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612 FOCUS: - MAKE FINAL SETTING WITH RED NOS. DECREASING

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- FOR CENTRE TO VIOLET, CORRECT BY INCREASING RED NOS.

- DECREASING TEMP WILL CAUSE CENTRE TO VIOLET

- 50 DIVISIONS \approx SHIFT OF 21 MICRONS ON PLATE

\approx MOVEMENT OF CAMERA 6×10^{-3} INCHES

TYPICAL FOCUS: 90 IR (WINTER) - 5-R (SUMMER)

640 FOCUS:

by

UG

NG

AT

!

5

Date ^{Wed Thurs.} July 15-16 1970 Observer Gu - R₁ 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.	How long Exp.
33384	i Ser	15 ^h 37 ^m 5 ^s	+20° 0'	G12	Ilao	9L		23:18	23:30		2:11
33385	HD 157087	17 16 ^m 5 ^s	+25° 38'	G12	Ilao	9L	76°F	23:37	23:51		1:50
33386	72 Oph.	18 ^h 2 ^m 37 ^s	+09° 33'	"	"	"	75°F	00:04	00:07		1:24
33387	111 Her	18 ^h 42 ^m 36 ^s	+18° 04'	"	"	"		00:17	00:25	A	1:50
33388	2 Cap ("hu")	20 15 ^m 7 ^s	+13° 04'	"	"	"	74°F	00:32	00:44	B	1:15
33389	8 Del	20 30 38	+14° 20'	"	"	"		00:53	01:01	C	0:55
33390	0 Cep	20 27 54	+62° 39'	"	"	"	73°F	01:13	01:20		0:07
33391	i And	22 ^h 33 ^m 14 ^s	+42° 43'	"	"	"	73°F	01:31	01:39	D	2:45
33392	5 Del	20 30 38	+14° 20'	"	"	"		01:55	02:06	C	0:17
33393	107 Aps	20 42 49	+15° 14'	"	"	"	72°F			T	
33393	HD 183914	19 26.7	+27 40	"	"	"	73°F	02:52	3:09	A	2:57
33394	HD 212097	22 16.7	+27 50					03:20	03:30	B	0:36
33394E1	focus test	22 16.7 / 16.7		G12	Ilao	9	70°F			B	
33394T1	calibrator	step wedge	for	Ilao	plates ^{††}						
33394T2	"	"	"	"	"						

Dome Temp.

Focus

Dome Temp.

How long
Exp.

2:11

1:50

1:24

1:50

1:15

0:55

0:07

2:45

0:17

2:57

0:36

MWP

Dome Temp. *72°F H76%*

Focus *22-R*

Dome Temp. *67°F H79%*

Transparency Conditions *very hazy*

clear up at about 0010

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
3 ^h 7 ^m W	+79° 53'	3s	4.52	A1Ⅱ	17-17-17	Gw Pros	80/40		FINE
1 ^h 54 W	+55° 37'	3s	5.30	A3Ⅲ	17-17-17	Gw Pros	80/40		FINE
1 ^h 20 ^m W	+09° 38'	2s	3.73	A4Ⅲ	17-17-17	" "	80/40		FINE
0 ^h 56 ^m W	+48° 11'	2	4.30	A5Ⅲ	17-17-17	" "	80/40		FINE
0 ^h 17 E	-120 46	3	4.75	B9Ⅱ	17-17-17	" "	80/40		FINE
0 ^h 15 E	+14° 37'	3	4.67	A3Ⅱ	17-17-17	" "	80/40	BROKEN 3 PIECES	FINE
0 ^h 07 W	+62° 65'	2	4.20	A7Ⅲ	17-17-17	" "	80/40	" 2 PIECES	GUIDING FINE
2 ^h 40 E	+43° 09'	2	4.28	B8Ⅱ	17-17-17		80/40		SL. GUIDING FINE
0 ^h 49 ^m W	+14° 39'	2	4.67	A3Ⅱ	17-17-17	" "	80/40		FINE
			5.74	B2Ⅲ			80/100	couldn't find star	
2 ^h 59 ^m W	+27° 58'	3	5.34	B9	12-12-12	Comp Pros	200/100		FINE
0 ^h 26 W	+28° 15'	3	4.83	B8	12-12-12	" "	80/40		Fingerprint FINE
					7-7 in filter				C. to Red
M.W.P.	2 / 9.0 min	⊙	68°F		July 16 1970				
			"		"				

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THUR-FRI
Date JULY 16/17 1970Observer Hd-McA-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
33395	HD 180555	19 11.9	+14 23	G-12	IIaO	9L	70°F	20 51	21:09	A	2 ^h 45E
33396	HD 189090	19 53.2	+16 31	"	"	"	69°F	21 15	21:34	B	3 ^h 03E
33397	HD 183914	19 26.7	+27 40	"	"	"	69°F	21 39	21 55	C	2 ^h 14E
33398	HD 183227	19 23.4	+2 43	"	"	"	68°F	22 03	22:28	C	1 ^h 35E
33399	HD 196426	20 32.2	-0 15	"	"	"	67°F	22 34	23 04	C	2 11E
33400	"	"	"	"	"	"	67°F	23 11	23 44	B	01 31E
33401	HD 200340	20 57.8	-01° 19	"	"	"	66°F	23:57	0:35	D	1 05E
33402	HD 198667	20 46.8	-05 52	"	"	"	66°F	0 40	1 01	A	0 28E
33403	HD 212097	22 16.7	+27 50	"	"	"	65°F	1 06	1 14	B	1 05E
33404	HD 213998	22 30.2	-0 38	"	"	"	64°F	1 18	1 25	C	1 48E
33405	"	"	"	"	"	"	64°F	1 26	1 33	A	01 40E
33406	HD 223094	23 41.5	+28° 09	"	IIaOB	13 5	63°F	01 42	02 31	C	01 52E
33407	HD 4388	00 41.1	+30° 25	"	IIaOB	"	63°F	02:38	03 23	B	01 49E
33408	HD 213998	22 30.2	-0 38	"	IIaO	"	63°F	03 39	03 44	A	00 32W
33408 F	four test		out out/in in	"	IIaO	9	63°F			C	
3340871	calibration	step wedge	for IIaO	plates #	33396-33405, 33408						

Dome Temp. 57°

Focus

Dome Temp. 67°

Hour Angle
End

Dome Temp. 67°F H 64%

Transparency Conditions

Some haze, photometric after 9200

Focus

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Dome Temp. 61°F H 74%

Time	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9	A	2 ^h 45 E	+14 32	2"	5.46	A0	12-12-12	COMP. PROG	200/100		FINE
4	B	3 ^h 03 E		2"	5.36	B9	12-12-12	comp prog	200/100	BROKEN 2 PCS.	FINE
5	C	2 ^h 14 E	+27 56'	2"	5.34	B9	12-12-12	" "	200/100	We took faint comp of dbl, though there is confusion in HDV	Field known FINE
28		14 38 E	+02° 57'	2"	5.92	B9	12-12-12	" "	200/100		QUIETING FINE
04	C	2 11 E	+00° 04'	2"	6.11	B8	12-12-12	" "	200/100		SL QUIETING FINE
4	B	01 31 E	+00° 04'	2"	"	"	6-12-12	" "	200/100		FINE
5	O	1 05 E	-01° 01'	2"	6.26	B8	12-12-12	" "	200/100		SL QUIETING FINE
1	A	0 29 E	-05° 34'	2"	5.45	B8	12-12-12	" "	200/100		FINE
4	B	1 45 E	+28° 14'	2"	4.83	B8	12-12-12	" "	200/100		FINE
25	C	1 48 E	-00° 11'	2"	4.08	B8	12-12-12	" "	200/100		FINE
33	A	01 40 E	-00° 11'	2"	"	"	12-12-12	" "	200/100		FINE
1	C	01 52 E	+28° 36'	2"	8.97	K III	6-6-6-6-6-6	ex. std. val.	800/320	baked plate right side of box	
33	B	01 49 E	+30° 52'	2"	8.80	K III	6-6-6-6-6-6	" "	800/320	N component of pair	
44	A	00 32 W	-00° 15'	2"	4.08	B8	18-18	comp prog	200/100		STRONG
							7-7	no filter			O.K.

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Tues-wed
Date July 21/22

Public night E Lyrae July 18/19
95⁽²⁾ → 65⁽²⁾

Observer West, H. 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
33409	HD 1839.4	19 26.7	27 40	G12	Ilao	9L	67°F	21 10	21:30	A	02 16E +
33410	HD 183227	19 23.4	+02 43	"	"	"	64°F	21:40	22:15	B	1 30E +
33411	HD 187 691	19 46.2	+10 10	"	"	"	"	22 24	23:04	C	01 05E +
33412	ADS 14893	¹⁹⁷⁰ 21 20.7	¹⁹⁷⁰ +10 12	"	"	"	61°F	23:20 ⁸⁰	00:40	A	00 59E +
33413	"	"	"	"	"	"		00:45 ⁷⁶	02:01	B	00 21W
33414	"	"	"	"	"	"	59°F	02:03	03:13	C	01 34W +
33415	L PISCUM	¹⁹⁷⁰ 23 38.4	¹⁹⁷⁰ +05° 28'	"	"	"		03:22 ¹⁰	03:32	A	00 25E +
33416	E CETI	¹⁹⁷⁰ 02 38.1	¹⁹⁷⁰ -11° 58'	"	"	"		03:40	03:58	B	08:00E -
33416F	Focus			"	"	9	57°F			B	in m / out
33416 T1	calibration step wedge for plates 33409-33416										22 July 1920
											2000 / 90
	411 - 416	REMOVED	BY DR. WEST								

Dome Temp. 62

Focus

Dome Temp. 50

How Angle
End

Dome Temp. 62°F H=60%

Transparency Conditions very good

Focus

Dome Temp. 55°F H=63% Delayed by Ex meter trouble

Time	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
32	H	02 16E	+27 54	2	5.34	B9	12-12-12	Comp.	unserviceable.		STRONG
18	B	1 30E	+02 55	2-3"	5.92	B9	12-12-12	"	"		SL. STR.
04	C	01 05E	+10° 24'	2"	5.8	F8	12-12-12	Std vel.	"		SL. STR.
40	A	00 59E	+10 17	2-3"	^{via} 6.75	F8V	12-12-12	Spec Bin	"	maybe strong Fe closely guided	FINE
01	B	00 21W	"	"	"	"	12-12-12	"	"	Finder fld down spot guided	
13	C	01 34W	+10° 16'	"	"	"	12-12-12	"	"	"	<u>BROKEN</u>
32	A	00:25E	+05° 32'	2"	^{vis} 4.3	F8	18-18	std vel	"	broken 2pc	SL. WK
58	B	03:00E	-11 55'	3"	^{vis} 4.3	F5	18-18		"		<u>BROKEN</u> * SL. STR
	B	in in / out out					7/7	no filter			
										* ACCIDENT DURING PROCESSING	
6/20		2 WP. 2 / 9.0 min @ 68°K					(2 to C. 159)				
								Anson -		Could you develop those as early as possible. ie Dr West wants to take them in the afternoon - Tn ✓	
								EX. MTR		Repaired July 22/70 HV	

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Date JULY 22/23 WED/THUR Observer Faubert - In-Gullive 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.	
33417	HD 158704	17 ^h 25 ^m .6	-26° 11'	G12	Ilao	9L	70°F	20:45	21:41	A	
33418	HD 134305	15 04.0	+12° 52'	"	"	"	70°F	21:56	22:08	B	
33419	HD 176938	18 ^h 57.5	+29° 23'	G12	Ilao	9L	"	23:20	23:44	A	
33420	HD 178947	19 ^h 05 ^m .5	+30° 24'	"	"	"	69°F	23:57	00:37	C	
33421	HD 179838	19 09.0	+29° 03'	"	"	"	68°F	00:43	01:37	A	
33422	HD 189847	19 ^h 57.0	+30° 57'	"	"	"		01:50	02:35	B	
33423	Band (HD 6860)	01 ^h 04 ^m .0	+35° 04'	"	"	"		02:51	02:55	C	
33424	Cali (Mia)	02^h 14^m.5	-3 26'	"	"	"	67°F	03:08		A	
33423 F	Focus			"	"	9	67°F			B	
33423 T1	calibration step wedge for plates 33417-33423									23 July/20	

Dome Temp. ...
Focus ...
Dome Temp. ...

Hour Angle End

0^h 05^m E

03^h 49^m +

02^h 25^m +

01^h 12^m W

0^h 00^m +

02^h 00^m +

02^h 00^m +

2002/20

Dome Temp. *6.6* H-57%

Focus *20-R*

Dome Temp. *63°F* H=70%

Transparency Conditions *Excellent*

cloud at 01:30

Time T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
41	A	0 ^h 05 ^m E	-26° 11'	3"	6.01	B9	17-17-17	Gu Ap *	200/100	possibly fog (ie loose catches) also broken 1" cd	(GUIDING) SL. WK
8	B	03 ^h 47 ^m W	+12° 38'	2"	7.24	A3	17-17-17	"	400/200	NO FOG	SL. WK
4	A	00 ^h 28 ^m W	+29° 31'	3"	6.64	A0	17-17-17	"	100/200		(GUIDING) FINE
7	C	01 ^h 12 ^m W	+30° 34'	"	6.66	B9	17-17-17	"	200/100		(GUIDING) FINE
7	A	00 ^h 12 ^m W	+29° 14'	2v	6.93	A0	17-17-17	"	200/100	thru cloud	FOR GUIDING FINE
5	B	02 ^h 22 ^m N	+31° 12'	"	6.66	B8	17-17-17	"	200/100	"	(GUIDING) SL. STR
	C	02 ^h 28 ^m E	+35° 30'	2c	2.27	M0II	18-18	G1001-Exh	20/19		(GUIDING) FINE
	A	_____	_____	_____	_____	M6	18	"	200/	c/cloud, gave up	
	B	_____	_____	_____	_____	_____	7/7	no filter	_____	_____	VERY SLIGHT CENTRE TO SEA
ly/n		2 WP-2 / 9.0 min @ 65°F / 290C.59									

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Date 1970 JULY 23/24 THUR-FRI Observer HD-Tn-MoK 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.
33424	HD189090	19 53.2	+16 31	G-12	IIaO	9L	73°F	20 39	21 13	A
33425	HD 171391	18 29.5	-11 03	"	IIaO	9L	71°F	21 21	21 51	B
33426	HD 196426	20 32.2	-00 15	"	"	"	71°F	21 59	22 31	C
33427	"	"	"	"	"	"	70°F	22 34	23 10	A
33428	HD 198667	20 46.8	-5 52	"	"	"	70°F	23 16	23 36	B
33429	HD 171391	18 29.5	-11 03	"	"	13S	69°F	23 46	23 58	C
33430	HD 200340	20 57.8	-01 19	"	"	9L	69°F	00 06	00 50	A
33431	"	"	"	"	"	9L	68°F	01 46	02 36	C
33432	HD 213998	22 30.2	-00 38	"	"	"	67°F	02 40	02 44	A
33433	HD 212097	22 16.7	+27 50	"	"	"	"	02 52	02 58	B
33434	HD 176318	18 54.6	+38 07	"	"	"	"	03 06	03 30	C
33434 F	Focus			"	"	9	66°F			B
33434 T1	calibration step wedge for plates 33424 - 33434								24 July/70	

Dome Temp. 58

Focus 22

Dome Temp. 61

Hour Angle
East

2'56E

00 54E

2 16E

01 39E

01 26E

01 14W

00 23E

01 23W

00 01E

00 27W

04 21W

14 m / s

24 July/70

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Date 1970 July 24/25 Fri-Sat Observer Tm 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
33435	HD 139892	15 35.6	+36 58	612	IIaD	9L	73°F	20:45	21:07	A	01 20W+3
33436	HD 187929	19 47.4	+00 44.9	"	"	"	72°F	23:14	23:28	C	00 31E+0
33437	^{Tvu'} HD 198726	20 47.2	+27 52.5	"	"	"	71°F	23:35	00:15	A	00 42E+2
33438	HD 213947	22 29.9	+26 05	"	IIaD b	13s		00:24	01:00	B	01 40E+2
33438F	Focus			612	IIaD	13	71°F			B	

Dome Temp. 70

Focus 20

Dome Temp. 6

Hour Angle
End

Dome Temp. 70°F H=8070

Focus 20 R

Dome Temp. 68°F H=9270

Transparency Conditions very hazy, scattered cloud
thick cloud by 21^h 16
much better by 00:30

Time	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
07	A	01 20W	+36° 47'	3"	5.1	B8n	12-12-12	SP Bin	200/90	some cloud -	
28	C	00 31 E	+01° 01'	2"-3"	4.08 - 5.25	F67b -G41b	12-12-12	Cepheid	200/125	very hazy	FINE
15	A	00 43 E	+28° 12'	1"-3"	5.82 - 6.82	F57b -G07b	12-12-12	"	200/130	"	GUIDING FINE
00	B	01 40 E	+26° 30'	1"-2"	8.93	K4III	6-6-6 18	SS V	800/160	Fld Drawn] complete cloud	WEAK
	B	in a/c at					7/7	no filter		Fog like soup	C TO P
										Closed 01:30	

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Date 1970 July 25/26 Sat-Sun Observer She-In 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.
33439	AG 10133	19 31.0	+28 52	G12	D ₀₀ b	13s	75°F	22:47	02:11	A
33440	HD 4388	00 41.1	+30 25	"	D ₀₀ b	"	72°F	02:21	03:39	B
33441	HD 222368	23 34.8	+05°05'	"	D ₀₀ b	"	71°F	03:47	03:53	C
33441F	Focus			"	D ₀₀	13	"			B

Dome Temp. 7Focus 20

Dome Temp.

Hour Angle
Ecl

CR 33 W+

01 08 E+

00 12 W+

Date 1970 July 26/27 SUN-MON Observer HERBST-MCCL 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	D
33442	HD 160762	17 36.6	+46 04	G-12	IIaO	9L	79°F	20:43	20:46	A	00 52E	+
33443	HD 131861	14.50.9	+45 43	"	IIaO B	13-0.4	78°F	21:06	22:07	C	03 12W	14
33444	HD 209813	22 01.0	+46 45	"	"	13-0.4	77°F	22:21	22 59	A	03 15E	+
33445	HD 176318	18 54.6	+38 07	"	IIaO	9L	77°F	23 18	23 40	B	00 48W	+
33446	AG 10133	19 31.0	+28 52	"	IIaOB	13S	77°F	23 57		C		
33446	S Caphei HD 213306	22 25.5	+57°54'	"	IIaOB	9L	76°F	00 40	00 49	B	04 46E	+
33447	HD 4388	00 41.1	+30 25'	"	"	13S	75°F	01 04	03 35	A	01 35E	+
33448	HD 10205 (CAN)	01 34.7	+40 04'	"	"	13L	74°F	03 43	04 00	C	01 37E	-
33448F	focus			"	IIaO	9				B		

Dome Temp. 75°

Focus 20 R

Dome Temp. 72°

Dome Temp. 75° H=79%

Focus 20 R

Dome Temp. 70° H=81%

Transparency Conditions *moderate but fairly hazy*
ground fog but clear in zenith by 2300

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g Time S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
06	-	00 52E	+46 05	2"3"	3.62	B8V	18-18	Bp PROGRAMME (BU)	40/19		POOR GUIDING, FINE
07	C	03 12W	+45 30	2"	7.64	F3	12-12-12	SPECTROSCOPIC BINNEY	400/175		POOR GUIDING, FINE
07	A	03 05E	+47 08	1"-2"	7.5	K0	6-6-6 6-6-6	"	800/320		FINE
03 40	A	00 43W	+38 17	2"-3"	5.7	B67	6-18-12	"	200/100		COMPLETELY BLACK
	C				9.55	F7V		SSV	800/300	15 counts = 300 counts forgot it! 15 min / 5 hrs	
04	B	01 40E	+58 18	2"	4.52	F5- G2	18-18	CEPHRID. PROG.	80/40	heavy haze by now - third 3.5 min, in parallel etc.	POOR GUIDING, FINE
03 25	A	01 03E	+30 49	VARIABLE 2"-4"	3.8	K3III	6-6-6 6-6-6	SSV	300/300	N following - cloudy haze	BL. W/ K
03 30	C	01 37E	+40 28	2"	4.76	B8III	12-12-12	Bp PROGRAMME (BU)	200/100	broken: 2 pcs.	FINE
	B	in in/out out					7/7	no filter			CENTRE TO VIOLET
		Anson: baked plate left side of box, unbaked right side								main focussing screw shorted out while focussing.	
		Focus Sw. Rep build 7/27/70 Av									

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Date 1970 July 27/28 Mon.-Tue Observer She-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 Est
33449	HD 188727	19 51.5	+16 22.2	G-12	IIa.O	9L	77°	23:54	01:10	A	11 20 w. 11
#33448 T1	calibration step wedge				IIcO			for plates 33442, 33445			
T2	"	"	"		IIcO-b			for plates 33438-33441,			33447-3
T3					IIcO			for plates 33435-33437,			33447-3
T4					IIcOb			# 33446			

Dome Temp. 74

Focus 20

Dome Temp. 74

How Angle
Est

Dome Temp. 74° H=81%

Transparency Conditions ...very hazy & cloudy

22

Focus 20 R

Dome Temp. 73° H=81%

Time T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0	A	01 20 W.	16° 36'	2"	5.87 -7.02	F6Ib -G5Ib	12-12-72	Cepheid	200/105	cloud, cut short closed 07 ^h	V.S.L. with
2330.5											
2341.5		33443,	33444							"	
2347		33447-	33448							"	
										-	

MWP 2/9.0 min @ 6.5 PE 25 July 1970

23

Date 1970 July 28/29 Tues-Wed Observer Emj - 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	
33450	HD 137849	19 47.0	38 27'	G12	IIaD	9/		22:59	00:50	A	11 04	
33450F	Focus					9	75°F			B =:		
33450	T1	calibration step wedge for plates 33449, 33450										

Done Temp. 77

Focus 20

Done Temp.

Hour Angle
Est

Dome Temp. 77°F H=89%

Focus 20R

Dome Temp. 75°F H=82%

Transparency Conditions Very hazy

24

closed 01^h cloud

Time T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
50	A	01 09 W.	+38 41	2-3	6.90	M2 III	12-12-12	VIS BIN-WHT.	200/190	thick cloud	(GAINING) ↑ WERR
	B						7/7	no filter			PROB. DUE TO GLASS?
		changed focus to 5-R / 29 July - 70									FOCUS: 55 CENTRE TO VIOLET
		<p>also - Light switch in 79th darkroom is bad, could cause nasty accident. please tell Frank</p> <p>SWI Replaced: 7/29/70 HV</p>									
										Note Sid Time clock fast 2 1/2 min Same as clock in basement, could you reset & inform me please. It's been out a little for past week or more.	

25

Date 1970 July 29/30 WED/THUR Observer T. Gulliver ^{GH} ^{CF} Faubert 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
33451	HD 178704	17 ^h 25 ^m .6	-21° 11'	G12	Ilford	9L		20:36		A	
33451	HD 176938	18 57.5	+29° 23'	G12	Ilford	9L	79°F	20:55	22:31	B	00 18E 12
33452	HD 178947	19 05.5	+30° 24'	"	"	"		22:34	00:34	C	01 37W 13
33452 F	focus test			G12	Ilford	9L				B	02 1/
33452 T1	calibration step wedge for plates ^{Ilford} 33451, 33452								July 30/70		02 00 2/

Dome Temp. 7

Focus 5

Dome Temp. 7

Hour Angle
End

Dome Temp. 76°F 79% H

Transparency Conditions *Very hazy*

Focus *SR*

Dome Temp. 73°F 86% H

Foggy

Time T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
					6.01	B9	17-	<i>Galileo Ap 3mm</i>	200/130	<i>2.5 over 10</i>	
31	B	00 18 E	+29° 31'	2"-3"	6.64	A0	17-17-17	<i>Ap Em</i>	400/250		(GUIDING) U.S. W.K.
34	C	01 ^h 37 ^m W	+30° 34'	3"	6.66	B9	17-17-17	"	400/147	<i>fog, haze</i>	BOTH NUMBERED ...51
	B	<i>in in / out out</i>					7/7	<i>no filter</i>			.SL. W.K. - W.K. CENTRE TO J.E.
										<i>INCREASING TEMP</i>	
<i>July 30/70</i>										<i>closed 00 30</i>	SHOULD BE CORRECTING TH...
											JIM: STILL NO TIME SIGNAL AS OF FRI A.M.

27

Date 1970 July 31 - Aug 1 FRI-SAT Observer Tm - Gu - CF 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
33 453	HD 158013	17 ^h 21. ^m 7	+57° 05'	G12	DaO	9L	75°F	21:21	00:01	A	02 ^h 52 ^m 11 ^s

Done Temp. 74
Focus 5
Done Temp. 72

Hour Angle
End
02^h 52^m 11^s

29

Date 1970 Aug 1-2 Sat-Sun Observer T. J. CF 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
33454	AG10133	19 31.0	+28 52	G12	Ilao ^{baked}	13.3	74°F	20:30	00:28	A	01 18W +2
33455	HD187691	19 46.2	+10 10	"	Ilao ^{baked}	13.3	"	00:37	00:51	B	01 26W +1
33456	HD209813	22 01.0	+46° 45'	"	Ilao	13.3		01:02	02:34	B	00 55W +4
33457	HD 268	00 ^h 2.3 ^m	-25° 55'	"	Ilao	13.3	70°F	03:05	04:14	A	00 33W +2
33457F	Focus			"	Ilao	13	68°F			B	

Dome Temp. 76Focus 5-1Dome Temp.

31

Date 1970 Aug 2-3 Sun-Mon Observer Tn-H6 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
33458	HD 174853	18 47.5	+13 51	G12	IIaD	9L		20 35	21:17	A	01 06 E
33459	HD 170200	18 23.1	+6 08	"	"	13L	74°F	21 31	21 45	B	00 10 E
33460	HD 169578	18 20.2	+5 02	"	"	"	73°F	21 50	22 40	C	00 43 W
33461	HD 180553	19 11.9	+27 27	"	"	"	71°F	22 44	23 24	A	00 36 W
33462	HD 186791	19 41.5	+10 22	"	"	"		23 28	23 36	B.	00 20 W
33463	HD 193964							23 49			
33462F	Focus						70°F			B	

Dome Temp. 71

Focus

Dome Temp. 6

Hour Angle
End

Dome Temp. 71°F H=57%

Transparency Conditions poor: C

Focus

Dome Temp. 68°F H=70%

Time L.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
17	A	01 06 E	+14 '00	2-3"	6.1	B8V	12-12-12	B-type spec. Bin.	200/1100	thru cloud	5L-STR
41	B	00 14 E	+06 15'	2"	5.7	B8111	12-12-12	"	200/100	sid clock slow 1/2 min] reset	5L STR
40	C	00 43 W	+05 '09	2-3"	6.5	B8V	12-12-12	"	200/100	cloud	5L-STR
24	A	00 36 W	+27 28	3"	6.3	B5111	12-12-12	" 1	200/100	cloud	5L-STR
36	B	00 20 W	+10 36	2-3"	4.15	K311	12-12-12	std vel	200/140	"	FINE
					5.6	B9V	12-	B-type spec. Bin.	200/	"	
	B						7/7	not filter			GOOD
										Closed 00:30 cloud	

33

Date 1970 Aug 3-4, Mon-Tues Observer Tn, 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
33463	HD 174853	18 47.5	+13 51	G12	Duo -	13L	70°F	20:28	20:56	A	01 24E +1
33464	HD 165814	18 07.0	-25° 29'	"	"	"	66	21 02	22:48	B	01 13W -2
33465	HD 169578	18 20.2	+05° 02'	"	"	"	"	22 52	23:46	C	01 54W +0
33466	HD 170200	18 23.1	+6° 08'	"	"	"	64°F	23:49	00:11	A	02 15W +0
33467	HD 180553	19 11.9	+27 07	"	"	"		00 14	00 46	B	02 03W +2
33468	HD 193964	20 18.0	+61 56	"	"	"		00 59	01 13	C	02 26W +6
33469	HD 1256	00 09.3	-21° 00.6	"	"	"		01 25	02 29	A	01 14E -2
33470	HD 180553	19 11.9	+27 17	"	"	"	61°F	02 35	03 07	B	04 25W -1
33471	HD 24769	03 51.1	+22 53	"	"	"		03 12	03 34	C	03 49E +
33472	HD 16219	02 31.1	+39 28	"	"	"		03:38	04 00	A	02 03E +
33473	HD 12929	02 01.5	+22 59	"	"	"		04:06	04 08	C	01 25E +2
33473F				"	"	B	60°F			B	
33473 T1	calibration step wedge				Ilad	for plates		33454, 33455			4 Aug 1970
T2	"				Ilad			33453, 33456 - 33461			
T3					"			33462, 33463, 33465 - 33472			
T4					"			33464, 33473			

Dome Temp. 68°F $H=55\%$

Transparency Conditions *Very good*

Focus *S-R*

Dome Temp.

very bad seeing

Time I.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
56	A	01 24E	+13° 58'	3"-4"	6.1	B8V	12-12-12	B-type Spec. Bin	200/100		
48	B	01 13W	-25° 24'	3"	6:27	B8	12-12-12	"	200/80	(broken 2pc) Visible no reference to this p=12, 0=80 in BSC, 1DS, 142	BROKEN FINE
46	C	01 54W	+05° 09'	3"	6.5	B8V	12-12-12	"	300/100		U.S.C. STR
11	A	02 15W	+06° 14'	3"-4"	5.7	B8III	12-12-12	"	200/100		SC-STR
46	B	02 03W	+27° 26'	4"	6.3	B5III	12-12-12	"	200/100		SC-STR
13	C	01 26W	+62 13	2"	5.6	B9V	12-12-12	"	200/100		SC-STR
29	A	01 14E	-20 15	3"	6.5	B7III	12-12-12	"	200/100		FINE
07	B	04 25W	+27 30	"	6.3	B5III	12-12-12	"	200/100		(CALIBRATING) SC-STR
34	C	03 49E	+23 12	2"-3"	6.0	B9.5IV	12-12-12	"	200/100		U.S.C. STR
00	A	02 03E	+39° 49'	"	6.4	B8	12-12-12	"	200/100		SC-STR
08	C	01 25E	+23 23	"	3.15	K2III	12-24	std vel	40/28		STRONG
	B						7/7	no filter		clocks at 14 Aug	GOOD
		4 Aug 170					nu WP-2/9.0	min @ 65°F		2705159	
								"			
								"			
								"			

35-

Date 1970 Aug 4-5, Tues Wed Observer T_x-H_b 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
33474	HD 169578	18 20.2	+05 02	G12	IIaD	13L	65°F	20 36	21:36	C	00 13E-0
33475	HD 170200	18 23.1	+06 08	"	"	"	"	21 48	22 04	B	00 20W-0
33476	HD 174853	18 47.5	+13 51	"	"	"	64°F	22 09	22 35	A	00 20W-1
33477	HD 180553	19 11.9	+27 17	"	"	"	"	22 39	23 03	C	00 20W-12
33478	HD 193964	20 18.0	+61 56	"	"	"	"	23 12	23 26	A	00 20E-6
33479	HD 170200	18 23.1	+06 08	"	"	"	"	23 39	23 56	B	02 01W-0
33480	HD 219749	23 13.2	+44 57	"	"	"	62°F	00:06	00 32	A	02 09E-4
33481	HD 193964	20 18.0	+61 56	"	"	"	"	00:41	01:27	B	01 47W-0
33482	HD 180553	19 11.9	+27 17	"	"	"	"	01:32	02:14	C	03 35W-2
33483	HD 3712	00 34.8	+55 59	"	"	"	60°F	02 24	02:36	A	01 26E-3
33483F	Focus			"	"	13	59°F			B	
33483 T1	calibration step wedge				IIaD	plates		33474-33483			in WP-29
G40 Focus Tests	[^{F2} (F1, A holder) (^{F3} F2, B) (^{F4} F3, C)]				setting	35	59°F				holder

Dome Temp. 53

Focus 5-1

Dome Temp.

Hour Angle
End

Dome Temp. 63°F H=5770

Transparency Conditions Poor

36

Focus S-R

Dome Temp.

