6
✓ 3005	Kapteyn 41	Oct 18	9.30	9:20	60 min	12"	13	202	7
3006	Pleiades	"	16	16:15	5/30 5/45/50	12"	13	"	4
3007	"	" 19	3:30 Sid Time	3:50	4/4	18"	16	205	4
3008	Orion Nebula	"	4:40	5:45	60 min	18"	15	205	7
3009	Ref. Stm 325	" 20	8;40					KE196	
3010	"	" 21	8:00	8:30	12 @ 5 min each	16"		203	8
3011	Ring Neb Lyrae	" "	9:15	9:50	35 min	24"		"	6

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ued 27				7	14	44	W	48	A,	Moon. seeing poor. 231
" "				7	10	20	W	63	A,	" " bad.
" "				9	9	30	W	67	A,	hazy.
Cluster Isocrom.	filter W12	(out of focus) This was my way of testing filter W12 (out of focus)		5	13	42	W	48	A I	clouds
"	"			7	15	50	W	30	×	"
Seed 27				9 4½ 0	12	34 24 14	E	41	×	"
Cluster Isocrom	filter W12	for best focus					E	41	×	
" "	" B7	" "					E	41	×	
ued 30				7	9	30	W	63	A I	no good. Interrupted by clouds, not usable.
" 27				var.	15	var.	E	27	×	
ued 30				6	9	25	W	65	A I	Misty no good.
" "		Filters. B7 - 11 div outside W12 - 8 " inside		var.	16	var.	E	28	×	
" 27				var	17	var	E	63	×	Culmination in middle of exposure no backing on plate.
" 30				14	14	20	E	33	×	
n. 956										
1. "		for focus & filter W12 & (- Blue)		var	var	var	W	70	×	best focus 8 div inside Knife Edge Holder 8. Test. Low in West.
Seed 30				8	13	29	W	11		

No.	Field.	Date.	Exposure. Central Standard Time. Begin.	End.	Time.	Aperture. (in)	Temp. (C)	Focus.	Holder No.
3012	h Persei following	Oct 29 1914	11.06	11.30	30	12	17	168	8
			12:00	12:30	30	12			
3013	Rap. 41	" 22	7:30	8:25	55m	12	+19	202	6
3014	γ Cephei	" 23	8:15	8:40	20m/20m	12	+20°	205	7
3015	1899 Nge	" "	10:15	10:45	30m	24	18°	206	6
3016	" "	" 24	3:00	5:05	2hr.	"	+6°	198	6
3017	85 Peg.	" 25	8:15	8:30	11m/11m	12	+10°	209	4
3018	ε Cephei	" 26	8:15	8:35	15m/15m	12	+1°	203	4
3019	γ Cephei	" "	8:50	9:30	15/15	12	0.0°	203	8
3020	Pleiades	" 30	10:30	11:00	var.	"	9°	205	6
3021	Nebelfleckhaufen in Perseus	Nov 10	8:15	11:15	3hr.	24	6°	205	6
3023	Pleiades	Nov 20	11:50	12:20	3 ax. 5 4m each	18"	−5°	213	6
3024	"	" 27	3.40 Sid.	3.55	3 ax. b 3 min each	18"	0.0°	207	4
3025	"	" "	4:10 "	4:20	10 exp. /2"	"	"	"	8
3026	"	" "	4:30 "	5:00	Free 10m A, 11m	12"	"	192	6
3027	"	Dec 11	1:10 "	1:35	Free 10m A, 10m	12"	−4°	195	6

Focus plate taken with Filter — Blue

" 250	Filter W12			5	E	71	A I fixed	Transparent.
" 30		6	9	25	W	64	A I	"
" 27		10	11	40	E	351	A I	Hazy. Clouds stopped
Graflex		14	19	−5	E W	71	—	Clock fast.
"								Moon light
" 30		10	16	23	E	36	A I	
" "		7	11	15	W	30	A I	" "
" "		6	10	51	W	24	A I	" "
" "	2s, 3s, 5s, 9s, 16, 27, 47, 81, 141, 243				E		—	Rgt " "
Red graflex		14	18	0	E	40	—	
Lantern Slide		7	14	var	E	300	—	Last exp. at high end. Exp. from culmination to Hour 30m W. 1st exp. at high end (marked by line on plate)
" "		9	15	"	"	305		
Seed 30	1, 2, 4, 8, 16. 32, 64, 128, 256, 128	14	16	"	W	39		
" "		"	"	"	"	"	A I	W12 Filter
" 1119		8	13		E	300	A I	" "

shows focus 6 div. below (less than) knife-edge test)

No.	Field	Date	Exposure. Central Standard Time Begin	End	Time.	Aperture (in)	Temp. (°C)	Focus.	Holder No.							Filter			
3028	Pleiades	1914 Dec 15	8.00	8.20	20m	12"	-20°	201	6	I 950 2nd	8163					E	W12	A_I	Seeing poor.
3029	"	" 19	8:00	8:30	30m	12"	-9°	202	6	" "	"					E	W12	A_I	" good
3030	"	" "	8:40	9:00	var.	"	"	"	8	Seed 30	14756	3s-4s-5½s-8s-11s 16-22½-32-45-64 90-128-179-256				"		"	
3031	"	" "	9:10	9:35	10m/10m	"	"	"	4	"	"					"		A_I	free 10m A_I 10m
3032	U Ceph	21	7 18	11 2	4m see notes	"	-10	202	6	" 30	8717	8 30 + 9 10 expo abt 8 22 & 9 12 10 30 + 10 40 omitted one at 10 46 and 11				E			Expo every 13 min of 4m each 7 20 [illegible]
3033 ✓	Kap 41	1915 Jan 8	1:55	2.40	45	"	-9°	193	6	I 950	not 8163		9	10	31	W	64	—	Filter W12 (-8)
3034 ✓	Kap 21	"	3.40	4.45	65	"	-8.5°	"	"	"	"		9	14	26	W	61	—	" "
			4.50	5.05	15	"	"	"	"	"								A_I	" "
3035 ✓	Kap 29	"	7.25	8.25	60	"	-9.0°	"		"	"		11	13	32	E	344		"
			8.30	8.45	15	"	-9.0°	"		"	"							A_I	"
3036 ✓	Kap 41	" 9	1.05	2.05	60	"	-4½°	198	"	"	"		6	9	31	W	64	A_I	"
3037	Pleiades Scale plate	" "	2.30	3.15	var	"	"	"	"	"	"	1-2-3-5½-9-16-27-47 81-140-243-421 f -421 A_I				E			"
3038	Nebelfleck haufen in Perseus	" 12	4.00	5 20	90m	24		210	"	Seed 30			8	16	22	W	60	—	Seeing 1-3
3039 ✓	Kap 21	" 14	3.40	4 25	45m	12	-2°	208	"	"			8	13	13	W	55	A_I	
3040	Pleiades Scale plate	" "	5 00	5 40	var	"	"	"	4	"		√5 Scale				W		A_I	
3041 ✓	Kap 29	" "	7.00	7 40	15/15	"	"		6	"			10	16	-5	E	72	A_I	very faint guiding star
3042 ✓	Kap 29	" 16	6 30	7 40	30/31	"	-7	207	6	"			12	17	22	E	350	A_I	seeing poor

8h 15

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No.	Field.	Date.	Exposure. Central Standard Time Begin	End.	Time.	Aperture. (in)	Temp. (°C)	Focus.	Holder No.									
3043	Pleiades "c"	1915 Feb 16	5:50 Sid. T.	7:00 Sid T.	var	12"	-2°	1.97	6	8341 Sout	8361 Free expo. -421-421-243-141-81-47-27-16-9-5-3-2-1= gitter A_I 421-243-141-47-16-5.	var	11	var	W	341	A_I	Seeing good. Filter -β (W_{12})
3044	M. 81.	"	7:45	10:00	2^h15^m	24"	-5°	1.97	8	ud 30		9	17	0	E	71	—	Clock stopped.
3045	Field around Metcalf Comet (1916) $\alpha=8^h31^m$ $\delta=-1°40'$	17	5:40	6:40	60^m	24"	0°	1.97	6	" "	Transparency very bad. Harvard teleg. no comet but asteroid	8	14	24	E	65	—	Seeing very poor at low altitude
3046	" $\alpha=8^h40^m$ $\delta=-1°$ 10^m	Feb 18	7:45	8:25	40^m	"	+1°	1.96	6	" "		10	18	10	E	40	—	Comet stopped by clouds.
											almost full moon no guiding star. Threw telescope out in declination							
3047	9 Camel.	Feb 26	7:02	8:02	60^m	12"		2.15	6	9510 8361 Sout	seeing poor	7	7	20	W	202	A_I	Filter $W_{12}(-\beta)$ fund one
3048	Pleiades section "c"	" 28	6:16	6:40	var	"	-3°	2.11	6	"	1-2-3-5-9-16 27-47-81-141-243	var. sat			W		A_I	Full moon Filter $W_{12}(-\beta)$
3049	Orion Neb.	" "	7:07	8:22	75^m	24	-3°	"	6	"		5	15	49	W	202		
3050	Planet "Eros" 433	March 3	6:40	7:25	45^m	24	-3°	2.12	6	ed 30	α 3^h33^m $\delta=+21°45'$ seeing so thick that even the bright Pleiades could not be distinguished	10	17	52	W	197	—	a faint trail. @1mm long exp ended when guiding disapp.
3051	" "	" 7	6:52	8:08	75^m	"	-2°	2.08	6	"	$\alpha=3^h49^m$ $\delta=+21°43'$	10	13	50	W	175	—	good seeing. fine trail.
3052	" "	" 8	7:13	7:32	2^m 5^m 2^m	"	-1°	2.16	7	"	$\alpha=3^h52^m$, $\delta=+21°41'$ 2^m exp 7:13-7:15 7:20-7:25 7:30-7:32	8	14	17	W	325	—	
3053	HI 17 & 18 $\alpha=10^h40^m$ $\delta=+12°20'$	" "	8:05	10:38	$2\frac{1}{2}^h$	"	-1°	2.16	6	"		7	15	-7	E	238	—	
3054	" "	" "	11:07	11:39	30^m	"	-2°	"	4	afler	centered on asteroid / $10^h40^m14^s$, $+13°49.'6$ } midnight March 8 moving East.	8	13	10	W	275		to check trail on 3053
3055	M 59-60	" "	13:05	14:05	60^m	"	-3°		7	"		8	13	8	W	241		Hazy near horizon,
3056	W Herc.	" "	14:52	15:32	40^m	18"	-4°	"	6	seek 30		8	16	31	E	186		Moon cut exp. short.
3057	Orion Neb.	" 9	7:50	8:00	10^s/30^s/90^s	24"	0°	2.17	7	" "		various			W		—	
3058	K 27	"	8:19	9:25	30^m/30^m	12	0°	"	6	" "		12	12	23	W	208	Free/AI	guiding star int
3060	Nebulous Region $\alpha=12^h30^m$ $\delta=+11°55'$	"	10:05	15:00	4^h55^m	24	"	"	4	" "		7	10	15	W	254		

19^h 0

~~237~~ 247

No.	Field.	Date.	Exposure. Central Standard Time Begin,	End.	Time.	Aperture (in)	Temp. (°C)	Focus.	Holder No.									Remarks
3059 ✓	Eros,	1915 March 10	7:3½-6½ ≡ Sid. 7:9½-19½		3m 10m	24	-2°	216	6	[..]ed 30					W	'	—	~~Hazy~~, & windy (239)
3061	Kap 28	"	8:03	8:18	15m	12	-2°	"	7	"					E		—	" "
3062	Asteroid f 305[3]	"	8:40	8:55	15m	24	"	"	4	"					E		—	" "
3063	M 63	"	13:30	14:00	30m	"	-4°	"	6	"		9	12	31	W	236		Nothing of M83 on plate
3064 ✓	Region around β Lyrae.	"	15:30	16:25	55m	"	"	"	7	"		10	20	46	E	200	—	stopped by Dawn,
3065	Kap 27	" 11	7:36	8:36	60m	12	+3°	215	6	"	gitter AI 9m.	9	13	50	W	96	A_I	Sky seemed hazy very steady
3066	Praesepe	" "	9:30	10:5	9m/9m/5m	"	"	"	7	"	partial " 9m free 5m	8	19	48	W	184	AI / partial	sky hazy seeing steady
3067	HI 96	" "	10:20	15:50	5hm	24		"	4	"		13	17	7	E	226	—	sky hazy seeing steady
3068	α = 9h 35m HI 114?? δ = +32°29′	" 12	6:44	10:55	4h	"		216	7	"	Used 1911 plates, films very badly preserved. numerous spurious nebulae	9	1.2	50	E	122		clear, seeing fair. guiding & double trgt.
3069	Mistaken HI 96 ~~HI 97~~	" "	11:35	14:45	3h	"		"	4	"		7	9	26	W	226		sky very hazy.
3070	Asteroid of R 6053 α = 10h 35m, δ = +13°57	" 13	8:17½	8:47½	30	"	+6°	216	7	"		10	19	0	E	222		sky very hazy. seeing steady
3071	M 46	" 18	7:08	9:00	108m	"	+3°	213	8	"		6	13	29	W	218		~~transp and fine~~ seeing unsteady
3072	Asteroids	" "	9:21	10:22	60m	"	"	"	4	"		8	15	30	E	209		"
3073	HI 97 5033	"	11:20	16:00	4h 35m	"	0°	"	7	"	stopped by clouds.	5	15	25	W	158		
3074	O NGC 6543 HIV 37	"	16:15	16:30	30s 120s 10m	"	-3°	"	6	[..]23	Three exposures	19	8	42/22/2	W	215		Strong morning light.
3075	Praesepe for 24" field distortion	" 28	8:26-31 8:39-44	8:46-51	5m/5m/5m	24"	-2.5°	211	4	[..]m Slide Plate	1st exp E. P. at 42, then moved E. P. to left, adjusting by declination slow motion.	19.	8	42/22/2	W	215		Transparent & very unsteady.
3076	M class star 78.103 BD α = 2h 53m δ = +79°1′4	" "	9:30	9:35	5m	12	-3°	"	7	[..]d 30		9	12	4	W	189	AII	" "

