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3

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

Transparency Conditions

4 6

Room Temp.

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
						DAVID DUMAR OBSERVATORY	
						14" LOGBOOK	
						VOL 50	
						PLATE NOS 41460 - 41671	
						AUG 1964 - JUNE 1973	

Date..... Observer..... Julian Day.....

Dome Temp.

Focus

Double Temp.

[illegible]

Hour	Angle	End
1	10	10
2	20	20
3	30	30
4	40	40
5	50	50
6	60	60
7	70	70
8	80	80
9	90	90
10	100	100
11	110	110
12	120	120
13	130	130
14	140	140
15	150	150
16	160	160
17	170	170
18	180	180
19	190	190
20	200	200
21	210	210
22	220	220
23	230	230
24	240	240
25	250	250
26	260	260
27	270	270
28	280	280
29	290	290
30	300	300
31	310	310
32	320	320
33	330	330
34	340	340
35	350	350
36	360	360

Focus

Dome Temp.

[illegible]

7

Dome Temp.

Focus

Dome Temp.

How Angle
End

Transparency Conditions

8

Dome Temp.

[illegible]

Date..... Observer..... Julian Day.....

[illegible]

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

Transparency Conditions

Dome Temp.

P.H.

[illegible]

Log for 72in f.l. Aerial Camera

Date *Thurs Fri Aug 1964* Observer *Coy, Fl* Julian Day

[illegible]

Dome Temp.

Transparency Conditions Good.

12

Ending Time E.S.T.	P.M.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
end here		seen	the	instrument	to	find	instrumental	pole	

Date Sat-Sun Aug 1964 Observer Cy, FL Julian Day

[illegible]

Dome Temp.

Focus

Dome Temp.

Transparency Conditions *Excellent*

Ending Time
EST.

P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

REMARKS

Quality

frills

random

star trailed slightly

Date Mon / Tues Aug 31 - Sept 1, 1964 Observer C. F. L. Julian Day _____

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
	Focus Test				using knife edge + yellow filter					
27	Milky Way				(guided on Altair) 103aE yellow filter (min)					
28	Focus Test				103aE red filter					
29	Pleiades (guided)				103aE " " 3 min					
Took drive apart and discovered backlash in roller wheel and friction in differential gear.										

Dome Temp. _____

Focus _____

Dome Temp. _____

Hour Angle
End

17

Date Tues/Wed Sept 1/2 1964 Observer Con Julian Day (MR)

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
30	Focus plate Cygnus			Focus	103aD	K3	54°F	~ 21 ⁴ EST		1
31	Milky Way	guide star Albireo			"	"		21:35	21:50	✓
32	Focus plate	"			103aO	None		~ 22:30		1
33	M 31			70	103aO	None		23:20	23:29	1
One of sets of planetary glass was removed for this night. Guiding quite good although small cumulative error of about 1/2 to 1 sec evident. Cannot guide in dec.										

Dome Temp. —

Focus —

Dome Temp. —

Hour Angle
End

Date *Wed/Thurs Sept 2/3 1964* Observer *C, El* Julian Day.

[illegible]

Date Wed-Thurs Sept 30-Oct 1 1964 Observer CA Julian Day 19640930.5

[illegible]

Date Wed. June 20 14-15 1968 Observer Con Julian Day 2455010.5

[illegible]

Dome Temp.

Transparency Conditions

good
1/4 moon

Focus

Dome Temp.

Ending Time
E.S.T.

P.E.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

REMARKS

Quality

49

49 - should be 58

Date *Mon + Tues Oct 26-27, 1964* Observer *CR* Julian Day

[illegible]

Dome Temp.

Hour Angle
End

Dome Temp.

Transparency Conditions *Page - 1 cloud* *26*

Ending Time E.S.T.	P.E.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
			<i>Jaws</i>						
			35	double space	40, 45		80	best? 70-80?	
73 35			65	00				windy!	
								Jaws should be 80 (MR)	

Date Nov 30-31 Martin 1964 Observer CR Julian Day 175

[illegible]

Dome Temp.

Focus

Dome Temp.

Transparency Conditions

Good - frost crystals in air 28
No moon

Ending Time
EST.

P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

REMARKS

Quality

65 60 55 50 45 40 35 30 25 spread 10 turns in dec
10 air exposures Best ~ 80?
65 70 75 80 85 90 95 0 5 11 Best 80

Probably out of focus - plates much thinner mag = 15 Focus OK

Had trouble with guiding eyepiece - wouldn't focus
at 80. Should be moved further from camera back.

Feb, 1965 New camera back installed complete with
- movable guiding eyepiece etc

9095
365
130

Date April May 28-29 1965 Observer Cn, Fl Julian Day 171

[illegible]

Dome Temp.

Focus

Dome Temp.

Transparency Conditions ^{high,} occasional cloud.

30

Ending Time
E.S.T.

P.M.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

REMARKS

Quality

Focus 10

00

^{14.1} Pluets early seen, mag. limit 15.25

20 15 10 5 0

.95

10 m each.

10 best

(42° E 9 S (Jan 4))

31

April
Date May 29-30 1965 Observer Cm Julian Day _____

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
- 46	Pluto			8X10	2a0			21:00	21:30	
- 47	Pluto	11 ^h 23	19° 47	8X10	2a0			23:55	00:25	
April <u>May 30-31</u> 1965										
- 48	Pluto			8X10	2a0	^{no} filter		21:05	21:35	
May 31 - 1 1965 sd										
49	Super Nova	12 38	0 18	8X10		"		22:0		
June 3-4 1965 sd										
49	Super Nova	(1860) 12 38	(1860) 0 18	8X10	Photometric night Supra Panchro 2000 Focus 10			21 25	21 55	
50	Novallene 1963 DOHERDIAL (SK)	18 13 13 4	41 50 +45 41		103aG	Focus 10		0 10	0 40	

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

Moon

Zwt

Dome Temp.

32

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
1:20								Zets 1	
1:25									
1:35			Jans 10					Haze	
			8 Vir					stars	
1:55			Moon - 3 hr (W)					7 Vir guide star	tail
2:40			Zenith seeing ^{& transp} very good					9 Hercules g. star	"

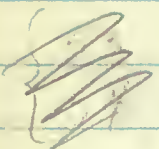
Date

June 4-5 / 65

Observer

SD

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
{ 51	Super Nova (yellow)	(1860) 12 38	(1860) +0 18		103a G	Focus 10		22 00	22 30	20
{ 52	" (blue)	"	"		11a O	"		22 43	22 58	15
										
53	June 10-11 / 65 Focus Mizar Alcor	(1960) 13 22.3	+55 08	SD	Wa Nav D19			23 25	23 43	
Atap 11100										
{ 54	June 21/22 M6C 4666	1965 12 38	SD 0 00	Focus T. Cond ⁿ	very good	photometric		68 21 50	22 10	①
{ 55	—	—	—	18	11a O			67 22 15	22 50	②
				18	103a G					

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

93

Horse

Dome Temp.

Transparency Conditions : excellent

34

[illegible]

35

Date

Tues Wed
Jun 22/23 1965

Observer

Sd

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	
56	NGC 4752	12 41	-00 38	14"	11a0	f5.6	72	22 35 ¹⁵	22 50	1	
57 57	Test for light "S" Pattern				103aG	unexposed; in plate holder for 1 day					2
Thurs Fri June 24/25 1965 Sd											
58	} NGC 4753	12 40	0 00	#	11a0B	f5.6	72	22 00 ³⁰	22 30	1	
59					103aG	"	60°	22 35 ⁴⁰	23 15	2	
60	} DQ Herc	18 ^h 10	+43°		11a0	"	55	00 50 ³⁰	01 20	1	
61					103aG	"	55	01 35 ⁵⁰	02 35	2	

Dome Temp.

Focus

Dome Temp.

Hour Angle
East

Low SW

2nd

Dome Temp.

Focus

Dome Temp.

Transparency Conditions

cloudy at 22 50

sky light haze earlier

36

Ending Time E.S.T.	P.M.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
20 50	1	low SW	Focus 18	0				terminated by clouds ^{gamma} & 1 in	good guiding
21 00	2							3 min D 19 (wash) 5 min fixer + light + 15 min fixer	
								T. C. fix, some haze in S, NGC 4753	
22 50	1	low SW	Focus 18	0				η Vir guide refraction effects	
23 15	2	"	"	0				η Vir guide recorder ^{essays} - checking guiding	visual trailing
		Zenith	"	60		Yes	DQ	broken for ~10 min at 22:10-20:20 approx elastic bands (2) broke, 1st light wind causing telescopes vibrate	good guiding

37

ri Sat

Date June 25-26, 1965 Observer Sd - Wa Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	How long Exp.
62	N 4753	12 ^h 42 ^m	0° 0'		11a0	f/5.6	64°F	21:46	22:06	1	2
63	N 4753				103aG	"	62°F	22:11	22:41	2	SW
6											
64	DQ Her, N 4753 Her				11a0	f/5.6		0:56	1:26	1	Z
65	" " "				103aG	"	59°F	1:39	2:09	2	Z
Sun. Mon.											
June 27/28 1965											
(New D19)											
66	H 4753	13 ^h 15'	+5°		11a0		72	21 46	22 01	1	SN
67	Focus test	Center of field			SPP		70	22 30	22 45	2	8-2
Procedures											

Dome Temp.

Focus

Dome Temp.

How long
Exp.

Dome Temp. 62°F

Focus

Dome Temp.

Transparency Conditions

excellent

38

Ending Time E.S.T.	PR	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
22:06	1	SW	Focus 18	0				check fog vs. start of exposure.	
22:11	2	SW	"	0				7 Vir guide	
1:26	1	Z		1		No DQues		possible meteor thru plate @ 1:54	
2:09	2	Z				No DQues		11 long side of V11gm in Lyra NE → SW R.A. from R to L ^{thru} gen. (Here guide)	
								Thick haze ~ 3 mag → Supernova	
								drive good	
22:01	1	SW	Focus 18	0				slow but slow RA in "to expose drive delta doesn't work consistently 8 Vir guide	
		18	-(22)-26-30-34-38					10 sec exp	
		10	10 ↑ 10 10 20					guide star	
								was η Boo?	
								(4)	

best!

39

Date *Wed Thurs 30/1 June July 1965* Observer *sd* Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	How Angle End
68	NGC 4753	12 ^h 42 ^m	+0° 00'		11a0		63°	21 37 ¹⁵	21 53	1	log 2
69	NGC 4753	12 ^h 42 ^m	+0° 00'		1030G		63°	21 57 ²¹	22 18	2	11
70	Ring M 57	18 ^h 52 ^m	+32° 59'		SPP		60°	23 30 ³⁰	0 00	1	IE
71	North Am Neb	21 ^h 00 ^m	+50° 00'		SPP		60°	1 03 ¹⁵	1 18	2	
72	HERC 1960	18 ^h 55 ^m	+3° 10'		1030G		59	2 18 ²⁰	2 38	1	multi
Mon Tues July 5/6 1965 sd 62° focus 22 60°											
New D19											
73		11 ^h 20 ^m	+55°		SPP		62	22 23	23 50	1	
74		12 ^h 15 ^m	+47°		1030G		62	23 26	23 56	2	
75	North Am Neb	20 ^h 57.4 ^m	+44° 10'		1030G		60	01 00	01 35	1	
20 57.4 +35 30 1030G											

Dome Temp.

Focus 22

Dome Temp.

Dome Temp.