Timing Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:36	C	00 13 E	+05° 09'	1-2"	6.5	B8V	12-12-12	B ⁸ type Spec Bin	200/100	broken 23"	<u>BROKEN</u> U.S.L. STR
2:04	B	00 20 W	+06 15'	"	5.7	B8III	12-12-12	"	200/100		(GHI 12MG) STRONG
2:35	A	00 20 W	+14° 00'	2-3"	6.1	B8V	12-12-12	"	200/100	broken 22"	<u>BROKEN</u> S.L. STR
3:03	C	00 24 W	+27° 28'	"	6.3	B5III	12-12-12	"	200/100		S.L. STR
3:26	A	00 17 E	+62 12'	"	5.6	B9V	12-12-12	"	200/100		S.L. STR
3:56	B	02 05 W	+06 15'	"	5.7	B8III	12-12-12	"	200/100		S.L. STR
4:32	A	02 09 E	+45 24'	2"	6.27	B9ds	12-12-12	"	200/100		U.S.L. STR
5:27	B	01 43 W	+62 12'	2-3"	5.6	B9V	12-12-12	"	200/100	cloud	U.S.L. STR
6:14	C	03 35 W	+27 29'	2"	6.3	B5III	12-24	"	200/50	" cut by cloud	S.L. WK
7:36	A	01 26 E	+55 25'	"	3.34	KOII	18-18	Std. Vel.	40/26	cloud	(GHI 12MG) S.L. WK
	B		min/out/out				7/7	no filter			GOOD
<p>mwp-2/9.0 min @ 68°F / 2200 .59 / 5 Aug</p>											
<p>[B holder only (F4 set 36), F5 set 37, F6 set 34, F7 set 33]</p>											
<p>1st 9 plates from 1 box remainder from another</p>											

Anson*, could you cut GH
some G40 plates, re from the
too long G12 plates, Tn

Dome Temp. 66°F H=62%

Transparency Conditions scattered cloud

Focus

Dome Temp. 60°F H=69%

Looked at Saturn at Dawn (great with good seeing) Excellent after 21^h

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
	-26 10		6.01	B9	17-	Gu-Bp prog.	200/125	Cloud	
00 43W	+14 31	2"-5"	4.41	M5II	13-18	STD VEL	200/170	cloud	FINE
00 02E	+29 15	1"-2"	6.93	AD?	17-17-17	Gu Bp prog	410/250		(GUIDING) FINE
02 41W	+29 05	1"-2"	9.55	F7I	6-6-6 6-6-6	SSV	800/336	field drawn	* off to far right of plate box FINE
01 45W	+15 01	"	4.53	A5	17-17-17	Ap & m	80/45		FINE
01 01W	+47 09	"	7.5	K0	12-12-12	spect Bin	400/200		FINE
01 30E	+29 16	4"-2"	8.96	K2II	6-6-6 6-6-6	SSV	800/340	* fantastic seeing	also maybe problem V.S.G. Wk.
01 33E	-03 02	1"-2"	2.6	M	12-12-12	Mira	40/36	Looks quite bright	sc wk
00 39W	+15 08	"	2.60	B2II	18-18	Bp prog	40/17		(GUIDING) STRONG
					7/7	no filter			GOOD
mwp. = 19.0 min @ 68°F / 270 x 159 / 600									

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Date 1970 Aug 6/7 Thurs/Fri Observer In. She. Evans 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
33492	^{Top} HD 162714	17 ^h 47.3	-06° 07.2	G12	Ilao	9L	72°F	20:37	22:09	A	01 03W
33493	HD 178359	19 03.2	+01 09	"	"	13.4	70°F	22:27	00:23	B	02 00W
33494	HD 186688	19 40.8	+29 01.4	"	"	9L	69°F	00:31	01 43	C	02 43W
33495	HD 187929	19 47.4	+00 44.9	"	"	"	"	01:51	02 01	A	03 53W
33496	HD 188727	19 51.5	+16 22.2	"	"	"	67°F	02:08	02 50	B	03 40W
33497	HD 197572	20 39.5	+35° 13.6	"	"	"	"	02:55	04:05	C	04 07W
33498	HD 213306	22 25.4	+57° 54.2	"	"	"	"	04:09	04:14	A	02 30W
33499	HD 3712	06 34.8	+55° 59	"	"	"	66°F	04:20	04:23	C	00 28W
33499 F	Focus			"	"	9	66°F			B	
33499 T1	calibration step wedge				Ilao	for plates		33492-33499			16 min

Dome Temp. 68

Focus

Dome Temp. 68

Hour Angle
End

Dome Temp. 68°F H=617

Transparency Conditions *some cloud*
Excellent after 0h

40

Focus
 Dome Temp. 63°F H=770

Time	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
09	A	01 03 W	-06 04	1.2"	7.01- 7.83	F8 Ib G8 Ib	12-12-12	Cepheid	200/130		SL. WK
23	B	02 00 W	+01 19	"	7.29- 8.08	F8 - K0	12-12-12	"	200/100	cloud (NE wrote it)	(LEND FOGGED) SL. WK
43	C	02 43 W	+29 15	"	6.8- 7.66	F0 -G1	12-12-12	"	200/130		FINE
01	A	02 53 W	+01 00	"	4.08 -5.25	F6 Ib -G4 Ib	12-12-12	"	200/120	(NE it) CAN'T	}
250	B	03 40 W	+16 38	2"	5.87 -7.02	F6 Ib -G5 Ib	12-12-12	"	200/130	READ NOS.	
4:05	C	04 07 W	+35 33	"	6.5/ 8.2	F7 Ib G8 Ib	12-12-12	"	200/130		SL WK
4.14	A	02 30 W	+58 19	"	4.1- 5.2	F5 Ib G2 Ib	12-29	"	40/23		FINE
4:23	C	00. 28 W	+56 26	"	3.34	K0 U	R-18	std vel	40/26		FINE
	B						7/7	no filter			GOOD
		8.6 mi @ 69°F / mcp-2 Aug 7/12 2700 c 129									

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Date 1970 Aug 7th FR/SAT Observer Tn-G1 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.
33500	HD 159774	17 ^h 25. ^m 6	-26° 11'	G12	II-a-0	9L	74°F	20:28	21:50	A
33501	HD 140573	15 39.4	+06° 21.7	G12	"	"	74°F	22:01	22:05	B
33502	HD 140573	"	"	"	"	"	"	22:11	22:15	B
33503	HD 183339	19 24.0	+57° 49'	"	"	"	"	22:29	23:00	A
33504	HD 187279	19 ^h 44.1	+31° 15'	"	"	"	73°F	23:05	23:49	B
33505	HD 204934	21 ^h 26. ^m 8	+27° 56'	"	II-a-0 ^{baked}	13s	"	00:00	01:36	B
33506	HD 223094	23 41.5	+28 09	"	II-a-0 ^{baked}	13s	"	01:42	02:32	C
33507	HD 219449	¹⁹⁷⁰ 23 14.3	¹⁹⁷⁰ -09 14.1	"	II-00	9L	"	02:41	02:53	A
33508	HD 12029	1 ^h 53. ^m 0	+28° 54'	"	II-a-0b	13s	"	03:03	04:01	B
33509	HD 12929	02 01.5	+22 59	"	II-a-0	13s	"	04:04	04:06	C
33510	53 And	01 34.7	+40 04	"	"	9L	"	04:10	04:16	A
33510 F	<i>framed</i>			"	"	9	69°F			
	<i>framed</i>			G40				A1-9 →	(F2-F1) T = 69°F	
								Setting		

Dome Temp. _____
Focus _____
Dome Temp. _____

Hour Angle
End _____

Dome Temp. 70°F 61% H

Transparency Conditions very good

42

Focus

Dome Temp. 66°F 68% H

Eng Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:50		01 08 W	-26° 08'	1-2"	6.01	B9	17-34	G1 Apem	400/185	cut short limit	WFAR
2:05	B	03 09 W	+6° 35'	"	2.66	K2 III	18-18	Bj Lum Prog	40/25		O.S.C. Wk
2:15	B	03 19 N	+6° 35'	"	"	"	18-18	"	40/25		O.S.C. Wk
2:10	A	00 ^h 21 ^m N	+58° 00'	1"	6.41	B8	17-17-17	G1 Apem	400/250		FINE
3:49	B	00 50 W	+31° 31'	1"	6.65	A0	17-17-17	"	200/125		FINE
4:36	B	00 54 W	+28° 24'	1-2"	9.64	K1 III	6-6-6 6-6-6	SSV	800/300	fld drawn) Excellent	FINE
4:32	C	00 25 ^m E	+28° 36'	"	8.97	K5 III	6-6-6 6-6-6	"	800/300	" " "	BROKEN FINE
4:53	A	00 27 W	-09° 10'	2"	5.96	K0 III	18-18	Bj Lum Prog	40/25		SC. Wk
4:01	B	01 ^h 11 ^m E	+29° 18'	1-2"	8.96	K2 III	6-6-6 6-6-6	SSV	800/300	same fld as 33489	FINE
4:06	C	01 11 E	+23° 23'	2"	3.15	K2 III	136	std Vel	40/17		FINE
4:06	A	00 ^h 35 ^m E	+40° 28'	2"	4.76	B8 IV	18-	Bp prog	40/17		FINE
							7-7	map lines			GOOD

45

Date 1970 Aug 9-10, Sun-Mon Observer Tn, 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
33515	HD 170200	18 ^h 23.1 ^m	+06° 08'	G12	Duo	13L		20:21	20:49	A	00 42E
33516	HD 169578	18 20.2	+05 02	"	"	"		20:54	22 16	B	00 49W
33517	HD 174853	18 47.5	+13 51	"	"	"	75°F	22:22	23 08	C	01 12W
33518	HD 180553	19 11.9	+27 17	"	"	"	74°F	23 14	23 58	A	01 39W
33519	HD 193964	20 18.0	+61 56	"	"	"	"	00 04	00 28	B	01 09W
33520	HD 219749	23 13.2	+44° 57'	"	"	"		00 34	01 16	C	01 05E
33521	HD 180553	19 11.9	+27 17	"	"	"	71°F	01 21	02 29	B	04 10W
33522	HD 193964	20 18.0	+61 56	"	"	"		02 36	02 56	A	03 31W
33523	HD 24769	03 51.1	+22 53	"	"	"		03 02	03 46	C	03 14E
33524	HD 12929	02 01.5	+22 59	"	"	"		03 53	03 56	B	01 13E
33524F	Focus						70°F			B	
33524 T1	calibration	step	in	scope							
					II ad			for plates	33505, 33506, 33508		
					II ad				33500-33504, 33507, 33509, 33510		
					II ad				33515-33523		
					II ad				33524		

Dome Temp. 72

Focus

Dome Temp.

Hour Angle
End

00 42E

00 49W

01 12W

01 39W

01 09W

01 05E

04 10W

03 31W

03 14E

01 13E

NW P.

47

Date 1970 Aug 10-11 Mondays Observer Hb-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.H.	Hour Angle End
33525	HD 165814	18 02.7	-25° 29	G12	IIaD	13L	78°F	20:33	22 17	A	01 10W
33526	HD 169578	18 20.2	+05 02	G12	IIaD	13L		22:24	23:22	C	01:58W
33527	HD 170200	18 23.1	+06 08	G12	IIaD	13L	76°F	23:30	23:58	A	02:32W
33528	HD 174853	18 47.5	+13 51	G12	IIaD	13L		00:05	00 39	B	02 47W
33529	HD 180553	19 11.9	+27 17	G12	IIaD	13L		00:43	01 25'	C	03 10W
33530	HD 193964	20 18.0	+61 56	G12	IIaD	13L		01 32	01:52	A	03:32W
33531	HD 219749	23 13.2	+44° 57	G12	IIaD	13L	75°F	01 59	02:38	B	04:27W
33532	HD 1256	00 11.7	-20 46	G12	IIaD	13L		02:46	04:22	C	04:06W
33532F	Focus Test						73°F			B	
33532 71					IIaD	platin		33525-33532			11 Aug

Dome Temp. 74°F H. 60%

Transparency Conditions *hazy*

48

Focus

Dome Temp. 70°F H 64%

Obs. Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2 17	A	01 30 W	-25° 22'	1-2"	6.7	B8:	12-12-12	B-type Spec Bin	200/.38		WEAK
2 22	C	01 45 W	+05° 10'	1.2	6.5	B8V	12-12-12	"	200/100		FINE
2 58	A	02 43 W	+06° 16'	"	5.7	B8III	12-12-12	"	200/100		(GUIDING) D.S.L. W
3 39	B	02 47 W	+14° 00'	"	6.1	B8V	12-12-12	"	200/100		FINE
3 51	C	03 10 W	+27° 27'	"	6.3	B8III	12-12-12	"	200/100		SL. STR
4 52	A	02 43 W	+6° 13'	1-2"	5.6	B9V	12-12-12	"	200/120		SL. STR
5 38	B	00 42 W	+45° 20'	"	6.07	B9p(2)	12-12-12	"	200/100		(GUIDING) SL. STR
6 20	C	01 40 W	-20° 19'	2"	6.5	B7III	12-12-12		200/50		SL. W
	B							7-7 no filter			GOOD
11 Aug		MCP-2/9.0 min @ 68°F / 2 sec 1-79									

49

Date 1970 Aug 11-12 Tues Wed Observer Ri-Hua 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.	Flow Angle End
33533	HD 165625	18 01 ^m 49 ^s	+22° 13'	G12	IIaO	9L	76°F	20:22	21:50	A	0°45W
33534	HD 175865	18 52 ^m 78 ^s	+43° 49'	G12	IIaO	9L		22:02	22:43	B	0°51W
33535	HD 183439	19 24 ^m 33 ^s	+24° 28'	G12	IIaO	9L	75°F	22:55	23:40	C	1°15W
33536	HD 206749	21 ^m 39 ^m 05 ^s	+40° 42'	G12	IIaO	9L	74°F	23:52	01:44	A	1°05W
33537	HD 221615	23 ^m 28 ^m 28 ^s	+21° 57'	G12	IIaO	9L		01:51	04:13	B	1°45W
33537F1	focus test	out of focus		G12	IIaO	9	72°F			B	
33537 r1	calibration	step wedge			IIaO			33533 - 33537			12 Aug 70
		Wsl	Focus test	T=∞°	Ranklon A			B1-7 set 33-39			(G1)
								B3 = 35 = F2			
								B4 = 36 = F3			
								B5 = 37 = F4			

Dome Temp. 7

Focus 53

Dome Temp. 7

Flow Angle
End

51

Date 1970 AUGUST 13/14 THURS/FRI Observer McU - 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.	How Angle End	D
33538	HD 154528	17 00.9	+77°48'	G12	IIaD	9L	75°F	20 16	22:05	A	02°17'W	7
33539	HD 176798	18 56.9	+43 07	"	"	"	74°F	22 12	23:41	B	0°53'W	4
33540	HD 202313	21 09.9	+30 33	"	"	"	73°F	00 00	02:18	C	02°16'W	13
33541	HD 6833	^{1976 coord.} 01 07.9	^{1970 coord} +54 35	"	"	"	73°F	02:23	04:16	A	00°19'W	+5
33542	HD 2360	00 31.4	+53° 21	"	"	"		04:20	04:23	B	01°00'W	+5
33542	focus test			G12	IIaD	9	72°F			B		

Dome Temp. 72°F

Focus 20.0

Dome Temp. 68°

How Angle
End

Dome Temp. 72°F H=75%

Transparency Conditions *lazy*

52

Focus 20.0 R

Dome Temp. 69°F H=76%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:05	A	02 ^h 17 ^m W	77° 44'	2	6.66	A0	17-17-17	GI Ap PROGRAM	400/230		SL. WK
03:41	B	01. 53W	+43° 15'	1-2"	7.27	A3	17-17-17	"	400/250		U.SL. WK
02:18	C	02 ^h 16 ^m W	+30° 54'	1-2"	7.56	A0	17-17-17	"	400/250	field drawn	U.SL. WK
04:16	A	00 19W	+54° 37'	2	6.73	K1III	17-7-12	Rj Lum. Prog.	400/250		SL. WK
04:23	B	01 ^h 00W	+53° 46'		3.41	B2I	18-18	Bp Pros.	40/20		STRONG
	B						77	no filter			GOOD

53

Date Fri Sat Aug 14-15 1970 Observer R. - ESM 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
33543	HD 182955	19 22.1	+19 41	G12	IIaD	9L	780°F	20:18	22:15	A	0°05'W
33544	HD 189577	19 55.6	+17° 15'	G12	IIaD	9L	770°F	22:22	00:10	B	0:37'W
33545	HD 198134	20 43.2	+34 00	G12	IIaD	9L		00:21	01:28	C	0:54'W
33546	HD 218634	23 04.5	8 08	G12	IIaD	9L	740°F	01:33	3:56	A	02°05'W
33547	HD 17506	02 43.4	55 29	G12	IIaD	9L		04:08	04:33	B	01°01'E
33547F1	focus test	out/out/w.v.		G12	IIaD	9	740°F			B	
33547 T1					IIaD for plates			33535 - 33547	15 Aug 1970		MUP 2
	Focus test G40		T = 75°		sets	35 - 41		Plates C1 - C7			
						C2 = 36 = F2					
						C3 = 37 = F3					
						C4 = 38 = F4					

Dome Temp. 74°F H 75%

Transparency Conditions Lazy

54

Focus

Dome Temp.

Seeing Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0111	A	0405W	+19° 54'	2	7.44	M ₀ II	12-12-12	Visual Binocular	400/430		SL. WK
0020	B	0127W	+17° 32'	2-3	7.00	M ₄ II	12-12-12	" "	400/430	BROKEN 2 PIECES	SL. WK
0128	C	0157W	+34 20'	2	6.37	K ₃ III	12-12-12	" "	400/340		U. SL. WK
0356	A	02 ^h 05W	+08 35		6.58	K ₆ I	12-12-12	" "	400/340	BROKEN 2 PIECES $\frac{1}{2}$ W.	WEAK
0437	B	014011E	+55° 40'	2	5.41	K ₃ IB	12-12-12	" "	200/168		WEAK
	B						7-7	no filter			GOOD
		MWP-2 / 9.0 min @ 68°F / 290°C 1-79									
		THE TENDENCY FOR WEAK PLATES (BOTH NIGHTS) IS MOST PROBABLY DUE TO THE LONG EXPOSURE TIMES.									

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Date Aug 16/17 1970 Observer WEST-R. Julian Day 2440815.5

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
33548	HD 157691	19 ^h 46 ^m .2	+10° 12'	G12	IIa-O	9L	7	20:12	20:43	A.	1.44 E
33549	ADS 14893	21 ^h 16 ^m .5	+09° 55'	G12	"	"	78°	20:53	23:00	B	0 ^h 55 E
33550	" "	21 ^h 16 ^m .5	+09° 55'	G12	"	"		23:02	00:46	C	0 ^h 50 W
33551	HD 222368	23 ^h 34 ^m .8	+05° 05'	G12	"	"	70°F	00:52	01:07	A	1 ^h 07 E
33552	ADS 14893	21 ^h 16 ^m .5	+09° 55'	G12	"	"		01:14	02:46	B	2 ^h 50 W
33553	ADS 14893	21 ^h 16 ^m .5	+09° 55'	G12	"	"		02:49	04:10	C	0 ^h 45 W
33554	HD 222368	23 34.8	+05° 05'	G12	IIa O	9L	68°F	04:15	04:32	A	02 ^h 17 W
33554F1	focus test.	out out/w/w		G12	IIa O	9				B	

Dome Temp. 7

Focus

Dome Temp.

Dome Temp. 74°F H 58°F

Transparency Conditions clear

56

Focus

clouds at 21:00
clear at 21:30

Dome Temp. 64°F H 74%

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:44 E	+10 24	3	5.2	F8V	12-12-12		200/130	BROKEN 2 PIECES	BROKEN FINE
0458 E	+10 16	3	6.7	F8V	12-12-12		400/260	clouds	FINE
0450W	+10° 16		"	"	12-12-12		400/260		FINE
1 ^h 07 E	+5° 32'		4.3	F8V	12-12-12		200/130		FINE
2 ^h 50 W	+10° 16		6.7	F8V	12-12-12		400/260		FINE
04415W	+10° 16'	3	6.7	F8V	12-12-12		400/145		SL. CLK
02417W	+5° 33	3	4.3	F8V	12-12-12		200/20		STRONG
									GOOD

7-7 no filter

57

MON - THES

Date Aug 17/18/70

Observer WEET - HV - 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.H.	Hour Angle End
33555	HD 187691	19 ^h 46. ^m 2	+10° 12'	G12	IIaO	9L	72°	20 17	20 47	A	0135E +
33556	ADS 14893	21 ^h 16. ^m 5	+09° 55'	"	"	"		20:58	22 39	B	0145E +
33557	" "	" "	" "	"	"	"		22 42	00:18	C	00:25D
33558	HD 222368	23 ^h 34. ^m 8	+05° 05'	"	"	"	66°F	00:27	00:43	A	1 ^h 45E +
33559	ADS 14893	21 ^h 16. ^m 5	+09° 55'	"	"	"		00:50	02:07	B	2 ^h 15W -
3355960	" "	21 ^h 16. ^m 5	+09° 55'	"	"	"		02:11	03:55	C	4 ^h 05W -
33561	HD 222368	23 ^h 34. ^m 8	+05° 05'	"	"	"		04:01	04:12	A	2 ^h 21W +
33561F1	focus test	on back of camera		G12	IIaO	9	63°F			B	
33561 T1	calibration star wedge				IIaO			for plates 33548 - 33556 1F Aug			2 ^h 09W -
T2	"				IIaO			" 33557 - 33561 "			
33561	$\underbrace{T2}$ T2-34, $\underbrace{T2-35}$ T3-36, $\underbrace{T4-37, T5-38, T6-39, T7-40}$ 13	$\underbrace{T3}$		G12 focus test	RI		68°F			A	

Dome Temp. 72°

Focus

Dome Temp. 68°

Hour Angle
End

Dome Temp. 70° #63%

Transparency Conditions *Good*

58

Focus

Dome Temp. 60° #76%

Timing Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality	
0:47	A	$0^h 13^m 5^s E$	$+10^{\circ} 24'$	4-5	5.2	F8V	12-12-12		200/130		FINE	
2:39	B	$0^h 11^m 4^s E$	$+10^{\circ} 17'$		6.75	F8V	12-12-12		400/260		FINE	
0:19	C	$00^h 25^m W$	"		"	"	12-12-12		400/260		FINE	
0:43	A	$1^h 28^m E$	$+05^{\circ} 33'$	3	4.3	F8V	12-12-12		200/130		STRONG	
3:17	B	$2^h 15^m W$	$+10^{\circ} 17'$	2-3	6.75	F8V	12-12-12		400/260		FINE	
3:55	C	$4^h 03^m W$	"		6.75	F8V	12-12-12		400/260		FINE	
4:17	A	$2^h 01^m W$	$+05^{\circ} 34'$		4.3	F8V	12-12-12		200/130		FINE	
	B						7-7	<i>no film</i>				
16 Aug		<i>nwp. 2/9.0 min @ $65^{\circ} E$ / 200c 159</i>							PLATES 33548-33561 TAKEN BY DR. WEST			
"												
	A						9 sec.					

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Date Aug 19/20 Observer G.H.-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.
33562	H153765	0h35.3	139°40'	G40	Ilao	13L	70°	 	 	

Dome Temp.
Focus
Dome Temp.

Hour Angle
End

Date Thurs Aug 20/21/70 Observer L-She 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.
						(KAPUTT)				
						Clock drive caput				
						<u>REPAIRED</u> Aug 21 (L)				

Dome Temp. S

Focus

Dome Temp.

Hour Angle
End

63

Date 1970 Aug 21/22 FRI/SAT Observer G1-MCU 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
33562	HD154528	17 00.9	+77 48	G-12	IIaO	9L	63°F	20 08	21 16	A	02 01 W
33563	HD176669	18 56.3	+42 52	"	"	"	62°F	21 36	23 26	B	02 11 W
33564	HD206280	21 36.0	+43 59	"	"	"	62°F	23 36	00 24	C	00 28 W
33565	HD209813	22 ^h 01 ^m (1970)	+46° 45' (1970)	"	"	"	61°F	00 30 ⁰²	02:40 ¹⁰	A	02 ^h 14 ^m W
33566	HD 6833	01 ^h 07 ^m .9	+54° 35'	"	"	"	60°F	02 50	04:34	B	01 ^h 10 ^m W
33566F	Focus test						59°F			B	

Dome Temp. 64

Focus

Dome Temp.

Dome Temp. $+61^{\circ}$ H 74%

Transparency Conditions Good

66

Focus

Dome Temp.

Observing Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
227	A	0046 W	+5833	2	7.5	KS	12-12-12	STD. VEL.	400/350		FINE
219	B	0003 E	+7312	3	7.08	G ^B II-III	12-12-12	VIS. BIN. Waterloo	400/350		(GUIDING)* STRONG
113	C	0010 W	+4129	3	5.48	BZ IV	12-12-12	"	200/100		STRONG*
216	A	0100 W	+0833	3	6.58	K6I	12-12-12	"	200/200		FINE
301	B	0140 W	-0910	4	5.28	K0D	12-12-12	"	200/200		(GUIDING) FINE
347	C	0002 W	72,56	3	6.25	G ^B II	12-12-12	"	180/180		POOR GUIDING FINE
0420	A	0037 E	55,48	3	5.41	K3Ib	12-24	"	100/100		(GUIDING) FINE
0455	B	0129 E	-736	3	5.14	K0D	12-12-12	"	100/95		FINE
							7-7	No Filter			VERY SLIGHT CENTRE TO W
											* APPEARS TO BE SHORT SLIT
0566		2 WP. 2/ 9.0 min @ 64° / 240 c 159.									

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MON - TUES

Date Aug. 24-25 / 1970 Observer B. W. 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
33575	(L Her) HD 160762	17 ^h 36. ^m 6	+46° 04'	G-12	Il 00	9L	67°F	20:55	20:58	A	1 ^h 13 ^m W +
33576	(8 Cyg) HD 184171	19 ^h 28. ^m 1	+34° 14'	"	"	"	67°F	21:20	21:26	B	0 ^h 10 ^m E +
33577	"	"	"	"	"	"	67°F	21:57	22:03	C	0 ^h 17 ^m W +
33578	(K Cap) HD 192907	20 ^h 12. ^m 3	+77° 25'	"	"	"	67°F	22:24	22:30	A	0 ^h 16 ^m W +
33579	(15 Cap) HD 193432	20 ^h 15. ^m 1	-13° 04'	"	"	"	66°F	22:47	23:02	B	0 ^h 38 ^m W -
33580	(L Aql) HD 184930	19 ^h 31. ^m 6	-1° 31'	"	"	"	66°F	23:13	23:20	C	1 ^h 40 ^m W -
33581	(K Aql) HD 184915	19 ^h 31. ^m 5	-7° 15'	"	"	"	65°F	23:31	23:47	A	2 ^h 07 ^m W -
33582	(γ Aqr) HD 212061	22 ^h 16. ^m 5	-1° 53'	"	"	"	65°F	0:00	0:05	B	0 ^h 20 ^m E -
33583	(32 Peg) HD 212097	22 ^h 16. ^m 7	+27° 50'	"	"	"	65°F	0:16	0:23	C	0 ^h 02 ^m E +
33584	(π ² Cyg) HD 207330	21 ^h 43. ^m 1	+48° 51'	"	"	"	65°F	0:34	0:38	A	0 ^h 17 ^m W +
33585	(12 Lac) HD 214993	22 ^h 37. ^m 0	+39° 42'	"	"	"	66°F	0:48	0:55	B	0 ^h 16 ^m W +
33586	(L And) HD 222173	23 ^h 33. ^m 2	+42° 43'	"	"	"	64°F	1:04	1:09	C	0 ^h 32 ^m E +
33587	(ω ² Aqr) HD 222661	23 ^h 37. ^m 5	-15° 06'	"	"	"	64°F	1:20	1:37	A	0 ^h 08 ^m E -
33588	(γ Peg) HD 886	00 ^h 08. ^m 1	+14° 38'	"	"	"	63°F	2:26	2:28	B	0 ^h 10 ^m W +
33589	"	"	"	"	"	"	63°F	2:35	2:37	C	0 ^h 01 ^m W +
33590	(8 Cas) HD 3360	00 ^h 31. ^m 4	+53° 21'	"	"	"	63°F	2:49	2:51	A	0 ^h 12 ^m W +

Dome Temp. 6

Focus

Dome Temp.

Hour Angle
End

Dome Temp. 65°F

Focus

Dome Temp.

Transparency Conditions

Early evening cloud cover cleared completely by about 20:30 EST. Sky clear remainder of night. No haze on horizon.

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Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0:58	A	$1^{\text{h}}13^{\text{m}}\text{W}$	$+46^{\circ}05'$	$\sim 2''$	3.62	B3V	18-18	Bp Prog.	40/19	Comp. star	(GUIDING) FINE
1:26	B	$0^{\text{h}}10^{\text{m}}\text{E}$	$+34^{\circ}26'$	"	4.86	B3IV	18-18	"	100/47	" (Prob. very uneven exposure) (BROKEN 2pc.)	BROKEN FINE
2:03	C	$0^{\text{h}}27^{\text{m}}\text{W}$	$+34^{\circ}26'$	"	"	"	18-18	"	100/47	"	FINE
2:20	A	$0^{\text{h}}14^{\text{m}}\text{W}$	$+77^{\circ}40'$	"	4.33	B9III	18-18	"	100/47	Comp star	FINE
3:02	B	$0^{\text{h}}38^{\text{m}}\text{W}$	$-12^{\circ}46'$	$\sim 4''$	4.70	B9V	18-21	"	100/46	" (Plates from here on are from fresh box marked No 2.)	FINE
3:20	C	$1^{\text{h}}40^{\text{m}}\text{W}$	$-1^{\circ}17'$	$\sim 3''$	4.28	B5III	18-18	"	100/45	"	FINE
3:47	A	$2^{\text{h}}07^{\text{m}}\text{W}$	$-7^{\circ}01'$	$\sim 3''$	4.95	P0.5III	18-18	"	100/45	MK std	FINE
4:05	B	$0^{\text{h}}20^{\text{m}}\text{E}$	$-1^{\circ}28'$	$\sim 3''$	3.78	B9III	19-18	"	100/45	Comp star	(GUIDING) FINE
4:23	C	$0^{\text{h}}02^{\text{m}}\text{E}$	$+28^{\circ}15'$	$\sim 2''$	4.83	B8V	18-18	"	100/45	"	FINE
4:38	A	$0^{\text{h}}47^{\text{m}}\text{W}$	$+49^{\circ}14'$	$\sim 3''$	4.08	B3III	18-18	"	100/45	"	U.S.C. STR
4:55	B	$0^{\text{h}}10^{\text{m}}\text{W}$	$+40^{\circ}06'$	$\sim 2''$	5.10	B2III	20-16	"	100/45	MK std.	FINE
5:09	C	$0^{\text{h}}32^{\text{m}}\text{E}$	$+43^{\circ}08'$	$\sim 2''$	4.18	B8V	18-18	"	100/45	MK std	(GUIDING) FINE
5:37	A	$0^{\text{h}}08^{\text{m}}\text{E}$	$-14^{\circ}38'$	$\sim 3''$	4.04	B9.5V	18-18	"	100/47	MK std.	U.S.C. WK
5:48	B	$0^{\text{h}}13^{\text{m}}\text{W}$	$+15^{\circ}06'$	$\sim 3''$	2.60	B2IV	18-18	"	40/16	MK std.	U.S.C. STR
5:57	C	$0^{\text{h}}20^{\text{m}}\text{W}$	$+15^{\circ}06'$	$\sim 3''$	"	"	20-16	"	40/18	MK std.	STRONG
6:51	A	$0^{\text{h}}12^{\text{m}}\text{W}$	$+53^{\circ}47'$	$\sim 3''$	3.41	B2V	24-12	"	40/17	MK std.	(GUIDING) STRONG

69

Mon-Tues
 Date Aug 24-25 / 1970 contd. Observer B.W. 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
33591	(S Cas) HD 3360	0 ^h 31. ^m 4	+53° 21'	G12	Ilao	9L	63°F	2:57	3:00	B	0 ^h 25 ^m +
33592	(T And) HD 10705	01 ^h 34. ^m 7	+40° 04'	"	"	"	63°F	3:11	3:18	C	0 ^h 25 ^m E +
33593	(T Col) HD 17081	02 ^h 39. ^m 4	-14° 17'	"	"	"	62°F	3:32	3:44	A	none -
33594	(70 Tau) HD 23408	03 ^h 39. ^m 9	+26° 03'	"	"	"	61°F	4:26	4:30	C	1 ^h 15 ^m E +
33595	HD 21278	03 ^h 20. ^m 9	+48° 43'	"	"	"	61°F	4:38	4:45	A	0 ^h 45 ^m E +
33596	(T Mon) HD 30836	04 ^h 45. ^m 9	+5° 26'	"	"	"	61°F	4:51	4:55	B	1 ^h 55 ^m E +
33596F					out-out/in	in				B	
33596 T1	calibration step wedge				Ilao	for plates		33575-33585			25 Aug
T2						"		86-90			

73

Date Aug 26/57 Wed Thur Observer GH-Ha-SHE 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.
33603	+36° 33' 19"	18h 50'	+36° 47'	BYO		13L	76°F		clouds	

gain multiplier switch on exp
meter fell off! Repaired - Hr

Ra Console knobs don't work
Repaired - Hr

Balance very poor at high dec near

Dome Temp...
Focus...
Dome Temp...

Hour Angle
East

includ...

Dome Temp.

Transparency Conditions

Focus

Dome Temp.

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
<i>1</i>									
<i>2</i>									
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<i>100</i>									

ading Time
E.S.T. P.H.

twists

ar meridian

75

Date 1970 AUG 28/9 FRI-SAT Observer Tn-McK 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.
33603	HD208174	21 49.4	+27 53	G-12	IIaO	9L		01 14		A

Dome Temp. 64
Focus
Dome Temp.

Hour Angle
End

77

Date 1970 Aug 31 / Sept 1 Mon/Tues Observer Tn-Gl 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.
33603	HD 138406	15 ^h 26 ^m .8	+62° 05'	G12	II-a-0	9L	63°F	20:00	21:20	B
33604	AR Cas	23 25.4	+58 00	"	"	13L	"	21:42	22:34	C
33605	AR Cas	"	"	"	"	13L	58°F	22:37	22:44	A
33606	HD 198195	20 ^h 43 ^m .6	+42° 03'	G12	"	9S	56°F	22:58	00:20	B
33607	HD 222207	23 ^h 33 ^m .5	+41° 57'	"	"	9L	55°F	00:30	01:24	C
33608	S Cep (HD 213306)	22 ^h 25 ^m .5	+57° 54'	"	"	"	"	01:40	01:46	A
33609	HD 2019	00 ^h 19 ^m .4	+30° 49'	"	"	"	"	01:55	02:47	B
33610	HD 7374	01 08.8	+15 36	"	"	"	53°F	02:54	03:22	C
33611	HD 16727	02 ^h 35 ^m .8	+54° 41'	"	"	"	54°F	03:31	03:51	A
33612	HD 16855	02 ^h 37 ^m .1	+43° 07'	"	"	"	"	04:00	04:48	B
33613	HD 20902	03 17.2	+49 30	"	"	"	"	"	"	C
33612F	Focus			"	"	9				C
33612 T1	calibration				II a 0	for plates		33603 - 33612		

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Date 1970 Sept 1/2 Tues/Wed Observer Tr - Herbst 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.	Flow Angle East
33613	TT Aql	19 ^h 03 ^m 09 ^s	+01° 08.5'	G12	H-a-o	135	62°	19:45	21:10	A	5° 34' W +10
33614	U Vul	19 32.3	+20° 06.6	G12	H-a-o	135	60°	21:34	22:18	B	01 08W +12
33615	η Aql	19 47.4	+00° 44.9	"	"	92	60°	22:24	22:31	C	01 06W +10
33616	S Sge	19 51.5	+16 22.2	"	"	"	59°F	22:40	23:28	A	01 53W +11
33617	SV Cyg	19 40.8	+29° 01.4	"	"	"	57°F	23:35	01:05	B	03 42W +12
33618	X Cyg	20 39.5	+35° 13.6	"	"	"	56°F	01:11	01:55	C	03 40W +13
33619	T Val	20 47.2	+27° 52.5	"	"	"		02:09	02:36	A	04 13W +12
33620	S cep	22 25.5	+57 54.2	"	"	"		02:48	02:52	C	02 50W +15
33621	HD 6833	¹⁹⁷⁰ 01 07.9	¹⁹⁷⁰ +54 35	"	"	"		03:00	04:45	B	02 05W +15
33621 T.	calibration										2.05W +15

used for plates 33613 - 33621

Dome Temp. 61
Focus
Dome Temp.Flow Angle
East

2.05W +15

Dome Temp. 60°F H=6170

Transparency Conditions *Excellent*

80

Focus

Dome Temp. 53° 6370

Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:10	A	0 ^h 34W	+01° 19'	2"	7.29 - 9.08	F8 - K0	17-17-17	Cepheid	400/190	prob 18-9 "	Weak
2:18	B	01 08W	+20° 20'	1 ¹ / ₂ "	7.8 - 9.0	F8 - K0	17-17-17	"	400/200	prob near max	Fine
2:31	C	01 06W	+01° 01'	2"-3"	4.08 -5.25	F6 Ib -G4 Ib	25-25	"	90/23		Fine
2:38	A	01 59W	+16° 39'	"	5.87 - 7.02	F1 Ib -G5 Ib	17-20-12	"	200/130	prob near min	Fine
1:05	B	03 42W	+29° 15'	"	6.8 - 7.66	F0 - G1	17-17-17	"	200/100	prob at min] cut short	sl weak
1:55	C	03 40W	+35° 34'	2 ¹ / ₂ "-3 ¹ / ₄ "	6.5 - 8.2	~G	17-17-17	"	400/260	near max	sl weak
1:36	A	04 13W	+28° 12'	"	5.82 - 6.82	F5 Ib -G0 Ib	17-17-17	"	200/130		Fine guiding
2:52	C	02 50W	+58° 18'	2"	4.1 - 5.2	~G	25-25	"	90/23		Fine sl guiding
1:45	B	02 05W	+54° 24'	"	6.75 ^{v.5}	K1 II	17-17-17	B; Lum Reg	200/175		Fine
mwp-2 / 9.0 min at 65°F / 2 ABC 159											

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Date Sept 4/5/70 Fri-Sat Observer Tn-MeU 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.
33622	HD 194071	20 ^h 18 ^m 5 ^s	+27° 55'	0-12	IdO	13-3	68°F	19.42	21 42	A
33623	HD 4388	00 41.1	+30 25	"	"	"	65°F	22 50	00 58	B
33624	HD 12029	01 53.0	+28° 54	"	"	"	64°F	01 05	03 33	C
33625	HD 12929	02 01.5	+22 59	"	"	"	64°F	03 38	03 40	A
33626	16 Tau	03 38.9	+23 58	"	"	9.5	63°F	03 46	04 08	B
33627	40 Per (HD 22951)	03 36.0	+33 39	"	"	"		04 23	04 38	C
										1

Dome Temp. 65

Focus

Dome Temp. 65

Hour Angle
End

00 55 E 12

01 09 E 13

01 15 E 12

00 10 E 12

00 58 E 12

00 25 E 13

Dome Temp. 66°F H=78%

Transparency Conditions some cloud

Focus

Dome Temp. 61 H=85% *should be*

Hour Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
42	A	00 58W	28° 12'	2"	9.06	G8 III	8-8-8 8-8-8	SSV	800/380	fld drawn	SL. WK
58	B	01 09E	+30° 51'	111"	8.80	K3 IV	8-8-8 8-8-8	"	800/400	"	SL. WK
33	C	00 13W	+29° 18'	"	8.96	K2 III	8-8-8 8-8-8	"	800/400	heavy + 0200, becoming scattered by 0215	SL. WK
41	A	00 13W	+23 23	"	3.15	K2 III	25-25	Std Vel	40/18		FINE
41	B	00 57E	+24 16	"	5.40	B7 IV	17-17-17	Bp PROG.	200/90	fld drawn (checked by Bü; O.K.)	FINE
438	C	00 25E	+33 56	"	4.94	05 V	17-17	"	200/90	heavy cloud at 0410	SL STRONG
								DEC CAMERA REPLACED			
										Sep 5/7: hr	

83

Date Sept 5/6 - Sat-Sun Observer GH - 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.	Hour Angle End	Decl.
33628	+36° 3319	18h 50	+36° 47	G40	D a O	13 L	65°	19:33	19:38	A	01:35E	+
33629	+36° 3324	"	"	"	"	"	"	19:49	20:21	"	01:14E	+3
33630	+36° 3314	"	"	"	"	"	64°	20:29	21:29	"	01:17W	-3
33631	+36° 3315	"	"	"	"	"	60	21:35	22:00	"	01:49W	+3
33632	HD 176502	18h 55.5	+40° 33	"	"	"	60°	22:11	22:17	"	02:01W	-4
33633	HD 13854	249.9	+56° 36	"	"	"	62°	22:33	22:51	"	04:33E	+
33634	Stock 2-7	242.9	+59° 08	"	"	"	61°F	23:38	01:01	"	03:26E	+5
33635	Stock 2-43	"	"	"	"	"	61°F	00:18	01:09	"	02:26E	+
33636	Stock 2-160	"	"	"	"	"	60°F	01:24	01:58	"	01:37E	-5
33637	Stock 2-40	"	"	"	"	"	"	02:10	02:44	"	00:45E	+
33638	Stock 2-56	"	"	"	"	"	54°	03:02	03:48	"	00:15W	+5
33639	Stock 2-53	"	"	"	"	"	"	03:56	04:36	"	01:02W	-
33640	HD 13854	249.9	+56° 36	"	"	"	58°	04:46	04:54	"	01:24W	-

Dome Temp 62°

Focus _____

Dome Temp _____

Hour Angle
End

Decl.

