



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-02 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0007.BIAS	0	1:51	09:07:03.5	+31:30:57	300	90	3.0	#56 Spectropho	4	
0008-0010.BIAS	0	1:51	09:07:25.1	+31:30:58	300	90	3.0	#56 Spectropho	4	
0011-0017.FLAT	8	1:53	09:09:48.3	+31:30:58	300	90	3.0	#56 Spectropho	4	
0018-0020.FLAT	8	1:54	09:10:48.9	+31:30:59	300	90	3.0	#56 Spectropho	4	
0021-0030.BIAS	0	1:57	09:12:59.4	+31:30:59	300	90	3.0	#56 Spectropho	2	
0031-0035.FLAT	16	1:59	09:15:39.8	+31:31:00	300	90	3.0	#56 Spectropho	2	
0036-0041.FLAT	16	2:02	09:18:41.9	+31:31:01	300	90	3.0	#56 Spectropho	2	
0042-0047.FLAT	16	2:05	09:21:43.8	+31:31:02	300	90	3.0	#56 Spectropho	2	
0048-0051.FLAT	16	2:07	09:23:45.2	+31:31:03	300	90	3.0	#56 Spectropho	2	
0052.sky	3	2:19	9:31:00	32:00:00	300	90	3.0	#57 Velocity S	4	thin clouds
0053-0056.sky	3	2:20	9:31:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0057.COMP	5	2:20	9:31:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0058.HD52071	5	2:51	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0059.HD52071	5	2:51	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0060.HD52071	5	2:51	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0061.COMP	5	2:52	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0062.N3377	150	2:54	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	4	
0063.COMP	5	2:57	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	4	
0064.HD84937	10	2:59	09:48:54.8	13:45:13	300	18	3.0	#56 Spectropho	2	
0065.HD84937	10	2:59	09:48:54.8	13:45:13	300	18	3.0	#56 Spectropho	2	



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UT Date 2005-05-02 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0066.HD84937	10	3:00	09:48:54.8	13:45:13	300	18	3.0	#56 Spectropho	2	
0067.COMP	10	3:00	09:48:54.8	13:45:13	300	18	3.0	#56 Spectropho	2	
0068.N3227	150	3:02	10:23:30.6	+19:51:54	300	0	3.0	#6 AGN Monitor	2	
0069.N3227	150	3:04	10:23:30.6	+19:51:54	300	0	3.0	#6 AGN Monitor	2	
0070.COMP	10	3:07	10:23:30.6	+19:51:54	300	0	3.0	#6 AGN Monitor	2	
0071.2M07494829-0339444	270	3:08	07:49:48.2	-03:39:44	300	0	3.0	#141 Mapping t	4	
0072.COMP	5	3:13	07:49:48.2	-03:39:44	300	0	3.0	#141 Mapping t	4	
0073.Feige34	120	3:20	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0074.Feige34	120	3:22	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0075.COMP	10	3:25	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0076.sn2005bf	1500	3:27	10:23:57.2	-03:11:28	300	12	3.0	#2 SN Observat	2	
0077.COMP	10	3:53	10:23:57.2	-03:11:28	300	12	3.0	#2 SN Observat	2	
0078.2M07310447+2128319	360	3:56	07:31:4.4	+21:28:31	300	90	3.0	#141 Mapping t	4	
0079.COMP	5	4:02	07:31:4.4	+21:28:31	300	90	3.0	#141 Mapping t	4	
0080.2M07390433+1804252	330	4:03	07:39:4.3	+18:04:25	300	90	3.0	#141 Mapping t	4	
0081.COMP	5	4:09	07:39:4.3	+18:04:25	300	90	3.0	#141 Mapping t	4	
0082.2M07485747+1734378	270	4:10	07:48:57.4	+17:34:37	300	90	3.0	#141 Mapping t	4	
0083.COMP	5	4:15	07:48:57.4	+17:34:37	300	90	3.0	#141 Mapping t	4	
0084.2M07461727+2753418	420	4:16	07:46:17.2	+27:53:41	300	90	3.0	#141 Mapping t	4	
0085.COMP	5	4:23	07:46:17.2	+27:53:41	300	90	3.0	#141 Mapping t	4	



