

Original Record Books of Tikhov Exp.
with Bruce. These have now been
entered into TV series, but all data
is not there.
(WPB.)



No	Date	star	α	S	PH	Sidereal Time		Exp	sky	Obs.				
						Begin	End							
H 1	June 1931 15/19	γ Cygni	20 10	+40°		15 ^h		1 ^{mm} 2 ^{mm} 5 ^{mm} 3 ^{mm}	1-2 1	Hgn Hgn Hgn	11, 13, 15 13? 13?	E ^{Super} pandoro press.	Fro 11, 1 ^{mm} , 13, 2 ^{mm} , 15, 3 ^{mm} 7" diaphragm Lightning, Thunderstorm near. 7" diaphragm Destroyed. 7" diaphragm. No plate #4	
H 2	"	γ Cygni	20 4	+40°		16	5 16	8					"	"
H 3	June 19/20	γ Cygni	20 20	+45°		16	55						"	"
H 5	June 19/20		17 55	-22°	old	18	08 18	18 10		3	0'K	13	"	"
H 6	"	μ Cep.	21 ^h 50 ^{mm}	+57°	"	18	40 18	57 10 2		3	0'K	13	"	"
H 7	"		19 ^h 50 ^{mm}	+1.5	"	20	19 20	34 10 2		3	0'K	13	"	"
H 8	July 12/13		18 ^h 10 ^{mm}	-18°	7	18	05 18	21 11		2	0'K	13	"	sl. hazy 7" diaphragm supported on Al. sticks
H 9	"		19 ^h 45	+26°	7	21	17 21	30 11		2+	0'K	13	"	"
H 10	"		19 ^h 58	+31°	8	21	35 21	48 11		2+	0'K	13	"	"
H 11	July 19/20		18	20	-24°	7	17 17	38 22	10 ^{mm} 15 ^{mm}	2	0'K	13	"	sl. haze, 7" diaphragm For Morgan
H 12	"		19	7	+9°	8	19 25	19 26	10 ^{mm} 11 ^{mm}	2	0'K	13	"	I interrupted by clouds
H 13	"		19	15	+14°	7	20 31	20 41	10 ^{mm} 11 ^{mm}	2	0'K	13	"	Second exposure super-posed.
H 14	"		19	25	+17°	8	20 42	20 42	10 ^{mm} 11 ^{mm}	2	0'K	13	"	Anvora
H 15	"		19	35	+22°	7	21 21	21 21	10 ^{mm} 11 ^{mm}	3	0'K	13	"	"
H 16	"		19	45	+26°	8	21 45	21 55	10 ^{mm} 11 ^{mm}	2	0'K	13	"	"
H 17	"		19	58	+31°	8	22 19	22 24	10 ^{mm} 11 ^{mm}	2	0'K	13	"	"
H 18	"		20	35	+38°	8	22 34	22 53	10 ^{mm} 11 ^{mm}	2	0'K	17	"	"
H 19	July 20/21		18	18	-13°	8	17 50	17 52	10 ^{mm} 11 ^{mm}	3	0'K	13	"	7" diaphragm
H 20	"		18	18	-18°	7	18 20	18 47	10 ^{mm} 11 ^{mm}	3	0'K	13	"	"
H 21	Aug 4/5		18	30	-9°	7	18 47	18 48.5	10 ^{mm} 11 ^{mm}	2+	0'K	13	"	Moon rising
H 22	Aug 14/5		18	40	-4°	8	18 22	18 33	10 ^{mm} 11 ^{mm}	2	0'K	13	"	"
H 23	"		18	45	0	7	18 37	18 42	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 24	"		18	52	+5	8	18 54	19 04	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 25	Spt 10/11	HD 178849	19	7	+34° 6	7	19 22	19 40	7 ^{mm} 10 ^{mm}	3	0'K	"	"	Moon 1/2. & Plate upside down
H 26	Spt 20/21	BD +31° 6	20	43	+31° 6	3	19 50	19 57	7 ^{mm} 10 ^{mm}	3	0'K	13	"	Moon 1/2
H 27	Spt 20/21	BD +31° 6	20	43	+31° 6	4	20 12	20 19	7 ^{mm} 10 ^{mm}	3	0'K	13	"	Shutter sticks & super exp.
H 28	Nov 4/5		19	58	+21°	3	22 53	23 27	10 ^{mm} 11 ^{mm}	2	0'K	1	"	"
H 29	"		3 ^h 20	+57°	4	20 21	20 39	20 42	10 ^{mm} 11 ^{mm}	2	0'K	"	"	clds in W.
H 30	"		21 ^h 45	+55°	3	21 30	21 39	21 42	10 ^{mm} 11 ^{mm}	3	0'K	"	"	"
H 31	Nov. 7/8	γ Ori	5 55	+20°	3	19 08	19 08.5	19 09	10 ^{mm} 11 ^{mm}	3	0'K	"	"	Moon up. Sky bright
H 32	Nov 8/01		6 10	+18°	4	19 52	19 55	19 55	10 ^{mm} 11 ^{mm}	3	0'K	"	"	Hazy at else
H 33	Nov 13/14		20 25	+38°	3	11 25	11 2	11 0	10 ^{mm} 11 ^{mm}	2	0'K	"	"	Wrong position
H 34	"		22 40	+43°	3	22 22.5	22 5	22 12	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 35	"		22 55	+60°	4	22 15	22 15	22 12	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 36	"		5 25	+35°	3	4 50	4 22	4 25	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 37	"		5 35	+31°	4	4 30	4 30	4 30	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"
H 38	"		5 45	+27°	3	4 30	4 27	4 27	10 ^{mm} 11 ^{mm}	2	0'K	"	"	"