Dome Temp. 62°F H=6770

Transparency Conditions very good

84

Focus
Dome Temp. 58°F

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:39	"	0635E	+37°05'	1-2	6.0	M4	3-3-3	GH cluster	200/50	F=34 (2H's on flange)	fine
10:21	"	0 ^h 10W	+36°45'	"	8.0	B9	3-6	"	400/50		grainy, fine
11:29	"	0117W	+36°56'	"	8.7	A0	3-3-3	"	800/98		good
12:00	"	0148W	+36°45'	"	7.5	B5	3-3-3	"	400/50		fine
12:17	"	0200W	+40°42'	"	6.0	B5	3-6	B-stall vel	200/25		OK, grainy
12:51	"	0433E	+57°02'	"	6.2	B1	3-3-3	B-stall vel	200/25	F=33	good
1:01	"	0326E	+59°51'	"	7.0	F5	3-3-3	GH cluster	400/72		fine, light
1:19	"	0226E	+59°04'	2"	8.8	G5	3-3-3	"	400/75		poor, grainy
1:58	"	0137E	+59°53'	2"	8.2	G8	3-3-3	"	400/85		fine
2:44	"	0045E	+59°50'	"	8.8	B?	3-3-3	"	400/50		OK, w/ls
3:42	"	0018W	+59°18'	"	8.9	B?	3-3-3	"	400/50	F=32	fine-w/ls
4:36	"	0108W	+59°22'	"	8.9	B?	3-3-3	"	400/50		fine-w/ls
4:54	"	0121W	+57°02'	"	6.2	B1	3-	B-stall vel	200/25		good

85

Date Sept 6/7 1972 SUN/MON Observer G.L.T.H. 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.
33641	HD 179218	19.06.6	+15 37'	G12	IIaO	9-5		19:55	22:15	
33642	HD 201859	21 ^h 07. ^m 2	+27° 09'	"	"	"	66°F	22:20	23:58	B
33643	HD 222416	23 ^h 35. ^m 3	+44° 31'	"	"	"	69°F	00:06	01:58	C
33644	HD 11336	01 ^h 46. ^m 4	+44° 19'	"	"	"		02:08	03:56	B
33645	HD 14688	02 17.1	+16 25'	"	"	"		04:01	05:03	A
33645F	Focus			"	"	"	63°F			B

Dome Temp. c.
Focus
Dome Temp.

Hour Angle
Ecl
21 51 W
01 33 W
01 06 W
00 52 W
01 29 W

Dome Temp. 64°F - 67% H

Transparency Conditions cloudy then Excellent

86

Focus

Dome Temp. 60°F 72%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:11		01 ^h 51 ^m W	+15° 49'	1.2"	7.13	B8	17-17-17	AG1 Ap+Am	400/280		
3:58	B	01 33 W.	+27° 30'	"	7.56	A0	17-17-17	"	400/250		FINE
1:58	C	01 06 W	+49 58.	"	7.45	A0	17-17-17	"	400/250		FINE
3:56	B	00 52 W	+44 44.	"	7.43	B8	17-17-17	"	400/250	broken - two pieces, one ~1" long	FINE
5:03	A	01 29 W	+16 48	2"	6.78	A2	17-17-17	"	200/100		FINE
	B		in in/out of				7/7	no filter			GOOD

87

Date Sept 7/8 1970 Mon-Tues Observer G.I.-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.
33646	HD 164898	17 ^h 58 ^m .3	+45° 21'	G12	Ilao	9-5		19:32	22:28	A
33647	HD 204428	21 23.4	+52 28	"	"	"	62°F	22:40	23:16	B
33648	HD 208174	21 49.4	+27 53	"	"	"	61°F	23:23	00:33	C
33649	HD 222407	23 ^h 35 ^m .2	+63° 10'	"	"	"	"	00:44	01:54	A
33649F	Focus			"	"	"	61°F			B
33649 T1	calibration step wedge				Ilao					
T2	"	"	"	"	"					

33641-33643, 33645

33622-33627,

for plates

" 33644, 33646-33649

Dome Temp. 61

Focus

Dome Temp.

Hour Angle
End

0318W

0038W

0135W

0105W

2000-2

Dome Temp. 61°F H=6770

Transparency Conditions Have then Very Good 88

Focus

Dome Temp. 59°F / 91.5% H

01:30 Low cloud - fast moving
from East
RH=91%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
22:28	A	0318W	+45° 24'	12"	7.42	A1	17-17-17	G1 Ap+Am	400/260		FINE
3:16	B	0038W	+52° 49'	2-3"	5.90	B8	17-17-17	"	200/125		D.S.L. STR
3:33	C	01 ^h 30 ^m W	+28 16	"	6.77	A3	17-17-17	"	200/125		FINE
3:54	B	01 ^h 06 ^m W	+63 36	2"	6.91	A3	17-17-17	"	200/109	cloud	SL Wk
							7/7	no filter			SL. CENTRE TO U.S.L.
3:43, 3:54, 4:5		MCOO-2 / 9.0 min @ 68°F / 240 c 159								9 Sept 170	
3:53		"								9 Sept 170	
3:54											

Dome Temp. 66°F 117%

Transparency Conditions

90

Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:06	A	0423 W	+05 ⁰ 431	2"	7.2	F0	3-3-3	GH cl.	400/75	setting 35	OK
	A			"	9.0	B	3-	"	500/50	very hazy	
0	A	0454 W	+36 ⁰ 54	"	5.96	M4II	3-3-3	GH cl	400/120	humidity 87%	good
	A	1 ^h 05 W	+36 ⁰ 58	"	5.5	B?	3-3-3	"	200/25		abundant
1:53	A	1457 W		"	8.7	A0	3-2-3	"	800/36	covered by 4 min. clouds at 21:20	OK

93

Date *Fri Sat Sep 11-12 1970* Observer *West-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
33656	ADS 14893	21 16.5	+09° 55'	G-12	IIa0	9L	65°F	19:30	20:53	A	01° 22'E +
33657	ADS 14893	21 16.5	+09 55	G-12	IIa0	9L	65°F	20:55	22:02	B	00° 13'E +
33658	HD 222368	23 34.8	+05 05	G-12	IIa0	9L	64°F	22:11	22:21	C	00° 2'E -
33659	ADS 14893	21 16.5	+09 55	G-12	IIa0	9L	64°F	22:28	23:34	A	01° 20'W -
33660	ADS 14893	21 16.5	+09 55	G-12	IIa0	9L	63°F	23:36	01:00	B	02° 45'W +
33661	ADS 14893	21 16.5	+09 55	G-12	IIa0	9L	60°F	01:03	02:36	C	04° 32'W +
33662	HD 222368	23 34.8	+05 05	G-12	IIa0	9L	59°F	02:42	02:53	A	02° 20'W +
33663	ε-Ceti	02 34.8	-12 18	G-12	IIa0	9L	59°F	03:00	03:22	B	00° 09'E -
33664	ε-Ceti	02 34.8	-12 18	G-12	IIa0	9L		03:25	03:48	C	00° 16'W -
33665	HD 22484	03 31.7	+06 05	G-12	IIa0	9L	58°F	03:55	04:09	A	00° 20'E +
33666	1 Geminaurum	05 58.0	+23 16	G-12	IIa0	9L		04:19	04:34	B	03° 01'E +
33667	1 Geminaurum	05 58.0	+23 16	G-12	IIa0	9L		04:42	04:52	C	03° 04'E +
33668	M Orionis	05 57.1	+09 39	G-12	IIa0	9L	58°F	04:58	05:08	A	01° 46'E +
33669	β Geminaurum	07 39.3	+28 13	G-12	IIa0	9L		05:14	05:16	B	03° 21'E +
33669F1	focus test	out out / in in		G-12	IIa0	9	58°F			B	

Dome Temp. *6*

Focus

Dome Temp.

Dome Temp. 61°F H-56%

Transparency Conditions Excellent night

94

Focus

Dome Temp. 54°F H 69%

Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
53	A	01 ^h 22 ^m E	+10° 16'	2	6.75	F8V	17-17-17	West ^{W and} Spect. Bin	400/260	exposed box #2	WEAK
02	B	00 ^h 13 ^m E	+10 16	2	6.75	F8V	17-17-17	West Spect. Bin	400/260		WEAK
02:21	C	02 ^h 12 ^m E	+05 32	3	4.3	F8V	17-17-17	West Std Vel	200/130		(S.L.) STRONG
02:34	A	01 ^h 20 ^m W	+10 16	2	6.75	F8V	17-17-17	West Spect. Bin	400/260		FINE
00	B	02 ^h 45 ^m W	+10 16	2	6.75	F8V	17-17-17	West Spect. Bin	400/260		FINE
02:36	C	04 ^h 22 ^m W	+10° 16'	2-3	6.75	F8V	17-17-17	West Spect. Bin	400/250		FINE
02:53	A	02 ^h 20 ^m W	+05° 32'	2	4.3	F8V	17-17-17	West Std Vel	200/130		U.S.L. STR
03:22	B	00 ^h 09 ^m E	-11° 56'	2	4.5	F5V	17-17-17	West Spect. Bin	200/130		U.S.L. STR
03:48	C	00 ^h 16 ^m W	-11° 56'	2	4.5	F5V	17-17-17	" " "	200/130		U.S.L. STR
04:09	A	00 ^h 20 ^m E	+00° 23'	2	4.5	dF9	17-17-17	" Std Vel	200/130		SL. STR
04:34	B	02 ^h 21 ^m E	+23 20		4.5	gG5	17-17-17	" Spect. Bin	200/130		FINE
04:52	C	02 ^h 04 ^m E	"		4.5	gG5	17-17-17	" " "	200/130		FINE
05:08	A	01 ^h 46 ^m E	+09 43		4.4	Am	17-17-17	" " "	200/100		FINE
05:16	B	03:21E	+28 07		1.21	K0III	25-25	" Std Vel	20/20		SL. STR
	B						7-7	no filter			GOOD

95 Visitors till 21:30

Date Sat-Sun Sept 12-13 1970 Observer West-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.
33670	ADS 14892	21 16.5	+09°55'	G-12	IIa-O	9-5	64°F	21:43	23:33	A
33670F	FOCUS Test			"	"	9	64°F	-	-	B
33671	HD 22368	23 ^h 34. ^m 8	+05° 05'	"	"	9-5		23:53	00:03	C
33672	C CETA	02 34^m 8	-12° 18'	"	"	"		00:20	00:52	A
33672 T1	calibration	step	wedge	for	plates	33656 - 33666				14 Sept
T2	"	"	"	"	"	33654 - 33655, 33667 - 33672				

Done Temp. 60
Focus
Done Temp.
Hour Angle
End
1:23 W +1
00:26 E +
02:31 E
2:02 W 2/

Dome Temp. 60° 72%

Transparency Conditions Clear but cloud at 23:30

Focus

Exp Meter bad. Probably mirror alignment because count rate not uniform along slit. *

Dome Temp.

Starting Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
23:33	A	1:23 W	+10° 16'	1.2"	V=8.75	F8V	17-17-17	WEST SPECT. BIN	400/130??	estimated, exp meter wrong	WEAK
	B		in in/out out				7/7	no filter			GOOD
00:03	C	00:26 E	+05° 31'	1.2"	V=4.3	F8V	25-25	West std vel	40/21?		FINE
00:57	A	02:31 E	-11° 54'	3"	V=4.3	F5V	19	West spot bin	400/	CLOSED 00:30 (LOW) OPEN 00:47	GUIDANCE * SL. WAVE
								[PLATES 33 656 - 33 671 TAKEN]			
										34 WEST	
14:44		WUP-2 / 9.0 min @ 68° E / 240 C 159									
3872			"							* POSSIBLY DUST COVER, NOT ROTATED FULLY OPEN DURING 1ST OPENING UP PROCEDURE	

Public Ans, Hs, G₄₀/75Date SAT/SUN: SEPT. 19/20 1970 Observer G₁₂, T₇ 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
33677	β Ari	01 49.1	+20 19	G12	Ilaw	9L	64°F	21 02 ⁽¹⁾	21 10	A	05 08 E
33678	HD 197572	20 39.5	+35 14	"	"	9L	"	21 28	22 13	B	01 10 W
33679	β Ari	01 49.1	+20 19	"	"	9L	63°F	22:19 ⁽²⁾	22:23	C	03 52 E
33680	HD 198726	20 47.2	+27 53	"	"	9L	"	22:31	22:57	A	01 43 W
33681	β Ari	01 49.1	+20 19	"	"	9L	"	23:03 ⁽³⁾	23:06	B	03 07 E
33682	HD 2019	00 19.4	+30 49	"	"	9L	60°F	23:11 ⁽³⁾	00:11	C	00 34 E
33683	β Ari	01 49.1	+20 19	"	"	9L	"	00:14 ⁽³⁾	00:17	A	01 56 E
33684	HD 4388	00 41.1	+30 25	"	"	135	"	00:23 ⁽⁴⁾	01 41	B	00 36 W
33685	β Ari	01 49.1	+20 19	"	"	9L	"	01:45 ⁽⁴⁾	01 49	C	00 24 E
33686	HD 14969	02 19.7	+29 26	"	"	135	"	01:55 ⁽⁴⁾	03:19	A	00 34 W
33687	β Ari	01 49.1	+20 19	"	"	9L	"	03:25 ⁽⁴⁾	03:29	B	01 13 W
33688	HD 32963	05 01.8	+26 12	"	"	135	"	03:38	04:48	A	00 40 E

Dome Temp. 6

Focus

Dome Temp.

Dome Temp. 60°F H=77%

Transparency Conditions EXCELLENT

Focus

INCREASING HAZE AT 3^h

Dome Temp. 56°F H=93%

FOGGY AT 3:45 → H=91%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:10	A	05 03 E	+20 45	1-2"	2.7	A5	25-26	ECL. BIN	20/13		SL. STR
2:3	B	01 10 W	+35 34	1-2"	6.5/8.2	F7-68	17-17-17	CEPHEID P.	400/260		(GUIDING) FINE
2:23	C	03 52 E	+20 46	"	2.7	A5	25-25	ECL. BIN	20/13		(GUIDING) FINE
2:57	A	01 46 W	+28 13	~1"	5.8-6.8	F5-60	17-17-17	CEPHEID P.	400/260		FINE
3:06	B	03 07 E	+20 46	"	2.7	A5	25-25	ECL. BIN.	20/13		STRONG
3:11	C	00 34 E	+31 17	"	6.78	A _m	17-17-17	A _m PROG	400/350		(GUIDING) FINE
3:07	A	01 56 E	+20 46	"	2.7	A5	25-25	ECL. BIN.	20/13		STRONG
3:11	B	20 36 W	+30 50	1-2"	8.80	K3 III	8-7-8 7-8-8	S.S. VEL.	800/425	north following (Vis approx cross half light on)	FINE
3:2	C	00 24 E	+20 45	"	2.7	A5	25-25	ECL. BIN.	20/13		STRONG
3:9	A	00 34 W	+29 48	~1"	8.96	K3 III	8-9-8- 9-8-8	S.S. VEL.	800/425		FINE
3:29	B	01 13 W	+20 45	"	2.7	A5	25-25	ECL. BIN.	20/13		SL. STR
4:48	A	00 40 E	+26 22	1"	8.36	G2 V	7-8-7 7-15	S.S. VEL.	800/310	Fld drawn] cut short	
FOG: MAIN BLIX NOT VISIBLE FROM DOME!!											

103

Date SUN/MDN S.E.P.T. 20/21 1970 Observer T₂ - GZ 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
33689	β Ari	01 49.1	+20 19	G12	Ilao	9/0.5	65°F	20 11 ⁽¹⁾	20 28	A	05 11 E
33690	HD 186688	19 40.8	+29 01	"	"	13/0.3	"	20 41	22 27	B	02 25 1/4
33691	β Ari	01 49.1	+20 19	"	"	9/0.5	"	22 34 ⁽³⁾	22 37	C	23 34 E
33692	HD 188727	19 51.5	+16 22	"	"	9/0.5	63°F	22 45	23 24	A	03 10 1/4
33693	β Ari	01 49.1	+20 19	"	"	9/0.5	"	23 59 ⁽²⁾	00 01	B	02 11 E
33694	HD 2924	00 27.4	+27 01	"	"	9/0.5	"	00 14	00 38	C	00 11 E
33694F	Focus			"	"	9	62°F	.		B	
33694 71	step wedge				Ilao	for plate		33677 - 33687			21 00 1/2
72					Ilao			33688 - 33694, 33674 - 33676			

Dome Temp. 60°F H=86%

Transparency Conditions *etc-etc* CLOUDY → GOOD → CLOUDY 104

Focus

Dome Temp. 60°F H=88%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:27	A	05 44 E	+20 46	~3"	2.7	A5	17-17-17	ECL. BIN.	200/130		FINE
02:27	B	02 25 W	+29 16	1-2"	6.8-7.6	F0-G1	17-17-17	CEPHEID P.	400/170	CLOUDS	FINE
02:37	C	03 34 E	+20 15	"	2.7	A5	25-25	ECL. BIN.	10/13		U.S.L. STR
03:24	A	03 10 W	+16 38	"	5.87 7.02	F6 G5	17-34	CEPHEID P.	400/116	CLOUDS! CUT SHORT	VERY WEAK
00:01	B	02 11 E	+20 44	"	2.7	A5	25-25	ECL. BIN.	20/13		SL. STR
00:24	C	00 11 E	+27 30	"	6.54	A _m	17-34	A _m PROG.	400/65	CLOUDS! CUT SHORT	VERY WEAK
	B		in in / out out				7/7	no filter			GOOD
08:27		MCP-2 / 9.0 min @ 60°F / 2700 159 / 21 Aug 8/70									
04:16:26		"									

Dome Temp. 53°F 5990H

Transparency Conditions scattered clouds but good 110

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:34	A	1403W	+05 16'	2"-3"	7.2	F016	3-3-3	Cluster Prog	400/75	set 3] x 1970 18 39.5	(GUIDING) FINE
1:34	"	3405W	+05 27	"	9.0	B	3-3-3	"	800/68	field of bubble motion!	EXP. OK
1:49	"	2 08 W	+10° 23	3"	8.8	F8	3-3-3	RVS model	200/22	set 30	SL-STR
4	"	2 23W	"	"	"	"	3-3-3	"	200/36	"	SL-STR
1:50	"	3407 E	+59° 54'	2-3	8.2	G8	3-3	Cluster st	400/ 85 ⁴³	" clouds lead 10" slow	SL. WK
2:00	"	0443W	+59.51'	2"	8.8	B	3-3-3	"	400/50	set 29	(GUIDING) FINE
						"		"			
19		MWD-2	19.0 min @ 65°K			290C	I 59			29 Sep 8 1970	
			"			290C	I 10			"	

Dome Temp. 500F 73%

Focus

Dome Temp. 430F 80%

Transparency Conditions

who changed the H.V to 700?

112

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:07	A	1435 W	+36° 56	2-3	8.74	A0	2-3-3	GH detector	800/108	setting 20	fine
20:47	"	24 14 W	+36° 46		7.99	B7	3-3-2	"	800/100		fine
1:15	"	24 43 W	+36° 45		7.54	B5	2-3-2	"	800/100	set 29 19!	fine
20:30	"	24 57 W			5.96	M4 II	2-3-2	"	200/60		"
1:40	"	34 07 W	+37° 00		5.48	B?	2-3		200/55	dark !! ↓	"
1:19	A	04 38 E	+59° 54		8.20	G8	2-2-2		800/160	setting 28	OK
2:43	"	04 54 W	+59° 50		8.18	B	2-2-2		800/100	set 27	OK
										Clouds!	

Dome Temp. 48°F $H=77\%$

Transparency Conditions *clouds at faint*

114

Focus

Dome Temp. *should be $3^{\circ}10^{\circ}\text{W}$*

Thick cloud by 01^h

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01 15	B	01.34 W	$+28^{\circ}17'$	$7^{\circ}2''$	9.64	K III	$8-8.7$ $8-15$	SSV	800/180	clouds 22.00-2230	SL WK
01 11	A	02.20 W	$-09^{\circ}16'$	2-3"	4.39	B5 V	15-15-15	SPEC. BIN.	200/48	CUT SHORT CLOUDS	(GUIDING) SL WK
01 04	C	MWP. 2/	1.0 min @	60°F	12	200	1.59				

Dome Temp. 44°F 6670 H

Focus

Dome Temp. 41°F 6850 H

Transparency Conditions intermittent to total cloud 118

Strange comet like blue cloud spotted in East SE at 4:30 till dawn, same shape & posn for 1 hr

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:11	A	1 ^h 26 ^m W	+36° 54'	2-3"	5.96	M4II	2-3-2	GH Cloud	200/60	bet = 28	fine OK
02:04	"	3 ^h 07 ^m E	+59° 53'	1"	7.0	F5II	2-3-2	"	800/144		OK
02:12	"	2 ^h 16 ^m E	+59° 55'	1"	5.20	G8	2-3-2	"	400/90		OK
04:02	"	1 ^h 36 ^m E	+56° 56'	3"	6.2	B1	2-3-2	B std vel	200/25		
05:05	B	0 ^h 35 ^m E	+89° 10'	2-3"		cF8W	22-22	G1001	40/23		STILL A FULL BOX IN THE DEEP FREEZE FINE
07:38	A	3 10 ^m W	+40 48	2"	8.0	K0	15-15/5	"	400/320	Fld Prown	FINE
09:02	B	0:05 W		"	7.06	GK5 +M2	45	"	40/30		FINE
09:20	C	03:05 W	+29 29	"	3.6	F5	22-22	"	40/23		(GUIDING) STRONG
10:29	A	01:07 W	+12 28	"	3.9	B3	22-22	"	40/18		VERY STRONG
10:51	B	00:25 W	-01° 34'	"	5.15	B1V	22-22	Bp prog	40/18	cloud	(GUIDING) SL. WK
10:57	C	01:30 W	16° 34'	"	7.06	GK5 +M2	22-22	G1001	40/30	"	FINE
10:59	A	02:17 W	12° 29'	"	3.9	B3	22-22	G1001	40/18	None	STRONG
	B						f/7	no filter			EXTREMELY WK GOOD
11:33		5 Oct 1970	mev-2/		9.0	min	@ 68°F	1272-159			

119 2 120 visitors from Waterloo about 2 hours, (Looked at Ring Nebula)

Date Oct 6-7 Tues-Wed Observer HD-T.N./moore-T. 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.
33728	HD 209813	22 01.0	+46°45'	G12	Ilco	9/3	68°F	18:53	19:53	A
33729	BD +47 781	03 06.4	+47.43	G40	Ilco	13/5	62°F	22:10	23:44	A
33730	HD 9774	01 30.5	+72 32	G12	Ilco	9/5	"	00:05	01:18	C
33731	HD 26965	04 10.7	-7.49	"	"	"	"	01:35	02:43	A
33732	HD 13994	02 11.0	+57 04	"	"	"	"	03:03	03:57	B
33733	HD 17506	02 43.4	55°29'	"	"	"	59	04:09	04:27	C
33734	HD 16028	02 29.4	+36°53'	"	"	"	"	04:35		A
33733 F	Focus			"	"	"	59°F			B
33733 T1	calibration step wedge				Ilco					for plates 33728, 33730 - 33733

Dome Temp. 60° 92%

Transparency Conditions clear, then haze, some cloud

Focus

120

Dome Temp. 55° 90%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
7:53	A	E 1 ^h 27 ^m	+47° 08'	1-2"	7.5	K0	15-15-15	ed Bin	400/186		SL. WK
8:44	A	E 2 ^h 45 ^m	+48° 01'	2"	8.5	G5	2-3-3	Sp Bin	800/150	seem fainter than 8.5	SL. WK
1:18	C	W 0 ^h 25 ^m	+72° 55'	1"	6.25	G8E	15-15-15	Vis Bin	200/140	cloud at 0 ^h 25 ^m	SL. WK
2:43	A	E 0 ^h 47 ^m	-07° 38'	2-3"	5.14	K0U	15-15-15	Vis Bin	200/180		FINE
3:57	B	W 2 ^h 26 ^m	+57° 25'	2"	7.04	G2U	15-15-15	Vis Bin	400/280	seeing is better than long	FINE
4:27	C	W 2 24	+55° 49'	"	5.41	K3E6	15-15-15	Vis Bin	200/180		FINE
	A	137 14	137 14	1-2"	7.10	K3U	15-	"	200/	cloud	
	B		in in/out out				7/7	no filter		NO CENTRE COMPARISON	?
13:33		7 Oct / 70	24 WP-21	9.0 mm @	0.5°	1.2	90	c. 1.59			

123

Date Oct 8-9 Thurs - Fri Observer Blt - 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 End
33737	HD 1404	00 13.1	+36°14'	G12	IIaO	9/15	63°F	01:05	01:13	A	01 48 W 3
33738	50 Cas	01 54.9	+71°56'	"	"	"	"	01:29	01:34	B	00 25 W 4
33739	4 Per	01 55.6	+54°00'	"	"	"	"	01:45	01:57	C	00 50 W + 01 15 E + 02 45 E +
33740	71 Tau	04 20.7	+15°23'	"	"	"	"	02:06	02:14	A	00 05 W +
33741	HR 1403	04 22.1	+21°24'	"	"	"	61°F	02:54	03:40	A	00 05 W +
33742	π^2 Ori	04 45.2	+8°44'	"	"	"	"	03:48	03:56	C	00 0 W -
33743	9 Cam	04 44.1	+66°10'	"	"	"	"	04:12	04:23	B	00 24 W 1
33743F	Focus			"	"	9	60°F			B	
33743 T1	calibration step wedge				IIaO	for plates		33734-33743			9 54

Dome Temp. 5

Focus

Dome Temp.

Dome Temp. 59°F 84% H

Transparency Conditions scattered cloud

124

Focus

Dome Temp. 57°F 90%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:13	A	01.48W	+36 42	2-3"	4.6	A2V	22-22	Sp Bin	40/18		(GUIDING) SL. WFK
1:34	B	00.25W	+72 18	"	4.06	A1V	22-22	"	40/18		(GUIDING) FINE
1:57	C	00.50W	+54 16	"	4.91	158II	22-22	Sp - Bin	40/18		BLACK
2:14	A	02.42 E 01.18 E	+15° 36'	2"	4.73	F0V	22-22	Sp. Bin	40/18		FINE
3:40	A	00 05 W	+21° 37'	"	6-	Am	15-15-15	Sp - Bin	200/100	α = 02 26.3) some confusion	FINE
3:56	C	00 01 W	+8° 54'	"	4.32	A0V	15-15-15	Sp - Bin	40/18	} possible double exp	FINE
4:23	B	00 24 W	+66° 19'		4.3	09.5I ₀	15-15.5		200/90		SLIGHTLY STRONG
	B						7/7	no filter			SL. CENTRE TO VIOLET
3		9 Oct	nwp. 2/	9.0 min @	68°F			2400 154			

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Date Oct 9-10 Fri - Sat Observer In-WZ 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
33744	HD 209813	22 01.0	+46 45	G12	IIaD	13/3		18:44	19:54	B	01:13E
33745	19 Lyr	19 07.9	+31 07	"	"	9/5	63°F	20:17	20:55	C	02:40W
33746	HD 209515	21 58.9	+44 10	"	"	"	"	21:10	21:30	B	00:24W
33747	HD 217477	22 55.9	+30 33	"	"	"	"	21:41	22 20	C	00:20W
33748	HD 220933	23 22.7	+24 37	"	"	"	"	22 30	23:00	C	00:30W
33749	HD 12447	01 56.8	+02 17	"	"	"	62°F	23 07	23:17	A	01:49E
33750	HD 11291	01 45.8	+50 18	"	"	"	"	23:32	00:10	B	00:44E
33751	HD 1048	00 09.8	+21 43	"	"	"	"	00 22	01:13	A	00:55W
33752	HD 20210	03 09.7	+34 19	"	"	"	"	01 25	02:11	A	00:01E
33753	AG Per	04 00.7	+33 11	"	"	"	"	02:19	03:20	C	00:10W
33754	HD 27650	04 16.6	+42 12	"	"	"	60°F	03:25	04 07	B	00:42W
33755	HD 51418	06 52.3	+42 27	"	"	"	"	04 22		A	

Dome Temp. 6

Focus

Dome Temp.

Dome Temp. 60°F H=83%

Transparency Conditions scattered cloud

126

Focus

Dome Temp. 58°F H=95%

Hour Angle EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:54	B	01:13E	+47 07	2"	7.5	KO	7-7-7 8-8-8	ec/Rin	400/220		sl wh.
01:55	C	02 40W	+31 18	"	5.7	B9p	15-15-15	mixy star prog	200/90	broken 2pc	<u>BROKEN</u> FINE
01:30	B	00 24W	+44 33	1.2"	5.6	A0IV	15-15-15	"	200/90		(GUIDING) FINE
02:20	C	00 20W	+30 58	1.2"	6.3	B8p	15-15-15	"	200/100		(GUIDING) FINE
03:00	C	00 30W	+25 03	"	5.8	A0p	15-15-15	"	200/100		FINE
03:17	A	01:47 E	+02 42	"	4.3	A0p	15-15-15	"	200/90		FINE
03:10	B	00 44E	+50 42	2"	5.6	B9p	15-15-15	"	200/100		FINE
03:13	A	01 55W	+22 11	3"	6.0	A1p	15-15-15	"	200/100		U.S.L. WK
03:11	A	00 04E	+34 26	2.3"	6.2	A2m	15-15-15	"	200/100		(GUIDING) U.S.L. WK
03:20	C	00 10W	+33 25	"	6.6	B3	15-15-15	"	200/100	HD 25833	U.S.L. WK
04:07	B	00 42W	+42 25	2"	6.0	A1p	15-15-15	"	200/100	Plate holder not completely closed	SL. WK
	A		+42 25	3"	6.6	A0p	15	"	200/100	Clouds.	
		repaired			P.H.	B	Ri				

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Date Oct 10-11 S.D. Sur Observer G.I.-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.H.	Hour Angle End
33755	HD 192907	20 12.3	+77° 25'	G12	Hao	9L	59°F	19:50	20:12	A	01° 01'
33756	HD 208835	21 ^h 53 ^m .9	+46° 23'	"	"	"	59°F	20:28	23:42	B	02° 45'
33757	HD 2019	00 ^h 19 ^m .4	+30° 49'	"	"	"	53°F	23:48	01:08	C	0° 45'
33758	HD 17330	02 ^h 41 ^m .8	+09° 17'	"	"	"		01:14	02:50	A	01° 00'
33759	HD 26571	04 ^h 07 ^m .3	+22° 09'	"	"	"	50°F	02:54	03:54	B	00° 45'
33760	HD 51418	06 52.2	+42° 26'	"	"	"		04:06	05:44	C	01° 45'
33760F	Focus			"	"	9	48°F			B	
33760 r	calibration step wedge				500	for plates		33751-33760			13 44 11 7
TV								33744-33759			

Dome Temp. 50Focus 5Dome Temp. 50

Dome Temp. 56°F 69%

Focus 5-R

Dome Temp. 46°F 72%

Transparency Conditions scattered clouds at day,
clear after 23:00

128

Hour Angle EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
12	A	01 ^h 01 ^m W	+77° 39	2-3	4.38	B2III	17-17-17	G1 Ap9m	200/100		FINE
3.42	B	02 ^h 46 ^m W	+46° 45	2-3	7.39	A0	17-17-17	"	800/560		FINE
10x	C	01 ^h 44 ^m W	+31° 13	2	6.78	A0	17-17-17	"	400/280		FINE
2	A	01 ^h 04 ^m W	+29° 35	2	7.17	B9	17-17-17	"	400/250	ft. comp. in window & space	FINE
11.4	B	00 ^h 45 ^m W	+22° 20	2	6.11	B8	17-17-17	"	200/125		D.S.L. WR
5.4	C	00 ^h 12 ^m E	+42° 21	2	6.61	A0	17-17-17	"	200/125	thin clouds	FINE
							7-7	no filter		DAWN	CENTRE TO VIOLET
10		13008 1970	70 WR-2 / 9.0 min @ 60° F / 200 C 159								
151			"								
								changed @ 12 focus to 30-R			

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Date OCT 16/17 Fri/SATObserver Gr-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
33761	HD 189706	19 ^h 56 ^m .3	+29° 32'	Gr 12	Il 20	13L	43°F	18 ^h 34	21:00	A	22 ^h 28 ^m W
33762	HD 212986	22 ^h 23 ^m .2	+55° 56'	"	"	9L	39°F	21:08	22:12	B	21 ^h 18 ^m W
33763	HD 1662	00 ^h 15 ^m .8	+12° 13'	"	"	13L	38°F	22:18	00:14	C	0° 22 ^m W
33764	HD 22260	03 ^h 35 ^m .2	+28° 23'	"	"	9L	36°F	00:25	01:29	A	26 ^h 43 ^m E
33765	HD 29487	04 ^h 33 ^m .5	+43° 55'	"	"	13L	36°F	01:34	02:50	B	21 ^h 14 ^m E
33766	HD 35036	05 ^h 16 ^m .7	+16° 01'	"	"	"	35°F	03:08	04:50	C	00° 50 ^m W
33766F	Focus			"	"	9L				B	

Dome Temp. 4

Focus 30

Dome Temp.

Dome Temp. 40°F 58%

Focus 30-R

Dome Temp.