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UT Date 2005-05-02 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0086.2M07190260+4109163	270	4:24	07:19:2.6	+41:09:16	300	90	3.0	#141 Mapping t	4	
0087.COMP	5	4:28	07:19:2.6	+41:09:16	300	90	3.0	#141 Mapping t	4	
0088.2M07192229+6018386	330	4:29	07:19:22.2	+60:18:38	300	90	3.0	#141 Mapping t	4	
0089.COMP	5	4:35	07:19:22.2	+60:18:38	300	90	3.0	#141 Mapping t	4	
0090.2M07304986+6354356	360	4:36	07:30:49.8	+63:54:35	300	90	3.0	#141 Mapping t	4	
0091.COMP	5	4:42	07:30:49.8	+63:54:35	300	90	3.0	#141 Mapping t	4	
0092.2M07344737+4859414	390	4:43	07:34:47.3	+48:59:41	300	90	3.0	#141 Mapping t	4	
0093.COMP	5	4:49	07:34:47.3	+48:59:41	300	90	3.0	#141 Mapping t	4	
0094.2M07354574+5142469	420	4:50	07:35:45.7	+51:42:46	300	90	3.0	#141 Mapping t	4	
0095.COMP	5	4:57	07:35:45.7	+51:42:46	300	90	3.0	#141 Mapping t	4	
0096.2M07372574+5046176	480	4:58	07:37:25.7	+50:46:17	300	90	3.0	#141 Mapping t	4	
0097.COMP	5	5:06	07:37:25.7	+50:46:17	300	90	3.0	#141 Mapping t	4	
0098.2M07383133+5924564	300	5:07	07:38:31.3	+59:24:56	300	90	3.0	#141 Mapping t	4	
0099.COMP	5	5:12	07:38:31.3	+59:24:56	300	90	3.0	#141 Mapping t	4	
0100.2M07425653+6010070	480	5:13	07:42:56.5	+60:10:7	300	90	3.0	#141 Mapping t	4	
0101.COMP	5	5:21	07:42:56.5	+60:10:7	300	90	3.0	#141 Mapping t	4	
0102.2M07423160+5238190	480	5:22	07:42:31.6	+52:38:19	300	90	3.0	#141 Mapping t	4	
0103.COMP	5	5:30	07:42:31.6	+52:38:19	300	90	3.0	#141 Mapping t	4	
0104.2M07492075+5221029	480	5:31	07:49:20.7	+52:21:2	300	90	3.0	#141 Mapping t	4	
0105.COMP	5	5:40	07:49:20.7	+52:21:2	300	90	3.0	#141 Mapping t	4	



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0106.2M07544572+5532481	420	5:40	07:54:45.7	+55:32:48	300	90	3.0	#141 Mapping t	4	
0107.COMP	5	5:47	07:54:45.7	+55:32:48	300	90	3.0	#141 Mapping t	4	
0108.2M07555134+5642381	420	5:48	07:55:51.3	+56:42:38	300	90	3.0	#141 Mapping t	4	
0109.COMP	5	5:55	07:55:51.3	+56:42:38	300	90	3.0	#141 Mapping t	4	
0110.2M08311919+3626166	420	5:56	08:31:19.1	+36:26:16	300	90	3.0	#141 Mapping t	4	
0111.COMP	5	6:04	08:31:19.1	+36:26:16	300	90	3.0	#141 Mapping t	4	
0112.2M08365849+5538443	480	6:04	08:36:58.4	+55:38:44	300	90	3.0	#141 Mapping t	4	
0113.COMP	5	6:13	08:36:58.4	+55:38:44	300	90	3.0	#141 Mapping t	4	
0114.2M08503288+6629148	540	6:13	08:50:32.8	+66:29:14	300	90	3.0	#141 Mapping t	4	
0115.COMP	5	6:23	08:50:32.8	+66:29:14	300	90	3.0	#141 Mapping t	4	
0116.2M08445953+4829004	390	6:24	08:44:59.5	+48:29:0	300	90	3.0	#141 Mapping t	4	
0117.COMP	5	6:30	08:44:59.5	+48:29:0	300	90	3.0	#141 Mapping t	4	
0118.2M08593885+4541124	360	6:31	08:59:38.8	+45:41:12	300	90	3.0	#141 Mapping t	4	
0119.COMP	5	6:38	08:59:38.8	+45:41:12	300	90	3.0	#141 Mapping t	4	
0120.2M09150664+7407318	330	6:39	09:15:6.6	+74:07:31	300	90	3.0	#141 Mapping t	4	
0121.COMP	5	6:45	09:15:6.6	+74:07:31	300	90	3.0	#141 Mapping t	4	
0122.2M09161996+6952568	600	6:45	09:16:19.9	+69:52:56	300	90	3.0	#141 Mapping t	4	
0123.COMP	5	6:56	09:16:19.9	+69:52:56	300	90	3.0	#141 Mapping t	4	
0124.sn2005az	1200	6:58	13:05:46.9	+27:44:08	300	75	3.0	#2 SN Observat	2	
0125.COMP	10	7:19	13:05:46.9	+27:44:08	300	75	3.0	#2 SN Observat	2	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0126.sn2005bvhostandsn	1500	7:24	14:24:07.4	+26:17:50	300	-45	3.0	#2 SN Observat	2	
0127.COMP	10	7:49	14:24:07.4	+26:17:50	300	-45	3.0	#2 SN Observat	2	
0128.2M10251867+7010223	270	7:53	10:25:18.6	+70:10:22	300	90	3.0	#141 Mapping t	4	
0129.COMP	5	7:57	10:25:18.6	+70:10:22	300	90	3.0	#141 Mapping t	4	
0130.2M10273358+6657234	240	7:58	10:27:33.5	+66:57:23	300	90	3.0	#141 Mapping t	4	
0131.COMP	5	8:02	10:27:33.5	+66:57:23	300	90	3.0	#141 Mapping t	4	
0132.2M10294146+6850482	480	8:03	10:29:41.4	+68:50:48	300	90	3.0	#141 Mapping t	4	
0133.COMP	5	8:11	10:29:41.4	+68:50:48	300	90	3.0	#141 Mapping t	4	
0134.2M10400907+7223135	240	8:12	10:40:9.0	+72:23:13	300	90	3.0	#141 Mapping t	4	
0135.COMP	5	8:16	10:40:9.0	+72:23:13	300	90	3.0	#141 Mapping t	4	
0136.2M10420036+7708115	240	8:17	10:42:0.3	+77:08:11	300	90	3.0	#141 Mapping t	4	
0137.COMP	5	8:21	10:42:0.3	+77:08:11	300	90	3.0	#141 Mapping t	4	
0138.2M11281913+7737503	240	8:22	11:28:19.1	+77:37:50	300	90	3.0	#141 Mapping t	4	
0139.COMP	5	8:27	11:28:19.1	+77:37:50	300	90	3.0	#141 Mapping t	4	
0140.2M11303935+7933306	330	8:27	11:30:39.3	+79:33:30	300	90	3.0	#141 Mapping t	4	
0141.COMP	5	8:33	11:30:39.3	+79:33:30	300	90	3.0	#141 Mapping t	4	
0142.2M10573666+4404162	420	8:35	10:57:36.6	+44:04:16	300	90	3.0	#141 Mapping t	4	
0143.COMP	5	8:43	10:57:36.6	+44:04:16	300	90	3.0	#141 Mapping t	4	
0144.2M11011294+3208494	420	8:43	11:01:12.9	+32:08:49	300	90	3.0	#141 Mapping t	4	
0145.COMP	5	8:51	11:01:12.9	+32:08:49	300	90	3.0	#141 Mapping t	4	