11, 13, 15
E^{Super} pandoro press.
Fro 11, 1^{mm}, 13, 2^{mm}, 15, 3^{mm} 7" diaphragm
Lightning, Thunderstorm near. 7" diaphragm
Destroyed. 7" diaphragm.
No plate #4
sl. hazy 7" diaphragm supported on Al. sticks
sl. haze, 7" diaphragm For Morgan
Second exposure super-posed.
Anvora
7" diaphragm
Moon rising
Moon 1/2. & Plate upside down
Moon 1/2
Shutter sticks & super exp.
clds in W.
Moon up. Sky bright
Hazy at else
Wrong position

No	Date	star	α	δ	PH	Sidereal Time		Exp	sky	Obs.
						Begin	End			
38	Nov 13/14	—	6 ^h 15	+15°	4	22 30	01 30	10m	3	O/K
39	Nov. 14/15	—	20 40	+43	3	22 30	01 30	10m	32	O/K
40	"	—	20 58	+47°	4	00	00	10m	2	O/K
41	"	—	21 20	+56°	3	00	00	10m	2	O/K
42	"	—	23 25	+62°	4	1 1	1 1	10m	2	O/K
43	"	—	0 0	+63	3	1 1	1 1	10m	3	O/K
44	Nov 16/17	—	0 45	+64°	3	22 22	22 22	10m	3	O/K
45	"	—	1 30	+63°	4	22 22	22 22	10m	33	O/K
46	"	—	2 15	+62°	3	22 22	22 22	10m	3	O/K
47	"	—	2 50	+59	4	22 22	22 22	10m	43	O/K
48	"	—	3 20	+57°	3	22 22	22 22	10m	3	O/K
49	"	—	3 50	+55°	4	22 22	22 22	10m	33	O/K
50	"	—	4 15	+51°	3	0 0	0 0	10m	2	O/K
51	"	—	4 30	+47°	4	0 0	0 0	10m	2	O/K
52	"	—	4 50	+44°	3	0 0	0 0	10m	3	O/K
53	"	—	5 10	+39°	4	0 0	0 0	10m	3	O/K
54	"	—	6 30	+90	3	0 0	0 0	10m	3	O/K
55	<hr/>									
55	Dec 15/16	—	5 45	+25°	3	0 0	0 0	10m	2	O/K
56	"	—	7 35	-22°	4	0 0	0 0	10m	2	O/K
57	Dec 16/17	—	6 30	-10°	33	0 0	0 0	10m	3	O/K
58	"	—	6 30	+10°	4	0 0	0 0	10m	3	O/K
59	"	—	6 40	+5°	3	0 0	0 0	10m	33	O/K
60	"	—	6 50	0°	4	0 0	0 0	10m	3	O/K
61	Jan 3/4	—	6 55	-5°	3	0 0	0 0	10m	4	O/K
62	"	—	7 15	-9	4	0 0	0 0	10m	4	O/K
63	"	—	7 10	-14	3	0 0	0 0	10m	4	O/K
64	Mar 8/9	RCrB	15 46	+28°	4	14 15	15 15	20m	4	O/K
65	May 3/4	RCrB	"	"	3					