23 5

No.	Field	Date	Exposure. Central Standard Time Begin	End	Time	Aperture (in)	Temp (°C)	Focus	Holder No.									
		1915	Sid. Time,															
3077	M type star $\alpha = 2^h 53^m$ $\delta = 79°1.4'$	Sunday March 28	9:40	9:50	10^m	12	-3°	211	6	..so med	Filter W_{12}(-B)	9	12	4	W	189	A I	Transparent very unsteady strong moon
3078	" "	"	9:55	10:05	"	"	"	"	8	" Inst	" "	"	"	"	"	"	"	"
3079	Praesepe	April 1.	8:25-30 8:33-38	8:40-845 Sid Time	5^m/5^m/5^m	24	+1°	215	6	..ss Plate	Tel. moved by Dec. Slow motion to the north. 1st reading of G.E.-52	15	~~52/27/2~~	52/27/2	W	130		
3080	M 46 & H IV 39	April 2 Friday	8:44	10:14	90^m	24	-2°	213	6	..d 30		9	13		W	215	—	Transparency 5 seeing 4.
3081	H IV 39 & M 46.	April 3 Saturday	8:20	9:20	60^m	24			6	..aflex					W		—	Transparent unsteady.
3082	$\alpha = 10^h$ $\delta = +39°$ Winnecke Comet	April 3	11:30	12:30	60^m	24			6	"					W			Moon light.
3083	" Field	" 5	10:23	13:5	150^m	24	+12°	219	6	..d 30		8	11	15	W	137		Clouds intermittently Hazy.
3084	M 59 & 60 $\alpha = 12^h 37^m$ $\delta = +12°20'$	" 7	11:11	13.21	130^m	"	+8°	214	6	" "		8	18	-5	W	130		very hazy, clouds seeing v. p.
3085	" " "	" 8	11:23	12:38	75^m	"	+13°	218	6	" "		7	21	-8	W	233		cloudy & hazy
3086	$\alpha = 9^h 56^m$ $\delta = +38°50'$	" 9	$10^h 16^m$	$11^h 22^m$	66^m	"	+10°	214	6	" "					W			cloudy. Exposure finally stopped by S[illegible]
3087	$\alpha = 9^h 54^m$ $\delta = +38°30'$	" 12	9:35	11:55	140^m	"	+3°	215	6	" "	clock running too fast	7	14	27	W	210		watery hazy. Seeing good guiding * too faint.
3088	$\alpha = 12^h 38^m$ $\delta = +12°50'$	" 12	12:55	15:25	150^m	"	+3°	215	7	" "	" !!	7	14	27	W	222		Transparent & steady guiding * too faint.
3089	NGC 6643 $\alpha = 18^h 23^m$ $\delta = +74°31'$	" 12	16^h 00	17:38	98^m	"	+2½°	215	8	" "	(p. B. spiral) " !!	10	17	17	E	223		Transparency good seeing good stopped by Dawn
3090	$\alpha = 10^h$ $\delta = +38°45'$	" 13	9:25	10:55	90^m	"	+8°	211	7	..aflex		10	13	33	W	182		unsteadily.
3091	$\alpha = 9^h 54^m$ $\delta = +39°15'$	" 13	11:12	12:27	85^m	"	+6½°	"	6	"		10	13	41	W	121		
3092	$\alpha = 12^h 42^m$ $\delta = +14°10'$	" 13	13:27	14:27	60^m	"	+6°	"	7	..ed 30		10	14	34	W	223		Clouds & hazy
3093	$\alpha = 14^h 58^m$ $\delta = +23°41'$ 5829?	" 14	11:46	12:57	71	"	+9°	214	6	"	very hazy. NGC 5829	7	21	-9	E	156		Seeing bad stopped by clouds
finished in west					22^h 15													

No.	Field	Date	Exposure Begin (Sid. Time)	Exposure End	Time	Aperture (in)	Temp. (C)	Focus	Holder No.									
3094	α = 12h 46m, δ = +14°	1915 April 16	9:45	11:00	75m	24	+8°	206	6	ed 30	14968		7	11	12	E	226	Seeing 3. Transparency 3.
3095	α = 14h 58m ~~HI 238~~, δ = +23° 41′	" "	12:00	17:35	320m	"	+8° → +6°	206	7	"	"	NGC 5829	6	7	10	E	258	
3096	H V 51 NGC 4236, α = 12h 13m δ = +70°	" 17	11:05	14:12	180m	"	+12°	213	7	"	"	Naked eye guiding ★.	6	16	53	E	311	Seeing Bad. very thick!. Both interrupted by & finally stopped by clouds.
3097	1915 H II 759 NGC 5907, α = 15h 14m δ = 56° 40′	" "	14:41	17:05	145m	"	+10°	"	6	"	--	good guiding ★	10	16	52	W	181	
3098	α = 16h 46m 9C 1231, δ = +58° 36′	" 19	14:39	17:30	150m	"	+17°	214	6	"	"	Clock ran very much too slow.	Plate bad - double images - 6	22	37	E	169	Cloudy & Haze. Bad seeing. good guiding ★.
3099	α = 9h 53m, δ = +36° 45′ Ursa Major Field ✓	May 1	12:24	13:10	40m	"		185	6	"	"	"				W		fair.

On April 30th, the 2 foot mirror was taken out of the telesc & carried to the basement for resilvering. The first trial by Brashear's method gave a good coat and the mirror was replaced on May 1st. After Collimation correction, the plate holder centered at $\alpha = 10$!! $\delta = 13.5$!!

April 30' [illegible]

No.	Field	Date	Begin	End	Time	Aperture (in)	Temp. (C)	Focus	Holder No.										
3100 good	α = 15h 14m, δ = +56° 40′ NGC 5907	✓ May 3	14:05	14:55	50m	24"	+9°	184	6	ed 30	14968	clock a shade fast				W	180	—	stopped by clouds
3101 b.c.	α = 9h 52m, δ = +36° 40′	✓ " 5	11.20	12.50	90m	"	+12°	185	4	"	"	clock much too slow	10c	6	35	W	198	—	interrupted by clouds
3102 b.	NGC 5907 (images trailed)	✓ " 5	12.10	14.30	90m	"	"	"	6	"	"	both plates bad, images trailed	10	12	52	W	179		seeing poor.
3103	α = 9h 55m, δ = +36° 5′	✓ " 7	11:30	12:30	60m	"	+13.5°	188	4	"	"	clock too fast	3	21	50	W	174		seeing fine transparency good
3104	α = 9h 54m, δ = +35° 50′	✓ " 9	11:39	13:43	120m	"	+10°	183	6	"	"		5	20	33	W	154 ✓		~~seeing bad~~ transparency fair

22h 0m

good but [illegible] sky bright (no plates above [illegible])

243 247

No.	Field	Date	Exposure. Central Standard Time Begin (Sid. Time)	End	Time	Aperture (in)	Temp. (°C)	Focus	Holder No.										
3105 g.	NGC 5907 ✓ α=15h14m δ=+56°40' ✓	1915 May 10th	11:48	15:00	185m	24	+14°	184	4	d 30	14968		8	12	-5	E	316°	—	Seeing bad 245 & transparency poor
3106 g.	" 6643 α=18h23m δ=+74°31' ✓	"	15:40	18:12	150m	24	+14°	184	6	"	"		12	15	40	E	238		image badly trailed.
3107 g.	EEB's Neb field near Alcor α=13h41m δ=+56°30' 1915. ✓	" 13	14:39	16:30	90m	"	+8°	184	4.	"	"	constant interruption from passing clouds. clock fast.	9	12	23	W	199.		Seeing (-1 on scale) 5 Transp. 3 sky hazy very slow.
3108 g.	M17 Swan Neb α=18h16m δ=-17° ✓	" 18	16:06	18:05	110m	"	+6° +4°	185	4	"	"		8	7 ran off	16	E	119		Stopped by clouds.
3109 g.	M20 Trifid ✓	" 23	18:10	18:25	15m	"	+14°	185	7	"	"					W			Haze & Moon
3110 weak	NGC 3593 (HI 29) 11h10m +13°17' (1900) ✓	" 30	13:22	14:45	80m	"	+13°	182	7	"	"		9	9	27	W	174		Seeing 3, Transp. 2
3111. p.b.i.	NGC ~~5904~~ 5905 5908 15h[illegible]m +56°12' ✓	[illegible]	13:45	15:35	105m	"	+15°	182	7"	"	[illegible] " 201 [illegible]		[illegible]	9	52	E	158	"	~~Seeing 3~~ Transparency 2.
3112 f.	NGC 6229 16h46m +47°40' ✓	" 31	17:15	18:15	60m	"	+14°	"	4	ISO Inst			9	9	52	W	147	Filter β=W12	Strong Moon
3113 f.	var. near HVI 30 23h46m +56° ✓	" 31	18:35	16:47	12m	"	+14°	"	6	d 20	14968					E			Strong Moon dense Haze.
3114 weak.	NGC 5334 13h48m -0°38' ✓	June 2	13:50	14:55	60m	"	+18°	183	4	"	"		9	11	22	W	214		v. Thick haze seeing 3.
3115 fair	Neb group (EEB) AN 4136 α=15h34m δ=+44° ✓	"	15:20	16:55	95m	"	"	"	6	"	"		11	12	45	W	195		"
3116 g.	NGC 6229 16h46m +47°40' ✓	"	17:12	17:32	20m	"	16°	"	7	"	"		10	14	52	W	147		" Strong Moonlight in Hazy sky.
3117 v.g.	var. near HVI 30 23h46m +56° ✓	"	18:40	19:00	20m	"	+14°	185	6	"	"	var good 13m ?	10	13	43	E	132		"
3118 f. Omega	var. near γ Ceph. 0h28m +80° ✓	"	19:21	19:41	20m	"	"	"	7	"	"	Susp. var. do not show Cf. R1858	10	15	49	E	115		"
3119 g.	Neb Cluster near Alcor ✓	6	14:08	16:00	110m	"	+24° +20°	184	6	"	"	Focus plate gave 7 div. greater than R.E. test: +3.8 for Camera.	'8	8	14	W	195		Seeing 3 Gathering clouds.
3120 di. v.	NGC 6555 HII 902 α=18h3m δ=+19°33' ✓	" 7	16:40 ~~18:06~~	18:45	120m	"	+14° +10°	184	6	"	"	clock v. fast. tel E. " O.K. tel W. ?query?	10	14	28	E	222		Transparency 4. Seeing 3.
3121	var. near HVI 30 Cass. ✓	" 7	19:11	19:31	20m (21h-12m)	"	+10°	186	7	"	"	"	10	13	43	E	130		" ~~crescent~~ moon.

No.	Field	Date	Exposure. Central Standard Time (Sid Time) Begin	End	Time	Aperture (in)	Temp. (°C)	Focus	Holder No.										
f. st. 3122	NGC 5908 ✓	1915 June 8	14:22	16:15	110m	24	+14° +10°	189	#6	ed 30	14968		8	14	50	W	140		Very clear. seeing 3.
f. 3123	M17 (images muddy & a bit trailed) ✓	"	17:05	18:45	100m	"	+10°	189	#7	"	..		10	ran out.	48	W	120		"
v.g. 3124	NGC 5829 $\alpha = 14^h 58^m$ $\delta = +23°41'$ ✓	" 9	15:35	19:20	220m	"	+10° +9°	184	#7	"	"		10	14	10	W	210		Clear sky but cloud passed at intervals seeing 2-3.
v.g. 3125	var near H VI 30 Cass. $\alpha = 23^h 46^m$ $\delta = +56°$ ✓	" 9	19:45	20:00	15m	"	+9°	184	#6	"	"		—		50	E	220		Dawn in the sky.
g. 3126	Ophiuchi $\alpha = 16^h 20^m$ $\delta = -23\frac{1}{4}°$ ✓	" 13	15:25	18:28	180m	"	+13°	180	#6	"	"	Plate backed clock rate good.	12	11	43	E	110		Seeing bad. Transparency 4-3.
f. st. 3127	H I 53 $\alpha = 22^h 30^m$ $\delta = +31°$ ✓	" 13	18:48	19:40	50m	"	+13°	180	#4	"	"	clock v. ~~fast~~ slow here.	10	12	43	E	220		"
E. 3128	var near H VI 30 Cass ✓	" 13	19:52	20:07	15m	"	"	"	#7	"	"		—	—		E.			Dawn in the sky.
f. vw. 3129	field near Y Cephei $\alpha = 0^h 28$ $\delta = +80$ ✓	" 13	20:15	20:30	15m	"	"	"	#4	"	"	α too great. vars not on plate. (var.?) on edge of plate				E.			Bright sky.
g. st. 3130	M101 $\alpha = 14^h$ $\delta = +55°$ ✓	" 15	14:57	17:45	170m	"	+19°	184	#6	.	..	clock fast at 16.	10	14	5	W	112		very hazy.
f. fogged by aurora 3131	ΣΣB Neb Region $\alpha = 15^h 34^m$ $\delta = +44°$ ✓	" 16	15:07	18:15	150m	"	+13°	"	6	"	..	" slow at 14.5	7	14	50	W	197		Seeing 3-4 Bright Transp. 4 Aurora
p. 3132	ΣΣB Neb Region (wrong field) $\alpha = 22^h 28$ $\delta = +34°$ ✓	" 16	18:45	19:35	40m	"	"	"	4	..	..		8	12	44	E	117		~~Brilliant~~ Aurora over field.
v.w. 3133	var near H VI 30 ✓	" 16	20:15	20:27	12m	"	..	"	7	"	"	clock slow at 14.5	—			E			Brilliant Aurora & dawn.
v.g. 3134	NGC 5907 ✓	" 21	15:22	18:22	180m	"	+18°	181	6	M	8319		12	16	55	W	177		Colour Filter W_{12} Clear moonlight
f. 3135	mistake for R Draco R Draco on edge. $\alpha = 16\|34$ $\delta = 66\|20$ ✓	" 21	18:50	20:15	65m	"	+17°	181	7	130	14968		8	16	54	W	119		Transparency: 4. Seeing 3-4
E. 3136	Var near H VI 30 ✓	" 21	20:35	20:50	15m	"	"	"	4	"	"		—			E			"
g. 3137	M17. $\alpha = 18^h 16^m$ $\delta = -17°$ ✓	" 22	17:15	20:35.	200m	"	+15° +12°	186 focus plate	6	ed 30 in ... 80	"	clock fast at 19 focus with (16 150) @ +9 or +10 on R.E.	10	12 to 8	43	W	217	Filter (26 150)	Clear. Transp. 4/4 Seeing 3. ½ moon for 2 hrs.
3138	Kap 34 $\alpha = 14\|49$ $\delta = +45°$ ✓	" 24	15:57	16:57	60m	12"	+16° +15°	176	6	9		Images badly trailed	7	17½	26	W	157	W_{12}	Bright Moon Seeing 2-3
3139	[illegible]	" 26	15:40	16:00	20m	24"	+20°.5	184	4	d	14968	Bright moon sky thick	10	12	41	W	168	—	Transpy 2-3

