



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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UT Date 2002-09-03 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.DARK	900	22:39	03:45:49.5	+24:22:04	300	90	3.0	Bright Stars	4	
0011-0020.DARK	900	1:11	03:45:49.5	+24:22:04	300	90	3.0	Bright Stars	2	
0021-0030.BIAS	0	2:54	18:18:31.9	31:30:10	300	90	3.0	Bright Stars	4	
0031-0040.FLAT	8	2:58	18:22:34.6	31:30:09	300	90	3.0	Bright Stars	4	
0041-0049.BIAS	0	3:01	18:25:11.3	31:30:09	300	90	3.0	Bright Stars	2	
0050.BIAS	0	3:01	18:25:24.4	31:30:08	300	90	3.0	Bright Stars	2	
0051-0060.FLAT	16	3:06	18:30:27.9	31:30:08	300	90	3.0	Bright Stars	2	
0061.N7331	180	5:03	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	sucker hole
0062.COMP	5	5:07	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	
0063.HD192281	10	5:11	20:10:46.8	40:07:01	300	0	3.0	#56 Spectropho	4	
0064.HD192281	10	5:11	20:10:46.8	40:07:01	300	0	3.0	#56 Spectropho	4	
0065.COMP	5	5:12	20:10:46.8	40:07:01	300	0	3.0	#56 Spectropho	4	
0066.id2549	720	5:37	20:04:07.5	35:41:35	300	90	3.0	#115 PMS NGC68	4	
0067.COMP	5	5:50	20:04:07.5	35:41:35	300	90	3.0	#115 PMS NGC68	4	
0068.id2664	900	5:50	19:59:52.7	35:15:07	300	90	3.0	#115 PMS NGC68	4	
0069.COMP	5	6:06	19:59:52.7	35:15:07	300	90	3.0	#115 PMS NGC68	4	
0070.0o2589	5	8:58	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	sucker hole
0071.0o2589	5	8:58	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0072.COMP	5	9:00	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0073.sn2002es	1200	10:31	03:23:47.2	+40:33:53	300	68	3.0	#2 SN Observat	2	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0074.COMP	10	10:52	03:23:47.2	+40:33:53	300	68	3.0	#2 SN Observat	2	
0075.snanon	1200	10:54	01:49:43.6	+32:37:43	300	90	3.0	#2 SN Observat	2	good sky
0076.COMP	10	11:15	01:49:43.6	+32:37:43	300	90	3.0	#2 SN Observat	2	
0077.Feige25	180	11:18	02:36:00	05:15:16	300	5	3.0	#56 Spectropho	2	
0078.Feige25	360	11:21	02:36:00	05:15:16	300	5	3.0	#56 Spectropho	2	bad continuum, slit effect
0079.COMP	10	11:28	02:36:00	05:15:16	300	5	3.0	#56 Spectropho	2	
0080.a496k_002	210	11:30	4:37:3.7	-10:11:50	300	5	3.0	#64 Cluster In	4	
0081.COMP	5	11:34	4:37:3.7	-10:11:50	300	5	3.0	#64 Cluster In	4	
0082.a496k_005	210	11:39	4:21:17.1	-9:56:44	300	5	3.0	#64 Cluster In	4	
0083.COMP	5	11:43	4:21:17.1	-9:56:44	300	5	3.0	#64 Cluster In	4	
0084.HZ14	480	11:55	04:38:15.6	10:53:57	300	-30	3.0	#56 Spectropho	2	guider wacked
0085.COMP	10	12:03	04:38:15.6	10:53:57	300	-30	3.0	#56 Spectropho	2	
0086.BIAS	0	12:08	03:30:00	32:00:00	300	-30	3.0	#56 Spectropho	4	lots of clouds around
0087-0095.BIAS	0	12:09	03:30:00	32:00:00	300	-30	3.0	#56 Spectropho	4	
0096-0105.FLAT	8	12:12	03:30:00	32:00:00	300	-30	3.0	#56 Spectropho	4	
0106-0115.BIAS	0	12:15	03:30:00	32:00:00	300	-30	3.0	#56 Spectropho	2	
0116-0125.FLAT	16	12:20	03:30:00	32:00:00	300	-30	3.0	#56 Spectropho	2	



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UT Date 2002-09-04 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:55	15:37:59.3	31:30:40	300	-30	3.0	#56 Spectropho	4	
0002.DARK	900	0:10	15:53:10.9	31:30:37	300	-30	3.0	#56 Spectropho	4	
0003.DARK	900	0:25	16:08:22.6	31:30:35	300	-30	3.0	#56 Spectropho	4	
0004.DARK	900	0:40	16:23:37.6	31:30:32	300	-30	3.0	#56 Spectropho	4	
0005.DARK	900	0:55	16:38:48.9	31:30:29	300	-30	3.0	#56 Spectropho	4	
0006.DARK	900	1:11	16:54:00.4	31:30:26	300	-30	3.0	#56 Spectropho	4	
0007.DARK	900	1:26	17:09:15.4	31:30:23	300	-30	3.0	#56 Spectropho	4	
0008.BIAS	0	1:42	17:09:55.0	31:30:23	300	-30	3.0	#56 Spectropho	4	bad comps not from cex alias
0009-0020.BIAS	0	1:43	17:11:34.4	31:30:23	300	-30	3.0	#56 Spectropho	4	
0021.FLAT	8	1:43	17:12:00.8	31:30:23	300	-30	3.0	#56 Spectropho	4	bad comps from usual cable
0022-0030.FLAT	8	1:46	17:14:15.3	31:30:22	300	-30	3.0	#56 Spectropho	4	
0031.BIAS	0	1:46	17:14:45.1	31:30:22	300	-30	3.0	#56 Spectropho	2	connection on side of
0032-0040.BIAS	0	1:48	17:16:38.6	31:30:22	300	-30	3.0	#56 Spectropho	2	
0041.FLAT	16	1:49	17:17:17.7	31:30:21	300	-30	3.0	#56 Spectropho	2	spectrograph
0042-0049.FLAT	16	1:52	17:20:55.4	31:30:21	300	-30	3.0	#56 Spectropho	2	
0050.FLAT	16	1:53	17:22:00	32:00:00	300	-30	3.0	#56 Spectropho	2	
0051-0055.sky	3	1:59	17:22:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0056.COMP	5	2:00	17:22:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0057.HD192281	6	2:23	20:10:46.8	40:07:01	300	85	3.0	#56 Spectropho	4	
0058.HD192281	6	2:23	20:10:46.8	40:07:01	300	85	3.0	#56 Spectropho	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0059.HD192281	6	2:23	20:10:46.8	40:07:01	300	85	3.0	#56 Spectropho	4	
0060.COMP	5	2:24	20:10:46.8	40:07:01	300	85	3.0	#56 Spectropho	4	
0061.a2199kf_003	600	2:36	16:29:52.0	40:49:30	300	85	3.0	#64 Cluster In	4	guider not working
0062.COMP	5	2:47	16:29:52.0	40:49:30	300	85	3.0	#64 Cluster In	4	
0063.sn2002er	1200	2:49	17:11:29.8	+07:59:44	300	35	3.0	#2 SN Observat	2	
0064.COMP	10	3:10	17:11:29.8	+07:59:44	300	35	3.0	#2 SN Observat	2	engineering delay
0065.COMP	5	4:19	19:48:02.6	31:29:54	300	-45	3.0	#2 SN Observat	4	
0066.BDp404032	60	4:33	20:06:40	41:06:15	300	0	3.0	#56 Spectropho	4	
0067.COMP	5	4:35	20:06:40	41:06:15	300	0	3.0	#56 Spectropho	4	
0068.MRK509	240	4:38	20:44:09.8	-10:43:24	300	-10	3.0	#6 AGN Monitor	4	
0069.MRK509	240	4:43	20:44:09.8	-10:43:24	300	-10	3.0	#6 AGN Monitor	4	
0070.COMP	5	4:47	20:44:09.8	-10:43:24	300	-10	3.0	#6 AGN Monitor	4	
0071.COMP	5	5:06	20:23:57.3	31:29:51	300	90	3.0	#115 PMS NGC68	4	
0072.COMP	5	5:08	20:37:30.7	31:29:47	300	90	3.0	#115 PMS NGC68	4	bad focus upon startup
0073.COMP	5	5:11	20:40:21.5	31:29:46	300	90	3.0	#115 PMS NGC68	4	more engineering
0074.COMP	5	5:13	20:41:39.6	31:29:46	300	90	3.0	#115 PMS NGC68	4	
0075.id2920	720	5:23	19:58:16.8	35:13:32	300	90	3.0	#115 PMS NGC68	4	
0076.COMP	5	5:35	19:58:16.8	35:13:32	300	90	3.0	#115 PMS NGC68	4	
0077.id1638	600	5:36	20:06:21.9	35:42:10	300	90	3.0	#115 PMS NGC68	4	
0078.COMP	5	5:46	20:06:21.9	35:42:10	300	90	3.0	#115 PMS NGC68	4	



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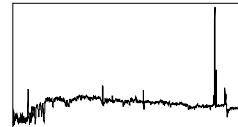
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0079.COMP	5	5:48	21:17:00.6	31:29:42	300	90	3.0	#115 PMS NGC68	4	weak comp upon startup
0080.COMP	5	5:49	21:17:57.4	31:29:42	300	90	3.0	#115 PMS NGC68	4	
0081.COMP	5	5:50	21:19:32.3	31:29:42	300	90	3.0	#115 PMS NGC68	4	
0082.id1886	600	5:53	20:05:55.0	35:42:43	300	90	3.0	#115 PMS NGC68	4	
0083.COMP	5	6:03	20:05:55.0	35:42:43	300	90	3.0	#115 PMS NGC68	4	
0084.id1919	600	6:04	20:05:51.4	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0085.COMP	5	6:15	20:05:51.4	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0086.BDp284211	90	6:17	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0087.BDp284211	90	6:19	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0088.BDp284211	90	6:20	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0089.COMP	10	6:22	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	more problems
0090.id1919	600	6:38	20:05:51.4	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0091.COMP	5	6:55	20:05:51.4	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0092.id2089	600	6:55	20:05:24.7	35:36:06	300	90	3.0	#115 PMS NGC68	2	
0093.COMP	10	7:07	20:05:24.7	35:36:06	300	90	3.0	#115 PMS NGC68	2	
0094.id2288	600	7:08	20:04:59.8	35:38:55	300	90	3.0	#115 PMS NGC68	4	
0095.COMP	5	7:19	20:04:59.8	35:38:55	300	90	3.0	#115 PMS NGC68	4	
0096.id2376	600	7:20	20:04:40.3	35:50:35	300	90	3.0	#115 PMS NGC68	4	
0097.COMP	5	7:31	20:04:40.3	35:50:35	300	90	3.0	#115 PMS NGC68	4	
0098.id2445	600	7:31	20:04:27.9	35:51:22	300	90	3.0	#115 PMS NGC68	4	



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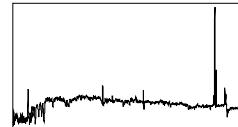
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0099.COMP	5	7:44	20:04:27.9	35:51:22	300	90	3.0	#115 PMS NGC68	4	
0100.id2462	600	7:44	20:04:24.0	35:51:55	300	90	3.0	#115 PMS NGC68	4	
0101.COMP	5	7:55	20:04:24.0	35:51:55	300	90	3.0	#115 PMS NGC68	4	
0102.Akn564	240	7:56	22:42:39.4	+29:43:31	300	77	3.0	#6 AGN Monitor	4	
0103.Akn564	240	8:00	22:42:39.4	+29:43:31	300	77	3.0	#6 AGN Monitor	4	
0104.COMP	5	8:05	22:42:39.4	+29:43:31	300	77	3.0	#6 AGN Monitor	4	
0105.N7469	120	8:06	23:03:15.7	+08:52:27	300	17	3.0	#6 AGN Monitor	4	
0106.N7469	120	8:08	23:03:15.7	+08:52:27	300	17	3.0	#6 AGN Monitor	4	
0107.COMP	5	8:11	23:03:15.7	+08:52:27	300	17	3.0	#6 AGN Monitor	4	
0108.DG_32	20	8:13	21:54:22.8	62:27:55	300	17	3.0	#137 Intermedi	4	
0109.DG_32	60	8:14	21:54:22.8	62:27:55	300	90	3.0	#137 Intermedi	4	
0110.COMP	5	8:15	21:54:22.8	62:27:55	300	90	3.0	#137 Intermedi	4	
0111.DG_34	120	8:16	21:52:35.1	62:40:41	300	90	3.0	#137 Intermedi	4	
0112.COMP	5	8:20	21:52:35.1	62:40:41	300	90	3.0	#137 Intermedi	4	
0113.DG_36	120	8:21	21:54:14.2	62:45:58	300	90	3.0	#137 Intermedi	4	
0114.COMP	5	8:23	21:54:14.2	62:45:58	300	90	3.0	#137 Intermedi	4	
0115.DG_349	360	8:24	21:51:17.4	62:43:41	300	90	3.0	#137 Intermedi	4	
0116.COMP	5	8:31	21:51:17.4	62:43:41	300	90	3.0	#137 Intermedi	4	
0117.DG_37	120	8:32	21:54:19.3	62:28:07	300	90	3.0	#137 Intermedi	4	
0118.COMP	5	8:34	21:54:19.3	62:28:07	300	90	3.0	#137 Intermedi	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0119.DG_371	300	8:35	21:51:26.0	62:29:15	300	90	3.0	#137 Intermedi	4	
0120.COMP	5	8:41	21:51:26.0	62:29:15	300	90	3.0	#137 Intermedi	4	
0121.DG_382	300	8:41	21:51:31.4	62:28:46	300	90	3.0	#137 Intermedi	4	
0122.COMP	5	8:47	21:51:31.4	62:28:46	300	90	3.0	#137 Intermedi	4	
0123.DG_38	180	8:48	21:52:43.5	62:40:20	300	90	3.0	#137 Intermedi	4	
0124.COMP	5	8:51	21:52:43.5	62:40:20	300	90	3.0	#137 Intermedi	4	
0125.DG_392	360	8:52	21:51:37.2	62:38:06	300	90	3.0	#137 Intermedi	4	
0126.COMP	5	9:00	21:51:37.2	62:38:06	300	90	3.0	#137 Intermedi	4	
0127.DG_394	360	9:01	21:51:38.5	62:35:50	300	90	3.0	#137 Intermedi	4	
0128.COMP	5	9:07	21:51:38.5	62:35:50	300	90	3.0	#137 Intermedi	4	
0129.DG_398	300	9:10	21:51:42.2	62:33:14	300	90	3.0	#137 Intermedi	4	
0130.COMP	5	9:16	21:51:42.2	62:33:14	300	90	3.0	#137 Intermedi	4	
0131.DG_399	300	9:16	21:51:41.7	62:47:14	300	90	3.0	#137 Intermedi	4	
0132.COMP	5	9:22	21:51:41.7	62:47:14	300	90	3.0	#137 Intermedi	4	
0133.COMP	5	9:24	21:51:39.7	62:47:18	300	90	3.0	#137 Intermedi	4	
0134.DG_408	360	9:26	21:51:45.4	62:47:05	300	90	3.0	#137 Intermedi	4	
0135.COMP	5	9:33	21:51:45.4	62:47:05	300	90	3.0	#137 Intermedi	4	
0136.ZAnd	5	9:34	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	4	
0137.ZAnd	15	9:35	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	4	
0138.ZAnd	60	9:36	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0139.ZAnd	2	9:37	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	4	
0140.COMP	5	9:46	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	4	
0141.MRK335	180	9:48	00:06:19.6	+20:12:11	300	52	3.0	#6 AGN Monitor	4	
0142.MRK335	180	9:51	00:06:19.6	+20:12:11	300	52	3.0	#6 AGN Monitor	4	
0143.COMP	5	9:58	00:06:19.6	+20:12:11	300	52	3.0	#6 AGN Monitor	4	
0144.sb120	1200	10:09	00:01:58.5	+36:38:56	300	90	3.0	#135 Starburst	4	
0145.COMP	5	10:29	00:01:58.5	+36:38:56	300	90	3.0	#135 Starburst	4	
0146.sb4	1200	10:32	00:24:43.6	+21:06:03	300	60	3.0	#135 Starburst	2	
0147.COMP	10	10:53	00:24:43.6	+21:06:03	300	60	3.0	#135 Starburst	2	
0148.sb5	1200	10:55	00:29:07.1	+31:00:10	300	80	3.0	#135 Starburst	2	
0149.COMP	10	11:16	00:29:07.1	+31:00:10	300	80	3.0	#135 Starburst	2	
0150.BIAS	0	11:43	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	4	more guiding problems
0151-0159.BIAS	0	11:44	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	4	
0160.FLAT	8	11:44	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	4	engineering wrap-up
0161-0169.FLAT	8	11:46	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	4	
0170-0179.BIAS	0	11:49	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	2	
0180-0189.FLAT	16	11:54	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	2	
0190-0199.DARK	900	14:34	02:27:36.6	+42:00:27	300	110	3.0	#135 Starburst	2	



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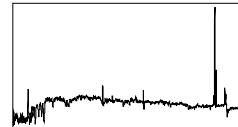
UT Date 2002-09-05 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	1:33	01:33:08	01:33:08	300	90	3.0	none	4	
0002.DARK	900	1:48	01:48:15	01:48:15	300	90	3.0	none	4	
0003.DARK	900	2:03	02:03:22	02:03:22	300	90	3.0	none	4	
0004.DARK	900	2:18	02:18:29	02:18:29	300	90	3.0	none	4	
0005.DARK	900	2:34	02:33:36	02:33:36	300	90	3.0	none	4	
0006.DARK	900	2:49	02:48:43	02:48:43	300	90	3.0	none	4	
0007.DARK	900	3:04	03:03:50	03:03:50	300	90	3.0	none	4	
0008.DARK	900	3:19	03:18:57	03:18:57	300	90	3.0	none	4	
0009.DARK	900	3:34	03:34:04	03:34:04	300	90	3.0	none	4	
0010.DARK	900	3:49	03:49:11	03:49:11	300	90	3.0	none	4	
0011.BIAS	0	4:04	04:04:27	04:04:27	300	90	3.0	none	4	
0012.BIAS	0	4:05	04:04:34	04:04:34	300	90	3.0	none	4	
0013.BIAS	0	4:05	04:04:41	04:04:41	300	90	3.0	none	4	
0014.BIAS	0	4:05	04:04:48	04:04:48	300	90	3.0	none	4	
0015.BIAS	0	4:05	04:04:56	04:04:56	300	90	3.0	none	4	
0016.BIAS	0	4:05	04:05:03	04:05:03	300	90	3.0	none	4	
0017.BIAS	0	4:05	04:05:10	04:05:10	300	90	3.0	none	4	
0018.BIAS	0	4:05	04:05:18	04:05:18	300	90	3.0	none	4	
0019.BIAS	0	4:05	04:05:25	04:05:25	300	90	3.0	none	4	
0020.BIAS	0	4:06	04:05:32	04:05:32	300	90	3.0	none	4	



WHIPPLE OBSERVATORY

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UT Date 2002-09-05 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.FLAT	6	4:06	04:06:10	04:06:10	300	90	3.0	none	4	
0022.FLAT	6	4:06	04:06:23	04:06:23	300	90	3.0	none	4	
0023.FLAT	6	4:07	04:06:36	04:06:36	300	90	3.0	none	4	
0024.FLAT	6	4:07	04:06:49	04:06:49	300	90	3.0	none	4	
0025.FLAT	6	4:07	04:07:01	04:07:01	300	90	3.0	none	4	
0026.FLAT	6	4:07	04:07:14	04:07:14	300	90	3.0	none	4	
0027.FLAT	6	4:07	04:07:27	04:07:27	300	90	3.0	none	4	
0028.FLAT	6	4:08	04:07:40	04:07:40	300	90	3.0	none	4	
0029.FLAT	6	4:08	04:07:53	04:07:53	300	90	3.0	none	4	
0030.FLAT	6	4:08	04:08:06	04:08:06	300	90	3.0	none	4	
0031.BIAS	0	4:09	04:08:40	04:08:40	300	90	3.0	none	2	
0032.BIAS	0	4:09	04:08:53	04:08:53	300	90	3.0	none	2	
0033.BIAS	0	4:09	04:09:06	04:09:06	300	90	3.0	none	2	
0034.BIAS	0	4:09	04:09:19	04:09:19	300	90	3.0	none	2	
0035.BIAS	0	4:10	04:09:32	04:09:32	300	90	3.0	none	2	
0036.BIAS	0	4:10	04:09:45	04:09:45	300	90	3.0	none	2	
0037.BIAS	0	4:10	04:09:58	04:09:58	300	90	3.0	none	2	
0038.BIAS	0	4:10	04:10:11	04:10:11	300	90	3.0	none	2	
0039.BIAS	0	4:10	04:10:23	04:10:23	300	90	3.0	none	2	
0040.BIAS	0	4:11	04:10:36	04:10:36	300	90	3.0	none	2	



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UT Date 2002-09-05 Observers M Calkins

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.FLAT	12	4:11	04:11:08	04:11:08	300	90	3.0	none	2	clouds at sunset...
0042.FLAT	12	4:12	04:11:33	04:11:33	300	90	3.0	none	2	
0043.FLAT	12	4:12	04:11:57	04:11:57	300	90	3.0	none	2	
0044.FLAT	12	4:12	04:12:22	04:12:22	300	90	3.0	none	2	
0045.FLAT	12	4:13	04:12:46	04:12:46	300	90	3.0	none	2	
0046.FLAT	12	4:13	04:13:11	04:13:11	300	90	3.0	none	2	
0047.FLAT	12	4:14	04:13:36	04:13:36	300	90	3.0	none	2	
0048.FLAT	12	4:14	04:14:00	04:14:00	300	90	3.0	none	2	
0049.FLAT	12	4:14	04:14:25	04:14:25	300	90	3.0	none	2	
0050.FLAT	12	4:15	04:14:49	04:14:49	300	90	3.0	none	2	
0051.BDp404032	180	5:38	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	holes!
0052.COMP	5	5:41	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0053.BDp404032	180	5:46	20:06:40	41:06:15	300	110	3.0	#56 Spectropho	2	
0054.COMP	12	5:50	20:06:40	41:06:15	300	110	3.0	#56 Spectropho	2	wait out more clouds
0055.id2898	720	6:15	19:58:24.0	35:18:42	300	90	3.0	#115 PMS NGC68	2	
0056.COMP	12	6:27	19:58:24.0	35:18:42	300	90	3.0	#115 PMS NGC68	2	
0057.id1082	720	6:29	20:07:26.6	35:37:33	300	90	3.0	#115 PMS NGC68	2	row=67
0058.COMP	12	6:41	20:07:26.6	35:37:33	300	90	3.0	#115 PMS NGC68	2	
0059.id1219	780	6:43	20:07:14.4	35:49:50	300	90	3.0	#115 PMS NGC68	2	row=67
0060.COMP	12	6:56	20:07:14.4	35:49:50	300	90	3.0	#115 PMS NGC68	2	