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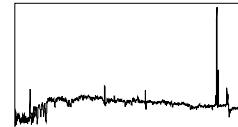
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0146.2M11110222+2554244	240	8:51	11:11:2.2	+25:54:24	300	90	3.0	#141 Mapping t	4	
0147.COMP	5	8:56	11:11:2.2	+25:54:24	300	90	3.0	#141 Mapping t	4	
0148.2M11183629+2452033	540	8:57	11:18:36.2	+24:52:3	300	90	3.0	#141 Mapping t	4	
0149.COMP	5	9:06	11:18:36.2	+24:52:3	300	90	3.0	#141 Mapping t	4	
0150.2M11590885+4559281	600	9:08	11:59:8.8	+45:59:28	300	90	3.0	#141 Mapping t	4	
0151.COMP	5	9:18	11:59:8.8	+45:59:28	300	90	3.0	#141 Mapping t	4	
0152.2M14055380+4821555	330	9:19	14:05:53.8	+48:21:55	300	90	3.0	#141 Mapping t	4	
0153.COMP	5	9:25	14:05:53.8	+48:21:55	300	90	3.0	#141 Mapping t	4	
0154.2M14051677+2102389	240	9:26	14:05:16.7	+21:02:38	300	90	3.0	#141 Mapping t	4	
0155.COMP	5	9:30	14:05:16.7	+21:02:38	300	90	3.0	#141 Mapping t	4	
0156.2M14115211+2455194	240	9:31	14:11:52.1	+24:55:19	300	90	3.0	#141 Mapping t	4	
0157.COMP	5	9:35	14:11:52.1	+24:55:19	300	90	3.0	#141 Mapping t	4	
0158.2M14154699+0854365	240	9:36	14:15:46.9	+08:54:36	300	90	3.0	#141 Mapping t	4	
0159.COMP	5	9:40	14:15:46.9	+08:54:36	300	90	3.0	#141 Mapping t	4	
0160.2M14355060+2808484	270	9:41	14:35:50.6	+28:08:48	300	90	3.0	#141 Mapping t	4	
0161.COMP	5	9:46	14:35:50.6	+28:08:48	300	90	3.0	#141 Mapping t	4	
0162.2M14494072+3541250	240	9:47	14:49:40.7	+35:41:25	300	90	3.0	#141 Mapping t	4	
0163.COMP	5	9:52	14:49:40.7	+35:41:25	300	90	3.0	#141 Mapping t	4	
0164.2M14493269+6648477	240	9:53	14:49:32.6	+66:48:47	300	90	3.0	#141 Mapping t	4	
0165.COMP	5	9:57	14:49:32.6	+66:48:47	300	90	3.0	#141 Mapping t	4	