13	E. Super Pachino Press	7' dupluregion S
13	"	sl. tharg
"	"	"
"	"	motor at 9:12 CST.
"	"	"
"	"	"
"	"	slide sticks Moon up.
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	"
"	"	Wray region
"	"	slide not drawn.
"	"	"
"	"	olds in Wat beginning
"	"	Nata Pillsy Way Field
"	"	"
"	"	"
"	"	"
"	"	Night very bright
"	"	"
"	"	Motor stuck.
"	"	"
"	"	slide sticks

NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T	OBS	EMULSION	DEVELOPMENT			DIAPHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS.
					BEGIN UT	END UT	DURATION					KIND	TIME	TEMP					
K 33		1		JUNE 26 1946			2h 50m	3	VB	103E	D19	3m	70°	8"	4	8	10"	PLATE HOLDER 4. 8" DIAPHR. 8" DIAPHR. TIKHOV	
K 33		2		JUNE 26			5h 00.	3	VB	103E	D19	3m	70°	8"	3	16	"	" 8" diaph. 3.	
K 33		3		JULY 2 46	15h 15m	15h 20m	5m		VB	103E	"	"	70°	6"	3	13	"	3 day old moon 3° from horizon 6" diaph.	
"		"		"	15h 21m	15h 36m	15m		"	"	"	"	"	"	11	13	"	6" Diaph.	
22 Cygn.		"		"	17h 12m	17h 17m	5m		"	"	"	"	"	"	11	13	"	DOTS ON 15 min exp. of 22 Cygn. are 88 exposures of a few seconds made by mistake: ⊙ ⊙	
"		"		"	16h 56m	17h 11m	15m		"	"	"	"	"	"	11	13	"	"	
"		"		"	17h 18	17h 21	3m		"	"	"	"	"	"	11	8	"	"	
K 33		4		"	15h 37m	16h 12m	35m		"	"	"	"	"	"	4	13	"	"	
22 Cyg		"		"	16h 15m	16h 50m	35m		"	"	"	"	"	"	"	13	"	"	
"		"		"	16h 51m	16h 53m	2 1/2 m		"	"	"	"	"	"	"	13	"	"	
BD 17°3986		5		"			10m		"	"	"	2 1/2	72°	"	4*	13	"	WRONG REGION OBTAINED BY MISTAKE. TOOK W.H.A. INSTEAD OF E.	
"		"		"			20m		"	"	"	"	"	"	"	13	"	"	
BD 34°3820		6		"			20m		"	"	"	"	"	"	5*	13	"	"	
BD 41°3931		"		"			20m		"	"	"	"	"	"	"	13	"	"	
"		"		"			2m		"	"	"	"	"	"	"	8	"	"	
22 Cygn		"		"			2m		"	"	"	"	"	"	"	13	"	"	
"		"		"			5m		"	"	"	"	"	"	"	13	"	"	
"		"		"			20m		"	"	"	"	"	"	"	13	"	"	
L Cas	3	7	Thu Fri	July 11/12	Sid. T. 20:14		3m	4	Den						3	16	10"	8" Telescope moved 22 turned RA over	

* PLATE HOLDER NOT
ASSIGNED TO BRUCE
BOOK WENT FROM MISS
VANDERBILT (40" PROGRAM)