Focus 22

Dome Temp. 59

Transparency Conditions

excellent

Slow motion response poor

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
Large W	low SW	O				sky bright here	good
"	"	O				too short exposure better	fine
1 E	Zenith	1				guiding in + drive ch ⁿ very bad	slight tail
		1				shutter closed 3 times. No guide known	ring OK
		1				No guide to know	
meridian		1				very faint guide, slow motion response poor, motor sound bad	
Transparency						excellent	
						1/4 moon 13 ^h 11 ^m - 20	
						Northern lights 20° → 30° above N horizon	
		0				β 4 Maj 1" ^{inch} above centre + tight to plate	
		0				χ 4 Maj 2" below " in centre	
		0				+ γ 9 centre tight to plate	fine
Difficultly in						finding guide star for NGC 6946 before dawn	
						too far East for shutter	

41

Date July 11/12Observer sd

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
5. min in	76	NGC 4753	12 ^h 42 ^m		103a 6		66	21 36 ²⁰	21 56	1	SW
019	77	Pallas	20 ^h 48 ^m +17° 18'		SPP		65	23 19 ¹⁹	1 min		
	78		20 ^h 48 ^m +17° 18'		SPP		65	23 24 ¹⁹	23 25		
	July 19/20	1965		sd	DB		64°/60°		Focus 22		
79	Pallas	20 ^h 48	+17° 18'		SPP		61	22:57	23:17	1	
80	Juno	20 ^h 35	-5°		SPP		62	23 44	24 00	2	
81	NGC 7078 (M5)	21 ^h 28	+12°		SPP		62°	1:08	1:48	1	
82	Pallas	20 ^h 45	+17° 18'		SPP		60°	2:22	2:37	2	

Dome Temp.

Focus 22

Dome Temp.

Dome Temp.

Focus 22Dome Temp. 64Transparency Conditions good - full moon

42

New 2 way centre off switch for slow motionhaze & clouds in SE after 000

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
low SW						Develop in 019 for 5 min h Vi (4) h Del top 3" tight to plate guiding & shutter ditto guid & shutter OK.	
						good	
		1				SAgu (4) 23 09 meteor	
		1				⊕ Agu (7)	
		0				8 Equuleus (6) Moon 3/4 up, guiding Focus	
		1				SAgu (4) "	

Dome Temp. 63

Moon $\swarrow$ up 25 + 86

44

Make all future focus tests with exposures at least 30 sec long to minimize differences in exposure time

45

Date July 27/28 1965 Observer SD Julian Day _____

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit Filter	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
87	Focus Altair			8X10	SPP	None	64-62	0:15	0:40	1
88	"			3 1/4 X 4 1/4	SPP	"	60-60	1:20	1:41	1
89	"			3 1/4 X 4 1/4	103a0	"	59-58	2:10	2:25	1
90	"			"	SPP	2208	57-56	2:55	3:18	1
91	Focus			3 1/4 X 4 1/4	103aE	2444				1
9										
91	Focus			3 1/4 X 4 1/4	103aE	2444				

Dome Temp. 64°F

Focus

Dome Temp. 55°F

Transparency Conditions Some Haze, clouds

on horizon

Excellent

46

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
0:40		1		20		10-15-20-25-30-35-40 30 seconds 0-5-10-15-20-25-30-35-40	
1:41		1		31		40-35-30-25-20-15-10-5--0	NB 200000
2:25		1		31		A B 0-5-10-15-20-25-30-35--40	
3:18		1		17		V 40-30-25-20-15-10-5-0-90-85-80-75	
						R 75-80-85-90-95-5-10-15-20--25	

47

Date

July 29/30 1965

Observer

SL

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Sht Filt	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
91	NH or 1963			3 1/4 x 4 1/4	103a6		60°	22 44	23 00	1
92				8X10	116/811	103a6				1
93				8X10	116/811	103a6				2
	Aug 10/11 1965			SL			50° Focus 3 60°			
92	NH or 1963	18 13	41 50	8X10	103a6	2208	58°	23 58	0 23	1
93	Focus	18 13	41 50	8X10	103a6	2208	58° 57°	0 57	1:15	2

Dome Temp.

Focus 30/

Dome Temp.

Hour Angle

Ecl

49

Date Aug 15/14Observer sd

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
94	Pallas				10306		69	0 37	0 48	1
95	fund									
	Aug 19/20 1965		sd		EXcellent			63°F / 20 / 58°F		
					windy 15 mph			from N switching to NW.		
95	N Herc 1963			8X10	10306	20	63°	21:05 ^{21 20}	2135	1
96	↓			↓	↓	↓	60	21 50 ^{22 15}	22 25	2
97	↓			↓	↓	↓		22 50	23:20	1
98	↓			↓	↓	↓	58	23:25 ^{23 40}	23:55	2
					wind not so noticeable in			SW or S		
99	Attain Focus			8X10	SPP		58→58	0 55	1:17	1
100				3X4	SPP		58→58	1 20	1:55	2
101	Pegasus North End			8X10	10306	2444	58	2:55	3 35	1
102	"			3X4	10306	2444	58	3 40	4 09	2

Dome Temp.

Focus 24

Dome Temp.

Hour Angle
EndHour Angle
End3024
11

10

Dome Temp. 71°F
 Focus $22\frac{1}{2}$
 Dome Temp. 68°

Transparency Conditions *material I + hz*
moon up
glows 50

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
48	1					0		B Aquil ① guiding problems sky too bright for B. J. uno	
20/58 ⁰⁰ F									
2135	1								
22 15	2								
23.20	1								
22.55	2								
SW 75									
1 17	1	30 sec expo						dark slide vent ^{PH} maybe dark binary program @ H/c ① wind	No satellite foggy
1 55	2	"						double image out of focus much more vibration	
3 35	1	60 " "						moon rose during exposure sun motion striking need oil wind from west (dome then 90° S $\rightarrow$ W from 95 $\rightarrow$ 98)	
4 09	2	" "						0-5-10-15-20-25-30-35--40 60-55-50-45-40-35-30-25-20-15-10-5--0 80-85-90-95-5-10-15-20-25--30 35-30-25-20-15-10-5-0-90-85--80	

51

Date Aug 23/24 1965 Observer Sd

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	SA Focus	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.I.	Hour Angle End
New 019 103		1875	1875								
103	SA 40	21 48 37	+44 51.9	8X10	11a0	15	61	23 ^h 18 ^m	23 ^h 44 ^m	1	21 min
104	SA 40	"	"	8X10	11a06	15	60	23 50 ⁰⁰	0 11	2	21
105	SA 40	"	"	8X10	11a06 103aE 2444	90	58→58	1 45 ³⁵	2 25	1	90 min
									oiled		rotation
Sept 1/2 1965 (Wed Thurs) Sd.								58°/52			
106	Juno	20 09	- 8 25	8X10	Tri X	17	54	1:15	1:30	1	21 min
107	Variable 4	20 52.4	+08° 25	8X10	Tri X	17	53	1:49	2:12	2	SW
108	Milky Way	23 ^h 00	+60°	8X10	103aE 2444	89	53	3:40	4:40	1	

Date Sept 2/3 1965 Observer SP SHK Julian Day _____

[illegible]

Dome Temp. 64°Focus 19, EastDome Temp. 60Transparency Conditions Haze

54

Moon 16h 45m - 22° 40' 28h EST

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
2058 1		0				5 Gph (6) Dm	heavy fog guiding ok
2133 2		0-1				2 Oph (3) Dm	light fog guiding OK but
2232 1		1				18h 6+9°30 (1) Dm	OK guiding
2317 2		1,				E Del (9) Dm	
0118 1		2!				5th Mag (7) Mcl	
0552 2		0				0-5-10-15-20-25--30	Apr (5) 30500

TEMPORARY 74" Logbook.

II.0-C/4017 - 09047

Start

55

Date *APR 11-12 mon-Tues* 77 Observer *But-Th* Julian Day

[illegible]

507

15-R

607

Transparency Conditions Hazy

56

Ending Time E.S.T.	P.M.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.			REMARKS	Quality
05 55	B	1 07W	+83 30	4-8	5.81	A0	^{Filter} 888	SB B _{1/2}	400/118		fine v sl. str
05 03	B	Q 51W	+25 55	3-8	7.07	A1	888	AmPR	400/141		fine
					7 1/2" DI9	68°F	0.16				

57

III aJ-e 01126-06047

IIaF 14017-07047

Date APRIL 12/13 TUES./WED 77 Observer But-Tr Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
41462	HD 73731	08 34.7	1 19 54	G12	IIaJ-e	9/5		19 44		H
41462 T	Strip Cols for 41462				"					
41462	HD 139892	15 35.6	+36 58	G12	III aJ-e	18/5		00:00	02 00	A
41462 T	Strip Cols for 41462				"	180 sec				
41462 T2	Spot plate IIaF 15 min 7.5 v ^①		D3 15100 ^②		D1 Hd					

Dome Temp. +

Focus 15

Dome Temp.

Hour Angle
East

00 31 E

6097

Dome Temp. $+18^{\circ}\text{C}$ $H=5070$

Focus 15-R

Dome Temp.

Transparency Conditions *Scattered cloud*

58

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Exp Meter	Prog	REMARKS	Quality
W +19	2-8	6.3	A_m	9	Filter in	400/30	A_m - K_R	cloud	Scrapped
00 31 E	+36 42.6	3-4'	4.95	B7V	NO FILTER 4-4-4	200/234	SB-Ly	more cloud	v. sl. wh.
		III 25	6 ^m D19	68°F	0.12			Hd should be Diaph 2	wh
		II 3F	5 ^m D19	68°F	0.24				

59

098-01e 26046-09047
 IIa0-e 14017-09047
 IIa0e* 14017-11047

Date April 13/14 (Wed/Thur) 1977 Observer BB-Tn / Km-Tn Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	How Angle End
41463	HD93033 (TX UMa)	10 ^h 39.5	+46° 05'	G65	098-01e	20/4		21:54	22:21	A	0° 43 W
41463 T	Spot Calc for 41463-64				"	15 min @		D 315 V D. 1 ZV D 21V 4810 Hx 5450			
41464	HD117555 (FK (om))	13 ^h 26.1	+24° 44'	"	"	20/4		22:27	0:16	B	0° 02 E
41464 T	Strip Calc for 41463-64				"	90 sec					
41465	HD186688 = SUGy	19 ^h 40.8	+29° 01.4	G12	IIa0-E	18/5		0 ^h 51	04:09	B	223 E
41465 T1	Strip Calc for 41465				"	90 sec					
41465 T2	Strip Calc for 41465				"	90 sec		Did second one by accident.			
41466	HD213306 = Sep	22 ^h 25.4	+57° 54.2	G12	IIa0-E*	9/5		04 ^h 18	05:06	C	04 ^h 10 E
41466 T1	Strip Calc for 41466				"	90 sec					

IIa0-e 14017-11047
IIaF-e 14017-07047

IIaF-e 14017-07047

Date 14/15 April 1977 Thur/Fri Observer Blu-Tu/Ly-Th Julian Day 197

[illegible]

Spec²
Dist Temp.
Focus 30
Spec⁺
Dist Temp.