Plate No.	Field.	α.	δ.	Sid. Time begin	Sid. Time end.	Exp. in m	Aptr.	Focus		Temp.	Plate.	No.	Plate	Developer	Temp.	Time.	Scale Readings α	δ	g.e.p.	⊙	Tel.	Seeing.	Transp.	Remarks.	Date. 1915
g. 3140	Small Neb	6h37m	+66°12'	16h25m	17/20	65	24	179		+18°	Seed 30	14968	7	E.C.	+20	15m	8	10	52	210	W	2-3	3	Guiding ★ faint. Clouds & haze.	June 30.
b. 3141	var. near HVI 30	23h46	+56°	17/35	17/55	20	"	"		+16°	"	"	4	"	"	"					Ɛ	2	2-3	guided by W.L. / Moon 3 days old " "	"
f. 3142	susp. var. Wrong field	0h15m	+80°	18:11	18:31	20	"	"		+16°	"	"	7	"	"	"					Ɛ	"	3	~~wrong field~~ "	"
g. 3143	M 56	19h13m	+30°	19/38	20/40	60	"	180	W12	+15°	C 99	8619	6	"	"	"	8	15	15	207	W	2	3	good g. ★	"
v.w. 3144	Neb Region	16h37	+66°			105m	"	179		+23°	Seed 30	14968	7	"	"	10m					W	3	2-3	underdeveloped. (P.) Clouds.	July 1.
f. 3145	M 56	19h13	+30°	19h45	20h15	30m	"	"		+22°	"	"	6	"	"	15m	12	8	12	222	W	3	3	bgt moon 3 wks. old. "	"
g. 3146	var near HVI 30 Cass	23h46	+56°	20h30	20h50	20m	"	"		+21°	"	"	4	"	"	"	10	8	11	222	Ɛ	3	2-3	" " "	"
f. v.w. 3147	Reg. f y. Ceph.	0h30	+80°	21h	21h25	25m	"	"		+20°	"	"	7	"	"	"	10	10	23	226	Ɛ	3	2-3	" " "	"
f. moving 3148	NGC 5383	13h53	+42°16'	16h	18h30	145m	"	183		+19° +16°	"	"	7	"	"	"	10	18	7	240	W	2-3	3	bgt moon last 40m passing "	" 2.
f. st. 3149	M 56	19h13	+30°	18h50	19h25	35m	"	184		+16°	"	"	4	"	"	20m					Ɛ	3	3-4	bgt moon 3 wks old (P.)	" 2.
g. 3150	M 103	20h30	+7°7'	19:55	20:55	60m	"	"	W12	+15°	C 99	8619	6	"	"	"					Ɛ	"	"	" trailed. ● (P.)	2
v.g. 3151	M 17	18h16m	-16°	16:40	19:30	165m	"	180		+16°	Seed 30	14968	7	"	[illegible]	"	11	7	48	120	Ɛ	"	4-5	" last hour !	" 4
v.g. 3152	NGC 6824	19h42m	+55°54'	20:08	21:25	75m	"	"		+13°	"	"	4	"	"	"	11	11	8	169	W	"	"	bgt moon. light haze.	" 4
g. 3153	var HVI 30	23h46	+56°	21:37	21:54	16m	"	"		"	"	"	6	"	"	"					Ɛ	"	"	" "	" 4
E. 3154	Neb Region near Alcor	13h41m	+56⅓°	16:10	16:40	30m	"	184		+18°	"	"	7	"	"	"	10	14	52	228	W	2-3	4/5	light in g.p. burnt out. exp. stopped & light replaced (?)	" 5
E. 3155	H III 739 NGC 6015	15h50m	+62.5°	17:50	19:50	120m	"	"		+17°	"	"	6	"	"	"	12	14	0	222	W	3	4-5		" 5
g. v.w. 3156	NGC 7293	22h25m	-21¼°	20:30	21:45	75m	"	185		+16°	"	"	4	"	"	25m					Ɛ	3	4-5	(P.)	" 5
v.w.d. 3157	α = 18h52m δ = +8°30'			17:10	17:38 18h26	20m	"	183		+19°	"	"	7	tom Slide (?)	"	5m					W	3	1-2	Stopped by clouds	" 8

Plate No.	Field	Position α	Position δ	Date	Sid. Time of Exp. Begin	Sid. Time of Exp. End	Aptr.	Focus	Temp.	Coulor Filter or grating	Exp. in min.	Plate Holder	Plate	Emulsion number	Developer Kind	Developer Time	Developer Temp.	Scale Readings α	Scale Readings δ	Scale Readings gap	Scale Readings ⊙	Tel	Sky Seeing	Sky Trans	Remarks.
3158	var. near HV30	23h46m	+56°	1915 July 8	18:45	19:10	24	183	+18°		25	6	Seed 30	968	Lantern Slide	+19°	5m					E	2-3	4	Center out of focus: Plate in holder with film out.
3159	M31	0h37m	+40°43'	"			"	"	"		130		"	"	C.E.C.	+20°						E			(P.)
3160	Neb Star 5.5 BD-10.4713	18h28m	-10°55'	" 11	16:40	19:10	"	182	+22°		150	6	backed "	"	"	+22	20m	16.8	8	10	208	W	4	2-0	Stopped by thickening haze.
3161	var near HV30	23h46m	+56°	"	19:27	19:45	"	"	+21°		18	8	Seed 30	"	Lantern Slide	+20°	5m					E	4	3	
3162	M31	0h37m	+40°43'	"	19:55	20:50	"	"	"		50	4	"	"	"	"	8m					E	2-3	2-0	" " " "
3163	Trifid M20	17h55	-23°	" 12			"	178	+23°				"	"											(P.)
3164	"	"	"	" 12			"	"					"	"											(P.)
3165	trial for Neb.	0h10m	+47°20'	" 12	20:00	21:25	"	179	+21°		80	4	"	"	CEC	+21°	20m	8	15	43	186	E	4	5-4	Stopped by dawn. BD Neb Field AN
3166	M13			" 13																					Very weak probably cloudy. (P.)
3167	BD-10°4713 Neb Star	18h28m	-10°55'	" 16	17:10	21:05	"	181	+23°		230m	6	Seed 30 backed	"	"	+20°	20m	13	18	25	224	W	3-4	4	Small clouds occasionally passed.
3168	M31	0h37m ~~21:25~~	+40°43' ~~22:25~~	" "	21:25	22:25	"	"	+21°		60m	7	"	"	"	"	"	9	11	15	184	E	3-4	4	
3169	var near HV30 Cas	23h46m	+56°	" "	22:35	22:55	"	"	+20°		18m	4	"	"	Lantern Slide	+22°	5m					E	3	"	Strong Dawn in sky.
3170	30' NW of M92 Neb Reg.	17h11m	+43°45'	" 17	17:45	19:45	"	183	+25°		120	7	"	"	CEC	+20°	23m	15	8	25	188	W	5	4	clock guided badly
3171	HI53 Peg NGC 7331	22h34m	+33°54'	" 17			"	"	+24°		100m		"	"								E			(P)
3172	M57	18h50m	+33°	" 20			"		+18°		100		"	"								E			(P.)
3173	Neb Field	22h12	+36°55'	" "	19:10	22:40	"		+18°		~~210~~ 210	6	"	"	CEC	20°	25m	12	15	43	200	E	2-3	3-4	sky slightly hazy Clock stopped at end of exp.
3174	Region of R Draconis			" 21							20h12		Graflex									W			Wrong Field moon [illegible] (P.)
3175	near HI53 Peg.	22h12m	+34°18'	" "	21:15	22:00	"		+16°		45m	6	Seed 30	16	"	20°	25m	10	15	30	163	E	3-4	4	Clock stopped.

Plate No.	Field	Position α	Position δ	Date	Sidereal Time Begin	Sidereal Time End	Exp Time in minutes	Aptr.	Focus	Temp.	Plate Holder	Grating or Filter	Plate	Emulsion No.	Developer Kind	Developer Time	Developer Temp.	Scale Readings α	Scale Readings δ	Scale Readings [illegible]	Scale Readings ⊙	Tel	Sky Seeing	Sky Transp.	Remarks
3176	in Ursa Minor	17h 44m	+77° 40'	1915 July 22	18:00	19:00	60	24	183	+22°	6		Seed 30	4968	CEC	12m	+20°	10	15	30	157	W	3	1/2	Bright moon 3/4 full very hazy sky.
3177	var. near HVII30 Cas.	23h 46m	+56°	"	19:12	19:33	21	"	"	+21°	7		"	"	"	15	"	12	8	3	210	E	"	1 to 2	" " " " " "
3178	N.P. HI33 Peg. Tryfn neb.	22h 23m	+36° 50'	"	20:35	23:00	145	"	"	+20°	6		"	"	"	30	"	6	20	52	177	E	"	2	Very hazy sky no moon.
3179	var near HVII30 Cas	23h 46m	+56°	" 30	19:11	19:45	23	"	185	+21°	7		"	"	Lantern slide	5	20°±	12	8	3	210	E	2	2-0	Passing clouds. sky finally overcast
3180	α = 18h 16m, δ = +24° 28' van Maanens susp.			Aug 5	18:40	19:05	12	"	184	+19°	7		"	"	CEC	20m	20°					E	4	2-0	Clouds. Suspt. object near center. ZZB hunt 1hr with 40", then R3181 shows nothing
3181	"	"	"	"	21:00	21:25	25	"	"	"	"		"	"	Lantern slide	6m	+20½					W	3-4	4-0	Passing clouds nothing shown save ★ + neb near edges.
3182	"	"	"	Aug 6	18:30	20:20	110	"	"	+21°	7		"	"	CEC	25m	+20°					W	4	4	nothing shown of suspicious nature
3183	NGC 7822	24 00	+68° 12'	"			90	"	"		4		"	"	"	20m	+19°					E			Defect in film?? several small neb ?? (P)
3184	h+χ Persei			"			110																		double exposure. (P)
3185	NGC 7822	24h 00m	+68° 12'	" 7	21:40	24:15	150	"	185	+19	7		"	"	CEC	25m	+22°	3	16	36	188	E	3	2-4	guiding star on N. side. sky hazy (result:- star follow arcs, about guiding ★.
3185½	var near HIII30 Cas	23 46	+56°	" 7	24 28	24:53	23	"	"	"	4		"	"	Lantern slide	6m						W	3	3	-Dam.. sky,
3186	Region NW of M92	17h 10m	+43° 45'	" 8	17:55	21:00	180	"	181	+21	7		"	"	Lantern slide	8m	+21°	4	6	43	185	W	3-4	2-4	passing cloud. clock poor.
3187	Field of susp. variable	18 ~~20~~ 16	-12½°	" 9	17:40	18:00	20	"	184	+21	4		"	"	"	6m	+20°	8	16	32	142	E	3	2-4	var. off plate.
3188	R Draconis	~~[illegible]~~ 16h 33m	+68°	" 9	18:20	20:00	90	"	"	+19	7		"	"	CEC	25	20°	10	15	41	162	W	3-4	4	clock good.
3189	neb. field	24h	+7°	" 9	~~23h 58m 17°~~		140	"	"	+18	7		"	"	"	"	"					E	"	"	NGC 7816, 7818, 7824 double image (P.)
									[Mirrors resilvered, Brashear's Process Aug 10th																
3190	M57	18h 40m	+37° 4'	" 17			20m	"					"	"											P.
3191	"	"	"	" 17			90m	"					Process Plate	✓											P.
3192	var star	18 20	-11.5°	" 17	18:30	18:45	15 (22h 4m)	"	114	+21	4		Seed 30	4968	Lantern slide	6m	+20°					W	3	3	

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Plate No.	Field	Position α	Position δ	Date	Sidereal Time Begin	Sidereal Time End	Exp Time in min	Alt.	Focus	Temp	Plate Holder	Gitter or Filter	Plate	Emulsion No.	Developer Kind	Developer Time	Developer Temp	Scale Readings α	Scale Readings δ	Scale Readings ach	Scale Readings ⊙	Tel	Sky Seeing	Sky Trans	Remarks
3193	N. of M2 ✓	21h 30m	-1°	1915 Aug 17	19:00	19:20	20	24	114	+22°	7		Seed 30	4968	Lantern Sl.	7m	+20°					E	3	3	Tel. Jarred with knee. exp. ~~stopped~~.
3194	Neb Field in Aquar. ✓	23h 14m	+8°	" "	21:00	23:00	120	"	"	+20	4		"	"	"	8m	"	8	12	28	200	E	3	3-2	Haze & clouds.
3195 (trailed)	Pleiades ✓	3h 40m	+24°	" 18			160	"	"				" backed	"								E			Clock stopped. P.
3196	Neb Field in Aquar. ✓	23h 14m	+8°	" 19	20:10	2:25	240	"	112	+18°	6		"	"				8	11	26	204	E	4	4-5	Focus off. } focus badly off.
3197	var near HVII 30 ✓	23 46	+56°	" "	2:05	3:50	45	"	"	+15°	4		"	"								W	"	"	" " }
3198	Neb. Field ✓	23h 14	+8	" 24	20:20	2:10	300	"	111	+20°	6	W12	C. 350	19	CEC	25m	+20°	9	12	30	208	E	3-4	3	Bgt moon. Plate too fogged for use.
3199 (trailed)	M27 ✓	19° 53'	+22.5°	" 31	22h	24h	120	"					Seed 30	4968											Petit
3200	var near HVII 30 ✓	23h 46m	+56°	Sept 1	19:50	20:30	40	"	109	?	4		Process	—	CEC	20	+20°					E	3-4	3	Misshot. var not visible.
3201	g. Long 20° β -30° ✓	21h 3m	+1° 36'	" 6	19:40	21:00	80	"	113	+20°	4		Seed 30	4968	"	25	"	8	9	20	200	E	4	3-0	stopped by clouds.
3202	g. Long 0° β = -30° ✓	20h 29m	-13° 32'	" 9	19:20	21:20	120	"	109	+21°	4		"	"	"	25	"	7	9	35	114	E	3	4	
3203	NGC 7541 ✓	23h 10m	+4°	" "	22:10	22:40	30	"	"	+19°	6		"	"	"	25	"	7	12	20	204	E	4	4-0	stopped by clouds.
3204	var. near HVII 30 Cass. ✓	23h 46m	+56°	" 13	19:15	20:00	45	"	107	+26°	6		"	"	"	"	"	8	11	48	138	E	3	4+	good plate var. just at limit 17.5-18.0 mag.
3205	NGC 7328 ✓	22h 33m	+10°	" "	20:35	23:45	180	"	"	+25°	4		"	"	"	"	"	7	14	51	162	E	3	3-2	very faint spiral. sky rather hazy. } good guiding stars
3206	NGC 470 etc. ✓	1h 15m	+2° 54'	" "	0:20	2:40	120	"	"	+23	6		"	"	"	"	"	7	15	-7	178	E	3-	3-1	fine bunch of nebulae. patches of haze constantly passing.
3207 (trailed)	NGC 2261 ✓	6h 35m	+8° 50'	" "	3:00	3:55	50	"	"	+23	4		"	"	"	"	"	8	11	-6	130	E	2	1-3	guiding star too faint. taken thru thick haze near horizon
3208	M 57 ✓	18h 40m	+32° 40'	Aug 15			25m	"					"	"	Images trailed										
3209	Pleiades ✓			Aug 16			40m	"					"	"	Focus rod										
3210	HVII 30 Cas. ✓	23h 50m	+56°	" 28			30m	"					"	"	"										
3211	M 27 ✓	19h 57m	+22.5°	@Aug 25		28h 55	30m?						"	"	Images trailed.										

Plates 3208–3211: 4 plates taken by Mr. Petit. (not recorded at time.) Last one is @ 30m exp. Most probably taken just before P.3199 on Aug 15 to 30

Sept 15. Plates entered in Reflector Card Index.