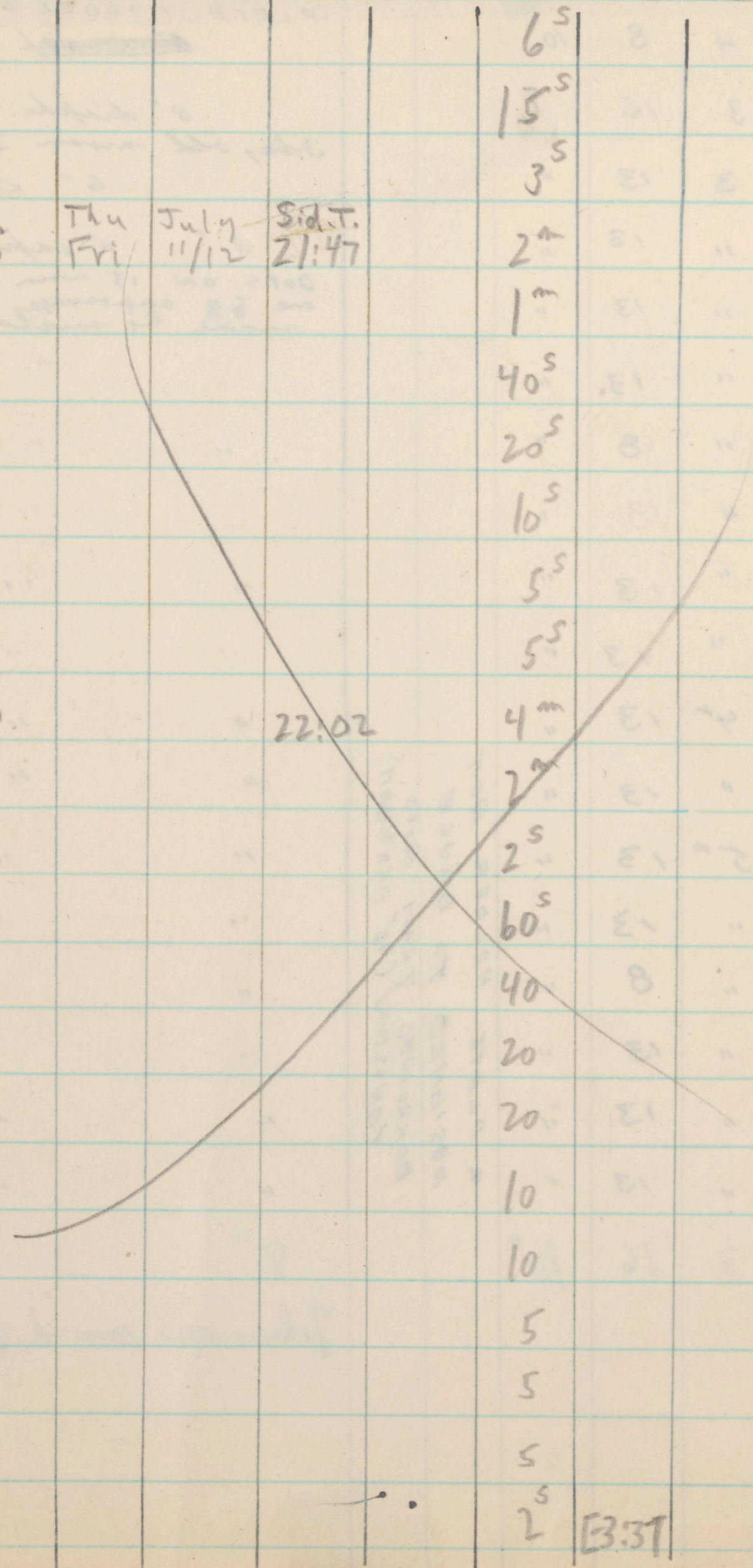
NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T S	OBS	EMULSION	DEVELOPMENT			DIR.PHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS
					BEGIN S/T	END H/T	DURATION					KIND	TIME	TEMP					

L Cas 8 Thu July Sid.T. 21:47
 Fri 11/12

103-E

Files, moved 24 turns / screw

1:55, +74 " 22.02



6^s
 15^s
 3^s
 2^m
 1^m
 40^s
 20^s
 10^s
 5^s
 5^s
 4^m
 2^m
 2^s
 2^s
 60^s
 40
 20
 20
 10
 10
 5
 5
 5
 5^s
 2 [3:37]

NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T	OBS	EMULSION	DEVELOPMENT			DIPHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS.	
					BEGIN CUT	END UT	DURATION					KIND	TEMP	TEMP						
K 33		9	MON	22/Jul	0400	0420	20	427W	3	2	1B	103ae	219	32	70°	6"	3	13	10"	clouds obscured part of exposure.
22 Cygn		10	"	"	0430	0440	10	18E	"	"	"	"	"	4	"	"	4	"	"	same as above
BD-19°4357 (253)	0	11	FRI	26/Jul	0334	0339	5	147W	1	3	"	103ae	"	"	"	"	3	13	10"	aurora borealis interfering exposure made during fainting spells of aurora
	1/8"	"	"	"	0342	0352	10	25W	"	"	"	"	"	"	"	"	"	"	"	plate holder moved 1/8".
BD-19°4953 (557)	0	12	FRI	AUG 2/3	sid 1900	sid 1910	10	55W	"	"	"	"	"	"	"	"	3	"	"	
"	3/8"	"	"	"	1912	1915	3	59W	1	2	"	"	"	"	"	"	"	"	"	
22 Cyg	0	13	"	"	1918	1930	2	19E	1	2	"	"	"	"	"	"	4	"	"	This set has nebulous stars exposed at same zenith distance as 22 Cygnus field. ○○○ 22 cygn ○○○ 39° 4209
"	1/8"	"	"	"	1931	1935	4	"	1	12	"	"	"	"	"	"	"	"	"	
"	1/4"	"	"	"	1936	1949	8	5E	1	12	"	"	"	"	"	"	"	"	"	
BD 39°4209 (811)	0	"	"	"	1952	1957	5	250E	1	12	"	"	"	"	"	"	"	"	"	
"	1/8"	"	"	"	1959	2009	10	"	"	"	"	"	"	"	"	"	"	"	"	
22 Cygnus	0	13	"	"	UT 0615	0630	15	126	1	11	"	"	"	"	"	"	3	13	"	groups tied in time. ○○○ 39° 4206
"	1/8"	"	"	"	0631	0636	5	132	1	11	"	"	"	"	"	"	3	"	"	
BD 39°4206 (809)	1/8"	"	"	"	0640:15	0655:15	15	121	1	11	"	"	"	"	"	"	"	"	"	
"	1/4"	"	"	"	0658:0	0703	5	126	1	11	"	"	"	"	"	"	"	"	"	
"	0	"	"	"			2	"	1	11	"	"	"	"	"	"	"	8	"	
22 Cygn	0	14	"	"	0726	0742	16	3438	1	11	"	"	"	"	"	"	4	"	"	
"	1/8"	"	"	"	0743	0747	5	343	"	"	"	"	"	"	"	"	"	"	"	

→ identification

NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T S	OBS	EMULSION	DEVELOPMENT			DIAPHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS
					BEGIN S/T	END UT	DURATION					KIND	TEMP	TEMP					
-10° 47' 13"		0	15	TUES WED	AUG 7/8	SIDT 1938	1 ^m			BL	103A-E			6"	3	13	10"	10 min of lat separation between exposures. mistake made in sign of lat - is $\alpha = \sim 18^h 24^m$ $\delta = \sim 11.5$	
605 w.							2 ^m			"				"	"	"	"		
"							4 ^m			"				"	"	"	"		
"							6 ^m W 1/25 ^m			"				"	"	"	"		
17° 39' 86"		0	16	"	"	2014	2030	20 ^m 1/25 ^m						"	4	"	"	} tied in zenith distance.	
(720) 22 Cy		0	"	"	"	2132	2147	15 ^m W 155											
22 Cyg		0	17	"	"	2050	2105	15 ^m 1/10 ^m						"	3	"	"	} tied in zenith distance	
41° 37' 31"		0	"	"	"	2110	2125	15 ^m 55 ^m						"	"	"	"		
2 Aquila		0	C1	THU FRI	AUG 8/9	SIDT 1830	1 ^m			Co BL				"	5	"	"	} Moonlight, 3/4 @ 30° W from 2 Aquila. Motion between exposures, @ 12-14 minutes of declination.	
"		"	"	"	"	"	2 ^m			"				"	"	"	"		
"		"	"	"	"	1835	4 ^m 1/50 ^m			"				"	"	"	"		
8 Cep.		"	C2	"	"	SIDT 1858	30 ^s			Co BL				"	6	"	"		
"		"	"	"	"	"	1 ^m			"				"	"	"	"		
"		"	"	"	"	1903	2 ^m 352 ^m			"				"	"	"	"		
22 Cyg		"	18	"	"	1910	1920	10 ^m		BL								} + 38° 38' 36" in center " 8 ^m E of " " "A" " 6 ^m E of " " "B" " 4 ^m E of " " "C"	
						1923	1933	10 ^m		"									
						1946	203			"									
						2005	25			"									

