

Frame prefix: SP97C

Telescope: 61'

Sheet #: 1

Date: MAR 28/29

Focus:

Iris: 2.0

Humidity: 55%

Tailpiece: *rotated to 60°*

Balance: 90

Temp: 40/44

Observers: Fink, Hicks, Fung, Gandy, Fairlight

Guidepoint: (396.5, 397)

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA $\alpha$	Dec $\delta$	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
001	HALE-BOPP	<del>1.0</del>	0.25	58K	2:18	1:19:57	45:23:05	2.68	Telescope tailpiece rotated
002	"	3.0	"	57K	2:20			2.70	to 60° for HALE-BOPP
003	"	2.0	"	38K	2:22			2.72	
004	"	"	"	38K	2:23			2.74	
005	"	"	"	38K	2:24			2.76	
006	"	"	"	38K	2:25			2.78	
007	"	"	"		2:25	1:19:56	45:23:01	2.80	
008	"	200	"	23K	2:32	1:20:00.4	45:26:18	2.95-3.02	FOUND TAIL BUT STILL IN GUIDER FIELD
009	"	"	"	22K	2:37	1:20:02	45:26:15	3.05-3.13	Telescope <sup>we finally recovered</sup> ran away
010	Wirtanen	60	0.25	<sup>NUT 80</sup> 2240/1440/1200	05:13:21	<del>08:29:47</del>	<del>20:40:17</del>	2.39	+04:53 Counts did increase last run
011	"	"	"	<sup>NUT 80</sup> 2240/1440/1200	5:24	"	"	2.61	+05:03 PA=62.5
012	"	"	"	2200/1400/1200	05:30:44	20:52.6	40:44	2.88	05:13
013	"	"	"	2130/1440/1200	05:47			5.24	2:5:24
014	Wirtanen	1200	0.25	5940/1450/1200	09:07	08:09:21	21:52:12	1.05	PA = 44.2
015	"	"	"	5130/1520/1300	09:27	"	"	1.07	PA = 56
016	"	"	"	5620/1530/1310	09:49	"	"	1.11	→ 1.15 = 60.3
017	CAMP BS 4027	50	1.00	4700	05:55	10:16:18	28:41:47	1.00	
018	"	20	"	3200	05:56			1.01	
019	"	"	"	38K	05:57				PA = 56°
020	"	"	"						
021	"	"	"	30K				1.01	

Frame prefix: SPA 7C

Telescope: 61"

Sheet #: 2

Date: MAR 28/24

Focus:

Humidity:

Iris:

Tailpiece:

Balance:

Temp:

Observers: Fink, Hicks, Gunders, Fens

FR1

Guidepoint: (346.5, 347)

the  
Balk

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA $\alpha$	Dec $\delta$	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
022	BS 2141	40	1.0	40K	5:24	6:05:57	35:23:17	1.87	
022	"	"	"	51K	5:47			1.88	
024	"	30	"					1.90	
025	"	"	"	26K	5:49			1.91	
026	RS 4534567	0.10	1.0	34K	5:50	11:48:57	14 35 08	1.07	
027	"	"	"	32K	5:57			1.07	
028	"	"	"	47K	5:58			"	
029	"	"	"	58K				1.07	
030	RS 2141 Comp	300	"	32K	6:05	06 05 58	35 23 12	2.10	
031	"	"	"	40K	6:17			2.25	
032	"	"	"	34K	6:18		"	2.27	
033	"	"	"	38K	6:19	"	"	2.24	Parallactic Angle
034	"	"	"	31K	6:31	"	"	2.50	PA=66°
035	"	"	"	38K	6:32	"	"	2.51	
036	"	"	"	50K	6:37	"	"	2.60	
037	"	"	"	"	6:38	"	"	2.62	
038	"	"	"	30K	6:42	"	"	2.70	
039	"	"	"	30K	6:43	"	"	2.72	
040	"	"	"	37K	6:44	"	"	2.74	
041	"	"	"	28K	6:45	"	"	2.76	
042	"	"	"	31K		"	"	2.78	
043	"	"	"	33K	6:46	"	"	2.80	Parallactic Angle
044	"	"	"	32K	6:50	"	"	2.90	PA=69
045	"	"	"	33K	6:51	"	"	2.93	
046	"	"	"	31K	7:04	"	"	3.30	
047	"	"	"	30K	7:05	"	"	3.34	
048	<sup>1036</sup> GAMMED	1200	0.5	8411/2292 1427	7:39	12:40:16.0	-19:27:25	1.61	
049	"	"	"	8811/2155/1413	8:02			1.63	
050	"	"	"	8459/2111/1241	8:23	12:40:15	-19:27:11	1.66	
051	"	"	"	8107/2045/1260	8:44			1.71	1.78



Frame prefix: SP96C

Telescope: 61"