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FAST SPECTROGRAPH LOG



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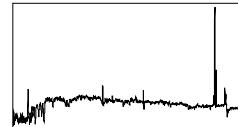
UT Date 2002-09-05 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.id1225	660	6:57	20:07:13.8	35:39:33	300	90	3.0	#115 PMS NGC68	2	
0062.COMP	12	7:09	20:07:13.8	35:39:33	300	90	3.0	#115 PMS NGC68	2	
0063.sn2002eu	1200	11:25	01:49:43.6	32:37:43	300	91	3.0	#2 SN Observat	2	
0064.COMP	12	11:45	01:49:43.6	32:37:43	300	91	3.0	#2 SN Observat	2	
0065.sn2002es	1200	11:50	03:23:47.2	40:33:53	300	2	3.0	#2 SN Observat	2	
0066.COMP	12	12:10	03:23:47.2	40:33:53	300	2	3.0	#2 SN Observat	2	
0067-0071.Sky	2	12:38	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	4	
0072.COMP	5	12:39	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	4	
0073-0082.BIAS	0	12:41	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	4	
0083-0092.FLAT	6	12:43	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	4	
0093-0102.BIAS	0	12:46	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	2	
0103-0112.FLAT	12	12:51	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	2	
0113-0122.DARK	900	15:12	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	2	



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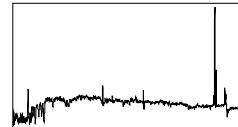
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	22:19	02:32:31	03:30:51	300	2	3.0	#57 Velocity S	4	
0002.DARK	900	23:23	23:23:24	23:23:24	300	2	3.0	#57 Velocity S	4	
0003.DARK	900	23:39	23:38:31	23:38:31	300	2	3.0	#57 Velocity S	4	
0004.DARK	900	23:54	23:53:38	23:53:38	300	2	3.0	#57 Velocity S	4	
0005.DARK	900	0:09	00:08:45	00:08:45	300	2	3.0	#57 Velocity S	4	
0006.DARK	900	0:24	00:23:52	00:23:52	300	2	3.0	#57 Velocity S	4	
0007.DARK	900	0:39	00:38:59	00:38:59	300	2	3.0	#57 Velocity S	4	
0008.DARK	900	0:54	00:54:05	00:54:05	300	2	3.0	#57 Velocity S	4	
0009.DARK	900	1:09	01:09:12	01:09:12	300	2	3.0	#57 Velocity S	4	
0010.DARK	900	1:24	01:24:19	01:24:19	300	2	3.0	#57 Velocity S	4	
0011.BIAS	0	1:42	01:42:13	01:42:13	300	2	3.0	#57 Velocity S	4	
0012.BIAS	0	1:42	01:42:21	01:42:21	300	2	3.0	#57 Velocity S	4	
0013.BIAS	0	1:42	01:42:28	01:42:28	300	2	3.0	#57 Velocity S	4	
0014.BIAS	0	1:43	01:42:35	01:42:35	300	2	3.0	#57 Velocity S	4	
0015.BIAS	0	1:43	01:42:42	01:42:42	300	2	3.0	#57 Velocity S	4	
0016.BIAS	0	1:43	01:42:50	01:42:50	300	2	3.0	#57 Velocity S	4	
0017.BIAS	0	1:43	01:42:57	01:42:57	300	2	3.0	#57 Velocity S	4	
0018.BIAS	0	1:43	01:43:04	01:43:04	300	2	3.0	#57 Velocity S	4	
0019.BIAS	0	1:43	01:43:11	01:43:11	300	2	3.0	#57 Velocity S	4	
0020.BIAS	0	1:43	01:43:19	01:43:19	300	2	3.0	#57 Velocity S	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.FLAT	6	1:45	01:45:14	01:45:14	300	2	3.0	#57 Velocity S	4	
0022.FLAT	6	1:45	01:45:27	01:45:27	300	2	3.0	#57 Velocity S	4	
0023.FLAT	6	1:46	01:45:40	01:45:40	300	2	3.0	#57 Velocity S	4	
0024.FLAT	6	1:46	01:45:53	01:45:53	300	2	3.0	#57 Velocity S	4	
0025.FLAT	6	1:46	01:46:06	01:46:06	300	2	3.0	#57 Velocity S	4	
0026.FLAT	6	1:46	01:46:19	01:46:19	300	2	3.0	#57 Velocity S	4	
0027.FLAT	6	1:47	01:46:32	01:46:32	300	2	3.0	#57 Velocity S	4	
0028.FLAT	6	1:47	01:46:45	01:46:45	300	2	3.0	#57 Velocity S	4	
0029.FLAT	6	1:47	01:46:58	01:46:58	300	2	3.0	#57 Velocity S	4	
0030.FLAT	6	1:47	01:47:11	01:47:11	300	2	3.0	#57 Velocity S	4	
0031.BIAS	0	1:48	01:48:27	01:48:27	300	2	3.0	#57 Velocity S	2	
0032.BIAS	0	1:49	01:48:40	01:48:40	300	2	3.0	#57 Velocity S	2	
0033.BIAS	0	1:49	01:48:53	01:48:53	300	2	3.0	#57 Velocity S	2	
0034.BIAS	0	1:49	01:49:06	01:49:06	300	2	3.0	#57 Velocity S	2	
0035.BIAS	0	1:49	01:49:19	01:49:19	300	2	3.0	#57 Velocity S	2	
0036.BIAS	0	1:50	01:49:32	01:49:32	300	2	3.0	#57 Velocity S	2	
0037.BIAS	0	1:50	01:49:45	01:49:45	300	2	3.0	#57 Velocity S	2	
0038.BIAS	0	1:50	01:49:58	01:49:58	300	2	3.0	#57 Velocity S	2	
0039.BIAS	0	1:50	01:50:11	01:50:11	300	2	3.0	#57 Velocity S	2	
0040.BIAS	0	1:50	01:50:24	01:50:24	300	2	3.0	#57 Velocity S	2	



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FAST SPECTROGRAPH LOG



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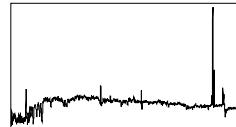
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.FLAT	12	1:52	01:51:31	01:51:31	300	2	3.0	#57 Velocity S	2	
0042.FLAT	12	1:52	01:51:56	01:51:56	300	2	3.0	#57 Velocity S	2	
0043.FLAT	12	1:52	01:52:21	01:52:21	300	2	3.0	#57 Velocity S	2	
0044.FLAT	12	1:53	01:52:45	01:52:45	300	2	3.0	#57 Velocity S	2	
0045.FLAT	12	1:53	01:53:10	01:53:10	300	2	3.0	#57 Velocity S	2	
0046.FLAT	12	1:54	01:53:34	01:53:34	300	2	3.0	#57 Velocity S	2	
0047.FLAT	12	1:54	01:53:59	01:53:59	300	2	3.0	#57 Velocity S	2	
0048.FLAT	12	1:54	01:54:23	01:54:23	300	2	3.0	#57 Velocity S	2	
0049.FLAT	12	1:55	01:54:48	01:54:48	300	2	3.0	#57 Velocity S	2	
0050.FLAT	12	1:55	01:55:12	01:55:12	300	2	3.0	#57 Velocity S	2	
0051.BDp284211	180	4:47	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0052.COMP	5	4:51	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0053.BDp284211	240	5:35	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	(engineering with Ted...)
0054.COMP	12	5:39	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0055.BDp284211	120	6:41	21:48:57.1	28:37:48	300	62	3.0	#56 Spectropho	2	
0056.COMP	12	6:44	21:48:57.1	28:37:48	300	62	3.0	#56 Spectropho	2	
0057.sn2002et	1200	6:52	20:08:31.0	-25:27:37	300	32	3.0	#2 SN Observat	2	row=78
0058.COMP	12	7:12	20:08:31.0	-25:27:37	300	32	3.0	#2 SN Observat	2	
0059.sn2002ey	1200	7:20	23:10:12.3	7:32:59	300	-9	3.0	#2 SN Observat	2	
0060.COMP	12	7:40	23:10:12.3	7:32:59	300	-9	3.0	#2 SN Observat	2	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.ZAnd	2	7:44	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0062.ZAnd	5	7:44	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0063.ZAnd	15	7:45	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0064.COMP	12	7:45	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0065.MRK509	360	7:49	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0066.MRK509	360	7:55	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0067.COMP	12	8:02	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0068.Akn564	240	8:04	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0069.Akn564	240	8:08	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0070.COMP	12	8:13	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0071.N7469	120	8:15	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	row=74
0072.N7469	120	8:17	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0073.COMP	12	8:19	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0074.MRK335	180	8:21	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0075.MRK335	180	8:24	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0076.COMP	12	8:27	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0077.0o2589	5	8:31	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0078.0o2589	5	8:32	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0079.0o2589	5	8:32	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0080.0o2589	5	8:32	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.0o2589	5	8:32	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0082.COMP	12	8:33	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0083.sb97	1200	8:38	22:28:25.8	+30:17:33	300	110	3.0	#135 Starburst	2	
0084.COMP	12	8:58	22:28:25.8	+30:17:33	300	110	3.0	#135 Starburst	2	
0085.sb102	600	9:00	22:55:32.4	+19:17:33	300	90	3.0	#135 Starburst	2	row=76
0086.COMP	12	9:11	22:55:32.4	+19:17:33	300	90	3.0	#135 Starburst	2	
0087.sb100	1020	9:13	22:44:12.2	+34:21:05	300	90	3.0	#135 Starburst	2	
0088.COMP	12	9:30	22:44:12.2	+34:21:05	300	90	3.0	#135 Starburst	2	
0089.sb103a	240	9:34	22:57:35	+19:46:56	300	90	3.0	#135 Starburst	2	row=76
0090.COMP	12	9:38	22:57:35	+19:46:56	300	90	3.0	#135 Starburst	2	
0091.sb101	480	9:40	22:52:34.7	+24:43:49	300	110	3.0	#135 Starburst	2	
0092.COMP	12	9:48	22:52:34.7	+24:43:49	300	110	3.0	#135 Starburst	2	
0093.sb106	480	9:50	23:14:51.7	+33:01:22	300	110	3.0	#135 Starburst	2	
0094.COMP	12	9:58	23:14:51.7	+33:01:22	300	110	3.0	#135 Starburst	2	
0095.sb107	300	10:00	23:27:41.2	+23:35:21	300	90	3.0	#135 Starburst	2	
0096.COMP	12	10:05	23:27:41.2	+23:35:21	300	90	3.0	#135 Starburst	2	
0097.sb105	1020	10:07	23:04:56.6	+19:33:07	300	110	3.0	#135 Starburst	2	
0098.COMP	12	10:25	23:04:56.6	+19:33:07	300	110	3.0	#135 Starburst	2	
0099.sb104	1020	10:26	23:00:32.3	+13:02:04	300	110	3.0	#135 Starburst	2	
0100.COMP	12	10:43	23:00:32.3	+13:02:04	300	110	3.0	#135 Starburst	2	



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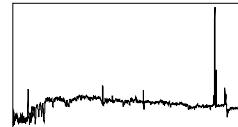
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0101.sb110	480	10:45	23:37:39.6	+30:07:47	300	90	3.0	#135 Starburst	2	
0102.COMP	12	10:54	23:37:39.6	+30:07:47	300	90	3.0	#135 Starburst	2	
0103.sb108	420	11:08	23:28:06.3	+23:31:53	300	90	3.0	#135 Starburst	2	
0104.COMP	12	11:16	23:28:06.3	+23:31:53	300	90	3.0	#135 Starburst	2	
0105.sb111	780	11:17	23:38:49.7	+04:25:43	300	90	3.0	#135 Starburst	2	
0106.COMP	12	11:31	23:38:49.7	+04:25:43	300	90	3.0	#135 Starburst	2	
0107.sn2002es	1200	11:35	03:23:47.2	40:33:53	300	17	3.0	#2 SN Observat	2	
0108.COMP	12	11:56	03:23:47.2	40:33:53	300	17	3.0	#2 SN Observat	2	
0109.BGGem	300	11:58	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0110.BGGem	900	12:04	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0111.COMP	12	12:20	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0112.Feige24	180	12:23	02:32:31	03:30:51	300	33	3.0	#56 Spectropho	2	
0113.COMP	12	12:26	02:32:31	03:30:51	300	33	3.0	#56 Spectropho	2	
0114-0118.sky	2	12:41	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	4	
0119.COMP	5	12:42	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	4	
0120-0129.BIAS	0	12:44	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	4	
0130-0139.FLAT	6	12:47	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	4	
0140-0149.BIAS	0	12:51	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	2	
0150-0159.FLAT	12	12:58	02:32:31	03:30:51	300	33	3.0	#57 Velocity S	2	
0160-0169.DARK	900	15:28	02:32:31	03:30:51	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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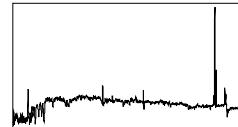
UT Date 2002-09-07 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0002.DARK	900	23:28	02:32:31	03:30:51	300	90	3.0	#57 Velocity S	4	
0003.COMP	5	1:28	01:28:25	01:28:25	300	90	3.0	#57 Velocity S	4	
0004.COMP	5	1:31	01:30:40	01:30:40	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	1:34	01:33:52	01:33:52	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	1:49	01:48:59	01:48:59	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	2:04	02:04:06	02:04:06	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	2:19	02:19:13	02:19:13	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	2:34	02:34:20	02:34:20	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	2:49	02:49:27	02:49:27	300	90	3.0	#57 Velocity S	4	
0011.DARK	900	3:05	03:04:34	03:04:34	300	90	3.0	#57 Velocity S	4	
0012.DARK	900	3:20	03:19:41	03:19:41	300	90	3.0	#57 Velocity S	4	
0013.BIAS	0	3:39	03:38:57	03:38:57	300	90	3.0	#57 Velocity S	4	
0014.BIAS	0	3:39	03:39:05	03:39:05	300	90	3.0	#57 Velocity S	4	
0015.BIAS	0	3:39	03:39:12	03:39:12	300	90	3.0	#57 Velocity S	4	
0016.BIAS	0	3:39	03:39:19	03:39:19	300	90	3.0	#57 Velocity S	4	
0017.BIAS	0	3:39	03:39:27	03:39:27	300	90	3.0	#57 Velocity S	4	
0018.BIAS	0	3:40	03:39:34	03:39:34	300	90	3.0	#57 Velocity S	4	
0019.BIAS	0	3:40	03:39:41	03:39:41	300	90	3.0	#57 Velocity S	4	
0020.BIAS	0	3:40	03:39:49	03:39:49	300	90	3.0	#57 Velocity S	4	
0021.BIAS	0	3:40	03:39:56	03:39:56	300	90	3.0	#57 Velocity S	4	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-07 Observers M Calkins

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0022.BIAS	0	3:40	03:40:03	03:40:03	300	90	3.0	#57 Velocity S	4	
0023.FLAT	6	3:41	03:40:55	03:40:55	300	90	3.0	#57 Velocity S	4	
0024.FLAT	6	3:41	03:41:08	03:41:08	300	90	3.0	#57 Velocity S	4	
0025.FLAT	6	3:41	03:41:21	03:41:21	300	90	3.0	#57 Velocity S	4	
0026.FLAT	6	3:42	03:41:34	03:41:34	300	90	3.0	#57 Velocity S	4	
0027.FLAT	6	3:42	03:41:46	03:41:46	300	90	3.0	#57 Velocity S	4	
0028.FLAT	6	3:42	03:41:59	03:41:59	300	90	3.0	#57 Velocity S	4	
0029.FLAT	6	3:42	03:42:12	03:42:12	300	90	3.0	#57 Velocity S	4	
0030.FLAT	6	3:42	03:42:25	03:42:25	300	90	3.0	#57 Velocity S	4	
0031.FLAT	6	3:43	03:42:38	03:42:38	300	90	3.0	#57 Velocity S	4	
0032.FLAT	6	3:43	03:42:51	03:42:51	300	90	3.0	#57 Velocity S	4	
0033.BIAS	0	3:45	03:45:28	03:45:28	300	90	3.0	#57 Velocity S	2	
0034.BIAS	0	3:46	03:45:41	03:45:41	300	90	3.0	#57 Velocity S	2	
0035.BIAS	0	3:46	03:45:54	03:45:54	300	90	3.0	#57 Velocity S	2	
0036.BIAS	0	3:46	03:46:07	03:46:07	300	90	3.0	#57 Velocity S	2	
0037.BIAS	0	3:46	03:46:19	03:46:19	300	90	3.0	#57 Velocity S	2	
0038.BIAS	0	3:47	03:46:32	03:46:32	300	90	3.0	#57 Velocity S	2	
0039.BIAS	0	3:47	03:46:45	03:46:45	300	90	3.0	#57 Velocity S	2	
0040.BIAS	0	3:47	03:46:58	03:46:58	300	90	3.0	#57 Velocity S	2	
0041.BIAS	0	3:47	03:47:11	03:47:11	300	90	3.0	#57 Velocity S	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-07 Observers M Calkins

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0042.BIAS	0	3:47	03:47:24	03:47:24	300	90	3.0	#57 Velocity S	2	
0043.FLAT	12	5:13	05:12:34	05:12:34	300	90	3.0	#57 Velocity S	2	clouds at sunset
0044.FLAT	12	5:13	05:12:58	05:12:58	300	90	3.0	#57 Velocity S	2	
0045.FLAT	12	5:13	05:13:23	05:13:23	300	90	3.0	#57 Velocity S	2	
0046.FLAT	12	5:14	05:13:47	05:13:47	300	90	3.0	#57 Velocity S	2	
0047.FLAT	12	5:14	05:14:12	05:14:12	300	90	3.0	#57 Velocity S	2	
0048.FLAT	12	5:15	05:14:37	05:14:37	300	90	3.0	#57 Velocity S	2	
0049.FLAT	12	5:15	05:15:01	05:15:01	300	90	3.0	#57 Velocity S	2	
0050.FLAT	12	5:15	05:15:26	05:15:26	300	90	3.0	#57 Velocity S	2	
0051.FLAT	12	5:16	05:15:50	05:15:50	300	90	3.0	#57 Velocity S	2	
0052.FLAT	12	5:16	05:16:15	05:16:15	300	90	3.0	#57 Velocity S	2	
0053.BDp284211	120	6:26	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0054.COMP	5	6:29	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0055.BDp284211	180	6:34	21:48:57.1	28:37:48	300	53	3.0	#56 Spectropho	2	
0056.COMP	12	6:37	21:48:57.1	28:37:48	300	53	3.0	#56 Spectropho	2	
0057.N7331	240	6:50	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	2	
0058.COMP	12	6:54	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	2	
0059.id1482	1020	6:57	20:06:44.0	35:45:15	300	90	3.0	#115 PMS NGC68	2	
0060.COMP	12	7:14	20:06:44.0	35:45:15	300	90	3.0	#115 PMS NGC68	2	
0061.id1664	1020	7:16	20:06:18.6	35:50:38	300	90	3.0	#115 PMS NGC68	2	



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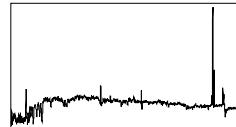
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0062.COMP	12	7:33	20:06:18.6	35:50:38	300	90	3.0	#115 PMS NGC68	2	wait out clouds
0063.sn2002eu	1200	11:30	01:49:43.6	32:37:43	300	87	3.0	#2 SN Observat	2	row=72, thru clouds
0064.COMP	12	11:51	01:49:43.6	32:37:43	300	87	3.0	#2 SN Observat	2	
0065.snn759	1200	11:58	01:57:50.3	36:20:35	300	96	3.0	#2 SN Observat	2	
0066.COMP	12	12:19	01:57:50.3	36:20:35	300	96	3.0	#2 SN Observat	2	
0067.Hiltner600	120	12:23	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	
0068.COMP	12	12:26	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	
0069-0073.sky	2	12:40	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	4	
0074.COMP	5	12:41	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	4	
0075-0084.BIAS	0	12:43	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	4	
0085-0094.FLAT	6	12:45	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	4	
0095-0104.BIAS	0	12:50	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	2	
0105-0114.FLAT	12	12:54	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	2	
0115-0124.DARK	900	15:24	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	2	



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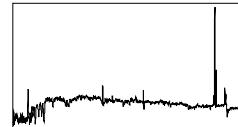
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	21:38	21:38:15	21:38:15	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	21:53	21:53:22	21:53:22	300	90	3.0	#57 Velocity S	4	
0003.DARK	900	22:08	22:08:29	22:08:29	300	90	3.0	#57 Velocity S	4	
0004.DARK	900	22:24	22:23:36	22:23:36	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	22:39	22:38:43	22:38:43	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	22:54	22:53:50	22:53:50	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	23:09	23:08:57	23:08:57	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	23:24	23:24:04	23:24:04	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	23:39	23:39:10	23:39:10	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	23:54	23:54:17	23:54:17	300	90	3.0	#57 Velocity S	4	
0011.BIAS	0	3:56	03:55:42	03:55:42	300	90	3.0	#57 Velocity S	4	
0012.BIAS	0	3:56	03:55:49	03:55:49	300	90	3.0	#57 Velocity S	4	
0013.BIAS	0	3:56	03:55:57	03:55:57	300	90	3.0	#57 Velocity S	4	
0014.BIAS	0	3:56	03:56:04	03:56:04	300	90	3.0	#57 Velocity S	4	
0015.BIAS	0	3:56	03:56:11	03:56:11	300	90	3.0	#57 Velocity S	4	
0016.BIAS	0	3:56	03:56:19	03:56:19	300	90	3.0	#57 Velocity S	4	
0017.BIAS	0	3:56	03:56:26	03:56:26	300	90	3.0	#57 Velocity S	4	
0018.BIAS	0	3:57	03:56:33	03:56:33	300	90	3.0	#57 Velocity S	4	
0019.BIAS	0	3:57	03:56:40	03:56:40	300	90	3.0	#57 Velocity S	4	
0020.BIAS	0	3:57	03:56:48	03:56:48	300	90	3.0	#57 Velocity S	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.FLAT	8	3:57	03:57:01	03:57:01	300	90	3.0	#57 Velocity S	4	corrupted files due to
0022.FLAT	8	3:57	03:57:22	03:57:22	300	90	3.0	#57 Velocity S	4	
0023.FLAT	8	3:58	03:57:42	03:57:42	300	90	3.0	#57 Velocity S	4	
0024.FLAT	8	3:58	03:58:03	03:58:03	300	90	3.0	#57 Velocity S	4	
0025.FLAT	8	3:58	03:58:23	03:58:23	300	90	3.0	#57 Velocity S	4	
0026.FLAT	8	3:59	03:58:43	03:58:43	300	90	3.0	#57 Velocity S	4	
0027.FLAT	8	3:59	03:59:04	03:59:04	300	90	3.0	#57 Velocity S	4	
0028.FLAT	8	3:59	03:59:24	03:59:24	300	90	3.0	#57 Velocity S	4	
0029.FLAT	8	4:00	03:59:44	03:59:44	300	90	3.0	#57 Velocity S	4	
0030.FLAT	8	4:00	04:00:05	04:00:05	300	90	3.0	#57 Velocity S	4	
0031.BIAS	0	4:00	04:00:29	04:00:29	300	90	3.0	#57 Velocity S	2	faulty cable connections
0032.BIAS	0	4:01	04:00:42	04:00:42	300	90	3.0	#57 Velocity S	2	
0033.BIAS	0	4:01	04:00:55	04:00:55	300	90	3.0	#57 Velocity S	2	
0034.BIAS	0	4:01	04:01:08	04:01:08	300	90	3.0	#57 Velocity S	2	
0035.BIAS	0	4:01	04:01:21	04:01:21	300	90	3.0	#57 Velocity S	2	
0036.BIAS	0	4:02	04:01:34	04:01:34	300	90	3.0	#57 Velocity S	2	
0037.BIAS	0	4:02	04:01:47	04:01:47	300	90	3.0	#57 Velocity S	2	
0038.BIAS	0	4:02	04:01:59	04:01:59	300	90	3.0	#57 Velocity S	2	
0039.BIAS	0	4:02	04:02:12	04:02:12	300	90	3.0	#57 Velocity S	2	
0040.BIAS	0	4:02	04:02:25	04:02:25	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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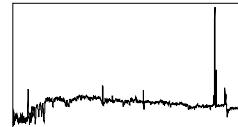
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.FLAT	16	4:03	04:02:48	04:02:48	300	90	3.0	#57 Velocity S	2	
0042.FLAT	16	4:03	04:03:28	04:03:28	300	90	3.0	#57 Velocity S	2	
0043.FLAT	16	4:04	04:04:09	04:04:09	300	90	3.0	#57 Velocity S	2	
0044.FLAT	16	4:05	04:04:49	04:04:49	300	90	3.0	#57 Velocity S	2	
0045.FLAT	16	4:05	04:05:29	04:05:29	300	90	3.0	#57 Velocity S	2	
0046.FLAT	16	4:06	04:06:10	04:06:10	300	90	3.0	#57 Velocity S	2	
0047.FLAT	16	4:07	04:06:50	04:06:50	300	90	3.0	#57 Velocity S	2	
0048.FLAT	16	4:08	04:07:30	04:07:30	300	90	3.0	#57 Velocity S	2	
0049.FLAT	16	4:08	04:08:11	04:08:11	300	90	3.0	#57 Velocity S	2	
0050.FLAT	16	4:09	04:08:51	04:08:51	300	90	3.0	#57 Velocity S	2	
0051.FLAT	8	4:29	04:28:55	04:28:55	300	90	3.0	#57 Velocity S	4	
0052.FLAT	8	4:30	04:30:20	04:30:20	300	90	3.0	#57 Velocity S	4	
0053.FLAT	8	4:32	04:31:54	04:31:54	300	90	3.0	#57 Velocity S	4	
0054.DARK	900	4:35	04:34:45	04:34:45	300	90	3.0	#57 Velocity S	2	
0055.DARK	900	4:50	04:49:58	04:49:58	300	90	3.0	#57 Velocity S	2	
0056.DARK	900	5:05	05:05:11	05:05:11	300	90	3.0	#57 Velocity S	2	
0057.DARK	900	5:20	05:20:23	05:20:23	300	90	3.0	#57 Velocity S	2	
0058.DARK	900	5:36	05:35:36	05:35:36	300	90	3.0	#57 Velocity S	2	
0059.DARK	900	5:51	05:50:48	05:50:48	300	90	3.0	#57 Velocity S	2	
0060.DARK	900	6:06	06:06:01	06:06:01	300	90	3.0	#57 Velocity S	2	