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UT Date 2005-05-02 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0166.2M14401346+7500461	240	9:58	14:40:13.4	+75:00:46	300	90	3.0	#141 Mapping t	4	
0167.COMP	5	10:02	14:40:13.4	+75:00:46	300	90	3.0	#141 Mapping t	4	
0168.2M14290336+8430076	270	10:03	14:29:3.3	+84:30:7	300	90	3.0	#141 Mapping t	4	
0169.COMP	5	10:08	14:29:3.3	+84:30:7	300	90	3.0	#141 Mapping t	4	
0170.2M15140850+815619EW	360	10:10	15:14:8.5	+81:56:19	300	90	3.0	#141 Mapping t	2	please extract both E and W comps
0171.COMP	10	10:16	15:14:8.5	+81:56:19	300	90	3.0	#141 Mapping t	2	E gal at row 84, W at row 71
0172.2M15180891+6657522	600	10:17	15:18:8.9	+66:57:52	300	90	3.0	#141 Mapping t	4	
0173.COMP	5	10:28	15:18:8.9	+66:57:52	300	90	3.0	#141 Mapping t	4	
0174.2M15271278+7948133	420	10:29	15:27:12.7	+79:48:13	300	90	3.0	#141 Mapping t	4	
0175.COMP	5	10:36	15:27:12.7	+79:48:13	300	90	3.0	#141 Mapping t	4	
0176.2M16004187+6943160	420	10:37	16:00:41.8	+69:43:16	300	90	3.0	#141 Mapping t	4	
0177.COMP	5	10:45	16:00:41.8	+69:43:16	300	90	3.0	#141 Mapping t	4	



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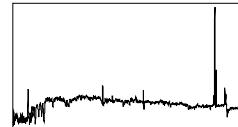
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	23:20	06:55:03.9	+31:30:05	300	90	3.0	#141 Mapping t	4	
0002.DARK	900	23:35	07:10:15.1	+31:30:12	300	90	3.0	#141 Mapping t	4	
0003.DARK	900	23:50	07:25:29.9	+31:30:18	300	90	3.0	#141 Mapping t	4	
0004.DARK	900	0:06	07:40:41.0	+31:30:24	300	90	3.0	#141 Mapping t	4	
0005.DARK	900	0:21	07:55:52.2	+31:30:31	300	90	3.0	#141 Mapping t	4	
0006.DARK	900	0:36	08:11:07.4	+31:30:37	300	90	3.0	#141 Mapping t	4	
0007.DARK	900	0:51	08:26:18.4	+31:30:43	300	90	3.0	#141 Mapping t	4	
0008-0010.BIAS	0	1:06	08:26:40.4	+31:30:43	300	90	3.0	#141 Mapping t	4	
0011-0020.BIAS	0	1:09	08:29:38.0	+31:30:44	300	90	3.0	#141 Mapping t	4	
0021-0024.FLAT	8	1:11	08:31:00.5	+31:30:44	300	90	3.0	#141 Mapping t	4	
0025-0030.FLAT	8	1:13	08:33:01.8	+31:30:45	300	90	3.0	#141 Mapping t	4	
0031-0033.BIAS	0	1:13	08:33:45.2	+31:30:45	300	90	3.0	#141 Mapping t	2	
0034-0040.BIAS	0	1:15	08:35:12.4	+31:30:46	300	90	3.0	#141 Mapping t	2	
0041-0042.FLAT	16	1:16	08:36:21.5	+31:30:46	300	90	3.0	#141 Mapping t	2	
0043-0047.FLAT	16	1:18	08:38:53.3	+31:30:47	300	90	3.0	#141 Mapping t	2	
0048-0053.FLAT	16	1:21	08:41:55.3	+31:30:48	300	90	3.0	#141 Mapping t	2	
0054-0058.FLAT	16	1:24	08:44:27.0	+31:30:49	300	90	3.0	#141 Mapping t	2	
0059-0061.FLAT	16	1:25	08:45:58.0	+31:30:50	300	90	3.0	#141 Mapping t	2	
0062-0066.sky	3	2:20	9:35:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0067.COMP	5	2:21	9:35:00	32:00:00	300	90	3.0	#57 Velocity S	4	