Hour Angle
End

304 E.

137 E

4 or W-

0 29 W +

000

1 12E

0.43E

Spec
 Dome Temp. H=60°

Focus 30-R

Spec
 Dome Temp. H=

Transparency Conditions Photometric - → sl/haze
 gusty

62

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
20 34 A	3 04 E	+83 33.8	3.6"	5.2	shell	8-8-8	Filter in Shell-Bln 200/69	fine
22 01 B	1 37 E	+83 34.2	3.4"	5.81	A0	8-8-8	Sp. Bln-Bln 200/70 marked at both end to insure ID marked 67 maybe	fine double-lined
01 00 C	4 08 W	+20 28.8	3-4	7.20	965 +A2	7-7-7	VB-Bln 400/209	fine v sl str guiding.
01 23 A	0 24 W	+14 14.9	3-4	1.29	K2 IIIp	7-7	Li - Ly 20/25	sl. str.
03 35 B	0 00	+82 05	2-4	4.28	FO +G5 III	5-5-6	2 And. Star - Ly 200/221 *KK Ron sez to use your super special bottomless banger	fine
04 18 C	1 18 E	+36 58	2-3"	~5	B3	8-8-8	Filter in SB - Ly 200/70	sl. str. fine
04 54 A	0 43 E	"	"		B3	8-8-10	" 200/70	fine
					IIa0	8"	D19 67°F	
					IIaF	4"	" " 0.23	

63

2 APR

III a-J-e 01126-06047

II a-O-e 14017-11047

Date Apr. 15/16 FRI/SAT 77 Observer W. H. Taylor Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41474	HD 37468	05 ^h 33. ^m 7	-2° 39'	G12	III a-J-e	13/.5		19:37.	20:56	A	4:37W
41474 T1	Strip cal'n for 41474, 79, 80.				"	180 sec.					
41474 T2	Spot cal'n for 41474, 79, 80.				"	15 min @ 15V	3x	λ4300 @ 04			
41475	HD 47105	6 ^h 31. ^m 9	+18° 29'	G12	II a-O-e	9/9		21:09	21:14	A	3:57W
41476	HD 93431	10 ^h 42. ^m 1	+6° 52'	G12	II a-O-e	13/.5		21:29	00 08	C	2:42W
41476 T	Strip cal'n for 41475-76-77, 78.				"	90 sec.					
41477	HD 112014	12 ^h 48. ^m 3	+83° 58'	G12	II a-O-e	13/.5		00:17	01:22	A	1:55W
41478	HD 112028	"	"	"	"	"		01:25	02:09	B	2:43W
41479	HD 139892	15 ^h 35. ^m 6	+36° 58'	G12	III a-J-e	13/.5		02:19	04:07	C	1:47W
41480	HD 148857	16 ^h 25. ^m 9	+2° 12'	G12	III a-J-e	9/.5	43°F	04:13	05 01	A	1:51W

 Spect
 Dew Temp.
 Focus 30-R
 Spect
 Dew Temp.

spect
Dome Temp. H=60%

Transparency Conditions OK - some thin cloud

Focus 30-R
Dome Temp. 43°F H=75%

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
20:56 A	4:37W	-2° 37'	2-5"	3.51	09.5V	5-5-5	no filter Sp-Bin-Bln 200/286	fine blank
21:14 A	3:57W	+16° 25'	1"	1.93	A0 II	13-13	filter in Std-Star-Bln 40/8	double exposure
00 08 C	2 42W	+6 28	2-3"	7.07	A2	8-8-8	filter in Sp. Bin-Bln 400/139	fine
Two plates w/ this no								
01:22 A	1:55W	+83 31	2"	5.81	A0	8-8-8	filter in Sp. Bin-Bln 200/71 *Maybe some light from Comp.	double exp. w/ 75
02:09 B	2:43W	+83 31		5.2	shell	8-8-8	Shell-Bln 200/71 (South of Pair)	vsl. str
04:07 C	1:47W	+36° 47'	1-2"	4.95	B7V	5-5-5	no filter SB-Bln/ky 200/360	fine good double lines
05 01 A	1:51W	+2 05	2"	3.86	A1V	6-6-6	Sp-Bln 40/70	fine
				II 20	7 1/2		0.21	
				III 25	6"	D19	68.5 0.18	

6^S 2 Visitor groups 20^h-22^h - 2hrs

II.0-e 14017 - 15047
III.0-e 01126 - 06047

Date April 16-17 Sat-Sun 77 Observer Bln-Tn Julian Day

[illegible]

Dome Temp. 55°F H = 60%

Focus 30R.....

~~Dew~~ ^{Spect} Temp. 48°F H = 757

Transparency Conditions *Good s/haze to SW*

cloudy times

66

[illegible]

098-01e 26046-09047

Observer.

BB-Tn

Julian Day

[illegible]

Spot
Temp.
Focus 30
Spot
Temp.

Spec
 Dome Temp. 55°F H=4590

Transparency Conditions thin cloud → haze

Focus 30-R

Spec
 Dome Temp. 52°F H=

Chris 531-7871

Strip Exp Box #2

Ending Time EST.	P.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. meter	REMARKS	Quality
20:15	A	0 59 E	+45°42.1	2"	7.1v	B8.5	10-9-10	BB edip. bin.	400/30	Wr 4 Filter in	fine
20:50	B	0:24 E	"	"	"	"	9-9-9	(no 4x5 Plates for Spot Cul'n)	400/30		fine
21:20	C	0:02 W	"	"	"	"	9-9-9	Flux ~ 0.8-0.9	400/30		fine
								no 4x5 098 to use (Had thought there was one more) us 1st			
22:23	A	1:39 E	+24°21.1	2"	7.9v	g6e	7-7-7	Flux ~ 0.3-0.4 Blu edip. bin.	800/43		fine
22:52	B	1:35 W	+45°40.8		7.1v	B8.5	9-9-9	BB edip. bin.	400/30		fine
0:12	C	1:52 E	63°57.6	1"	7.5v	A6+65	9-9-9	"	800/53	Cloud	awful background apparently edge of error
			in in/out out				4/4	no filter			
							4 ^m D19	68.5	0.31		
							New D19				

secondary aluminized April 19

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

Hour Angle
End

Dome Temp. 14°C 59%

Focus

Dome Temp.

SECONDARY ALUMINIZED

Transparency Conditions VERY HAZY

of

[illegible]

Dome Temp.

Transparency Conditions *Very Hazy - cloudy*

72

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
01:5	3 ^h 03 ^m E	+71 25	2-4"	4.18	Ap-Si	9-9-9	Program Exp. meter Lne SB 200/75	fine
03:22	02 ^h 51 ^m E	+29° 21	2-3"	6.3- 7.66	FO-GI	6-5	Cepheid/Evans 800/39 Cloud * RHS / * RHS / * KA Push & guess. T ₄	v wh
							41491 12 ^m Dig 68°F 0.25 41490 8 ^m 0.17	

Π.Ο.ε 14017 - 15047

Spent
Dome Temp.
Focus 7
Dome Temp.

[illegible]

5047

spect
Dome Temp. 42°F H=602

Focus 70-R

Dome Temp. 36°F

Transparency Conditions Very Good

6^H Wk. Aurora low in N and NE2^H Aurora Low in NE

74

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Exp meter	Prog	REMARKS	Quality
20 49 A	01 53E	+83 36	3"	5.81	Shell	Filter in 8-8-	200/83	Shell-1314		sl. str.
23 11 B	02 26E	+12 53	3-5	6.80	A0	Filter in 12-12-12	800/250?	Sp Bin-1314	Tilt -1 turn Exp meter?	fin
01 14 C	00 23E	+12 52	3"	6.8	A0	12-12-12	800/250	Sp Bin-1314		
02 50 A	01 14W	+12 52	2-3"	6.8	A0	12-12-12	800/292	Sp. Bin-1314		
04 20 B	02 53W	+12 53	3"	6.8	A0	12-12-12	800/250	Sp. Bin-1314		
							8 ^m 219 68°F 0.18			

098-01E 20047 - 22047

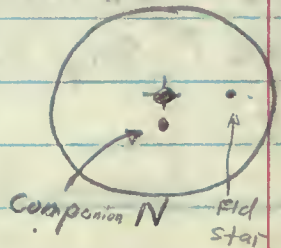
Date April 29/30 FRI-SAT/77 Observer Wtm-Tm/ Julian Day 22047

[illegible]

Dome Temp.

* Blue Box #1

46

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Exp. meter	Prog	REMARKS	Quality
23 36	3:43V	+20 31	1"-2"	7.20	965 +A2	Filter in 8-7-8	400/200	VB-B1m	clouds	fine
01 20	0 04E	+36 47	1"-2"	4.95	B7V	No Filter 6-6-5	200/300	SB-B1m/ky	RHS Clearing up (23:44) RHS More cloud (01:28)	fine sl str
02 58	2 40E (ie cloud for first 50 mins)	+06 28	2"	4.57	G8II	Filter in 9-9-8	200/190	Radio Star-B1	Comp not visible at 1st cloud	
03 36	2 02E	+06 28	1"	4.57	G8II	No Filter 2-2-2	200/127	Radio star	UV in / Tilt 0.7B	fine
04 15	1 17E	+06 28		4.57	G8II	Filter in 7-7-7	200/195	Radio Star	Tilt 1.49B Vis Eyepiece	vs sl str
Dev → see next page  3:10 Comp sl brter then Fld star 3:40 Comp is brter then fld star										

Visitors 1.5 hrs

77

Sat - Sun

Date Apr 30 - May 1 1977 Observer Tn

II₀-e 14017-15047

II₀-e 14017 30047

098-01E 20047-22047

2 Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
41502	HD 117555	13 26.1	+24 44	G12	II ₀ -e	13/3		21 48	00 48	A
41502T	Strip Caln for 41502				II ₀ -e	90sec				
41503	HD 188512	19 50.4	+6 09	G12	II ₀ -e	13/7		00 57	02 11	C
41503T	Strip Caln for 41503				"	90sec				
41504*	HD 188512	19 50.4	+6 09	G16	098-01E	13/7		02 23	03 07	A
41504T*	Spot Caln for 41504				"	15 min @		D3 4810 D1 7V D2 7V H ₂ 5450		
41505	HD 188512	19 50.4	+6 09	G16	098-01E	13/7		03 13	03 35	B
41505T	Spot Caln for 41505-06				098-01E	15 min @		D3 4810 D1 7V D2 7V H ₂ 5450		
41506	HD 188512	19 50.4	+6 09	G16	"	13/7		03 48	04 24	C
41506T	Strip Caln for 41505-06 & 41500				"	60sec				
					II ₀	8"	} D19 68°F			
					II ₀ J	5"				
					098	5"				

Dome Temp. 5
Focus 307
Dome Temp. 5

Hour Angle
End

1:7W+

325E+

229E

200E

1:150

111E

Dome Temp. 57°F $H = 55\%$
Focus $30-B$ — wrong setting?
Dome Temp. 52°F $H = 75\%$

Transparency Conditions *SI Hazy - Cloud by 2 AM*

* Used Same Exp boxes as last night

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp	REMARKS	Quality
00 48 A	1 37 W	+24 26.5	1.2"	8.7- 8.83	g6e	Filter in 8-8-8	Ecl Bin - Bln	800/160	setting hazy Exp meter very bad	fine
02 11 C	3 25 E	+6 29	2-3	4.57	G8 IV	Filter in 8-8-8	radio star	200/185	comp vis @ 4°40' E Hrs haze, Fld star not	fine
03 07 A	2 29 E		2	4.57	G8 IV	Filter in 16-16-16	Radio star	200/130	Hrs 4° E comp is brtr than Fld star, Fld star visible sl str cloud (comp looks same)	* dbl exp. * dbl exp.
03 35 B	2 00 E			4.57	G8 IV	Filter in 16-16-16	Radio star	200/85	cloud stopped	fine, comp wh
									(also the closest caln for 41500 previous night)	
04 24 C	1 11 E			4.57	G8 IV	16-16-16	Radio star	200/105	more cloud	sl. str. fine
* Very bad mix up with last night's Exposed 098's * 41504 will be dbl exposed with last night's strip caln. (Thought there were too few UnExposed 098's in Supposal Unex Box but didn't get around to checking it. Too sloppy)										

79

IIaO-E 14017 -30047

Date MAY 2/3 MON/TUES 77 Observer But-Tr Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
41507	HD 96003	10 59.3	+13 12	G12	IIaO-E	9/5		20 01	23 49	A
41507T	Strip cal for 41507-9				IIaO-E	90sec				
41508	HD 137182	15 19.5	+10 54	"	"	13/5		23 58	04 06	B
41509	HD 191610	20 05.8	+36 33	"	"	18/9		04 11	04 32	C
41509F1	Plate Holder Focus Test			G12	IIaO	13	46°F	Set. 30-R		A
41509F2	" "	" "		"	"	13	"	30R		B
41509F3	" "	" "		"	"	13	"	30R		C
	May 3 77		Focus test							
41509F4	Focus test			G12	IIaO	9		30R	Normal	A
41509F5	"			"	"	"				B
41509F6	"			"	"	"				C
F7	"			"	"	"				B
F8										B
9										A
10										B
11										C

 Spect
 Temp.
 Focus
 Spot
 Temp.