Plate Nº	Field	Position α	Position δ	Date	Sidereal Time Begin	Sidereal Time End	Exp Time in min	Alt	Focus	Temp	Plate Holder	Gitter or Filter	Plate	Emulsion Nº	Developer Kind	Developer Time	Developer Temp	Scale Readings α	Scale Readings δ	Scale Readings ach	Scale Readings ⊙	Tel	Sky Seeing	Sky Trans	Remarks
3212	var.★ near M27	19^h58^m	$+22°40'$	1915 Sept 17	19:30	19:45	15	24"	108	+22°	6		Seed 30	968	CEC	25	+20°	5	8	49	222	W	3	3	Bgt. ½ moon
3213	reconnaissance for nebulae	17^h55^m	$+61°41'$	"	20:25	21:35	50	"	"	"	7		"	"	"	"	"	8	9	19	135	W	3	3-0	" " stopped by clouds.
3214	M56	19^h13^m	$+30°$	" 18	19:25	19:55	30	"	114	+22°	4		"	"	"	"	"	8	8	48	148	W	2	4	" ¾ moon passing clouds.
3215	M27	19^h53^m ~~20.20~~	+22°.5 ~~22.25~~	" "	20:20	22:25	120	"	"	"	6	-β	C 99	619	"	"	"	7	14	50	147	W	"	"	" " " "
3216	HI 159	0^h47^m	$+47°$	" "	23:00	24:00	60	"	"	"	4		Seed 30	968	"	"	"	8	13	26	151	E	"	"	" "
3217	Nebulous Field	1^h2^m	$+32°$	" "	0:40	2:45	125	"	"	"	7		"	"	"	"	"	6	9	10	172	W	"	"	Exp stopped by sudden gathering of clouds.
3218	Kap 38	18^h47^m	$+45°10'$	" 20	20:50 / 21:20	21:15 / 21:45	25 / 25	12" / 12"	104 / 104	+11° / "	7	{gitter Partial AI	"	"	"	"	"	5	11	21	125	W	2	4	Brilliant moon ¾ full. a few small clouds hurried over the field during the 2nd exp. 1st exp. Gitter A_I Partial 2nd exp Free.
3219	W Androm	2^h12^m	$+43°57'$	" "	23:25	0:15	45	24"	"	+10°	4		"	"	~~Lantern~~ "	"	"	8	11	1	135	E	2	"	To compare with R 15 for P.M. Plate bad - trailed.
3220	var. near HVI 30 Cas	23^h46^m	$+56°$	" "	0^h55^m	1^h30^m	35	"	"	+9°	7		"	"	Lantern Slide	8	"	7	11	15	126	W	"	"	Moon too bgt. var. does not show. limit 16.5 mag.
3221	NGC 1507	4^h	$-2°-26'$	"	2:35	4:30	110	"	"	"	7		"	"	CEC	25	"	13	9	1	118	E	"	?	Bgt moon (¾) during first 70m. Plate seems mushy. (no depth)
3222	Kap 36	16^h47^m	$+45°27'$	" 21	19:20	20:10	20 / 20m	12"	111	+14°	7	{Partial gitter A_2 / Free	"	"	"	"	"	9	13	2	158	W	3-4	4/4	Brilliant moon 13 day old Field off to side, centered wrong.
3224	Z Cass.	23^h41^m	$+56°$	" 23	22:55	23:30	35m	24"	110	+18°	4	-β W_{12}	C 99	619	Lantern Slide	8	"	8	14	43	209	E	2-3	4	Brilliant moon (full)
3225	NGC 7662	23^h20^m	$+42°$	" 23	23:47 / 23:50	23:49 / 23:58	2m / 8m	24"	"	"	7		Lantern Slide		"	"	"				160	W	"	"	" "
3223	Region N.W. of M92	17^h12^m	$+43°45'$	" 23			5m	"					Seed 30	968	"	6	"				.	W			using "slit slide" for trails.
3226	var near M27	19^h58^m	22-40	" 28	20-23	20-37	14m	"	112	+10°	6		"	"	CEC	30	"	6	7	50	220	W	2	4	
3227	NW of M92	17^h12^m	$+43°45'$	" "			5m / 10m Trail.	"	"	"	8		"	"	"	"	"					W	"	"	5m exp. 10m Traling
3228	NGC 7562	23^h11^m	$+6°$	"	21-30	21·55	25	"	"	"	7		"	"	"	"	"	6	16	3	204	E	"	"	stopped by moon light.
3229	Neb Field in Aquarius	23 14	$+8°$	"			5m / 6m Trail	"	"	"	4		23^h5^m "	"	"	"	"					E	"	"	

Plate N°	Field	Position α	Position δ	Date	Sidereal Time Beginning	Sidereal Time End	Exp Time	Aperture	Focus	Temp	Plate Hole or Filter	Plate
				1915								
3230	Nebulae (small)	20h 48m	-6° 3'	Sept 29	19:50	22-25	150m	24"	110	+11°	4	Seed 30
3231	var near HII 30	23h 46m	+56°	"	1:00	2:00	60m	"	"	+10°	4	"
3232	R Draco	16h 33m	+67°	Oct 1	20:15	22:35	140	"	"	+14°	8	"
3233	Neb Field	23-48	+7°	"	23:25	1:05	100	"	"	+12°	4	"
3234	NGC 7662	23h 20m	+42°	"	2:40	2:55	1m 3m 5m	"	"	"	7	"
3235	Small Neb	2h 30m	+32.5°	"	3:15	4:15	60	"	"	"	8	"
3236	" "	4h 26m	+0.5°	" 4	2:40	4:10	90	"	109	+7°	4	"
3237	Trial for Temple's Comet #2	4h 29m	+2° 55'	" "	4:44	5:31	45m	"	"	+7°	8	"
3238	Neb. Field	1h 2m	+32°	" 5	22:30	3:50	305	"	112	+8°	7	"
3239	Trial for Temple's Comet Neb Cluster	4h 27m	+2° 30'	" "	4:45	5:30	20	"	"	+7°	4	"
3240	in Aquarius	23h 14m	+8°	" 9	20:45	2:00	300	"	115	+5°	4	"
3241	Asteroids on 3240	23h 18m	+7° 50'	" 10	21:11	22:15	60	"	"	+14°	4	"
3242	"	"	"	" "	23:20	23:50	30	"	"	"	4	"
3243	Reconnoiter for Neb.	23h 48m	-3°	" 12	21:45	23:52	120	"	115	+19°	4	"
3244	Asteroids 3240	23h 14m	+6° 5'	" 14	20:40	21:20	40m	"	113	+15°	6	"
3245	EE B's Neb field	23h 43m	-2° 50'	"	21:40	1:30	210	"	"	"	4	"
3246	Field of 3236	4h 26m	+0.5°	"	2:07	6:35	250m	"	"	+13°	6	"
							33h 8m					

Plate N°	Emulsion N°	Developer Kind	Developer Time	Developer Temp	Scale Readings α	Scale Readings δ	Sky Intensity	Sky ⊙	Sky Tel.	Sky Seeing	Sky Transp.	Remarks.
3230	4968	Lantern Slide	8	+20°	7	16	48	178	E	3½	4	sky a bit moist. ½ moon rose at 21.15
3231	"	"	"	"	7	10	18	130	W	"	"	var does not show guided with dark lines brilliant ½ moon in bgt & out of focus.
3232	"	C E C	25	"	6	7	20	125	W	4	5	
3233	"	"	"	"	10	10	19	262	W	"	"	stars somewhat trailed. (asteroid on plate). all over exposed.
3234	"	"	"	"					W	"	"	
3235	"	"	"	"	8	13	0	137	W	"	"	gibbous moon in sky.
3236	"	Lantern Slide	8m	"	14	9	31	197	E	2½	5	Clocks fast. @ 20 worked to NGC
3237	"	"	"	"	8	13	51	176	E	2	5	Brilliant sky (rather moist) Rings seen to rise over horizon no comet.
3238	"	C E C	20m	"	12	8	13	176	W	4	4½	Increasing haze near horizon. clock slow - rate during exposure.
3239	"	Lantern Slide	5m	"	8	11	52	190	W	3	2½ 0	Thin passing clouds. plate very weak. no comet!
3240	"	C E C	30	"	12	8	12	210	W	3	4½ 5	Exp. ended by clouds.
3241	"	Lantern Slide	6	"	4	14	52	155	E	2½	4½	Haze at times } focus 6 pts too low.
3242	"	"	10	"	"	"	"	"	E	"	4	" " "
3243	"	"	6	"	9	10	33	132	E	3	2½	Mistake in field. Thin thick haze.
3244	"	C E C	25	"	7	15	51	150	E	3	3½	Moon 6 days old. clear sky strong aurora.
3245	"	"	"	"	11	14	-5	244	W	"	"	Clock irreg: gt faint. images trailed a bit.
3246	"	"	"	"	7	9	53	172	"	"	4½ 0	double image - get jostled !! fog stopped exposure!

Plate №	Field	Position α	Position δ	Date 1915	Sideral Time Begin	Sideral Time End	Exp Time	Aperture	Focus	Temp.	Plate	Filter or Grating	Plate	Emulsion №	Developer Kind	Developer Time	Developer Temp.	Scale Readings α	Scale Readings δ	Scale Readings Alt.	Scale Readings ⊙	Sky Tel.	Sky Seeing	Sky Trans.	Remarks
3247	M 1 1952	5h-28	+22°	Oct 18	2:50	3:55	60 15	24"	117	+12°	6	W12	C99	619	Lantern Slide	6	+22	10	12	-6	190	E	1	3/2	Increasing ground fog. Driving clock very fast (261)
3248	NGC 2261	6:37	+8-50	"	4:15	4:30	~~30~~	"	"	"	4		Seed 30	968	"	"	"	8	10	17	159	E	1	"	Driving clock rated. Trifle slow
3249	H IV 44 2403	7-27	+65-50	"	4:45	4:55	10	"	"	"	7		"	"	"	"	"	9	11	20	170	E	"	2/0	Fogged over.
3250	Kap 38	18-47	45° 8'	"20	21:57 22:35	22:17 22:45	20m 20m	18" 12"	113	+11°	6	free W12	Partial gitter A II C99	619	CEC	12	+25°	9	13	53	203	W	3	4	Brilliant moon 12 days old. clock very fast
3251	Am. Barnard var in Lacerta	22-17	54-50	" "	23:45	0:0	15	24	"	+10°	4		Seed 30	968	Lantern Sl.	7	+22					E	"	"	" "
3252	Kap 43 centered on Maia	23-47	+44°35'	" "	0:20 0:50	0:45 1:15	25 25	18" 12"	"	+9°	6	free W12	Partial gitter A II C99	619	CEC	12	+25°					W	"	"	" " (bows bad?) clock a bit slow,
3253	Pleiades	3h40	+24°	" "	@1:30		2m 2m	18 12	"	+9	7	P. gitter A III	Seed 30	968	"	"	"					E	3-2	"	" "
3254	NGC 2261	6h37	+8 50	" "	1:55	6:25	90m	24	"	+9	6	W12	C99	619	"	"	20	8	11	20	160	E	2	4/3	" (fog bad?)
3255	Kap 38	18-47	45-8	" 21	21:27 22:01	21:57 22:31	30m 30m	12" 18"	119	+15°	6	W12 P. A III	Partial gitter A II	"	"	"	15	8	14	52	208	W	3-4	4	" 13 day old.
3256	" 41	21-50	+45°	" 23	23:11 0:01	23:56 0:46	45m 45m	12" 18"	118	+15°	6	W12	C99	"	"	"	+20°	10	10	25	160	W	3	3	" 14 d. old. sky a bit hazy
3257	W Cass	0h50	+56°	"	1:30	2:10	40m	24	"	+14	6	W12	"	"	"	"	20	"				W	"	"	" "
3258	Kap 38	18-47	45-8	" 25	21-40	22-40	60m	12"	115	+12	6	W12 Partial gitter A III	"	"	"	"	15	"	10	14	52	237	W	2-1	3-4	" " 16 day old.
3259	var * near M27	19:55	+22.3	"	22-50	23:00	10m	24	"	"	8		Seed 30	968	Lantern Slide	5	"	8	11	42	216	W	"	"	" " "
3260	P.M. * in Cass	0h47	57.5	"	23:23	23:31	8m	"	"	"	4		"	"	"	"	"	7	12	32	180	E	"	"	" " "
3261	T Androm	0h17	+26.2	"	0h35	0h50	15	"	"	+11	6		"	"	"	"	"	8	15	0	196	"	"	"	both poor plates " " "
3262	"	"	"	"	1:23	2:00	37	"	"	+11	6		"	"	"	"	"					W	"	"	
3263	Kap 38	18-47	45°-8'	" 26	21:35 21:57	21:55 22:17	20m 20m	12"	118	+9°	8	PA III Free	"	"	CEC	10	"	11	8	21	178	W	3-2	4	
3264	Kap 41	21-50	45-2'	" 26	23:04	00:4	60m	12"	"	"	6	W12 PA III	C99	619	"	"	"	9	8	28	154	W	"	"	

Plate No	Field	Position α	Position δ	Date	Sidereal Time Begin	Sidereal Time End	Exp Time	Alt.	Focus	Temp	Plate Hldr	Grating or Filter	Plate	Emulsion No	Developer Kind	Developer Time	Developer Temp	Scale Readings α	Scale Readings δ	Scale Readings ecb	Scale Readings ⊙	Tel.	Sky Seeing	Sky Trans	Remarks
3265	U Cass	$0^h 41^m$	$+48^\circ$	1915 Oct 26	1:20	1:40	20	24	118 118 ~~225~~	$+8^\circ$	8		Seed 30	968	Lantern Slide	5	$+22^\circ$	8	13	24	213	W	3-2	4	Brilliant moon 17 days old.
3266	V Androm	$0^h 45^m$	$+35.1^\circ$	"	1:52	2:10	18	"	"	$+7^\circ$	4		"	"	"	"	"	9	10	41	162	W	"	"	fleecy clouds from NW stopped exp.
	— Focus Plate taken on Oct 26th gave focus with filter W_{12} = -β as @ 1 div greater than knife edge test!!																								
3267	Try for asteroid on R 3240	23-7	$+6^\circ$	Oct 27	21-35	22-25	50	"	220	+11	4		Seed 30	968	Lantern Slide	8	$+20^\circ$	11	11	21	217	W	2-1	3-4	asteroid not on plate
3268	NGC 470	1-15	$+3^\circ$	"	2:25	3:05	40	"	"	"	6	W_{12}	C 99	19	"	"	"	9	9	31	152	W	1	4	
3269	H VI 30 Cass	23-46	$+56^\circ$.	"	~~22~~ 45 @	23-30	@ 45	"	"	"	8		Seed 30	968	"	"	"	Unguided				W	2-1	"	Unguided exposure shows clock error of periodic nature. ie.
3270	Scale Plate	light ★ on 3269 field "	"	"	0 @		var	12	"	"	6	W12	C 99	19	"	"	"					W	1-0	"	Exposures 1.-2.-3.-5.-9 — 16.-27.-47.-81 -141 — 243 seconds.
3271	gλ 20° β = -60°	$22^h 45$	$-14^\circ 40'$	" 28	21:45	23:15	90^m	24	116	$+14^\circ$	8		Seed 30	968	"	"	"	9	7	21	165	W	2-1	"	
3272	gal λ = 80° β = -60°	$0^h 21^m$	$+1^\circ 40'$	"	0:13	1:13	60^m	"	"	$+11^\circ$	8		"	"	"	"	"	10	7	5	200	W	2-1	"	Brilliant moon in 3rd quarter. clock ~~fast~~ slow — guiding ★ too faint.
3273	gal λ = 0 β = -60°	$22^h 28^m$	-24°	" 29	21:38	23:46	122^m	"	117	$+13^\circ$	6		"	"	"	"	"	5	14	38	162	E	2-1	"	interesting neb at @ 22:45 −19° 5′ NGC [illegible] h. guiding ★ much too faint.
3274	gal λ = 100° β = -60°	$1^h 7^m$	+1 [illegible] (−0° 30′)	"	0:12	1:42	90^m	"	"	$+12^\circ$	8		"	"	"	"	"	8	6	14	158	W	2x	4	fine neb. ★ is slightly trailed
3275	NGC 470	1-15	$+3^\circ$	"	2:2	2:22	20^m	"	"	$+11^\circ$	4		"	"	"	"	"	8	12	45	162	W	2x	4	good guiding star.
3276	R Persei ~~Peg~~	3-24	$+35.2^\circ$	"	4 00	4:30	30^m	"	"	$+16^\circ$	4		"	"	"	"	"	9	14	41	216	W	2-3x	4x	seeing better sky c. clear.
3277	NGC 2261	6-35	$+8^\circ 50'$	"	4:45	5.15	30^m	"	"	$+9^\circ$	6	W_{12}	C 99	19	"	"	"	8	14	50	200	E	3	4x	
3278	Try for asteroid 3240	$23^h 6^m$	$+6^\circ$	" 30	22:25	22:45	20^m	"	118	$+14^\circ$	6		Seed 30	968	"	"	"	6	12	2	174	E	2-1	3-4	
3279	Region of Neb	$1^h 55^m$	$+31.1^\circ$	" "	23:55	1:00	60^m	"	"	$+13^\circ$	8		"	"	"	"	"	6	12	32	189	E	"	4	
3280	λ = 30° gal β = ~~30~~ 30° Con.	21-23	$+8^\circ 17'$	" 31	22:18	24:00	1.00 $13^h 15^m$	"	117	$+16^\circ$	8		"	"	"	"	"	12	7	21	200	W	3	3	Stopped by clouds.