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0068.HD52071	5	2:45	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0069.HD52071	5	2:45	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0070.HD52071	5	2:45	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0071.COMP	5	2:46	06:57:51	+27:13:42	300	90	3.0	#57 Velocity S	4	
0072.HD84937	10	2:48	09:48:54.8	13:45:13	300	15	3.0	#56 Spectropho	2	
0073.HD84937	10	2:49	09:48:54.8	13:45:13	300	15	3.0	#56 Spectropho	2	
0074.HD84937	10	2:49	09:48:54.8	13:45:13	300	15	3.0	#56 Spectropho	2	
0075.COMP	10	2:50	09:48:54.8	13:45:13	300	15	3.0	#56 Spectropho	2	
0076.N4151	30	2:52	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0077.N4151	30	2:52	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0078.N4151	90	2:53	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0079.COMP	10	2:55	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0080.N4051	150	2:56	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0081.N4051	150	2:58	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0082.COMP	10	3:01	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0083.N3379	180	3:04	10:45:11.4	+12:50:48	300	90	3.0	#57 Velocity S	2	
0084.COMP	10	3:07	10:45:11.4	+12:50:48	300	90	3.0	#57 Velocity S	2	
0085.2M08314246-0539556	240	3:09	08:31:42.4	-05:39:55	300	90	3.0	#141 Mapping t	4	
0086.COMP	5	3:13	08:31:42.4	-05:39:55	300	90	3.0	#141 Mapping t	4	
0087.2M08350295-0510283	240	3:14	08:35:2.9	-05:10:28	300	90	3.0	#141 Mapping t	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0088.COMP	5	3:18	08:35:2.9	-05:10:28	300	90	3.0	#141 Mapping t	4	
0089.2M08365686-0548385	330	3:19	08:36:56.8	-05:48:38	300	90	3.0	#141 Mapping t	4	
0090.COMP	5	3:25	08:36:56.8	-05:48:38	300	90	3.0	#141 Mapping t	4	
0091.sn2005am	1200	3:29	09:16:12.4	-16:18:16	300	29	3.0	#2 SN Observat	2	
0092.COMP	10	3:49	09:16:12.4	-16:18:16	300	29	3.0	#2 SN Observat	2	
0093.sn2005bf	1200	3:51	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0094.COMP	10	4:11	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0095.2M08330822+0009436	240	4:13	08:33:8.2	+00:09:43	300	90	3.0	#141 Mapping t	4	
0096.COMP	5	4:17	08:33:8.2	+00:09:43	300	90	3.0	#141 Mapping t	4	
0097.2M08354710-0156381	270	4:18	08:35:47.1	-01:56:38	300	90	3.0	#141 Mapping t	4	
0098.COMP	5	4:23	08:35:47.1	-01:56:38	300	90	3.0	#141 Mapping t	4	rt crash
0099.2M08430920-0144211	270	4:28	08:43:9.2	-01:44:21	300	90	3.0	#141 Mapping t	4	
0100.COMP	5	4:33	08:43:9.2	-01:44:21	300	90	3.0	#141 Mapping t	4	
0101.2M08434522-0032041	240	4:33	08:43:45.2	-00:32:4	300	90	3.0	#141 Mapping t	4	
0102.COMP	5	4:37	08:43:45.2	-00:32:4	300	90	3.0	#141 Mapping t	4	
0103.2M08452858-0228416	240	4:38	08:45:28.5	-02:28:41	300	90	3.0	#141 Mapping t	4	
0104.COMP	5	4:42	08:45:28.5	-02:28:41	300	90	3.0	#141 Mapping t	4	
0105.2M08525827+1921360	270	4:43	08:52:58.2	+19:21:36	300	90	3.0	#141 Mapping t	4	
0106.COMP	5	4:48	08:52:58.2	+19:21:36	300	90	3.0	#141 Mapping t	4	
0107.2003bo_gal	1800	4:50	09:47:44.0	36:18:22	300	90	3.0	#158 SN Host G	2	



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## FAST SPECTROGRAPH LOG



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UT Date 2005-05-03 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0108.COMP	10	5:21	09:47:44.0	36:18:22	300	90	3.0	#158 SN Host G	2	
0109.2003de_gal	1200	5:24	10:10:41.1	35:44:48	300	90	3.0	#158 SN Host G	2	
0110.COMP	10	5:44	10:10:41.1	35:44:48	300	90	3.0	#158 SN Host G	2	
0111.2003cy_gal	1800	5:46	10:46:03.4	27:21:00	300	90	3.0	#158 SN Host G	2	
0112.COMP	10	6:16	10:46:03.4	27:21:00	300	90	3.0	#158 SN Host G	2	
0113.sn2004gk	1200	6:18	12:25:33.2	+12:15:39	300	45	3.0	#2 SN Observat	2	
0114.COMP	10	6:38	12:25:33.2	+12:15:39	300	45	3.0	#2 SN Observat	2	
0115.2003dk_gal	1800	6:41	13:15:31.4	-7:20:53	300	90	3.0	#158 SN Host G	2	ok h-alpha pixel 2503
0116.COMP	10	7:11	13:15:31.4	-7:20:53	300	90	3.0	#158 SN Host G	2	
0117.2002cz_gal	1800	7:13	13:34:02.0	-14:49:20	300	90	3.0	#158 SN Host G	2	
0118.COMP	10	7:43	13:34:02.0	-14:49:20	300	90	3.0	#158 SN Host G	2	
0119.2003cz_gal	1800	7:46	12:05:53.2	33:27:12	300	90	3.0	#158 SN Host G	2	EW close pair of gals
0120.COMP	10	8:16	12:05:53.2	33:27:12	300	90	3.0	#158 SN Host G	2	both have h-alpha at pixel 2667
0121.2003ex_gal	1800	8:19	13:27:32.2	05:31:16	300	90	3.0	#158 SN Host G	2	
0122.COMP	10	8:49	13:27:32.2	05:31:16	300	90	3.0	#158 SN Host G	2	
0123.BDp332642	60	8:51	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0124.BDp332642	60	8:52	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0125.COMP	10	8:53	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0126.2003dj_gal	1800	8:56	13:16:21.5	19:25:51	300	90	3.0	#158 SN Host G	2	ok em
0127.COMP	10	9:27	13:16:21.5	19:25:51	300	90	3.0	#158 SN Host G	2	