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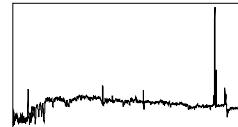
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.FLAT	8	6:34	06:34:28	06:34:28	300	90	3.0	#57 Velocity S	4	
0062.COMP	5	6:36	06:35:31	06:35:31	300	90	3.0	#57 Velocity S	4	
0063.BIAS	0	6:38	06:37:48	06:37:48	300	90	3.0	#57 Velocity S	4	
0064.BIAS	0	6:38	06:37:56	06:37:56	300	90	3.0	#57 Velocity S	4	
0065.BIAS	0	6:38	06:38:03	06:38:03	300	90	3.0	#57 Velocity S	4	
0066.BIAS	0	6:38	06:38:10	06:38:10	300	90	3.0	#57 Velocity S	4	
0067.BIAS	0	6:38	06:38:17	06:38:17	300	90	3.0	#57 Velocity S	4	
0068.BIAS	0	6:38	06:38:25	06:38:25	300	90	3.0	#57 Velocity S	4	
0069.BIAS	0	6:39	06:38:32	06:38:32	300	90	3.0	#57 Velocity S	4	
0070.BIAS	0	6:39	06:38:40	06:38:40	300	90	3.0	#57 Velocity S	4	
0071.BIAS	0	6:39	06:38:47	06:38:47	300	90	3.0	#57 Velocity S	4	
0072.BIAS	0	6:39	06:38:54	06:38:54	300	90	3.0	#57 Velocity S	4	
0073.FLAT	8	6:39	06:39:08	06:39:08	300	90	3.0	#57 Velocity S	4	ok
0074.FLAT	8	6:39	06:39:29	06:39:29	300	90	3.0	#57 Velocity S	4	
0075.FLAT	8	6:40	06:39:49	06:39:49	300	90	3.0	#57 Velocity S	4	
0076.FLAT	8	6:40	06:40:10	06:40:10	300	90	3.0	#57 Velocity S	4	
0077.FLAT	8	6:41	06:40:31	06:40:31	300	90	3.0	#57 Velocity S	4	
0078.FLAT	8	6:41	06:40:51	06:40:51	300	90	3.0	#57 Velocity S	4	
0079.FLAT	8	6:41	06:41:12	06:41:12	300	90	3.0	#57 Velocity S	4	
0080.FLAT	8	6:42	06:41:32	06:41:32	300	90	3.0	#57 Velocity S	4	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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UT Date 2002-09-08 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.FLAT	8	6:42	06:41:53	06:41:53	300	90	3.0	#57 Velocity S	4	
0082.FLAT	8	6:42	06:42:13	06:42:13	300	90	3.0	#57 Velocity S	4	
0083.BIAS	0	6:43	06:42:39	06:42:39	300	90	3.0	#57 Velocity S	2	
0084.BIAS	0	6:43	06:42:52	06:42:52	300	90	3.0	#57 Velocity S	2	
0085.BIAS	0	6:43	06:43:05	06:43:05	300	90	3.0	#57 Velocity S	2	
0086.BIAS	0	6:43	06:43:18	06:43:18	300	90	3.0	#57 Velocity S	2	
0087.BIAS	0	6:44	06:43:31	06:43:31	300	90	3.0	#57 Velocity S	2	
0088.BIAS	0	6:44	06:43:44	06:43:44	300	90	3.0	#57 Velocity S	2	
0089.BIAS	0	6:44	06:43:56	06:43:56	300	90	3.0	#57 Velocity S	2	
0090.BIAS	0	6:44	06:44:09	06:44:09	300	90	3.0	#57 Velocity S	2	
0091.BIAS	0	6:44	06:44:22	06:44:22	300	90	3.0	#57 Velocity S	2	
0092.BIAS	0	6:45	06:44:35	06:44:35	300	90	3.0	#57 Velocity S	2	
0093.FLAT	16	6:45	06:44:58	06:44:58	300	90	3.0	#57 Velocity S	2	ok
0094.FLAT	16	6:46	06:45:38	06:45:38	300	90	3.0	#57 Velocity S	2	
0095.FLAT	16	6:46	06:46:19	06:46:19	300	90	3.0	#57 Velocity S	2	
0096.FLAT	16	6:47	06:46:59	06:46:59	300	90	3.0	#57 Velocity S	2	
0097.FLAT	16	6:48	06:47:39	06:47:39	300	90	3.0	#57 Velocity S	2	
0098.FLAT	16	6:48	06:48:20	06:48:20	300	90	3.0	#57 Velocity S	2	
0099.FLAT	16	6:49	06:49:00	06:49:00	300	90	3.0	#57 Velocity S	2	
0100.FLAT	16	6:50	06:49:40	06:49:40	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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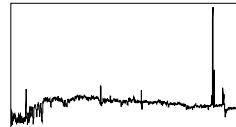
UT Date 2002-09-08 Observers P BerlindColl. Focus 980 Grating/Grism 300

<i>File</i>	<i>Exp Time</i>	<i>UT Start</i>	<i>RA</i>	<i>Dec</i>	<i>Gr.</i>	<i>P.A.</i>	<i>Slit</i>	<i>Program</i>	<i>Bin</i>	<i>Comments</i>
0101.FLAT	16	6:50	06:50:21	06:50:21	300	90	3.0	#57 Velocity S	2	
0102.FLAT	16	6:51	06:51:01	06:51:01	300	90	3.0	#57 Velocity S	2	
0103.BIAS	0	9:06	09:06:16	09:06:16	300	90	3.0	#57 Velocity S	2	



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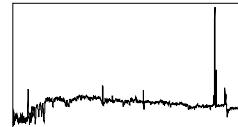
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:15	23:15:06	23:15:06	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	23:30	23:30:16	23:30:16	300	90	3.0	#57 Velocity S	4	
0003.DARK	900	23:45	23:45:26	23:45:26	300	90	3.0	#57 Velocity S	4	
0004.DARK	900	0:01	00:00:37	00:00:37	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	0:16	00:15:47	00:15:47	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	0:31	00:30:57	00:30:57	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	0:46	00:46:07	00:46:07	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	1:01	01:01:17	01:01:17	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	1:16	01:16:28	01:16:28	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	1:32	01:31:38	01:31:38	300	90	3.0	#57 Velocity S	4	
0011.DARK	900	1:47	01:46:49	01:46:49	300	90	3.0	#57 Velocity S	2	
0012.DARK	900	2:02	02:02:05	02:02:05	300	90	3.0	#57 Velocity S	2	
0013.DARK	900	2:17	02:17:20	02:17:20	300	90	3.0	#57 Velocity S	2	
0014.DARK	900	2:33	02:32:35	02:32:35	300	90	3.0	#57 Velocity S	2	
0015.DARK	900	2:48	02:47:50	02:47:50	300	90	3.0	#57 Velocity S	2	
0016.DARK	900	3:03	03:03:05	03:03:05	300	90	3.0	#57 Velocity S	2	
0017.DARK	900	3:18	03:18:20	03:18:20	300	90	3.0	#57 Velocity S	2	
0018.DARK	900	3:34	03:33:36	03:33:36	300	90	3.0	#57 Velocity S	2	
0019.DARK	900	3:49	03:48:51	03:48:51	300	90	3.0	#57 Velocity S	2	
0020.DARK	900	4:04	04:04:06	04:04:06	300	90	3.0	#57 Velocity S	2	



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UT Date 2002-09-09 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.BIAS	0	5:01	05:00:54	05:00:54	300	90	3.0	#57 Velocity S	4	
0022.BIAS	0	5:01	05:01:02	05:01:02	300	90	3.0	#57 Velocity S	4	
0023.BIAS	0	5:01	05:01:09	05:01:09	300	90	3.0	#57 Velocity S	4	
0024.BIAS	0	5:01	05:01:16	05:01:16	300	90	3.0	#57 Velocity S	4	
0025.BIAS	0	5:01	05:01:23	05:01:23	300	90	3.0	#57 Velocity S	4	
0026.BIAS	0	5:02	05:01:31	05:01:31	300	90	3.0	#57 Velocity S	4	
0027.BIAS	0	5:02	05:01:38	05:01:38	300	90	3.0	#57 Velocity S	4	
0028.BIAS	0	5:02	05:01:45	05:01:45	300	90	3.0	#57 Velocity S	4	
0029.BIAS	0	5:02	05:01:53	05:01:53	300	90	3.0	#57 Velocity S	4	
0030.BIAS	0	5:02	05:02:00	05:02:00	300	90	3.0	#57 Velocity S	4	
0031.FLAT	8	5:02	05:02:15	05:02:15	300	90	3.0	#57 Velocity S	4	
0032.FLAT	8	5:03	05:02:35	05:02:35	300	90	3.0	#57 Velocity S	4	
0033.FLAT	8	5:03	05:02:56	05:02:56	300	90	3.0	#57 Velocity S	4	
0034.FLAT	8	5:03	05:03:16	05:03:16	300	90	3.0	#57 Velocity S	4	
0035.FLAT	8	5:04	05:03:37	05:03:37	300	90	3.0	#57 Velocity S	4	
0036.FLAT	8	5:04	05:03:58	05:03:58	300	90	3.0	#57 Velocity S	4	
0037.FLAT	8	5:04	05:04:18	05:04:18	300	90	3.0	#57 Velocity S	4	
0038.FLAT	8	5:05	05:04:39	05:04:39	300	90	3.0	#57 Velocity S	4	
0039.FLAT	8	5:05	05:04:59	05:04:59	300	90	3.0	#57 Velocity S	4	
0040.FLAT	8	5:05	05:05:20	05:05:20	300	90	3.0	#57 Velocity S	4	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-09 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.BIAS	0	5:06	05:05:45	05:05:45	300	90	3.0	#57 Velocity S	2	
0042.BIAS	0	5:06	05:05:58	05:05:58	300	90	3.0	#57 Velocity S	2	
0043.BIAS	0	5:06	05:06:11	05:06:11	300	90	3.0	#57 Velocity S	2	
0044.BIAS	0	5:06	05:06:24	05:06:24	300	90	3.0	#57 Velocity S	2	
0045.BIAS	0	5:07	05:06:37	05:06:37	300	90	3.0	#57 Velocity S	2	
0046.BIAS	0	5:07	05:06:50	05:06:50	300	90	3.0	#57 Velocity S	2	
0047.BIAS	0	5:07	05:07:03	05:07:03	300	90	3.0	#57 Velocity S	2	
0048.BIAS	0	5:07	05:07:15	05:07:15	300	90	3.0	#57 Velocity S	2	
0049.BIAS	0	5:07	05:07:28	05:07:28	300	90	3.0	#57 Velocity S	2	
0050.BIAS	0	5:08	05:07:41	05:07:41	300	90	3.0	#57 Velocity S	2	
0051.FLAT	16	5:08	05:08:04	05:08:04	300	90	3.0	#57 Velocity S	2	
0052.FLAT	16	5:09	05:08:44	05:08:44	300	90	3.0	#57 Velocity S	2	
0053.FLAT	16	5:09	05:09:24	05:09:24	300	90	3.0	#57 Velocity S	2	
0054.FLAT	16	5:10	05:10:04	05:10:04	300	90	3.0	#57 Velocity S	2	
0055.FLAT	16	5:11	05:10:45	05:10:45	300	90	3.0	#57 Velocity S	2	
0056.FLAT	16	5:11	05:11:25	05:11:25	300	90	3.0	#57 Velocity S	2	
0057.FLAT	16	5:12	05:12:05	05:12:05	300	90	3.0	#57 Velocity S	2	
0058.FLAT	16	5:13	05:12:46	05:12:46	300	90	3.0	#57 Velocity S	2	
0059.FLAT	16	5:13	05:13:26	05:13:26	300	90	3.0	#57 Velocity S	2	
0060.FLAT	16	5:14	05:14:07	05:14:07	300	90	3.0	#57 Velocity S	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-09 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.M32	30	9:20	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	clearing after 2
0062.M32	30	9:21	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	
0063.COMP	5	9:22	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	
0064.sb3	1200	9:36	00:22:23.1	-01:18:13	300	80	3.0	#135 Starburst	2	no guider
0065.COMP	10	9:56	00:22:23.1	-01:18:13	300	80	3.0	#135 Starburst	2	
0066.snn759	1200	10:01	01:57:50.3	36:20:35	300	90	3.0	#2 SN Observat	2	tv image problems
0067.COMP	10	10:21	01:57:50.3	36:20:35	300	90	3.0	#2 SN Observat	2	
0068.sb1	20	10:23	00:06:21.8	+17:26:14	300	90	3.0	#135 Starburst	2	test
0069.sb1	900	10:24	00:06:21.8	+17:26:14	300	80	3.0	#135 Starburst	2	
0070.COMP	10	10:40	00:06:21.8	+17:26:14	300	80	3.0	#135 Starburst	2	
0071.sb1a	720	10:41	00:06:21.5	+17:25:46	300	105	3.0	#135 Starburst	2	
0072.COMP	10	10:54	00:06:21.5	+17:25:46	300	105	3.0	#135 Starburst	2	
0073.0o2589	10	10:56	02:22:53.3	57:14:42	300	105	3.0	#83 H+Chi Per	4	
0074.0o2589	5	10:57	02:22:53.3	57:14:42	300	105	3.0	#83 H+Chi Per	4	
0075.0o2589	5	10:57	02:22:53.3	57:14:42	300	105	3.0	#83 H+Chi Per	4	
0076.0o2589	5	10:57	02:22:53.3	57:14:42	300	105	3.0	#83 H+Chi Per	4	
0077.COMP	5	10:58	02:22:53.3	57:14:42	300	105	3.0	#83 H+Chi Per	4	
0078.sb27	900	11:00	02:15:27.6	+06:00:09	300	50	3.0	#135 Starburst	2	
0079.COMP	10	11:15	02:15:27.6	+06:00:09	300	50	3.0	#135 Starburst	2	
0080.sb25	720	11:16	02:13:45.1	+04:06:09	300	50	3.0	#135 Starburst	2	



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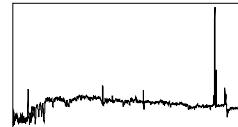
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.COMP	10	11:29	02:13:45.1	+04:06:09	300	50	3.0	#135 Starburst	2	
0082.PG0216p032	720	11:30	02:16:43.0	03:13:08	300	30	3.0	#56 Spectropho	2	
0083.COMP	10	11:43	02:16:43.0	03:13:08	300	30	3.0	#56 Spectropho	2	
0084.BGGem	1080	11:46	6:03:31	27:41:50	300	30	3.0	#100 BGGem	2	
0085.COMP	10	12:05	6:03:31	27:41:50	300	30	3.0	#100 BGGem	2	
0086.HZ14	300	12:08	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	2	
0087.COMP	10	12:13	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	2	
0088-0097.BIAS	0	12:17	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	4	
0098-0107.FLAT	8	12:20	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	4	
0108-0117.BIAS	0	12:22	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	2	
0118-0127.FLAT	16	12:29	04:38:15.6	10:53:57	300	-10	3.0	#56 Spectropho	2	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:04	23:04:17	23:04:17	300	-10	3.0	#56 Spectropho	4	
0002.DARK	900	23:19	23:19:28	23:19:28	300	-10	3.0	#56 Spectropho	4	
0003.DARK	900	23:35	23:34:38	23:34:38	300	-10	3.0	#56 Spectropho	4	
0004.DARK	900	23:50	23:49:48	23:49:48	300	-10	3.0	#56 Spectropho	4	
0005.DARK	900	0:05	00:04:58	00:04:58	300	-10	3.0	#56 Spectropho	4	
0006.DARK	900	0:20	00:20:08	00:20:08	300	-10	3.0	#56 Spectropho	4	
0007.DARK	900	0:35	00:35:19	00:35:19	300	-10	3.0	#56 Spectropho	4	
0008.DARK	900	0:50	00:50:29	00:50:29	300	-10	3.0	#56 Spectropho	4	
0009.DARK	900	1:06	01:05:39	01:05:39	300	-10	3.0	#56 Spectropho	4	
0010.DARK	900	1:21	01:20:49	01:20:49	300	-10	3.0	#56 Spectropho	4	
0011.DARK	900	1:36	01:36:01	01:36:01	300	-10	3.0	#56 Spectropho	2	no guider tonight
0012.DARK	900	1:51	01:51:16	01:51:16	300	-10	3.0	#56 Spectropho	2	
0013.DARK	900	2:07	02:06:31	02:06:31	300	-10	3.0	#56 Spectropho	2	
0014.DARK	900	2:22	02:21:46	02:21:46	300	-10	3.0	#56 Spectropho	2	
0015.DARK	900	2:37	02:37:01	02:37:01	300	-10	3.0	#56 Spectropho	2	
0016.DARK	900	2:52	02:52:16	02:52:16	300	-10	3.0	#56 Spectropho	2	
0017.DARK	900	3:08	03:07:32	03:07:32	300	-10	3.0	#56 Spectropho	2	
0018.DARK	900	3:23	03:22:47	03:22:47	300	-10	3.0	#56 Spectropho	2	
0019.DARK	900	3:38	03:38:02	03:38:02	300	-10	3.0	#56 Spectropho	2	
0020.DARK	900	3:53	03:53:17	03:53:17	300	-10	3.0	#56 Spectropho	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-10 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.BIAS	0	5:00	04:59:40	04:59:40	300	-10	3.0	#56 Spectropho	4	
0022.BIAS	0	5:00	04:59:47	04:59:47	300	-10	3.0	#56 Spectropho	4	
0023.BIAS	0	5:00	04:59:55	04:59:55	300	-10	3.0	#56 Spectropho	4	
0024.BIAS	0	5:00	05:00:02	05:00:02	300	-10	3.0	#56 Spectropho	4	
0025.BIAS	0	5:00	05:00:09	05:00:09	300	-10	3.0	#56 Spectropho	4	
0026.BIAS	0	5:00	05:00:16	05:00:16	300	-10	3.0	#56 Spectropho	4	
0027.BIAS	0	5:00	05:00:24	05:00:24	300	-10	3.0	#56 Spectropho	4	
0028.BIAS	0	5:01	05:00:31	05:00:31	300	-10	3.0	#56 Spectropho	4	
0029.BIAS	0	5:01	05:00:38	05:00:38	300	-10	3.0	#56 Spectropho	4	
0030.BIAS	0	5:01	05:00:46	05:00:46	300	-10	3.0	#56 Spectropho	4	
0031.FLAT	8	5:01	05:00:59	05:00:59	300	-10	3.0	#56 Spectropho	4	
0032.FLAT	8	5:01	05:01:20	05:01:20	300	-10	3.0	#56 Spectropho	4	
0033.FLAT	8	5:02	05:01:40	05:01:40	300	-10	3.0	#56 Spectropho	4	
0034.FLAT	8	5:02	05:02:01	05:02:01	300	-10	3.0	#56 Spectropho	4	
0035.FLAT	8	5:02	05:02:21	05:02:21	300	-10	3.0	#56 Spectropho	4	
0036.FLAT	8	5:03	05:02:42	05:02:42	300	-10	3.0	#56 Spectropho	4	
0037.FLAT	8	5:03	05:03:03	05:03:03	300	-10	3.0	#56 Spectropho	4	
0038.FLAT	8	5:03	05:03:24	05:03:24	300	-10	3.0	#56 Spectropho	4	
0039.FLAT	8	5:04	05:03:44	05:03:44	300	-10	3.0	#56 Spectropho	4	
0040.FLAT	8	5:04	05:04:05	05:04:05	300	-10	3.0	#56 Spectropho	4	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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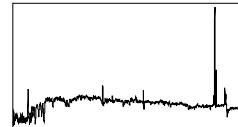
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.BIAS	0	5:04	05:04:29	05:04:29	300	-10	3.0	#56 Spectropho	2	
0042.BIAS	0	5:05	05:04:42	05:04:42	300	-10	3.0	#56 Spectropho	2	
0043.BIAS	0	5:05	05:04:55	05:04:55	300	-10	3.0	#56 Spectropho	2	
0044.BIAS	0	5:05	05:05:08	05:05:08	300	-10	3.0	#56 Spectropho	2	
0045.BIAS	0	5:05	05:05:21	05:05:21	300	-10	3.0	#56 Spectropho	2	
0046.BIAS	0	5:06	05:05:34	05:05:34	300	-10	3.0	#56 Spectropho	2	
0047.BIAS	0	5:06	05:05:47	05:05:47	300	-10	3.0	#56 Spectropho	2	
0048.BIAS	0	5:06	05:05:59	05:05:59	300	-10	3.0	#56 Spectropho	2	
0049.BIAS	0	5:06	05:06:12	05:06:12	300	-10	3.0	#56 Spectropho	2	
0050.BIAS	0	5:06	05:06:25	05:06:25	300	-10	3.0	#56 Spectropho	2	
0051.FLAT	16	5:07	05:06:47	05:06:47	300	-10	3.0	#56 Spectropho	2	
0052.FLAT	16	5:07	05:07:23	05:07:23	300	-10	3.0	#56 Spectropho	2	
0053.FLAT	16	5:08	05:07:59	05:07:59	300	-10	3.0	#56 Spectropho	2	
0054.FLAT	16	5:09	05:08:34	05:08:34	300	-10	3.0	#56 Spectropho	2	
0055.FLAT	16	5:09	05:09:10	05:09:10	300	-10	3.0	#56 Spectropho	2	
0056.FLAT	16	5:10	05:09:45	05:09:45	300	-10	3.0	#56 Spectropho	2	
0057.FLAT	16	5:10	05:10:21	05:10:21	300	-10	3.0	#56 Spectropho	2	
0058.FLAT	16	5:11	05:10:56	05:10:56	300	-10	3.0	#56 Spectropho	2	
0059.FLAT	16	5:12	05:11:32	05:11:32	300	-10	3.0	#56 Spectropho	2	
0060.FLAT	16	5:12	05:12:08	05:12:08	300	-10	3.0	#56 Spectropho	2	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.BDp284211	90	5:40	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0062.BDp284211	90	5:42	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0063.BDp284211	90	5:43	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0064.COMP	10	5:46	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0065.CHCyg	5	5:53	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0066.CHCyg	10	5:53	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0067.CHCyg	1	5:53	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0068.CHCyg	1	5:54	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0069.COMP	5	5:54	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0070.CICyg	5	5:55	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0071.CICyg	2	5:55	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0072.CICyg	15	5:56	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0073.CICyg	30	5:56	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0074.CICyg	60	5:57	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0075.COMP	5	5:58	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0076.DG_424	120	6:04	21:51:55.6	62:27:14	300	90	3.0	#137 Intermedi	4	
0077.COMP	5	6:07	21:51:55.6	62:27:14	300	90	3.0	#137 Intermedi	4	
0078.DG_423	360	6:11	21:51:54.6	62:44:07	300	90	3.0	#137 Intermedi	4	
0079.COMP	5	6:19	21:51:54.6	62:44:07	300	90	3.0	#137 Intermedi	4	
0080.DG_44	180	6:20	21:54:30.6	62:31:08	300	90	3.0	#137 Intermedi	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.COMP	5	6:23	21:54:30.6	62:31:08	300	90	3.0	#137 Intermedi	4	
0082.DG_43	180	6:25	21:54:11.9	62:46:34	300	90	3.0	#137 Intermedi	4	
0083.COMP	5	6:28	21:54:11.9	62:46:34	300	90	3.0	#137 Intermedi	4	
0084.DG_414	360	6:29	21:51:46.7	62:46:12	300	90	3.0	#137 Intermedi	4	
0085.COMP	5	6:35	21:51:46.7	62:46:12	300	90	3.0	#137 Intermedi	4	
0086.DG_41	180	6:36	21:53:19.4	62:37:39	300	90	3.0	#137 Intermedi	4	
0087.COMP	5	6:39	21:53:19.4	62:37:39	300	90	3.0	#137 Intermedi	4	
0088.DG_422	300	6:40	21:51:54.8	62:38:34	300	90	3.0	#137 Intermedi	4	
0089.COMP	5	6:45	21:51:54.8	62:38:34	300	90	3.0	#137 Intermedi	4	
0090.DG_42	180	6:45	21:53:36.7	62:32:49	300	90	3.0	#137 Intermedi	4	
0091.COMP	5	6:49	21:53:36.7	62:32:49	300	90	3.0	#137 Intermedi	4	
0092.DG_40	150	6:49	21:52:49.7	62:31:31	300	90	3.0	#137 Intermedi	4	
0093.COMP	5	6:52	21:52:49.7	62:31:31	300	90	3.0	#137 Intermedi	4	
0094.DG_409	150	6:53	21:51:45.6	62:42:58	300	90	3.0	#137 Intermedi	4	
0095.COMP	5	6:56	21:51:45.6	62:42:58	300	90	3.0	#137 Intermedi	4	
0096.DG_449	300	6:56	21:52:06.5	62:28:09	300	90	3.0	#137 Intermedi	4	
0097.COMP	5	7:07	21:52:06.5	62:28:09	300	90	3.0	#137 Intermedi	4	
0098.DG_45	180	7:08	21:53:45.4	62:40:57	300	90	3.0	#137 Intermedi	4	
0099.COMP	5	7:11	21:53:45.4	62:40:57	300	90	3.0	#137 Intermedi	4	
0100.DG_455	210	7:12	21:52:09.9	62:25:31	300	90	3.0	#137 Intermedi	4	