Transparency Conditions

130

clock 3 min. out
 repair red side lamp of guider
 turned clock drive & heaters on

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:00	A	02 ^h 28 ^m W	+29° 48'	3"-4"	7.50	A0	17-17-17	G1 Ap + m	800/560	hr. comp. in visible spectrum - search light	FINE
1:12	B	01 ^h 13 ^m W	+56° 22'	3"-4"	6.37	B8	17-17-17	"	400/250		FINE U.S.L. 575-
1:14	C	01 ^h 22 ^m W	+12° 38'	2"-3"	7.51	A3	17-17-17	"	800/560		FINE
1:29	A	00 ^h 43 ^m E	+28° 40'	2"-3"	6.87	B9	17-17-17	"	400/250		FINE
1:40	B	00 ^h 14 ^m E	+44° 05'	2"-3"	7.30	B9	17-17-17	"	400/250	fast moving clouds, some rain	FINE
1:50	C	00 ^h 57 ^m W	+16° 06'	2"-3"	7.38	A0	17-17-17	"	400/220	clouds (pass. combination by reason reflected)	U.S.L. WK CENTRE TO VIOLET
	B						7-7	no filter		clouded out	

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Date 29 Sep Oct 17-18 1970 Observer Wz - 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
33767	HD 3322	00 31 ^m 05 ^s	+26° 42'	G12	IIaD	9L	43°F	23:05	23:51	A	0 ^h 45 ^m
33768	HD 7546	01 10 ^m 31 ^s	+47° 33'	G12	IIaD	9L	43°F	23:56	00:56	B	1 ^h 5 ^m
33769	HD 9996	01 32 ^m 30 ^s	+44° 34'	G12	IIaD	9L		01:05	01:43	C	1 ^h 3 ^m
33770	HD 16004	02 29 ^m 13 ^s	+39° 14'	G12	IIaD	9L	43°F	01:48	02:24	A	1 ^h 23 ^m
33771	HD 29155	03 ^h 45 ^m 43 ^s	+12° 45'	G12	IIaD	9L		02:35	03:29	B	1 ^h 10 ^m
33772	HD 51418	06 ^h 52 ^m 20 ^s	+42° 26'	G12	IIaD	9L	43°F	03:36	04:13	B	1 ^h 12 ^m
33773	HD 39317	05 ^h 46 ^m 41 ^s	+14° 09'	G12	IIaD	9L		04:21	04:45	C	0 ^h 25 ^m
33774	HD 38478	05 41 ^m 00 ^s	+15° 47'	G12	IIaD	9L		04:53	05:27	A	1 ^h 14 ^m
33774F1	focus test	out of focus		G12	IIaD	9	44°F			B	

Dome Temp. 4

Focus 2.2

Dome Temp.

Hour Angle
End

133

Date Sun Mar 09 18-19 1970 Observer Ri - Pen / G4-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
33775	HD 217035	¹⁹⁷⁰ 22 55.7	¹⁹⁷⁰ +62° 40'	G12	IIaO	13L	52°F	18:36	19:29	A	55° E
33776	α Lyr.	¹⁹⁷⁰ 18 35.9	¹⁹⁷⁰ +38 45	G12	IIaO	13L	50°F	21:45	21:52	B	55° W
33777	HD 209813	22 01.0	+46° 43'	G12	IIaO	13-03	50°F	21:59	22:57	C	2° 28° W
33778	HD 217035	22 55.7 ^{52.6}	+62° 40' ¹⁹	G12	IIaO	13-03		23:01	00:14	A	2° 55° W
33778F1	focused	02 02 / w i		G12	IIaO	9	46°F			B	
33778F2-5	focused			G40	IIaO	13-5	46°F			A	
33779	Stock 2-56	2 ^h 0.5	+58° 58'	"	"	"	"	00:45	01:36	A	01° 00° W
33780	Stock 2-53	2 ^h 8.	+58° 15'	"	"	"	44°F	01:53	02:40	A	02° 00° W
33781	Stock 2-43	2 ^h 6.9	+58° 46'	"	"	"	44°F	02:45	03:25	A	02° 49° W
33782	Stock 2-7	2 ^h 3.3	+59° 33'	"	"	"	43°F	03:30	03:41	A	03° 02° W
33783	HD 13854	2 ^h 09.9	+56° 36'	"	"	"	43°F	03:46	03:53	A	03° 11° W
33784	NGC 1662-10	4 ^h 42.9	+10° 45'	"	"	"	42°F	04:08	05:46	A	2° 36° W

Dome Temp. ...

Focus ...

Dome Temp. ...

Hour Angle
End

135

Date Mon-Tues Oct 19/20/70 Observer B/n - Tr/Tr-G.H. 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
33785	66 Oph	17 55.3	+04 22	G12	D ₆₀	9/5		18:18	18:26	A	02 08W
33786	60 Sex	18 24.5	-02 03	"	"	"		18:36	19:32	B	02 37W
33787	33 Agr	22 ^h 01.0	-14° 21'	"	"	"	46°F	19:42	19:48	C	00 41E
33788	17 Psc	23 ^h 34 ^m 8	+5° 05'	"	"	"	"	20:02	20:08	B	01 55E
33789	28 Cyg	20 05.7	+36 33	"	"	"	"	20:17	20:23	C	01 50W
33790	HD 217061	22 ^h 52 ^m 8	+62° 05'	"	"	13/3		20:51	23:09	A	01 48W
33791	HD 209813	22 01.0	46 45	"	"	"		23:16	00:16	B	03 47W
33792	Stock 2-56	2 ^h 6.5	+58° 58'	G40	"	13/5	42°F	00:30	01:36	A	01 05W
33793	Stock 2-43	2 ^h 6.9	+58° 46'	"	"	"	"	01:47	03:15	A	02 40W
33794	Stock 2-7	2 ^h 3.3	+59° 53'	"	"	4	"	03:22	03:54	A	03 22W
33795	HD 13854	2 ^h 9.9	+56° 36'	"	"	"	"	03:59	04:13	A	03 34W
33796	4 Aur	04 52.5	+37° 44'	G12	"	9/5	42°F	04:34	04:48	A	01 28W
33797	3 Mon	05 57.1	-10 36	"	"	"	"	04:54	05:30	B	01 05W
33797F	Focus			"	"	9	41°F			B	

Dome Temp. Focus Dome Temp. Hour Angle
End

Dome Temp. 44°F $H=690$

Focus $20-R$

Dome Temp. 40°F $H=807$

Transparency Conditions *Excellent, Cloud after 1 AM*

*Sid Time slow 5 min (also EST wrong)
reset using Altair*

136

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
18:26	A	02 08W	+04° 25'	2'-3"	4.8	B2Vc	22-22	sp Bin	40/18		SL. STR
19:32	B	02 37W	-01 56	"	6.5	K0M	17-17-17	"	200/160		FINE
19:48	C	00 41E	-13 57	"	4.14	B8V	22-22	"	40/18		(GUIDING) FINE
20:08	B	01 55 E	+05 33	2"	4.54	F7E	22-22	RV Std	40/23		(GUIDING) FINE
20:23	C	01 50 W	+36 50	"	4.8	B3Vc	22-22	sp Bin	40/19		SL. STR
22:09	A	01 48W	+62 31	"	9.5	B1V	17-17-17	"	400/140		FINE
20:16	B	03 47W	+47 08	2'-3"	7.5	K0	17-17-17	ec1 Bin	400/220		(GUIDING) FINE
20:26	A	01 00 W	+59° 17'		8.9	B	2-3-2	6H cl.	400/50	Set = 24	(GUIDING) FINE
23:15	A	02 40W	+59° 03'	2"	8.8	G5II	2-3-2	"	800/170	cloud	(GUIDING) FINE
23:54	A	03 22W	+59° 52'	"	7.0	F5II	2-3-2	"	200/36		FINE
4:13	A	03 34W	+56° 57'	"	6.2	B	2-3-2	Sch vel	200/25		(GUIDING) SL. STR
4:48	A	01 28W	+37° 51'	1'-2"	5	A0V	17-17-17	Bp Prog	200/95	cloud	FINE
5:30	B	01 05 W	-10° 33'	"	4.8	B5V	17-17-17	"	200/100	"	(GUIDING) FINE
	B	in in / out out					7/7	no filter			SL. CENTRE TO VIBLET

137

Date..... Observer..... 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
33797 T1	calibration stars wedge				33761 - 33766			33785 - 33788	2:10		
33797 T2					33789 - 33791, 33796			33797		4	
33797 T3					33767 - 33770					4	
33797 T4					33777, 33778					4	
33797	F2		23 set (G.H.)	G40			T = 11.6 °C	focus		31	
	F3									32	
	F4									33	

Dome Temp. —

Focus —

Dome Temp. —

Hour Angle
End

M. 101.2

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Date Oct 23/24/70 Fri-Sat Observer Bln-Ta 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
33798	66 Oph	17 ^h 55 ^m .3	+4° 22'	G12	IIa-0	9/5	57°	18:10	18:28	A	02 20W
33799	17 Aql	19 ^h 00 ^m .8	+13° 43'	G-12	IIa-0	"	56°F	18:35	18:37	B	01 23W
33800	16 Aql	19 ^h 01 ^m .0	-5° 02'	"	"	"	"	18:45	18:51	C	01 23W
33801	67 Aql	20 ^h 09 ^m .7	+14° 54'	"	"	"	"	18:57	19:13	A	00 50W
33802	HD192685	20 ^h 11 ^m .0	+25° 17'	"	"	"	"	19:23	19:33	B	01 08W
33803	28 Cyg	20 ^h 05 ^m .7	+36° 33'	"	"	"	"	19:39	19:49	C	01 30W
33804	54 Cyg	20 ^h 43 ^m .5	+36° 07'	"	"	"	56°F	19:54	20:00	A	01 04W
33805	58 Cyg	20 ^h 53 ^m .5	+46° 47'	"	"	"	"	20:09	20:15	C	01 07W
33806	33 Aql	22 ^h 01 ^m .0	-14° 21'	"	"	"	"	20:20	20:34	B	00 20W
33807	26 Peg	22 ^h 05 ^m .3	+5° 42'	"	"	"	"	20:39	20:43	C	00 25W
33808	17 Psc	23 34.8	+5° 05'	"	"	"	"	20:50	21:00	A	00 45E
33809	HD218154	23 00.6	+24 07'	"	"	13/5	"	21:10	22:26	B	01 11W
33810	HD209813	22 01.0	+46 45'	"	"	13/3	51°	22:31	00:05	A	07 50W
33811	25 And	00 13.1	+36 14'	"	"	9/5	"	00:11	00:19	C	01 53W
33812	HD 37519	5 ^h 34 ^m .1	+31° 18'	"	"	"	"	00:34	01:26	B	02 22E
33813	50 Cas	01 54.9	+71 56'	"	"	"	"	01:42	01:48	C	01 38W

Dome Temp. 52°F $H=82\%$

Focus $50-R$

Dome Temp.

Transparency Conditions $\text{very hazy - fog at } 22^{\text{h}} 140$

cont over

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
8:28	A	02 20W	$+4^{\circ}27'$	2"	4.79	B2Ve	17-15-15	Sp - Bin	200/90		
8:37	B	01 23W	$+13^{\circ}54'$	"	3.01	A0V	20-20	Sp Bin	40/17		
9:51	C	01 35 W	$-4^{\circ}52'$	2"-3"	3.32	B9V	20-20	"	40/17		
9:13	A	00 50 W	$+15^{\circ}13'$	"	5.04	A2V	15-15-15	"	40/18		
9:33	B	01 08W	$+25^{\circ}35'$	11	4.59	B3V	15-15-15	"	40/17		
9:49	C	01 30W	$+36^{\circ}54'$	"	4.92	B3Ve	15-15-15	"	40/17		
10:50	A	01 04W	$+36^{\circ}27'$	2"	4.42	B5V	20-20	"	40/17		
10:15	C	01 07W	$+41^{\circ}06'$	"	3.96	A0V	20-20	"	40/17		
10:34	B	00 20W	$-13^{\circ}55'$	"	4.18	B8V	15-15-15	"	40/20		
10:43	C	00 25W	$+6^{\circ}09'$	"	3.61	A2V	20-20	"	40/17		
11:00	A	00 48E	$+5^{\circ}31'$	"	4.6	F7V	20-20	RV std.	40/23		
11:26	B	01 11 W	$+24^{\circ}34'$	"	7.01	A0	15-15-15	Sp - Bin	400/200	fld down fog	
11:05	A	03 50 W	$+47^{\circ}09'$	2"-3"	7.5	K0	15-15-15	ec/Bin	400/220		
11:19	C	01 53 W	$+36^{\circ}38'$	"	4.58	A2V	15-15-15	Sp - Bin	40/18		
11:26	B	02 22 E	$+31^{\circ}22'$	"	6.0	B7V	15-15-15	Sp - Bin	200/100		
11:48	C	01 38 W	$+72^{\circ}18'$	"	4.1	A1V	15-15-15	"	40/18		

141 pg # 2

Date Oct 29/70 Observer Pla-Tin 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
33814	4 Per	1 ^h 55 ^m .6	+54° 00'	G-12	IIa-0	9/5		01:53	02:03	A	01 54W
33815	9 Tri	2 ^h 11 ^m .4	+33° 23'	"	"	"		02:08	02:14	B	01 41W
33816	22 Per	2 ^h 52 ^m .4	+39° 16'	"	"	"		02:19	02:27	C	01 26W
33817	HD 21447	3 ^h 22 ^m .4	+55° 06'	"	"	"		02:33	02:49	A	01 11W
33818	46 Per	3 ^h 52 ^m .5	+35° 30'	"	"	"		03:00	03:06	B	01 01W
33819	9 Com	4 44.1	+66° 10'	"	"	"	50°	03:13	03:19	C	00 18W
33820	3 Lep	5 ^h 07 ^m .6	-11° 59'	"	"	"	"	03:27	03:43	A	00 24W
33821	4 Lep	5 ^h 08 ^m .6	-13° 04'	"	"	"		03:50	04:04	B	00 42W
33822	71 Tau	4 ^h 20 ^m .7	+15° 23'	"	"	"	49°	04:09	04:21	C	01 48W
33823	2 Ori	4 45.2	+8° 44'	"	"	"	"	04:28	04:38	B	01 39W
33824	3 Mor	05 57.1	-10° 36'	"	"	"		04:50	05:10	C	01 00W
33825	HD 51418	06 52.2	+42 26	"	"	"		05:18	06:02	A	00 56W
Looked at	R Cnc	It was very faint) too faint to do at this time									

Dome Temp.

Transparency Conditions *very good*

142

Focus

Dome Temp. *46°F 8790*

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:03	A	01 54W	-757° 21'	2"	4.91	B8V	15-15-15	Sp - Bin	40/18		
2:14	B	01 45W	+33° 43'	"	4.06	A0V	15-15-15	"	40/18		
2:27	C	01 20W	+39 34	"	4.6	A2V	15-15-15	"	40/17		
2:49	A	01 11W	+55° 24'	"	5.13	A1V	15-15-15	"	40/20		
3:06	B	01 00W	+35° 44'	"	4.04	07	20-20	"	40/18		
3:19	C	00 18W	+66° 21'	"	4.3	095T	20-20	"	40/18		
3:43	A	00 24W	-11° 51'	3"	4.35	B8V	15-15-15	Sp Bin	40/20		
4:04	B	00 43W	-12 35	"	4.26	B8V	15-15-15	"	40/18		
4:21	C	01 48W	+15 38	2-3"	4.73	F0V	15-15-15	"	40/18		FINE
4:38	B	01 39W	+8° 55'	"	4.3	A0V	15-15-15	"	40/18		FINE
5:10	C	01 00W	+10° 33'	"	4.73	B5V	15-15-15	Bip Prog	40/18		FINE
6:02	A	00 56W	+42° 24'	"	6.61	A0p	15-15-17	Apr m	200/75	cut short	(GUIDING) FINE
										Down (finally)	

143

Date Oct 24/25/70 Sat-Sun Observer Blm - Jm 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
33826	17 Aq	19 ^h 00 ^m .8	+13° 43'	G-12	ITA-0	9/5		18:11	18:15	A	01 03W
33827	HD 218537	23 ^h 03 ^m .7	+63° 06'	"	"	"		18:25	18:57	B	02 NE
33828	HD 218342	23 ^h 02 ^m .1	+62° 41'	"	"	13/3	54°	19:09	19:41	C	01 19E
33830	HD 217061	22 ^h 52 ^m .8	+62° 05'	"	"	"	53°	20:01	22:13	A	01 12W
33829	33 Per	3 ^h 17 ^m .2	+49° 30'	"	"	9/5		22:31	22:34	B	02 43E
33831	25 And	00 ^h 13.1	+36° 14'	"	"	"		22:49	23:18	C	00 52W
33832	50 Cas	1 ^h 54 ^m .9	+71° 56'	"	"	"	52°F	23:24	23:38	A	00 30E
33832F	Focus			"	"	9	52°F			B	
33833	46 Per	3 ^h 52 ^m .5	+35° 30'	"	"	9/5		02:30	02:42	A	00 39W
33834	9 Cam	4 44.1	+66 10	"	"	"		02:47	02:53	B	00 04E
33835	22 Per	2 ^h 52.4	+39° 16'	"	"	"		03:01	03:09	B	02 58W
33836	HD 32519	5 ^h 34.1	+31° 18'	"	"	"	51°	03:14	03:40	C	02 04E
33837	2 Ori	4 ^h 45 ^m .2	+8° 44'	"	"	"		03:45	03:51	A	00 59W
33838	3 Lep	5 ^h 07.6	-11° 59'	"	"	"		03:59	04:11	B	00 52W
33839	4 Lep	5 08.6	-13° 04'	"	"	"		04:15	04:23	C	01 06W
33840	65 Eri	4 ^h 56 ^m .6	-7° 19'	"	"	"		04:28	04:38	A	01 32W

Dome Temp. 50

Focus

Dome Temp.

Hour Angle
End

Dome Temp. 50°F 8270

Transparency Conditions *hazy - cloud too*

144

Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
8:15	A	01 03W	+13° 54'	2"	3.01	A07V	15-15-15	Sp - Bin	40/18		CONTINUING FINE
8:57	B	02 18E	+13° 32'	1-2"	6.24	07	15-15-15	"	200/95		SL. WK
9:41	C	01 19E	+63° 04'	"	7.85	B07V	15-15-15	"	400/140		CONTINUING SL. WK
2:13	A	01 12W	+62° 31'	"	9.49	B17V	15-15-15	"	400/140		WEAK
2:24	B	02 53E	+49° 45'	"	2.27	F51L	20-20	RV 5+d	40/23		POOR CONTINUING, FINE
3:18	C	00 50W	+36° 32'	"	4.58	A2V	15-15-15	Sp - Bin	40/20	cloud	FINE
3:38	A	00 30E	+72° 19'	2	4.08	A1V	15-15-15	"	40/20		FINE
	B		in in/out of				7/7	no filter			VERY SLIGHT CENTRE TO RED
2:42	A	00 39W	+35° 46'	2"	4.04	07	15-15-15	Sp Bin	200/90		U.S. SEC
2:53	B	00 04E	+62° 20'	"	4.3	09.5%	20-20	"	40/18		
3:09	B	02 08W	+39° 34'	"	4.63	A2V	15-15-15	"	40/18		
3:40	C	00 04E	+31° 21'	"	6.03	B37V	15-15-15	"	200/100		
3:51	A	00 58W	+8° 53'	"	4.32	A07V	15-15-15	"	40/18		
4:11	B	00 55W	-11 51	2-3"	4.35	B8V	15-15-15	"	40/18		
4:23	C	01 06W	-12 55	"	4.26	B8V	15-15-15	"	40/18		
4:24	A	01 32W	-7° 16'	"	4.6	B2V	15-15-	"	40/18		

105 2

145

Date Oct 24/25/70 Sat-Sun Observer B/n - Tu 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.
33841	17 Lep	6 ^h 00 ^m .5	-16°29'	G-12	IIa-D	9/5		04:42	04:58	B
33842	H10.28236	4 22.1	21 24	"	"	"	50°F	05:03	05:33	C

Dome Temp. _____
Focus _____
Dome Temp. _____

Hour Angle
End
00 50 W
03 03 W

pg 11

147 Date Oct 25/26/70 Sun/Mon Observer Blu-Tu 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
33843	66 Oph	17 ^h 55 ^m 3	+4° 22'	G-12	IIa-D	9/5		18:05	18:13	A	02 11W-
33844	28 Cyg	20 ^h 05 ^m 7	+36° 33'	"	"	"		18:18	18:26	F	00 14W-
33845	33 Aql	22 ^h 01 ^m 0	-14° 21'	"	"	"		18:32	19:30	C	00 36E
33846	67 Aql	20 ^h 09 ^m 7	+14° 54'	"	"	"		19:36	19:52	A	01 37W-
33847	HD 12695	20 ^h 11 ^m 0	+25° 17'	"	"	"		19:57	20:03	B	01 46W-
33848	54 Cyg	20 ^h 43 ^m 5	+36° 07'	"	"	"		20:08	20:16	C	01 58W-
33849	58 Cyg	20 ^h 53 ^m 5 22 05.2	+40° 47' +5° 42'	"	"	"		20:27	20:31	A	01 33W- 00 29W-
33850	HD 218154	23 ^h 00 ^m 6	+24° 07'	"	"	13/5		20:50	21:52	B	00 4W-
33851	HD 218537	23 ^h 03 ^m 7	+63° 06'	"	"	9/5	51°	22:08	22:38	C	01 23W-
33852	50 Cas	1 ^h 54 ^m 9	+71° 56'	"	"	"	"	22:46	22:52	A	01 10E
33853	4 Per	1 55.6	+59° 00'	"	"	"		22:57	23:07	B	00 5.8E
33854	33 Per	3 17.2	+49° 30'	"	IIa0 boked	"	50°	23:13	23:14	B	00 0E-
33855	HD 21447	3 22.4	+55° 06'	"	IIa0	"		23:21	23:31	C	02 26E+
33856	25 And	00 13 ^m 1	+36° 14'	"	"	"		23:37	23:43	A	01 24W+
33857	9 Tri	2 ^h 11 ^m 4	+33° 23 ^m	"	IIa0 boked	"		23:48	23:52	B	00 26E-
33858	22 Per	2 ^h 52 ^m 4	+39° 16'	"	"	"		23:57	00:03	C	00 56E-

Dome Temp. 50°F 8770

Transparency Conditions *Sea Hazed clouds*

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Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
18:13	A	02 11W	$+4^{\circ}24'$	2-3"	4.8	B2Ve	15-15-15	sp Bin	40/19		FINE
18:26		00 14W	$+36^{\circ}50'$	2"	4.72	B3Ve	15-15-15	"	40/18		FINE
19:30	C	0036E	$-13^{\circ}56'$	2-3"	4.18	B8 II	15-15-15	"	40/20	cloud (18:40-19:20)	(SL. CHUDING) FINE
19:52	A	01 37W	$+15^{\circ}11'$	2"	5.04	A2V	15-15-15	"	40/19		FINE
20:03	B	01 46W	$+25^{\circ}35'$	"	4.59	B3V	15-15-15	"	40/18		U.S.L. STR
20:11	C	01 28W	$+36^{\circ}27'$	"	4.42	B5V	15-15-15	"	40/18		U.S.L. STR
20:31	A	01 33W 01 22W	$+41^{\circ}08'$	1"-2"	3.96	A0V	15-15-15	"	40/17	coords listed are wrong! -SAS/90	U.S.L. STR
21:52	B	00 46 W	$+24^{\circ}34'$	V	7.01	A0	15-15-15	"	200/100		FINE
22:38	C	01 29W	$+63^{\circ}33'$	"	6.24	07	15-15-15	"	200/95		FINE
22:52	A	01 10E	$+72^{\circ}21'$	"	4.08	A1V	15-15-15	"	200/95		STRONG
23:07	B	00 51E	$+54^{\circ}22'$	"	4.9	B8V	15-15-15	"	40/18		FINE
23:14	B	02 10E	$+49^{\circ}41'$	"	2.27	F5Ib	20-20	rev std	40/20		U.S. STR
23:21	C	02 00E	$+55^{\circ}24'$	"	5.11	A1V	15-15-15	sp - Bin	40/19		FINE
23:43	A	01 24W	$+35^{\circ}40'$	"	4.58	A2V	15-15-15	"	40/18		FINE
23:52	B	00 26E	$+34^{\circ}44'$	"	4.10	A0V	15-15-15	"	40/17		FINE
00:03	C	00 56E	$+39^{\circ}35'$	2"	4.63	A2V	15-15-15	"	40/17?		FINE

Pg 22

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Date Oct 25/26/50 Observer R. H. T. 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	
33859	46 Per	3 ^h 52 ^m .5	+35° 30'	G-12	D ₁₉ O baked	9/5		00:09	00:11	A	4:35	
33860	2 Ori	4 ^h 45 ^m .2	+8° 44'	"	"	"		00:19	00:29	B	22:35	
33861	32 Per	3 ^h 14 ^m .7	+42° 58'	"	"	"		00:37	00:45	C	20:38	
33862	HD 21278	3 ^h 20 ^m .9	+48° 43'	"	"	"		00:57	01:05	A	00:35	
33863	HD 28226	4 ^h 22 ^m .1	+21° 24'	"	"	"	47°F	01:19	02:45	B	00:20W	
33863 F	Focus			"	H ₂ O	9	47°F			B		
33863 T1	calibration	step wedge for plates 33811-33821								26 Oct		20:22
T2	"	" 33822-33825; 33843-33849								27 Oct		
T3	"	" 33850-33853; 33855, 33856								"		
T4	"	" 33826-33832								"		
T5	"	" 33809, 33810, 33839-33842								28 Oct		
T6	"	" 33798-33808								"		
T7	"	" 33863-33867								"		

Dome Temp.

Focus

Dome Temp.

Hour Angle
End

Dome Temp.

Transparency Conditions

150

Focus

Dome Temp. 45° F 82%

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0111	A	0147E	+35°44'	2"	4.04	07	15-15-15	Sp-Bin	40/15		SL-STR
0229	B	0222E	+58°55'	1"	4.32	AOV	15-15-15	"	40/17	Clouds	FINE
0451	C	0036E	+43°16'	"	5.03	ASV	15-15-15	"	40/17		(1 END FOGGED) FINE
0115	A	0023E	+48°59'	"	4.88	ASV	15-15-15	"	40/17		FINE
0245	B	0020W	+21°34'	2.5"	5.99	Am	15-15-15	"	200/80	Cloud again cut short	
	B						7/7	no filter			
26 Oct		new p-2 / 9.0 min @ 68° F / 2 AOC E10									
27 Oct				"							
"				"							
"				"							
28 Oct				"							
"				"							
"				"							

Dome Temp. 44°F H=8270

Transparency Conditions *cloudy scattered*

Focus

Dome Temp. *42* *86*

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Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:14	A	$1^{\text{h}}58^{\text{m}}\text{W}$	$+60^{\circ}08'$	2.3"	2.8	A5	22-22	G1001	40/18		FINE
2:00	B	$1^{\text{h}}25\text{E}$	$-05^{\circ}22'$			HII	15-15-15	G1001			EM WEAK
2:48	C	$0^{\text{h}}38\text{E}$	$-05^{\circ}23'$	2.3"	2.4		15-15-15	"	40/19		FINE
3:30	B	$2^{\text{h}}52\text{W}$	$+36^{\circ}45'$	1.2"	2.8	FVAR	15-15-15	"	400/112	cut short (cloud)	SI. WK

74" MIRROR
 ALUMINIZED
 TELESCOPE OUT OF OPERATION
 For 1 NIGHT cloudy anyway

Oct. 28/70

Dome Temp. 50°F H=8790

Focus

Dome Temp.

Transparency Conditions scattered cloud 154

[Large, bright blue/red Fireball reported at 6:40 EST Nov 2]

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality	
1:09	A	0635 E	+50° 15'	2"	8.82	K5 IV	3-3-3	cluster Prog	800/200	setting 32 cloud	FINE	
1:59	A	0605 E	+42° 09'	1"	7.7	G2	3-3-3	std vel	400/75	some cloud	FINE	
								cloud!				
		MWP 2 / 9.0 min @ 61°F / 2400 ISO							4 2800/20			

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Date Wed Nov 4-5/70 Observer Hal - Bl-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.
33870	HD 209813	22 01.0	46 45	G12	Ilao	13/4	45°F	18 03	19:01	A
33871	HD 12 029	01 53.0	+28° 54'	"	"	13/3	"	19:11	20 53	B
33872	HD 14969	02 19.7	+29 26	"	"	"	41°F	21:10	22 25	C
33872F	Zoom test			"	"	13	41°F			B
33873	4 Per	01 55.6	+54° 00'	"	"	9/5		00:44	00:50	A
33874	9 Tri	0 2 11.4	+33° 23'	"	"	"		00:55	00:57	B
33875	22 Per	02 52.4	+39° 16'	"	"	"	43°F	01:01	01:41	C
33876	HR 1938	05 34.1	+31° 18'	"	"	"	41°F	03:47	04:13	B
33877	HD 62509	07 39.2	+28° 16'	"	"	"		04:18	04:34	C
33877T	calibration step wedge				Ilco	plate		33870-33877	5 hrs	

Dome Temp. 43°F H=70%

Transparency Conditions *clear, some cloud
much cloud*

156

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:01	A	00 25E	+47 09	2"	7.5	K0	15-15-15	NO SB.	400/250		FINE
20:57	B	2 26E	+29 16	"	8.96	K2II	7-8-8 8-8-8	S. S. V.	800/332		SL. WK
22:25	C	1 20E	+29 48	2.5"	8.96	K3III	7-7-7 8-16	"	800/214	some cloud - then solid *	WEAK
	B						7/7	no filter			GOOD
00:00	A	01 29W	+54 24	1.2"	4.89	B8V	15-15-15	Sp Bin	40/18		(GUIDING) SL-STR.
00:07	B	01 20W	+34 45	"	4.10	A0V	22-22	"	40/18		(GUIDING) FINE
00:41	C	01 24W	+39 37	"	4.63	A2V	15-15-15	"	40/200	cloud again	FINE
01:13	B	01 14W	+31° 25'	3"	6.01	B7V	15-15-15	"	200/100		FINE
01:34	C	00 30E	+26° 07'	"	2.15	K0III	22-22	RV Std.	200/150	cloud	SL. STR
5:00		mwp.2 / 12 min @ 68°F						@ A0-C I 10			
* Anson. Please give 33872 long development											

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Date Thurs-Fri Nov 5-6/70 Observer Tn-Gz 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
33878	HD 209813	22 01.0	+46 45	G12	Il00	13/3	40°F	20:38	22:10	A	02 49W
33879	88 Peg	00 08.1	+14 38	"	"	9/5	40°F	22:22	22:24	B	0 55W
33880	"	"	"	"	"	"	"	22:29	22:32	C	1 02W
33881	48 Agr	22 16.5	-1 53	"	"	"	"	22:47	22:51	A	3 13W
33882	HD 35189	05 17.9	+16 36	"	"	"	"	23:08	23:40	B	08 00E
33883	HD 29104	04 29.8	+19 41	"	"	9/0.5	40°F	23:46	00:40	C	01 11E
33884	HD 33541	05 05.9	+73° 09	"	"	"	"	00:54	01:08	A	01 25E
33885	HD 37171	05 31.5	+10 58	"	"	"	39°F	01:17	02:14	B	0:38E
33885	71 calibration slip wedge.				Il00	plate	33878 - 33885		6 200		2 11E

Dome Temp. 40°F H=60%

Transparency Conditions *scattered cloud* 158

Focus

Dome Temp. 37°F H=70% (at HRL 02 20E & Dec 73° Dec would not hold for white) Balance??
 $23^{\text{h}} \rightarrow$ excellent

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:10	A	02 49W	+47° 11'	2"	7.5	K0	15-15-15	ecl Bin	400/220	some cloud	FINE
2:24	B	0 55W	+15 04	"	2.6	B2V	15-30	Bp prog	40/17		STRONG
2:32	C	1.02W	"	"	"	"	22-22	"	40/18	fast guided	(GUIDING) STRONG
2:51	A	3.13W	-1° 30'	2.3"	3.78	B9III	22-22	"	40/18		FINE
3:20	B	03 00E	+16 46	2"	6.09	A2V	15-15-15	SPEC. BIN.	200/100		FINE
3:40	C	01:11E	+19 54	3"	6.56	F8	15-15-15	"	200/130		FINE
4:08	A	01:25E	+73 19	2"	5.76	A0	15-15-15	"	200/100		FINE
4:14	B	0:38E	+11 03	2.3"	5.98	K5III	15-15-15	"	200/145	cloud, cut short	FINE
4:20		nwp 2/9.0 min @ 68°F / 200 CI 10									

Dome Temp. 44°F $H = 85\%$

Transparency Conditions *Scattered cloud*

.160

Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:56	A	$0^{\text{h}} 30^{\text{m}} \text{W}$	$+28^{\circ} 59'$	2-3	1.98	B9p	22-22	G1 Ap + m	40/17		(GUIDING) STRONG
20:00	C	$1^{\text{h}} 45^{\text{m}} \text{E}$	$+9^{\circ} 18'$	2-3	5.59	B8	17-17-17	"	200/134	cloud	FINE
20:10	B	$1^{\text{h}} 45^{\text{m}} \text{W}$	$+15^{\circ} 07'$	2"	2.60	B2V	22-22	Bp Prog	40/15		FINE
20:30	A	 	 	 	4.18	B8V	22	"	40/17	cloud	
<p>10 Nov/1970 - in WFO-2/9.0 min @ 68° R / 270 - T10</p> <p style="text-align: center;">"</p>											

Date Sun Mon Nov 8-9 1970 Observer Bl. - Ri / CHR 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
33889	HD 191610	20 05 ^m 43	+36° 33'	G12	IIaO	9L	42°F	21:11	21:23	A	4 ^h 08 ^m W
33890	HD 213534	22 ^h 26.9	+29° 02'	"	"	"		21:34	22:18	B	02 41 W
33891	25 And	00 13.1	+36° 14'	"	"	"		22:21	22:36	C	01 40 W
33892	9 Tri	02 11.9	+33° 23'	"	"	"		22:29	22:32	A	00 50 E
33893	72 Cet	02 21.1	-12° 41'	"	"	"	42°F	22:34	22:53	B	00 40 E
33894	22 Per	02 52.4	+39° 16'	"	"	"		23:00	23:04	C	00 54 E
33895	32 Per	03 14.4	+42° 58'	"	"	"		23:09	23:14	A	0 11 E
33896	HD 21278	03 20.9	+48° 43'	"	"	"		23:18	23:23	B	01 10 E
33897	HD 37579	05 34.1	+31° 18'	"	"	"		23:30	23:52	C	02 52 E
33898	HD 20902	03 17.2	+49° 30'	"	"	"		00:01	00:03	A	00 26 E
33898F1	focus bad	out out/w w				9	40°F			B	
33898F2	focus bad			G40	det - 22, 24, 26, 28, 30		T=40°F				
33899	IR 2-1	2430.2	+55° 32'	G40	IIaO	13L	40°F	00:35	01:21	A	01 39 W
33900	IR 2-2	"	"	"	"	"	"	01:27	02:53	A	03 11 W
33901	HD 20365	34 11.5	+49° 51'	"	"	"	"	03:02	03:06	A	02 43 W
33902	NGC 2162-3	6 ^h 08.8	+13° 08'	"	"	13S	"	03:20	04:36	A1	02 11 W

Dome Temp. 38°F H 70%

Focus

Dome Temp. 38°F H 90%

Transparency Conditions

power back on about 20:30
increasing haze + cloud all night!