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UT Date 2005-05-03 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0128.141242+05030	600	9:28	14:15:12.4	+04:49:24	300	90	3.0	#84f Updated Z	2	
0129.COMP	10	9:38	14:15:12.4	+04:49:24	300	90	3.0	#84f Updated Z	2	
0130.141548+07340	480	9:39	14:18:14.3	+07:20:16	300	90	3.0	#84f Updated Z	4	
0131.COMP	5	9:47	14:18:14.3	+07:20:16	300	90	3.0	#84f Updated Z	4	
0132.142412+22030	420	9:49	14:26:29.3	+21:49:24	300	20	3.0	#84f Updated Z	4	ok em, next to bright star
0133.COMP	5	9:57	14:26:29.3	+21:49:24	300	20	3.0	#84f Updated Z	4	
0134.143048+04070	420	9:58	14:33:17.4	+03:54:10	300	90	3.0	#84f Updated Z	4	
0135.COMP	5	10:06	14:33:17.4	+03:54:10	300	90	3.0	#84f Updated Z	4	
0136.143406+10090	480	10:06	14:36:29.6	+09:56:18	300	90	3.0	#84f Updated Z	4	
0137.COMP	5	10:15	14:36:29.6	+09:56:18	300	90	3.0	#84f Updated Z	4	
0138.143406+03240	600	10:15	14:36:38.4	+03:11:37	300	90	3.0	#84f Updated Z	4	
0139.COMP	5	10:26	14:36:38.4	+03:11:37	300	90	3.0	#84f Updated Z	4	
0140.143542-00090	300	10:26	14:38:16.5	-00:21:00	300	90	3.0	#84f Updated Z	4	
0141.COMP	5	10:32	14:38:16.5	-00:21:00	300	90	3.0	#84f Updated Z	4	
0142.144200-03020	420	10:33	14:44:33.4	-03:13:36	300	90	3.0	#84f Updated Z	4	
0143.COMP	5	10:40	14:44:33.4	-03:13:36	300	90	3.0	#84f Updated Z	4	
0144.144806-01310	480	10:40	14:50:43.1	-01:42:54	300	90	3.0	#84f Updated Z	4	
0145.COMP	5	10:49	14:50:43.1	-01:42:54	300	90	3.0	#84f Updated Z	4	
0146.150700-00350	720	10:50	15:09:30.2	-00:46:17	300	90	3.0	#84f Updated Z	4	
0147.COMP	5	11:02	15:09:30.2	-00:46:17	300	90	3.0	#84f Updated Z	4	



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## FAST SPECTROGRAPH LOG



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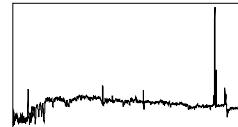
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0148.150736-02040	480	11:02	15:10:11.9	-02:14:55	300	90	3.0	#84f Updated Z	4	
0149.COMP	5	11:11	15:10:11.9	-02:14:55	300	90	3.0	#84f Updated Z	4	
0150.152048+08440	360	11:12	15:23:12.2	+08:33:01	300	90	3.0	#84f Updated Z	4	
0151.COMP	5	11:18	15:23:12.2	+08:33:01	300	90	3.0	#84f Updated Z	4	
0152.152118+09340	420	11:19	15:23:43.8	+09:22:38	300	90	3.0	#84f Updated Z	4	
0153.COMP	5	11:27	15:23:43.8	+09:22:38	300	90	3.0	#84f Updated Z	4	
0154-0163.BIAS	0	11:31	15:23:43.8	+09:22:38	300	90	3.0	#57 Velocity S	4	
0164-0173.FLAT	8	11:34	15:23:43.8	+09:22:38	300	90	3.0	#57 Velocity S	4	
0174-0183.BIAS	0	11:36	15:23:43.8	+09:22:38	300	90	3.0	#57 Velocity S	2	
0184-0193.FLAT	16	11:41	15:23:43.8	+09:22:38	300	90	3.0	#57 Velocity S	2	
0194-0203.DARK	1200	14:59	15:23:43.8	+09:22:38	300	90	3.0	#57 Velocity S	2	