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Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0101.COMP	5	7:16	21:52:09.9	62:25:31	300	90	3.0	#137 Intermedi	4	
0102.DG_460	90	7:16	21:52:11.4	62:38:45	300	90	3.0	#137 Intermedi	4	
0103.COMP	5	7:18	21:52:11.4	62:38:45	300	90	3.0	#137 Intermedi	4	
0104.sn2002ey	1200	7:27	23:10:12.3	7:32:59	300	0	3.0	#2 SN Observat	2	
0105.COMP	10	7:47	23:10:12.3	7:32:59	300	0	3.0	#2 SN Observat	2	
0106.COMP	5	7:55	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	tv lockup, exit, restart
0107.COMP	5	7:56	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	spec focus lost
0108.COMP	5	7:58	07:58:08	07:58:08	300	0	3.0	#12 Symbiotic	4	same problem as before, as with comp mirror. bad cables.
0109.ZAnd	5	8:01	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	
0110.ZAnd	15	8:01	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	
0111.ZAnd	2	8:01	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	
0112.ZAnd	30	8:02	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	
0113.COMP	5	8:03	23:33:40	48:49:06	300	0	3.0	#12 Symbiotic	4	
0114.sb2	900	8:08	00:20:02.4	+06:28:01	300	110	3.0	#135 Starburst	2	
0115.COMP	10	8:24	00:20:02.4	+06:28:01	300	110	3.0	#135 Starburst	2	
0116.sb2a	300	8:25	00:20:02.4	+06:28:01	300	110	3.0	#135 Starburst	2	
0117.COMP	5	8:31	00:20:02.4	+06:28:01	300	110	3.0	#135 Starburst	2	more tv problems
0118.sb6	600	8:47	00:31:18.9	+08:28:29	300	110	3.0	#135 Starburst	2	
0119.COMP	10	8:58	00:31:18.9	+08:28:29	300	110	3.0	#135 Starburst	2	
0120.sb7	1200	8:59	00:31:23.9	+08:28:01	300	0	3.0	#135 Starburst	2	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0121.COMP	10	9:19	00:31:23.9	+08:28:01	300	0	3.0	#135 Starburst	2	
0122.sn2002eu	1200	9:23	01:49:43.6	32:37:43	300	90	3.0	#2 SN Observat	2	
0123.COMP	10	9:44	01:49:43.6	32:37:43	300	90	3.0	#2 SN Observat	2	
0124.sb10	900	9:45	00:47:56.4	+22:22:22	300	90	3.0	#135 Starburst	2	
0125.COMP	10	10:00	00:47:56.4	+22:22:22	300	90	3.0	#135 Starburst	2	
0126.sb11	900	10:02	01:02:30.9	+34:16:33	300	20	3.0	#135 Starburst	2	
0127.COMP	10	10:17	01:02:30.9	+34:16:33	300	20	3.0	#135 Starburst	2	
0128.sb9	1200	10:19	00:37:12.2	+35:54:10	300	10	3.0	#135 Starburst	2	
0129.COMP	10	10:40	00:37:12.2	+35:54:10	300	10	3.0	#135 Starburst	2	
0130.sn2002es	1200	10:43	03:23:47.2	40:33:53	300	38	3.0	#2 SN Observat	2	
0131.COMP	10	11:03	03:23:47.2	40:33:53	300	38	3.0	#2 SN Observat	2	
0132.0o2589	5	11:09	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0133.0o2589	5	11:09	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0134.0o2589	5	11:09	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0135.COMP	5	11:10	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0136.sb31	900	11:12	02:27:36.6	+42:00:27	300	90	3.0	#135 Starburst	2	
0137.COMP	10	11:28	02:27:36.6	+42:00:27	300	90	3.0	#135 Starburst	2	
0138.sb31a	240	11:29	02:27:36.6	+42:00:27	300	90	3.0	#135 Starburst	2	
0139.COMP	10	11:33	02:27:36.6	+42:00:27	300	90	3.0	#135 Starburst	2	
0140.Akn120	330	11:35	05:13:38.0	-00:12:15	300	90	3.0	#6 AGN Monitor	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0141.COMP	5	11:41	05:13:38.0	-00:12:15	300	90	3.0	#6 AGN Monitor	4	
0142.NGC1700	210	11:41	04:56:58.1	-04:52:22	300	90	3.0	#57 Velocity S	4	
0143.COMP	5	11:45	04:56:58.1	-04:52:22	300	90	3.0	#57 Velocity S	4	
0144-0153.BIAS	0	11:48	04:56:58.1	-04:52:22	300	90	3.0	#135 Starburst	4	
0154-0163.FLAT	8	11:52	04:56:58.1	-04:52:22	300	90	3.0	#135 Starburst	4	
0164-0173.BIAS	0	11:54	04:56:58.1	-04:52:22	300	90	3.0	#135 Starburst	2	
0174-0183.FLAT	16	12:00	04:56:58.1	-04:52:22	300	90	3.0	#135 Starburst	2	



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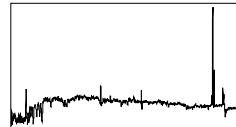
Coll. Focus 960 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	1:58	01:58:03	01:58:03	300	90	3.0	Bright Stars	4	
0002.DARK	900	2:13	02:13:10	02:13:10	300	90	3.0	Bright Stars	4	
0003.DARK	900	2:28	02:28:17	02:28:17	300	90	3.0	Bright Stars	4	
0004.DARK	900	2:43	02:43:24	02:43:24	300	90	3.0	Bright Stars	4	
0005.DARK	900	2:59	02:58:31	02:58:31	300	90	3.0	Bright Stars	4	
0006.DARK	900	3:14	03:13:38	03:13:38	300	90	3.0	Bright Stars	4	
0007.DARK	900	3:29	03:28:45	03:28:45	300	90	3.0	Bright Stars	4	
0008.DARK	900	3:44	03:43:52	03:43:52	300	90	3.0	Bright Stars	4	
0009.DARK	900	3:59	03:58:58	03:58:58	300	90	3.0	Bright Stars	4	
0010.DARK	900	4:14	04:14:05	04:14:05	300	90	3.0	Bright Stars	4	
0011.BIAS	0	5:01	05:01:14	05:01:14	300	90	3.0	Bright Stars	4	
0012.BIAS	0	5:01	05:01:21	05:01:21	300	90	3.0	Bright Stars	4	
0013.BIAS	0	5:01	05:01:28	05:01:28	300	90	3.0	Bright Stars	4	
0014.BIAS	0	5:02	05:01:35	05:01:35	300	90	3.0	Bright Stars	4	
0015.BIAS	0	5:02	05:01:43	05:01:43	300	90	3.0	Bright Stars	4	
0016.BIAS	0	5:02	05:01:50	05:01:50	300	90	3.0	Bright Stars	4	
0017.BIAS	0	5:02	05:01:57	05:01:57	300	90	3.0	Bright Stars	4	
0018.BIAS	0	5:02	05:02:04	05:02:04	300	90	3.0	Bright Stars	4	
0019.BIAS	0	5:02	05:02:12	05:02:12	300	90	3.0	Bright Stars	4	
0020.BIAS	0	5:02	05:02:19	05:02:19	300	90	3.0	Bright Stars	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.FLAT	6	5:19	05:19:13	05:19:13	300	90	3.0	Bright Stars	4	
0022.FLAT	6	5:19	05:19:26	05:19:26	300	90	3.0	Bright Stars	4	
0023.FLAT	6	5:20	05:19:39	05:19:39	300	90	3.0	Bright Stars	4	
0024.FLAT	6	5:20	05:19:51	05:19:51	300	90	3.0	Bright Stars	4	
0025.FLAT	6	5:20	05:20:04	05:20:04	300	90	3.0	Bright Stars	4	
0026.FLAT	6	5:20	05:20:17	05:20:17	300	90	3.0	Bright Stars	4	
0027.FLAT	6	5:21	05:20:30	05:20:30	300	90	3.0	Bright Stars	4	
0028.FLAT	6	5:21	05:20:43	05:20:43	300	90	3.0	Bright Stars	4	
0029.FLAT	6	5:21	05:20:56	05:20:56	300	90	3.0	Bright Stars	4	
0030.FLAT	6	5:21	05:21:09	05:21:09	300	90	3.0	Bright Stars	4	
0031.BIAS	0	5:22	05:22:18	05:22:18	300	90	3.0	Bright Stars	2	
0032.BIAS	0	5:23	05:22:31	05:22:31	300	90	3.0	Bright Stars	2	
0033.BIAS	0	5:23	05:22:44	05:22:44	300	90	3.0	Bright Stars	2	
0034.BIAS	0	5:23	05:22:56	05:22:56	300	90	3.0	Bright Stars	2	
0035.BIAS	0	5:23	05:23:09	05:23:09	300	90	3.0	Bright Stars	2	
0036.BIAS	0	5:23	05:23:22	05:23:22	300	90	3.0	Bright Stars	2	
0037.BIAS	0	5:24	05:23:35	05:23:35	300	90	3.0	Bright Stars	2	
0038.BIAS	0	5:24	05:23:48	05:23:48	300	90	3.0	Bright Stars	2	
0039.BIAS	0	5:24	05:24:01	05:24:01	300	90	3.0	Bright Stars	2	
0040.BIAS	0	5:24	05:24:14	05:24:14	300	90	3.0	Bright Stars	2	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.FLAT	12	5:59	05:59:02	05:59:02	300	90	3.0	Bright Stars	2	
0042.FLAT	12	5:59	05:59:26	05:59:26	300	90	3.0	Bright Stars	2	
0043.FLAT	12	6:00	05:59:51	05:59:51	300	90	3.0	Bright Stars	2	
0044.FLAT	12	6:00	06:00:15	06:00:15	300	90	3.0	Bright Stars	2	
0045.FLAT	12	6:01	06:00:40	06:00:40	300	90	3.0	Bright Stars	2	
0046.FLAT	12	6:01	06:01:04	06:01:04	300	90	3.0	Bright Stars	2	
0047.FLAT	12	6:01	06:01:29	06:01:29	300	90	3.0	Bright Stars	2	
0048.FLAT	12	6:02	06:01:53	06:01:53	300	90	3.0	Bright Stars	2	
0049.FLAT	12	6:02	06:02:18	06:02:18	300	90	3.0	Bright Stars	2	
0050.FLAT	12	6:03	06:02:42	06:02:42	300	90	3.0	Bright Stars	2	
0051.BDp284211	150	8:07	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0052.COMP	5	8:10	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0053.BDp284211	150	8:11	21:48:57.1	28:37:48	300	76	3.0	#56 Spectropho	2	
0054.COMP	12	8:14	21:48:57.1	28:37:48	300	76	3.0	#56 Spectropho	2	
0055.M31	60	8:17	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0056.COMP	12	8:18	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0057.Akn564	240	8:22	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0058.Akn564	240	8:26	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0059.COMP	12	8:30	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0060.N7469	120	8:32	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	row=72



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.N7469	120	8:34	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0062.COMP	12	8:37	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0063.ZAnd	2	8:39	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0064.ZAnd	5	8:39	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0065.ZAnd	15	8:39	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0066.COMP	12	8:40	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0067.0o2589	5	8:42	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0068.0o2589	5	8:42	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0069.0o2589	5	8:42	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0070.COMP	12	8:45	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0071.MRK335	180	8:48	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0072.MRK335	180	8:51	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0073.COMP	12	8:55	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0074.sb109	420	8:58	23:36:14.2	+02:09:16	300	45	3.0	#135 Starburst	2	
0075.COMP	12	9:05	23:36:14.2	+02:09:16	300	45	3.0	#135 Starburst	2	
0076.sb114	1020	9:08	23:43:54.3	+26:04:32	300	100	3.0	#135 Starburst	2	
0077.COMP	12	9:25	23:43:54.3	+26:04:32	300	100	3.0	#135 Starburst	2	
0078.sb112	900	9:28	23:40:22.4	+04:01:00	300	-20	3.0	#135 Starburst	2	
0079.COMP	12	9:44	23:40:22.4	+04:01:00	300	-20	3.0	#135 Starburst	2	
0080.sb115	780	9:46	23:47:09.2	+15:35:48	300	80	3.0	#135 Starburst	2	



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FAST SPECTROGRAPH LOG



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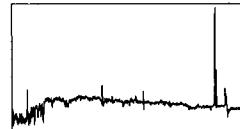
UT Date 2002-09-11 Observers M CalkinsColl. Focus 960 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.COMP	12	10:00	23:47:09.2	+15:35:48	300	80	3.0	#135 Starburst	2	
0082.sb113	1200	10:02	23:43:05.9	+18:39:24	300	100	3.0	#135 Starburst	2	
0083.COMP	12	10:22	23:43:05.9	+18:39:24	300	100	3.0	#135 Starburst	2	
0084.sb113a	300	10:23	23:43:06	+18:39:47	300	90	3.0	#135 Starburst	2	
0085.COMP	12	10:29	23:43:06	+18:39:47	300	90	3.0	#135 Starburst	2	
0086.sb113a	420	10:31	23:43:06	+18:39:47	300	90	3.0	#135 Starburst	2	get again for counts...
0087.COMP	12	10:39	23:43:06	+18:39:47	300	90	3.0	#135 Starburst	2	
0088.sn2002eo	1200	10:45	01:52:55.1	36:03:22	300	110	3.0	#2 SN Observat	2	row=77
0089.COMP	12	11:05	01:52:55.1	36:03:22	300	110	3.0	#2 SN Observat	2	close for humidity
0090-0099.BIAS	0	12:24	01:52:55.1	36:03:22	300	90	3.0	#2 SN Observat	4	
0100-0109.FLAT	6	12:26	01:52:55.1	36:03:22	300	90	3.0	#2 SN Observat	4	
0110-0119.BIAS	0	12:30	01:52:55.1	36:03:22	300	90	3.0	#2 SN Observat	2	
0120-0129.FLAT	12	12:34	01:52:55.1	36:03:22	300	90	3.0	#2 SN Observat	2	
0130-0139.DARK	900	14:52	01:52:55.1	36:03:22	300	90	3.0	#2 SN Observat	2	



WHIPPLE OBSERVATORY

FAS I SPECTROGRAPH LOG



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UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

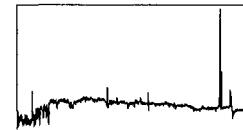
File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:15	23:15:19	23:15:19	300	90	3.0	#2 SN Observat	4	
0002.DARK	900	23:30	23:30:26	23:30:26	300	90	3.0	#2 SN Observat	4	
0003.DARK	900	23:46	23:45:33	23:45:33	300	90	3.0	#2 SN Observat	4	
0004.DARK	900	0:01	00:00:40	00:00:40	300	90	3.0	#2 SN Observat	4	
0005.DARK	900	0:16	00:15:47	00:15:47	300	90	3.0	#2 SN Observat	4	
0006.DARK	900	0:31	00:30:53	00:30:53	300	90	3.0	#2 SN Observat	4	
0007.DARK	900	0:46	00:46:00	00:46:00	300	90	3.0	#2 SN Observat	4	
0008.DARK	900	1:01	01:01:07	01:01:07	300	90	3.0	#2 SN Observat	4	
0009.DARK	900	1:16	01:16:14	01:16:14	300	90	3.0	#2 SN Observat	4	
0010.DARK	900	1:31	01:31:21	01:31:21	300	90	3.0	#2 SN Observat	4	
0011.BIAS	0 1:55	01:54:40	01:54:40	300	90	3.0	#2 SN Observat	4		
0012.BIAS	0 1:55	01:54:47	01:54:47	300	90	3.0	#2 SN Observat	4		
0013.BIAS	0 1:55	01:54:55	01:54:55	300	90	3.0	#2 SN Observat	4		
0014.BIAS	0 1:55	01:55:02	01:55:02	300	90	3.0	#2 SN Observat	4		
0015.BIAS	0 1:55	01:55:09	01:55:09	300	90	3.0	#2 SN Observat	4		
0016.BIAS	0 1:55	01:55:16	01:55:16	300	90	3.0	#2 SN Observat	4		
0017.BIAS	0 1:55	01:55:24	01:55:24	300	90	3.0	#2 SN Observat	4		
0018.BIAS	0 1:56	01:55:31	01:55:31	300	90	3.0	#2 SN Observat	4		
0019.BIAS	0 1:56	01:55:38	01:55:38	300	90	3.0	#2 SN Observat	4		
0020.BIAS	0 1:56	01:55:46	01:55:46	300	90	3.0	#2 SN Observat	4		

reduced in 2 sets: before + within 1454 and after + within 1455



WHIPPLE OBSERVATORY

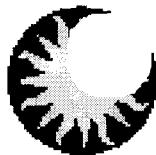
FAS I SPECTROGRAPH LOG



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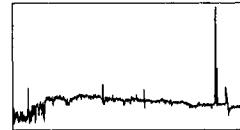
UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.FLAT	6	1:56	01:56:17	01:56:17	300	90	3.0	#2 SN Observat	4	
0022.FLAT	6	1:57	01:56:30	01:56:30	300	90	3.0	#2 SN Observat	4	
0023.FLAT	6	1:57	01:56:43	01:56:43	300	90	3.0	#2 SN Observat	4	
0024.FLAT	6	1:57	01:56:56	01:56:56	300	90	3.0	#2 SN Observat	4	
0025.FLAT	6	1:57	01:57:09	01:57:09	300	90	3.0	#2 SN Observat	4	
0026.FLAT	6	1:57	01:57:21	01:57:21	300	90	3.0	#2 SN Observat	4	
0027.FLAT	6	1:58	01:57:34	01:57:34	300	90	3.0	#2 SN Observat	4	
0028.FLAT	6	1:58	01:57:47	01:57:47	300	90	3.0	#2 SN Observat	4	
0029.FLAT	6	1:58	01:58:00	01:58:00	300	90	3.0	#2 SN Observat	4	
0030.FLAT	6	1:58	01:58:13	01:58:13	300	90	3.0	#2 SN Observat	4	
0031.BIAS	0	1:59	01:58:46	01:58:46	300	90	3.0	#2 SN Observat	2	
0032.BIAS	0	1:59	01:58:59	01:58:59	300	90	3.0	#2 SN Observat	2	
0033.BIAS	0	1:59	01:59:12	01:59:12	300	90	3.0	#2 SN Observat	2	
0034.BIAS	0	1:59	01:59:25	01:59:25	300	90	3.0	#2 SN Observat	2	
0035.BIAS	0	2:00	01:59:38	01:59:38	300	90	3.0	#2 SN Observat	2	
0036.BIAS	0	2:00	01:59:51	01:59:51	300	90	3.0	#2 SN Observat	2	
0037.BIAS	0	2:00	02:00:04	02:00:04	300	90	3.0	#2 SN Observat	2	
0038.BIAS	0	2:00	02:00:17	02:00:17	300	90	3.0	#2 SN Observat	2	
0039.BIAS	0	2:01	02:00:30	02:00:30	300	90	3.0	#2 SN Observat	2	
0040.BIAS	0	2:01	02:00:42	02:00:42	300	90	3.0	#2 SN Observat	2	