Sheet #: 4

Date: April 19/02

Focus: 2540  
 Iris: 2.0  
 Tailpiece: white + 60°  
 Balance: 4.0  
 Humidity: 68%  
 Temp: 24/40

Observers: Hank Lynch, Feng

Traced night

Guidepoint:

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA $\alpha$	Dec $\delta$	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
056	Hale-Bopp	2.0	0.25	2500/1615	2:17:20	01:57:12.5	44 07:12.1	2.34	+05:20 PA=60.6
057	"	5.0	"	4600/1125	19:11	"	"	2.37	tailpiece white + 60° photo not valid $\geq 10\%$
058	"	"	"	5500/1135	20:32	"	"	2.39	look clean though
059	"	2.0	"	55K	22:08	"	"		
060	"	"	"	31K	2:23	15.4	03.9	2.43	
061	"	2.0	"	14K	2:37	01:57:16.9	44 10:52.5	2.68	Photo taken here, cloud shifted in with fr. tail in cloud. no cloud in
062	"	"	"	11.6K	2:42			2.70	clouds may find at
				heavy clouds	constantly	moving through	zone	fr. up.	
063	Wirtan	6.0	0.25	2200/1200/1500	2:58	03:42:27.7	22:14:38	2.06	photo not valid due to cloud PA=64.1 mag 14.55
064	"	"	"	2700/1200/1500	3:09	"	"	2.22	04:16 64° good exp.
0		2.0	2	V+R w/ 1 H $\alpha$					exposure in between.
065	"	6.0	"	2700/1800/1600	5:42	03:42:32.4	22 20 28.5	2.92	05:19 PA=62
066	"	"	"	2700/1800/1700	5:52			5.26 <del>5.18</del> 05:24	14A = 61.7 not perfect
067	W.62	12.0	"	560/1800/1600	4:11:20	08:15:43	+21 43 17	1.06	PA=54°
068	"	"	"	6300/1800/1600	4:32	"	"	1.09	01:30 = 58.1°
069	"	"	"	6730/1800/1600	4:53	"	"	1.13	
070	"			6460/1760/1600	5:14	"	"	1.18 $\rightarrow$ 1.24	PA=64.7°
071	RS 2141	3.0	1.00	27K		06:05:57	35:25:06	2.08	+05:22 PA=64

Frame prefix: SP96C

Telescope: 61"

Sheet #: 5

Date: April 01/102

Focus:

Humidity:

Iris:

Tailpiece:

Balance:

Temp:

Guidepoint:

Observers: Fink, Lyns, Fung

The night

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA $\alpha$	Dec $\delta$	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.	
072	BS 2141	4.0	1.0	55K	5:10			2.10		
073	BS A Cap	"	"	32K	5:52	06:05:57.9	+35:23:13.9	2.11		
074	"	"	"	31K	5:57	"	"	2.19		
075	"	"	"	30K	5:58	"	"	2.20	← head of H <sub>2</sub> O rings	
076	"	"	"	32K	6:22	"	"	2.04	) not photometric $\pm 10\%$	
077	"	"	"	27K	6:24	"	"	2.06		
078	"	"	"	28K	6:26	"	"	2.20	) pulsar	
079	"	"	"	27K	6:27	"	"	2.22		
080	"	"	"	32K	6:28	"	"	2.25		
081	"	"	"	33K	6:29	"	"	2.27		
082	"	"	"	38K	6:35	"	"	2.94	PA = 68°	
083	"	"	"	29K	6:37	"	"	2.98		
084	"	"	"	38K	6:41	"	"	3.10	) tan $\gamma$ ring visible + 60	
085	"	"	"	40K	6:43	"	"	3.13		
086	"	"	"	39K		"	"	3.30		
087	"	"	"	32K	6:49	"	"	3.29		
088	"	"	"	28K	6:53	"	"	3.46		
089	"	"	"	35K	6:58	"	"	3.50		
090	BS 4534	0.10	"	28K	6:59	11:48:55	14:35:10	1.05		
091	"	"	"	25K	7:00	"	"	1.06		
092	"	"	"	33K		"	"	1.06		tan $\gamma$ ring visible + 60
093	"	"	"	35K	7:02	"	"	1.06		
094	BS 5185	2.0	"	21K	7:08	13:46:49	06:21:39	1.18		
095	"	2.0	"	28K	7:10	"	"	1.17		
096	"	"	"	32K	7:11	"	"	1.17		
097	"	"	"	29K	7:12	"	"	1.17		
098	"	"	"	25K	7:12	"	"	1.17		
099	1685 Toro	1200	0.5	2992/1573/1284	7:56	11:56:43	-22:33:06	1.89	LHA = 1:19 PA = +19.9	
100	"	"	"	2774/1619/1291	8:16	11:56:39	-22:32:38	1.99	LHA = 1:40 PA = +24.5	
101	"	"	"		8:37	11:56:38	-22:32:22	2.12	LHA = 2:00 PA = +28.8	
102	BS 5968	1.5	1.0	40K	9:20	16:00:55	33:18:55	1.04		