03/2W+

03 09W+

04 09E+

in in/m

in in/p

in in/p

Spec
Bore Temp. 57°F H = 579.

Focus 30-R
 Spot 46°F
 Temp. 46°F H = 8170

Transparency Conditions *Photometric $\rightarrow$ SI here*

80

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Exp/meter	Prog	REMARKS	Quality
23 49	A 03 12 W	+12 53.4	2"-4"	6.75	Ap	9-9-9	400/160	Ap MR	Too Slow -	} Tilted to red end, out of focus
04 06	B 03 09 W	+10 43	4"-5"	7.19	A.O.	8-8-8	400/160	Am MR	Too Slow - 51 haze Is Exp setup right?	
04 32	C 04 09 E	+36 50	3"	4.98	B3Vc	7-7-7	200/114	Bln Prog		
	A	in in / out out				3/3	no filter			
	B	in in / out out				3/3	no filter			
	C	in in / out out				3/3	no filter			
					8" D19	68°F				
						no fa				
	A					3/3			30R Normal	
	B								all turn with red nos. decreasing	
	C								one turn with red nos increasing in focus	
	B					3/3			tuned the right screw one 1/2 flat in	
	B								" " " " back 1/2 flat	
	B								" " " " back 1/4 flat	

Date May 3-4 Tues-Wed 77 Observer But-Tn Julian Day _____

Dome Temp. _____
Focus _____ R-
Dome Temp. _____

Hour Angle
End

320 W +
*Noted the

Dome Temp. 51°F H=5870

Focus R-40

Dome Temp. 47°F

Transparency Conditions Sl. Hazy - cloud (thin)

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	ExpMeter	Prog	REMARKS	Quality
2352	3 20 W	+12 52.9	3-4	26.75	Ap	9-6-6	400/71?	Ap MR	haze (some trouble with Exp meter)	tilted to red
	*Noted that brass knob was in "in" pos'n after 3.5 hrs on						*41510		Push - (Frank checked it)	
	in / out out						3/3 no filter			
							29sec Filter in			

8" D19 68°F

Παο-ε 14017-30097

Dome Temp. 49
Focus 40
Dome Temp.

[illegible]

Dome Temp. 49°F $H=80\text{ f}$

Focus 40-R

Dome Temp.

Transparency Conditions ... clear by 01³⁰ the Low SE cloud

84

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Filter id	Prog	REMARKS	Quality
11:16	3 ^h 58E	+29 19	1.2	6.8-7.7	F0-G1	6-6	400/25	Cephed/Evans	cloud * Push please prob useless eh?	wh, tilt off
						12 ^m 719	68°F	.28		

ΠαΟε 14017-30047

Spect
Dome Temp.
Focus ... 20
Dome Temp.

Hour Angle
End

Spect
Bottle Temp. ... 59°F H=

Barre Temp. ... 59°F ... H =

Focus 20-R

Dome Temp.

Transparency Conditions *some thin cloud → thick cloud by 22nd*

86

[illegible]

85

2 Tours 2 hrs

По-е 14017-30047

Date May 7/8 Sat-Sun

Observer BK-Tn

Julian Day.

Dome Temp. 40.....

28

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog.	Exp Meter	REMARKS	Quality
00	A	147 W	+18 37	3-5"	6.6	F7 V	Filter in 8-8-8	Wat.	400/200		vs. str
240	B	224 W	+11 36	3-6"	8.4	H4 III	7-7-7	Wat.	800/265	Exp meter very unstable	fine
				8 ^m D19	68°F		.20				

ΠαΟ-ε 14017-30047

Observer... But- T_2

..Julian Day

[illegible]

Spect

Dome Temp. 44°F H=65%

Transparency Conditions Good

Windy

Focus 55-P

Dome Temp. 42°F

90

Ending Time E.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PROG	EXP MTR	REMARKS	Quality
21.07	A 00 48W	+15 42	2"-3"	3.34	A2V	FILTER IN 13-13		40/24	"Normal"	sl str
21.14	B 00 55W	"	"	"	"	13-13		200/30	1/4 normal	sl wk
21.19	A 01 00W	"	"	"	"	13-13		200/15	1/8 normal	wk
21.25	B 01 06W	"	"	"	"	13-13		200/7.5	1/16 normal (Fast guided whole)	v wk
01.03	A 00 33W	+10 47	2"-3"	7.19	A0	9-8-8	Am MR	400/159		v sl str
01.11	B 00 11W	+44 18	"	7.00	A1	8-8-8	"	400/162	DAWN	sl str
				8 ^m	D19	68°F	0.19			

91

IlavE 14017 09057
078-02 14017 14057

Date May 11/12 (Wed-Thur) 1977 Observer BB-Ri Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41521	HD 97633 (θ Leo)	11 ^h 09 ^m .0	+15° 59'	G12	IlavE	9/1.9		20:10	20:18	A	00° 09' W
41522	"	"	"	"	"	"		20:20	20:24	B	
41523	"	"	"	"	"	"		20:25	20:29	A	00 17 W
41524	"	"	"	"	"	"		20:36	20:31	B	00 20 W
41525	HD 93033 (TX UMa)	10 ^h 39.5	+46° 05'	B-65	098-01e	20/1.4		20:42	20:52	A	01 10 W
41526	HD 117555 (FK Cen)	13 ^h 26.1	+24° 44'	"	"	"		20:58	22:08	B	02 28 W
41527	"	"	"	G12	IlavE	13/1.3		22:15	01:49	A	3 24 W
4152771	cal strip wedge for plates 41525, 26				098-01	15 mi	4810 03	15V 54507V D2	HA 7V D1		
4152772	cal strip wedge for plates 41525, 26				098-01	90 sec					
4152773	cal strip wedge for plates 41521-24, 27				IlavE	90 sec					
41528	HD 139319 (TW Dra)	15 ^h 32.4	+64° 14'	G65	098-01e	20/1.4		1:59	2:25	B	1° 53' W
41529	HD 169753 RZ Sct	18 21.1	8-9 15	"	"	"		2:33	3:41	A	0 19 W

~~Dome~~ Temp. ^{Spd. Tr.} 60°F

Done 150C 50%

Transparency Conditions *Good*

92

Focus 20R

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Meter	REMARKS	Quality
2:19	A	00°09W	+15°42.3	2"	3.34	AZV	Filter In 13-13		40/22	Normal exp.	str
2:20	B		"		"	"	13-13		200/27	1/4 "	fine
2:22	A	00 17W			"	"	13-13		200/13	1/8 "	vs sl wk
2:31	B	00 20W			"	"	13-13		200/6.5	1/16 "	wk
2:42	A	01 10W	+45°50.0	7.1v	BBS	Filter In 8-8-8	BB edip. bin.	800/60			fine
2:42	B	00 20E	+24°30'	7.9v	gGe	8-8-8	Blu " "	800/43		Exp. meter unstable - changed H.V. Supply this plate may be overexposed	vs sl str
3:17	A	3 21W	"	"	"	Filter In 8-8-8	"	800/140		A few clouds	fine
	DI										
											fine
											fine/vsl str
2:25	B	1°53W	+64°06.9	7.5v	AG	Filter In 8-8-8	BB edip. bin.	800/60			fine
3:41	A	0 19W	-9°03.1	2-3	7.5v	B&V	8-8-8	"	800/60	Long down Low	fine
						II 0	8"		0.18		
						098	5"	D19 68°F	0.17		

93

IIa0E 14017-09057
098-02E 14017-11057

Date Fri May 12-13 1927 Observer Ly-Ri. Crow Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41530	HD 97633 (Orion)	11 09.0	+15° 59	B-12	IIa0-E	9/9	64°F	20:41	20:54	A	00 46W
41531	"	"	"	"	"	"		20:57	21:02	B	00 54W
41532	"	"	"	"	"	"		21:04	21:06	A	00 58W
41533	"	"	"	"	"	"		21:08	21:08 ⁺	B	01:00W
41534	"	"	"	"	"	"		21:11	21:54	A	01:46W
41535	HD 124897 (α Boo)	14 11.1	+19 42	"	"	"		22:04	22:07	B	01:02E
41536	HD 153751 (ε UMi)	16 52.2	+82° 12	"	"	9/5		22:27	00:06	A	01:37E
41536T1	cal step wedge	41530-36, 38			IIa0-E		90°				
41536T2	"	41530-36, 39			"		90°				
41537	HD 210334 (AR Lac)	22 04.6	+45 15	G16	098-01c	13/5		00:34	02:27	B	04:34E
41537T1	cal step wedge	41537			098-02	15m	15003 4810	70 D2 5450	70 D1 Hd		
41537T2	cal step wedge	41537			098-02E	90°					
41538	HD 210334 (AR Lac)	22 04.6	+45° 15	G-12	IIa0-E	13/4	60°F	02:35	04:15	A	02:46E

Dome Temp. 15°C 80%

Focus 1.0R

Dome Temp. 13°C 80%Transparency Conditions *hazy very*
good after 01:20

94

Ending Time EST.	P.R.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PROG.	Exp METER	REMARKS	Quality
20 54	A	00 46W	+15° 42'	2-3	3.34	A2I	^{with} 13-13	CAL. STD	200/26	$\frac{1}{4}$ normal	s/wk
21 02	B	00 54W			"	"	13-13	"	200/13 $\frac{1}{4}$	$\frac{1}{8}$ normal	s/wk
21 06	A	00 58W			"	"	13-13	"	200/7 $\frac{1}{2}$	$\frac{1}{16}$ normal	wk
21 08	B	01:00W			"	"	13-13	"	200/4 $\frac{1}{2}$	$\frac{1}{32}$ 1 pass	v/wk
21 54	A	01:46W			"	"	8-88	"	200/1104	some clouds intermittent exp.	v/sl str.
22 07	B	01:02E	+19° 27'		0.2	K0	13-13	RV STD.	40/32		fine
00 06	A	01:37E	+82° 12'		^{V₀} 4.28	^{F₀} +G5III	8-88	λ AND STAR-ly	400/270	for CalI emission	fine
01 27	B	01:34E	+45° 45'	3-4	7.3	G ⁵ +K0	NO FILTER 3-3-3	RADIO STAR	800/373	.7B UV Filter in FLARE REPORTED TONIGHT	fine
04 15	A	02:46E	+45° 45'		7.3	G ⁵ +K0	with Filter 8-88		800/326	pushing down	fine
								DAWN			

Two - unevaled
HAE 14017-11057

Dome Temp.
Focus 20 R
Dome Temp.