WHIPPLE OBSERVATORY

FAS I SPECTROGRAPH LOG

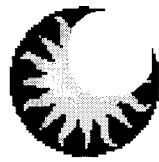


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UT Date 2002-09-12 Observers M Calkins

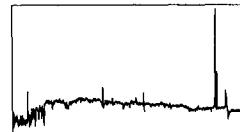
Coll. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0041.FLAT	12	2:02	02:01:34	02:01:34	300	90	3.0	#2 SN Observat	2	monsoons ending
0042.FLAT	12	2:02	02:01:59	02:01:59	300	90	3.0	#2 SN Observat	2	
0043.FLAT	12	2:02	02:02:23	02:02:23	300	90	3.0	#2 SN Observat	2	
0044.FLAT	12	2:03	02:02:48	02:02:48	300	90	3.0	#2 SN Observat	2	
0045.FLAT	12	2:03	02:03:12	02:03:12	300	90	3.0	#2 SN Observat	2	
0046.FLAT	12	2:04	02:03:37	02:03:37	300	90	3.0	#2 SN Observat	2	
0047.FLAT	12	2:04	02:04:01	02:04:01	300	90	3.0	#2 SN Observat	2	
0048.FLAT	12	2:04	02:04:26	02:04:26	300	90	3.0	#2 SN Observat	2	
0049.FLAT	12	2:05	02:04:50	02:04:50	300	90	3.0	#2 SN Observat	2	
0050.FLAT	12	2:05	02:05:15	02:05:15	300	90	3.0	#2 SN Observat	2	
0051.BDp332642	150	2:17	15:50:03	33:05:49	300	90	3.0	#56 Spectropho	4	
0052.COMP	5	2:20	15:50:03	33:05:49	300	90	3.0	#56 Spectropho	4	
0053.BDp332642	120	2:21	15:50:03	33:05:49	300	82	3.0	#56 Spectropho	2	
0054.COMP	12	2:24	15:50:03	33:05:49	300	82	3.0	#56 Spectropho	2	
0055.sn2002er	1200	2:29	17:11:29.8	+07:59:44	300	34	3.0	#2 SN Observat	2	
0056.COMP	12	2:49	17:11:29.8	+07:59:44	300	34	3.0	#2 SN Observat	2	
0057.Kaz207	900	2:53	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0058.COMP	12	3:08	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0059.Kaz208	240	3:09	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0060.COMP	12	3:13	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

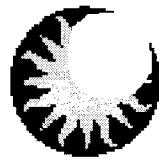


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UT Date 2002-09-12 Observers M Calkins

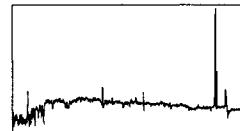
Coll. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.Kaz209	900	3:14	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0062.COMP	12	3:30	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0063.N7331	180	4:06	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	2	
0064.COMP	12	4:10	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	2	
0065.DG_472	120	4:14	21:52:20.1	62:27:58	300	90	3.0	#137 Intermedi	2	
0066.COMP	12	4:17	21:52:20.1	62:27:58	300	90	3.0	#137 Intermedi	2	
0067.DG_513	30	4:18	21:52:32.8	62:23:57	300	90	3.0	#137 Intermedi	2	
0068.COMP	12	4:18	21:52:32.8	62:23:57	300	90	3.0	#137 Intermedi	2	
0069.DG_529	90	4:19	21:52:39.2	62:44:49	300	90	3.0	#137 Intermedi	2	
0070.COMP	12	4:21	21:52:39.2	62:44:49	300	90	3.0	#137 Intermedi	2	
0071.DG_531	45	4:22	21:52:39.2	62:46:58	300	90	3.0	#137 Intermedi	2	
0072.COMP	12	4:23	21:52:39.2	62:46:58	300	90	3.0	#137 Intermedi	2	
0073.DG_912	60	4:24	21:55:47.5	62:35:43	300	90	3.0	#137 Intermedi	2	
0074.COMP	12	4:26	21:55:47.5	62:35:43	300	90	3.0	#137 Intermedi	2	
0075.DG_913	90	4:27	21:55:47.6	62:37:54	300	90	3.0	#137 Intermedi	2	
0076.COMP	12	4:29	21:55:47.6	62:37:54	300	90	3.0	#137 Intermedi	2	
0077.DG_940	30	4:29	21:56:07.6	62:34:07	300	90	3.0	#137 Intermedi	2	
0078.COMP	12	4:30	21:56:07.6	62:34:07	300	90	3.0	#137 Intermedi	2	
0079.DG_946	30	4:31	21:56:10.7	62:34:55	300	90	3.0	#137 Intermedi	2	
0080.COMP	12	4:32	21:56:10.7	62:34:55	300	90	3.0	#137 Intermedi	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-12 Observers M Calkins

Coll. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.DG_39	180	4:34	21:53:27.7	62:35:18	300	100	3.0	#137 Intermedi	2	
0082.COMP	12	4:37	21:53:27.7	62:35:18	300	100	3.0	#137 Intermedi	2	
0083.DG_47	240	4:38	21:53:55.5	62:36:18	300	90	3.0	#137 Intermedi	2	
0084.COMP	12	4:43	21:53:55.5	62:36:18	300	90	3.0	#137 Intermedi	2	
0085.DG_48	240	4:44	21:54:13.2	62:43:09	300	90	3.0	#137 Intermedi	2	
0086.COMP	12	4:48	21:54:13.2	62:43:09	300	90	3.0	#137 Intermedi	2	
0087.DG_64	480	4:49	21:53:22.3	62:34:25	300	90	3.0	#137 Intermedi	2	
0088.COMP	12	4:58	21:53:22.3	62:34:25	300	90	3.0	#137 Intermedi	2	
0089.DG_49	240	4:59	21:53:51.8	62:33:25	300	90	3.0	#137 Intermedi	2	
0090.COMP	12	5:03	21:53:51.8	62:33:25	300	90	3.0	#137 Intermedi	2	
0091.DG_50	300	5:05	21:53:35.3	62:30:03	300	90	3.0	#137 Intermedi	2	
0092.COMP	12	5:10	21:53:35.3	62:30:03	300	90	3.0	#137 Intermedi	2	
0093.DG_51	360	5:11	21:54:05.7	62:39:00	300	90	3.0	#137 Intermedi	2	
0094.COMP	12	5:18	21:54:05.7	62:39:00	300	90	3.0	#137 Intermedi	2	
0095.DG_52	300	5:19	21:55:19.8	62:39:15	300	90	3.0	#137 Intermedi	2	
0096.COMP	12	5:24	21:55:19.8	62:39:15	300	90	3.0	#137 Intermedi	2	
0097.DG_53	360	5:25	21:52:54.1	62:41:54	300	90	3.0	#137 Intermedi	2	
0098.COMP	12	5:32	21:52:54.1	62:41:54	300	90	3.0	#137 Intermedi	2	
0099.DG_54	360	5:33	21:54:27.7	62:39:57	300	90	3.0	#137 Intermedi	2	
0100.COMP	12	5:39	21:54:27.7	62:39:57	300	90	3.0	#137 Intermedi	2	



WHIPPLE OBSERVATORY

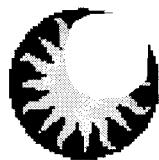
FAST SPECTROGRAPH LOG



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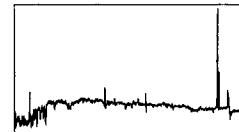
UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0101.DG_55	360	5:40	21:53:33.0	62:37:03	300	90	3.0	#137 Intermedi	2	
0102.COMP	12	5:47	21:53:33.0	62:37:03	300	90	3.0	#137 Intermedi	2	
0103.DG_56	360	5:48	21:54:07.2	62:44:26	300	90	3.0	#137 Intermedi	2	
0104.COMP	12	5:54	21:54:07.2	62:44:26	300	90	3.0	#137 Intermedi	2	
0105.DG_57	360	5:55	21:54:44.5	62:29:38	300	90	3.0	#137 Intermedi	2	
0106.COMP	12	6:02	21:54:44.5	62:29:38	300	90	3.0	#137 Intermedi	2	
0107.DG_58	360	6:03	21:54:15.7	62:36:04	300	90	3.0	#137 Intermedi	2	
0108.COMP	12	6:09	21:54:15.7	62:36:04	300	90	3.0	#137 Intermedi	2	
0109.DG_59	360	6:10	21:54:39.3	62:36:22	300	90	3.0	#137 Intermedi	2	
0110.COMP	12	6:17	21:54:39.3	62:36:22	300	90	3.0	#137 Intermedi	2	
0111.DG_60	330	6:17	21:54:33.4	62:28:53	300	90	3.0	#137 Intermedi	2	
0112.COMP	12	6:23	21:54:33.4	62:28:53	300	90	3.0	#137 Intermedi	2	
0113.DG_61	360	6:25	21:53:30.0	62:30:10	300	90	3.0	#137 Intermedi	2	
0114.COMP	12	6:31	21:53:30.0	62:30:10	300	90	3.0	#137 Intermedi	2	
0115.DG_62	420	6:32	21:54:30.2	62:31:16	300	90	3.0	#137 Intermedi	2	
0116.COMP	12	6:40	21:54:30.2	62:31:16	300	90	3.0	#137 Intermedi	2	
0117.DG_65	420	6:41	21:54:36.7	62:34:00	300	90	3.0	#137 Intermedi	2	
0118.COMP	12	6:48	21:54:36.7	62:34:00	300	90	3.0	#137 Intermedi	2	
0119.DG_67	480	6:49	21:52:59.8	62:42:06	300	90	3.0	#137 Intermedi	2	row=75
0120.COMP	12	6:58	21:52:59.8	62:42:06	300	90	3.0	#137 Intermedi	2	



WHIPPLE OBSERVATORY

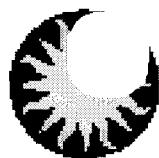
FAST SPECTROGRAPH LOG



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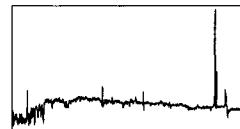
UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0121.sb118	720	7:04	23:59:01.2	+18:50:02	300	90	3.0	#135 Starburst	2	row=75
0122.COMP	12	7:16	23:59:01.2	+18:50:02	300	90	3.0	#135 Starburst	2	
0123.sb116	1200	7:18	23:48:41.7	+02:14:22	300	90	3.0	#135 Starburst	2	
0124.COMP	12	7:39	23:48:41.7	+02:14:22	300	90	3.0	#135 Starburst	2	
0125.sb119	1200	7:41	23:59:36.8	+14:48:25	300	45	3.0	#135 Starburst	2	
0126.COMP	12	8:02	23:59:36.8	+14:48:25	300	45	3.0	#135 Starburst	2	
0127.sb117	480	8:03	23:55:44.3	+30:12:44	300	90	3.0	#135 Starburst	2	
0128.COMP	12	8:12	23:55:44.3	+30:12:44	300	90	3.0	#135 Starburst	2	
0129.sb8	660	8:16	00:36:10.6	+04:38:07	300	50	3.0	#135 Starburst	2	
0130.COMP	12	8:27	00:36:10.6	+04:38:07	300	50	3.0	#135 Starburst	2	
0131.sb14	540	8:29	01:11:30.9	+01:19:17	300	110	3.0	#135 Starburst	2	
0132.COMP	12	8:39	01:11:30.9	+01:19:17	300	110	3.0	#135 Starburst	2	
0133.sb12	540	8:41	01:03:04.7	+17:45:02	300	30	3.0	#135 Starburst	2	
0134.COMP	12	8:51	01:03:04.7	+17:45:02	300	30	3.0	#135 Starburst	2	
0135.sb15	660	8:53	01:19:32.9	+14:52:19	300	90	3.0	#135 Starburst	2	
0136.COMP	12	9:04	01:19:32.9	+14:52:19	300	90	3.0	#135 Starburst	2	
0137.sb15a	480	9:05	01:19:33.0	+14:52:35	300	90	3.0	#135 Starburst	2	
0138.COMP	12	9:13	01:19:33.0	+14:52:35	300	90	3.0	#135 Starburst	2	
0139.sb13p13a	780	9:16	01:11:21.2	+27:55:41	300	45	3.0	#135 Starburst	2	sb13=row89, 13a=row67
0140.COMP	12	9:29	01:11:21.2	+27:55:41	300	45	3.0	#135 Starburst	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



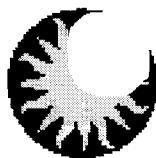
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UT Date 2002-09-12 Observers M Calkins

Coll. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0141.sb18p18a	720	9:33	01:22:43.1	+26:52:00	300	100	3.0	#135 Starburst	2	sb18=row65, 18a=92
0142.COMP	12	9:46	01:22:43.1	+26:52:00	300	100	3.0	#135 Starburst	2	
0143.sb16	480	9:49	01:19:44.8	+03:24:36	300	-30	3.0	#135 Starburst	2	
0144.COMP	12	9:57	01:19:44.8	+03:24:36	300	-30	3.0	#135 Starburst	2	
0145.sb19	420	10:04	01:34:59.3	+35:02:22	300	90	3.0	#135 Starburst	2	
0146.COMP	12	10:12	01:34:59.3	+35:02:22	300	90	3.0	#135 Starburst	2	
0147.sn2002fb	1200	10:15	01:57:50.3	36:20:35	300	-39	3.0	#2 SN Observat	2	row=79
0148.COMP	12	10:36	01:57:50.3	36:20:35	300	-39	3.0	#2 SN Observat	2	
0149.0o2589	5	10:38	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0150.0o2589	5	10:39	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0151.0o2589	5	10:39	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0152.COMP	12	10:40	02:22:53.3	57:14:42	300	-39	3.0	#83 H+Chi Per	2	
0153.sn2002es	1200	10:43	03:23:47.2	40:33:53	300	47	3.0	#2 SN Observat	2	
0154.COMP	12	11:03	03:23:47.2	40:33:53	300	47	3.0	#2 SN Observat	2	
0155.BGGem	300	11:07	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0156.COMP	12	11:13	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0157.BGGem	1200	11:14	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0158.COMP	12	11:34	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0159.a496k_001	180	11:44	4:28:20.7	-17:35:43	300	90	3.0	#64 Cluster In	2	
0160.COMP	12	11:47	4:28:20.7	-17:35:43	300	90	3.0	#64 Cluster In	2	

slightly out of focus from file 145 on -



WHIPPLE OBSERVATORY

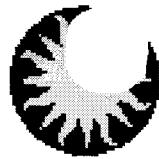
FAS I SPECTROGRAPH LOG



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UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0161.a496k_003	150	11:48	4:40:16.9	-16:2:33	300	90	3.0	#64 Cluster In	2	
0162.COMP	12	11:51	4:40:16.9	-16:2:33	300	90	3.0	#64 Cluster In	2	
0163.a496k_004	150	11:53	4:43:12.9	-15:42:11	300	90	3.0	#64 Cluster In	2	
0164.COMP	12	11:56	4:43:12.9	-15:42:11	300	90	3.0	#64 Cluster In	2	
0165.a496k_006	240	11:57	4:40:11.6	-13:13:41	300	90	3.0	#64 Cluster In	2	
0166.COMP	12	12:01	4:40:11.6	-13:13:41	300	90	3.0	#64 Cluster In	2	
0167.a496k_007	150	12:02	4:45:13.1	-15:6:51	300	90	3.0	#64 Cluster In	2	
0168.COMP	12	12:05	4:45:13.1	-15:6:51	300	90	3.0	#64 Cluster In	2	
0169.a496k_008	150	12:06	4:27:32.8	-12:9:36	300	90	3.0	#64 Cluster In	2	
0170.COMP	12	12:09	4:27:32.8	-12:9:36	300	90	3.0	#64 Cluster In	2	
0171.a496k_009	210	12:10	4:28:16.3	-12:9:16	300	90	3.0	#64 Cluster In	2	<i>not long enough</i>
0172.COMP	12	12:14	4:28:16.3	-12:9:16	300	90	3.0	#64 Cluster In	2	
0173.Hiltner600	120	12:20	06:42:37.2	02:11:25	300	-45	3.0	#56 Spectropho	4	
0174.COMP	12	12:23	06:42:37.2	02:11:25	300	-45	3.0	#56 Spectropho	4	
0175.Hiltner600	90	12:24	06:42:37.2	02:11:25	300	-45	3.0	#56 Spectropho	2	
0176.COMP	12	12:26	06:42:37.2	02:11:25	300	-45	3.0	#56 Spectropho	2	
0177-0186.BIAS	0	12:34	06:42:37.2	02:11:25	300	-45	3.0	#57 Velocity S	4	
0187-0196.FLAT	6	12:39	06:42:37.2	02:11:25	300	-45	3.0	#57 Velocity S	4	
0197-0206.BIAS	0	12:41	06:42:37.2	02:11:25	300	-45	3.0	#57 Velocity S	2	
0207-0216.FLAT	12	12:45	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

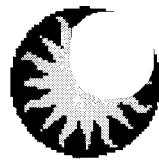
FAST SPECTROGRAPH LOG



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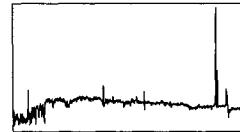
UT Date 2002-09-12 Observers M CalkinsColl. Focus 920 Grating/Grism 300

<i>File</i>	<i>Exp Time</i>	<i>UT Start</i>	<i>RA</i>	<i>Dec</i>	<i>Gr.</i>	<i>P.A.</i>	<i>Slit</i>	<i>Program</i>	<i>Bin</i>	<i>Comments</i>
0217-0226.DARK	900	15:07	06:42:37.2	02:11:25	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

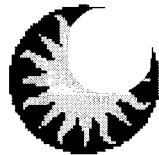
FAS1 SPECTROGRAPH LOG



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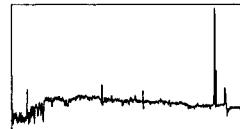
UT Date 2002-09-13 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:51	16:09:32.7	+31:30:35	300	90	3.0	Bright Stars	4	
0002.DARK	900	0:06	16:24:43.4	+31:30:32	300	90	3.0	Bright Stars	4	
0003.DARK	900	0:21	16:39:54.5	+31:30:29	300	90	3.0	Bright Stars	4	
0004.DARK	900	0:36	16:55:01.7	+31:30:26	300	90	3.0	Bright Stars	4	
0005.DARK	900	0:51	17:10:13.0	+31:30:23	300	90	3.0	Bright Stars	4	
0006.DARK	900	1:07	17:25:20.3	+31:30:20	300	90	3.0	Bright Stars	4	
0007.DARK	900	1:22	17:40:30.9	+31:30:17	300	90	3.0	Bright Stars	4	
0008-0017.BIAS	0	1:46	17:50:21.2	+31:30:15	300	90	3.0	Bright Stars	4	
0018-0020.FLAT	6	1:47	17:51:13.1	+31:30:15	300	90	3.0	Bright Stars	4	
0021-0027.FLAT	6	1:49	17:52:44.0	+31:30:14	300	90	3.0	Bright Stars	4	
0028-0037.BIAS	0	1:52	17:55:46.6	+31:30:14	300	90	3.0	Bright Stars	2	
0038-0047.FLAT	12	1:56	18:00:06.4	+31:30:13	300	90	3.0	Bright Stars	2	
0048-0055.sky	2	1:59	18:03:00.3	+31:30:12	300	90	3.0	#57 Velocity S	4	
0056.COMP	5	1:59	18:03:30.1	+31:30:12	300	90	3.0	#57 Velocity S	4	
0057.BDp404032	120	2:17	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0058.COMP	5	2:20	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0059.BDp404032	90	2:21	20:06:40	41:06:15	300	73	3.0	#56 Spectropho	2	
0060.COMP	12	2:23	20:06:40	41:06:15	300	73	3.0	#56 Spectropho	2	
0061.N5548	180	2:26	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0062.N5548	180	2:29	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

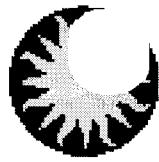


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UT Date 2002-09-13 Observers M Calkins

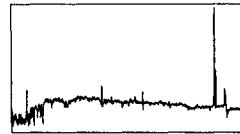
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0063.COMP	12	2:33	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0064.3C390.3	360	2:36	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	
0065.3C390.3	360	2:42	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	
0066.COMP	12	2:49	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	
0067.A183332.6p670903	240	2:51	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	
0068.COMP	12	2:55	18:33:32.6	67:09:03	300	90	3.0	#68 2MASS Surv	2	more tests for Ted...
0069.id1666	600	3:32	20:06:18.0	35:40:48	300	90	3.0	#115 PMS NGC68	2	row=78
0070.COMP	12	3:42	20:06:18.0	35:40:48	300	90	3.0	#115 PMS NGC68	2	
0071.id1735	420	3:43	20:06:10.8	35:48:09	300	90	3.0	#115 PMS NGC68	2	row=78
0072.COMP	12	3:50	20:06:10.8	35:48:09	300	90	3.0	#115 PMS NGC68	2	
0073.id2417	420	3:51	20:04:32.2	35:46:10	300	90	3.0	#115 PMS NGC68	2	row=78
0074.COMP	12	3:59	20:04:32.2	35:46:10	300	90	3.0	#115 PMS NGC68	2	
0075.id2946	360	4:00	19:58:02.9	35:20:55	300	90	3.0	#115 PMS NGC68	2	
0076.COMP	12	4:06	19:58:02.9	35:20:55	300	90	3.0	#115 PMS NGC68	2	
0077.id1136	420	4:08	20:07:22.0	35:38:57	300	90	3.0	#115 PMS NGC68	2	
0078.COMP	12	4:15	20:07:22.0	35:38:57	300	90	3.0	#115 PMS NGC68	2	
0079.id1509	420	4:16	20:06:40.5	35:50:51	300	90	3.0	#115 PMS NGC68	2	
0080.COMP	12	4:23	20:06:40.5	35:50:51	300	90	3.0	#115 PMS NGC68	2	
0081.id2048	420	4:24	20:05:33.1	35:45:15	300	90	3.0	#115 PMS NGC68	2	
0082.COMP	12	4:32	20:05:33.1	35:45:15	300	90	3.0	#115 PMS NGC68	2	