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:23 A 4 ^h 08 W	+36° 50'	2"	4.98	B3Vc	15-15-15	Spec - Bin	40/18		FINE
2:15 B 02 41 W	+29° 25'	1-2"	6.24	A5	15-15-15	"	200/100		FINE
2:26 C 01402W	+36° 40'	"	4.54	A2V	15-15-15	"	40/18		FINE
2:32 A 00450E	+33: 45	1"	4.10	A0V	15-15-15	"	40/18		FINE
2:53 B 00440E	-12° 19'	2"	4.45	B9V	15-15-15	"	40/18		FINE
3:04 C 00 58 E	+39° 35'	"	4.63	A2V	15-15-15	"	40/18		FINE
3:14 K 01411E	+43° 47'	1"	5.03	A3V	15-15-15	"	40/18		FINE
3:23 D 01410E	+49° 01'	"	4.84	B3V	15-15-15	"	40/18		V. SL. STR
3:26 G 02452E	+31° 23'	"	6.03	B37V	15-15-15	"	200/105		FINE
3:03 A 00 26 E	+49° 49'	"	2.27	F5I6	22-22	std Vel.	20/13		STRONG
B					7-7	no filter			U. SL. CENTRE TO WIDE F
F 9/2							200/125		
1:21 A 01 39 W	+55° 52'	1-2	9.12	G-K?	3-3-3	std/dust	80/175	setting ok	FINE
3:53 A 03411W	+55° 54'	2	8.8	A8V	3-3-3	"	800/125	" haze!	FINE
3:53 A 02443W	+50° 07'	"	5.1	B3	15-4	std vel	200/25		SL. STR
3:56 A 1424W	+13° 58'	"	9.4	G?	3-	G/H dust	800/110 5-6	clouds!	SL. WEAK

Dome Temp. 32°

H=7190

Transparency Conditions

166

Focus

Dome Temp. 28°

cloudy with moonlight.
clocks were 3 hrs. out

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:37	A	01 ^h 12 ^m W	+10° 57	3	9.91	G 711	3-3-3	GH-Clusters	800/130	set = 26	SL. WK
03:40	"	02 ^h 15 ^m W	+10° 56	2-3	9.15	A0J	3-3-3	" "	800/100		FINE
04:49	"	03 ^h 23 ^m W	+10° 59	3	9.45	B95LS-3		" "	800/ 100 ¹⁷⁰	set = 25 clouded out!	SL. WEAK
9.0 min in MWP-21 @ 6F ⁰ E (2 AOC I10)											
2151											

Dome Temp. 40°F H=91%

Transparency Conditions *Very hazy*

168

Focus

Excellent seeing

Dome Temp. 40 92%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0:48	A	02 00 E	$+29^{\circ} 48'$	1.1"	8.96	K3M	8-7- 30	SSV	800/150	too hazy & wet.	VERY TOO WEAK
	B		in in / out out.				7/7	no filter			OK
1:20		mir. 2 / 15 min @ 64°K / 290 c I 10									

169

Date Sun - Mon Nov 22-23 '70 Observer Blu 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 East
33907	HD 21447	3 ^h 22 ^m .4	+55° 06'	G-12	TTA-0	9/5		02:01	02:21	A	02 42 W
33908	1 Cam	424.1	+53° 42'	"	"	"	31°F	02:35	03:15	B	02 36 W
33908T1	calibration star wedge										
									23 Nov 70		7:19 W

Dome Temp. 62%

Transparency Conditions Scattered clouds

170

Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:21	A	02 42W	+55° 25'	2-3"	5.13	A1V	22-22	Sp Bin	40/20	sid. Time in N3M fast	FINE
3:15	B	02 36W	+53° 55'	3"+	5.40	B3III	15-15	"	40/20	Clouds + Bad seeing Time to quit	FINE
23 Nov 70		Humid. 2 / 9.0 min @ 65°F				2 100 c F 10					

171

Date Mon-Tues Nov 23-24/70 Observer B/n-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.	
33909	28 Cyg	20 ^h 05. ^m 7	+36°33'	6-12	IIIa-D	9/15	27°F	18:50	19:04	A	
33910	HD 206979	21 39.9	1 29 20	"	"	"		19:15		B	
33909 71	calibration step wedge for # 33909								24	Nov/70	

Dome Temp. 24
Focus
Dome Temp.
Hour Angle
End

Dome Temp. 24°F H=77%

Transparency Conditions Scattered cloud

172

Focus

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
04	A	02.148	W+36° 52'	3"	4.82	33Vc	15-15-15	Sp - Bin	40/20		SL. STR.
	B	02.148	+28 38	3"	4.82	33Vc	15-15-15	Sp - Bin	40/20	clouded out NG	
04		new 2 / 8.0 min @ 65°F				270c	I10				

173

Date Tues-Wed Nov 24-25 Observer Emj - 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
33910	HD 199439	20 55.2	44 01	G12	Ilad	131.3	28°F	18:08	19:00	C	02 00W
33911	Fld drawn	(α 1976 0344.1)	Ilad		Ilad	94.5	27°F	00:30	00:44	C	0 56W
33912	HD 22649	03 33.5	62 54	G12	Ilad	"	26°F	00:50	01:24	A	1 40W
33913	HD 48329	06 37.8	+25 14	"	"	"	"	01:32	01:38	C	1 07E
33914	HD 62509	07 39.2	28 16	"	"	"	"	01:48	02:02	B	1 45E
33914 F	Focus			"	"	9	"			B	
33915	HD 48329	06 37.8	+25 14	"	"	91.5		02:21	02:37	A	0 07E
	HD 44033	06 14.4	+14 42	"	"	"				B	
33915 T1	calibration	step wedge	for plates	33910 - 33915					25 hoo/70		uwp

Dome Temp. 2
Focus 50R
Dome Temp. 2

Dome Temp. 23°F H6976

Focus 50R

Dome Temp. 22°F H8078

Transparency Conditions Excellent
then cloud by 19^h

174

Timing Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:00	C	02 00W	+44 19	2"	9.0	K5p	15-15	Late Type	800/180	cloud at 18:45 cut short	SL. WK
10:44	C	0 56W	+63 16'	"	24.9	2F	15-15	unknown	200/150	wrong star - (prec. wrong)	SL. STR
1:24	A	1 40W	+63 08	"	5.0	K3Ip	15-15	Late Type	200/200		FINE
1:38	C	1 07E	+25 12	"	3.1	G8Ib	22-22	"	200/150	cloud	FINE
2:02	B	1 45E	+28 08	3"	1.2	K01II	22-22	"	40/33	cloud	(GUIDING) FINE
	B		in in / out out				7/7	no filter			CENTRE TO VIOLET
2:37	A	0 07E	+25 11	2"	3.1	G8Ib	22-22	Late Type	200/140	thru cloud	FINE
	B				5.0	K3Ib		"	200/200	<u>Closed. 03^h</u>	
25 hrs 70		n w n	2 / 9.0 min @		68	0E	1270	I10		- G1 - 12 focus changed from 50-R to 75-R	

Pg #1

175

Date Mon-Tues Nov 30/Dec 1 Observer Bln-Ta 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
33916	26 Peg	22 05.2	+5°42'	G-12	IIa-D	9/5		19:24	18:26	A	0032W-
33917	26 Peg	"	"	"	"	"		19:31	19:33	B	0041W
33918	93 Aqr	23 12.7	-9°44'	"	"	"	42°F	18:44	18:50	C	0005E-
33919	33 Aqr	22 01.0	-14°21'	"	"	"	"	18:57	19:07	A	0122W-
33920	25 And	00 13.1	+36°14'	"	"	"		19:12	19:16	B	0040E-
33921	50 Cass	01 54.9	+71°56'	"	"	"		19:33	19:36	C	0205E-
33922	4 Per	01 55.6	+54°00'	"	"	"		19:43	20:03	A	0136E-45
33923	9 Tri	2 ^h 11 ^m .4	+33°23'	"	"	"	42°F	20:18	20:32	B	0125E+
33924	22 Per	2 ^h 52 ^m .4	+39°16'	"	"	"		20:36	20:42	A	0154E+
33925	24 Ari	2 ^h 19 ^m .3	+10°09'	"	"	"	41°F	20:49	21:05	C	0057E+
33926	HD21447	3 ^h 22 ^m .4	+55°06'	"	"	"	"	21:12	21:23	B	0145E+
33927	32 Per	3 14.7	+42°58'	"	"	"		21:30	21:38	A	0121E-
33928	5 Tri	2 ^h 05.6	+31°03'	"	"	"		21:44	22:28	B	0039W-
33929	46 Per	3 ^h 52.5	+35°30"	"	"	"		22:34	22:36	C	0100E-
33930	45 Per	3 ^h 51 ^m .1	+39 43	"	"	"		22:40	22:44	A	0051E-
33931	2 Tau	3 21.8	19 23	"	"	"		22:48	23:10	B	0004W-

Dome Temp. 33

Focus 75

Dome Temp. ?

Dome Temp. 38°F 68%

Focus 75-R (612)

Dome Temp. 36 75

Transparency Conditions clear by 18:30

more cloud 19:20

176

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:26	A	00 38 W	+6° 06'	1"-2"	3.61	A2V	15-15-15	Sp Bin	40/19	Broken in 2 = pieces	SL STR
9:33	B	00 44 W	"	"	"	"	15-15-15	"	40/18		SL STR
9:50	C	00 05 E	-9° 19'	2"	4.24	B5V	15-15-15	"	40/19		V.SL STR
9:57	A	01 22 W	-13° 58'	2"-3"	4.18	B8V	15-15-15	"	200/100		SL STR
9:16	B	00 40 E	+36° 39'	2"	4.58	A2V	15-15-15	"	40/19		SL STR
9:36	C	02 05 E	+72° 18'	"	4.08	A1V	22-22	"	40/19		V.SL STR
10:03	A	01 36 E	+55° 39'	1"-2"	4.89	B8V	30-15	"	200/100	cloud	SL STR
10:32	B	01 25 E	+33° 45'	"	4.10	A0V	15-15-15	"	200/100	"	SL STR
10:42	A	01 54 E	+39° 34'	"	4.63	A2V	15-15-15	"	200/100	"	SL STR
11:05	C	00 57 E	+10° 29'	"	5.38	B6	15-15-15	"	200/100		STRONG
11:23	B	01 45 E	+55° 26'	"	5.13	A1V	15-15-15	"	200/101		SL STR
11:38	A	01 21 E	+43° 13'	3"	5.03	A3V	15-15-15	"	200/100		SL STR
12:28	B	00 39 W	+31° 24'	"	6.25	Am	15-15-15	"	200/120		SL STR
12:36	C	01 00 E	+35° 44'	"	4.04	O7	22-22	"	40/16		SL STR
12:44	A	00 51 E	+39° 57'	"	2.71	B0.5V	22-22	"	40/19		SL STR
13:10	B	00 04 W	+9° 40'	"	3.66	B9p	15-15-15	"	200/100	cloud	SL STR

Pg #2

177

Date.....Observer.....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.	
33932	HD 29139	04 30.2	+16 18'	G12	Il00	9/5		23:29	23:33	C	
33932 F	Focus			11	11	9	41°F			B	
33932 T1	calibration to envelope for plates 33916 - 33926									Dec/70	
T2					33927 - 33932						

Dome Temp. —

Focus —

Dome Temp. —

Hour Angle
End

00 40 E —

Nov 21 / 70

179

Date Wed Dec 2-3 / 70 Observer NL
Rj
DP 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
33933	HD 12029 ^v	1 53.0	+28° 54	G12	IIaO	13/3		17:32	19:14	A	24:14
33934	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3	46°F	19:34	20:04	B	34:15
33935	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3	"	20:12	20:36	C	34:35
33936	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3	"	20:43	21:21	A	14:59
33937	HD 23675	03 41.9	+52 21	G12	IIaO	13/3	44°F	21:26	21:50	B	14:28
33938	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3		21:56	22:26	C	04:53
33939	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3	44°F	22:30	22:50	A	04:09
33940	HD 23675	03 41.9	+52° 21	G12	IIaO	13/3		23:00	00:08	B	04:50
33940F1	focus test	out/out/w/w		G12	IIaO	9	44°F			B	
33940 11	calibration strip wedge	for	later	33933-33940					3 Dec 1970		24:02

Dome Temp. 42°F 55%

Transparency Conditions

180

Focus 75-R

Dome Temp. 37°F 64%

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:14	A	24 14 E	29 15	2-3	8.96	K2 III	8-8-8 8-8-8	See Starvel	800/300		SL. WK
20:04	B	34 15 E	52° 34'	3	6.52	B0	17-17-17	DP ⁺ G1001	400/120		FINE
20:36	C	24 43 E	52° 34'	.	6.52	B0	15-15-15	DP ⁺ G1001	400/120		FINE
21:21	A	14 59 E	52° 34'	3	6.52	B0	15-15-15	"	400/120		FINE
21:50	B	14 28 E	52° 34'	3	6.52	B0	15-15-15	"	400/120		(SL. GUIDING) FINE
22:26	C	04 53 E	52° 34'		6.52	B0	15-15-15	"	400/120		FINE
22:50	A	04 29 E	52° 34'		6.52	B0	15-15-15	"	400/120		FINE
00:08	B	04 50 W	52° 34'		6.52	B0	15-15-15	"	400/120	clouds	*
	B						7-7	no filter			GOOD
										cloud up at 02:00	
30 sec	F	MCP. 2 / 9.0 min @ 6.0 f / 2700 I/O									
										* BADLY FOGGED WHILE STILL IN PLATE HOLDER	

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Date FRI-SAT DEC 4/5 1970 Observer Gl-Ri/Blu-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
33941	HD 208513	21^h 51.6	+44° 29'	G12	Il-ao	9L	30°F	17:30	18:00	A	
33941	HD 209484	21 ^h 58. ^m	+42° 04'	G12	Il-ao	13L		18:10	19:36	B	24 ^m 10W
33942	HD 218428	23 ^h 02. ^m	+29° 31'	"	"	"	28°F	19:43	21:19	C	24 ^m 50W
33943	HD 20536	03 ^h 13. ^m	+61° 38'	"	"	"	27°F	21:27	22:15	A	01° 37'E
33943F1	focus test	out out/line		"	"	9	26°F			B	
33944	9 Tri	2 ^h 11.4	+33° 23'	"	"	9/5		20:27	23:27	C	47W
33945	22 Per	02 52.4	+39 16	"	"	"		23:32	23:43 P	A	01 22W
33946	HD 28226	04 22.1	+21 24	"	"	"		23:48	00:28	B	00 30W
33947	HD 27691	04 17.1	+14° 51'	"	"	13/5	25°F	00:33	01:10	C	01 22W
33948	70 Ori	06 06.3	+14° 14'	"	"	9/5		02:30	03:02	A	01 30W

Dome Temp. -

Focus

Dome Temp.

Dome Temp. 61% 29°

Transparency Conditions clear

182

Focus

*had seeing
clouds at 00:00
cleared up at 23:30*

clouds at 01:03

Dome Temp. 70% 20°F

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:36	B	24 10W	+30° 05'	5"	7.8	B9	17-	Gr. Aperture	400/250³⁰		
19:36	B	24 10W	+30° 05'	4	6.99	B9	17-17-17	Gr. Aperture	400/250		FINE
21:19	C	24 50W	+29° 55'	4	7.23	B9	17-17-17	"	400/250		FINE
22:15	A	04 27E	+61° 55'		6.60	B8	17-17-17	"	200/125	clouds	FINE
	B						7-7 no filter				VERY SLIGHT CENTRE TO VIOLET
23:27	C	14 47W	33° 43'	4	4.10	A0V	15-15-15	Sp-Bin	200/100	clouds	FINE
23:30	A	21 23W	+39° 35'	3	4.63	A2V	15-15-15	"	40/20	cleared up	FINE
00:28	B	00 39W	+21° 35'	3	5.99	Am	15-15-15	"	200/110		FINE
01:00	C	01 26W	+15° 02'	3	^{v=} 7.09	G0	K-30	"	400/76	Terminated by cloud cloud at 01:03	WEAK
01:02	A	01 30W	+14° 15'	3	4.18	B3V	15-30	"	200/40	Cut short by clouds	FINE

183

Date Sun Mon Tue 6-7 1970 Observer GH-Ri/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
33948 F	Sat = 16-26 (F1-F6)			640	IIa-D		24°F				
33949	T12-3	2h 29.2	+55° 42'	"	"	13L	24°F	17:55	18:55	A	2h 55E
33950	T12-4	"	"	"	"	"	23°F	19:04	20:04	"	1h 46E
33951	T12-1	"	"	"	"	"	22°F	20:09	21:29	"	1h 21E
33952	T12-5	"	"	"	"	"	20°F	21:33	22:49	"	0h 57W
33953	HD 20365	3h 11.5	+49° 56'	"	"	"	20°F	23:22	23:26	"	0h 54W
33954 ✓	HD 23169	3h 37.4	+25° 25'	G12	"	13/3		23:36	01:36	A	2h 45W
33955	HD 23862	03 43.2	+23 56	G12	"	9/5	18°F	02:12	02:24	B	3h 23W
33956	HD 23856	03 43.2	+23 45	G12	"	"		02:40	02:54	C	3h 53W
33957	HD 66141	07 57.1	+02 36	G12	"	9/5	17°F	03:04	03:34	A	0h 25W
33958	HD 65934 ✓	07 56.1	+26 55	G12	IIa0	13/3		03:45	05:28	B	2h 14W
33959	HD 90861 ✓	10 24.3	+29° 05'	G12	IIa0	13/3	16°F	05:33	06:45	C	1h 03W
33959 F1	focus test	out and in		G12	IIa0	9	15°F			B	
33959 T1	calibration strip wedge	for plates						33941-33943, 33954-33959			2h 00W 2/
T2								33944-33953			

Dome Temp. 15°F 65%

Focus

Dome Temp. 13°F 65%

Transparency Conditions *clear with scattered clouds* : 186
clouds out 22:10

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
8:29	A	3 ^h 20 E	+55° 52	3	8.7	B8	3-3-3	GH clusts	800/98	sed = 22	(GUIDING) * FINE
9:45	A	2 ^h 02 E	+55° 52	"	9.2	K?	3-3-3	"	800/100		* FINE
10:46		1 ^h 02 E	+55° 54	"	8.8	A8	3-3-3	"	800/100		* FINE
11:45		0 ^h 02 E	+55° 55	2	8.8	B9 III	3-3-3	"	800/100	sed = 21	(GUIDING) FINE
12:23	A	0 ^h 57 W	+56° 58	2	6.2	B1	3-3-3	std vel	400/50	clouds	* FINE
<p>MWP 2 / 9.0 min @ 65° = 1270c I10 / 8 D 1970</p>											
<p>* COMPARISON PRETTY STRONG</p>											

187

Where is my student? Eh?

Date ^{Sun / Mon} Dec 20-21 / 70 Observer Th ✓ 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
33965	27 Tau	03 43.2	+23 45	G12	Il 90	9/5	29°F	23:10	23:14	A	01 06 W
33966	28 Tau	03 43.2	+23 50	"	"	"	"	23:19	23:31	B	01 23 W
33967	20 Aur	05 14.7	+41 42	"	"	"	"	23:45	00:01	C	0 21 W
33968	112 Tau	05 20.0	+28 31	"	"	"	27°F	00:08	00:10	A	0 25 W
33969	HD 32963	05 01.8	+26 12	"	"	13/3	25°F	00:23	01:41	B	2 13 W
33969 F1	Focus Test			"	"	13	"			B	
33969 T1	calibration step wedge				Il 90						2, Dec 170

1767

Dome Temp. $25^{\circ}F$ H=70%

Transparency Conditions *semi-clear* 188

Focus

*very good after 0h
cloud by 01h*

Dome Temp.

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
3:14	A	01 06 W	+24 04	2"-3"	3.54	B8 III	22-22	Bp prog ^{19*}	40/17		
3:31	B	01 23 W	+24 09	2"-5"	5.01	B8p	17-17-17	"	40/19		
0:01	C	0 21 W	+41 51	2"-3"	4.91	B5 V	17-17-17	"	200/90		
0:10	A	0 25 W	+28 39	2"	1.52	B7 III	22-22	"	40/16		
1:41	B	2 13 W	+26 23	2"-3"	8.36	G2 V	⁸⁻⁸⁻⁸ 8-8-8	S S V	800/250	<i>finder fld down (cloud)</i>	<i>fine</i>
	B		<i>in in/out out</i>				7/7	<i>no filter</i>			
										<i>closed 03h</i>	
2:24		<i>WUP. 2 / 9.0 min @ 68°F / 20°C T10</i>									

189

Mon-Tues

Hns

Date Dec 21/22 /70

Observer McU-Tn / Bln-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 End
33970	105 Aqr	23 37.5	-15 06	G12	UaO	9/5		17:44	17:56	A	0 02E
33971	87 Psc	01 08.8	+15 36	"	"	"	20°F	18:03	18:37	B	0 53E
	TR Photometry		19 ^h →	21 ^h 45 ^m							
33972	HD 32963	05 01.8	+26 12	G-2	UaO	13/3		22 04	00:04	A	0 41W
33973	45 Per	03 51.1	+39° 43'	"	"	9/5	12°F	00:12	00:16	B	2 04W
33974	46 Per	03 52.5	+35° 30'	"	"	"	"	00:21	00:31	C	2 18W
33975	71 Tau	04 24.7	+15° 23'	"	"	"		00:37	00:50	A	2 05W
33976	HD 29226	04 26.3	+21° 29'	"	"	"		00:55	01:27	B	2 41W
33971 F1	Focus			"	"	9	20°F			B	

Dome Temp. /

Focus

Dome Temp.

Dome Temp. 17°F H=5970

Transparency Conditions good Cloud by 23:30

Focus

922-4316

190

Dome Temp.

Timing Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:56	A	0 02E	-14°38'	3"-4"	4.44	B9SV	17-17-17	pp prog	40/18	line broken off	gone
3:37	B	0 53E	+16 03	"	5.91	B8p	17-17-17	mag star prog	400/200		FINE
								sync amp. sented bal; viewing mirror string led.			
4:04	A	0 41W	+26 22	3"-4"	8.36	O2I	8-8-8 8-8-8	SSV	500/285	cloud	FINE
4:16	B	2 04W	+39 59	"	2.71	B0.5I	17-17-17	Sy - Bin	40/18		STRONG
4:31	C	2 18W	+35 46	"	4.04	07	17-17-17	"	200/85		STRONG
4:50	A	2 05W	+15 37	3"	4.73	F0I	17-17-17	"	40/25		
5:27	B	2 41W	+21 37	"	5.99	Ain	17-34	"	200/18		VERY WEAK
	B									339 71/F1 -	SC. CENTRAL TO 10641
<p>- PLATE # 33971 WAS IN 1 EXP. BOX IN THE REAR RATOR</p> <p>- A SECOND EXPOSED BOX WAS IN THE 'FRIG', EMPTY</p> <p>- THE BALANCE OF THE EXPOSED PLATES WERE MIXED IN WITH THE UNEXPOSED PLATES (IN THE DOME)</p> <p>- (# 33971 & # 33976), AND (# 33975 & 33971A) ARE DOUBLE EXPOSURES</p> <p>- NO TRACE OF # 33970</p>											

191

Date Mon Tues 28-29 Observer GT 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
33977	HD51418	6 ^h 52. ^m 2	+42° 26'	G12	ITaO	9L	19°F	01:02	02:24	A	01 ^h 40 ^m
33978	HD56222	07 ^h 11. ^m	+31° 53'	"	"	13L	17°F	02:33	03:25	B	02 ^h 23 ^m
33979	HD82010	09 ^h 24. ^m 2	+31° 45'	"	"	9L	17°F	03:35	06:04	C	03 ^h 04 ^m
33980	HD135679	15 ^h 11. ^m 3	+26° 01'	"	"	13L	14°F	06:13	07:02	A	06 ^h 02 ^m
33980F1	focus test	and and / new		G12	ITaO	9	130°F			B	
33980 T1	calibration step envelope				ITaO	for plates		33977-33980			29 ^h 46 ^m / 30

Dome Temp. Focus 25Dome Temp.

Dome Temp. 15°F 75%
 Focus 75-R
 Dome Temp. 10°F 75%

Transparency Conditions good after 0110
 I wish someone would ^{check} the clocks in
 the dome

192

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:24	A	01 ^h 40 ^m W	+42° 23'	3"	6.61	A0	17-17-17	G1A _{p+m}	200/125		SL. STR
03:25	B	02 ^h 23 ^m W	+31° 49'	3"	6.63	B8	17-17-17	"	200/125		SL. ASTRONG
04:04	C	02 ^h 49 ^m W	+31° 30'	3"	7.55	B8	17-17-17	"	400/290		FINE
07:02	A	02 ^h 00 ^m E	+25° 48'		6.67	A0	17-17-17	"	200/125		STRONG
	B						7-7 m filter				CENTRE TO VIOLET
		29 Dec / 70					MWP-2 / 9.0 min @ 65°F				290C I/O
										changed focus from	
										75-R to 95-R (Dec 29)	

193

Date Tues. Wed. Dec. 29-30 Observer JH-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.
33981-	HD 22649	3 33.5	+62° 54'	G12	Ilao	9L	17°F	18:07	19:13	A
33982	HD 44033	6 14.4	+14 42	G12	Ilao	9L		19:35	21:23	B
33982F1	focus test	out of focus		G12	Ilao	9	15°F	0		B
					photometry					
33983	HD 77247	8 56.3	+53 30	G12	Ilao	13/5	12°F	01:19	02:45	C
33984	HD 106 110	12 11.1	41.13	G12	Ilao	9/5	10°F	03:00	04:31	A
33985	HD 111 113	11 32.5	51 10	"	"	9/5	9°F	04:42	06:20	B
33986	HD 101 501	11 35.8	24 46		"		7°F	06:25	07:00	C

Dome Temp.
Focus 95
Dome Temp.

Hour Angle
Ecl

0° 12 E

2° 40 E

0°

1° 20 E

1° W

4° 30 W

Dome Temp. 140°F 75%

Focus 9.5-R

Dome Temp. 50°F 72%

Transparency Conditions

clouds at 20:30
clear up at 21:10

194

Ending Time Z.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:13	A	24 22 E	+63° 11'	2	5.0	K316	15-15-15	Waterloo	200/200		(MISSING) FINE
10:23	B	24 40 E	+140 45	2-3	5.0	K316	15-15-15		200/200		FINE CENTRE TOILET
	B						7-7	in filter			
10:45	C	0 ^h	53 15	2	8.1	K00	15-15-15	Waterloo	800/1700		FINE
	A	1:26 E	+40 52	2	7.4	M010	15-15-15	4	400/450		FINE
10:20	B	1 ^h W	+50 48'	B	6.6	K16	15-15-15	11	200/200		FINE
07:00		1 ^h 37W	+34° 25'	"	5.3	G84	15-15-15	11	150/200		SL STRONG

Dome Temp. 13°F H=74%

Focus 95-R

Dome Temp. 8°F H=73%

Transparency Conditions Excellent

196

RA Clomptable - blows fuses

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19 29	A	01 37 E	+29 48	1.2"	8.96	K3III	6-6 8-8-8-8	SEC. STD. VEL.	800/250		FINE
0 34	S	01 00 E	+25 42	"	9.39	G2V	8-6-8 8-6-7	"	800/250		FINE
01:16	AB	2 04 W	-01 34	1.2"	8.2	B81D	14-14-14	Bp prog - RG	800/300	fld drawn (Correct star. Field checked by BU)	FINE
03 02	C	1 48 W	+23 51	"	9.29	G0IV	7-7-7 7-7-7	Sec STD vel	800/250		FINE
03 56	A	1 46 W	+09 59	2"	6.58	A0	14-14-14	Sp Bin	200/80	fld drawn	(CORRECTION) FINE
04 40	B	1 30 W	+27 33	"	6.59	A0	14-14-14	"	200/80		FINE
0 19	C	0 53 W	+27 33	1.2"	8.26	G8IV	7-7-7 7-7-7	S S V	800/250	cloud	FINE
06 37	A	00 02 W	+38 30	2"	2.9	A0p	14-21	mag star	40/15		SL-STAR FINE
06 52	B	01 03 E	+46 15	"	4.26	A0	21-21	"	40/18		FINE
	A	0 50 E	---	"	1.29	K2III	21-21	std vel	40/20		CALCULATED FINE
	B	in in / out out					6/6	no filter			SL CENTRE 40 W/200
31 Dec 1970		mwp. 2/ 9.0 min @ 68°F		290C I10							
RA Clompt Fixed - HV											

1970

1971

Date New Years Day / Jan 2 Observer Dt - T_n - 62 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
33997	HD 14969	02 19.7	+29 26	G12	Ilad	13/0.3	20°F	18:10	18:44	A	0114 E
33998	HD 23169	03 37.9	+25 25	"	"	"	"	18:51	20:08	B	0108 E
33999	HD 18473N	02 53.1	+59 17	"	"	13/0.5	"	20:18	20:48	C	0050 W
34000	HD 23324	03 39.2	+24 32	"	"	9/0.5	"	20:54	21:04	A	0116 E
34001	HD 23383	03 39.7	+55 37	"	"	9/0.5	"	21:10	21:30	B	0112 W
34002	HD 23838	03 43.1	+44 40	"	"	9/0.5	"	21:35	21:55	C	0034 W
34003	HD 27742	04 17.7	+20 45	"	"	9/0.5	"	22:00	22:18	A	023 W
34004	HD 29365	04 32.4	+20 29	"	"	9/0.5	"	23:20	23:54	A	0151 W
34005	HD 51418	06 52.2	+42 26	"	"	9/0.5	15°F	00:04	00:21	C	008 E
34005 F	Focus			"	"	9	18°F			B	
34005 r1	calibration step wedge				for plates	33997 - 34005					4 Jan

Dome Temp. 18°F H = 6550

Transparency Conditions Excellent

198

Focus

(AMAZING SEEING)

Dome Temp.

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01 14 E	+29 49	~1"	8.96	K3 III	7-7-7	SEC. STD. VEL	800/270		FINE
01 08 E	+25 42	"	9.39	G2 V	7-7-7	"	800/250		FINE
00 15 W	+59 35	"	7.35	A0	14-14-14	Sp Bin	400/200		(GUIDING) SL. STRONG
0 11 E	+24 48	"	5.64	B8 E	14-14-14	SPEC. BIN.	200/100		STRONG
00 11 W	+55 58	"	6.00	B9	14-14-14	"	200/100	CLOUDS	STRONG
00 34 W	+44 56	1-2"	5.79	O65	14-14-14	"	200/100		FINE
0 23 W	+20 58	"	5.9	B9 I	14-14-14	"	200/100		STRONG
01 45 W	+20 42	2"	5.70	B8 E	14-14-14	"	200/100	CLOUDS	(GUIDING) SL. STRONG
0 08 E	+42 24	2'-3'	6.61	A0 p	14-30	Mag star	400/54	cloud (cut short)	WEAK
		in in / out out			6/6	no filter		closed 0.30	6000
nwp-2 / 9.0 min @ 68°F / 27°C E10									

199

Waterloo Night

Date Jan 5-6 Tues-Wed 1971 Observer JH-Enj-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 End
34006	HD 20023	03-08.0	+46-45'	G12	Ilao	13/3		17:47	19:19	A	1 12E
34008	BD: +47781	3 ^h 06 ^m .4	47° 43'	G12	Ilao	13/3	25°F	19:49	21:49	C	1 20W
34007	Moon - near Pluto			"	"	9/5	"	21:59	22:00	A	2 24W
34009	HD 31487	04.51.3	+51 47	"	"	13/3		22:17	00:35	B	2 21W
34010	HD 44537	06 17.2	+49 20	"	"	9/5	22°F	00:46	01:22	C	1 43W
34011	HD 44033	06 14.4	+14 42	"	"	"		01:31	01:47	A	
34011	HD 62509									C	
34010 F	Focus			G12	Ilao	9				C	
34011	HD 76294	08 50.1	+6° 20'	"	"	9/5	21°F	04 16	04 24	A	2 14W
34012	HD 62509	07 39.2	28 16	"	"	9/5	"	04 34	04 38	C	3 40W
34012 T1	calibration										
			for plates 34006 - 34012						6 Jan		2 01-2

201

Date Jan 6-7 Wed Thurs 1971 Observer Had-Ton My 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
34013	HD 14969	2 19.7	29 26	G12	Ilao	13:13	20°F	17 43	19:03 (1.20)	A	0 35 E 2
34014	HD 23169	03 37.9	+25 25	"	"	"		19 08	~ 20 30	B	20 35 E 42
34015	HD 82191	09 25.4	+27 50	G12	Ilao	9/0.5	17°F	03 25	4 11	B	01 30 W 1
34016	HD 91948	10 31.9	+60 38	"	"	13/0.5	"	04 18	05 06	A	01 18 W 1
34017	HD 81995	09 24.1	+45 12	"	"	13/0.5	15°F	05 15	06 11	C	02 30 W 1
34018	HD 120974	13 47.1	+59 02	"	"	9/0.5	"	06 19	06 55	B	20 06 E 1

Dome Temp. 18

Focus _____

Dome Temp. 16

How Angle
End

Dome Temp. 18°F 70%

Transparency Conditions Excellent

202

Focus

Dome Temp. 10°F? 76%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19 03	A	0 35E	29 48	1-3"	8.96	K ₂ III	8-7-7 8-7-7	SSU	800/300	at 3 ^h 12 ^m +83° 15' greenish	
20 30	B	20 30E	+25 43	2"	9.39	G2 V	7 ^T -8 24	"	800/100	moon only a few degrees away. By exp meter @ +* = 5x During Ci cloudy periods @ ÷ * capped from Et 100 Snow - cloud 20 25	
								(Anson - could you overdevelop this piece?)			
4 11	B	01 30W	+27 36	4-5"	6.59	A0	14-14-14	SPEC. BIN.	200/80	SEEING POOR, WINDY	
5 06	A	01 18W	+60 20	2 ¹ / ₁₁ 3"	7.37	F8	14-14-15	"	800/400	" "	
6 11	C	03 30W	+44 57	4"	7.12	A5	14-14-14	"	800/320	" "	
6 55	B	20 06E	+58 42	3-4"	6.36	A0	14-14-14	"	400/160	" "	

203

Date Jan 7-8 Thurs Fri 1971 Observer TM 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.
34019	HD 3881	00 36.3	+59 23	617	E-0	1365		17.47		A

Dome Temp. 15

Focus

Dome Temp. 1

Hour Angle
End

Dome Temp. 15°F 70%

Focus

Dome Temp. 10°F 66%

Transparency Conditions Excellent (for about 10 min)
then cloud 204

Ending Time
E.S.T.

P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

Program

Exp. Mtr.