Plate No.	Field	Position α	Position δ	Date	Sidereal Time Begin	Sidereal Time End	Exp Time (minutes)	Aper.	Focus	Temp	Plate Holder	Grating or Filter	Plate	Emulsion No.	Developer Kind	Developer Time	Developer Temp	Scale Readings α	Scale Readings δ	Scale Readings ab	Scale Readings ⊙	Tel.	Sky Seeing	Sky Trans.	Remarks
3281	λ=40° β=-60 gal Coor	23-26	-7°	1915 Nov 1	22:10	0:40	120m	24	118	+14°	4		Seed 30	968	Lantern Slide	7	20°	14	10	31	226	W	1–0	4+	Beautifully clear. High wind. Seeing is worst I've ever had. 40" spectroscope stopped work.
3282	NGC 784	1-57	+28°27'	"	1:10	4:40	180m	"	"	+10°	8		"	"	"	8	"	14	12	8	225	W	1	4+	Faint auroral arch 7:00 PM (~~Wolf's var on edge of plate~~)
3283	R Vulpec.	21h	+23.4	" 2	21:57	23:27	90m	"	"	+9°	4		"	"	"	6	"	10	8	18	175	W	3-4	4–	Clock stiff a bit slow. New var.
3284	NGC 147	0h 26m	+47.8	"	0:20	3:30	180m	"	"	+7°	8		"	"	"	8	"	12	7	-3	165	W	3+	"	~~Seeing~~ structureless ? Cluster? 1° np of NGC 185.
3285	NGC {2518, 2519}	8h 0m	+51.4°	"	5:30	8:10	120m	"		+4°	8		"	"	"	8	"	8	16	53	161	E	3	"	Does not exist as double. Neb is pF. S.R. gbM.
3286	var near R Vulpec.	21-4	+23°20'	" 4	22:12	22:30	18m	"	113	+9°	4		"	"	CEC	15	"	9	9	21	159	W	3-4	3+	Sky rather moist & milky.
3287	"	"	"	" 4	22:35	23:10	35m	"	"	+8°	6		C I I	619	CEC	15	..	"	"	"	"	"	"	"	These plates for PM ★ & the var. ★
3288	Pole.	—	+90°	"	23:20	1:35	125m	"	"	+4°	8		Seed 30	968	Lantern Slide	7	..	Tel stationary				..	"	..	Clock stopped & stars permitted to trail.
3289	Mr. Barnard's new Neb.	1-41	+31°50'	"	2:00	5:10	180m	"	"	+6°	4		"	"	Lantern Slide	7	"	9	7	21	161	W	"	3½	Ray neb. a trifle flared at ends. V.F. 4' l. 20" wide. very rich neb. field
3290	NGC 2339	7:04	+19°3'	"	5:43	6:23	40m	"	"	+6°	8		"	"	"	"	..	7	15	-3	198	E	"	3–0	Exp. stopped by gathering haze. other neb. a nice spiral. other small ones
3291	NGC 185	0:33	+48°	" 5	1:00	1:40	40m	"	120	+6°	4		"	"	CEC	25	"	8	11	52	170	W	2	3–0	Fine aurora. Exp stopped by clouds.
3292	var near H VI 30 Cas	23:46	+56°	" 6	1:20	1:40	20m	"	118	+9°	4		"	"	"	"	"					W	3	2–0	" " " var not on plate - limit - 16 mag. ± 16-16.5
3293	Mr. Barnard's var in Lac.	22:19	+55.4°	" 8	21:15	21:45	30m	"	111	+10°	6	W12	C I I.	619				12	11	53	226	E	2–1	4	
3294	"	"	"	"	21:50	22:05	15m	"	"	"	8		Seed 30	168				"	"	"	"	..	2–1	"	
3295	NGC 185	0h 31m	+48°	"	22:30	5:00	300m	"	"	+9° +5°	7		"	"	CEC	25	"	9	8	10	184	W	"	"	Question - is this a glob cluster??
3296	Small Nebula	9:16	+49°40'	"	6:12	7:42	90m	"	..	+5°	4		"	"	"	"	"	8	13	53	231	"	"	"	out of focus why?? Small spring loose as lying in P.H. tilting the plate.
3297	var near H VI 30 Cas.	23:46	+56°	" 11	23:25	0:25	60m	"	114	+7°	4		"	"	Lantern Slide	6m	"	10	10	53	138	E	2–1	4×	

28h 43m

R Number.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Developement Temp.	Guiding Star α	Guiding Star δ	Guiding Star Sept	Guiding Star ⊙	Guiding Star Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks.
3298	NGC {936 941 955	2h 23m	-1°-30'	Nov. 11	1:50	4:55	180m	24	+7° 0°	114	7			S30	1496	6	+20°	10	9	-3	175	W	4+	2-1	G	F	— nearby. 941 prob sp. curious form. 955 unsp. variable
3299	NGC 2701	8h 53m	+54° 6'	"	6:15	6:45	30	"	0°	"	8			"	"	"	"	8	10	50	162	E	"	"	"	"	- weak. 2701 sp. with star 11m overlaping. not cometic.
3300	" 185	0h 31m	+48°	" 12	22:25	1:10	115m	"	+7° +5°	119	6		W12	C99	8619	"	"					E	"	3	"	Poor.	- clock fast. differential trailing. neb very weak on plate.
3301	@ NGC 955	2h 24m	-2°	"	1:50	2:30	35m	"	+5	"	8			S30	1496	"	"					E	"	3-4	"	G.	This plate to check apparent tail on 3298 (no result.)
3302	@NGC855 Neb in Trian.	2h	+29°	"	2:49	5:20	135m	"	"	"	7			"	"	"	"					W	"	4	"	F	Images slightly tailed. Fine large spindle. on comes.
3303	NGC 2261	6h 35m	+8° 50'	"	6 20	6245	25m	"	+4°	"	7			"	"	"	"					W	"	"	"	Frg.	Detail in neb good. Stars show what tailed } apparently conforms motion of neb.
3304	@ NGC 2857	9h 16m	+49° 40'	"	7:20	9:00	90m	"	"	"	8			"	"	"	"					E	"	"	"	E.	2856 2857 spirals. many small neb.
3305	Pleiades	3-40	+24	"20	4:00		30s 60s 120s				4			"	"	M.	"					224 W	1	1		f.	Diaphram - 9" free in center - 12 1" squares. evenly distributed around circle of 6" to 7" radius.
3306	"	"	"	"		4:20	30s 60s 120s				6			"	"	"	"					"	"	"	"	f.	Diaphram 9" free in center. 12 1" sqrs at 9" to 10" from center
3307	Ast (193) (Ambrosia)	23-36	+8°-38'	"24	21:45	22:55	60m	"	+8°	122	7			"	"	"	"					W	2	1		ff.	Sky misty east. @ 5' off axis. 12 openings 1" x 2" 6" to 8" from center
3308	Pleiades	3-40	+24	"	4:00		30s 60 105s				4			"	"	"	"					"	2	2		E	Diaphram 9" free center
3309	"	"	"	"		4:20	30s 60s				6			"	"	"	"					"	2	2		E	" " " " " " 9" & 11" from center.

11h20m

Plates sorted on Card catalogue Dec 27th 1915

On Nov. 25th the two mirrors were taken out and the telescope covered with cloth as a precaution against dust from the brick work to be done of the pier. The pier on top of the brick tower was refaced throughout with cement brick. (The pier had previously been cracking - due to unslacked lime in the old bricks, slacking and exploding.) About 2 weeks were taken for this work. The 24" mirror was resilvered - four attempts being made before a really good coat was secured. The flat was not resilvered as a test of its reflecting power showed it was for about 88% effecient. Mirrors remounted on Dec 16th.

R number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developer	Time	Temp	Guiding Star α	Guiding Star δ	sep.	⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks
																												plate backed.
3310	γ Cass	0h 50m	+60° 10'	Dec 27	2:25	4:15	90	24	-9°	134	7			Seed 30	14968	8	+20°	7	7	43	126	W	4	1	v.f.	v.p.		clock error caused differential trailing. Plate almost worthless
3311	NGC 1186	3h 0m	+42° 30'	"	4:40	5:40	60	"	-12°	"	8			"	"	"	"	5	17	35	158	W	"	"	g.	f.		slightly trailed. clock still bad clock readjusted
3312	var ★ 1	6h 34m	+10° 30'	"	6:55	7:10	15	"	"	"	8			"	"	6	"	9	10	39	174	"	3–4	"	g.	f.		very slightly trailed clock readjusted.
3313	var ★	6h 44	+8°	"	7:23	7:38	15	"	"	"	6			"	"	"	"	8	12	24	212	"	4		g.	g.		clock rate about right.
3314	field of R Vulp.	21h 0	+23° 30'	" 28	0h 2m	0:27	23	"	-8°	132	8			"	"	"	"	8	12	52	190	"	2–3	2	f.	p.g.		started just at dusk. some wispy clouds. var 2 does not show
3315	var ★ near H VII 30 in Triang	23h 47m	+56°	"	0:40	1:25	45	"	-8°	"	6			"	"	"	"	—	—	—	—	"	3+	2	—	v.p.		unguided. trails very jerky. var shows @ 16½ mag.
3316	Mr. Barnard's nebula	1h 44m	+32°	"	1:47	3:12	85 / 5h 33	"	-10°	"	7			"	"	"	"	7	13	43	247	"	3–0	2	v.f.	p.g.		clock ~~is~~ better of R 3289. Exposure stopped by clouds. one spider line in gep. broken, guided this night on spec. on one line.
3317	NGC 972	2h 29m	+29°	1916 Jan 2	1:30	2:15	45	"	-3°	134	7			"	"	10	"	8	15	40	170	E	4	2	v.g.	g.		seeing so bad 40" vis work halted. (~~Neb a fine spindle~~ ? spiral.) } both plates pretty mushy.
3318	Gal λ = 180° β = -60°	2h 53m	-24°	"	2:40	3:40	60	"	"	"	4			"	"	–	"	12	12	52	178	E	"	2 to 1	g	f.		4 or 5 faint small neb.
3319	Trails for δ = +32°			"	3:45	4:05	20	"	-5°	"	6			"	"	"	"					E	"	1	←	v.g.		Trails for determining δ offset from Y axis of plate.
3320	NGC 2245	6h 25m	+10° 20'	"	6:20	6:50	30	"	-8°	"	4			"	"	"	"	16	13	0	192	E	"	½	vg	g.		
3321	" 2261	6h 35m	+8° 50'	"	7:08	7:40	30	"	-8°	137	7			"	"	"	"	8	9	10	143	E	"	½	vg.	g.		Exposure a bit too long for ɸ with R 2[illegible] (say 20m)
3322	vars. below 15 M mag.	6h 35 / 6:40	+10° 35 / +8° 9	"	7:50 / 8:05	7:58 / 8:10	8m / 5m	"	"	"	8			"	"	"	"	—				E	"	"		"		Two fields on one plate. var (6h40 – 8°9) deeply colored.
3323	Field of small neb. ~~NGC 3550~~	11h 4m	+22° 30'	"	9:25	10:25	60m	"	"	"	7			"	"	"	"	4	14	20	203	E	"	2	"	"		This was an attempt at NGC 3550 – ~~but~~ which is 7° north of this place. There are 2 of Swift's + @ 25 new little nebulae.
3324	NGC ~~3550~~ M 95	10h 45m	+12° 50'	"	10:45	11:50	60m	"	"	"	4			"	"	"	"	12	9	32	170	E	"	2	"	"		a splendid ɸ shaped spiral. M96 is on edge of plate.
3325	Pleiades	⊙ on Alcyone. 3h 40	+24°	" 3			60m	"															4–3	3		p.g.		Plate unbacked. Neb. fairly well shown. Taken by Mr. Van B.
3326	Hind's Var Neb NGC 1555	4h 14	+19° 15'	" 5	2:00	3:30	90m	"	-12°	109	4			"	"	8	+22	9	14	0	206	E	4	1–0	E	g.		Seeing worst I've ever experienced. Neb is just vis on plate of Mr. Barnard's but very mushy 60" Mount Wilson plate 1m exp.; almost all stars shown
3327	V Cancri	8h 16m	+18°	"	7:45	8:15	30 (8h 18m)	"	"	114	6			"	"	~~81~~		8	9	7°	180	E	"	½	f	p		focus considerably out asteroid in center of plate.

R Number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Grating	Color Filter	Plate Brand	Plate Emulsion	Developer	Dev. Time	Dev. Temp	Guiding Star α	Guiding Star δ	Sep.	⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks
3328	var* near HVI30 Cas.	23h 46m	+56°	1916 Jan 6	2:40	3:00	20	24	-9°	137	4			S_{30}	1496	1/16	5	+20	8	13	47	194	W	2	3	ε	ε	sky very misty. var* on plate, but v. faint.
3329	NGC 2261	6h 35m	+8°-50'	"	5:20	5:30	10	"	-10°	"	4			"	"	"	"	"	8	10	22	150	E	2+	3-2	g		cf R2057.
3330	"	"	"	"	5:35	6:00	20	"	-10°	"	8			"	"	"	"	"	"	"	"	"	"	2	2	"	f.	3 plates to show shift in nebula is not due
3331	"	"	"	"	6:40	7:20	40	"	-11°	"	6			"	"	"	"	"	"	"	"	"	"	2-	2-3	"		to difference in exposure time.
3332	Kap 43	23h 40m	+44° 40'	" 14	2:40	3:00	20m	12		138	6	PA [illegible]	W_{12}	C99			8	"					W	4-0	3	"		[illegible] stopped by cloud
3333	NGC 1186	2h 56m	+42° 17'	" 22	2:50	3:40	50m	24	[illegible]	139	[illegible]	0	'	S_{30}	1496		8	"	10	10	28	156	W	~~3~~	3-4	"	ε	" " moon. 1186 a spiral *12 superimp
3334	" "	"	"	Feb 2	4:35	5:45	70	"	-17°	143	6			"	"	1/16	6	"	10	7	25	155	W	3-4	4-3	"	"	
3335	" 2261	6h 35m	+8°50'	"	6:22	6:42	20	"	"	"	8			"	"		"	"	6	12	23	150	E	3-2	"	"	g	No good guiding star with Tel W.
3336	R Leo Minoris	9h 40m	+35°	"	8:20	9:50	90	"	"	"	8			"	"		"	"	6	25	0	152	E	3	"	"	g	Many small nebulae on plate.
3337	O² Eridani	4h 10m	-8°	" 3	1. 5:09?		5s 10s 20s 40s 60s; 1/5s to	"	-15°	140	8			"	"		"	"	—	—	—	—	E	4	3	—	g	B-(9.1-10.8) 3".9 not separated.
3338	Saturn	—		"	5:10		2s	"	"	"	7			Lantern Sl.			2	"	[illegible] —	—	—	—	E	"	"		"	central belt just distinguishable 12 exp.
3339	NGC 2261	6h 35m	+8° 50'	"	5:22	5:45	22	"	"	"	6			S30	1496		10	"	6	12	22	148	E	"	"	g	g	Developer old. details not quite sharp.
3340	" 2610	8h 27m	-15° 40'	"	7:52	8:22	30	"	-17°	"	8			"	"		"	"	8	12	47	145	E	"	3	f	ε	40"d. * in center = 14.5+ 1900 {8h 28m 47s, -15° 48'.5} A Ring Neb ~~relatively very strong central star.~~
3341	" 3550	11h 4m	+29° 30'	"	11:05	12:05	60	"	"	"	6			"	"		"	"	3	10	25	205	E	"	3	ε	g	Interesting cluster of v.s. nebulae.
3342	S Bootis	14h 19m	+54° 15'	"	13:25	13:50	25	"	"	"	7			"	"		"	"	6	10	29	200	E	"	2	"	"	cf with R28 1902 80m 24" 2 P.M*, 12 & 15.5 mag. resp. & 1 extra var.
3343	NGC 1325	3h 18m	-22°	" 7	4:00	4:25	25	"	-16°	135	6			"	"	1/10	8	"	7	25	0	155	E	3	2	g	f	1325 @ 25' off center. needs longer exp. Miscentered on HI60 (1332 spiral) Many neb on plate
3344	" 2245	6h 24m	+11° 20'	" "	4:46	5:18	30	"	-18°	"	7			"	"		"	"	8	15	[illegible]	170	E	3-2	2	ε	g	Misty plate weaker than R3320.