Hour	Angle	End
00 ^h 10 ^m		
0	14 ^m	
0	18 ^m	
0	27 ^m	
00 ^h 45 ^m		
00 ^h 38 ^m		
01 ^h 46 ^m		
01 ^h 3 ^m		
01 ^h 35 ^m		

Dome Temp. 120C 70%

Focus 20R

Focus 20 K
Dome Temp. 08°C 86%

Transparency Conditions the cirrus clouds

fair after 23:00
exposed Bar #1

96

Ending Time EST.	PR	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PROG	FVT METER	REMARKS	Quality
20 4	A	00 ^h 10W	+15°42'		3.34	A2II	14-14	CAL STD	200/26	1/4 normal	
20 19	B	0 14W			"	"	14-14		200/13	1/8	
20 22	A	0 18W			"	"	14 14		200/7	1/6	wh
20 28	B	0 24W			"	"	14 14		200/4	1/32	
20 49	A	00 ^h 45W			"	"	9-9-9		200/195	normal	sl str
21 3	B	02 ^h 38W	+24°02'		3.12	B0II	11-10-11	Went	200/130	R.H.S of exposure	v sl str
21 27	A	09 ^h 46W	+38°03'	4-5	6.45	G8VI	12-12-12	"	400/250	clouds at beginning	not guided wedge comp lines eld'd flexure?
										R.H.S of exposure	
21 36	B	01:36W			0.2	K0	18-18	"	40/32	" " "	str
23 07	A	01:32E	+10°03'		5.2	F8V	12-24	"	400/71	clouded in and envelop please	v sl wh

Dome Temp. 10°C 55%

Focus 30R

Dome Temp. 06°C 60%

Transparency Conditions good

Blue plate w/ exposure 3

98

Ending Time E.S.T.	PR	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PROG	EXT METER	REMARKS	Quality
01:24	A	00:30 E	+49° 42'	2-3	5.4V	g12	F.H. 13-13	Wnt	800/33		v sl str
01:59	B	00:48 W	+54° 29'		10.4V	M3 VI	18-8-8	"	800/32		exp de, not guided to edge
70 D2 5450		70 D1 H2									
02:08	A	00:09 W	+14° 33'		3.48	g15	13-13	West	800/32		sl str
04:15	B	01:50 E	+10° 23'	3-5	6.75	F7D F8V	88-8	"	400/140	overdevelop please pushing down	fine
					098	5 ^m					
					41551	11 ^m	D19 68°F	0.17			

ИАО-Е 140А-14057

Date Sun, Mon - May 15-16 1997 Observer West-Ri-Crow Julian Day 2450080.5

[illegible]

Dome Temp. 12°C 58%

exposed Box 2

100

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PROG	EXT. METER	REMARKS	Quality
21.29	A	00°55W	+38°00	1-2	6.45	G8VI	8-8-8	W29	500/361	ok
22.43	B	02°09W			"	"	8-8-8	"	400/181	exp fine, not guided to edge
02.10	A	05°37W	+38°00'		6.45	G8III	8-8-8	"	400/172	not guided to edge
02.22	B	03°27W	+19°25.6		0.2	K0	13-13	"	40/20	
03.46	A	02°43E	+17°18'	2-3	5.5- 6.9	F2III	8-8-8	"	400/180	fine
04.13	A	04°13E	+05°38		4.3	F7V	8-8-8	"	400/150	fine putting down
i.d. nos written on spectra on some plates										

Παο-Ε 14017-14057

Date Mon-Tues May 16-17 1997 Observer Bud-Ri-Cru Julian Day

[illegible]

Dome Temp. 19°C 52%

Focus OR

Dome Temp. 17°C 65%

Transparency Conditions very hazy

102

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	PRDG	Exy. METER	REMARKS	Quality
20.17 A 00 ^h 25W	+15° 41'	2-3	3.34	A2I	fillin 14-14	PRAL, STD.	200/26	$\frac{1}{4}$ normal	
20.21 B 0 29W					14-14		200/14	$\frac{1}{8}$	
20.25 A 0 33W					14-14		200/7	$\frac{1}{16}$	
20.42 B 0 36W					14-14		200/4	$\frac{1}{32}$	
20.47 A 00 55W					9-9-9		200/99	normal	
23.35 B 03 53W	+12° 55'	2-3	6.75	Ap	9-7-7	Ap MR	400/91	overdevelop please R.H.S. Bayer/Box	fine
04.08 A 04 01W	+61° 54'	3"	6.79	AD	9-7-11	Am-MR	400/142	R.H.S. Bayer Box	fine

098-02E20047 - 13057
II-0-e 14017 - 14057

Date Wed./Thur. May 18/19 1977 Observer BB/Tn/Crw Julian Day _____

[illegible]

Spot
Dome Temp.
Focus _____
Dome Temp.

Spectr
Dome Temp. 68°F H=98%

Transparency Conditions ... Hazy - s/cloody -

704

Focus ... OR

Dome Temp.

Ending Time
E.S.T.

P.H.

1:04 A
V D1 7002
Hx 5450

3:27 B

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Meter	REMARKS	Quality
0:59 W	+64°06.9	8.4"	7.5V	AG+G	Filter In 8-8-8	BBedipbin.	800/60	R Box	guiding
								R Box	
0:50 E	+29°21.4	4.6"	6.8V	FO-G1	Filter In 6-6-6	Rm Cepheid	800/402	Blue Box	Dome dripping fine
								Blue Box	
								Red box	
		0.98	5"	D19	60°F	0.17			

I40-E 14017 - 16057
 I41-E 01126 - 18057
 098-E 20047 - 18057

Date 19/20 MAY '77 Thu/Fri..... Observer Blu-Tu-Crow Julian Day.....

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
41567	HD88021/2	10 ^h 03 ^m .8	+20° 49'	G12	IIa-O-E	13/5	72°F	20 20	22:54	A
41567 T	Strip Calc for 41567,	69			IIcO-E	60sec				
41568	HD 139892	15 ^h 35 ^m .6	36° 58'	G12	IIIaJ-E	13/5		23 00	01 13	A
41568 T	Strip Calc for 41568				IIIaJ-E	180sec				
41569	HD 170000	18 ^h 22 ^m .2	71° 17' ^{H75}	G12	IIaO-E	9/.5		01 22	01 46	B
41570	SV Vul	19 ^h 50.5 ^{M1975}	27° 24' ^{H75}	G16	O-98	13/3	68°F	01 57	03 02	A
41570 T	Spot Calc for 41570				O-98	15 min @	D315V 4810	D17V Hd	D27V 5450	

Dome Temp.

Transparency Conditions *hazy - cloudy*

706

[illegible]

PaO-e 14017-16057
127-01e 00095-20057
098-02e 20047-18057

127-01e 00095-20057

098-02e 20047-18057

Date 20/21 May 77 Fri/Sat Observer KK-Tg-Crw Julian Day 175.5

[illegible]

Dome Temp. $+22^{\circ}\text{C}$ $H=7070$

Focus $0-R$

Dome Temp. $+18^{\circ}$ $H=8070$

Transparency Conditions *Hazy*

708

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp Meter	REMARKS	Quality
23 45	A	$1^{\text{h}} 20^{\text{m}} \text{W}$	$+ ?$	$2-3''$	6.8	G8V	Filter in 8-10-8	Asm-Sp/KK	400/160		blank!
										0.19	
00 56	B	$1^{\text{h}} 41^{\text{m}} \text{W}$		$3''$	6.8	dK1	Filter in 2-2-2	Asm-Sp/KK	400/70	0.49 BT/17	fine in general H&K sl wks
02 05	A	$0^{\text{h}} 09^{\text{m}} \text{W}$		$2-3$			no filter 9-9-9	Asm-Sp/KK	40/150	2 oph. 0.78	exp fine guiding off
02 19	B	$0^{\text{h}} 39^{\text{m}} \text{E}$			0.04	A0V	no filter 9-9-9		40/200	2 Lyr.	str.
02 28	A	$0^{\text{h}} 30^{\text{m}} \text{E}$		$2''$	"	"	"		40/120		sl str; guiding
03 31	B	$1^{\text{h}} 55^{\text{m}} \text{E}$			$V=6.02$	KTV	No filter 3-3-3		400/120	RHS Red Box	v. fine
03 53	A	$2^{\text{h}} 11^{\text{m}} \text{E}$				FSIV	3-3-3		200/75	RHS Red Box	v sl str
					127-05	5^{m}	} D19 68°F				
					098-02	5^{m}					
					IIa 0	8^{m}					

II a 0-e 14017-16057
III g 1-e 01126-18057

III g.j-e 01126 - 18057

Dome Temp. _____
Focus 15
Dome Temp. _____

Hour	Angle	End
01	01	W
03	20	E
01	05	W
0	55	W
0	42	E
0	50	W

Dome Temp. 21°C H=7070Focus $15-B$ Dome Temp. 18°C H=8370Transparency Conditions *hazy*

770

seeing much better by 04

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp/MTR	REMARKS	Quality
22 11	A	01.01 W	+83 40	4-7	5.2	A0	Filter in 8-8-6	Sp. Bin-Bln	200/30	* Too Slow } * Push Please LHS $\leftarrow$ * Box #3 LHS	fine
23 19	B	03.20 E	+71 26	3"-4"	4.18	Apsi	8-10-6	SB Lne	200/80	RHS box #3 $\leftarrow$ RHS RHS	fine
01 02	A	01.05 W	+36 50	5- $\frac{1}{2}$ "	4.95	BTV	no filter 4-5-5	SB-Bln/Ly	200/260	Middle Box #3 " "	v sl wh
02 55	B	0.55 W	+14 34	2"	6.07	Am	Filter in 8-8-8	Ec/Bln-8 $\frac{1}{2}$	400/140	RHS	fine
03 44	A	0.42 E	+36 55	2"-1"	4.98	B3Te	8-8-8	SB Bln	200/118	RHS	v sl str
04 06	B	01.26 W	+71 27	2"-8"	4.18	Hpsi	8-8-8	SB Lne	200/60	RHS	v sl str
			41578	11 ^m					.24		
			Other II20	8 ^m	D19	68°F			.20		
			III0J	5 ^m					.10		

II 90-e 14017-16057
098-02 20047-18057

098-02 20047-18057

Speed 7
Dome Temp. 7
Focus 15-
Dome Temp. 7

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle East
41584	HD117555 (FK (cm))	13 ^h 26.1	+24° 44'	G12	Ilford	20/3	76°F	20 26	0:11	A	02 27 W
41584 T	Strip Cal'n for 41584				"	60sec					
41585	HD136175 (UGB)	15 ^h 14.1	+32° 01'	G65	09802C	20/4		0:21	01 39	B	02 08 W
41585 T	Spot Cal'n for 41585-86.				"	15 min @		15V D3 4810	7V D1 HL 5450		
41586	HD139319 (TW Dra)	15 ^h 32.4	+64° 14'	G65	"	20/4		01 45	02 45	A	02 58 W
41586 T	Strip Cal'n for 41585-86.				"	90sec					
41587	HD191610 (28 Gg)	20 ^h 5.7	+36° 33'	G12	Ilford	13/9	66°F	02 55	04 01	B	02 E
41587 T	Strip Cal'n for 41587.				"	90sec					