REMARKS

Quality

~~1.2" 7.35 A6 15- Sp Bin 400/160~~

cloud (scrapped)

closed 03^h

after much procrastination

205

Date Jan 9-10 Sat Sun Observer Th-Rm 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
34019	5 Gem = HD 52973	06 ^h 58.2	+20° 43.0	G12	IIaD	9/5	20°F	19:23	19:55	B	4 10E
34020	AW Per = HD 30282	04 ^h 41.1	+36° 32.6	G12	IIaD	13/3	20°F	20:07	21:27	C	0 20E
34021	r Mon = HD 44990	06^h 19.8	+07° 08.4	G12	IIaD	9/5				A	
34021	45 Per = HD 24760	3 ^h 51.1	+39° 43	G12	IIaD	9/5	18°F	21:49	22:11	A	15W
34021 T 1									12 Jan/71		WSP 2/

Dome Temp. 17

Focus

Dome Temp. 16

Dome Temp. 17°F 8670

Transparency Conditions *scattered cloud*

206

Focus

Full moon

Dome Temp. 15°F 9070

Observing Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:55	B	4 10E	$+20^{\circ}40''$	2-4'	4.44 6.20	F7b- G3SD	15-15-15	<i>even bases</i> Cepheid	200/130		FINE
1:27	C	0 20E	$+36^{\circ}42''$	1-3"	1.9 7.8	F6- G1	15-15-15	<i>even bases</i> Cepheid	800/166	perhaps some object cut short	VERY WEAK
	A				6.40- 7.96	F7.5ab- K15		Cepheid			
2:11	A	1 15 W	$+39^{\circ}59''$	2"	2.71	B0.5I	15-15-15	Bolton	200/80	cloud	FINE
		NWP 2 / 9-2 min @ 68°K / 2 20 c I 10									

209

Hns-R²-IR PhotDate Jan 12-13 Tues-Wed 1971 Observer In. / In. - Dinroths 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	
	IR Photometry - 1st half											
	Scrapped again - too much clouds @ spect							00:21				
34022	HD 93702	10 44.0	+11 04	612	TI40	9/5	8°F	01:42	02:36	B	01 00E +11	
34023	HD 58715	07 21.7	+8° 29	"	"	"	7°F	02:50	02:56	A	2 40W +0	
34024	HD 110411	12 36.8	+10 47	"	"	"	"	03:11	03:37	C	1 52E +0	
34025	HD 102870	11 45 ^m 5	+2° 20	"	"	"	"	03:50	04:14	A	0 24E +0	
34025F1	Focus			"	"	9	7°F		04:20	B		

Dome Temp. 16°

Focus

Dome Temp. 6°

dus " 11:00

Dome Temp. 10°F H=6670

Transparency Conditions some cloud

210

Focus

Dome Temp. 6°F H=6470

Time	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
			+25° 06'	2"-3"			7-7	SSV	800/	cloud (some of spec moon 4" away)	
2:36	B	01 00E	+10 44	2"-3"	5.29	A2V	15-15-15	sp Bin	400/150	cloud	SL. WIK FINE
2:56	A	2 40W	+8 25	"	2.74	B7V	15-15-15	"	200/80	(Diagnose with E)	FINE
3:37	C	1 52E	+10 27	"	4.97	A1V	15-15-15	"	200/80	cloud	FINE
4:14	A	0 24E	+11 59	4"	4.16	F8V	15-15-15	std vel	200/85	el. sun (cut short)	FINE
4:00	B			min / out out			7/7	no filter			GOOD
<p>des 11 Jan 171 MWR-2/9.0 min @ 62°F (290C F10)</p>											

Dome Temp. 18°F 70%

Transparency Conditions

Focus

few snow flurries at begin of night

Dome Temp. 02°F? 69%

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:19	A	04 ⁵⁰ E	+09° 20'	3	5.59	B8	17-17-17	G1 Apt m	200/100		FINE
20:2	B	04 ²³ W	+22° 24'	3	6.11	B8	17-17-17	G1 Apt m	200/50	clouds	(GUIDING) SL. STR CENTRE TO VIOLET
							7-7	no filler			
20:4	C	04 ¹⁰ W	+42° 24'	3	6.61	A0	17-17-17	G1 Apt m	400/200		FINE
00:28	A	02 ^h 17 ^m W	+49° 53'	3	5.47	NOp	15-15-15	MAGNETIC STAR	200/100		STRONG
00:30	B	02 ^h 12 ^m W	+42° 24'	3	6.61	A0	15-17-17	MAGNETIC STAR	400/200		FINE
02:12	C	00 ^h 48 ^m E	+65° 45'	3	4.95	A0p	17-17-17	Magnetic Star	200/100		SL. STR
03:03		00 ^h 00 ^m	+09° 57'	3	6.03	A0p	17-17-17	magnetic star	200/100		U.S.L. STR
05:05		00 ^h 39 ^m W	+27° 33'	3	8.26	G8W	7-7-7	S.S.V.	800/300		FINE
05:19	C	00 ^h 13 ^m E	+38° 29'		2.9	A0p	17-34	magnetic star	20/10		STRONG
05:38	A	02 ^h 39 ^m E	+14° 58'	4-5	6.2	A4p	17-17-17	magnetic star	400/200	seeing degenerated badly	SL. STR BROKEN (DURING PROCESSING)

213

Date Sat. Sun. Jan. 16-17, 1971 Observer Rm R. / G.I.-R. Julian Day 2479.2

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
34036	HD 30282	04 41 ^m 05 ^s	+36° 30.6'	G12	IIaO	13/3	80°F	18:03	19:26	A	1 ^h 53 ^m E
34037	HD 31913	04 ^h 54 ^m 28 ^s	+39° 48.7'	G12	IIaO	13/3	80°F	19:37	20:58	B	0 ^h 25 ^m E
34038	CO 11042	05 58.5	+35° 20'	G12	IIaO	13/3	80°F	21:07	22:30	C	0 ^h 02 ^m E
34039	W Gem	06 ^h 33 ^m 17 ^s	+15° 21.50'	G12	IIaO	13/3	70°F	22:38	23:20	A	0 ^h 11 ^m W
34040	RT Aur	06 ^h 22 ^m 08 ^s	-30 33.3	G12	IIaO	9/5	70°F	23:28	00:02	B	0 ^h 02 ^m W
34041	HD 34547	05 ^h 13 ^m 2	+13° 35'	G12	IIaO	9/5		00:10	01:48	C	23 ^h 55 ^m W
34042	HD 55283	07 ^h 07 ^m 2	+15° 21'	G12	IIaO	9/5	50°F	01:56	04:06	A	0 ^h 22 ^m W
34043	BD-10° 3452	12 ^h 16 ^m 0	-10° 55'	G12	IIaO	13/3		04:40	06:22	B	0 ^h 09 ^m W
34043E	four test at 02/03/04/05			G12	IIaO	9	40°F			B	

Dome Temp. ...10°F... 76%

Transparency Conditions ...Excellent until 0:30...

214

Focus

Dome Temp. ...02°F... 76%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19.26	A	1453E	+36° 44'	2	7.9-8.8	F6-G1	7-7-7 7-7-7	Evans Thesis	800/300		FINE
20.59	B	0435E	+39° 58'	3	8.0-9.0	F8-G8	7-7-7 7-7-7	Evans Thesis	800/300		FINE
21.30	C	0402E	+35° 23'	2-3	7.8-8.6	F5	7-7-7 7-7-7	Dy*	800/300		FINE
23.20	A	0411W	+15° 25'	3	7.9-8.9	F6-G5	7-7-7 7-7-7	Evans Thesis	800/300		FINE
00.02	B	01402W	+30° 34'	2	5.3-6.5	F1-G0	15-15-15	Evans Thesis	200/180		FINE
01.02		03 ^h 58 ^m W	+13° 37'	2	7.5	A0	17-17-17	G1 Ap + m	400/200		FINE
01.03	A	04 ^h 22 ^m W	+15° 17'	2	7.39	A0	17-17-17	"	400/200	clouds at 02:30	FINE
01.04	B	01 ^h 30 ^m W	-11° 16'	3	2.55	A0	17-17-17	"	800/175	cut short; prop. contains brighten, some comp. (in 17-17-17)	WFAK
	B						7-7	w/ filter			CENTRE TO VIOLET

215

Date Sun Mon Jan 17-18 1971 Observer P. Dinroths
Ri/H.S. - 12v 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 Ecl
34044	HD 30282	04 ^h 41 ^m 05 ^s 1970	+36° 30.6 1970	G12	ITaD	13/3	12°F	18:03	19:08	A	02° 08 E
34045	α Cas	04 38.8	+56° 22	G12	ITaD	9/5	12°F	19:27	19:40	B	02° 31 W
34045F1	focus test out out/w in			G12	ITaD	9	12°F			B	
	IR photometry							23:00	00:30		
34045 T1	step wedge for plate		34026 - 34035								2109 2
T2			34036 - 34045								

Dome Temp.

Focus

Dome Temp.

Dome Temp. 120°F 73%

Transparency Conditions

216

Focus

Dome Temp. 090°F 78%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
9:08	A	02408E	+36° 44	2	7.9-8.8	F6-G1	7-7-7 7-7-7	Evans 9axis	800/300		FINE
9:40	B	02431W	+56° 24	2	2.16	K0	27-27	G1001 Dinrath's+	20/12	d. dcd d clouds	STRONG
	B						7-7	filter		msd	GOOD
		NWP-2 / 9.0 min @ 60°F / 220 L I 10									

217

Date Mon Tues 18-19 1920 Observer Haas-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
	1R <u>Photometry</u>							<u>18:15</u>	<u>21:30</u>		

Dome Temp. ...
Focus ...
Dome Temp. ...

Hour Angle
End

Dome Temp. 0.00 F

66%

Transparency Conditions

218

Focus

Dome Temp. -0.40 F

68%

Ending Time
EST. P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

Program

Exp. Mtr.

REMARKS

Quality

cloudy

219

Date Jan 19-20 1971 Observer Ri-JM (Wet) 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.
34046	HD 86801	09 55.9	+29° 02	G12	IIaO	13/13	08° F	02:45	05:15	A
34046F1	focus test	out out / wind		G12	IIaO	9	08° F			B
+1						9/5				B
T2										C

Dome Temp. _____
Focus _____
Dome Temp. _____
Hour Angle _____
End _____

Dome Temp. 06°F 74%

Transparency Conditions

220

Focus

Dome Temp. 05°F 75%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
5:15	A	2454W	+28°46	2	9.48	GOV	7.7, 7 7-7-7	Sec. 8 for 2nd	800/280	clouded over	FINE
	B						7-7	is filter			(GOOD)
	B		full aperture				125			fe exposure test	
	C						205				

221

Date THUR-FRID JAN 21-22 1971 Observer Tm-Gz 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.
	<u>MIRROR COVERED BY FROST</u>									

Dome Temp. _____
Focus _____
Dome Temp. _____
Hour Angle _____
End _____

223

Date Jan 23-24 Sat-Sun..... Observer In..... 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
34047	HD 30282	04 41.1	+36 33	G12	II ₀₀	13/3	26°F	18:04	19:50	A	01 03E
34048	RT Aur	06 22.1	+30 33	"	"	9/5	25°F	19:56	20:30	B	02 02E
	I R Phot.		0 ^h →	5 ^h :30							
34049	HD 130841	14 45.4	-15 38	G12	II ₀₀	9/5		05 50	05 58		00 57E
34050	HD 130109	14 41.2	+2 19	"	"	"		06 03	06 43		00 06E

Dome Temp. 2

Focus

Dome Temp.

Hour Angle
End

225-

Hns IR Phot "Pinraths"

Date Jan 24-25 Sun-Mon Observer Tn 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.
34051	HD 11291	01 45.8	+50 18	G12	IIaO	9/5	29°	18:06	18:22	A
34052	HD 10260	01 35.3	+60 32	"	"	"	"	18:29	19:07	C
34052F	Focus			"	"	9	"			B
	IR Phot		19 → 22h							
34053	HD 82191	09 25.4	+27 50	G12	IIaO	9/5	28°F	02:05	02:59	A

25 Jan 1971

Dome Temp. 28

Focus

Dome Temp. 28

Hour Angle
End

00 29W

01 23W

01 28W

1. 34

Dome Temp. 25°F H=80%

Focus Humidity rising ?? (seems dry)

Dome Temp. 25°F H=100%

Transparency Conditions scattered cloud

cloud by 22^h

226

Ending Time P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
18:22 A	00 29W	+50° 43'	2"	5.62	B9 III	6-6-6	Spect Bin	200/100		SL. STR
19:07 C	01 23W	+60 56	1-2"	5.58	B7 V	6-6-6)	200/100	seems faint but fld checks	SL. STR
B		in in / out out				3/3	no filter			GOOD
22:59 A	01 28W	+27° 35'	1"	6.59	A0	6-6-6	Spect Bin	200/100	some cloud	(GUIDING) FINE
									Closed 03 ^h	
									some frost on mirror	
197									plates 34047-34053 in NUCP 2 @ 68°C for 9 minutes; no calibration plate	

227

Date Jan 27-28 wed Thurs Observer HD-Ta 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.
34054	HD 23169	03 37.9	425 25	612	D ₀₀	13/13		18:15	19:05	"

Dome Temp. 40
Focus _____
Dome Temp. _____
Hour Angle
End
00 30E 42

Dome Temp. +01°F

H=6670

Transparency Conditions scattered cloud

228

Focus

very windy

Dome Temp.

Ending Time
E.S.T.

P.H.

Hour Angle
End

Declination

Seeing

Ptg.
Mag.

Sp.

Comp.

Program

Exp. Mtr.

REMARKS

Quality

19:05

00 30E

+25 42

3-4"

8.36

G2V

3-3
12

S S V

800/35

cloud - cut short.

ALMOST
BLANK

229

Date Jan 28-29 Thurs-Fri, 1971 Observer Dy-Tn/Tn-G 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
34055	M Mon			G12	TI 00	131.3		23:10	23:58	B	00:41W
34056	HD 59973	06 58.2	+20 43	"	"	9/0.5	12°F	00:06	00:16	C	01:28W
34057	HD 72208	08 26.5	+10 09	"	"	9/0.5	"	00:25	01:33	B	01:17W
34058	HD 82191	09 25.4	+27 50	"	"	9/0.5	11°F	01:39	02:13	C	00:58W
34059	HD 91948	10 31.9	+60 38	"	"	13/0.5	"	02:23	02:59	A	00:37W
34060	HD 84441	09 40.2	+24 14	"	"	9/1.5	"	03:10	03:20	B	01:49W
34061	HD 81995	09 24.1	+45 12	"	"	13/0.5	10°F	03:30	04:02	C	02:47W
34062	HD 120874	13 47.1	+59 02	"	"	9/0.5	"	04:11	04:34	A	01:00E
34063	HD 91948	10 31.9	+60 38	"	"	13/0.5	"	04:44	05:26	B	02:55E
34064	HD 152224	16 47.0	+32 44	"	"	9/0.5	"	05:35	06:31	A	02:03E
34065	HD 130841	14 45.4	-15 38	"	"	9/0.5	"	06:39	06:43	C	00:09W
34065F1	Focus			"	"	9				B	

Dome Temp. /

Focus

Dome Temp.

Dome Temp. 10°F 80%

Transparency Conditions very good

230

Focus

STRONG WIND

Dome Temp. 7°F 80%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
23:58	B	00 41W	-9 39	3"	2.65	~G	6-6-6	RV Tauti	400/180		FINE
00:16	C	01 28W	+20 41	2"	4.4-5.2	FT-42	6-6-6	CEPHEID PG	200/100		FINE
1:33	B	01:17W	+10 00	"	6.58	AD	6-6-6	SPEC. BIN.	200/80	cloud	(GUIDING) FINE
2:3	C	00:58W	+27 35	"	6.59	AD	6-6-6	"	200/80		(GUIDING) FINE
2:59	A	00:37W	+60 20	"	7.37	F8	6-6-6	"	200/110	more cloud	FINE
3:20	B	01:49W	+23 56	"	3.76	GOTT	9-9	st/vel	200/90	cloud	FINE
4:03	C	02:47W	+44 57	"	7.12	A5	6-6-6	SPEC. BIN.	400/160	WIND NOT AS STRONG	(GUIDING) FINE
4:34	A	01:00E	+58 43	"	6.36	A0	6-6-6	"	200/80		FINE
5:06	B	03:05W	+60 19	"	7.37	F8	6-6-6	"	200/110		(GUIDING) FINE
6:31	A	02:03E	+32 40	2-3"	6.26	KOTT	6-6-6	"	200/130		FINE
7:43	C	00:09W	-15 50	3-4"	2.89	Amv	9-9	sp Bin-bit	40/15	Brightest star in field	FINE
	B		in low red				3/3	no filter		broken	GOOD

Dome Temp. $7^{\circ}F$ 70%

Transparency Conditions scattered cloud

232

Focus

Dome Temp. $-5^{\circ}F$ 70%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
3:42	A	01 00W	+20 42	tumble	4.44- 5.20	F7IB Q30	6-6-6	Cepheid- Evans	200/100		FINE
3:52	B	02 47W	+30 36	"	5.3- 6.5	F1- G0	6-6-6	Cepheid EVANS	300/110		FINE
4:00	C	01 00E	+10 47'	"	5.29	AZV	6-6-6	Sp-Bin	200/80		(GUIDING) FINE
	C	in in out out					3-3	no filter			CENTRE TO VIOLET
1 FEB/71		mwd-2 for 9.0 min @ 68°F				290C 1K0					

235

1971

Waterloo Obs

Date Feb 2-3 Tues-Wed Observer JH-T_n 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.
34072	HD 22649	03 33.5	+62 54	G12	D40	9/5	+07°	18:24	18:54	A
34073	+47 761	03 06.4	47 43	"	"	13/3		19:02	20:44	B
34074	HD 44537	06 17.2	49 20	"	"	9/5	+5°	20:57	21:57	C
34075	HD 48329	06 37.8	25 14	"	"	"		22:10	22:22	A
34076	AD 62509	07 39.2	28 16	"	"	"		22:31	22:33	B
34077	HD 44033	06 14.4	14 42	"	"	1		22:47	00:07	A
34078	HD 44537	06 17.2	49 20	"	"	"		00:15	00:48	B
34079	HD 46294	08 50.1	+6 20	"	"	"		00:55	01:33	A
34079F	Focus			"	"	9	+4°E			B
34080	HD 101501	11 35.8	34 46	"	"	9/5	"	01:52	02:10	B
34081	HD 77247	08 56.3	53 30	"	"	13/5	"	02:26	02:56	A

Dome Temp. °C

Focus

Dome Temp.

Hour Angle
End

00 14E

02 06W

00 07W

00 13W

00 37E

00 23W

02 59W

01 14W

00 55E

02 30W

9

Dome Temp $+0.7^{\circ}$ $71\frac{7}{10}$

Transparency Conditions Excellent - s

236

Focus

cloud by $20''$

Dome Temp. $0^{\circ}F$ $76\frac{7}{10}$

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
18:54	A	00 14E	+63 10	1-2"	5.0	K3I6	6-6-6	Waterloo prog	200/130		(GUIDING) FINE
20:44	B	02 06W	48 03	2"	8.5	65	6-6-6	"	800/250	cloud	FINE
21:57	B	00 07W	49 22	1-2"	5.1	K5I6	6-6-6	"	200/130	"	*
22:22	B	00 13W	25 14	"	3.1	G8I6	9-9	"	40/22	"	FINE
22:33	B	00 37E	—	"	4.2	K0I6	9-9	"	40/22		SC. STR FINE -
00:04	A	00 23W	14 44	"	5.0	K3I6	6-6-6	"	200/130		FINE
00:48	B	02 59W	49 22	2"	5.1	K5I6	6-6-6	"	200/130	cloud	SL. W. K (GUIDING)
01:33	A	01 14W	+06 08	3"	3.1	K0I6	6-6-6	"	200/120	"	FINE
	B		in in' / 2nd set				3/3	no filter			SC. CENTRE TO VIOLET
02:40	B	00 55E	134 26	1-2"	5.3	G8I6	6-6-6	Wal prog	200/100		FINE
02:55	A	02 30W	53 12	2"	8.1	K0P	6-12	"	800/90	cloud / ended	VERT WEAK
										* BADLY OUT OF FOCUS - <u>PLATE IN</u> SPECTROGRAPH <u>INSIDE DOWN?</u>	

237

Date Feb 3-4 Wed Thurs 1971 Observer Hd-Ri/Ri-G2 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
34082	HD 65934	07 56.1	+26 55	G12	Tao	13/0.3	15°F	23:53	01:16	B	01:54 W
34083	HD 75935	08 47.9	+27 18	"	"	13/0.3	15°F	01:46	02:23	C	02:10 W
34084	HD 93702	10 44.0	+11 04	"	"	9/0.5	"	02:40	03:12	A	01:08 W
34084F1	focus test	out out/w/w		G12	Tao	9	15°F			B	
34084T1	calibration	step wedge	for plate						4 Feb/71		W/W
									3		

Dome Temp. 12°F H=95%

Transparency Conditions SOME HAZE

238

Focus

Dome Temp. 12°F H=98%

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:54 W	+26 47	1-2"	8.87	G8II	7-6-6	SEC. STD. VEL.	800/280		FINE
02:10 W	+27 05	"	9.35	G8I	3-15	"	800/50	CUT SHORT; SNOW FLURRIES, TOO HAZY	OUT OF FOCUS
01:03 W	+10 47	"	5.29	A2V	6-6-6	SPEC. BIN.	400/103	CUT SHORT; SKY COVERED	(GUIDING) FINE
					3-3	ofulla			GOOD
MWP-2 / 12 min @ 60° / 2900' HD									
SHOULDN'T WATERLOO CLEAN-UP THE BLOODY MESS THEY LEAVE BEHIND?									

239

Date Feb 6-7 Sat-Sun 1971 Observer Rm-Ri/HAS-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.H.	Hour Angle End
34085	RX Aur = HD 31913	04 ^h 59. ^m 3	39° 53.3	G12	IIaO	13/3	27°F	18:25	20:11	A	04:00
34086	CO Aur = HD 90457	05 ^h 53.8	35° 19	G12	IIaO	13/3	26°F	20:16	21:40	B	04:30
34087	T MON HD 44990	06 ^h 19 ^m 49 ^s	+07° 08.4	G12	IIaO	13/3	25°F	21:46	22:25	A	04:50
34088	ξ Gem HD 52973	06 ^h 58 ^m 11 ^s	+20° 43.0	G12	IIaO	9/5	24°F	22:32	22:45	B	04:30
34089	RT Aur	06 ^h 22 ^m 08 ^s	+30° 33.3	G12	IIaO	9/5	24°F	22:51	23:14	A	1:35W
34090	U MON	07 ^h 26.0	-09° 34.1	G12	IIaO	13/3	24°F	23:20	00:08	B	1:39W
34090F1	focused IR photometry	out of view		G12	IIaO	9				B	
34091	HD 120874	13 ^h 47.1	+59° 02	G12	IIaO	9/5	21°F	02:26	03:04	A	1:58
34092	HD 123423	14 ^h 02.5	-10° 41	G12	IIaO	13/3		03:16	06:00	B	2:45W
									12		

Dome Temp. 24°F 78%

Transparency Conditions ... excellent ... until 00:01 ...

240

Focus

Dome Temp. 18°F 86% NB DO NOT USE P.H. C *laggy after that*

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:11	A	04 00	+40° 00'	2	8.0- 9.0	F3- G8	6-6	Cepheid/ Evans	800/ 300		
21:40	B	04 30 W	+35° 23'	2	7.8- 8.6	F5	6-6-6	RV Tau/ Dy	800/ 300		
22:25	A	04 50 W	+07° 10'	2-3	6.4- 7.96	F7Iab K1Iab	6-6-6	Cepheid/ Evans	400/ 150		
22:45	B	04 33 W	+20° 42'	2	4.44 5.20	F7Ib G3Ib	6-6-6	Cepheid/ Evans	200/ 110		
23:14	A	14 35 W	+30° 35'	2	5.3 6.5	F1 A0	6-6-6	Cepheid/ Evans	200/ 110		
23:27	B	14 29 W	-09° 39'	2	6.1 8.1	F8 K0	6-6-6	RV Tau Dy	400/ 150		
	B						3-3	no filter			
24:00	A	1 ^h 56 E	+58° 41'	3-4	6.36	A0	6-6-6	Spec Bin / Gorzo?	400/ 200		
6:00	B	04 45 W	+11° 01'	4	8.5(9.2)	F5	3-3-3- 9	Spec Bin	800/ 140	clouds	

Dome Temp. 16°F 71%

Focus

Dome Temp. 08°F 76%

Transparency Conditions *good until 03:00*

in clouds

nice lunar eclipse

242

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20 41	A	2 ^h 30 ^m W	+48° 04	3	8.5	G5	3-3-3 3-3-3	Waterloo Paris	800/310		FINE
23 25	B	1 ^h 38 ^m W	+08° 00	3	6.8	KOII	6-6-6	"	400/300		V. SC. WK
00 34	W	0 ^h 34 ^m W	+53° 15	3	8.1	top	6-6-6	"	800/350		FINE
01 28	B	0 ^h 47 ^m W E	+40° 52	3	7.4	MOIII	6-6-6	"	400/400		FINE
03 31	A	0 ^h 00 ^m E	+18° 35	3	6.84	FIIV	6-12		400/1004	clouds	SC. WK
	B						3-3	nanofilter		clouded out	GOOD
10 Feb 1971		MCP-2 / 9.0 min @ 68°F / 0.40c / 1K0									

243

Date wed-Thurs Feb 10-11/71 Observer Hd-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 End
34098	HD 23169	03 37.9	+25 25	G12	E1a0	13/13	17°F	18 20	19:30	A	0054W 25
34098 r1	calibration strip wedge							11 Feb/71			new 1/

Dome Temp. 15°

Focus

Dome Temp.

Hour Angle
End

0054W 25

new 1/

245

Date Thurs-Fri Feb 11-12/71 Observer In 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.
34099	MD 23324	03 39.2	+24 32	G12	Ilod	96.5	27°	18:27	18:57	B
34099 71	calibration step wedge				Ilod				15 FEB 171	
34099 72										
34099 73										

Done Temp. _____

Focus _____

Done Temp. _____

Hour Angle
End

60 23W

in WP 2

247

Date Mon-Tues Feb 15-16/71 Observer Pa-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 Ead
34100	HD 86812	09 55.9	+29 00	G12	IIaO	13/3	22°F	01:48	03:36	A	03 03W
34101	HD 152224	16 49.7	+32 37	G12	IIaO	9/5	20°F	04:44	06:02	B	01.20E
34102	HD 130841	14 45.4	-15 38	"	"	"	19°F	06:13	06:15	A	0054W
34103	HD 130109	14 41.2	+2 19	"	"	"	"	06:24	06:28	B	110W
34102F	Focus Plate			"	"	9	19°F			B	
34102 T1	calibration step wedge				IIaO			for plates 34100 - 34102		16F-6	2.0W-2/9

Done Temp. 2

Focus

Done Temp.

How Angle
Ead

Dome Temp. 20°F H=84%

Transparency Conditions Clear by 00:30

248

Focus

Dome Temp. 17°F H=84%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
03:36	A	03 03W	+28 43	2'-3"	9.2	F8	3-3-3 3-6	_____	800/150	wing star fld drawn	WEAK
06:02	P	01 20E	+32 37	"	6.26	KOIV	68-6	SpBin-G2	200/140		FINE
06:15	A	0054W	-15 50	4"	2.89	Am	9-9	SpBin-Bln	40/17		FINE
06:28	B	0110W	+02 04	3"	3.74	AOV	9-9	"	40/17	Pawn coming fast? Broken - Discarded	
	B		in in/out out				3/3	no filter			VERT SLIGHT CENTRE TO LED
06:02	11-16	MWP-2/	9.0 rim @	68°F	/2000	IK2					

249

Date Tue-Wed Feb 16-17/71 Observer Rm-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 End
34103	Rx Aur = HD 31913	04 ^m 54.5	39° 48.7	G12	Ilao	13/.3	24°	18:38	21:04	A	13:51
34104	T Mon AD 44990	06 19.8	+07° 08	"	"	1		21:14	22:14	B	13:51
34105	S Gem = HD 52973	06 58.2	+20 43	"	"	9/.5		23:43	00:18	A	13:51
34106	HD 120787	13 ^h 46.5	61° 59	"	Ilao	13/.3	24°	00:33	02:33	A	01:46E+
34106 71	calibration step wedge				Ilao				17 Feb		13:51
									8		

FEB 17/18/71

Cleaning about 23:30

Secondary started to frost up

H. Quality 100%+

Dome Temp. 20°F H=8250

Transparency Conditions hazy & thin cloud 250

Focus
 Dome Temp. 20°F H=9250

Complete Cloud by 22:30

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality	
1:56	A	1 ^h 35W	+40° 00'	1.2"	8.0 - 9.0	F8 - G8	6-66	Cepheus/EUROS	800/250		V.S.G. WR	
2:00	B	1 ^h 20W	+7 10'	2"	6.4 - 7.96	F7lab - K11lab	6-66	"	400/126	cloud	FINE	
2:00	A	2 ^h 45W	+20 42	1.2"	4.44 - 5.20	F7lab - G33b	6-66	"	200/100	f	FINE	
2:33	A	01 46E	+61 40	1	6.05	KU	6-66	G1001	800/330	Very hazy Cloud by 2:30	FINE	
12:00		MWP. 2/ 9.0 min @ 68°F 12 APCIKO									Closed	

255

Date THUR / Fri FEB 26 Observer Dy - Ri / Ri - G2 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.
34109	CO Aur	05 53.8	+35 19'	12	IIaO	13/.3	36°F	18.39	2001	A
34109F1	four stars	out out / w w		G12	IIaO	9	34°F			B
	PHOTOMETRY		20h → 0h						2	
34110	HD 75935	08 47.9	+27 18	G12	IIaO	13/0.3				

Dome Temp. 2
Focus
Dome Temp. 3

Hour Angle
End

M.W.P. 2

Dome Temp. 30° 90% How about an
 Focus observers Handbook
 Dome Temp. 30°F 95% for the Dome (1971)

Transparency Conditions good -
 Oh - VERY DENSE FOG

256

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2001	A	0:06W	+35 24	~3	~8	F5	4-4-4 6	RV TAN	800/271	got some water of the mirror from what known where	FINE
	B						3-3	no filter			C. TO R.
					9:35	G8V			800/270		
								CLOSED		UP AT 0:15 ! FOG TOO THICK	
		mwp	2/12 min @ 40° E				26 F-10/71		240 C 1K0		

257

Hns IR Phot

Date Mar 1-2/71 Mon-Tues Observer Bln-Ta/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.
34110	2 Ori	4 ^h 45 ^m .2	+8° 44'	G-12	IIa-O	13/5	34°F	18:44	18:48	A
34111	HD 37519	5 ^h 34 ^m .1	+31° 18'	"	"	"	33°F	18:56	19:26	B
	IR Phot		19:30 →		02:30					
34112	HD 91948	10 31.9	+60 38	G12	IIaO	13/5	23°F	02:43	04:05	B
34113	HD 153720	16 56.0	+75 34	"	"	"		04:14	05:50	A
34114	HD 148857	16 25.9	+2 12	"	"	"	22°F	05:57	06:09	B
34114.F1	Focus			"	"	13	"			B
34114 71	calibration slip wedge				IIaO				2 March 1971	

Dome Temp. 28° 64%

Transparency Conditions Excellent

258

Focus

Dome Temp. 20°F 75%

NB: THE KODAK BRUSH IS FOR (CAREFULLY) BRUSHING DUST FROM PLATES BEFORE EXPOSURE - HOW ABOUT LEAVING

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
7:48	A	00 20W	+8° 55'	3"	4.32	AOV	6-6-6	Sp-Bin-Bh	40/18		FINE
9:26	B	00 08W	+31° 25'	"	6.03	BTV	6-6-6	"	400/200		FINE
4:05	B	03 50W	+60 19	2'-3"	7.37	F8	6-6-6	Sp Bin-GZ	400/250		FINE
5:50	A	00 44E	175 28	"	6.84	F0	6-6-6	"	200/110		(GUIDING) FINE *
6:09	B	00 00	+02 05	3'-5"	3.86	AIV	10-10	Sp Bin-Bh	40/18	thick cloud at dawn	FINE-5L ^{STR.}
	F	in in / out out					3/3	no filter			GOOD
sub 15		www-2/ 4.0 min @ 62°F / 200-150								Telescope seems very slow.	
										* FOG + ABRASION MARKS	

259

Date Mar 2-3/71 Tue-Wed Observer Rm-Tn/Prt-Ta 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
34115	TM _{Mon} = HD 44990	06 19.8	+07° 8'	G12	IIaD	13/3		19 ^h 08	20:20	B	01 ^h 47 ^m W
							27°F	21:00	21:17		
34116	W Gem=	6 ^h 29.2	+15° 24'	G12	IIaD	B/3		21:52	22:52	A	02 ^h 42 ^m W
34117	HD 91945	10 31.9	60 38	"	"	13/5	22°F	02:24 ^(11/5)	04:20	B	04 ^h 09 ^m W
34117	T1 calibration slip wedge				IIaD			3 March 1971			02 ^h 21 ^m W

Dome Temp. 2

Focus

Dome Temp.

Hour Angle
End

Dome Temp. 25.0 6890

Transparency Conditions scattered cloud

260

Focus

very bad seeing

Dome Temp. 18 7478

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:20	B	0.1 47W	+7° 10'	6-8	6.40- 7.96	F7 Job- K1 Job	6-6-6	Cepheid- EVANS	400/200	cloud	SL. WK
21:17				5							
22:52	A	02 42W	15° 25'	2"	7.9- 8.9	F6- G5	6-6-6	Cepheid- EVANS	400/150	cloud because of snow	FINE (POG 460)
04:20	R	04 09W	60 19	"	7.37	F8	6-6-6	Sp Bin-G2	400/180	Cloud again	FINE
07:11		MWP-2/ 9.0 min @ 68°F / 290 C 1K0									

261

Date March 4/5 THUR / FRID 1971 Observer Tm - Gz 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 Ecl
34118	HD 42397	06 05.4	+25 02	G12	Ilco	13/0.3	25°F	19:42	21:20	A	01:40
34119	HD 75935	08 47.9	+27 18	"	"	13/0.3	23°F	21:24	23:26	B	01:00
34120	HD 86801	09 55.8	+29 02	"	"	13/0.3	"	23:32	02:02	A	02:35W
34121	HD 120874	13 47.1	+59 02	"	"	9/0.5	24°F	02:10	02:42	B	00:55E
34122	HD 110411	12 36.8	+10 47	"	"	13/0.5	"	02:50	02:58	A	01:50W
34123	HD 130109	14 41.2	+2 19	"	"	13/0.5	"	03:04	03:08	B	01:09E
34124	HD 130841	14 45.4	-15 38	"	"	13/0.5	"	03:14	03:18	A	01:00E
34125	HD 141513	15 44.4	-03 07	"	"	13/0.5	23°F	03:25	03:29	B	01:45E
34126	HD 149803	16 32.0	+29 56	"	"	13/0.3	"	03:41	06:07	A	00:05
34126F	Focus			"	"	13				B	
	PHOTOMETRY: 18 ^h 30 → 19 ^h 30										
34126 T1	calibration step wedge					Ilco	for plate, 34118, 34121 - 34126				
T2							34119, 34120				

Dome Temp. 20°F H=65%

Transparency Conditions Excellent

264

Focus

almost Full Moon
thin cloud by 22h

Dome Temp. 18°F H=72%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:38	A	01:20W	+25 06	2"	8.68	G0W	³⁻³⁻³ 3-3-3	Su Sid Vel.	800/290		Fine
23:35	D	01:35W	+27 06	"	9.35	G8V	³⁻³⁻³ 3-3-3	" " "	800/260	moonlight detectable but < 10% near Moon (15°) + light clouds	Fine
00:33	A	01:09E	+18 36	"	6.22	K2III	7-7-7	Vis Bin-wat	200/160		(GUIDING) * FINE
01:57	B	00:15W	"	"	6.84	FIV	7-6-6	"	400/260		(GUIDING) * FINE
02:36	A	00:36W	+21 28	2"-3"	5.86	K0	6-7-6	"	200/160		FINE
03:25	B	00:04W	+51 58	"	6.61	F0	6-7-6	"	200/120		FINE
03:32	A	00:11W	"	"	4.60	A8	10-10	"	40/18		FINE
04:24	B	00:27W	+48 52	2"	6.8	F0	6-6-6	"	200/120	South of pair? Diff to Distinguish	(GUIDING) * FINE
05:07	A	01:10W	"	"	7.5	F5	6-6-6	"	400/240	North one worse interference	FINE
	B	110 09	"	"	5.4	K1p	6-	late type-wat	200/160	cloud at Dawn	GOOD
	B	in in front					3/3	no filter			
										* FOG	

267

Date Fri/SAT MARCH 12/13 1971 Observer TN-Dy 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.
34146	U Mon	7 ^h 26.0	-09° 34.1	B12	IIa-D	13/0.3	29°	1950	21:04	A
34147	HD 52973	6 58.2	+20 43.0	B12	IIc0	9/1.5	"	2115	21:41	B
34148	HD 58715	7 21.7	+8 29	"	"	13/1.5	28°	2148	21:55	A
34149	HD 73262	8 32.4	+6 03	"	"	13/1.5	"	2204	22:16	B
34150	HD 74280	8 38.0	+3° 45	"	"	"	"	2220	22:36	A

Dome Temp. .2

Focus

Dome Temp. .2

Hour Angle
End0^h 38^m W -

01 42 W - 2

01 32 W -

0^h 43 W +

0 58 W -

269

Date Sat/Sun March 13/14/71 Observer DF-Tn/GI-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 End
34151	HD 73210			G12	IIa.D	13/0.3		19:16	19:56	A	01:38E
34152	HD 46595	06 29.3	15° 25'	G12	IIa.D	13/0.3	32°F	20:04	21:04	B	01:38W
34153	HD 73575			"	"	"	"	21:10	22:00	A	00:30W
34154	HD 73785			"	"	"	"	22:09	23:09	B	01:37W
34155	HD 73819			"	"	"	"	23:18	00:22	A	02:50W
34156	HD 102494	11 42.7	+27 53	"	"	"		00:43	01:50	B	01:17W
Anson please give max development.											