R Fnumber.	Field	Position α	Position δ	Date 1915 / 1916	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developer	Developement Time	Developement Temp.	Guiding Star α	Guiding Star δ	Guiding Star Mag	Guiding Star ⊙	Guiding Star Tel.	Seeing Transp.	Seeing Stead	Quality Guider	Quality Plate	Remarks.
3345	W Aurigae	5h 20m	+37°	Feb 9	5:05	5:25	20	24	-10°	138	6			S_{30}	14961	1/2	5	20°	7	15	40	155	E	3	4	ε.	g.	W faint @ 14.5 mag.
3346	V "	6h 16m	+48°	"	5:40	6:00	20	"	"	"	7			"	"	"	"	"	6	10	25	192	E	3-3-4	p.	f.	g. star two faint images slightly elongated.
3347	NGC 2701	8h 48m	+54° 20′	"	7:50	8:10	20	"	"	"	6			"	"	"	"	"	7	15	38	155	E	2-0	3	vp.	p.	stopped by clouds. # R3299 much too weak im. slightd trailed. Neb sp? * uncertain
3348	" 1186	2h 59m	+42° 17′	" 21	5:30	6:05	35	"	0°	137	6			"	"	1/20	10	"	8	7	33	162	W	2-3	4	ε	g	but weak.
3349	" 2261	6h 35m	+8° 50′	"	6:25	6:55	30	"	"	"	4			"	"	"	"	"	10	15	30	165	E	2-3	3	vp.	f.	a trifle elongated
3350	" 2366	7h 20m	+69° 10′	"	7:08	7:23	15	"	"	"	8			"	"	"	"	"	10	13	0	142	E	2-3	1	p.	f.	very weak moon rose 10m before exposure began.
																											From focus plates taken Feb 21, focus for Filter W_{12} is 1 div greater than K.2. " K_3 " 0 " " " "
3351	NGC 2366	7h 20m	+69° 16′	Feb 26	6:20	7:20	50	"	-10°	134	6			"	"	1/10	8	"	10	12	40	133	E	4	3	v.f.	ε	
3352	" 3550	11h 4m	+29° 31′	"	8:20	10:20	120	"	-12°	"	4			"	"	"	"	"	13	16	0	131	E	4	3	f.	ε	more nebel flecken than stars, near center of plate.
3353	" 5230 5207	13h 27m	+14° 40′	"	12:15	13:15	60	"	"	"	4			"	"	"	"	"	7	11	20	178	E	4	3	f.	ε	Centred near 5230 - a fine little spiral. 5207 off to one side - no connection with * near by.
3354	Z Virginis	14h 5m	-13°	"	13:50	14:20	30	"	"	"	6			"	"	"	"	"	9	16	0	187	E	4	3	g.	ε	P.M.*. @ 14-14.5
3355	var near H2230 Cass	23h 46m	+56°	" 27	5:25	5:35	10	"	-3°	132	6			"	"	1/10	8	"	10	12	0	178	W	4	4	ε	ε	var near max.
3356	W Aurigae	5h 20m	+37°	"	5:50	6:20	30	"	"	"	6			"	"	"	8	"	10	8	33	131	W	4	4	g		to check P.M.* on R 2345 not a *.
3357	NGC 2261	6h 35m	+8° 50′	"	7:40	8:20	40	"	-5°	"	4			"	"	"	8	"	10	8	50	169	W	3	3	g	ε	But Plate since R 2057.
3358	R Comae	12h	+19°	"	10:00	10:25	25	"	-6°	"	7			"	"	"	6	"	8	8	38	178	E	3	3	g.		

R Number.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Fitter	Color Filter	Plate Brand	Plate Emulsion
3359	Var near HV30 Cass	23h 46	+56°	~~Feb~~ Mar. 3	5:40	5:45	5	24		132				S_{30}	14968
3360	2nd var algol?	Miscentered field at [illegible]		"	5:50	5:55	5	"		"				"	"
3361	NGC 2261	6h 35m	+8° 50′	"	6:35	7:45	70	18		"				"	"
3362	" "	"	"	"	7:50	8:00	15s 30s 60s 120s 240s	18		"				"	"
3363	NGC 3360 61	10h 37m	−10° 30′	"	10:00	10:30	30	24		"				"	"
3364	Pleiades	centered near Pleione. 3h 40m	+24°	~~Feb~~ Mar. 4	6:40	7:40	60	12		133	6	PN	W_{12}	C33	8767c
3365	~~A~~ "	"	"	"	7:50	7:53	9s/81s	24		"				S_{30}	1496[illegible]
3366	NGC 2366	7h 20m	+69° 10′	"	8:30	10:15	105	24		"				"	"
3367	S Boötis	14h 20m	+54° 1/4	"	11:30	11:55	25	24		"				"	"
3368	W Leonis	10h 48m	+14° 20′	"	12:10	13:40	90	"		"				"	"
3369	P.M★ near Z Virginis	14h 10m	−13°	"	14:00	14:20	20	"		"				Graflex	
3370	Scale Plate	"	"	"		14:30	var.	"		"				S_{30}	"
3371	NGC 2261	6h 35m	+8° 50′	Mar 8	6:45	7:05	20	"	−5°	136	8		W_{12}	C33	8767
3372	PM ★s near W Leonis	10h 46	+14 40	"	8:45	9:15	30	"	−6	"	6			S_{30}	14968
3373	R Camelop.	14h 27m	+84° 17′	"	9:40	11:05	85	"	−7	"	4			"	"
3374	NGC 3858 3865	11h 40m	−8° 50	"	11:40	12:10	30	"	−7	"	7			"	"
3375	S Herculis	16h 46m	+15°	"	14:05	15:35	90	"	−8	"	8			"	"

R Number.	Developement Developer	Time	Temp.	Guiding Star α	δ	Sep.	⊙	Tel.	Seeing Transp.	Stead.	Quality Guider	Plate	Remarks.
3359	1/10	8	20°	10	10°	175	W	4	2	g.	ε.		var strongly colored vis. c. bright.
3360	"	"					W	"	"	"	"		Miscentered. var. on edge. too weak. ~~light in exp smashed. exp. unguided~~ but images round.
3361	"	"					W	"	"	vf.	f.		images somewhat elongated. plate overdeveloped.
3362	"	"					W	"	"	g.	ε.		15s shows nucleus. − 240s gives fair picture of nebula.
3363	"	"					ε	"	"	"	"		Two not unusual neb. NGC gives same pos for both, but they are some min. apart.
3364		12	"				W	3	2	pf.	ε.		star m. well shown. n [illegible]
3365		6	"				W	"	"	g.	ε		13.22 star well shown on 81s exp.
3366		8	"				W	"	3	ε	ε.		screw ran out. Need longer exp to show faint extensions
3367							ε	"	"	"	"		conforms P.M of 15.5 mag ★.
3368							W	"	2	f.	'		3 P.M★s. {13.5 mag − 1.″06; 16.2 " − .30; 16.3 " − .20} are faint var. ★. cf R363.
3369							W	"	"	ε.	"		2 excellent PM's. 10m − C.30 14m − .″76
3370							W	"	"				trailed 243s − 141s − 81 − 47 − 27, − 16 − 9 − 5 − 3 − 2, ~~last~~ 2 exp no good
3371	1/10	10	20°				W	4	4	g	ε		
3372							ε	3	4	vf	p.		Brilliant Aurora all night
3373							ε	3	3	unguided.	f.		
3374							W	"	"	g	ε		
3375							ε	2	2	vf	fair.		

R Number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Fitter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Developement Temp.	Guiding Star α	Guiding Star δ	Guiding Star Sep.	Guiding Star ⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks
3376	NGC 2261	6-35	+8° 50'	Mar 10	8:00	9:15	75	24	-4°	133	8		W_{12}	C 99	8767		5	+20°	6	10	45	165	W	4	4	f.	ε.	fine detail in neb.
3377	PM ✱ near +19° 2320	10-46	+14°	"	9:35	9:55	20	"	"	"	7			Graflex			"	"	9	9	5	147	W	3	4	v.f.	g.	
3378	NGC 3550	11h 4m	+29° 25'	"	10:20	11:10	50	"	"	..	4			S_{30}	1496		"	"	11	9	18	147	W	3	4	v.f.	g.	
3379	Harvard Standard Field	11h 0	+15°	" 12	10:34	12:04	90	12		132	6	PN	W_{12}	C 99	8767		12	"	11	9	35	170	W	2	2	g	ε	Images excellent, but few in number.
3380	NGC 5328	13h 48m	+28°	"	13:33	14:03	30	24		"	4			Graflex			15	"	12	9	30	167	W	2	2	g	g	var neb? see AN 127 p 199 extremely doubtful
3381	NGC 2261 (Catalogued Mar 2!)	6h-35m	+8°-50'	" 16	7:15	7:40	25	15		128	8		W_{12}	C 99	876		15	"					W	3	3	g	ε.	An exposure on the pole was put on the same plate, but axis error(!) trailed these badly.
3382	NGC 2902	9h 30m	-14° 10'	April 3	8:20	8:50	30	24						S_{30}			6	"					W	3-1	2	p.	f.	v.s. bgter middle. H 2114
3383	U Virginis	12h 46m	+6°	"	10:20	10:50	30	"						"			10	"										very weak plate one spiral neb. nif. NGC 5317
3384	NGC 2515	7h 58m	+20°.5	" 4	9:30	10:00	30	"	+7°	122	4			"			6	"	10	18	0	130	W	3-4	2	f.	g	Nothing in pos. of 2515. But e.f. neb. @ 7h 57m 69° 45' N.P.D. (1855)
3385	NGC 3344	10:38	+25.7°	" "	10:20	10:50	30	"	+6°	"	8			"			6	"	10	18	45	115	W	"	2	f.	g	Splendid spiral. open.
3386	Cluster of Neb.	12h 15m	+6°.2	" "	11:40	12:40	60	"	+6°	"	6			"			6	"	10	8	20	146	W	"	2	g.	g.	about 40 neb. on plate M 61 in corner.
3387	NGC 3239	10h 20m	+18°	" 5	9:15	9:45	30	"	+2°	131	7			"			10	"	12	9	5	129	W	4	2	p.	f.	✱ sl. trailed unusual form. needs longer exp.
3388	" 4845	12h 52m	+2° 15'	" "	10:15	11:05	60	"	0°	"	8			"			"	"	10	12	0	178		"	"	ε	g.	Nebm. certainly a tilted spiral 3' long x 1' wide.
3389	" 4799	12h 49m	+3° 45'	" "	11:30	12:15	45	"	-1°	"	6			"			"	"	10	8	30	180		"	"			Plate a bit miscentered 4799 is a tiny spindle.
3390	" 4900	12 54	+3° 10'	" "	12:45	13:45	60	"	-2°	"	4			"			"	"	10	8	15	215		"	"			probably an open spiral. ✱12 on border. sharp nucleus. All three Wolf Proper Motion Nebulae see AN March 1916.
3391	Kap 25	5h 39m	+44° 48'	" 27	10:39	11:09	30	12		126	4	P.N.		"			5	"	8	8	0	149	W	3	3	p.	trailed	

R Number	Field	Position α	Position δ	Date 1915 [1916]	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion
3392	NGC 4900	12h 56m	+3¼°	1916 April 27	12:05	14:15	120	24		124	8			S 30	
3393	" 4904	"	+0° 35'	"	14:41	15:43	60	"		"	7			"	
3394	M 11	18h 45m	-6° 32'	"	17:00	18:00	60	18		"	4			"	
(3395)	Trial for Wolf's cometic object	12h 24m	+3° 15'	May 3	12:15	12:45	30	24	+11°	132	~~4~~ 8			"	
(3396)	NGC 2403	7h 27m	+65° 50'	"	11:15	11:45	30	"	"	"	8			"	
3397	Trial for Wolf's Comet	12h 37m	+1° 54'	"	14:30	15:30	60	"	10°	"	7			"	
3398	M 5	15h 13m	+2° 30'	"	16:30	17:30	60	"	9°	"	4			"	
3399	M 13	16h 38m	+36°.5	"	17:50	18:30	40	"	8°	"	7			"	
3400	Comet Wolf.	12h 36m	+3°	May 4	12:37	13:31	54	"	12°	135	8			"	
3401	Ast. on R 3398	15h 15m	+2° 30'	"	14:33	15:03	30	"	"	"	8			"	
3402	Comet Wolf	12h 36m	+3°	"	15:45	16:10	25	"	11°	"	8			"	
3403	M 51	13h 38m	+48°	May 6	12:10	14:00	60m	"							
3404	Comet Wolf.	12h 35m	+3° 10'	" 8	C.T. 10:21	10:43	22	"			7			"	
3405	Comet Wolf.	12:33	+3° 30'	" 10	Sid T. 12:55	13:15	20	"		130	8			"	
3406	NGC 5846	15h	+2°	May 11	14:28	15:08	40	"	+14°	132	4			"	
3407	" 6503	17h 50m	+70°	"	15:50	16:50	60	"	+12°	"	7			"	
3408	" 6960	20h 42m	+30¼°	"	17:18	18:18	60	"	+8°	"	8			"	
3409	Comet Wolf	12h 31m ~~12:08~~	+4° ~~12:28~~	May 18	12:08	12:28	20	"		130	7			"	