Spectr. Dome Temp. 76°F H=75%

Focus 15-B

Dome Temp. 70°F H=90%

Transparency Conditions Good sl haze only

- some cloud

Blue box #1

112

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp Meter	REMARKS	Quality
0:11	A	02 27 W	+24° 31.9	2-3-5	8.7v	g6e	Filter In 7-5-5	Bln Edg Bin	800/113	* Push Please very slow Increasing haze * LHS LHS	v sl wk
01 39 B V01 9V D2 6 5450		02 08 W	+31° 54.0	3-4	7.65v	B5	Filter In 8-8-8	BB Edg bin	800/60	Yellow Filter in/Tilt 0.49B	fine
02 45 A		02 58 W	+64° 06.9	3-4	7.5v	A6	Filter In 8-8-8	BB edg bin	800/58	" " "	fine
04 01 B		00 22 E	+36 55.6	1-2"	4.98	B3IIe	Filter In 7-8-8	Bln Spec Bin	200/120	* Normal Devlmt * RHS RHS	v sl str
		098 5m								Note The remaining (2) IIa0 UnExp plates put in Exp Box on LHS (insurance, just in case it's # 41571)	
		41584 10m									
		41587 8m									
										P.S. More 098 needed pat in Vacuum	

ΠαΟ-ε 14017-22057

Dome Temp. _____
Focus 15
Dome Temp. _____

[illegible]

Παθ-ε 14017-22057

Dome Temp. 20
Focus 15-8
Dome Temp. 17

[illegible]

17-22057

Dome Temp. 20°C H9070

Focus 15-B

Dome Temp. 17°C H=9870

Transparency Conditions OK s/haze

776

Exp Box #1

Ending Time EST.	P.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp Mtd	REMARKS	Quality
02:35	A	0 ^h 47 ^m E	-12 50	3-5"	7.0-7.9	A2	filter in 6-6-6	Blr EcB	800/1100	* (Exp not carried at begin) RHS *Push those two please. RHS	sl wk light struck in holder
02:37	B	1 ^h 13 E	+29 21	3"	6.8-7.7	FO-G	6-6-6	Rm-Ceph	866/354	LHS: Exp Box #1 LHS	fine
03:58	A	0.59 E	+28 18	3'-4"	5.3-6.8	FSI6- GOT6	8-8-	Rm-Ceph	900/180	LHS Dome dripping at dawn	v sl str v sl str
				8' 1/4"	DI)	67.5 F				KK** Note - It prob wouldn't make any difference to develop all plates the same perhaps slightly pushed. uncertainty in 41589 Exp. & its broken anyway	

117

IIa0-e 14017 - 24057 098-02e 20047 - 23057
 IIIaJ-e 01126 - 18057

Date May 25-26 Wht-Thurs 1977 Observer Gies-Tn-Cw Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.I.	Hour Angle End
41592	HD 88021/2	10 ^h 3 ^m 3.8	20° 49'	G12	IIa0-e	13/.5	68°F	20:36	23:08	A	4:57 W+
41592 T	Strip Caln for 41592				IIa0-e	60sec	-				
41593	HD 139892	15 ^h 35 ^s 6	36° 58'	G12	IIIa-Je	18/.5	63°F	23:23	1:01	B	1:26 W+
41593 T	Strip Caln for 41593				IIIaJ-e	180sec					
41594	SV Vul.	19 ^h 47.4	27° 12'	G16	098-02e	13/.3 ⁺	60°F	1:22	03:51	A	0.02E+
41594 T	Spot Caln for 41594				098-02-e	15min @		15V D3 4810	7V D1 Hx		7V D2 3450

20047-2357

Dome Temp. 66°F $H=80\%$

Focus OR

Dome Temp. 58°F $H=90\%$

Transparency Conditions clear getting gusty 178

Ending Time EST.	P.F.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp. meter	REMARKS	Quality
23 08	A	4:57 W	$+20^{\circ} 30'$	2"-4"	7.2	965 +A2	Filter in 10-7-7	VB-Bln	400/91	Tilt 0.49B Push } RHS Both } RHS	sl wk
1:01	B	1:20 W	$+36^{\circ} 46'$	4"	4.95	BTV	No filter 5-6-6	VB-Bln	200/302	LHS LHS	fine
03 51 V04 71 02 54 50	A	0 02 E	$+27^{\circ} 28'$	3"-5"	8.0	GOIG	No filter 3-3-3	"	400/80 .19	UV Filter in Tilt 0.7B	v sl str
										Karl - Perhaps the 098 should be slightly pushed. Consider the results of pushing # 91570. Was it really Fine at 400/24?	
										IIIaI 6" 098 6" IIaO 10" } DI 67°F } .13 .19 .20 1.29 .70	

Doc 14017-24057

Donze Temp.

Focus 0

Dome Temp. 7

[illegible]

721

IIoO-e 14017 -26057

Date May 27-28 Fri-Sat 1977 Observer Tn - Crow Julian Day _____

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.I.	Hour Angle End
41598	HD 141458	15 ^h 44. ^m 1	+13° 01'	G12	IIaO-e	13/15	70°F	20:38	22:02	A	01.41 E
41598T	Spot Calc for 41598-41601				IIaO-e	15 min @ 15V		D4 39.00	D3 43.00	D2 48.10	
41599	HD 135681	15 ^h 11. ^m 3	-12° 40'	G12	IIaO-e	20/.3		22:12	23:07	B	00.02 E
41600	"	"	"	"	"	"		23:08	00:08	A	00.57 W
41600T	Strip Calc for 41598-41601					90 sec					
41601	HDE 226868 (Cy9 x-2)	19 ^h 54. ^m 6	34° 56'	G12	IIaO-e	20/.4	67°F	00:21	3:49	B	00.03 E
41601T	Strip Calc for 41598-41601				IIaO-e	80 sec					

Dome Temp.

Focus

Dome Temp.

Transparency Conditions

722

Ending Time EST.	PP	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. meter	REMARKS	Quality
22 02 3 02 20 48/0	A	01 41 E	12° 58'	good 1"	6.80	A0	Filter in 10-10-10	SB-B/n	400/100	LHS	fine
23:07	B	00 03 E	-12° 48'	2"-3"	7.2	A2	Filter in 8-8-8	Ecl-B/n	400/40	LHS	good exp ok not guided to edge dimo
00 08	A	00 57 W	"	2"-5"	"	"	8-8-8	"	400/35	Middle of Box #3 maybe push with 41601	
3:49	B	00 03 E	35° 19.5'	2"-3.4"	9.7	09.7 Iab	Filter in 7-7-7	Sp. Bin -B/n	800/58	RHS. very slow getting hazy RHS	sl wk
all - 8^m Dig 49°F 20, .96 21, .76 KK* Prob should develop 41600 (middle of box) with 41598 & 98T c 99. or maybe Push all plates including 41601 together.											

II.0-e 14017-26057
098-02e 20047-23057

Date May 29-30 (Sun/Mon) 1977 Observer BB-Tn Julian Day 175.5

Dome Temp. _____
Focus 20
Dome Temp. + _____

Dome Temp. $+11^{\circ}\text{C}$ $H=9070$

238

Saw Bright Satellite thru Cygnus at 2110 - brighter than Vega WNW $\rightarrow$ ESE

124

Ending Time E.S.T.	P.H	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp Meter	REMARKS	Quality
0 09 3 D2 00 4210	A	2 48 W	+24 31	3-4	8.7- 8.83	gGe	8-8-8	Filter In Ec/Bin-Bln	800/125	* Tilt 0.99 LHS	exp ok flexure?
0 53 D1 71D2 5450	B	1 49 W	+31 54	2-3	7.6SV	B5	Filter In 8-8-8	Ecl Bin - BB	400/31	Placed next to Strip Photos in Exp Box 3 *LHS (Convention will be LHS with the Strip rack facing you)	ok fine
2 55	A	0 58 E	+46 23.5	2-3"	9.3V	A2+kO	Filter In 8-8-8	Ecl. Bin - BB	800/64??	RHS Problem with exp. meter balance	vsl wh
3 51	B	1 40 W	-9° 04.0	3-5	7.5V	B2	Filter In 8-8-8	Ecl. Bin - BB	400/23	RHS Pushing down	sil str
II 20 8" } Dig 68°F 098 5" } ,20 , .93 ,20 , .83											
* More IIo need bc cats evacuated. Also need more 098's evacuated before Wednesday.											

14017 - 30057

Dome Temp.

Hour Angle
End

Dome Temp. 17°C $H=65\%$

Focus 20-R

Dome Temp. 13°C 827

Transparency Conditions *Very Good*

126

[illegible]

127

14012-30052

Date June 2-3, Thurs-Fri 1977 Observer Ri-HB

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41613	HD 115612	13 13.2	+68 56	G12	IIaOb	13/.5	55°F	20 49	22:17	A	1:30 W
41613Y	cal stop plate	for plates 41613-18			IIaOb	15mm	@ 1500	3900	4300		
41614	HD 155763	17 08.5	+65 50	G12	IIaOb	13/.5		22:23	22:30	B	2:09 E
41615	HD 169820	18 21.4	+14 55	G12	IIaOb	13/.5		22:38	00:22	A	1:34 E
41616	HD 182255	19 18.7	+26° 04'	G12	IIaOb	13/.5		00:26	00:56	B	1:59 E
41617	HD 187691	19 46.2	+10° 10'	G12	IIaOb	13/.5		00:58	01:40	A	1:40 E
41617Y	cal stop wedge	for plates 41613-18			IIaOb	90°					
41618	HD 192276	20 09.0	+47° 26'	G12	IIaOb	13/.5	48°F	01:44	03:39	B	0:08 E

Dome Temp. 050c 97%

728

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp. filter in	Pros	Ex Meter	REMARKS	Quality
22:17 4300	A	1:30 W	+68° 38'	.5" +	6.1	B9	10-10-10	SB-4b	400/120		fine
22:30	B	2:09 E	+65° 47'		3.2	B6 IV	10-10-10	SB	400/126		vsl str
20:22	A	1:34 E	+15° 00'		6.4	Ap	10-10-10	SB-H5	400/120		v. sl. str
20:56	B	1:59 E	+26° 18'		4.9	B5 III	10-10-10	"	400/120		sl str
01:40	A	1:40 E	+10° 27'		5.1	F8 V	10-10-10	Std Vel	400/120		sl str
03:39	B	0:08 E	+47° 42'	2→5"	6.6	B8	10-10-10	SB	400/131		vsl str
				8" Dig	68°F	.17					

129

Dav-E 14017-02067

Date June 3-4 Fri-Sat, 1977 Observer Hb-Ri-Cro Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41619	HD 86360	9 ^h 52. ^m 8	+12° 55'	G12	IIaOE	13/.5	59°F	20:47	21:13	A	3:59W
41620	HD 115612	13 13.2	+68 56	G12	IIaOE	13/.5		21:19	21:59	B	1:16W
41620T1	cal stop wedge	for plates 41619-27			IIaOE	15mm @ 15 mil		D4 3900	D3 4300	D2 4810	
41621	HD 169820	18 21.4	+14 55'	G12	IIaOE	13/.5		22:06	23:00	A	2:52E
41622	HD 182255	19 ^h 18. ^m 7	26° 04'	G12	IIaOE	13/.5		23:05	23:21	B	3:28E
41623	HD 187691	19 ^h 46. ^m 2	10° 10'	G12	IIaOE	13/.5		23:25	23:52	A	3:23E
41624	HD 192276	20 ^h 09.0	+47° 26'	G-12	IIaOE	13/.5		23:57	01:02	B	2:35E
41624T1	cal stop wedge	for plates 41619-27			IIaOE	90mm					
41625	HD 199892	20 ^h 54.9	+41° 33'	G-12	IIaOE	13/.5		01:08	01:49	A	2:34E
41626	HD 193964	20 17.9	+61° 56'	G12	IIaOE	13/.5		2:00	2:24	B	1:21E
41627	HD 219634	23 ^h 12. ^m 2	+61° 25'	G12	IIaOE	13/.5	53°F	2:32	3:43	A	2:57E