Dome Temp. 30°F H=91%

Transparency Conditions Hazy

270

Focus

Dome Temp. 28°F H=100% + 9

very foggy

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01 38 E	+19 25	2"	7.1	A	6-6-6	G1001-04	400/145		FINE
01 38 W	+15 26	2"	8.	F6-65	6-7-6	Cepheid	400/170		FINE
00 30 W	19 56	2"	7.0	F0	6-7-6	G1001-04	400/170		FINE
01 37 W	19 53	1"	7.1	A	6-7-6	"	400/140	fog-some cloud	FINE
02 50 W	19 45	1"	7.0	A	6-7-6	"	400/120	H=100% +	U.S.L. WK
01 12 W	+27 34	1"	8.26	G8IV	3-3-3 10	55V	800/120	Heavy fog out F dw 15 min closed 02 ^h	WEAK (but measured)

271

Date... Sun / mon March 14 / 15 Observer... DE - T_h 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
34157	HD 73618		6:15	G12	IIa.D	B103	30°	20:10	22:04	A	01:30
K	Focus test			"	"		"			B	
34157 T1	calibration: plate 34146 - 34155, 34157										15 Mar / 71
											Mar 2 / 90

Dome Temp. 32

Focus

Dome Temp.

Hour Angle
End

275

Date Tues - Wed Mar 16/17/71 Observer Th - G2 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
34163	HD 58715	07 21.7	+8 29	612	$\text{U}\alpha\text{D}$	13/1.5	32°F	19:36	19:44	B	00:22E
34164	HD 51892	06 53.9	+7 27	"	"	9/1.5	"	19:58	21:20	A	01:41W
34165	HD 82191	09 25.4	+27 50	"	"	13/0.5	31°F	21:27	22:35	B	00:25W
34166	HD 91948	10 31.9	+60 38	"	"	13/0.5	30°F	22:42		A	
34166	HD 72208	08 26.5	+10 09	"	"	13/0.5	30°F	22:57	00:13	B	03:12W
34167	HD 102494	11 42.7	+27 53	"	"	13/0.3	28°F	00:20	02:54	A	02:51W
34168	HD 152224	16 47.0	+32 44	"	"	13/0.5	26°F	03:01	04:19	B	01:10E

Dome Temp. 27

Focus

Dome Temp.

Dome Temp. 27°F H=7570

Transparency Conditions Cloud at first → GOOD 276
 POOR SEEING - STRONG WIND

Focus
 Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:44	E	00:22E	+08° 26'	3-5"	2.74	B7V	6-7-6	SpBin-81/2	200/85	Thru cloud	FINE
21:20	A	01:41W	+07 26	3-4"	6.35	B7V	6-6-6	SpBin-6Z	200/100		* FINE
22:25	B	00:25W	+27 36	2-3"	6.59	A0	6-6-6	SPEC. BIN.	400/200		**
	A		+60 20		7.37	F8	6	"	400/	WIND TOO STRONG	
00:13	B	03:02W	+09 57	2-3"	6.58	A0	6-6-6	"	400/200		* FINE
02:54	A	02:27W	+27 35	1-2"	8.26	G8TV	3-3-3	SEC. STD. VEL.	800/270	thick haze	** *
01:10	B	01:10E	+32 40	2-4"	6.26	K0TL	6-6-6	SPEC. BIN	400/120	" " CUT SHORT	* SC. W. K.
										* FOGGED	
										** DOUBLE EXPOSURE	

277

Date WED./THUR. MARCH 17/18 1971. Observer Ea-Gz/Ri-Gz 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.
34169	HD 82191	09 25.4	+27° 50'	G12	IIaD	13/0.5	30°F	20:38	21:34	B
34170	HD 91948	10 31.9	60 38	"	"	13/0.5	29°F	21 41 ⁽⁷²⁾	22:53	A
34171	HD 72208	08 26.5	+10 09	"	"	13/0.5	28°F	23 08	00:16	B
34172	HD 81995	09 24.1	+45 12	"	"	13/0.5	27°F	00:21	01:31	A
34173	HD 91910	10 31.9	60 38	"	"	13/0.5	26°F	01:36 ⁽⁵³⁾	02:28	B
34174	HD 153720	16 56.0	+75 34	"	"	13/0.5	25°F	02. 38	03:52	A
34175	HD 154528	17 00.9	+77 48	"	"	13/0.5	24°F	04:00	04:40	B
34176	HD 152224	16 47.0	+32 44	"	"	13/0.5	24°F	04:46	05:50	A
34176F1	FOCUS TEST	OUT OUT	IN IN	G12	IIaD	9	23°F			B

Dome Temp. 27°F $H = 68\%$ Transparency Conditions ... CLOUDY \rightarrow GOOD \rightarrow EXCELLENT

Focus

Dome Temp. 20°F $H = 80\%$

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:34	B	00:33 E	+27 35	2-3"	6.59	A0	6-6-6	SPEC. BIN.	400/200		(SL. GUIDING) FINE
1:53	A	00:10 W	+60 20	1-2"	7.37	F8	6-6-6	"	400/260		(GUIDING) FINE *
2:16	B	03:08 W	+9 59	~2"	6.58	A0	6-6-6	"	400/200		(SL. GUIDING) FINE *
2:33	A	03:26 W	+44° 59	"	7.12	A5	6-6-6	"	400/200		FINE *
2:57	B	03:15 W	+60 19	"	7.37	F8	6-6-6	"	400/260		FINE *
3:15	A	01:39 E	+75° 28'	"	6.84	F0	6-6-6	"	400/260		(SL. GUIDING) FINE *
3:20	B	00:55 E	+77 42	"	6.66	A0	6-6-6	"	400/200		FINE
5:00	H	00:25 W	+32 38	"	6.26	KOTT	6-6-	"	400/300		FINE *
	B						3-3	NO FILTER			GOOD
										DAWN	
										* FOG	

Dome Temp. ...30°F... 85%

Transparency Conditions CLOUDY → HAZY.....

2.80

Focus

Dome Temp. ...28°F... 91%

UNEXP. PLATE BOX # _____ (DON'T LEAVE UNEXP. PLATES IN JUNE)

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:56	A	00 107 E	+27° 35	~2"	6.59	A0	6-6-6	SPEC. BIN.	400/200		(GUIDING) FINE
02:01	B	00 109 E	+60° 20	1-2"	7.37	F8	6-6-6	"	400/130	CLOUDS! CUT SHORT	(GUIDING) SL. WK CENTRE TO RED
	B						3-3 no filter				
00 21	A	01 400 W	+10 45	1-2"	5.29	A2V	6-6-6	Blm. SPEC. BIN.	400/200	HEAVY HAZE	FINE
00 26	B	00 37 E	+10 26	"	4.97	A1E	6-12	"	400/200	CUT SHORT - CLOUDS	
										CLOUDY : 1 ^h	

281

Date Sun / Mon March 21/22 1971 Observer G1-Ri / Pd-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
34180	HD 43044F	06 ^h 09 ^m 0	+14° 38'	G12	D ₂₀	13/3	33°F	19:13	20:45	A	02 ^h 11 ^m W
34181	HD 60180	07 ^h 28 ^m 2	+28° 38'	G12	D ₂₀	9/3	32°F	20:55	23:37	B	03 ^h 43 ^m W
34182	*HD 91941	10 ^h 31.9 ^m	60° 38'	G12	D ₂₀	13/5	29°F	00:04	01:57	A	03 ^h 00 ^m W
34182E1	FOCUS TEST	02 02.0		G10	D ₂₀	9	28°F			B	
34183	HD 110411	12 36.8	+10° 47'	G12	D ₂₀	9/5	27°F	02:37	03:13	A	03 ^h 10 ^m W
34184	HD 141527	15 ^h 44 ^m 5	+28° 28'	G12	D ₂₀	13/5	26°F	03:20	04:16	B	00 ^h 50 ^m W
34185	HD 152224	16 47.0	+32 44'	G12	D ₂₀	13/4	27°F	04:20	05:19	A	
34186	HD 148857	16 25.9	+02° 12'	G12	D ₂₀	9/5	27°F	05:29	05:39	B	04 ^h 50 ^m W
	*HD 91948 ?										

Dome Temp. 30°

Focus

Dome Temp.

Hour Angle
End

①
283

1971

No OBSERVER

Date Mon - Tues Mar 22/23 Observer L-B/Ri/ 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.
34187	2 Ori	04 45.2	+8° 44'	G-12	II _d -0	13/5		19:05	19:10	A
34188	HD 37519	05 34.1	+39° 18'	"	"	"		19:19	19:53	B
34189	70 Ori	06 06.3	+14° 14'	"	"	"		19:57	20:05	"
34190	69 Ori	06 06.3	+16 09	"	"	"		20:17	20:28	B
34191	18 Gem	06 23.0	+20 17	"	"	"		20:34	20:39	A
34192	HD 53755	07 01.1	-10 30	"	"	"		20:45	21:43	B
34193	HD 71663	08 23.4	-2 11	"	"	13/3		21:50	22:56	A
34194	53 Leo	10 ^b 44.0	+11 04	"	"	13/5		23:00	23:24	B
34195	40 Leo	10 14.3	+19 59	"	"	"		23:28	23:51	A
34196	HD 110411	12 36.8	+10 47	"	"	"		23:55	00:11	B
34197	HD 107225	12 15.3	+27 11	"	"	13/3		00:15	00:52	A
34198	HD 91948	10 31.9	+60° 38	"	"	13/5	26°F	01:00	02:38	B
34199	HD 130841	14 45.4	-15° 38	"	"	"	26°F	02:46	02:52	A
34200	HD 130109	14 41.2	+02 09	"	"	"	"	02:58	03:04	B
34201	HD 153720	16 56.0	+75° 34	"	"	"	25°F	03:17	04:50	A
34202	HD 154528	17 00.9	+77° 48	"	"	"	25°F	04:56	05:43	B

Dome Temp. 23
Focus
Dome Temp.

Hour Angle
End
02 03W +
01 55W -
01 37W -
01 59W +
01 54W -
02 23W -
02 11W -
00 19W +
01 15W +
00 16E +
03 45W -
01 41E =
00 34W +
00 31E +
00 39W +

Dome Temp. 24°F 68%

Transparency Conditions Hazy

284

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:10	A	02 03W	+8° 55'	2"	4.32	A0V	10-10	Sp. Bin	40/19	{ PECULIAR FOG PATTERN AT RED END OF BOTH PLATES	(SL. GUIDING) FINE
19:53	B	01 55W	+31° 20'	"	6.03	B7V	6-6-6	"	200/100		FINE
20:05	B	01 37W	+14 17	"	4.18	B3V	10-10	"	40/18		SL. STR
20:28	C	01 59W	+16 13	"	4.73	B5V	10-10	"	40/20		SL. STR
20:39	A	01 54W	+20 26	"	4.04	B2V	10-10	"	40/20		STRONG
21:43	R	02 23W	-10 34	"	6.43	B0V?	6-6-6	"	400/200	Companion ~ 8" west very ft.	FINE
22:56	A	02 11W	-2 21	1-2	6.72	dFO	6-6-6	"	400/160	FOG	BADLY OUT OF FOCUS
23:24	B	00 19W	+10° 45	2-3	5.29	A2V	6-6-6	"	40/20		FINE
23:51	A	01 15W	+19° 40	2	5.27	F6V	6-6-6	RV Std.	80/52		FINE
00:11	B	00 46E	+10° 27	2	4.97	A1V	6-6-6	Sp. Bin	80/40	(V.S.L. FOG)	FINE
00:52	A	00 16W	+26° 52	2	5.47	g1c2	6-6-6	"	400/196	(V.S.L. FOG)	FINE
01:38	B	03 45W	+60° 20	2	7.37	F8	6-6-6	Spent. Bin	400/260	FOG	FINE
02:52	A	00 14E	-15° 52'	2	2.89	Am	10-10	"	20/10		FINE
03:04	B	00 04W	+02° 02	2	3.74	A5V	10-10	"	40/20		FINE
04:50	B	00 21E	+75° 30'	2	6.84	F0	6-6-6	"	400/250	FOG	FINE
05:43	B	00 29W	+77° 43	2	6.66	A0	6-6-	"	400/200	FOG	FINE

②

285

Date Mon-Tues Mar 22/23 Cord Observer 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
34202	focus test	out/out/in		G12	IIa0	9	25°F			13	

Dome Temp. ---

Focus ---

Dome Temp. ---

Hour Angle
End

Dome Temp. 20°F H=65%

Focus

Dome Temp. 18°F H=72%

Transparency Conditions GOOD

Note - Window cover for spectro-phot. closed tonight!
 It had been opened March 3-4 when
 I tried to try the photometer.
 It may have caused the fogging - the data tallies up - Tm

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:57	A	02:20 W	+35° 26'	1-2"	6.59	09.5 III	6-6-6	ECH. BIN	400/200		(GUIDING) FINE
1:34		02:51 W	+15 28	2"	7.9/8.9	F6/45	6-6-6	EVANS' CEPHEID	800/200	CUT SHORT: VERY SLOW	WEAK
2:04	A	00:44 W	+27 35	"	6.59	A0	6-6-6	SPEC. BIN.	400/200		(SL. GUIDING) FINE
3:18	B	03:18 W	+46 05	"	6.53	A3	6-6-6	"	400/200		(GUIDING) FINE
0:36	A	02:58 W	+44 58	"	7.12	A5	6-6-6	"	400/150		FINE
1:18	B	04:10 W	+27 37	"	6.59	A0	6-6-6	"	400/200		FINE
4:29	A	02:19 W	+24 47	"	8.74	F8 V	3-3-3	SEC. STD. VEL.	800/200	FIELD SAME AS PL. NO. 31854	SL. WK
5:32	B	00:30 W	+75 29	"	6.84	F0	6-6-6	SPEC. BIN.	400/200	Down (cut short)	(GUIDING) FINE
										- ALL PLATES SHOW THE FOG	

Dome Temp. 23°F H=63%

Transparency Conditions Excellent

292

Focus

(MERCURY EASILY VISIBLE)

Dome Temp. 18°F H=65%

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
03:55 W	+46 00	~1"	8.0-9.0	F8-G8	6-6-6	EVANS' CEPHEID	800/275	→ SLOW (SL. FOG)	SL. W.K.
00:01 W	+27 36	1-2"	6.59	A0	6-6-6	SPEC. BIN.	400/200		FINE
00:10 E	+60 20	<1"	7.37	F8	6-6-6	"	400/260	AMAZING SEEING!	(GUIDING) FINE
03:10 W	+46 05	~1"	6.53	A3	6-6-6	"	400/200		(GUIDING) FINE
02:10 W	+27 34	"	6.59	A0	6-6-6	"	400/200		(GUIDING) FINE
01:57 W	+60 20	1-2"	7.37	F8	6-6-6	"	400/260	(V. SL. FOG)	FINE
03:50 W	+27 35	2"	6.59	A0	6-6-6	"	400/200	(V. SL. FOG)	(GUIDING) FINE
02:28 E	+75 29	1-2"	6.84	F0	6-6-6	"	400/260	(SL. FOG)	FINE
01:45 E	+77 44	"	6.66	A0	6-6-6	"	400/200	BLANK?	(GUIDING) WEAK
02:42 E	+43 13	"	6.26	A5	6-6-6	"	400/200		(GUIDING) WEAK
02:31 E	+27 56	"	6.69	B5	6-6-6	"	400/200		(SL. GUIDING) FINE
02:22 E	+13 15	2-3"	6.1	B8 IV	6-6-6	"	400/200	(new box)	FINE
00:11 E	+4 38	"	3.93	K2 III	9-9	std vel	40/30		FINE
						3/3	no filter		GOOD

Dome Temp. 25°F H=62 $\frac{1}{2}$

Transparency Conditions *Excellent*

294

Focus

Dome Temp. 27°F H=65 $\frac{1}{2}$

Cloud at 23^h
thick at 0^a

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02 ^h 18 ^m W	+15 55	1"-2"	7.6	A0	6-6-6	G1 Ap + m	400/200		U.S.L. WIK
02^h 05^m W	+17 46'	2"	7.52	A0	6-6-6	"	400/200	forgot to uncap -	
02 13 W	+14 43'	1"-2"	8.12	A1	6-6-6	"	400/160	cloud (cut short)	sc. WIK
								Closed 01 ^h	
								<u>NO FOG!</u>	

Dome Temp. 28°F H=6570

Transparency Conditions thin clouds

296

Focus

Bolton Spectroscopic

Dome Temp. 27°F H=7570

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
		0 ^h 20 ^m W	-9° 39'		~8	G5	B-	RV Tan	200/-	discontinued - clouds too thick.	
0030		0 ^h 04 E	+5 51	2-3	4.14	B7	6-6-6	Bin - SPEC. Bi.	200/100	thick cloud	(GLIDING) FINE
1 ⁰⁰		0 ^h 20 W	+3 31	~3	4.10	B3	6-6-6	"	200/100	cloud	FINE
1 ²³	3	01 20 E	+10 42	1"	5.29	A2	6-6-6	"	400/200		(UPSIDE DOWN)
1 ⁵¹		00 10 E	-12 54	2-3"	4.51	B8	6-6-6	"	200/100	(newbox)	FINE UPSIDE DOWN
2 ⁵⁶		01 35 W	+27 33	2"	6.59	A0	6-6-6	Sp Bin-G2	400/86	circus cloud (approx time)	UPSIDE DOWN PLATE UPSIDE DOWN
	B		in/out				3/3	no filter			
2 ⁴⁰		2 ^h 07	9.0 min @	65°F	2201K	0				NO FOG	

Dome Temp. 28°F H=629

Transparency Conditions EXCELLENT

298

Focus

Aurora in far north 21' →

Dome Temp. 23°F H=759

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
11:26	A	03 41W	35 20	2-3"	7.8-8.6	F5	6-6-6	RV TAURI	800/200	slow : dw 15 min CUT SHORT	FOG WEAK
12:32	B	01:18W	+27 34	3-4"	6.59	A0	6-6-6	SPEC. BIN.	400/200		SL. FOG FINE
13:37	A	04:01W	+46 02	2-3"	6.53	A3	6-6-6	"	400/200	SEEING IMPROVING	FDG SL. WK
14:54	B	01:59W	+24 57	1-2"	8.19	G2V	3-6-6	S.S.V.	800/300	dw. 15 min.	FINE
15:05	A	01:35E	+75 25	"	6.84	F0	6-6-6	SPEC BIN.	400/260		FINE
16:54	B	00:49E	+77 40	"	6.66	A0	6-6-6	"	400/200		FINE
17:36	A	01:44E	+43 11	"	6.26	A5	6-6-6	"	400/200		FINE
18:14	B	01:35E	+27 54	"	6.69	B5	6-6-6	"	400/135	Down - cut short	(GUIDING) SL. WK
	B		in in 10 out out				3/3	no filter			GOOD
31:20	B	MWP-2 / 9.0 min @ 68° F / 2 ADC 1K0									

Dome Temp. 29°F H=67%

Transparency Conditions *Scattered Cloud*

302

Focus

Very bad seeing

Dome Temp. 24°F H=72%

Clear again by 1:30

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
00:14E	27 33	3"	6.59	A0	6-6-6	SpBin-G2	400/170	<i>Cloud by 21^h</i>	<i>sl/weak</i>
00:25W	175 27	3"	6.84	F0	6-6-6	SpBin-G2	400/240	<i>very slow</i>	<i>Fine-guiding</i>
00:02W	+2° 45	2"-3"	3.79	A0V	10-10	SpBin-8In	40/18	<i>All plates fogged some</i>	<i>sl/strong^{guiding}</i>
MWP-2	<i>(9.0 min @ 68°F / 2400 x 1K0)</i>								

Dome Temp. 27°F $H=65\%$

Transparency Conditions EXCELLENT

304

Focus

Thick cloud by 02^h

Dome Temp. 22°F $H=72\%$

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
00:41 E	+27 37	1-2"	6.59	A0	6-6-6	SPEC. BIN.	400/200		Fine ^{sl guiding}
02:05 W	+71 50	"	7.52	A0	6-6-6	"	400/120		Fine ^{Fog}
03:04 W	+46 05	"	6.53	A3	6-6-6	"	400/200		FINE ^{sl fog.}
00:51 W	+24 13	"	8.24	52V	³⁻³ 3-33-3	S.S.V.	800/300		FINE ^{Fog.}
04:10 W	+27 35	"	6.59	A0	6-6-6	SPEC. BIN.	400/200		SL. GUIDING FINE
02:32 E	+75 28	IN	6.84	F0	6-12	"	400/99	CUT SHORT: CLOUDS	GUIDING SL WEAK

305

Date Mon. Tues. April 5/6/71 Observer Tn - Pd - Pr + 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
34256	Wγ Gem	06 05.9	23 14	G12	IIaD	13/3		19:42	22:17	A	24°W 2
34257	HD 82191	09 25.4	27 50	G12	IIaD	13/5		22:30	23:20	B	02 28 W 2
34258	HD 165898	12 06.2	+25 19	G12	"	13/3	29°	23:32	01:25	A	01:54 W 2
34259	142983	15 52.6	-13 59	G12	"	13/5		01:41	02:05	B	01:22 W 1
34260	HD 130109 129 Vir	14 41.2	+2 19	G12	"	"		02:22	02:29	A	01:22 W 0
34261	89 Her	17 51.4	26 04	"	"	"		02:40	03:18	B	1:5 E
34262	Antares	16 -	-26	"	"	"	28°F	03:32	03:38	A	00:11 E
34263	142983 (48 Lib)	15 52.6	-13 59	"	"	"		03:54	04:12	B	00:54 W -1
34264	89 Her	17 51.4	26 04	"	"	"		04:20	04:48	A	00:28 E
34265	HD 156729	17 14.2	+37 24	"	"	"		04:54	05:04	B	00:25 W
34265 F	Focus			G12	IIaD	13	28°F			B	"
34265 TI	Cal step wedge for plates										April 7

Dome Temp. 25

Focus _____

Dome Temp. 71

Hour Angle
End

Dome Temp. 29°F H=67%

Transparency Conditions *Excellent*

306

Focus

Dome Temp. 26°F H=77%

Hour	Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:07	A 04:45 W	$23^{\circ} 17'$	1.2"	~8	M3 cr14	6-6-6	G1001-Prt	800/360		sl. weak
01:20	B 02:28 W	$27^{\circ} 35'$	1"	6.6	A0	6-6-6	Spec. Bin/G2	200/100		FINE
01:35	A 01:54 W	$24^{\circ} 58'$	1"	8.19	G2V	$\begin{matrix} 3-3-3 \\ 3-3-3 \end{matrix}$	S5V	800/300		* FINE
02:05	B 01:42 E	-14 06	4"	4.72	Bp	6-6-6	G1001-PrG	100/50		* FINE
02:29	A 00:22 W	+02 05	1"	3.74	A0V	6-6-6	Bolton	40118		* FINE
03:18	C 01:57 E	26 05	2"	5.5	F5p	6-6-6	G1001-Prt	200/130		sl. FOG * FINE
03:38	A 00:11 E	—	4"	~9	MIL6	10-10	"	40/34		FINE
04:12	B 00:54 W	-14 07	3"	4.72	Bp	6-6-6	"	200/90		* FINE
04:48	A 00:28 E	+26 07	2"	5.5	F5p	6-6-6	G1001 Prt	200/130		FINE
05:04	B 00:25 W	+37 23	1.2"	4.79	A2V	10-10	Sp Bin - Bln	200/90		** sl. STRONG
						3/3	no filter			O.K.
									* fogged	
05:05									** spots of light - above blue end	

April 7/71

Dome Temp. 32° H=70%

Transparency Conditions *Excellent*

308

Focus

some haze

Dome Temp. 27°F H=63%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
19:48	A	00 23 E	06 07	2"	3.1	KOM	6-12	Late Type	40/32		FINE
21:18	B	00 58 W	53 17	1-2"	8.1	KOp	6-6-6	"	800/450	SL. FOG	FINE
22:15	A	00 44 E	34 26	1-3"	5.3	G8V	6-6-6	"	200/140		FINE
23:58	B	01 02 W	50 50	2"	6.0	K1p	6-6-6	"	200/175	FOG+DOTS	FINE
01:27	A	01 55 W	40 53	"	7.4	MOM	6-6-6	"	400/430	SL. FOG	FINE
01:52	B	00 50 E	37 32	"	4.65	FOJ	10-18	Vis Pin	200/120		FINE
03:25	A	00 44 W	37 30	2-3"	7.11	d60	6-6-6	"	400/260		FINE
4:25		00 07 W	15 02	3"	6.32	Ap	6-6-6	"	200/100		FINE
05:14	A	02 20 W	10 09	1-3"	5.4	K1p	6-6-6	Late Type	200/140		FINE
		7 April 1971		M.W.P.	2	19.0 min	@ 68° F				
		" "		"	"	"	"				

309

Date WED/THUR APRIL 7/8 1971 Observer Gz-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.
* 34275	U Mon	07 26.0	-09 34.1	G12	Ilao	13/0.3	38°F	19:30	20:40	A
34276	H.D. 82191	09 25.4	+27 50	"	"	13/0.5	"	20:45	21:21	B
34277	H.D. 63630	07 44.8	+46 12	"	"	13/0.5	"	21:24	21:55	A
34278	H.D. 91948	10 31.9	+60 38	"	"	13/0.5	37°F	22:00	23:04	B
34279	H.D. 153720	16 56.0	+75 34	"	"	13/0.5	35°F	23:13	00:29	A
34280	H.D. 82191	09 25.4	+27 50	"	"	13/0.5	34°F	00:36	01:40	B
34281	H.D. 154528	17 00.9	+77 48	"	"	13/0.5	32°F	01:49	02:39	A
34282	H.D. 172187	18 33.7	+43 08	"	"	13/0.5	32°F	02:49	03:27	B
34283	H.D. 180316	19 11.0	+27 46	"	"	13/0.5	"	03:32	04:36	A
34284	H.D. 186547	19 39.9	+13 04	"	"	13/0.5	"	04:42	05:15	B
34284F1	focus test	out on/w	w	"	"	9	30°F			B
34284T1	calibrator also used	for plates 34276 - 34284								
* Develop	as for	Dr Heavens' plates								

Dome Temp. 33°F H=67%

Transparency Conditions EXCELLENT

310

Focus

Dome Temp. 24°F H=57%

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:57W	-09 37	1-2"	6.1-8.1	F8-K0	6-6-6	RV Tan	800/200	12.15mm, CUT SHORT; VERY SLOW	weak
00:37W	+27 35	~1"	6.59	A0	6-6-6	SPEC. BIN.	400/200		FINE
02:51W	+46 05	1-2"	6.53	A3	6-6-6	"	400/200		FINE
01:13W	+60 20	"	7.37	F8	6-6-6	"	400/260		FINE
03:39E	+75° 28	"	6.84	F0	6-6-6	"	400/260		Fog FINE
04:56W	+27 36	3	6.59	A0	6-6-6	"	400/200		SL. FOG FINE
01:52E	+78° 43	1-2"	6.66	A0	6-6-6	"	400/200		SL. FOG SL. Guiding - FINE
03:23E	+43° 13	2	6.26	A5	6-6-6	"	400/200		SL. FOG SL. Guiding SL. WEAK
01:50E	+27 57	2-3"	6.69	B5	6-6-6	"	400/200	BINARY? VERY SLOW; ECLIPSING	SL. FOG SL. Guiding SL. WEAK
01:42E	+13° 15	"	6.1	B8II	6-6-6	"	400/180		SL. FOG SL. Guiding FINE
					3-3	no filter			OK

8 April 1971 9mm @ 68°F

EXPOSURE METRE STOPS FUNCTIONING SOMETIMES,

WILL WORK AGAIN IF SWITCHED OFF AND ON.

Dome Temp. 30°F H=58%

Transparency Conditions VERY HAZY

312

Focus

Dome Temp. 30°F H=64%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:04	A	04:18W	+60 20	1-2"	7.37	F8	6-6-6	SPEC. BIN	400/200	CUT SHORT; TEL. TOUCHES N. POL.	SI WEAK
	B		+75° 29'	4-5"	6.84	F0	6		100/		
										CLOSED UP AT 2:30; SEEING VERY POOR (5-10") AND SKY VERY HAZY	

313

Date Sat/Sun. April 10/11 1971 Observer Bln - 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.H.	Hour Angle End
34286	HD 53755	7 ^h 01.1	-10° 30'	G-12	IIa-O	13/3	37°F	19:33	20:27	A	02° 30W
34287	HD 71663	8 ^h 23 ^m .4	-2° 11'	"	"	"		20:30	21:39	B	02° 30W
34288	HD 77309	8 ^h 52 ^m .7	+54 41	"	"	13/15		21:44	22:15	A	02° 30W
34289	HD 79469	9 ^h 09.3	+02° 44	"	"	"		22:18	22:27	B	02° 30W
34290	HD 87504	-10 ^h 00 ^m .15 ^s	-12° 35'	"	"	"		22:30	22:52	A	01° 40W
34291	HD 93702	10 ^h 44 ^m 00 ^s	+11° 04'	"	"	"		22:57	23:24	B	01° 35W
34292	HD 103483	11 ^h 49 ^m 54 ^s	+47° 02'	"	"	13/3		23:31	00:26	A	31 35W
34293	HD 107325	12 ^h 15 ^m .3	+27 11	"	"	"		00:31	01:19	B	04° 50W
34294	HD 110411	12 ^h 36 ^m 49 ^s	+10° 47'	"	"	13/5		01:22	01:44	A	02 06W
34295	HD 124675	14 ^h 09 ^m 54 ^s	+52° 15'	"	"	13/15		01:53	02:07	B	00° 50W
34296	HD 130109	14 ^h 41 ^m 12 ^s	+02 19	"	"	"		02:11	02:19	A	02 30W
34297	HD 130841	14 ^h 45 ^m 21 ^s	-15° 38'	"	"	"		02:22	02:26	B	00° 30W
34298	HD 124897	14 ^h 11 ^m 06 ^s	+19° 42'	"	"	"		02:30	02:32	A	04 15W
34299	HD 152614	16 ^h 49 ^m 17 ^s	+10° 20'	"	"	"		02:36	02:46	B	02 07E
34300	HD 159026	17 ^h 27 ^m 20 ^s	+38° 57'	"	"	13/3		02:51	03:40	A	02 52E
34301	HD 164577	17 ^h 56 ^m 41 ^s	+01° 18'	"	"	13/5		03:44	03:56	B	01 06E

Dome Temp. 32

Focus

Dome Temp.

Dome Temp. 32°F H=57%

Transparency Conditions Some Haze low in west

314

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
00:27	A	02400W	-10° 32'	3"	6.73	B0V?	6-6-6	Sp. Bin-131u	400/120	Lots of cirrus moving in	SL WEAK
00:39	B	02409W	+02° 20'	2"	6.72	2FO	6-6-6	"	400/156		FINE SL GUIDING
00:45	A	02400W	+54 28'	"	5.64	A2u	6-6-6	"	400/200		FINE
00:57	B	02410W	+020 30'	2-3	3.88	B9.5V ₆	6-6-6	"	40/18		FINE
01:52	A	01446W	-120 53'	2-3	4.51	B8V	6-6-6	"	40/20		FINE SL GUIDING
01:34	B	01434W	+100 47'	2	5.29	A2V	6-6-6	"	200/100		FINE
02:26	A	0135W	+46° 42'	1-2	6.46	A0	6-6-6	"	400/120		SL WEAK
02:19	B	01458W	+26° 50'	1-2	$v=$ 5.47	gK2	6-6-6	"	400/192		FINE
02:14	A	0206W	+110° 27'	2	4.88	A1V	6-6-6	"	40/20	1/2" piece missing	FINE
02:07	B	00450W	+51° 58'	1-2	4.54	A7IV	6-6-6	"	80/44		FINE
02:09	A	00432W	+02° 05'	2	3.74	A0V	6-6-6	"	40/20		FINE
02:26	B	00435W	-14° 08'	2-3	2.89	A1u	6-6-6	"	40/20		FINE
02:32	A	01415W	+190 24'	2	1.36	A2III _p	9-9	"	40/32		FINE
02:46	B	01407E	+10° 15'	2	4.30	B8V	6-6-6	"	40/20		FINE
03:40	A	00452E	+38° 57'	1-2	6.35	F2u	6-6-6	"	400/156		FINE
03:56	B	01406E	+01° 39'	1-2	4.46	A1V	6-6-6	"	80/40		FINE

Dome Temp. 28.0 F 69%

Transparency Conditions lazy

316

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
04:30	A	00455E	+42012	1	5.51	B6I	6-6-6	Sp-Bin-Bln	20/100		FINE
04:39	B	00446E	+58048'	1	4.93	A1I	6-6-6	"	80/40		FINE
05:02	A	01100E	+01050	1	5.69	A2	6-12		2100/138	No Good - must have been in pin. and stuck by down upside down.	RIGHT
	B						3-3 no file				C. To RED
		M.W.P. 2 @ 68.0 F 9 min 11 April 71									
		"	"	"	"	"	"				

Dome Temp. 44°F H=53%

Transparency Conditions Scattered Cirrostratus + haze

Focus

Dome Temp. 36° H=62%

Hour Angle EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:12	B	01 ^h 46 ^m W	-2°23'	3-4	6.72	dFO	6-6-6	Sp-Bin-Bln	400/156	Clouds - Clouds Gone 21:00	SL WEAK
01:38	A	00 ^h 09 ^m E	+10°46'	3	5.29	A2V	6-6-6	"	200/60		FINE
02:07	B	02 ^h 09 ^m W	+54°27'	2	5.64	A2n	6-6-6	"	200/100		SL WEAK SL GUIDING
02:54	A	00 ^h 02 ^m W	+46°41'	2	6.46	A0	6-6-6	"	400/120		FINE
02:22	B	01 ^h 05 ^m W	+26°51'	2	^{v=} 5.47	gK2	6-6-6	"	400/320	Patchy Clouds 23:10 Cut short - cloud bank!	FINE
02:40	A	00 ^h 30 ^m W	+51°58'	1-2	4.74	A2IV	6-6-6	"	80/44	clear up about 01:30	FINE
02:05	B	02 ^h 25 ^m W	+10°27'	3	4.97	A1V	6-6-6	"	40/20		FINE
02:08	A	00 ^h 56 ^m W	+19°25'	1-2	1.30	K2IIIp	9-9	RV-std	40/32		FINE
02:19	B	00 ^h 35 ^m W	+02°03'	1	3.74	A0J	6-6-6	SpBw-Bln	40/20		FINE
03:01	A	01 ^h 05 ^m E	+38°57'	1	6.35	F2n	6-6-6	"	400/156		FINE
03:09	B	01 ^h 06 ^m E	+04°25'	1-2	4.79	B2o	6-6-6	"	200/63	Clouds	SL WEAK
	B						3-3	no filter			C TO RED
12 April 1971 M.W.P. 2 @ 68°F											

Dome Temp. ... 32°F ... 65%

Transparency Conditions good (w/ good seeing)

Focus

what happen to the door to the catwalk
It went to be shortened (at the bottom)

Dome Temp. ... 30°F ... 63%

Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
00435E	+75°30	4	6.84	F0	6-12	SPEC BIN	400/60	too slow at start	Weak
00408W	+02°05	4	3.86	A1V	6-6-6	SPEC BIN ^{BIN}	80/40		Fine
00413E	+37°23	"	4.79	A2V	6-6-6	"	80/40		Fine
00434E	+42°13	"	5.51	B6V	6-6-6	"	200/100		Fine
00414W	+02°45	"	3.79	A0V	6-6-6	"	80/40		Fine
						3-3 no filter			

Dome Temp. 31°F H=55%

Transparency Conditions ... EXCELLENT ...