R Number	Developer	Dev. Time	Dev. Temp.	Guiding Star α	δ	Mag.	⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guiding	Quality Plate	Remarks
3392	ol	8	120°	~~8~~ 10	7	33	158	W	~~3-2~~	4	poor	fair	focus bad. ? Is nebula a spiral ?
3393		"	"	10	7	43	205	W	"	"	"	"	Wolf Proper Motion nebula.
3394	"	"	"	10	10	25	194	W	"	"	fair	good	Compare R 1513.
3395	al	6	"	10	8	20	160	W	3	3	"	"	Nothing moving i.e. Mr. Barnard's ast is not that of Wolf.
3396		8	"	10	7	0	180	W	"	"	good	"	Compare Ritchey #69. nothing definite.
3397		"	"	10	8	28	155	W	"	"	"	"	Cable wrong, motion probably + in Dec. nothing moving on plate
3398	ol	"	"	9	7	25	162	W	"	"	"	"	Compare Ry 57
3399		"	"	12	10	40	155	W	"	"	"	"	" Ry 3.
3400	ol	6	"	12	10	30	132	W	3	2	fair	"	Comet shows near center. short tail slight condensation
3401		"	"	11	9	40	180	W	"	"	"	fair	moving obj. a faint ast. @ 15th mag. Seen in Reflector.
3402		"	"	12	10	30	132	W	2	2	"	"	Check to R 3400. Comet shows as round. 10" diam. beyond limit of 12". Seen & measured in 40" by v.B. 14th mag.
3403		6	"			0	180	W			"	"	Exposure very weak.
3404		6	"	7	10	35	135	W	2	2	"	v.p.	out of focus. comet shows probably brighter!!
3405		"	"	10	7	30	209	W	2	3	"	fair	comet sharp. somewhat brighter.
3406		~~30~~	+17°	11	7	34	186	W	2	4	poor	"	Plate badly fogged by moon on light clouds. several nebulae.
3407		10	"	12	9	18	161	W	"	"	good	good	Neb. bright. Plate badly fogged.
3408		"	"	12	10	20	132	E	2, 0	3	faint	fair	Plate badly fogged by passing clouds which finally stopped exposure
3409	al	4	+20°	10	12	0	186	E	3	3	"	"	fogged by the twilight

R Number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Gitter	Color Filter	Plate Brand	Plate Emulsion	Developer	Dev. Time	Dev. Temp	Guiding Star α	Guiding Star δ	Guiding Star Sep	Guiding Star ⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks
3410	Kap 28	8h 40m	+45°	May 22	12:46	13:46	60	12	+16.5°	132	6	PN	W_{12}	CSS			10	+20°	10	11	12	158	W	2-3	2-3	good	weak	.
3411	" 32	12h 51m	+45°	"	14:02 – 14:22 / 14:24 – 14:44		20/20	"	+16°	"	4	PN/Fros	—	Seed 30			"	"	12	13	3	138	W	"	"	v. faint	v. poor	jitter exp. badly trailed.
3412	" 33	13h 51	+45½°	"	14:57 / 15:19	15:17 / 15:39	20/20	"	"	"	7	~~Fros~~/PN	—	"			"	"	11	8	45	121	W	"	"	faint	fair	
3413	Y Scorpii	16h 25	-19¼°	"	16:12	17:12	60	24	+15°	"	8			"			"	"	10	9	50	190	W	2	2	"	poor	In a blank region. sky curiously dull.
3414	☄ Wolf.	12h 31	+4° 10'	May 23	12:42	13:02	20	"	+21°	132	8			"			"	"	10	11	45	138	W	3	3	fair	good	Comet [illegible].
3415	NGC 3550	11h 4m	+29½°	" "	13:19	14:09	50	"	+20°	"	4			"			"	"	13	13	30	230	W	"	"	faint	fair	but weak.
3416	" 5350	13h 50m	+40¾°	"	14:38	15:38	60	"	"	"	6			"			"	"	11	8	40	134	W	"	"	fair	good	several nebulae on plate. Two fine open spirals. 5350 5371
3417	near Y Scorpii	16h 24m	-18½°	"	16:34	17:04	30	"	+19°	"	4			"			"	"	9	12	5	188	W	3-2	2	"	~~fair~~ good	To check app. trail(?) on 3413.
3418	R Serpentis	15h 46m	+15½°	"	17:28	17:48	20	"	"	"	6			"			"	"	11	9	30	220	W	3-0	2	good	fair	weak. stopped by gathering clouds.
3419	NGC 6992	20h 50m	+31.2	May 27	18:03	19:03	60	24	+18°	127	4			"			6	"	8	10	53	141	E	3	3-2	~~good~~ good	good	# Ry 58660. var. 205330 on plate 12.5-15.5 ~~range~~ normally @ 12.5 – 18.0
3420	var★ near H VI 30 Field)	23h 46m	+56°	"	19:18	19:30	12	"	"	"	7			"			6	"	8	10	50	138	E	3	3-2	"	"	var. @ 15 mag.
3421	~~Nebulous~~ Nebelfleck Field	12h 53m	+29°	" 29	14:40	16:10	90	"	+16°	132	6			"			8	"	9	9	30	125	W	3	3	faint	fair	# R 2191 This is a Wolf field not so thick. @ pole of Milky Way
3422	NGC			" "	17:05	17:35	30	"	+15°	"	4			"			10	"	10	9	45	158	W	3	3	good	good	a faint spindle. Position lost ~~exposure~~ ended 30-50 W(?) @ + 30° !?
3423	NGC 5669	14h 28m	+10° 15'	May 30	14:00	15:00	60	24	+13°	129	4			"			10	"	13	7	33	120	W	3-4	2-3	fair	fair	Faint open spiral nucleus very elongated -
3424	" 5792	14h 51m	-0° 31'	"	15:16	16:16	60	"	+12°	"	6			"			"	"	11	12	5	161	W	"	"	good	good	" elongated spiral ★ 9.0 mag on n.p. edge.
3425	" 6960	20h 38	+30.3°	"	16:29	19:13	150	"	+10°	"	8			"			"	"	11	9	33	141	E	"	"	"	fair	# Ry 38. apparently no change. Does not conform susp. of R3408.
3426	" ~~5326~~ 5393	13h ~~47~~ 51m	-28°	June 4	15:02	15:32	30	24	+16°	128	7						8	"	10	9	10	144	E	3-4	2-3	fair	fair	rather mushy. Needs longer exposure. See AN 127 p. 197. ~~var neb??~~

R Number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Gitter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Developement Temp	Guiding Star α	Guiding Star δ	Guiding Star gap	Guiding Star ⊙	Guiding Star Tel.	Seeing Transp.	Seeing Stead.	Quality Guide	Quality Plate	Remarks
3427	NGC 6548	18h	+18½°	June 4	16:40	18:15	90	24	+14°	128	8			S30			6	"	11	9	15	183	E	4	2.3	fair	fair	mushy neb prob. a cluster.
3428	" 6729 Cond & direct June 8	18h 57	-37°	"	18:37	19:17	40	"	+13°	"	6			"			"	"	10	12	15	165	W	3	1.2	good	good	" . var nebulae. see Helwan Bulletin.
3429	S Serpentis	15h 17m	+14° 40'	June 24			40	24		133	6			"			5	"					W	4	3	"	"	Plate miscentered @ 2m in RA.
3430	U Serpentis	16h c	+10° 19'	" "			40	"		"	4			"			"	"					"	"	3	"	fair	1PM★ @ 12-13 mag. ¢ R2049
3431	NGC 6729	18h 57	-37°	" "			70	"	+16°	"	6			"			8	"					"	"	1.2	"	"	Mushy.
3432	" 7515	23h 8m	+12¼°	" "			60	"	+15°	"	8			"			"	"					"	"	3	"	good	also NGC 7559 & 7563. on edge. 7563 suggested as var.??
	~~RY Herc Both mi~~			~~June~~	Both mirrors resilvered ~~July~~ June 30 & Jul																							
3432½	RY Herc.			June 25			40	24																				var ★ on edge ¢ R588
3433	not catalogued			July 1			45	24						S27														Plate old & fogged. Truman
3434	SX Cygni	20h 12m	+30° 21'	July 2			60	"						S30														Differential trailing (clock error) "
3435	RS Peg.	22h 7m	+14°	" "			40	"						S30														poor (i.e. little trailed) ¢ to R1595 no results.
3436	S X Cygni	20h 12m	+30° 21'	July 3	17h 31m	18:25	50	24	18°	8	6			S27				20°	9	13	17	323	E					Plate very old and fogged. stars good. Truman
3437	NGC 6729	18h 55m	-37°	" "	18:39	19:19	40	"	19°	"	8			S30			6	"	10	13	17	167	W	2,3	1,2	good	fair	mushy
3438	" 6804	19h 27m	+9° 10'	" "	19:40	20:40	60	"	"		4			"			"	"	9	11	45	133	W	3	3	"	good	spiral?
3439	" 6804	"	"	July 4	17:26	20:23	150	"	20	[illegible]	4			"			"	"	10	9	0	315	E	3	3	faint	trailed	spiral! in heart of galaxy. Truman + Hubble
3440	M 20	17h 55m	-23°	" 5	17:18	19:35	140	"	20	135	8			"					9	10	48	260	W	2,3	1	good	good	¢ Ry plate no results. Truman
3441	M 15	21h 27m	+12°	" "	20:00	21:00	60	"	19	"	6			"			5	20	10	9	0	180	W	3	3	fair	mushy	- out of focus? ¢ Ry67 - 1PM★ @ 11½ mag.
3442	var near HVI 30 Cass	23h 46m	+56°	"	21:12	21:30	18	"	19	"	7			"			"	20	10	10	50	138	E	3	3	good	good	★ @ 16 mag.

R Number.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate. Brand	Plate. Emulsion	Developement Developer	Developement Time	Guiding Star Temp.	Guiding Star α	Guiding Star δ	Seeing Sep.	Seeing ⊙	Seeing Tel.	Quality Transp.	Quality Stead.	Quality Guider	Quality Plate	Remarks.
	β = +30°	1915.0	1915.0																									(285) meteor trail(?)
3443	λ = 40°	17h 39m.5	+46° 38'	July 6	16:28	18:36	120	24	24°	136				S30				9	10	39	355	E	3	3		good	⊙ for 1915. probably 2 uncatalogued s.f. neb. Truman.
	β = −30°																											possibly a couple?
3444	λ = 40°	21h 46m.8	+14° 56'	" "	19:13	21:13	120	"	22°	"	6			"			6	20°	9	9	33	160	E	3	3	good	good	⊙ " " 2nd Index Cat. 5144, and 5145 on edge. s.f. neb
3445	β = +30° λ = 0°	16h 51m.8	+13° 24'	" 7	16h 44m	18h 50m	120	"	30° 29°	131	4			"			2		9	10	30	40°	W	3	3	"	"	
	N.G.C. 6894	1917.0	1917.0																									
3446	Cygnus ring neb.	20h 13m.	+30° 18'.5	" 7	19h 39m	22h 5m	129	"	24°	134	6			"			5		10	10	22	16°	W	3	3	"	"	
	β = +30°	1915.0	1915.0																									
3447	λ = 20°	17h 18m 3s	+29° 46'	July 8	16h 32m	18h 40m	120m	"	20°	124	4			"			3m		9	10	22	273°	W					
	β = +30°	16h 18m 42s	1915.0																									
3448	λ = 340°	~~+15~~ h	-1 24	July 9	16:48	19:01	120	"	21°	133	4			"			3½		9	10	51	62°	W	3	3		stabbed	
	β = −30°	20h - 8m - 8s	1915.0																									
3449	λ = 340°	~~20~~ h	-29 36	"	19:37	21:07	90m	"	17°	131	6			"			5	"	10	10	19	99	W	2	1½	good	good	
	Harvard Field	1915.0	1915.0																									
3450	19h, +15°	19h 0m.8	+15° 1'.3	July 10	17h 21m	19h 28m	120m	"	27°	139	6	P.M.	W 12	C.S.J					6	12	28	28°	E					
	Search for	1915.0	1915.0																									Titania & Oberon 13m under best conditions - Barnard.
3451	unpicked cases	20h 2m 28s	-29° 6'	" 10	19h 57m	20h 21m	30m	"	19°	134	7			S 30					9	11	52	20°	E					
	Uranus	1855.0	1855.0				1m														385 35.0	243	E		Very bad			Images from 11" to 15" diam. Plates considerably
3452	3 trial exposures.	21h 21m 46	-16° 13'	" 17	20h 25m	20h 35m	2m 4m	"	27°	222	4			S 30			2		9	10	44	46	E					Diam of Uranus 3".5 fogged by
																												No certain indication of satellite. nearly full moon.
3453	Uranus.	"	"	" 17	21h 8m	21h 16m	8m	"	27°	222	4			S 30			2		9	10	48	248	E		Very			Image 19" diam
	Field of																											
3454	Small Neb.	16h 5m	+29° 54'	July 18	17:25	18:25	60m	"	27°	209	4			S30			4		9	7	25	129	W	3	4	Excell.	Excell.	Neb. are not clustered @ a score very small.
	Neb. indicated	1855.0	1855.0	1916																								6303 not to be found on plate. see plate 3469.
3455	N.G.C 6303	17h 5m.5	+68° 35'	July 20	17h 32m	21h 2m	199m	"	25°	216	4			"			2½		10	8	16	287	W		Good.			neb which may be cometary or spiral found.
		1855.0	1855.0	1916																								
3456	N.G.C 6310	17h 6m 10s	+61° 5'	July 21	17h 4m	20h 25m	181m	"	27°	221	6			"			4½		9	8	31	29°	W	Good	Good			6310 and 2 other small spirals on plate.
		1916.0	1916.0																									
3457	Uranus.	21h 24m.7	-15° 58'	July 21	21h 18m	21h 34m	15m	"	26°	214	7			"			4½		9	9	22	336	E	"	"			Oberon & Titania well shown.
3458	NGC 7115	21h 40m	-26° 17'	" 21	22:05	22:40	30m	"	27°	"	4			"			6		11	7	15	129	E	"	fair	good	fair	Neb very faint oval central nucl. star near edge.
3459	Uranus	21h 25m	-16°	" "	23:03	23:18	15m	"	"	"	8			"			3						W	"	"	"	good	Same as 3457 good relief on stereo.

R Fnumber.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Temp.	Guiding Star α	Guiding Star δ	Seeing Sept.	Seeing ⊙	Seeing Tel.	Quality Transp.	Quality Stead.	Quality Powder Plate	Remarks.
3460	N.G.C 6928	1920.0 20h29m	1920.0 +9°39'	July 24	19h21m	21h26m	120	24"	30°	208	4			Seed 30		[illegible]	33m	8	12	51	140°	W	Fair to Good	Good			6928 spiral. Another small spiral near by. Good filmy neb, like C960 and C992-995. About 15' long. Reserves longer exp. — 5h, any.
3461	N.G.C 6888	1915.0 20h9.3m	1915.0 +38°13'	July 25	18h40m	20h45m	120	24"	26°	219	4			"		"	4m	9.2	9.2	24½	28°	E	Good	Good			
3462	NGC 7280	22h22m	+16°	July 24	22:35	23:22	45	"	23°	208	6			"		"	5	8	14	35	155	W	3	1-2	good	fair	neb. small fairly bright round neb. around 3 stars. Reminds one of Pleiades Should have 5h exp.
3463	N.G.C 6914	1915.0 20h21m	1915.0 +42° 6'	July 27	19h30m	21h56m	140m	"	31°	215	4			"		"		9	8	20	204	W	Poor	Very Faint.			
3464	Trial for Fuches ⊕	23h 18m	-3° 35'	Aug 3	21:00	23:00	120m	"		212	6			"		e	15	10	8	15	215	W	2, 3	½	good	poor	clock bad no ⊕ certain.
3465	M. Barnard var. neb. Ic 1577	0h 40m	-8° 45'	"	23:27	0:22	50	"		"	4			"		"	"	13	7	0	170	W	3	2	good	poor	misscentred some neb. to one side 4 images of each star. Large neb object above side — probably defect.
3466	N.G.C 7008	1920.0 20h58.2m	1920.0 +54°14.2'	Aug 6	19h16m	21h21m	120m	"	30°	214	4			"		[illegible]		9	10	36	165°	E	Fair	Good		poor.	
3467	" 6729	18h55m	-37°	" 9	18:17	19:35	75	"		222	6	W 12		C99			4					W	3	1	good	poor	v. faint.
3468	Fuchs & Field	23h10m	-3°53'	" 9	20:17	21:47	90	"		"	4			S 30			6					W	"	3	"	"	focus off. trail in center?
3469	N.G.C 6303 Card under to time	1920 17h5m	1920 +68°28'	" 22	19h20m	21h26m	120m	"	18°	214	6			"			5	9	12	-6	159°	W	Good	Good			See plate 3455.
3470	var * in Sag.	18h20m	-11½°	" 22			15m	"	"	"	7			"			5					fair	fair	fair	fair	weak
3471	var * near H VI 30 Algol, Variable Cepheid	23h45m	+55½°	"	22:00	22:15	15m	"	"	"	4			"			"					3	2	good	good	
3472	NGC {273 274 275}	0h46m	-7°37'	"	23:09	0:09	60	"	"	"	6			"			"	11	8	40	203	E	2	2	"	"	274 & 275 connected.
3473	NGC 6729	18h55m	-37°	" 23	18:32	19:40	65	"		214	8			"			5	8	8	34	178	W	3	3	"	"	
3474	γ Cass	0h50m	+60°	"	20:05	20:35	30	"		"	6			"			"	12	10	5	142	E	"	"	"	"	var not ≤ 4m Visual focal setting 215 Best focus 211.
3475	Vega for focus.	18h34m	+38°40m	Sept 2	18h30m	18h40m	9 4up 15 end	"	19	215	7			"			3										Correction to vis. setting −4.
3476	Algol var. near H VI 30 Cass	23h48m	+55½°	" 15	22h16	22.31	15m	"		218	4			Gilfer								4	2	good	fair	algol bright.