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0007.BIAS	0	0:09	07:33:19.9	+31:30:21	300	90	3.0	#57 Velocity S	4	
0008-0010.BIAS	0	0:10	07:33:37.8	+31:30:22	300	90	3.0	#57 Velocity S	4	
0011-0016.FLAT	8	0:12	07:35:43.2	+31:30:22	300	90	3.0	#57 Velocity S	4	
0017-0020.FLAT	8	0:13	07:37:01.8	+31:30:23	300	90	3.0	#57 Velocity S	4	
0021-0025.BIAS	0	0:14	07:38:10.7	+31:30:23	300	90	3.0	#57 Velocity S	2	
0026-0030.BIAS	0	0:15	07:39:15.6	+31:30:24	300	90	3.0	#57 Velocity S	2	
0031-0032.FLAT	16	0:16	07:40:21.3	+31:30:24	300	90	3.0	#57 Velocity S	2	
0033-0037.FLAT	16	0:19	07:42:53.1	+31:30:25	300	90	3.0	#57 Velocity S	2	
0038-0042.FLAT	16	0:21	07:45:24.9	+31:30:26	300	90	3.0	#57 Velocity S	2	
0043-0047.FLAT	16	0:24	07:47:56.6	+31:30:27	300	90	3.0	#57 Velocity S	2	
0048-0051.FLAT	16	0:26	07:49:58.0	+31:30:28	300	90	3.0	#57 Velocity S	2	
0052.DARK	900	0:28	08:07:06.3	+31:30:35	300	90	3.0	#57 Velocity S	4	
0053.DARK	900	0:43	08:22:18.0	+31:30:41	300	90	3.0	#57 Velocity S	4	
0054.DARK	900	0:58	08:37:32.4	+31:30:47	300	90	3.0	#57 Velocity S	4	
0055.DARK	900	1:13	08:52:43.8	+31:30:52	300	90	3.0	#57 Velocity S	4	
0056.DARK	900	1:29	09:07:58.5	+31:30:58	300	90	3.0	#57 Velocity S	4	
0057.DARK	900	1:44	09:23:31.5	+31:31:03	300	90	3.0	#57 Velocity S	2	
0058.DARK	900	2:00	09:39:47.7	+31:31:08	300	90	3.0	#57 Velocity S	2	
0059-0063.sky	10	2:35	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	
0064.COMP	10	2:38	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0079.HD84937	5	3:06	09:48:54.8	13:45:13	300	14	3.0	#56 Spectropho	2	
0080.HD84937	5	3:07	09:48:54.8	13:45:13	300	14	3.0	#56 Spectropho	2	
0081.HD84937	5	3:08	09:48:54.8	13:45:13	300	14	3.0	#56 Spectropho	2	
0082.N3377	3	3:16	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0083.N3377	180	3:17	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0084.MRK421	300	3:26	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0085.COMP	10	3:31	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0086.HD84937	10	3:40	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0087.HD84937	10	3:41	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0088.HD84937	10	3:41	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0089.HD84937	10	3:42	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0090.COMP	10	3:42	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0091.N3377	180	3:46	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0092.COMP	10	3:50	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0093.Feige34	120	3:55	10:39:36.8	43:06:10	300	-36	3.0	#56 Spectropho	2	
0094.Feige34	120	3:57	10:39:36.8	43:06:10	300	-36	3.0	#56 Spectropho	2	
0095.COMP	10	4:00	10:39:36.8	43:06:10	300	-36	3.0	#56 Spectropho	2	
0096.SN2005BF	1200	4:19	10:23:57.2	-03:11:28	300	24	3.0	#56 Spectropho	2	
0097.COMP	10	4:40	10:23:57.2	-03:11:28	300	24	3.0	#56 Spectropho	2	
0098.2M11022459-0642073	300	4:54	11:02:24.5	-06:42:7	300	90	3.0	#141 Mapping t	2	



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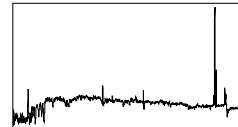
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0099.COMP	5	5:02	11:02:24.5	-06:42:7	300	90	3.0	#141 Mapping t	2	
0100.2M11003642-0856378	300	5:12	11:00:36.4	-08:56:37	300	90	3.0	#141 Mapping t	2	
0101.COMP	10	5:19	11:00:36.4	-08:56:37	300	90	3.0	#141 Mapping t	2	
0102.sn2004gt	1200	5:35	12:01:50.3	-18:52:12	300	14	3.0	#2 SN Observat	2	
0103.COMP	10	5:57	12:01:50.3	-18:52:12	300	14	3.0	#2 SN Observat	2	
0104.1913_18	900	6:09	14:26:51.2	16:40:33	300	90	3.0	#64 Cluster an	2	
0105.COMP	10	6:25	14:26:51.2	16:40:33	300	90	3.0	#64 Cluster an	2	
0106.sn2005by	1500	6:40	13:45:46.9	+22:05:46	300	20	3.0	#2 SN Observat	2	
0107.COMP	10	7:06	13:45:46.9	+22:05:46	300	20	3.0	#2 SN Observat	2	
0108.sn2005by	1500	7:09	13:45:46.9	+22:05:46	300	20	3.0	#2 SN Observat	2	
0109.COMP	10	7:35	13:45:46.9	+22:05:46	300	20	3.0	#2 SN Observat	2	
0110.1991_11	600	7:42	14:56:17.1	18:40:21	300	90	3.0	#64 Cluster an	2	
0111.COMP	10	7:53	14:56:17.1	18:40:21	300	90	3.0	#64 Cluster an	2	
0112.145142+10170	720	7:58	14:54:01.9	+10:04:51	300	90	3.0	#84f Updated Z	4	
0113.COMP	5	8:11	14:54:01.9	+10:04:51	300	90	3.0	#84f Updated Z	4	
0114.150248-01510	900	8:16	15:05:21.1	-02:02:05	300	90	3.0	#84f Updated Z	4	
0115.COMP	5	8:31	15:05:21.1	-02:02:05	300	90	3.0	#84f Updated Z	4	
0116.152242-01390	900	8:36	15:25:16.4	-01:49:11	300	90	3.0	#84f Updated Z	4	
0117.COMP	5	8:52	15:25:16.4	-01:49:11	300	90	3.0	#84f Updated Z	4	
0118.2022_18	480	8:58	15:05:15.7	28:36:56	300	90	3.0	#64 Cluster an	2	