WHIPPLE OBSERVATORY

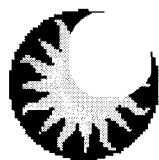
FAST SPECTROGRAPH LOG



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UT Date 2002-09-13 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0083.id2303	420	4:32	20:04:56.5	35:42:23	300	90	3.0	#115 PMS NGC68	2	
0084.COMP	12	4:40	20:04:56.5	35:42:23	300	90	3.0	#115 PMS NGC68	2	
0085.id2402	480	4:41	20:04:35.2	35:38:43	300	90	3.0	#115 PMS NGC68	2	
0086.COMP	12	4:50	20:04:35.2	35:38:43	300	90	3.0	#115 PMS NGC68	2	
0087.id2459	540	4:50	20:04:24.7	35:46:15	300	90	3.0	#115 PMS NGC68	2	row=78
0088.COMP	12	5:00	20:04:24.7	35:46:15	300	90	3.0	#115 PMS NGC68	2	
0089.id1129	480	5:01	20:07:22.4	35:49:06	300	90	3.0	#115 PMS NGC68	2	
0090.COMP	12	5:10	20:07:22.4	35:49:06	300	90	3.0	#115 PMS NGC68	2	
0091.id1391	480	5:12	20:06:55.0	35:37:51	300	90	3.0	#115 PMS NGC68	2	
0092.COMP	12	5:20	20:06:55.0	35:37:51	300	90	3.0	#115 PMS NGC68	2	
0093.id1615	480	5:21	20:06:23.9	35:47:11	300	90	3.0	#115 PMS NGC68	2	
0094.COMP	12	5:30	20:06:23.9	35:47:11	300	90	3.0	#115 PMS NGC68	2	
0095.id1729	540	5:30	20:06:11.3	35:46:19	300	90	3.0	#115 PMS NGC68	2	
0096.COMP	12	5:40	20:06:11.3	35:46:19	300	90	3.0	#115 PMS NGC68	2	
0097.id2422	480	5:41	20:04:31.4	35:52:27	300	90	3.0	#115 PMS NGC68	2	row=78
0098.COMP	12	5:49	20:04:31.4	35:52:27	300	90	3.0	#115 PMS NGC68	2	
0099.id2435	480	5:50	20:04:29.5	35:38:02	300	90	3.0	#115 PMS NGC68	2	
0100.COMP	12	5:59	20:04:29.5	35:38:02	300	90	3.0	#115 PMS NGC68	2	
0101.sn2002ew	1200	6:04	20:54:30.5	-00:08:26	300	27	3.0	#2 SN Observat	2	row=79
0102.COMP	12	6:24	20:54:30.5	-00:08:26	300	27	3.0	#2 SN Observat	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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UT Date 2002-09-13 Observers M Calkins

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0103.sn2002ey	1200	6:31	23:10:12.3	7:32:59	300	-18	3.0	#2 SN Observat	2	
0104.COMP	12	6:51	23:10:12.3	7:32:59	300	-18	3.0	#2 SN Observat	2	need more counts
0105.sn2002ey	1200	6:54	23:10:12.3	7:32:59	300	-6	3.0	#2 SN Observat	2	
0106.COMP	12	7:14	23:10:12.3	7:32:59	300	-6	3.0	#2 SN Observat	2	
0107.M31	60	7:17	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0108.COMP	12	7:18	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0109.FLAT	22	7:26	12:51.2	48:23:2000	600	90	3.0	#140 Disk Gala	2	600L, 3arcsec, tilt=742
0110-0118.FLAT	22	7:32	12:51.2	48:23:2000	600	90	3.0	#140 Disk Gala	2	
0119.BDp284211	120	7:36	21:48:57.1	28:37:48	600	90	3.0	#56 Spectropho	2	
0120.COMP	20	7:38	21:48:57.1	28:37:48	600	90	3.0	#56 Spectropho	2	
0121.IC5309	900	7:43	23:19:11.7	08:06:34	600	25	3.0	#140 Disk Gala	2	
0122.COMP	20	7:59	23:19:11.7	08:06:34	600	25	3.0	#140 Disk Gala	2	
0123.NGC7536	900	8:01	23:14:13.2	13:25:34	600	56	3.0	#140 Disk Gala	2	
0124.COMP	20	8:17	23:14:13.2	13:25:34	600	56	3.0	#140 Disk Gala	2	
0125.NGC7537	900	8:19	23:14:34.5	04:29:55	600	80	3.0	#140 Disk Gala	2	
0126.COMP	20	8:34	23:14:34.5	04:29:55	600	80	3.0	#140 Disk Gala	2	
0127.FLAT	12	8:39	23:14:34.5	04:29:55	300	90	3.0	#140 Disk Gala	2	normal setup
0128-0136.FLAT	12	8:43	23:14:34.5	04:29:55	300	90	3.0	none	2	
0137.Feige25	120	8:47	02:36:00	05:15:16	300	-41	3.0	#56 Spectropho	2	
0138.COMP	12	8:49	02:36:00	05:15:16	300	-41	3.0	#56 Spectropho	2	



WHIPPLE OBSERVATORY

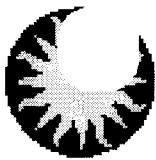
FAST SPECTROGRAPH LOG



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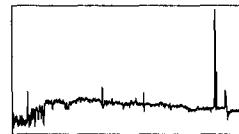
UT Date 2002-09-13 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0139.Akn564	240	8:52	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0140.Akn564	240	8:56	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0141.COMP	12	9:01	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0142.N7469	120	9:02	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0143.N7469	120	9:04	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0144.COMP	12	9:07	23:03:15.7	+08:52:27	300	90	3.0	#6 AGN Monitor	2	
0145.MRK335	180	9:08	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0146.MRK335	180	9:11	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0147.COMP	12	9:15	00:06:19.6	+20:12:11	300	90	3.0	#6 AGN Monitor	2	
0148.ZAnd	2	9:16	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0149.ZAnd	5	9:17	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0150.ZAnd	15	9:17	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0151.COMP	12	9:18	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0152.0o2589	5	9:20	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0153.0o2589	5	9:20	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0154.0o2589	5	9:21	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0155.COMP	12	9:21	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0156.sn2002eu	1200	9:26	01:49:43.6	32:37:43	300	80	3.0	#2 SN Observat	2	
0157.COMP	12	9:47	01:49:43.6	32:37:43	300	80	3.0	#2 SN Observat	2	
0158.FLAT	18	10:01	01:04:21.6	04:13:37	300	90	2.0	#136 Low-Mass	2	300L, 2arcsec, tilt=711



WHIPPLE OBSERVATORY

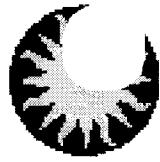
FAST SPECTROGRAPH LOG



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UT Date 2002-09-13 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0159-0167.FLAT	18	10:06	01:04:21.6	04:13:37	300	90	2.0	#136 Low-Mass	2	
0168.Feige11	300	10:09	01:04:21.6	04:13:37	300	29	2.0	#136 Low-Mass	2	
0169.COMP	16	10:15	01:04:21.6	04:13:37	300	29	2.0	#136 Low-Mass	2	
0170.luh-1	510	10:19	03:45:23.4	+31:58:57	300	94	2.0	#136 Low-Mass	2	
0171.COMP	16	10:28	03:45:23.4	+31:58:57	300	94	2.0	#136 Low-Mass	2	
0172.luh-2	300	10:30	03:45:07.7	+32:00:27	300	93	2.0	#136 Low-Mass	2	
0173.COMP	16	10:36	03:45:07.7	+32:00:27	300	93	2.0	#136 Low-Mass	2	
0174.luh-3	330	10:38	03:45:23.3	+32:00:15	300	93	2.0	#136 Low-Mass	2	
0175.COMP	16	10:44	03:45:23.3	+32:00:15	300	93	2.0	#136 Low-Mass	2	
0176.luh-4	330	10:46	04:18:42.3	+28:11:40	300	106	2.0	#136 Low-Mass	2	
0177.COMP	16	10:52	04:18:42.3	+28:11:40	300	106	2.0	#136 Low-Mass	2	
0178.luh-9	900	10:55	03:44:25.5	+32:12:30	300	90	2.0	#136 Low-Mass	2	
0179.COMP	16	11:10	03:44:25.5	+32:12:30	300	90	2.0	#136 Low-Mass	2	
0180.luh-11	840	11:12	03:45:05.7	+32:03:08	300	88	2.0	#136 Low-Mass	2	
0181.COMP	12	11:27	03:45:05.7	+32:03:08	300	88	2.0	#136 Low-Mass	2	
0182.luh-12	720	11:30	04:35:51.0	+22:52:40	300	-54	2.0	#136 Low-Mass	2	
0183.COMP	16	11:43	04:35:51.0	+22:52:40	300	-54	2.0	#136 Low-Mass	2	
0184.luh-13	720	11:47	04:32:11.3	+26:13:23	300	-56	2.0	#136 Low-Mass	2	
0185.COMP	16	12:00	04:32:11.3	+26:13:23	300	-56	2.0	#136 Low-Mass	2	
0186.luh-14	960	12:04	04:18:30.3	+27:43:20	300	-29	2.0	#136 Low-Mass	2	



WHIPPLE OBSERVATORY

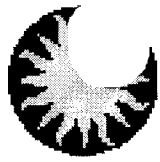
FAST SPECTROGRAPH LOG



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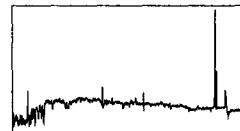
UT Date 2002-09-13 Observers M CalkinsColl. Focus 980 Grating/Grism 300

<i>File</i>	<i>Exp Time</i>	<i>UT Start</i>	<i>RA</i>	<i>Dec</i>	<i>Gr.</i>	<i>P.A.</i>	<i>Slit</i>	<i>Program</i>	<i>Bin</i>	<i>Comments</i>
0187.COMP	16	12:20	04:18:30.3	+27:43:20	300	-29	2.0	#136 Low-Mass	2	
0188-0197.DARK	900	14:58	03:45:13.5	+32:01:20	300	90	2.0	#136 Low-Mass	2	



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FAST SPECTROGRAPH LOG



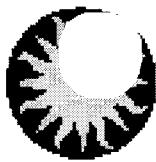
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UT Date 2002-09-26 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

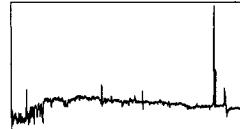
File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.COMP	5	1:51	18:46:28.9	+31:30:03	300	90	3.0	none	4	
0002.COMP	5	1:53	18:47:47.0	+31:30:03	300	90	3.0	none	4	
0003.COMP	5	1:57	18:52:07.1	+31:30:02	300	90	3.0	none	4	
0004.COMP	5	1:58	18:53:29.5	+31:30:01	300	90	3.0	none	4	
0005.BIAS	0	1:59	18:54:00.0	+31:30:01	300	90	3.0	none	4	
0006.FLAT	6	2:02	18:57:23.9	+31:30:01	300	90	3.0	none	4	
0007.COMP	5	2:06	19:01:03.6	+31:30:00	300	90	3.0	none	4	
0008.COMP	5	2:09	19:04:07.5	+31:29:59	300	90	3.0	none	1	
0009.COMP	5	2:10	19:05:08.9	+31:29:59	300	90	3.0	none	4	
0010.COMP	5	2:46	19:40:57.2	+31:29:52	300	90	3.0	none	4	
0011-0012.BIAS	0	2:50	19:45:26.3	+31:29:52	300	90	3.0	none	4	
0013-0016.BIAS	0	2:51	19:46:13.5	+31:29:51	300	90	3.0	none	4	
0017.COMP	5	2:52	19:47:06.3	+31:29:51	300	90	3.0	none	4	
0018.COMP	5	2:54	19:49:04.4	+31:29:51	300	90	3.0	none	4	
0019.COMP	5	2:56	19:51:10.0	+31:29:50	300	90	3.0	none	4	
0020.COMP	5	3:06	20:01:44.1	+31:29:49	300	90	3.0	none	4	
0021.COMP	5	3:11	20:06:25.2	+31:29:48	300	90	3.0	none	4	
0022-0023.BIAS	0	3:13	20:08:28.2	+31:29:48	300	90	3.0	none	4	
0024-0026.BIAS	0	3:19	20:14:41.3	+31:29:47	300	90	3.0	none	4	
0027.BIAS	1	3:19	20:14:54.3	+31:29:46	300	90	3.0	none	4	

DATA ALL BAD



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UT Date 2002-09-26 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0028.COMP	5	3:20	20:15:20.6	+31:29:46	300	90	3.0	none	4	
0029-0033.BIAS	0	5:26	22:22:00.5	+31:29:32	300	90	3.0	none	4	
0034.COMP	5	5:27	22:22:26.6	+31:29:32	300	90	3.0	none	4	
0035.COMP	5	5:29	22:24:45.4	+31:29:32	300	90	3.0	none	4	
0036.COMP	5	5:30	22:25:42.0	+31:29:31	300	90	3.0	none	4	
0037.FLAT	5	5:31	22:27:00.1	+31:29:32	300	90	3.0	none	4	
0038.FLAT	5	5:32	22:27:43.4	+31:29:31	300	90	3.0	none	4	
0039.BDp404032	120	5:44	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0040.COMP	12	5:46	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0041.BDp404032	120	5:48	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0042.COMP	5	5:56	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0043.BDp404032	120	6:07	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0044.DARK	300	6:12	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0045.COMP	12	6:40	20:06:40	41:06:15	600	90	3.0	#56 Spectropho	4	
0046.FLAT	12	6:44	20:06:40	41:06:15	600	90	3.0	#56 Spectropho	4	
0047.FLAT	24	6:49	20:06:40	41:06:15	600	90	2.0	#56 Spectropho	4	
0048.COMP	5	7:05	00:00:46.5	+31:29:30	300	90	3.0	#56 Spectropho	4	
0049.COMP	5	7:05	00:01:34.5	+31:29:30	300	90	3.0	#56 Spectropho	4	
0050.COMP	5	7:08	00:04:28.8	+31:29:30	300	90	3.0	#56 Spectropho	4	
0051.COMP	12	7:09	00:05:34.5	+31:29:30	300	90	3.0	#56 Spectropho	4	



WHIPPLE OBSERVATORY

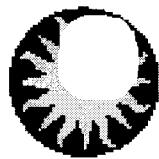
FAST SPECTROGRAPH LOG



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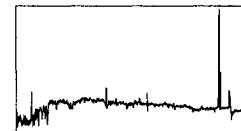
UT Date 2002-09-26 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0052.FLAT	12	7:12	00:08:40.6	+31:29:30	300	90	3.0	#56 Spectropho	4	
0053.BDp284211	600	7:26	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0054.COMP	5	7:38	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0055.COMP	15	7:40	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	4	
0056.HIP3092	5	7:48	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0057.HIP3092	3	7:50	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0058.HIP3092	4	7:52	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0059.HIP3092	5	7:53	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0060.HIP3092	5	7:54	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0061.test	1200	8:00	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0062.test	10	8:06	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0063.test	60	8:07	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0064.test	0	8:08	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0065.test	0	8:09	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0066.BIAS	0	8:16	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0067.BIAS	5	8:16	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0068.BIAS	0	8:17	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0069.BIAS	10	8:18	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0070-0071.BIAS	0	8:24	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0072.COMP	10	8:26	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	



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UT Date 2002-09-26 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0073.BIAS	1	8:42	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0074.FLAT	5	8:43	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0075.COMP	5	8:45	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0076.COMP	5	8:46	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0077.FLAT	1	8:47	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0078.COMP	5	8:48	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0079.COMP	5	8:51	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0080.COMP	5	8:54	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0081.FLAT	1	8:56	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0082.FLAT	10	8:56	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0083.BIAS	0	9:00	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0084.COMP	5	9:01	00:39:19.6	+30:51:40	300	90	3.0	Bright Stars	4	
0085-0087.BIAS	0	9:06	02:02:49.1	+31:29:40	300	90	3.0	Bright Stars	4	
0088.COMP	5	9:07	02:03:11.4	+31:29:40	300	90	3.0	Bright Stars	4	
0089.COMP	5	9:08	02:04:11.8	+31:29:40	300	90	3.0	Bright Stars	4	
0090-0093.BIAS	0	9:11	02:07:10.0	+31:29:41	300	90	3.0	Bright Stars	4	
0094.BIAS	1	9:11	02:07:39.9	+31:29:41	300	90	3.0	Bright Stars	4	
0095.COMP	5	9:12	02:08:23.6	+31:29:41	300	90	3.0	Bright Stars	4	
0096.BIAS	0	9:29	02:25:21.4	+31:29:43	300	90	3.0	Bright Stars	4	



WHIPPLE OBSERVATORY

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UT Date 2002-09-27 Observers M CalkinsColl. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:03	16:16:28.8	+31:30:35	300	90	3.0	Bright Stars	4	
0002.DARK	900	23:18	16:31:36.3	+31:30:31	300	90	3.0	Bright Stars	4	
0003.DARK	900	23:33	16:46:47.2	+31:30:28	300	90	3.0	Bright Stars	4	
0004.DARK	900	23:48	17:01:57.9	+31:30:25	300	90	3.0	Bright Stars	4	
0005.DARK	900	0:03	17:17:05.3	+31:30:22	300	90	3.0	Bright Stars	4	
0006.DARK	900	0:18	17:32:15.8	+31:30:19	300	90	3.0	Bright Stars	4	
0007.DARK	900	0:33	17:47:23.1	+31:30:15	300	90	3.0	Bright Stars	4	
0008.DARK	900	0:49	18:02:33.9	+31:30:12	300	90	3.0	Bright Stars	4	
0009.DARK	900	1:04	18:17:44.7	+31:30:09	300	90	3.0	Bright Stars	4	
0010.DARK	900	1:19	18:32:52.2	+31:30:06	300	90	3.0	Bright Stars	4	
0011-0016.BIAS	0	1:35	18:33:39.5	+31:30:06	300	90	3.0	Bright Stars	4	
0017-0020.BIAS	0	1:35	18:34:06.1	+31:30:05	300	90	3.0	Bright Stars	4	
0021-0030.FLAT	6	1:39	18:38:08.5	+31:30:05	300	90	3.0	Bright Stars	4	
0031-0040.BIAS	0	1:42	18:40:53.7	+31:30:04	300	90	3.0	Bright Stars	2	
0041-0050.FLAT	12	1:48	18:47:36.9	+31:30:03	300	90	3.0	Bright Stars	2	
0051.BDp404032	90	2:02	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0052.BDp404032	90	2:04	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0053.COMP	5	2:06	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0054.BDp404032	90	2:07	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	2	
0055.BDp404032	90	2:09	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	2	



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UT Date 2002-09-27 Observers M CalkinsColl. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0056.COMP	12	2:11	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	2	
0057.BDp404032	90	2:13	20:06:40	41:06:15	300	55	3.0	#56 Spectropho	2	
0058.BDp404032	90	2:14	20:06:40	41:06:15	300	55	3.0	#56 Spectropho	2	
0059.COMP	12	2:16	20:06:40	41:06:15	300	55	3.0	#56 Spectropho	2	
0060.3C390.3	360	2:22	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	not reduced
0061.3C390.3	360	2:28	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	not reduced
0062.COMP	12	2:35	18:42:09.1	79:46:17	300	90	3.0	#6 AGN Monitor	2	BAD COMP
0063.MRK509	240	2:38	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0064.MRK509	240	2:42	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0065.COMP	12	2:46	20:44:09.8	-10:43:24	300	90	3.0	#6 AGN Monitor	2	
0066.id2538	720	2:49	20:04:09.4	35:36:54	300	90	3.0	#115 PMS NGC68	2	
0067.COMP	12	3:02	20:04:09.4	35:36:54	300	90	3.0	#115 PMS NGC68	2	
0068.id2805	480	3:18	19:58:58.7	35:10:41	300	90	3.0	#115 PMS NGC68	2	
0069.COMP	12	3:26	19:58:58.7	35:10:41	300	90	3.0	#115 PMS NGC68	2	
0070.id1051	420	3:27	20:07:29.5	35:40:28	300	90	3.0	#115 PMS NGC68	2	
0071.COMP	12	3:35	20:07:29.5	35:40:28	300	90	3.0	#115 PMS NGC68	2	
0072.id2219	540	3:36	20:05:10.9	35:39:06	300	90	3.0	#115 PMS NGC68	2	
0073.COMP	12	3:46	20:05:10.9	35:39:06	300	90	3.0	#115 PMS NGC68	2	
0074.id2347	540	3:47	20:04:46.5	35:41:23	300	90	3.0	#115 PMS NGC68	2	row=78
0075.COMP	12	3:56	20:04:46.5	35:41:23	300	90	3.0	#115 PMS NGC68	2	



WHIPPLE OBSERVATORY

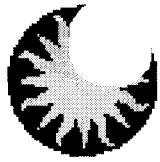
FAST SPECTROGRAPH LOG



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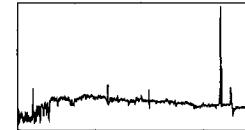
UT Date 2002-09-27 Observers M CalkinsColl. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0076.id2423	540	3:57	20:04:31.1	35:47:59	300	90	3.0	#115 PMS NGC68	2	
0077.COMP	12	4:06	20:04:31.1	35:47:59	300	90	3.0	#115 PMS NGC68	2	
0078.id2611	540	4:07	20:03:54.3	35:48:39	300	90	3.0	#115 PMS NGC68	2	
0079.COMP	12	4:17	20:03:54.3	35:48:39	300	90	3.0	#115 PMS NGC68	2	
0080.id2732	420	4:18	19:59:27.6	35:13:51	300	90	3.0	#115 PMS NGC68	2	
0081.COMP	12	4:25	19:59:27.6	35:13:51	300	90	3.0	#115 PMS NGC68	2	
0082.id2762	420	4:27	19:59:16.2	35:21:29	300	90	3.0	#115 PMS NGC68	2	
0083.COMP	12	4:34	19:59:16.2	35:21:29	300	90	3.0	#115 PMS NGC68	2	
0084.DG_462	240	4:37	21:52:12.8	62:44:09	300	90	3.0	#137 Intermedi	2	
0085.COMP	12	4:42	21:52:12.8	62:44:09	300	90	3.0	#137 Intermedi	2	
0086.DG_481	270	4:43	21:52:21.1	62:45:03	300	90	3.0	#137 Intermedi	2	
0087.COMP	12	4:48	21:52:21.1	62:45:03	300	90	3.0	#137 Intermedi	2	
0088.DG_526	240	4:49	21:52:38.5	62:45:52	300	90	3.0	#137 Intermedi	2	
0089.COMP	12	4:53	21:52:38.5	62:45:52	300	90	3.0	#137 Intermedi	2	
0090.DG_533	270	4:54	21:52:40.3	62:46:07	300	90	3.0	#137 Intermedi	2	
0091.COMP	12	4:59	21:52:40.3	62:46:07	300	90	3.0	#137 Intermedi	2	
0092.DG_603	270	5:00	21:53:07.3	62:27:19	300	90	3.0	#137 Intermedi	2	
0093.COMP	12	5:05	21:53:07.3	62:27:19	300	90	3.0	#137 Intermedi	2	
0094.DG_644	360	5:06	21:53:26.9	62:44:50	300	90	3.0	#137 Intermedi	2	
0095.COMP	12	5:13	21:53:26.9	62:44:50	300	90	3.0	#137 Intermedi	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

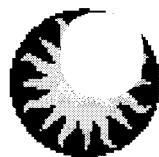


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UT Date 2002-09-27 Observers M Calkins