Focus 20k
Dome Temp. 10°C 85%

Transparency Conditions *Photometric*

730

approved plates in Box ^{II} 7

Ending Time E.S.T.	P.R.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp. Ratio	Prog.	Exp. Mt	REMARKS	Quality
21:13	A	3:49 W	+12° 38'	4"	5.2	B9.5V	10-10-10	Hb-SB	400/120		v sl str
21:59 03 4300	B D2 4910	1:16 W	+68° 33'	~3"	6.1	B9	10-10-10	"	400/120	Seeing much better than last night.	v sl str
23:00	A	2:52 E	+15° 01'	3"	6.4	A9	10-10-	Hb-SB	400/120	near front of exposed Bx the other 2 have rotten or clean	ok
23:24	B	3:28 E	+26° 19'	3"	V=4.9	B6III	10-10-10	"	400/120		"
23:52	A	3:23 E	+10° 25.5'	3"	5.1	F8V	10-10-10	Std. Vel	400/121		"
1:02	B	2:35 E	+47° 45'	3"	6.55	B8	10-10-10	Hb-SB.	400/120		"
01:49	"	2:34 E	+41° 53'	3+"	6.01	B9	10-10-10	Hb-S.B.	400/120		"
2:24	D	1:21 E	+62° 15'	4-6	5.6	B9	10-10-10	"	400/120		"
3:43	A	2:57 E	+61° 54'	4"-6"	V=6.5	B8	10-10-10	"	400/120		"
8 ^m D19 68°F .17											

131

J200-E 14017-02067

J200-E 14017-05067

Date June 8-9 Wed-Thurs 1977 Observer Rm-Ri Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.I.	How Angle End
41628	HD 84441 = c Leo	9 ^h 40.2	24° 14'	G12	IIaO E	9/.5	58°F	20:45	20:59	A	4 ^h 16W
41629	HD 186688 = SU Cyg	19 40.8	29° 01.4	G12	IIaO E	50/.5		21:11	23:34	B	3 ^h 16E
4162971	cal. spot wedge in plate	41628-41632			IIaO-E	15mm @ 15V					
4162972	cal. step wedge in plate	41628-41632			IIaO-E	90mm					
41630	HD 213306 = S Cep	22 ^h 25.4	+57° 54'	G12	IIaO E	9/.5		53:43	00:05	A	05 ^h 30E
41631	HD 178359 = TT Aql	19 ^h 03.2	+01° 08'	G12	IIaO E	80/.5		00:14	02:14	B	00 01W
41632	HD 191610 = 25 Cyg	20 ^h 05.7	+36° 33'	G12	IIaO E	13/.9		02:23	03:03	A	00 12E
4163271	spot cal. in plate	41633			IIaO-E*	15mm @ 15V					
4163272	strip cal. in plate	41633			IIaO-E*	90mm					
41633	HD 213306 (S Cep)	22 ^h 25.4	+57° 54'	G-12	IIaO-E*	9/.5	50°F	03:09	03:34	B	02 02E
41633T	strip Inst IIaO	6" exp									

Dome Temp.

Focus

Dome Temp.

Dome Temp. 10°C 65%

Focus 20.72

Dome Temp. 05°C 79%

Transparency Conditions Photometric

132

Ending Time EST.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Proc.	Exp Rate	REMARKS	Quality
21:55	A 4 ^h 06W	+24° 00		3.1	GOp II	15-15	Cepheid Evans	40/12		v sl str
23:14	B 3 ^h 16E	+29° 18	4-5	6.8-7.7	F0-G1	8-8-8	Cepheid Evans	800/280		fine
01:05	+ 05 ^h 30E	+58° 24		4.1-5.2	FS1b- G21b	10-10-10	Cepheid Evans	400/147		v sl str.
02:15	3 00 01W	+01° 26	3-4	7.3-9.1	F8- K0	8-8-8	Cepheid Evans	800/220	a little cloud S	fine
03:03	A 00 12E	+36 52		4.8	B3Ve	10-10-10	Sp B	200/120		sl str.
03:34	B 02 02E	+58° 24		4.1-5.2	FS1b G21b	10-10-10	Cepheid Evans	200/81	circus clouds coming up from S.W.	sl strong
					8 ^m D19	68°F	.18, .18			

FAOE 14077-05067

Dome Temp.

FOCUS

Dome Temp.

Hour Angle
End

Dome Temp.

Focus 302

Dome Temp.

Transparency Conditions

734

Ending Time
E.S.T.

02 59
D3
4300

353

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Procs	Ex Meyer	REMARKS	Quality
02 10 W	+14°34	4-6	6.07	Am	10-10-10	Fal Bin-13h	400/		fine
00°31 W			4.82	133	10-10-10	Sp Bin-13h	200/120	clouds pushing down	vs/str
			8" D19	68°F	.19				

135

IIa0-e *14017-10067
(evacuated only 4 hrs)

09802e 20047-31057
IIa0-e 14017-05067
IIaF 14017-09067

Date June 10-11

Fri-Sat-1977 Observer Ly-Tn

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle Est
41636	HD 93033	10 39.5	+46 05	G65	09802e	20/4	62°F	20 49	21 05	A	3 20 W
41636T	Spot Calc for 41636				"	15 min @		15VD3 8VD1 8VD2 4810 Hx 5450			
41637	HD 93033	10 39.5	+46 05	G65	09802e	20/4		21 17	21 29	A	3 45 W
41638	HD 131511	14 48.9	+19 33	G12	IIa0-e	13/5		21 41	23 15	B	1 23 W
41638T	Spot Calc for 41638				IIa0-e	15 min @ 15V		D4 D3 D2 3900 4300 4810			
41639	HD 153751 (EUM)	16 56.2	+82 12	G16	IIaF	9/5		23 34	00 53	A	1 03 W
41639T1	Spot Calc for 41639				IIaF	15 min @ 75V		P3 D3 D2 5100 5450 Hx			
41639T2	Strip Calc for 41639				IIaF	3 min					
41640	HD 210334 (AR Lac)	22 04.6	+45° 15'	G16	09802e	13/5		01 08	02 55	B	2 12 E
41641	HD 191610 (28 Grs)	20 5.7	+36 33	G12	IIa0-e*			03 05	03 40	A	0 31 W
41641T1	Spot Calc for 41641				IIa0-e*	15 min @ 15V		D4 D3 D2 3900 4300 4810			
41641T2	Strip Calc for 41641				IIa0-e*	90 sec					

Karl- This is too complicated & 4x5s are caught in Exp box
Where are other big boxes? We must keep emulsions separate.
Perhaps you can develop IIaFs & 098s in same time to avoid possible mixups.

Dome Temp. +
Focus 10-
Dome Temp. +

*
Transferred
IIaF, 098
IIa0

Dome Temp. $+11^{\circ}\text{C}$ H= 80%

Transparency Conditions *Excellent - thin clouds & gusty*

Calibration spot plates

This night & June 12/13 unnumbered

^{K15} note Exp Box convention with strip rack facing me.

Ending Time EST.	P.B.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Proj	Exp meter	REMARKS	Quality
21 05 1 8102 5450	A	3 20 W	+45 49	1-2"	7.06- 8.76	B8.5+F	8-8-8	Ecl BIN - BB ^B	800/63	wratten filter not in. RHS (Far back box #3)	overlapped
21 29	A	3 45 W	+45 49	1-2"	11	4	8-8-8	ECL BIN - BB ^F	800/60	Yellow wratten in RHS Yellow out	fine
23 15 02 4810	B	1 23 W	+19 22	2"	6.84	dk1	9-11-11	Asm KK	400/180		vs1 str
00 53 02 4810	A	1 03 W	+82 11	2-3"	4.78	F0+ G5 III	no filter 5-5-5	H+K BW - Ly	200/208	0.7B Tilt LHS (box #3 next to strips) LHS	vs1 str
02 55	B	2 12 E	+45 44	2-3"	7.3 -8.2	G5- K0	no filter 3-3-3	RSCVn - Ly	400/133	uv Filter in RAS	
3 40 02 4810	A	0 31 W	+36 51	3-5"	4.8	B3 Ve	5.11 in 10-10-10	SB - B ^{1/4}	200/117	uv out pushing down box #7 box #7 box #7	vs1 str no good
		Put in wrong expand box - only 5" dew - no good									
		Transferred IIaOs to box #7									
		IIaF, 098 5 1/4" Dig 67°F									
		IIso									
		note - I unfortunately fogged the remainder 1st Unexp IIaO box									

137

098-02e 20047-31057
II-o-e 14017-10067

Date June 12/13 (Sun/Mon) 1977 Observer BB-Tn Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
41642	HD93033 (TX UMa)	10 ^h 39.5	+46° 05'	G65	098-02e	13/1.5	60°F	21:10	22:16	A
41643	"	"	"	"	"	20/1.4		22:18	23:06	B
41643 T	Spot Colln for 41642-44					15mm @	15V D3 4810	7V D1 H2	7V D2 5450	
41644	HD191240 (SW Cap)	20 ^h 3.8	+46° 01'	G65	098-02e	20/1.4		23:21	2:12	A
41645	HD191610 (28 Cap)	20 ^h 5.7	+36° 33'	G12	IIaD-e	13/1.9		2:34	3:24	B
41645 T1	Strip Colln for 41645				IIaD-e		57°F			
41645 T2	Spot Colln for 41645				IIaD-e	15mm @	15V	D4 3900	D3 4300	D2 4810
41645 T3	Test			G16B	IIaD					A
T4	Test			"	"					A
T5	"			"	"					A
T6	Sky			G16B	IIaD	9/1.5				A
T7	Sky			"	"	"				A
T8	"			"	IIaD E	"				A
T9	"			G24R	IIaF E	9/1.5				A
T10	"			G16B	IIaD E	9/1.5				A
T11	Test			G16B = former G40 (short camera) grating serial 986 A5B4						A

Dome Temp. +
Focus -10-
Dome Temp. +Hour Angle
End

4 40 W

5 29 W

0 44 E

0 24 W

23 39

Dome Temp. $+13^{\circ}\text{C}$ $H=907$

Focus $10-R$

Dome Temp. $+13^{\circ}\text{C}$ 9776

Transparency Conditions OK but Hazy

738

Many meteors noted tonight.

