

Telescope: 61"

Iris:

Frame prefix #: SP93B

Day of Week: Mon

Focus: 7643 0

Humdty: 72% Sheet #: 1

Tailpiece: ^{3600 0}

+ 23m

Observers: Grundy
Hicks

Date MST/UT: 22/23 March

Balance:

Temp O/I: 39/41

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST UT	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
001	Mueller	600	0.5	2308 pk 1483 BK	6:55	7:08:00	57:57:22	4:27	1.59 E395 $\sigma=43$
002	"	1200	"	2807 pk 1102	7:07			4:40	1.64 (?) NO clouds, some E395 h222 apparent to west
003	"	1200	"	2606 pk	7:32			5:04	1.78 -1.92 $\sigma=29$ ← turned of garden before read out topped off dewdrops
004	VAISALA	1200	0.5	2885 pk	8:24	9:49:40	+24:11:56	+3:15	1.37 E393 $\sigma=22$
005	"	"	"	2622 pk	8:47	9:49:41	24:12:06	+3:38	1.50 E394 $\sigma=23$
006	"	"	"	2620 pk	9:10	9:49:43	24:12:15	4:01	1.66 E394 $\sigma=28$
007	"	1200	"	2723 pk	9:34	9:49:44	24:12:25	4:25	1.90 -2.14
008	BS 4098	3.0	0.5	23K	10:03	10:27:52	48:50:04	4:16	1.54
009	"	"	"	22K	10:04				1.55 NO clouds but 2 little h222
010	"	"	"	19K	10:05				1.55
011	"	"	"	24K					1.56
012	"	"	"	21K	10:07				1.56
013	"	"	"						1.57
014	BS 4285	2.0	"	21K	10:16	11:00:06	47:57:29	3:57	1.47
015	"	"	"	19K	10:17				1.47

Telescope: 61"

Iris:

Frame prefix #: SP93B

Day of Week: Mon

Focus:

Humdty:

Sheet #: 2

Observers: Hickey,
Grundy

Date MST/UT: 22/23

Tailpiece:

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
016	BS 4285	2.0	0.5	214				3:59	1.48
017	"	"	"	194					1.48
018	"	"	"	194					1.49
019	"	"	"	254					1.49
020	BS 3625	2.5	"	214		9:08:41	33:55.43	6:00	3.38
021	"	2.5	"	194					3.41
022	"	"	"	174					3.44
023	"	"	"	204					3.47
024	"	"	"	194					3.50
025	"	"	"	194					3.53
026	BS 4030	2.5	"	244	10:42	10:16:16	23:32:47	5:07	2.53
027	"	"	"	174					2.55
028	"	"	"	194					2.56
029	"	"	"	274					2.58
030	"	"	"	284					2.60

Telescope: 61"

Iris: 296

3600 decimal

Frame prefix #: FR93B

Day of Week: Mon/Tues

Focus: 7643^{octal} Humdty: 73% Sheet #: 1

Observers: Hicks, Grundy

Date MST/UT: 1993 March 22/23

Tailpiece: 34.3

Balance: 280 Temp O/I: 38 / 42 °F

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST/UT	RA set	Dec set	Hour-angle exp-start	Good seeing, Moon, clouds, etc.)	Comments
/ P/	VAISALA 1				clock is 2 seconds	setpoint: (894.5, 406.0)			↑ good	↑ to south
/	(AKA 1992 U)	60s	OPEN	Peak = 30k Phot = 560k	slow in VME	9:49:36.4	24:10:8	+1:53	1.03 = Sec Z	mostly but lots everywhere
/	VAISALA 1	"	"	Sky = 6k	~6:09	↑ Tim's	ephemeris (works)			Comet found
/ P/	Brewington	"	"	Peak = Phot =	~6:15	8:24:5.8	29:45:18	+2:30	1.18 = Sec Z	
/	AKA 1992 P	"	"		Could not find	Comet			1.20	Photometry
/ P/	MUELER	"	"	Peak = 24k Phot = 352k	~6:30	7:8:0.3	+57:36:44	+4h	1.18	only good to first decimal.
/	"	"	"	Sky = 8600					1.50	Comet found
/	"	30s	B/dichr	Peak = 400 Phot = 8500	6:39				1.51	
/	"	"	"	9300 9000	6:45	7:8:1	57:37:22	4:20	1.54 → 1.90	$\alpha = -.010$ $\delta = -.002$
/	VAISALA 1	30s	B/dichr	Peak 600 Peak 11k	~8:20	9:49:39.9	24:11:55	+3:15	1.2 → 2.15	$\alpha = .003$ $\delta = .005$
/	BS 4098	0.1s	B/dichr	Phot 186k Peak 23k	10h	10:27:53	48:50:2	+4h	1.52 → 1.57	comp *
/	BS 4285	0.2s	B/dichr	Peak: 45k Phot: 530k	10:15	11:0:6.4	42:57:29	+4h	1.46 → 1.49	comp *
/	BS 3625	0.2	B/dichr	Peak: 30k Phot: 350k	10:30	9:8:41	33:55:46	+6h	3.37 → 3.54	comp *
/	BS 4030	0.2	B/dichr	Peak: 50k Phot: 415k	10:45	10:16:16	23:32:47	+5h	2.46 → 2.65	comp * (poor tracking)
/	BS 5511	0.01	B/dichr	Peak: 39k Phot: 437k	11:00	14:45:52.3	1:55:22	+1h	1.19 → 1.20	std *
/	BS 5968		B/dichr		11:15			0h	1.00	

Telescope: 61"

Iris: 296

Frame prefix #: FR93B Day of Week: TUES./WED.