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0096.DG_682	180	5:13	21:53:45.0	62:36:55	300	90	3.0	#137 Intermedi	2	row=76
0097.COMP	12	5:17	21:53:45.0	62:36:55	300	90	3.0	#137 Intermedi	2	
0098.DG_685	360	5:18	21:53:45.3	62:45:25	300	90	3.0	#137 Intermedi	2	
0099.COMP	12	5:24	21:53:45.3	62:45:25	300	90	3.0	#137 Intermedi	2	
0100.DG_687	240	5:25	21:53:46.1	62:46:35	300	90	3.0	#137 Intermedi	2	
0101.COMP	12	5:30	21:53:46.1	62:46:35	300	90	3.0	#137 Intermedi	2	
0102.DG_720	180	5:31	21:54:02.8	62:26:34	300	90	3.0	#137 Intermedi	2	
0103.COMP	12	5:34	21:54:02.8	62:26:34	300	90	3.0	#137 Intermedi	2	
0104.DG_725	360	5:35	21:54:05.4	62:43:43	300	90	3.0	#137 Intermedi	2	
0105.COMP	12	5:42	21:54:05.4	62:43:43	300	90	3.0	#137 Intermedi	2	BAD COMP used 103
0106.DG_794	360	5:43	21:54:33.5	62:47:53	300	90	3.0	#137 Intermedi	2	
0107.COMP	12	5:49	21:54:33.5	62:47:53	300	90	3.0	#137 Intermedi	2	BAD COMP used 103
0108.0339.97976P03.42293	240	5:57	22:39:55.1	+03:25:22	300	90	3.0	#129 CHAMP Sou	2	
0109.COMP	12	6:02	22:39:55.1	+03:25:22	300	90	3.0	#129 CHAMP Sou	2	
0110.0345.47423P08.69347	900	6:05	23:01:53.8	+08:41:36	300	90	3.0	#129 CHAMP Sou	2	
0111.COMP	12	6:22	23:01:53.8	+08:41:36	300	90	3.0	#129 CHAMP Sou	2	
0112.0345.47472P08.69285	1200	6:25	23:01:53.9	+08:41:34	300	60	3.0	#129 CHAMP Sou	2	row=86, clouds passing thru
0113.COMP	12	6:45	23:01:53.9	+08:41:34	300	60	3.0	#129 CHAMP Sou	2	
0114.FLAT	22	6:53	23:01:53.9	+08:41:34	600	60	3.0	#140 Disk Gala	2	600L, 3arcsec, tilt=743, wait out clouds
0115-0123.FLAT	22	6:58	23:01:53.9	+08:41:34	600	60	3.0	#140 Disk Gala	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

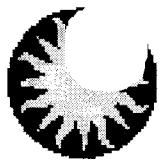


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UT Date 2002-09-27 Observers M Calkins

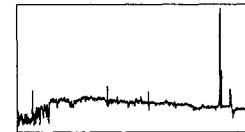
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0124.IC1474	1020	7:24	23:12:51.2	+05:48:23	600	-29	3.0	#140 Disk Gala	2	
0125.COMP	20	7:42	23:12:51.2	+05:48:23	600	-29	3.0	#140 Disk Gala	2	bad comp due to connector, will get again, clouds back
0126.COMP	12	8:40	01:20:02.7	+14:21:42	300	110	3.0	#135 Starburst	2	test comp
0127.sb17	1200	8:41	01:20:02.7	+14:21:42	300	110	3.0	#135 Starburst	2	normal setup
0128.COMP	12	9:01	01:20:02.7	+14:21:42	300	110	3.0	#135 Starburst	2	
0129.sb22	600	9:04	01:54:53.7	+36:55:02	300	80	3.0	#135 Starburst	2	not reduced
0130.COMP	12	9:14	01:54:53.7	+36:55:02	300	80	3.0	#135 Starburst	2	BAD COMP
0131.sb22a	1200	9:17	01:55:01.8	+36:55:11	300	90	3.0	#135 Starburst	2	row=59 not reduced
0132.COMP	12	9:37	01:55:01.8	+36:55:11	300	90	3.0	#135 Starburst	2	BAD COMP
0133.sb20	600	9:41	01:37:17.5	+05:52:40	300	90	3.0	#135 Starburst	2	
0134.COMP	12	9:51	01:37:17.5	+05:52:40	300	90	3.0	#135 Starburst	2	
0135.COMP	5	10:11	03:22:05.7	-15:24:03	300	90	3.0	#2 SN Observat	2	test comp BAD COMP
0136.COMP	5	10:13	03:22:05.7	-15:24:03	300	90	3.0	#2 SN Observat	2	test comp BAD COMP
0137.COMP	12	10:40	03:40:38.5	+31:29:56	300	90	3.0	#2 SN Observat	4	test comp
0138.COMP	12	10:45	03:22:05.7	-15:24:03	300	90	3.0	#2 SN Observat	2	test comp
0139.sn2002fk	510	10:57	03:22:05.7	-15:24:03	300	7	3.0	#2 SN Observat	2	
0140.COMP	12	11:06	03:22:05.7	-15:24:03	300	7	3.0	#2 SN Observat	2	
0141.0o2589	5	11:12	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0142.0o2589	5	11:12	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0143.0o2589	5	11:12	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-09-27 Observers M Calkins

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0144.0o2589	5	11:13	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0145.0o2589	5	11:13	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0146.COMP	12	11:13	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	2	
0147.HD12623	5	11:26	02:02:19	+62:56:04	300	90	3.0	#57 Velocity S	2	
0148.COMP	12	11:27	02:02:19	+62:56:04	300	90	3.0	#57 Velocity S	2	Another bad comp.. use 150
0149.HD12623	5	11:32	02:02:19	+62:56:04	300	90	3.0	#57 Velocity S	2	
0150.COMP	12	11:33	02:02:19	+62:56:04	300	90	3.0	#57 Velocity S	2	
0151.Hiltner600	60	11:36	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	use 154
0152.COMP	12	11:38	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	BAD COMP
0153.Hiltner600	60	11:39	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	
0154.COMP	12	11:40	06:42:37.2	02:11:25	300	-42	3.0	#56 Spectropho	2	
0155.BGGem	300	11:44	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0156.BGGem	840	11:49	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	shorten for clouds
0157.COMP	12	12:04	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0158.Akn120	420	12:13	05:13:38.0	-00:12:15	300	90	3.0	#6 AGN Monitor	2	
0159.COMP	12	12:21	05:13:38.0	-00:12:15	300	90	3.0	#6 AGN Monitor	2	wait out more clouds
0160-0164.sky	2	12:53	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0165.COMP	5	12:53	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0166-0175.BIAS	0	12:56	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0176-0185.FLAT	6	12:59	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

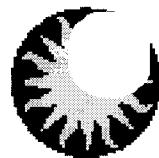


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UT Date 2002-09-27 Observers M CalkinsColl. Focus 1000 Grating/Grism 300

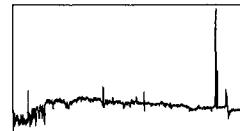
File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0186-0195.BIAS	0	13:02	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	2	
0196-0205.FLAT	12	13:07	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	2	
0206-0214.DARK	900	15:11	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	2	

215 DARK " "



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

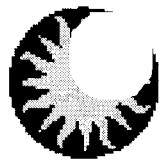


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UT Date 2002-09-28 Observers M Calkins

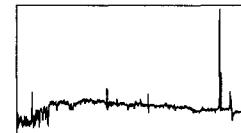
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.BIAS	0	2:03	19:09:45.8	-21:01:24	300	90	3.0	Bright Stars	4	
0011-0020.FLAT	6	2:08	19:09:45.8	-21:01:24	300	90	3.0	Bright Stars	4	
0021-0030.BIAS	0	2:10	19:09:45.8	-21:01:24	300	90	3.0	Bright Stars	2	
0031-0040.FLAT	12	2:14	19:09:45.8	-21:01:24	300	90	3.0	Bright Stars	2	
0041.BDp404032	90	2:28	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0042.COMP	5	2:31	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	4	
0043.BDp404032	90	2:32	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	2	
0044.COMP	12	2:34	20:06:40	41:06:15	300	90	3.0	#56 Spectropho	2	
0045.BDp404032	90	2:36	20:06:40	41:06:15	300	34	3.0	#56 Spectropho	2	
0046.COMP	12	2:38	20:06:40	41:06:15	300	34	3.0	#56 Spectropho	2	
0047.a2199kf_003	240	2:47	16:29:52.0	40:49:30	300	90	3.0	#64 Cluster In	4	
0048.COMP	5	2:51	16:29:52.0	40:49:30	300	90	3.0	#64 Cluster In	4	
0049.a2199kf_006	600	2:53	16:51:42.5	39:14:08	300	90	3.0	#64 Cluster In	4	get again
0050.COMP	5	3:03	16:51:42.5	39:14:08	300	90	3.0	#64 Cluster In	4	
0051.id2631	900	3:11	20:00:02.7	35:18:56	300	90	3.0	#115 PMS NGC68	4	
0052.COMP	5	3:26	20:00:02.7	35:18:56	300	90	3.0	#115 PMS NGC68	4	
0053.id2374	300	3:27	20:04:40.9	35:51:26	300	90	3.0	#115 PMS NGC68	4	
0054.COMP	5	3:33	20:04:40.9	35:51:26	300	90	3.0	#115 PMS NGC68	4	
0055.id2346	150	3:33	20:04:46.7	35:55:28	300	90	3.0	#115 PMS NGC68	4	
0056.COMP	5	3:36	20:04:46.7	35:55:28	300	90	3.0	#115 PMS NGC68	4	



WHIPPLE OBSERVATORY

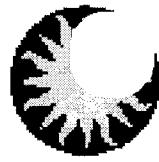
FAS I SPECTROGRAPH LOG



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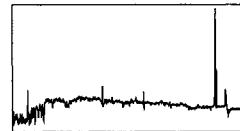
UT Date 2002-09-28 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0057.id2272	180	3:37	20:05:02.4	35:38:54	300	90	3.0	#115 PMS NGC68	4	
0058.COMP	5	3:40	20:05:02.4	35:38:54	300	90	3.0	#115 PMS NGC68	4	
0059.id2245	270	3:41	20:05:08.3	35:37:08	300	90	3.0	#115 PMS NGC68	4	
0060.COMP	5	3:46	20:05:08.3	35:37:08	300	90	3.0	#115 PMS NGC68	4	
0061.id2167	270	3:47	20:05:17.9	35:43:33	300	90	3.0	#115 PMS NGC68	4	
0062.COMP	5	3:52	20:05:17.9	35:43:33	300	90	3.0	#115 PMS NGC68	4	
0063.id2139	270	3:53	20:05:22.0	35:37:20	300	90	3.0	#115 PMS NGC68	4	
0064.COMP	5	3:58	20:05:22.0	35:37:20	300	90	3.0	#115 PMS NGC68	4	
0065.id2033	300	4:08	20:05:35.5	35:37:18	300	90	3.0	#115 PMS NGC68	2	row=72
0066.COMP	12	4:13	20:05:35.5	35:37:18	300	90	3.0	#115 PMS NGC68	2	
0067.id4	3	4:15	20:05:39.7	35:36:29	300	90	3.0	#115 PMS NGC68	4	
0068.COMP	5	4:15	20:05:39.7	35:36:29	300	90	3.0	#115 PMS NGC68	4	
0069.id2092	1	4:16	20:05:57.8	35:47:21	300	90	3.0	#115 PMS NGC68	4	
0070.COMP	5	4:17	20:05:57.8	35:47:21	300	90	3.0	#115 PMS NGC68	4	
0071.id47	300	4:19	20:05:59.3	35:47:34	300	90	3.0	#115 PMS NGC68	2	
0072.COMP	12	4:24	20:05:59.3	35:47:34	300	90	3.0	#115 PMS NGC68	2	
0073.id118	270	4:26	20:06:14.2	35:37:51	300	90	3.0	#115 PMS NGC68	2	
0074.COMP	12	4:31	20:06:14.2	35:37:51	300	90	3.0	#115 PMS NGC68	2	
0075.id124	240	4:32	20:06:15.5	35:41:24	300	90	3.0	#115 PMS NGC68	2	
0076.COMP	12	4:36	20:06:15.5	35:41:24	300	90	3.0	#115 PMS NGC68	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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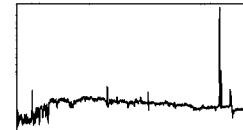
UT Date 2002-09-28 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0077.id1438	240	4:37	20:06:49.9	35:55:57	300	90	3.0	#115 PMS NGC68	2	
0078.COMP	12	4:42	20:06:49.9	35:55:57	300	90	3.0	#115 PMS NGC68	2	
0079.id218	30	4:43	20:06:54.0	35:37:27	300	90	3.0	#115 PMS NGC68	2	
0080.COMP	12	4:44	20:06:54.0	35:37:27	300	90	3.0	#115 PMS NGC68	2	
0081.DG_825	240	4:48	21:54:52.5	62:45:28	300	90	3.0	#137 Intermedi	2	
0082.COMP	12	4:53	21:54:52.5	62:45:28	300	90	3.0	#137 Intermedi	2	
0083.DG_853	270	4:54	21:55:06.8	62:43:34	300	90	3.0	#137 Intermedi	2	
0084.COMP	12	4:59	21:55:06.8	62:43:34	300	90	3.0	#137 Intermedi	2	
0085.DG_895	300	5:00	21:55:36.3	62:43:54	300	90	3.0	#137 Intermedi	2	
0086.COMP	12	5:06	21:55:36.3	62:43:54	300	90	3.0	#137 Intermedi	2	
0087.DG_899	240	5:07	21:55:38.2	62:45:53	300	90	3.0	#137 Intermedi	2	
0088.COMP	12	5:11	21:55:38.2	62:45:53	300	90	3.0	#137 Intermedi	2	
0089.DG_907	300	5:13	21:55:43.0	62:42:29	300	90	3.0	#137 Intermedi	2	
0090.COMP	12	5:18	21:55:43.0	62:42:29	300	90	3.0	#137 Intermedi	2	
0091.DG_920	360	5:19	21:55:54.8	62:44:33	300	90	3.0	#137 Intermedi	2	
0092.COMP	12	5:26	21:55:54.8	62:44:33	300	90	3.0	#137 Intermedi	2	
0093.DG_921	240	5:27	21:55:55.0	62:43:55	300	90	3.0	#137 Intermedi	2	
0094.COMP	12	5:31	21:55:55.0	62:43:55	300	90	3.0	#137 Intermedi	2	
0095.DG_928	360	5:33	21:55:59.8	62:26:45	300	90	3.0	#137 Intermedi	2	
0096.COMP	12	5:39	21:55:59.8	62:26:45	300	90	3.0	#137 Intermedi	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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UT Date 2002-09-28 Observers M Calkins

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0097.DG_934	240	5:40	21:56:03.5	62:38:55	300	90	3.0	#137 Intermedi	2	
0098.COMP	12	5:45	21:56:03.5	62:38:55	300	90	3.0	#137 Intermedi	2	
0099.DG_936	300	5:46	21:56:05.4	62:26:53	300	90	3.0	#137 Intermedi	2	
0100.COMP	12	5:51	21:56:05.4	62:26:53	300	90	3.0	#137 Intermedi	2	
0101.DG_949	240	5:52	21:56:11.1	62:47:04	300	90	3.0	#137 Intermedi	2	
0102.COMP	12	5:57	21:56:11.1	62:47:04	300	90	3.0	#137 Intermedi	2	
0103.DG_952	300	5:58	21:56:14.2	62:41:41	300	90	3.0	#137 Intermedi	2	
0104.COMP	12	6:03	21:56:14.2	62:41:41	300	90	3.0	#137 Intermedi	2	
0105.DG_954	300	6:05	21:56:15.7	62:45:44	300	90	3.0	#137 Intermedi	2	
0106.COMP	12	6:10	21:56:15.7	62:45:44	300	90	3.0	#137 Intermedi	2	
0107.FLAT	22	6:17	23:12:48.7	+12:40:45	600	90	3.0	#140 Disk Gala	2	600L, tilt=743, 3arcsec
0108-0116.FLAT	22	6:22	23:12:48.7	+12:40:45	600	90	3.0	#140 Disk Gala	2	
0117.IC1474	900	6:27	23:12:51.2	+05:48:23	600	-29	3.0	#140 Disk Gala	2	
0118.COMP	20	6:43	23:12:51.2	+05:48:23	600	-29	3.0	#140 Disk Gala	2	
0119.NGC7515	900	6:50	23:12:48.7	+12:40:45	600	-40	3.0	#140 Disk Gala	2	
0120.COMP	20	7:05	23:12:48.7	+12:40:45	600	-40	3.0	#140 Disk Gala	2	
0121.NGC7518	900	7:09	23:13:12.8	+06:19:18	600	-48	3.0	#140 Disk Gala	2	
0122.COMP	20	7:25	23:13:12.8	+06:19:18	600	-48	3.0	#140 Disk Gala	2	
0123.NGC7529	900	7:28	23:14:03.1	+08:59:33	600	-20	3.0	#140 Disk Gala	2	
0124.COMP	20	7:43	23:14:03.1	+08:59:33	600	-20	3.0	#140 Disk Gala	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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UT Date 2002-09-28 Observers M Calkins

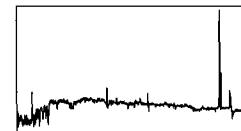
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0125.NGC7529	900	7:44	23:14:03.1	+08:59:33	600	-20	3.0	#140 Disk Gala	2	
0126.COMP	20	8:00	23:14:03.1	+08:59:33	600	-20	3.0	#140 Disk Gala	2	
0127.NGC7541	900	8:02	23:14:43.9	+04:32:04	600	105	3.0	#140 Disk Gala	2	
0128.COMP	20	8:18	23:14:43.9	+04:32:04	600	105	3.0	#140 Disk Gala	2	
0129.NGC7570	900	8:20	23:16:44.7	+13:28:59	600	29	3.0	#140 Disk Gala	2	
0130.COMP	20	8:36	23:16:44.7	+13:28:59	600	29	3.0	#140 Disk Gala	2	
0131.NGC7593	900	8:37	23:17:57.0	+11:20:57	600	95	3.0	#140 Disk Gala	2	
0132.COMP	20	8:53	23:17:57.0	+11:20:57	600	95	3.0	#140 Disk Gala	2	
0133.NGC7591	900	8:55	23:18:16.2	+06:35:09	600	-7	3.0	#140 Disk Gala	2	
0134.COMP	20	9:11	23:18:16.2	+06:35:09	600	-7	3.0	#140 Disk Gala	2	
0135.Feige25	240	9:14	02:36:00	05:15:16	600	-10	3.0	#56 Spectropho	2	
0136.COMP	20	9:18	02:36:00	05:15:16	600	-10	3.0	#56 Spectropho	2	
0137.Feige25	120	9:26	02:36:00	05:15:16	300	-4	3.0	#56 Spectropho	2	normal setup
0138.COMP	12	9:29	02:36:00	05:15:16	300	-4	3.0	#56 Spectropho	2	
0139.sn2002es	1200	10:01	03:23:47.2	40:33:53	300	26	3.0	#2 SN Observat	2	
0140.COMP	12	10:21	03:23:47.2	40:33:53	300	26	3.0	#2 SN Observat	2	
0141.M31	60	10:23	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0142.COMP	12	10:24	00:40:00.0	+40:59:42	300	90	3.0	#57 Velocity S	2	
0143.ZAnd	2	10:26	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0144.ZAnd	5	10:26	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0145.ZAnd	15	10:26	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0146.ZAnd	60	10:27	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0147.COMP	12	10:28	23:33:40	48:49:06	300	90	3.0	#12 Symbiotic	2	
0148.BGGem	300	10:31	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0149.COMP	12	10:36	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0150.BGGem	1200	10:37	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0151.COMP	12	10:58	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0152-0161.FLAT	12	11:04	6:03:31	27:41:50	300	90	3.0	#100 BGGem	2	
0162.luh-17	1020	11:27	03:44:05.7	+32:12:28	300	90	2.0	#136 Low-Mass	2	300L, 2 arcsec, tilt=711
0163.COMP	16	11:44	03:44:05.7	+32:12:28	300	90	2.0	#136 Low-Mass	2	
0164.luh-19	1200	11:49	04:17:49.5	+28:13:31	300	65	2.0	#136 Low-Mass	2	row=78
0165.COMP	16	12:09	04:17:49.5	+28:13:31	300	65	2.0	#136 Low-Mass	2	
0166.luh-5	300	12:13	03:45:13.5	+32:01:20	300	84	2.0	#136 Low-Mass	2	
0167.COMP	16	12:19	03:45:13.5	+32:01:20	300	84	2.0	#136 Low-Mass	2	
0168.luh-6	300	12:20	03:45:15.6	+32:08:12	300	84	2.0	#136 Low-Mass	2	
0169.COMP	16	12:25	03:45:15.6	+32:08:12	300	84	2.0	#136 Low-Mass	2	
0170.luh-7	420	12:27	03:45:30.6	+32:01:55	300	83	2.0	#136 Low-Mass	2	
0171.COMP	16	12:34	03:45:30.6	+32:01:55	300	83	2.0	#136 Low-Mass	2	
0172.Hiltner102	90	12:37	01:09:05.0	62:47:30	300	94	2.0	#136 Low-Mass	2	
0173.COMP	16	12:39	01:09:05.0	62:47:30	300	94	2.0	#136 Low-Mass	2	



WHIPPLE OBSERVATORY

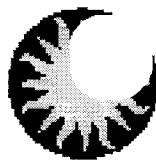
FAST SPECTROGRAPH LOG



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UT Date 2002-09-28 Observers M CalkinsColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0174.Hiltner102	45	12:39	01:09:05.0	62:47:30	300	94	2.0	#136 Low-Mass	2	
0175.COMP	16	12:41	01:09:05.0	62:47:30	300	94	2.0	#136 Low-Mass	2	
0176-0185.FLAT	18	12:47	01:09:05.0	62:47:30	300	90	2.0	#136 Low-Mass	2	
0186.sky	2	12:53	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	normal setup
0187-0190.sky	2	12:53	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	
0191.COMP	5	12:54	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	
0192-0201.FLAT	6	12:57	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	
0202.DARK	900	13:10	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	binby4 and binby2
0203-0211.DARK	900	15:26	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	
0212-0221.DARK	900	17:59	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