Miss Gushee

(289)

R Number	Field	Position α	Position δ	Date ~~1915~~ 1916	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Development Developer	Development Time	Development Temp.	Guiding Star α	Guiding Star δ	Guiding Star Sep.	Guiding Star ⊙	Guiding Star Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks
3477	var near R Vulpec	21h	+23°30'	Sept 16			20	24			4			Graflex		Ec. ol.	15	+20°					W					Miss Gusher
3478	NGC 7752 7753	23h40m	+29°	"			30	"			7			"			"	"					E					Several nebelflecken on plate. 7753 "a spiral".
3479	" 7156	21h50m	+3°	" 19	20:05	21:05	60	"	+15°	118	4			S_{30}		C.	5	"	9	14	0	300	E	2	1-2	v.p.	f.st.h.	
3480	β = −30° λ = 80°	0h	+31°	" 19	21:53	23:08	75	"	+14.5°	"	7			"			"	"	9	10	25	156	E	"	"	p:	"	Two faint nebulae off center.
3481	M33	1h29m	+31°	" 19	23:33	0:51	50	"	+14°	"	8			"			"	"	11	15	15	119	E	3 0	"	"	"	clouds. - @ 35m effective exposure. # Ry8.
3482	NGC 296 (Card Inserted)	0h47m	+31°	" 23	3:55	4:55 (−20m)	40	·	+10°	222✓				"						40.2								stopped by dawn ~~[illegible]~~ ~~296~~ new neb. at @ 1m fo V.M.G.
	Mirror resilvered			Sept 29	- replaced		Sept. 30																					
3483	Vega for focus	18h34m	+38°40'	" 30			19.44p 30s each	24"	2(to	setting 232 to 214	4			S_{30}			"											V.M.G.
3484	N.G.C 2261	6h35m	+8°50'	Sept. 30	5:05	5:30	25m	"	+8°	220	9			"			"		10	10	0	218	E		poor			V.M.G.
3485	Jupiter	1h60m	+10°34'	Oct 15						217	5			"														A piece of smoked mica was inserted in front of the plate to cut off light of 4 in order to catch, if possible, 4's 5th satellite
3486	"	1h59m	+10°28'	" 17	24:56	1:4	8m	24"		220	5			S_{30}					10.5	10	29	222	E		"			A thicker layer of smoke on mica in 3486. V.M.G.
3487	Nova Persei	3h26m	+43°38'	" 21	1:20	2:20	60	"	+4.5	225	4			"		c			12.5	10.5	14	235	E		2-3			
3488	Nova Aurigae	5h27m	+30°23'	" 25	2:30	3:45	60	"	+2°	225	9			"					11	8.5	18	232	E		3			
3489	Hind's Nebula	4h17m	+19°19'	" 27	3:00	4:00	60	"	+5°	222				"					10	9.5	30	162	E	1	3			Sky Very misty. Stars grow dim. Miscentered Neb. on edge of plate - not visible. V.M.G.
3490	NGC.2261	6h35m	+8°50'	Oct. 31	3:00	3:10	10	"	+5°	221 (+3)				"					12	11	50	200	E					V.M.G.
3491	"	"	"	"	3:40	3:50	10	"	"	"				"					"	"	"	"	"		2-3			Same exposure repeated because plate 3490 was thought to be poor. V.M.G.
3492	"	"	"	"	3:55	4:15	20	"	"	"				"		k's			"	"	"	"	"		"			V.M.G.
3493	"	"	"	"	4:20	5:00	40	·		"				"					"	"	"	"	"		"			V.M.G.

R Fnumber.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developer	Time	Temp.	Guiding Star α	Guiding Star δ	Eyep.	⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Sunday	Quality Plate	Remarks.
				1916																							
3494	Jupiter	1h 50m	+9° 44′	Oct 31	0h 20m	0h 30m	10	24″	+5°	223				S30		Hydro C					E		2-3				4 was covered with smoked mica screen 4 satellites but no sign of 5th Image for 222 best focus. V.M.S.
3495	Focus plate on Barlieta	1h 50m	+20° 24′	Nov. 2			30s each	"		230 -220				Seafley		"					E		4 according to M. Barnard.				
3496	Jupiter	1h 49m	+9° 39′	Nov. 4	0h 25m	0h 32m	7	"		222				S30		"					E		3d 4th.	Satellites & star images better but 4 blurred mica screen. V.M.S.			
	Pleiades			" 14	23 46	23 56			17½	197		07															
					23 59	0 4																					
3497	RT Geminorum variable	19h 40m	+48° 32′	Nov. 16	1h 16m	1h 26m	10 20s	24″	-3c	225 225 222 to 219	9			S30		Hydro C	9	10	4	210	W		3				Tails on brighter images. bad guiding Variable at Max. Nov. 15. V.M.S.
3498	Pleiades			" 21		0 30	each			219 207				S Seafley							E						guided by P
3499	Focus plate on Aldebaran	4h 30m	+17°	Nov. 19			35s each	"		setting 230 to 216				S30		"											Best image at 224 V.M.S.
3500	Hind's Variable Neb.	4h 14m	+19° 11′	"			40m	"	+3°	220	8			"		"		10	6	17	245	E					V.M.S.
3501	N.G.C. 1642	4h 39m	+0° 27′	"	6h 30m	7h 30m	60m	"	+2°	"	9			"		"		12	12	17	245	W					Fogged - plateholder exposed to day-light V.M.S.
3502	Pleiades	21 2m	+24	Nov. 21	1 30	1 35	5m	17½″	+0.2	K.F. 218 222	8	P7	—	Seed gra				10	10		E						guided by P
3503	"			" "	1 50 15	1 55 25	5m	"		218 222	6	Fisse	—	"		"		"	"	31	E						" " F
				" "	2 1 30	2 6 30	5m					P7				"		"	"	30							" " F
				" "	2 11 30	2 16 30	5m					P7				"		"	"	29							" " P
3504	Pleiades			" "	2 22 45	2 29 45	5m			218 219	4	P7	W12	C.D.		"		"	"	29	E						" " P
					2 32 7															30							" " F
3505	Field of Metcalf's Comet.	23h 37m	+16° 42′	Nov. 24	4h 35m	5h 5m	30m	24″	-7°	220	8			S30							W						V.M.S.

R Number	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developer	Dev. Time	Dev. Temp.	Guiding Star α	Guiding Star δ	Sep.	⊙	Tel.	Seeing Transp.	Seeing Stead.	Quality Guide	Quality Plate	Remarks
				1916 Nov. 29					+5	226																		
3506	Polaris			"			15^s each	24"	+4.1	212 ~~212~~	8																	Focus plate on Polaris 225, 22, 19, 16, 13, 10, 207
3507	Pole			"	0 40	1 10	30	17½	+3.1	216	7	–	–	Seed 30	1605													Floating clouds. {Plate fogged by desk lamp
3508	Field for Metcalf's Comet	$3^h 35^m$	+13°.7	Nov. 30	23 46	0 36	45	24	3.4	223	8			S_{30}	"				10½	10½	25	235	E	poor				Focus on α Arietis. hr. L 3^h E Fogged by moon-light V.M.G.
				Dec. 1					6 +5.4																			
3509	{Pole}			Dec. 1	0 30	1 0	30			213		–	W 12	C.W.	9167													
					1 3	1 33	30				P7	"		"														
	Kap. 23	3 40	+45°		2 51	3 21	30			220 / 221		–	"	"							33							guided on a
3510	Search for Metcalf's Comet	$3^h 34^m$	+12°.9	Dec 1	$8^h 6^m$	$8^h 46$	40		+2½		8			S_{30}	16050								W	n'		poor	–	Very faint guidingstar. Focus ⊙ at 223 V.M.G.
	Clock weights at 19 – too fast – moved to 18																											
3511	Venus	$14^h 30^m$	−12°47'	Dec. 4	10:49	11:03	14	24"	+4.4	213				S_{30}	16057								E					Focus on Spica at $10^h 15^m$ S.T. } Guided on ♀ thru plate V.M.G.
3512	Search for Comet	$3^h 23^m$	+13°56'	" 5	1:34	1:58	20	"	+4.8	221	7			"	"				10	11	16	180	E					" " Aldebaran at $0^h 50^m$ S.T.
3513	"	3 39	+13.8	" 5	3:00	3:20	20	"	"	"	7			"	"								E					{Wrong field. {Moon 11 dys. old & near exposed field V.M.G.
3514	"	3 23	+13°56'	" 5	3:50	4:18	20	"	"	"	8			"	"				6	9	1	228	E					Duplicate exp. of 3512 V.M.G.
3515	S.W. of 3512			" 5	6:3	6:23	20		+2.2	219	7								9	5	20	208	W				v. poor	Focus on Aldebaran at $5^h 30^m$ S.T. V.M.G.
~~3516~~	~~N.E. of 3512~~			" 5			20												~~9~~	~~12~~	~~26~~	~~171½~~	~~W~~					No guiding star bright enough to use.
3516	S.W. of 3512			" 5			20												11	7	27	210	W				v. poor	Duplicate exp. of 3515 – very poor V.M.G. Clock running slow. Set at 20 V.M.G.

R Fnumber.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time in min.	Aperture	Temp.	Focus	Plate Holder	Filter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Developement Temp.	Guiding Star α	Guiding Star δ	Guiding Star Sept.	Guiding Star ⊙	Guiding Star Tel.	Seeing Transp.	Seeing Stead.	Quality Guider	Quality Plate	Remarks.
				1916																							
3517	Venus	$14^h 35^m$	$-13° 10'$	Dec. 5	10:50	11:05	15	24	+22	219	5																Double Exp. Plate had been exposed for 2 or 3 min. on larger field. Guided on star V.M.G.
3518	M33 Tri-angulum	$1^h 28^m$	$+30° 1$	" 9	2:15	6:40	240	"	$-4°6°$	$222\frac{1}{2}$	4	W 12	C 99								9	9	17	219	W		Plate fogged by moon-light. Nebula very faint. Only nucleous visible. V.M.G.
					9 49	10																					
				" 13			10 =		-11.6	$\frac{224}{225}$	4	W 12	C 99	92 1/2													
3519	Pole										P 7																Knife edge focus, zenith 221 Polaris 224

295

R Fnumber.	Field	Position α	Position δ	Date 1915	Sidereal Time Begin	Sidereal Time End	Exp. Time	Aperture	Temp.	Focus	Plate Hold.	Filter	Color Filter	Plate Brand	Plate Emulsion	Developement Developer	Developement Time	Temp.	Guiding Star α	Guiding Star δ	Seeing	Quality	Tel.	Transp.	Stead.	Cloud	Plate	Remarks.

2½ turns of screw corrects error in o.a. corresp. to drift of 1 radius of g.c. per hour.

Azimuth Test

1916	δ	H	Begin	End	T	Telescope direction	Telescope drifts in T	Telescope drifts in 1 hr	Need of Axis too far	Col
Nov. 29	+45°	+0 4	20h 41	21h 11m	30	S	0.04	0.08	W	70°
"	+9° 40	−0 5	21 35	22 50	75m	N	0.07	0.06	E	45°
"	+31	−0 25	23 6	23 26	20	N	0.01±	0.0	~~W~~ E	—
Dec. 1	+89°	+0 15	13 13	14 12	59	N	?	0.01±	W	—
Dec. 5	+38°	−0 26	18h 8m	18h 53m	45	—	0.00	0.00	—	—
Dec. 13	+78	−0 29	7h 0m	7 40	40	S	0.01	0.015	W	—
"	"	"	7 0	8 4	60	—	—	—	—	—

1917 Jan. 6 Vega +38.7 −1 50 16 45 Clock gaining 1 ball at 20, one at 30 Salt

3 turns etc.

Attitude Test

315

1916	δ	H	Begin	End	T	Telescope direction	Telescope drifts in T	Telescope drifts in 1 hr	Axis too	Col
			h m							
Nov. 29	+88°.8	−6h 20m	19 15							
" 29	+88°.8	−6 20	19 15	19 50	35m	S	0.02½	0.05-	high	60°
" "	"	−5 25	20 0	20 15	15	S		0.01±		10°
Dec. 1	+38.7	−4 0	14 32	15 27	55	N	0.02	0.02±	low	
" "	+88.°8	−5 33	18 45	19 20	35	N	0.015	0.03±	low	30
" "	"	−6h 0m	19 26	19 56	30	S	0.05	0.10	high	30°
" "	"	−5 10	20 20	20 36	16	—	—	—	—	—
" 11	"	−6 20	19 10	19 50	40	N	0.05	0.08	low	45°
" "	"	−6 20	20 0	20 35	35	S	0.025	0.05-	high	
" 13	on dust spec. +88.8	−5 55	1 51 19 34	2 14	23	S	0.03-4	0.08±	high	25°
" "		−5 24	2 24	Driving clock Tope.						
" "	on arms +82° 11	+5 43	5 1 22 30	6 1	60	N	0.03	0.03	high	10°±
" "	+84°	+5 30	6 13	6 53	40	—	—	—	—	—

In 1915 -

284 Plates Total Exposure $378^h 53^m$ Av. Exp = $7^m 3.2$

Mirrors resilvered 3 times. { April 30 / Aug 10 / Nov 25

Plates of some sort taken on 126 nights

Av 2.3 plates
$= 2^h 46^m$ per night

Jan 5	July 14
Feb 5	Aug 14
Mar 10	Sep 11
Apr 12	Oct 14
May 11	Nov 11
June 13	Dec 2

In Oct - 49 plates $54^h 11^m$ exp.

Diameter of finding eye piece $28' \pm$

" " guiding " " $56'' \pm$ (Grubbs)

Scale of 24" plates

1 inch = $37\frac{1}{3}'$ $\quad 1^{mm} = 87''.4$

Focus by Knife Edge 1916, Nov. 21

α	δ	Temp.	Star	Focus
$4^h 55^m$	$+38^\circ\frac{1}{2}$	$+1^\circ.9$	Vega	218

Slow motion motor switch { left = east
right = west

Nov. 28, 1916 Diam of field lens of eye piece $\frac{15}{16}''$.