Focus: 7648 (0) 3440 (10) Humdty: 75% Sheet #: 2

Observers: Hicks, Grundy Date MST/UT: 1993 MARCH 23/24

Balance: Temp O/I: 34/38

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST UT	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)	
	VAISALA	30	open	Pk = 2k (± a lot) Ph = 80k	8:20	9:50:4	24:16:45	+3:15	1.39	highly variable photometry
1	SKY	60	C2		8:47.5	9:42:5	24:16:56	3:49	1.57	some clouds to south but none
2	"	"	6250		8:50	"	"	3:51	1.59	at all near comet (says Mike)
3	COMET	600	"	Pk = 300 Ph = 11k	8:52	9:50:5.1	24:16:58	3:45	1.54 → 1.61	now even
4	"	"	C2	Pk = 800 Ph = 38k	8:59.03	"	"	3:57	1.63 → 1.71	clouds over Tucson gone
5	SKY	60	"		9:16	9:42:7	24:17:9	4:17	1.80	
6	"	"	6250		9:18	"	"	4:19	1.82	
7	SKY	60	CN		9:22	"	"	4:23	1.87	
8	"	"	8600	sky = 4800	9:25	"	"	4:26.5	1.90	now change focus → 3380D
9	COMET	1200	"	Pk = 1000 Ph = 55k	9:27.5	9:50:7.2	24:17:15	4:21	1.84 → 1.96 → 2.08	7574
10	"	"	CN	sky = 8700 Pk = 550 Ph = 30k	9:49	"	"	4:43	2.10 → 2.26 → 2.43	
11	SKY	60	"		9:10.11	9:42:9.7	24:17:42	5:13	2.64	
12	"	"	8600		10:14	"	"	5:15.5	2.70	

Telescope: 61"

Iris:

Frame prefix #: FR93B Day of Week: Tues./Wed.

Focus:
Tailpiece:

Humdty:

Sheet #: 3

Observers: Hicks/Grundy Date MST/UT: 1993 March 23/24

Balance:

Temp O/I:

Exp #	Object	Exp time	Filter slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
13	BS 3951	1.0	8600	Pk = 15k Ph = 400k	10:24	10:1:25.3	31:57:14	5:07 2.23	focus = 3380 Dec. 7574 act.
14	"	"	"		10:25			5:08 2.24	(not a great focus)
15	"	"	"		10:26			5:09 2.26	focus)
16	"	2.0	CN	Pk = 14k Ph = 373k	10:29			5:12 2.30	
17	"	"	"					2.33?	
18	"	"	"	15k 390k	10:30.5			5:13.5 2.33	
19	"	0.3	C2	Pk = 42k Ph = 236k	10:37			5:20 2.45	focus
20	"	"	"		10:38			5:21 2.47	
21	"	"	"	✓	10:39			5:22 2.48	
22	"	1.2	6250	39k 272k	10:40			5:23 2.5	
23	"		"		10:41			5:24 2.52	
24	"		"		10:42			5:25 2.54	

Telescope: 61"

Frame prefix #: FR93B Day of Week: WED/Thurs RA offset:

Focus: 7574 oct. Humidity: 82% Sheet #: 6-1

Observers: Hicks, Grundy Date MST/DT: 24/25 Mar. Dec offset:

Tailpiece: Balance: Temp @ I: 37/41 °F
Spectrograph removed

Exp #	Object	Exp time	Filter Slit	Counts Object/Sky	Exp start MST	RA set	Dec set	Hour-Angle exp-start	Comments (P.A., seeing, Moon, clouds, etc.)
/	FKY stars		for	focus, etc.		Guidepoint = (394, 406)			Small clouds
/	sky is partly cloudy				7:00 PM				very widely scattered
/	SCHAUMASS	30s	OPEN	pk 16k ph 390k	Sky = 4000 3:23	7:15:56	47:15:56	+1:50	1.05 $\int \alpha = 0.042$
49	SKY	60s	C2		3:39	7:7:58	47:15:48	+1:18	1.07 $\int \delta = -0.005$ } DIAS RATES
50	"	"	6250		3:42	"	"	+1:21	1.07
51	SCHAUMASSE	1200	"	pk = 1000 ph = 35k	3:44	7:15:60	47:15:46	+1:14.5	1.07 → 1.09 comet trailed a bit
52	"	"	C2	pk = 4k ph = 183k	4:06	"	"	1:36	1.09 → 1.12 $\alpha \rightarrow 0.048$
53	SKY	60	"		4:29	7:8:12	47:15:29	2:07	1.14
54	SKY	"	6250		4:31	"	"	2:09	1.14
55	"	"	CN		4:35	"	"	2:13	1.15 focus → 7514 (from below) OCTAL
56	"	"	8600		4:37	"	"	2:15	1.15
57	SCHAU...	1200	"	pk = 1700 ph = 89k	4:39	7:16:14.4	47:15:27	2:09	1.14 → 1.18 still a bit trailed
58	"	"	CN	pk = 1600 ph = 80k	5:01			2:31	1.18 → 1.23 $\alpha \rightarrow 0.052$
59	SKY	60	"		5:23	7:8:26.8	47:15:11	3:01.5	1.26
60	SKY	"	8600		5:25	"	"	3:04	1.26