322

Focus

Dome Temp. 28°F H=63%

Fantastic Aurora from 20^h → 2^h
Cloud by 02^h

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
0:37	A	00:30 W	+27 35	1-2"	6.59	AD	6-6-6	SPEC. BIN.	400/220		Fine
1:21	B	03:05 W	+46 05	"	6.53	A3	6-6-6	"	400/220		* Fine
2:27	A	04:13 E	+75 28	"	6.84	FO	6-6-6	"	400/360		* Fine
3:51	B	04:35 W	+27 35	2-3"	6.59	AD	6-6-6	"	400/300		* Fine
2:26	A	01:18 E	+77 43	"	6.66	AD	6-6-6	"	400/165	HEAVY HAZE; CUT SHORT	Weak guiding
1:17		MWP-2	for 10 min	@ 67°F						* Some fog	

Dome Temp. 37°F H=57%

Transparency Conditions HEAVY HAZE

324.

Focus

EXCELLENT BY 21^h
 MORE HAZE BY 22:30
 EXCELLENT BY 00^h

Dome Temp. 32°F H=60%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:20	A	00:09W	+27 35	~1"	6.59	A0	6-6-6	SPEC. BIN.	400/220		FINE
21:25	B	02:52W	+46 04	1-2"	6.53	A3	6-6-6	"	400/220		GUIDING FINE
23:20		04:16E	+75 28	"	6.84	F0	6-6-6	"	400/260		FINE
00:36		04:24W	+27 35	2-4"	6.59	A0	6-6-6	"	400/200		FINE
01:44		01:56E	+77 42	2-3'	6.66	A0	6-6-6	"	400/220		FINE
02:37		02:40E	+43 12	1-2"	6.26	A5	6-6-6	"	400/320		FINE
04:00	A	00:43W	+75 27	1-3"	6.84	F0	6-6-6	"	400/260		FINE
04:54	B	01:30E	+13 15	4-5"	6.1	B8IV	6-12	"	400/35	POOR SEEING-STRONG WIND DAWN CUT SHORT	SL. WK

325

Date FRI/SAT APRIL 16/17 1971 Observer G.I. - T.N. - P.M. 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.
34334	HD 51418	06 ^h 52 ^m .2	+42° 26'	G12	II ₀₀	9/5		19:45	21:05	A
34335	HD 88476	10 ^h 07 ^m .1	+28° 44'	"	"	13/3	46°F	21:26	22:34	B
34336	HD 101906	11 ^h 38 ^m .6	+24° 33'	"	"	"	"	22:39	00:41	A
34337	HD 110411	12 36.8	+10 47	"	"	13/5	45°F	01:00	01:28	B
34338	HD 130109	14 41.2	+2° 19'	"	"	"		01:42	01:48	A
34339	HD 130841	14 45.4	-15 38	"	"	"	44°F	02:01	02:06	B
34340	89 Her	17 54.2	+26 04	"	"	"		02:20	02:50	A
34341	HD 169169	18 18.3	+14 57	"	"	"		03:10	04:44	B
34341 T1	Calibrating step wedge for plates 34334-34341 & 34326-28									

Dome Temp. 53°

Focus

Dome Temp. 35°

Hour Angle
End02^h 29^m

01 44 W 12

02 22 W +2

02 09 W +1

00 26 W +

00 32 W

01 45 E

00 05 E

April 16

Dome Temp. 53° - 40°F

Transparency Conditions *Excellent*

326

Focus

Dome Temp. 35°F - 80%

From now on watch your steps going out on the catwalk

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
2:05	A	03 ^h 29 ^m W	+42° 25'	2"	6.61	A0	6-6-6	G1 Aptm	400/200		FINE
22:34	B	01 44 W	+28 27	1"-2"	8.14?	G8 III	3-3-3 3-3-3	S S V	800/350	very fast? fld drawn	J.S.L. WK
00 41		02 22 W	+24 13	1-3"	8.24	G2 V	3-3-3 3-3-3	"	800/300	Dist light off	SC. WK
01 28	B	02 09 W	+10 28	2"-3"	4.97	A1 V	6-6-6	Sp Bin-Bln	40/20		(GUIDING) FINE
1:48	A	00 26 W	+02 04	2"	3.74	A0 V	6-6-6	"	40/18		FINE
2:06	B	00 38 W	-15 51	2"	2.89	A _n	6-6-6	"	40/18		FINE
2:50	A	01 45 E 01 45 E	+26 07	3"	5.48	F5p	6-6-6	G1001-Pr+	200/130		FINE
4 44	E	00 15 E	+15 03	2"-3"	7.40	A2	6-	G1 ApEm	400/100	Some cloud cut short Down early today (EXPOSED THROUGH GLASS)	WEAK
		April 18/21		MWP-2		for 9min	@ 68°F				

327

Date set/sun April 17/18 '71 Observer Bln-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 End
34342	HD107325	12 ^h 15.3	+27° 11'	6-12	Il-a-o	13/3		22:33	23:09	B	00:16W
34343	HD 124675	14 09.9	+52 15	"	"	13/5		23:16	23:30	A	01:17E
34344	HD141553	15 44.4	-13 07	"	"	"		02:30	02:36	B	00:14W
34345	HD148857	16 25.9	+242	"	"	"	41°F	02:41	02:45	A	00:17E
34346	HD152614	16 49.3	+10 20	"	"	"	"	02:30	02:58	R	00:29E
34347	HD 159026	17 27.3	+38 57	"	"	"		03:02	04:06	A	00:20W
34348	HD161868	17 42.9	+2 45	"	"	"		04:10	04:16	B	00:05E
34349	HD167965	18 12.5	42 08	"	"	"		04:21	04:35	A	00:15E

Dome Temp. 36

Focus

Dome Temp. 35

Hour Angle
End

329

Date Sun/Mon April 18/19, 1971 Observer Blm - Tm 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
34350	HD 71663	8 ^h 23 ^m .4	-2° 11'	G-12	IIa-D	13/5		19:50	21:26	A	02 27W -
34351	HD 93702	10 44.0	+11 04	"	"	"	50°F	21:29	21:57	B	00 38W +
34352	HD 77309	8 56.7	+54 41	"	"	"	49°F	22:03	22:35	A	03 00W +
34353	HD 103483	11 49.9	+47 02	"	"	"		22:40	23 48	B	01 23W +
34354	HD 107325	12 15.3	+27 11	"	"	13/3		23:51	00:33	A	01 43W +
34355	HD 110411	12 36.8	+10 47	"	"	13/5		00:35	00:49	B	01 38W +
34356	HD 124897	14 11.1	+19 42	"	"	"	46	00:52	00:53	A	00 07W +
34357	HD 130109	14 41.2	+29	"	"	"		01:00	01:06	B	00 10E +
34358	HD 107325	12 15.3	+27 11	"	"	13/3	45°	01:09	01:47	A	02 57W -
34359	HD 124675	14 09.9	+52 15	"	"	13/5		01:50	01:58	B	01 15W +
34360	HD 170073	18 22.5	+58 45	"	"	"		02:04	02:18	A	02 37E +
34361	HD 167965	18 12.5	42 08	"	"	"		02:21	02:41	B	02 05E -
34362	HD 159026	17 27.3	+38 57	"	"	"		02:45	03:43	A	00 17E -
34363	HD 172178	18 58.5	+1 40	"	"	"		03:46	04:26	B	01 06E +
34364	HD 164577	17 56.7	+1 18	"	"	"		04:28	04:36	A	00 06W +
34364 E	FOCUS						44°F			B	01 06E +

Dome Temp. 45°

Focus

Dome Temp. 50°F

Hour Angle
End

Dome Temp. 45°F $H=69\%$

Focus

Dome Temp. 40°F $H=70\%$

Transparency Conditions *High Cirrus Clouds*

Over entire sky

Excellent for most part

330

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
21:26		02 27W	-2° 20'	2	6.72	dFO	6-6-6	Sp. Bin	400/260		FINE
21:57		00 38W	+10° 46'	"	5.29	A2V	6-6-6	"	200/100		FINE
22:35	A	03 00W	+54 27'	2-3	5.64	A2n	6-6-6	"	200/100	link broken off	FINE
23:48	B	01 23W	+46 40	3-4	6.46	AD	6-6-6	"	400/200		FINE
00:33	-	01 43W	+26 52	2-3	^{v=} 5.47	gK2	6-6-6	"	400/192		SC. WK
00:49	B	01 38W	+10 28	2-3	4.97	A1V	6-6-6	"	40/20		FINE
00:52		00 07W	+19 24	2-3	1.30	K2III _p	10-10	RV Std	40/29	Plate Holder Back loose before placed in graph	FINE
01:06		00 10E	+02 03	2"	3.74	A0V	6-6-6	Sp. Bin	40/18		FINE
01:47	A	02 57W	+26 52	2	^{v=} 5.47	gK2	6-6-6	"	400/190		FINE
01:58		01 15W	+51 59	"	4.74	A2IV	6-6-6	"	40/19		
02:18	A	02 37E	+58 49	"	4.93	A1V	6-6-6	"	40/18		FINE
02:41		02 05E	+42 10	2	5.57	B6V	6-6-6	"	200/100		
3:43		00 17E 00 20W	+38 55	"	^{v=} 6.35	F2n	6-6-6	"	400/260		FINE
4:26		01 06E	+01 50	3-4	5.68	A2	6-6-6	"	200/100		FINE
4:36	A	00 06W	+01 22	"	4.46	A1V	10-10	"	40/18		FINE
		in in	in in				3/3	no filter			NO CENTRE

#1
333

Date THUR/FRI 22/23 APRIL '71 Observer Blu-Tu 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.
34365	HD 51418	06 ^h 52.2 ^m	+42° 26'	G-12	IIa-O	9/5	45°F	19:56	20:56	A
34366	HD 107325	12 15.3	+27 11	"	"	13/3		21:00	21:24	B
34367	HD 103483	11 49.9	+47 02	"	"	13/5		21:28	22:06	A
34368	HD 107325	12 15.3	+27 11	"	"	13/3	44	22:10	22:34	B
34369	HD 110411	12 36.8	+10 47	"	"	13/5	"	22:37	22:45	A
	HD 93702	10 44.0	+11 04	"	"	"		22:48	23:04	B
34370	HD 107325	12 15.3	+27 11	"	"	13/3	42°F	23:08	00:02	A
34371	HD 107325	12 15.3	+27 11	"	"	"	"	00:04	00:28	B
34372	HD 124897	14 11.1	+19 42	"	"	13/5		00:31	00:32	A
34373	HD 130109	14 41.2	+2 19	"	"	"		00:35	00:39	B
34374	HD 130841	14 45.4	-15 38	"	"	"		00:42	00:44	A
34375	HD 141458	15 44.1	+13 01	"	"	"		00:49	01:37	B
34376	HD 107325	12 15.3	+27 11	"	"	13/3	40°F	01:41	02:09	A
34377	HD 129675	14 09.9	+52 15	"	"	13/5		02:14	02:20	B
34378	HD 170073	15 22.5	+55 45	"	"	"		02:25	02:31	A
34379	HD 159026	17 27.3	+38 57	"	"	"		02:37	03:13	B

Dome Temp. 4
Focus
Dome Temp.

Hour Angle
End

03:47W
01:10E
00:03W
10:00
00:10E
2:00W
01:30W
01:55W
00:04E
00:20E
00:17E
00:25E
12:36W
01:54W
02:06E
00:31E

Dome Temp. $40^{\circ}F$ $H=58\%$

Transparency Conditions *Excellent - Windy*

334

Focus

Dome Temp.

April 21/71 Secondary minimized

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
01:56	A	03 43W	$42^{\circ} 28'$	2"	6.61	A0	6-6-6	G1 Ap + m	400/200		(GUIDING) FINE
01:24	B	01 10E	26 53	"	$V=17$ 5.47	gK2	6-6-6	Sp. Bin	400/200		FINE
02:06	A	00 03W	46 44	3	6.46	A0	6-6-6	"	400/200		(GUIDING) FINE
02:34	C	00 00.	26 53	2-3"	$V=5.47$	gK2	6-6-6	"	400/200		FINE
02:45	A	00 10E	+10 29	3-4	4.97	A1V	6-6-6	"	40/18		FINE
03:07	F	02 00W	+10 48	"	6.29	A2V	6-6-6	"	200/100	<i>broken - discarded</i>	
03:02	-	01 30W	+26 54	2"	$V=$ 5.47	gK2	6-6-6	"	200/250	<i>Long exposure for K₂ emission (V sl fog)</i>	STRONG
03:28	-	01 55W	"	"	"	"	6-6-6	"	200/100		FINE
03:32	-	00 04E	+19 25	"	1.30	K2H _p	10-10	RV Std.	40/28		STRONG
03:39	B	00 20E	+2 ^o 05'	2-3	3.74	A0V	10-10	Sp Bin	40/19		SL. STR
03:44	A	00 19E	-15 51	4	2.89	A _m	10-10	"	40/18		SL. STR
03:37	B	00 25E	+12 55	2-3"	6.80	A0	6-6-6	"	400/200	<i>(sl fog)</i>	FINE
03:09	-	03 36W	+26 53	3	$V=$ 5.47	gK2	6-6-6	"	400/200	<i>(v sl fog)</i>	FINE
03:20	C	01 54W	+52 01	2	4.74	A7V	10-10	"	200/90		SL. STR) FINE -
03:31	-	02 06E	+58 51	2	4.93	A1V	10-3	"	40/19		FINE
03:13	E-	00 31E	+38 52	2	$V=$ 6.35	F2n	6-6-6	"	400/260		FINE

#2

335

Date 22/23 April 71 Observer Blm - In 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
34380	¹⁸⁷⁴⁵⁹ HD 182519	19 45.0	+33 17	G-12	IIa-0	13/15		03:18	03:46	A	02 15'
34381	HD 167965	18 12.5	+42 08	"	"	"		03:50	04:00	B	00 28E
34382	HD 177178	18 58.5	+1 40	"	"	"		04:05	04:29	A	00 46E
34383	HD 164577	17 56.7	+1 18	"	"	"		04:32	04:38	B	59 24W
34383F	Focus			"	"	13	39°F			B	
34383T1	34365 - 34375										20W 2/0
T2	34676 - 34383										

Dome Temp. —

Focus —

Dome Temp. 35

Hour Angle
End

337

Date 23/24 April '71 Fri/Sat Observer Blu - Tu 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
34384	HD93702	10 49.0	+11 04	G-12	IIa-D	13/5	49°F	19:50	20:06	A	00 54 E
34385	HD79469	09 09.2	+2 44	"	"	"		20:09	20:13	B	00 42 W
34386	HD73262	08 32.4	+6 03	"	"	"		20:16	20:20	A	01 33 W
34387	HD74280	08 38.0	+3 45	"	"	"		20:23	20:29		01 35 W
34388	HD87504	10 00.3	-12 35	"	"	"		20:32	20:41	A	00 26 W
34389	HD103483	11 49.9	+47 02	"	"	"	48°F	20:47	22:24	B	00 19 W
blank plate from unexp box may be fogged — test plate OK											
34389 71	calibration for plates	34384 - 34389							26 Apr		20 19 W

Dome Temp. 41°F

Focus

Dome Temp.

Dome Temp. 41°F H=53%

Transparency Conditions Bad - Many Clouds
Some holes

338

Focus

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20' 06	A	00 54E	+ 10 49	1-2	5.29	AZV	6-6-6	Sp. Bin	200/100		FINE
20' 13	B	00 48W	+ 2 34	2	3.82	B9.5V _p	10-10	"	40/19		FINE
20' 20	A	01 33W	+ 5 56	"	4.14	A0V	10-10	"	40/19		FINE
20' 22		01 35W	+ 3 35	1-2"	4.10	B3V	10-10	"	40/	(very very sl/fog)	FINE
20' 41	-	00 26W	- 12 48	2-3	4.51	B8V	6-6-6	"	200/44	Clouds	FINE
20' 34	B	00 19W	+ 46 39	1-2	6.46	A0	6-6-6	"	400/180	THICK CLOUDS 20:50 Closed 10:30	(GUIDING) SI WK
20' 44		WWP-2 / 9.0 min @ 68°F / 2700 1K0									

339

Date MON/TUES APRIL 26/27 1971 Observer Gz/Hm 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.	
34390	HD 153720	16 56.0	+75 34	G12	Ilao	13/0.5	43°F	23:46	01:16	A	
34391	HD 154528	17 00.9	+77 48	"	"	13/0.5	42°F	01:34	02:30	B	
34392	HD 173187	18 33.7	+43 08	"	"	13/0.5	41°F	02:38	03:10	A	
34393	HD 166842	18 07.4	+25 32	"	"	13/0.3	"	03:15	04:20	B	
34 39371	calibration step wedge for plates 34390 - 34391								27 Apr		

Dome Temp. 37°
Focus _____
Dome Temp. 37°

Hour Angle
End
29 E +
30 E +
31:95 E =
32 11 1 2

Dome Temp. 38°F H=759

Transparency Conditions GOOD, SOME HAZE BY 23:30 340

Focus

Dome Temp. 37°F H=829

Dec Slew not working (broken pin)
(replaced by smaller pin)

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
1:00	A	01:38 E	+75 30	2-3"	6.84	FO	6-6-6	SPEC BIN.	400/260		FINE
2:00	B	00:27 E	+77 46	"	6.66	A0	6-6-6	"	400/220		
3:00	A	01:25 E	+43 15	2"	6.26	A5	6-6-6	"	400/220		Fine
4:00	B	00:11 W	+25 39	1-2"	8.14	KIII	3-3-3	S.S.V.	800/300	SEEING BETTER	
											DOUBLE EXPOSURE

341

Date Fri/Sat APRIL 30/1 Observer Dj/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 Ecl	D	
34394	HD 82191	09 25.4	+27° 50	G-12	IIc0	13/15	500F	20 29	21 14	A	2 ^h 50W	2	
34395	HD 88476	10 07.1	+28° 44	"	"	13/13	"	22 25	23 41	B	3 ^h 47W	2	
34396	HD 101906	11 38.6	+24° 33	"	"	"	480F	23 49	01 41	A	4 ^h 10W	2	
34397	AC HER	18 26.0	+21° 48	"	"	"		01 55	03 20	B	0 ^h 52E	2	
34398	R SCT	18 42.1	-05° 49	"	"	"	"	03:30	03:48	A	0 ^h 40E	3	
34399	HD 167965	18 12.5	+42° 08	"	"	13/15		03:55	04 08	B	0 ^h 09W	3	
34400	HD 191610	20 05.7	+36° 33	"	"	"		04:12	04:20	A	0 ^h 30E	3	
34400 F1	founder	at end/wire		G12	IIc0	9	440F			B			
34400 r.	calibration	step wedge for plates 34394-34400										3 May 71.	2012/9.

Dome Temp. 43.0F

Focus

Dome Temp. 46.0F

Dome Temp. 43°F 62%

Transparency Conditions *clouds at beginning of night
excellent after 22:20*

342

Focus

Dome Temp. 40°F 77%

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
21:4	A	2 ^h 00W	+27° 40'	2	6.59	A0	6-6-6	SPEC. BIN. ^{G2}	400/220	<i>clouds between 21:14-22:15</i>	(GUIDING) FINE
23:4	B	3 ^h 47W	+28° 25'	2	8.14	G8	3-3-3 3-3-3	^{5u/} STD VEL	800/300		SL. WK
01:41	A	4 ^h 16W	+24° 13'	2	9.24	G2	3-3-3 3-3-3	"	800/300		SL. WK
03:20	B	0 ^h 52E	+21 52	2	~8.5	~G5	3-3-3 3-3-3	RV Tan	800/320		SL. WK
03:48	A	0 ^h 40E	-05° 43'		~7.5	~G5	3-3-3 3-3-3	"	800/320		SL. WK
04:0	B	0 ^h 09W	+42° 12'		5.51	B6V	6-6-6	SPEC. BIN. ^{B6V}	200/100		(GUIDING) SL. STRONG
04:20	A	01 ^h 30E	+36° 47'		4.82	B3Vc	6-6-6	"	200/100		SL. STR
	B						3-3	<i>no filter</i>			C TO R
slugg		200P 2/	9.0 min @	68°F	1.270	C1K0					

343

Date May 3-4 1971 Observer Bl./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
34400	HD 77309	09^h 56.7	+54° 41'	G-12	IIa-O	13/5	47°F	20:27	20:40	A	
34401	HD 93702	10 44.0	+11 04	G-12	IIa-O	13/5		20:11	20:33	A	21:40
34402	HD 107325	12 15.3	+27 11	"	"	13/3		22:37	23:06	B	1:15W
34403	HD 110411	12 36.8	+16 47	"	"	13/5		23:10	23:21	A	1:15W
34404	HD 103483	11 49.9	+47 02	"	"	"		23:26	00:05	B	2:40W
34405	HD 124675	14 09.9	+52 15	"	"	"		00:09	00:16	A	0:32W
34406	HD 130841	14 45.4	-15° 38	"	"	"		00:21	00:24	B	2:03W
34407	HD 141458	15 44.1	+13° 01	"	"	"		00:29	01:09	A	2:10E
34408	HD 124897	14 11.7	+19 42	"	"	"		01:12	01:13	B	0:42E
34409	HD 130109	14 41.2	+2 19	"	"	"		01:17	01:21	A	0:24W
34410	HD 152614	16 49.3	+10 20	"	"	"		01:24	01:29	B	00:55E
34411	HD 159026	17 27.3	+38 57	"	"	"		01:33	02:29	A	6:03E
34412	HD 167965	18 12.5	+42 08	"	"	"		02:32	02:47	B	0:22E
34413	HD 176073	18 20.5	+58° 45	"	"	"		02:52	03:00	A	00:55E
34414	HD 187459	19 45.0	+33 11	"	"	"		03:05	03:39	B	2:14E
34415	HD 164577	17 56.7	+01° 18'	"	"	"		03:43	03:51	A	6:02W

Dome Temp. 40

Focus

Dome Temp.

Dome Temp. 50°F 57%

Focus

Dome Temp.

Transparency Conditions Many Clouds - Very Bad
good after 22:30

344

Ending Time E.S.T.	P.R.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:40	A		+54° 26'	4	5.64	A2n	6-	Sp. Bin - Blu	200/	clouds capped 20:40	
03:33	A	24 14W	+10° 47'	3-4	5.29	A2V	6-6-6	Sp. Bin - Blu	200/100		FINE
03:06	B	14 15W	+26° 50	2-3	^{V=} 5.47	gk2	6-6-6	"	400/200		FINE
03:21	A	14 10W	+10° 28	2-3	4.97	A1V	6-6-6	"	40/18		FINE
00:05	B	24 40W	+46° 42	2-3	6.46	A0	6-6-6	"	400/200		O.S.L. WK
02:16	A	04 32W	+51° 59'	2	4.74	A7IV	6-6-6	"	40/19		FINE
02:24	B	04 03W	-15° 51	3	2.89	Am	10-10	"	40/18	would fit in exposed box so put in diagonally	FINE
01:29	A	00 10 E	+12° 53	1-2	6.80	A0	6-6-6	"	400/200		FINE
01:03	B	01 428W	+19° 25	2	1.3	k2III ₀	10-10	R.V. 50	40/30		SL. GUIDING FINE
01:21	A	01 04W	+2° 05'	2	3.74	A0V	6-10	Sp. Bin	40/18		FINE
01:29	B	00 455E	+10 17	2	4.30	B38V	6-6-6	"	40/18		FINE
02:29	A	00 32E	+38° 56'	2	^{V=} 6.35	F2n	6-6-6	"	400/200		FINE
02:17	B	01 00E	+42° 12'	2	5.51	B6V	6-6-6	"	200/100		
03:20	A	00 455E	+58° 49'	2	4.85	A1V	6-6-6	"	40/18		
03:39	B	01 140E	+33° 25'	2	6.66	B0.5I ₆	6-6-6	"	400/190		
03:51	A	00 420W	+01° 23		4.46	MIV	6-6-6	"	40/17		FINE

345

Date May 3/4 1971 wlt Observer Bln/Rj Julian Day

Dome Temp. _____
 Focus 96
 Dome Temp. 2

Plate No.	Object	R.A. 1900	Declination 1900	Inst.	Emulsion	Slit	Temp.	Starting Time E.S.T.	Ending Time E.S.T.	P.H.
34416	HD 141458	1544.1	+13°01	"	"	"		03:55	04:21	B
34416F1	focus test	out out/w/w		G-12	Ilao	9	40°F			B

Hour Angle
 End

23.52W-1

Dome Temp.

Transparency Conditions

Focus 96-R

Dome Temp. 36.0 F

65%

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
24.21	B	03:02W	+12°53'	3-4	6.80	A0	6-12	Sp. Bw. Blk.	400/100	Over develop please	WEAK
	B						3-3	w/ filter			
										4 May 171	
										FOCUS CHANGED	
										FROM 96-R TO	
										40-R	
										(previous to 29 Dec 1970)	

347

Date TUES/RED MAY 4/5 1971 Observer G2-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
34417	HD 82191	09 25.4	+27 50	G12	BAKED: 48 ^h Ilao	13/0.5	50°F	20:03	20:27	A	01:30W
34418	HD 63630	07 44.8	+46 12	"	"	13/0.5	"	20:30	21:02	B	03:40W
34419	HD 105898	12 06.2	+25 19	"	"	13/0.3	50°F	21:08	22:18	A	04:10W
34420	HD 82191	09 25.4	+27 50	"	"	13/0.5	48°F	22:22	22:59	B	44:03W
34421	HD 153720	16 56.0	+75 34	"	"	13/0.5	47°F	23:10	00:18	A	03:05E
34422	HD 154528	17 00.9	+77 48	"	"	13/0.5	46°F	00:24	01:03	B	07:25E
34423	HD 172187	18 33.7	+43 08	"	"	13/0.5	45°F	01:12	01:46	A	02:17E
34424	HD 180316	19 11.0	+27 46	"	"	13/0.5	"	01:54	02:41	B	03:00E
34425	HD 153720	16 56.0	+75 34	"	BAKED 16 ^h Ilao	13/0.5	44°F	02:50	03:55	A	01:36E
34426	HD 186547	19 39.9	+13 04	"	"	13/0.5	"	04:06	04:23	B	00:47E
34426F1	focused	out of view		G12	Baked 16 ^h Ilao	9	44°F			B	

Dome Temp. 40

Focus 40

Dome Temp. 40

Hour Angle
End

Dome Temp. 42°F 48%

Transparency Conditions SOME CLOUD → EXCELLENT

Focus 40-R

Dome Temp. 40°F 68%

^{4 was} PLEASE TAKE A FOCUS PLATE.
(I'd think about it)

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
02:29	A	01 ^h 30 ^m W	+27° 36'	~1"	6.59	A10	6-6-6	SPEC-BIN	400/150	plunger for focustest was 1/2 way out	* V. SL STR
03:02	B	03:44 ^m W	+46° 06'	1-2"	6.53	A3	6-6-6	"	400/200		* SL STR
03:18	A	0 ^h 41 ^m W	+24° 58'	"	8.19	A2	³⁻³⁻³ 3-3-3	S.S.V.	800/300		* V.SL STR
03:59	B	4 ^h 03 ^m W	+27° 35'	"	6.59	A0	6-6-6	SPEC. BIN	400/200		* STR
04:18	A	02 ^h 05 ^m E	+75° 28'	2-3"	6.84	F0	6-6-6	"	400/260	POOR SEEING	* STR
05:03	B	01 ^h 25 ^m E	+77° 43'	"	6.66	A0	6-6-6	"	400/200		* (SL) STR
05:46	A	02:17 ^m E	+43° 14'	1-2"	6.26	A5	6-6-6	"	400/200	SOME CLOUDS	SL FOG STR
06:41	B	02:00 ^m E	+27° 58'	2-3"	6.69	B5	6-6-6	"	400/200		* STRONG
07:55	A	01:34 ^m W	+75° 29'	"	6.84	F0	6-6-6	"	400/260	AT TIMES SEEING ~10"	SL FOG SL STR
08:23	B	00:47 ^m E	+13° 16'	1-2"	6.1	B8 ^{IV}	6-6-6	"	400/130		* FINE
	B						3-3	no field			GOOD
										* FOG	

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Date *wed/Thurs May 5/6 1971* Observer *Prt-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 End	
34427	HD 82191	09 25.4	+27 50	G12	IIaO	13/1.5	53°F	20:10	21:02	A	0210W+	
34428	HD 93702	10 44.0	+11 04	"	"	"	"	21:09	21:37	B	0124W+	
34429	HD 110411	12 36.8	+10 47	"	"	"	"	21:50	22:10	A	0005W+	
34430	HD 130109	14 41.2	+2° 19'	"	"	"	52°F	22:18	22:30	B	0138E+	
34431	HD 130841	14 45.4	-15° 38'	"	"	"	"	22:38	22:46	A	0127E	
34431F	Focus						52°F			B		
34431T1	calibration	step wedge for plates 34427-34431								6 May		2002/

Dome Temp. 47°F $H=6770$

Transparency Conditions *Hazy - Clouding in*

Focus

Dome Temp. 45°F $H=7370$

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
21:02	A	0210W	$+27^{\circ}36'$	2.5"	6.59	A0	6-6-6	SPEC-BIN	400/200		SL. WK
21:37	B	0124N	$+10^{\circ}47'$	2-3	5.29	A2V	6-6-6	SpBin-Blm	200/100		SL. WK
22:10	A	0005W	$+10^{\circ}28'$	1"-10"	4.97	A1V	6-6-6	"	200/100	seeing terrible	FINE
22:30	B	0138E	$+2^{\circ}05'$	3"-6"	3.74	A0V	6-6-6	"	200/95		FINE
22:46	A	0127E	—	5"-10"	2.89	A _m	10-10	"	200/90	Cloud by 23 ^h	FINE
	B		in in / out out				3/3	no filter			GOOD
6 days		MWP-2 / 9.0 min @ 68°F / 2 + 20 C 1 K 0									

351 #1

Date Thurs/Fri May 6/7 1971 Observer Blair-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.
34432	HD 107325	12 15.3	+27 11	G-12	IIa-D	13/3	56°F	20:06	20:26	A
34433	HD 77309	08 56.7	+54 41	"	"	13/5		20:31	20:45	B
34434	HD 163483	11 49.9	+47 02	"	"	"		20:51	21:19	A
34435	HD 107325	12 15.3	+27 11	"	"	13/3		21:22	21:40	B
34436	HD 124897	14 11.1	+19 42	"	"	13/5		21:43	21:44	A
34437	HD 141458	15 44.1	+13 01	"	"	"	55°F	21:50	22:40	B
34438	HD 107325	12 15.3	+27 11	"	"	13/3		22:45	23:13	A
34439	HD 130109	14 41.2	+2 19	"	"	13/5		23:16	23:20	B
34440	HD 124675	14 09.9	+52 15	"	"	"		23:26	23:32	A
34441	HD 134646	15 05.9	+63 30	"	"	"		23:35	00:53	B
34442	HD 107325	12 15.3	+27 11	"	"	13/3	52°F	00:56	01:26	A
34443	HD 159026	17 27.3	+38 57	"	"	13/5		01:31	02:13	B
34444	HD 152614	16 49.3	+10 20	"	"	"		02:18	02:22	A
34445	HD 164577	17 56.7	+1 18	"	"	"		02:27	02:34	B
34446	HD 177178	18 58.5	+1 40	"	"	"		02:38	03:06	A
34447	HD 141458	15 44.1	+13 01	"	"	"		03:09	03:51	B

Dome Temp. 49

Focus

Dome Temp.

Hour Angle
End

Dome Temp. 49°F H=5170

Transparency Conditions Excellent

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Focus

Cloudy Looking Aurora

Dome Temp.

Ending Time EST.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
20:26	A	D1 13 E	+26° 52'	1-2	V=5.47	gK2	6-6-6	Sp. Bin-Bn	400/200		Fine
20:45	E	02 23 W	+51 29	2-3	V=5.64	A2n	6-6-6	"	400/100		Fine guiding
21:19	A	00 05 W	+46 42	2	6.46	A0	6-6-6	"	400/200		Fine sl guiding
21:40	B	00 01 W	+26 52	2	V=5.47	gK2	6-6-6	"	400/200		Fine
21:44	A	01 50 E 02 10 E	+19 25	2	1.30	K2 III	10-10	PV Std	40/28		Fine
22:40	C	02 27 E	+12 52	"	6.80	A0	6-6-6	Sp. Bin-Bn	400/200		Fine
23:13	A	01 35 W 00 44 E	+26 54	3-4	V=5.47	gK2	6-6-6	"	400/200		Fine
23:20	B	00 16 E	+2 05	2"	3.74	A0 IV	6-6-6	"	40/19		Fine
23:32	A	00 00	+51 59	"	4.74	A1 IV	6-6-6	"	40/19		Fine
00:53	B	00 25 W	+63 17	3	V=6.75	F2	6-6-6	"	400/260		Fine
1:26	A	03 48 W	+26 53	3-5	V=5.47	gK2	6-6-6	"	400/200		vsl weak Fine
2:13	B	20 35 E	+38 58	2-4'	V=6.35	F2n	6-6-6	"	400/260		Fine sl guiding
2:22	A	00 10 W	+10 18	2-3"	4.30	B3 V	6-6-6	"	40/15		Fine
2:34	B	00 45 E 00 45 W	+1 23	3-8	4.46	A1 V	6-6-6	"	40/18		Fine
2:06	A	01 15 E	+1 52	3-5	5.68	A2	6-6-6	"	200/100		Fine
3:51	B	02 45 W	+12 54	"	6.80	A0	6-6-6	"	400/200		Fine

#2

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Cont.
 Date Fri May 7 1971 Observer Bln-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 End
34448	HD 191610	20 05.7	+36 33	G-12	IIa-O	13/5		03:55	04:01	A	01 26E
34449	HD 198183	20 43.5	+36 07	"	"	"		04:03	04:07	B	02 00E
34450	HD 161868	17 42.9	+245	"	"	"		04:10	04:14	A	01 24W
34450 F	Focus Test			"	"	13	49°F			B	

Dome Temp

Focus JOK

Dome Temp 4

Dome Temp.

Transparency Conditions

Focus *40R 5/8*

Dome Temp. *42° 50/8*

Ending Time E.S.T.	P.H.	Hour Angle End	Declination	Seeing	Ptg. Mag.	Sp.	Comp.	Program	Exp. Mtr.	REMARKS	Quality
4:01	A	01 26 E	+36° 51'	2"	4.82	B35Ic	6-6-6	2p, Bin	80/36		Fine slight dim
4:07	B	02 00 E	+36° 29'	"	4.42	B35I	6-6-6	"	80/37		Fine
4:14	P	N 09 W	+02 48	"	3.79	A05I	10-10	"	70/18		Fine
							3/3	no filter			
<p><i>D.W. May 7 - 9.0 min @ 64 in WWT. 2</i></p>											

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Ending Time P.H.
EST.

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Pr 1.

20 AUG

35591

Pr 2.

20 OCT

35592

Pr 3

10 FEB

16 JUN