clouds

NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T	OBS	EMULSION	DEVELOPMENT			DIAPHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS
					BEGIN SHUT	END IT	DURATION					KIND	TIME	TEMP					
220y	1	18	BPT SUN.	AUG 17	2047	2057	10 ⁰⁰	12 ³⁰		BH	103aE				6"	3	13	10"	very nice & transparent
	2	"			2059	2109	10 ⁰⁰	12 ¹⁵											#1 centered at XX 4 ^m +38 ⁰
	3	"			212	2122	10 ⁰⁰	12 ⁰⁵			20 33								#2 " " XX 0 ^m +38 ⁰
	4	"			21710	21376	10 ⁰⁰	12 ⁰⁰			19 50								#3 " " XIX 56 ^m +38 ⁰
	5	"			21426	2152	10 ⁰⁰	20			43								#4 " " XIX 52 ^m +38 ⁰
	6	"			2157 ^m 20 ^s	2207 20 ^s	10 ⁰⁰	10 ^m E											#5 " " XIX 48 ^m "
	7	"																	#6 " " XIX 44 " "
																			major use at 2200, very white moon, (no reddening)!!
																			before exp #4 draft was accidentally moved, then centered
7 Ag	0 ^m	C3	Sun	Aug 18	0 ^h 20 ^m		.5 ^m		3	Co	E103aF								
"	2 ^m	"	"	"	0 ^h 22 ^m	0 ^h 23 ^m	1 ^m		"	"	"								
"	1 ^{Dec}	"	"	"	2 ^h 01 ^m		.5 ^m		"	"	"								
"	2 ^{Dec}	"	"	"	2 ^h 02 ^m	2 ^h 03 ^m	1 ^m		"	"	"								
B Delft	1	19		AUG 22/23			30 ^{sec}			VB				No	3	8	6"		Focus plate for
	2	"					"												6" camera
	3	"					"												30 sec exp
	4	"					"												
	5	"					"												
	6	"					"												
	7	"					"												
	8	"					"												
	9	"					"												
	10	"					"												

Focus PLATE

Focus plate for 6" camera 30 sec exp

NAME	PH	No	DAY	DATE	EXPOSURE			H.A. AT END	T S	OBS	EMULSION	DEVELOPMENT			DIAPHR.	PLATE HOLDER	FOCUS	CAMERA	REMARKS.
					BEGIN S/T	END UT	DURATION					KIND	TIME	TEMP					
B Del		19		Aug 22															
AC Her	1	C4		Wed Thur	800	900	1h		4	2 Co E1032 E				2 1/2"	3	17	6		
AC Her.	1	C5		Thur Fri	740	750	10m		4	2 Co E1032 E				6"	6	13	10"		
"	2	"	"	"	753	813	20m			" "				"	6	"	"		
hans X Paris	3		"	"	11:00	11:25	25m		4	2 Bi-co E103a-E				"	3	"	"		
Præsepe	1	1947		Fri Sat	8:44	8:46	2m		2	2 Bi-Chem E103a-E				6"	3	"	"		
"	2		"	"	8:49	8:57	8m ~4w		2	Bi-Chem "				6"	4	"	"		
Nova	1			Thi/Sat	8:05-8	8:15 U.T.			γ	Chem E 103 a E				6"		"	"		
Nova	2				18:15	18:25 ST			γ	Chem E 103 a E				6"		"	"		
Nova	3			Mon/Tue	209 CST-2:29		~0.30 W		γ	Chem E 103 a E				6"	4	"	"		
"	4			"	2:35 CST-2:50		0.50 W		γ	" E 103 a E				6"	3	"	"		

Trouse with plateholder
 Brilliant aurora in northern sky; wow!
 " " " " "
 clouded over during exposure.

EXPOSURE

H.A.
AT
END

T

S

OBS

EMULSION

DEVELOPMENT

KIND TIME TEMP

DIAPHR.

PLATE
HOLDER

FOCUS

CAMERA

REMARKS.

BEGIN END DURATION
CUT IT

DATE

DAY

NO.

NO.

4