Some in line of sight: very slow or flashing

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	REMARKS	Quality
4 40 W	$+45^{\circ}50'6''$	1-3"	7.1V	B8-5	Filter in 8-10-10	BB ecliptic	800/74 ^F Wratten Filter in	fine
5 29 W	"	2-3"	"	"	Filter in 8-8-8	"	800/60 " "	fine
0 44 E	$+46^{\circ}22'6''$	2-3-5"	9.5V	A2+K	Filter in 8-8-8	"	800/53 " " (No ds after 2) cloud	no good Turn glass Broken in two pieces
0 24 W	$+36^{\circ}53.9''$	3"	4.8	B3Ve	Filter in 10-10-10	Blu SB	200/108 thru cloud	vsl str
Duo 8" Dia 68°F 118						Filter in 20 sec	Tilt 0.50 B	grating in backboard
						"	There will be an insurance Duo blank	
						60 sec	Tilt 0.80 B	
						Filter in 20 sec	Duo in separate box; box #6	
						20 sec	Tilt 0.5 B 200/30	
						20 sec	Tilt 1.00 B 200/30	
						20 sec	Tilt 1.200 B 200/15	
						20 sec	" 200/15	WR 4 filter in
						20 sec	" 200/15	UV Filter in
						30 sec		

G-12 grating

$\sim 3^{\text{min}}$ exp

only part
of mirror
used

$\Pi_{40-e} \ 14017 \ -13067$

Dome Temp. 3
Focus 0
Dome Temp. 7

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41646	HD 137182	15 19.5	+10 54	G12	IIaO-e	13/5	70°F	20 48	00 25	A	01 17 W
41646T1	Strip C. 1/2 for 41646-48.				IIaO-e	90sec					
41646T2	Spot C. 1/2 for 41646-48.				IIaO-e	15min @ 15V		^{D4} 3900 ^{D3} 4300 ^{D2} 4810			
41647	HD 176003	18 53.0	+44 05	G12	IIaO-e	13/5		00 33	02 56	B	01 16 W
41648	HD 191610 (28 Cyg)	20 05	+36 33	G12	IIaO-e	13/9	62°F	02 59	03 29	A	00 36 W
41648T1	sky			G-12	IIaO	9/5		10 18	10 31	A	
41648T2	sky			G-16B	IIaO	9/5		10 35	10 38	A	
41648T3	sky			G-16B	IIaO	9/5		10 40	10 44	A	

$$H = 89 \frac{7}{8}$$

140

1111

141

IIa0-e 14017-13067

Date June 15-16 1977 Wed-Thurs Observer Rm-Ty Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour Angle End
41649	2 Boo ^{HD} 124897	14 11.1	+19 42	G16B	IIa0e	13/.9		20 41	20 42	B	0 13E
41650	ε Leo = HD 84441	9 ^h 40.2	+24° 14	G12	IIa0e	9/.5		20 51	21 27	A	5 01W
41650 T1	Strip Cal'n for 41650-53										
41650 T2	Spot Cal'n for 41650-53				IIa0-e	15 min @ 15V		D4 3900	D3 4300	D2 4810	
41651	HD 163506 = 89 Her	17 51.4	26° 4	G12	IIa0e	13/.5		21 35	22 33	B	2 01E
41652	HD 186688 = 50 Gys	19 40.8	29 01	G12	IIa0e	20/.9		22 40	01 51	A	0 32E
41653	HD 191610 = 28 Eri	20 ^L 05.7	+36° 33	G12	IIa0e	13/.9		01 56	03 07	B	0 18W

Dome Temp. 20°C $H=706$ Focus 0 Dome Temp. 15°C $H=803$ Transparency Conditions *hazy - cloudy*

142

Ending Time
EST.

P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

Prog

REMARKS

Exp Mkr

Quality

20 42

B

0 13 E

1"

0.9

KO

Filter in
10-10

UV filter in, tilt = 0.40 B 200/30

use 0.398
vsl str

21 27

A

5 01 W

+23 59

1-4"

7

602

Filter in
10-10-10

UV out tilt = 0.49 B 200/80

fine

90 sec

ok

02

4800

ok

22 33

B

2 01 E

+26 11

1-5"

6.82

F2 Ia

10-10-10 Ceph/E vano

400/160

vsl str

01 51

A

0 32 E

+29 20

2-3

6.8-7.7

F0-G1

2-8-8

Ceph/E vano

Thick cloud by 01"

800/198

200

guiding

03 07

B

0 18 W

+36 53

3-4"

4.98

B3 Ve

10-10-10

Blu SB cloud

200/62

vsl str

8^m Dig 68°F

.17 1.60

41649 same but dew in vichon

IIaO-e 14017 - 15067

Date June 16/17, 1977 (Thurs-Fri) Observer Tn-Gies Julian Day 2444111.5

[illegible]

Dome Temp. 17°C $H=71\frac{3}{8}$

Focus 0

Dome Temp. 16°C

Transparency Conditions Good-s/haze

$\text{very cloudy at times}$

744

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Prog	Exp meter	REMARKS	Quality
03 05 E	+71 25	3-5"	4.2	Ap Si	5 Her 19 10-10-10	SB Lnc	200/50		fine
02 32 E	+36 53	3"	4.98	B3 Ve	10-7-9	SB Bln	400/90	thick cloud by 2240 (No counts for 1 ^h around the middle of Exp.)	sl wh

8^m Dig 68°F .21 1.58

new Dig

945

IIaO-E
IIaF

14017-15067

14017-16067

Date JUNE 17/18 1977 Observer Ly-Ri Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.	Hour angle End
41655F1	Focus			G16B	IIaO-c	13/.5	74			A	
F2				G24R	IIaF					B	
F3				G24R	IIaF					A	
F4				G16B	IIaO					B	
41656	HD131511	14 48.9	+19 33	G24R	IIaF	13/.5		21:25	21:57	A	00°32W
F1	Focus			G12	IIaO					B	
41657	HD112014	12 48.3	+83° 58	"	IIaO-c	13/.5		22:24	23:03	A	03°43W
41658	HD131511	14 48.9	+19° 33	G-12	IIaO-c	13/.5		23:13	00:48	B	02°23W
41658T1	apert cal for plates 41637-59.				IIaO-c	15mm @ 1500		D4 03 02 3900 4800 4810			
41658T2	strip cal for plates 41637-59.				IIaO-E	9000					
41659	HD161321	17 39.	+14 27		IIaO-c			00:53	02:34	A	02°19W
41659T1	apert cal for plate 41656.				IIaF-E	7.5 @ 15mm		D3 02 D3 5100 41 5450			
Karl - please push 41659 + 41658 1/3 exp desired ~ 1/2 exp desired (ie all IIaO's slightly same only 1 cal)											

Dome Temp.

Focus 203

Dome Temp.

IIaO

IIaF

Dome Temp. 22°C 82%

Focus 20B

Dome Temp. 19°C 98%

Transparency Conditions

746
good at first
light cirrus + hazy towards 00:00
deteriorated from 00:00 on

Ending Time EST.	P.B.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
	A						34 SEC. FILTER IN	TILT 0.38B Focus OR	center to violet on all
	B						34 SEC	" W4 FILTER	
	A						34 SEC	W4 FILTER Focus 20B	
	B						6 SEC NO FILTER NO FILTER		
21:57	A	00° 32W	+19° 21	2-3	6.84	dk1	77-7 no filter 7 SEC	400/60 Asm - KK W4 FILTER TILT 0.49B Focus 20B	S/Wk center Vsl to red
23 03	A	03 43 W	+83 26		5.81	A0	fill in 10-10-10	400/134 Sp Bin - Bln fainter of pair telescope removed	fine
00:47	B	03 23 W	+19 22	3-6	6.84	dk1	10-10-10	400/101 Hem - kk cut short due to cirrus + thick haze	V sl wk
00:54	A	02 19 W	+14 30		6.07	Am	10-20	400/45 Sp Bin - Bln Thick haze some cloud. (3 up counts @ 2:15)	S/Wk ok
Tia O, late in exposed Box #7									
Tia F " " #8									
							8m	.23 1.74	
							5m	.21 2.05	

D19 68°F

747

Visitors from 20:30 - 22:45

Date Sat-Sun June 18-19 1977 Observer AK-R.

Julian Day

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.	Hour Angle End
41660	HD 22742	13 58.6	+11 16	G24R	098-02	13/.5	71°F	23:10	23:51	A	02:20W
41661	HD 131511	14 48.9	+19° 33	G24R	098-02	13/.5		23:55	00:23	B	23:04W
41661F	focus test 2 op.			G24R	098-02	9/.5				B	
41662	HD 159561	17 30.3	+12 38	G16	127-05	9/.7	70°F	0:36	1:10	A	01:10W
41662TI	optical for plates 41660-61 2 Lyr.				098-02	15mm		150 D3 4810	70 D1 Hx	70 D2 5450	
41663	HD 172167	18 33.6	+38° 41	G-16	127-05	9/.9		1:18	1:22	B	124W
41664	HD 172167							1:24	1:30	A	1
41664TI	spot cal for plates 41662-68 2 op.				127-05	15mm		70 D3 5450	70 D2 Hx		
41665	HD 159561	17 30.3	+12° 38	G-16	"	9/.7		1:35	2:14	B	214W
41666	HD 172167 2 Lyr.	18 33.6	+38° 41	G-16	127-05	9/.9		2:17	2:24	A	
41667	"	"	"	"	"	"		2:25	2:30	B	01:45W
41668	HD 159561	17 30.3	+12° 38	G-16	127-05	9/.7		2:33	3:23	A	3:22W

Dome Temp.

Focus

Dome Temp.

IIAD-F 14017-15067
098-02 20017-17067

098-02 20047-17067

Date Sun-Mar Jan 19-20 1977 Observer BB-R Julian Day 2443880.5

Focus 103

Dome Temp.

[illegible]

Dome Temp. 15°F 93%

Transparency Conditions Photometer after 22:30

250

[illegible]

Date... Mon June 20 1977.

Observer.

Julian Day

[illegible]

Dome Temp.

Transparency Conditions

Focus

Dome Temp.

Ending Time
E.S.T.

P.H.

B

B

B

B

B

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

filter out

REMARKS

Quality

10-10

64°F

Focus setting 0

Tilt = .49B

slv shift

10-10

"

.49B

big v shift

10-10

"

.38B

vlogge v shift

10-10

Focus 50R

"

big v shift

10

Focus 60R

"

Broken

Date..... Observer..... Julian Day.....

Focus

Dome Temp.

Hour Angle
End

Dome Temp.

Transparency Conditions 202

154

Ending Time P.S.T.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	REMARKS	Quality
							EMPTY BOOK	
							FROM NOW ON //	

Dome Temp.

Transparency Conditions 34

156

[illegible]

Date..... Observer..... Julian Day.....

[illegible]

Focus

Dome Temp.

Dome Temp.

Transparency Conditions

158

[illegible]

Date..... Observer..... Julian Day.....

Focus

Dome Temp.

[illegible]

Dome Temp.

Transparency Conditions

160

[illegible]

161

enclitico e periphrastico

.. 113 } , 116 {

Dome Temp.

1911

Focus

.....

Dome Temp.

Date..... Observer..... Julian Day.....

[illegible]

Hour Angle
End

1

162

Dome Temp.

Transparency Conditions

Focus

Dome Temp.

[illegible]

Date..... Observer..... Julian Day.....

Dome Temp.

[illegible]

Dome Temp.

Transparency Conditions

Focus

Dome Temp.

[illegible]

Date..... Observer..... Julian Day.....

[illegible]

Focus

Dome Temp.

Hour Angle
End

Transparency Conditions[illegible]

interpretation of quality ratings

v wh $\rightarrow$ too wh to measure

wh $\rightarrow$ measurable only at strongest portion

s wh $\rightarrow$ lines at extremes too weak to measure

v sl wh $\rightarrow$ H&K or Balmer limit underexposed

v. sl. strong — stronger than necessary for RV measures, i.e. spectrum extends well below H&K on late stars
 $\rightarrow$ no loss of information in denser regions

sl. strong — contrast lost in dense portion

strong — ditto, but more so, weaker lines nearly invisible

v. strong — lines blocked, only strongest visible

density readings (fog, step 7) follow developing data

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