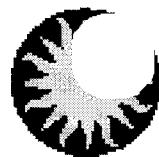


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UT Date 2002-09-29 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.DARK	900	23:35	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	4	
0011-0014.DARK	900	0:36	01:09:05.0	62:47:30	300	90	3.0	#57 Velocity S	2	
0015-0022.BIAS	0	1:17	18:23:53.4	+31:30:08	300	90	3.0	#57 Velocity S	4	
0023-0030.BIAS	0	1:18	18:24:53.7	+31:30:07	300	90	3.0	#57 Velocity S	4	
0031.FLAT	8	1:18	18:25:24.3	+31:30:07	300	90	3.0	#57 Velocity S	4	clouds and a little rain
0032-0040.FLAT	8	1:21	18:27:38.9	+31:30:07	300	90	3.0	#57 Velocity S	4	
0041-0042.BIAS	0	1:22	18:28:31.0	+31:30:07	300	90	3.0	#57 Velocity S	2	
0043-0050.BIAS	0	1:23	18:30:15.1	+31:30:06	300	90	3.0	#57 Velocity S	2	
0051-0053.FLAT	16	1:26	18:33:04.8	+31:30:06	300	90	3.0	#57 Velocity S	2	
0054-0060.FLAT	16	1:29	18:36:24.5	+31:30:05	300	90	3.0	#57 Velocity S	2	
0061.COMP	5	5:43	22:50:27.8	+31:29:30	300	90	3.0	#57 Velocity S	4	
0062.COMP	5	6:17	00:39:19.6	+30:51:40	300	90	3.0	#56 Spectropho	4	
0063.N7469	120	6:23	23:03:15.7	+08:52:27	300	15	3.0	#6 AGN Monitor	4	
0064.N7469	120	6:25	23:03:15.7	+08:52:27	300	17	3.0	#6 AGN Monitor	4	
0065.COMP	5	6:27	23:03:15.7	+08:52:27	300	17	3.0	#6 AGN Monitor	4	
0066.Akn564	240	6:31	22:42:39.4	+29:43:31	300	78	3.0	#6 AGN Monitor	2	
0067.Akn564	240	6:35	22:42:39.4	+29:43:31	300	78	3.0	#6 AGN Monitor	2	stop and go through clouds most of the night
0068.COMP	10	6:39	22:42:39.4	+29:43:31	300	78	3.0	#6 AGN Monitor	2	
0069.BDp284211	100	6:40	21:48:57.1	28:37:48	300	78	3.0	#56 Spectropho	2	
0070.BDp284211	100	6:42	21:48:57.1	28:37:48	300	78	3.0	#56 Spectropho	2	



WHIPPLE OBSERVATORY

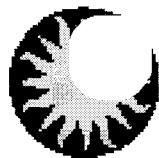
FAS I SPECTROGRAPH LOG



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UT Date 2002-09-29 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0071.BDp284211	100	6:44	21:48:57.1	28:37:48	300	78	3.0	#56 Spectropho	2	
0072.COMP	10	6:46	21:48:57.1	28:37:48	300	78	3.0	#56 Spectropho	2	
0073.2MJ2105590p370010	480	6:48	21:05:59.0	+37:00:10	300	90	3.0	#68 2MASS Reds	4	
0074.COMP	5	6:56	21:05:59.0	+37:00:10	300	90	3.0	#68 2MASS Reds	4	
0075.2MJ2107060p370702	480	6:57	21:07:06.0	+37:07:02	300	90	3.0	#68 2MASS Reds	4	hi Susan!
0076.COMP	5	7:05	21:07:06.0	+37:07:02	300	90	3.0	#68 2MASS Reds	4	
0077.2MJ2111438p373144	600	7:10	21:11:43.8	+37:31:44	300	90	3.0	#68 2MASS Reds	4	
0078.COMP	5	7:18	21:11:43.8	+37:31:44	300	90	3.0	#68 2MASS Reds	4	
0079.M32	30	7:57	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	
0080.M32	30	7:57	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	
0081.COMP	5	7:58	00:39:58	+40:35:30	300	90	3.0	#57 Velocity S	4	
0082.2MJ2331021p552722	600	8:01	23:31:02.1	+55:27:22	300	90	3.0	#68 2MASS Reds	4	
0083.COMP	5	8:11	23:31:02.1	+55:27:22	300	90	3.0	#68 2MASS Reds	4	
0084.2MJ2349470p723840	900	8:13	23:49:47.0	+72:38:40	300	90	3.0	#68 2MASS Reds	4	
0085.COMP	5	8:28	23:49:47.0	+72:38:40	300	90	3.0	#68 2MASS Reds	4	
0086.sn2002eu	180	8:32	01:49:43.6	32:37:43	300	90	3.0	#2 SN Observat	2	
0087.sn2002eu	1200	8:36	01:49:43.6	32:37:43	300	90	3.0	#2 SN Observat	2	
0088.COMP	10	8:57	01:49:43.6	32:37:43	300	90	3.0	#2 SN Observat	2	
0089.sn2002fb	180	9:43	01:57:50.3	36:20:35	300	90	3.0	#2 SN Observat	2	
0090.sn2002fb	1200	9:46	01:57:50.3	36:20:35	300	90	3.0	#2 SN Observat	2	



WHIPPLE OBSERVATORY

FAS I SPECTROGRAPH LOG



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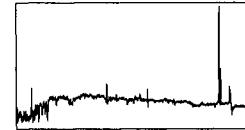
UT Date 2002-09-29 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0091.COMP	10	10:07	01:57:50.3	36:20:35	300	90	3.0	#2 SN Observat	2	
0092.sn2002fk	1200	10:11	03:22:05.7	-15:24:03	300	10	3.0	#2 SN Observat	2	
0093.sn2002fk	1200	10:22	03:22:05.7	-15:24:03	300	10	3.0	#2 SN Observat	2	
0094.COMP	10	10:43	03:22:05.7	-15:24:03	300	10	3.0	#2 SN Observat	2	
0095.0o2589	5	10:46	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0096.0o2589	5	10:47	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0097.0o2589	5	10:47	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0098.COMP	5	10:48	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0099.2MJ0123002p531545	600	10:52	01:23:00.2	+53:15:45	300	90	3.0	#68 2MASS Reds	4	
0100.COMP	5	11:02	01:23:00.2	+53:15:45	300	90	3.0	#68 2MASS Reds	4	
0101.2MJ0159236p213500	600	11:07	01:59:23.6	+21:35:00	300	90	3.0	#68 2MASS Reds	4	
0102.COMP	5	11:17	01:59:23.6	+21:35:00	300	90	3.0	#68 2MASS Reds	4	
0103.2MJ0224197p431544	600	11:18	02:24:19.7	+43:15:44	300	90	3.0	#68 2MASS Reds	4	
0104.COMP	5	11:29	02:24:19.7	+43:15:44	300	90	3.0	#68 2MASS Reds	4	
0105.2MJ0231334p680050	900	11:31	02:31:33.4	+68:00:50	300	90	3.0	#68 2MASS Reds	4	
0106.COMP	5	11:46	02:31:33.4	+68:00:50	300	90	3.0	#68 2MASS Reds	4	
0107.2MJ0234118p275007	330	11:48	02:34:11.8	+27:50:07	300	90	3.0	#68 2MASS Reds	4	
0108.COMP	5	11:54	02:34:11.8	+27:50:07	300	90	3.0	#68 2MASS Reds	4	
0109.2MJ0243330p321510	210	11:56	02:43:33.0	+32:15:10	300	90	3.0	#68 2MASS Reds	4	
0110.COMP	5	12:00	02:43:33.0	+32:15:10	300	90	3.0	#68 2MASS Reds	4	



WHIPPLE OBSERVATORY

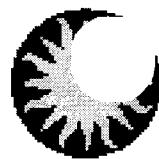
FAST SPECTROGRAPH LOG



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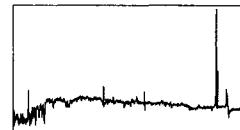
UT Date 2002-09-29 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0111.2MJ0245101p445822	300	12:00	02:45:10.1	+44:58:22	300	90	3.0	#68 2MASS Reds	4	
0112.COMP	5	12:06	02:45:10.1	+44:58:22	300	90	3.0	#68 2MASS Reds	4	
0113-0122.BIAS	0	12:09	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	4	
0123-0132.FLAT	8	12:13	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	4	
0133-0142.BIAS	0	12:15	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	2	
0143-0152.FLAT	16	12:21	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	2	



WHIPPLE OBSERVATORY

FAS I SPECTROGRAPH LOG

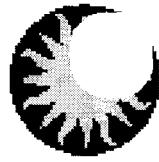


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UT Date 2002-09-30 Observers P Berlind

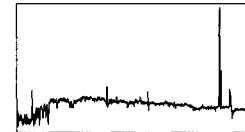
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.DARK	900	23:26	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	4	
0011-0015.DARK	900	0:43	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	2	
0016-0025.BIAS	0	1:14	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	4	
0026-0035.FLAT	8	1:18	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	4	
0036-0045.BIAS	0	1:20	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	2	
0046-0048.FLAT	16	1:21	02:47:23.8	+45:31:54	300	90	3.0	#83 H+Chi Per	2	
0049-0055.FLAT	16	1:26	18:35:00	32:00:00	300	90	3.0	#83 H+Chi Per	2	
0056-0060.sky	4	1:28	18:35:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0061.COMP	5	1:28	18:35:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0062.HD192281	6	1:55	20:10:46.8	40:07:01	300	90	3.0	#56 Spectropho	4	
0063.HD192281	6	1:56	20:10:46.8	40:07:01	300	90	3.0	#56 Spectropho	4	
0064.HD192281	6	1:56	20:10:46.8	40:07:01	300	90	3.0	#56 Spectropho	4	
0065.COMP	5	1:57	20:10:46.8	40:07:01	300	90	3.0	#56 Spectropho	4	
0066.CH Cyg	1	1:57	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0067.CH Cyg	3	1:58	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0068.CH Cyg	10	1:59	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0069.CH Cyg	20	2:00	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0070.COMP	5	2:00	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	4	
0071.CI Cyg	3	2:01	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0072.CI Cyg	1	2:02	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	



WHIPPLE OBSERVATORY

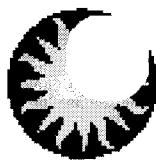
FAST SPECTROGRAPH LOG



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UT Date 2002-09-30 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0073.CICyg	10	2:02	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0074.CICyg	60	2:03	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0075.COMP	5	2:04	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	4	
0076.a2199k_008	240	2:06	16:56:23.1	38:21:48	300	90	3.0	#64 Cluster In	4	
0077.COMP	5	2:10	16:56:23.1	38:21:48	300	90	3.0	#64 Cluster In	4	
0078.a2199k_020	300	2:11	16:40:22.7	39:56:35	300	90	3.0	#64 Cluster In	4	
0079.COMP	5	2:16	16:40:22.7	39:56:35	300	90	3.0	#64 Cluster In	4	
0080.a2199k_022	600	2:17	16:45:10.1	36:49:40	300	90	3.0	#64 Cluster In	4	
0081.COMP	5	2:27	16:45:10.1	36:49:40	300	90	3.0	#64 Cluster In	4	
0082.a2199k_023	660	2:28	16:50:52.2	42:46:35	300	90	3.0	#64 Cluster In	4	
0083.COMP	5	2:39	16:50:52.2	42:46:35	300	90	3.0	#64 Cluster In	4	
0084.id1064	330	3:19	20:07:28.2	35:43:35	300	90	3.0	#115 PMS NGC68	4	
0085.COMP	5	3:24	20:07:28.2	35:43:35	300	90	3.0	#115 PMS NGC68	4	
0086.id1314	360	3:26	20:07:03.2	35:42:56	300	90	3.0	#115 PMS NGC68	4	
0087.COMP	5	3:32	20:07:03.2	35:42:56	300	90	3.0	#115 PMS NGC68	4	
0088.id1767	300	3:33	20:06:06.2	35:49:07	300	90	3.0	#115 PMS NGC68	4	
0089.COMP	5	3:38	20:06:06.2	35:49:07	300	90	3.0	#115 PMS NGC68	4	
0090.id2710	360	3:59	19:59:34.2	35:08:43	300	90	3.0	#115 PMS NGC68	4	
0091.COMP	5	4:05	19:59:34.2	35:08:43	300	90	3.0	#115 PMS NGC68	4	
0092.id2260	360	4:06	20:05:05.0	35:39:36	300	90	3.0	#115 PMS NGC68	2	



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FAST SPECTROGRAPH LOG

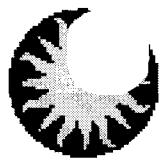


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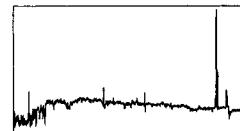
Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0093.COMP	10	4:13	20:05:05.0	35:39:36	300	90	3.0	#115 PMS NGC68	2	
0094.id1602	360	4:14	20:06:25.1	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0095.COMP	5	4:21	20:06:25.1	35:53:47	300	90	3.0	#115 PMS NGC68	4	
0096.id1526.south	480	4:22	20:06:37.2	35:40:18	300	90	3.0	#115 PMS NGC68	4	
0097.id1526.north	480	4:31	20:06:37.2	35:40:18	300	90	3.0	#115 PMS NGC68	4	
0098.COMP	5	4:41	20:06:37.2	35:40:18	300	90	3.0	#115 PMS NGC68	4	
0099.BDp284211	90	4:42	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0100.BDp284211	90	4:44	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0101.BDp284211	90	4:46	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0102.COMP	10	4:48	21:48:57.1	28:37:48	300	90	3.0	#56 Spectropho	2	
0103.id1346.east.and.west	420	4:50	20:06:59.8	35:48:34	300	90	3.0	#115 PMS NGC68	2	the close pair in the middle
0104.COMP	10	4:58	20:06:59.8	35:48:34	300	90	3.0	#115 PMS NGC68	2	east at row 88, west at row 81
0105.id1492	330	4:59	20:06:42.6	35:50:55	300	90	3.0	#115 PMS NGC68	4	
0106.COMP	5	5:05	20:06:42.6	35:50:55	300	90	3.0	#115 PMS NGC68	4	
0107.id1515	300	5:06	20:06:39.0	35:45:32	300	90	3.0	#115 PMS NGC68	4	
0108.COMP	5	5:11	20:06:39.0	35:45:32	300	90	3.0	#115 PMS NGC68	4	
0109.id2156	300	5:12	20:05:19.3	35:42:22	300	90	3.0	#115 PMS NGC68	4	
0110.COMP	5	5:17	20:05:19.3	35:42:22	300	90	3.0	#115 PMS NGC68	4	
0111.id2138	300	5:18	20:05:22.0	35:42:12	300	90	3.0	#115 PMS NGC68	4	
0112.COMP	5	5:23	20:05:22.0	35:42:12	300	90	3.0	#115 PMS NGC68	4	



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FAST SPECTROGRAPH LOG

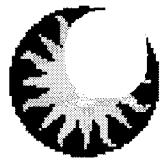


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UT Date 2002-09-30 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0113.id2889	300	5:24	19:58:28.2	35:11:13	300	90	3.0	#115 PMS NGC68	4	
0114.COMP	5	5:29	19:58:28.2	35:11:13	300	90	3.0	#115 PMS NGC68	4	
0115.id1647	300	5:30	20:06:21.1	35:56:00	300	90	3.0	#115 PMS NGC68	4	
0116.COMP	5	5:35	20:06:21.1	35:56:00	300	90	3.0	#115 PMS NGC68	4	
0117.0345.78344P08.70948	1800	5:38	23:03:08.0	+08:42:34	300	90	3.0	#129 CHAMP Sou	2	
0118.COMP	10	6:09	23:03:08.0	+08:42:34	300	90	3.0	#129 CHAMP Sou	2	
0119.0357.08010P01.13022	1200	6:14	23:48:19.2	+01:07:48	300	90	3.0	#129 CHAMP Sou	2	
0120.COMP	10	6:35	23:48:19.2	+01:07:48	300	90	3.0	#129 CHAMP Sou	2	
0121.BIAS	0	6:36	00:00:00	32:00:00	300	90	3.0	#129 CHAMP Sou	2	
0122.COMP	10	6:38	00:00:00	32:00:00	600	90	3.0	#129 CHAMP Sou	2	600-line, 3-sec
0123.NGC7611	900	6:41	23:19:36.6	+08:03:48	600	86	3.0	#140 Disk Gala	2	
0124.COMP	10	6:57	23:19:36.6	+08:03:48	600	86	3.0	#140 Disk Gala	2	
0125.NGC7610	1200	7:00	23:19:41.3	+10:11:06	600	17	3.0	#140 Disk Gala	2	
0126.COMP	10	7:20	23:19:41.3	+10:11:06	600	17	3.0	#140 Disk Gala	2	
0127.NGC7608	1200	7:22	23:19:15.3	+08:21:01	600	-5	3.0	#140 Disk Gala	2	
0128.COMP	10	7:42	23:19:15.3	+08:21:01	600	-5	3.0	#140 Disk Gala	2	
0129.NGC7615	1200	7:44	23:19:54.4	+08:23:57	600	-6	3.0	#140 Disk Gala	2	
0130.COMP	10	8:04	23:19:54.4	+08:23:57	600	-6	3.0	#140 Disk Gala	2	
0131.NGC7623	900	8:06	23:20:30.0	+08:23:45	600	10	3.0	#140 Disk Gala	2	
0132.COMP	10	8:22	23:20:30.0	+08:23:45	600	10	3.0	#140 Disk Gala	2	



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG

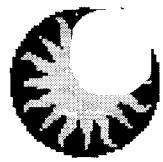


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UT Date 2002-09-30 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0133.NGC7634	900	8:23	23:21:41.8	+08:53:1	600	50	3.0	#140 Disk Gala	2	
0134.COMP	10	8:39	23:21:41.8	+08:53:1	600	50	3.0	#140 Disk Gala	2	
0135-0144.FLAT	20	8:45	2:00:00	32:00:00	600	90	3.0	#140 Disk Gala	2	
0145.BIAS	0	8:46	2:00:00	32:00:00	600	90	3.0	#140 Disk Gala	2	
0146.MRK335	180	8:49	00:06:19.6	+20:12:11	300	61	3.0	#6 AGN Monitor	2	
0147.MRK335	180	8:53	00:06:19.6	+20:12:11	300	61	3.0	#6 AGN Monitor	2	
0148.COMP	10	8:56	00:06:19.6	+20:12:11	300	61	3.0	#6 AGN Monitor	2	
0149.158m213	360	8:58	00:40:30.2	+40:50:55	300	90	3.0	#57 Velocity S	4	
0150.COMP	5	9:07	00:40:30.2	+40:50:55	300	90	3.0	#57 Velocity S	4	clouds
0151.2MJ0029168p531913	600	9:28	00:29:16.8	+53:19:13	300	90	3.0	#68 2MASS Reds	4	
0152.COMP	5	9:39	00:29:16.8	+53:19:13	300	90	3.0	#68 2MASS Reds	4	
0153.2MJ0029325p515057	600	9:39	00:29:32.5	+51:50:57	300	90	3.0	#68 2MASS Reds	4	
0154.COMP	5	9:50	00:29:32.5	+51:50:57	300	90	3.0	#68 2MASS Reds	4	
0155.0o2589	5	10:14	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0156.0o2589	5	10:14	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0157.0o2589	5	10:15	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0158.COMP	5	10:15	02:22:53.3	57:14:42	300	90	3.0	#83 H+Chi Per	4	
0159.XS02223B7_025	300	10:26	01:56:12.0	5:35:18	300	90	3.0	#129 CHAMP Sou	4	
0160.COMP	5	10:31	01:56:12.0	5:35:18	300	90	3.0	#129 CHAMP Sou	4	
0161.0054.34439M04.98496	300	10:33	03:37:22.6	-04:59:05	300	90	3.0	#129 CHAMP Sou	4	



WHIPPLE OBSERVATORY

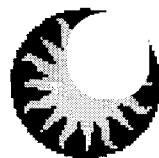
FAST SPECTROGRAPH LOG



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UT Date 2002-09-30 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0162.COMP	5	10:39	03:37:22.6	-04:59:05	300	90	3.0	#129 CHAMP Sou	4	
0163.0054.49085M05.00033	330	10:39	03:37:57.8	-05:00:01	300	90	3.0	#129 CHAMP Sou	4	
0164.COMP	5	10:45	03:37:57.8	-05:00:01	300	90	3.0	#129 CHAMP Sou	4	solid clouds
0165-0174.BIAS	0	11:03	03:37:54.6	-05:07:38	300	90	3.0	#57 Velocity S	4	
0175-0184.FLAT	8	11:06	03:37:54.6	-05:07:38	300	90	3.0	#57 Velocity S	4	
0185-0194.BIAS	0	11:09	03:37:54.6	-05:07:38	300	90	3.0	#57 Velocity S	2	
0195-0204.FLAT	16	11:14	03:37:54.6	-05:07:38	300	90	3.0	#57 Velocity S	2	
0205-0214.DARK	900	13:32	03:37:54.6	-05:07:38	300	90	3.0	#57 Velocity S	2	



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FAST SPECTROGRAPH LOG



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UT Date 2002-10-01 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	21:50	15:18:48.3	+31:30:46	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	22:05	15:34:03.4	+31:30:43	300	90	3.0	#57 Velocity S	4	
0003.DARK	900	22:20	15:49:14.7	+31:30:41	300	90	3.0	#57 Velocity S	4	
0004.DARK	900	22:35	16:04:28.5	+31:30:37	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	22:50	16:19:40.0	+31:30:34	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	23:05	16:34:51.5	+31:30:31	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	23:21	16:50:06.6	+31:30:28	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	23:36	17:05:18.1	+31:30:25	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	23:51	17:20:29.5	+31:30:21	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	0:06	17:35:45.0	+31:30:18	300	90	3.0	#57 Velocity S	4	
0011.DARK	900	0:21	17:50:56.6	+31:30:15	300	90	3.0	#57 Velocity S	2	
0012.DARK	900	0:37	18:06:15.8	+31:30:11	300	90	3.0	#57 Velocity S	2	
0013-0017.BIAS	0	0:55	18:09:48.5	+31:30:11	300	90	3.0	#57 Velocity S	4	
0018-0022.BIAS	0	0:56	18:10:27.1	+31:30:10	300	90	3.0	#57 Velocity S	4	
0023-0032.FLAT	8	0:59	18:13:56.0	+31:30:10	300	90	3.0	#57 Velocity S	4	
0033-0034.BIAS	0	1:00	18:14:26.4	+31:30:10	300	90	3.0	#57 Velocity S	2	
0035-0042.BIAS	0	1:01	18:16:10.3	+31:30:09	300	90	3.0	#57 Velocity S	2	
0043-0047.FLAT	16	1:04	18:19:08.5	+31:30:09	300	90	3.0	#57 Velocity S	2	
0048-0052.FLAT	16	1:07	18:22:06.1	+31:30:08	300	90	3.0	#57 Velocity S	2	
0053.DARK	900	1:23	18:53:02.6	+31:30:01	300	90	3.0	#57 Velocity S	2	



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UT Date 2002-10-01 Observers P BerlindColl. Focus 980 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0054.DARK	900	1:38	19:08:17.7	+31:29:58	300	90	3.0	#57 Velocity S	2	
0055.DARK	900	1:54	19:23:33.0	+31:29:55	300	90	3.0	#57 Velocity S	2	
0056.DARK	900	2:09	19:38:48.1	+31:29:52	300	90	3.0	#57 Velocity S	2	
0057.DARK	900	2:24	19:54:00.3	+31:29:50	300	90	3.0	#57 Velocity S	2	
0058.DARK	900	2:39	20:09:16.1	+31:29:47	300	90	3.0	#57 Velocity S	2	
0059.DARK	900	2:54	20:24:31.7	+31:29:44	300	90	3.0	#57 Velocity S	2	
0060.DARK	900	3:10	20:39:47.1	+31:29:42	300	90	3.0	#57 Velocity S	2	
0061.DARK	900	3:25	20:55:02.4	+31:29:40	300	90	3.0	#57 Velocity S	2	
0062.DARK	900	3:40	21:10:17.5	+31:29:38	300	90	3.0	#57 Velocity S	2	