103

"

"

"

9:21

"

"

"

"

← system crashed

104

"

"

"

9:29

"

"

"

1.03

105

"

"

"

"

"

"



Frame prefix: FR97C

Telescope: 61"

Sheet #: 1

Date: UT March 29

Focus: 3600

Iris: 300

Humidity: 58%

Tailpiece: +60° rot

Balance: → N30° from up Temp: 40/44 F

Observers: Fink, Hicks, Fevig, Grundy 1997

Guidepoint: (396.5, 397)

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds etc.
/	Hale-Bopp	0.2	B/dichr	55 k peak 1800 k phot.	~2:20	1:19:52	45:23:06	2.66	lots of cirrus
1	"	0.2	"		2:25			2.78	
2	"	0.2	"	(saturated)	2:36	1:20:01	45:26:17	2.97	move down tail
/				note: filter in FITS header is wrong					
3	"	2sec	H <sub>2</sub> O <sup>+</sup>						
4	"	2sec	"					3.25	
5	"	10sec	"	saturated	3:45			3.27	
6	"	"	"	"			45:26:07.8	3.32	
7	"	60sec	"	very saturated			<del>3:38</del>	→ 3.39	
<del>8</del>	<del>P/WIRT</del>	<del>30</del>	<del>B/DI</del>	<del>20k phot</del>				<del>2.39</del>	
8	Wirtanen	"	"	Peak = 600	~3:30	3:24:50	20:40:38	2.70	LHA = 5+ hours west
9	Wild 2	"	"	Peak = 1500 Phot = 51 k	~4:15	8:09:41	21:52:13	1.05	LHA = 1 hour west
10	"	"	"		5:10	8:09:44	21:52:04	1.15	
/	Mueller 97D1	"	"			10:22:58	54:20:28		Could not find it
/						New Guidepoint			→ (395.7, 397.4)
/									VME crash
/	10 Ganymed	30	B/dichr	Peak = 1100 Phot = 22 x					
/	36711 Dionysus	30	B/Dc	2400 phot					Some clouds

guiding:  
N = 30°  
from up

512<sup>2</sup>

256<sup>2</sup>

"

↓ W  
3.9 Hz

Crappy sky conditions

Frame prefix: FR97C

Telescope: 61"

Note: times in header are way off

Sheet #: 2

Date: UT April 2

Focus: 3550

windy, gusty

Iris: 300

Humidity: 68%

Tailpiece: rotate +60°

Balance: Tail heavy

Temp: 40/34 F

Guidepoint: (396.7, 397.4)

Observers: GRUNDY, FEVIG, FINK 1997

512<sup>2</sup>

256<sup>2</sup>

Exp. #	Object	Exp. time	Filter (slit)	Counts: Peak/Phot	UT time Start	RA α	Dec δ	SecZ	Comments: seeing, moon, LHA, VME crashes, clouds, etc.
11	Hale-Bopp	0.1	B/dichr	30 k peak 900 k phot	2:18	<del>01:57:126</del>	44:07:12	2.34	±5% a few clouds variable photometry
12	"	0.1				01:57:22	44:10:40	2.83	30% clouds moving quickly
13	Wirtanen	30	B/dichr	~25 k phot	3:04				30-50% cloud cover
14	"	120	V+R	34 k peak 713 k phot	3:23	3:42:27	22:19:57	2.45	some clouds
15	"	300	"	saturated	3:25	3:42:29	22:20:07	2.52	
16	"	300	H <sub>2</sub> O <sup>+</sup>	700 peak 28000 phot	3:31:47	3:42:30	22:20:13	2.65	(old H <sub>2</sub> O <sup>+</sup> filter)
17	<b>WILD 2</b>	30	B/dichr	2000 peak 50 k phot	4:30	8:15:43	21:43:14	1.09	
18	" + satellite	30	"					1.16	
19	M67	5	V+R		5:40	8:51:11	+11:46:56	1.23	
20	"	5	"		5:40:51			1.24	2:09 West
21	"	10	"		5:41:55			1.24	
22	BS 2141	10	H <sub>2</sub> O <sup>+</sup> <sub>new</sub>	45 k peak					
23	"	5	"	22 k peak 616 phot					
24	"	3	H <sub>2</sub> O <sup>+</sup> <sub>old</sub>	41 k peak 1 m phot					
25	"	2	"	26 k peak 667 k phot		6:05:59	35:23:06	2.48	+5:30 west
26	"	5	6250	32 k peak 642 k phot				2.52	
27	"	"	"	27 k peak 596 k phot	6:17:50			2.53	unstable photometry ±10%
28	TORO	30	B/dichr	8 k phot	8:20:17	11:56:39.6	-22:32:36	2.01	← VME system crash

← VME crash