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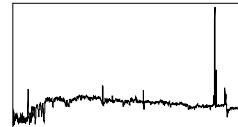
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0119.COMP	10	9:09	15:05:15.7	28:36:56	300	90	3.0	#64 Cluster an	2	
0120.NGC6109	1200	9:23	16:17:40.6	+35:00:15	300	-62	3.0	#151 FR I_II d	2	
0121.COMP	10	9:43	16:17:40.6	+35:00:15	300	-62	3.0	#151 FR I_II d	2	
0122.2M17180477+2104359	300	9:49	17:18:4.7	+21:04:35	300	90	3.0	#141 Mapping t	2	
0123.COMP	10	9:54	17:18:4.7	+21:04:35	300	90	3.0	#141 Mapping t	2	
0124.2M17212429+2453578	300	10:03	17:21:24.2	+24:53:57	300	90	3.0	#141 Mapping t	2	
0125.COMP	10	10:09	17:21:24.2	+24:53:57	300	90	3.0	#141 Mapping t	2	
0126.2M17253976+2157185	420	10:14	17:25:39.7	+21:57:18	300	90	3.0	#141 Mapping t	2	
0127.COMP	10	10:22	17:25:39.7	+21:57:18	300	90	3.0	#141 Mapping t	2	
0128.2M17433689+3304549	420	10:36	17:43:36.8	+33:04:54	300	90	3.0	#141 Mapping t	2	
0129.COMP	10	10:44	17:43:36.8	+33:04:54	300	90	3.0	#141 Mapping t	2	
0130.2M17552000+2525500	300	10:49	17:55:20.0	+25:25:50	300	90	3.0	#141 Mapping t	2	
0131.COMP	10	10:55	17:55:20.0	+25:25:50	300	90	3.0	#141 Mapping t	2	
0132.2M18074026+2216239	300	11:00	18:07:40.2	+22:16:23	300	90	3.0	#141 Mapping t	2	
0133.COMP	10	11:05	18:07:40.2	+22:16:23	300	90	3.0	#141 Mapping t	2	
0134.2M18154070+1030417	420	11:09	18:15:40.7	+10:30:41	300	90	3.0	#141 Mapping t	2	
0135.COMP	10	11:17	18:15:40.7	+10:30:41	300	90	3.0	#141 Mapping t	2	
0136-0145.BIAS	0	11:22	18:15:40.7	+10:30:41	300	90	3.0	#56 Spectropho	4	
0146-0155.FLAT	8	11:26	18:15:40.7	+10:30:41	300	90	3.0	#56 Spectropho	4	
0156-0165.BIAS	0	11:28	18:15:40.7	+10:30:41	300	90	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0166-0186.FLAT	16	11:38	18:15:40.7	+10:30:41	300	90	3.0	#56 Spectropho	2	
0187-0196.BIAS	0	11:58	19:23:36.6	+31:29:38	300	90	3.0	#56 Spectropho	4	
0197.FLAT	8	11:58	19:23:58.0	+31:29:38	300	90	3.0	#56 Spectropho	4	
0198-0204.FLAT	8	12:00	19:26:21.1	+31:29:37	300	90	3.0	#56 Spectropho	4	
0205-0206.FLAT	8	12:01	19:27:00.3	+31:29:36	300	90	3.0	#56 Spectropho	4	
0207-0214.BIAS	0	12:03	19:28:48.1	+31:29:36	300	90	3.0	#56 Spectropho	2	
0215-0216.BIAS	0	12:03	19:29:10.4	+31:29:35	300	90	3.0	#56 Spectropho	2	
0217-0219.FLAT	16	12:04	19:30:49.9	+31:29:35	300	90	3.0	#56 Spectropho	2	
0220-0224.FLAT	16	12:07	19:33:21.4	+31:29:34	300	90	3.0	#56 Spectropho	2	
0225-0229.FLAT	16	12:09	19:35:53.3	+31:29:33	300	90	3.0	#56 Spectropho	2	
0230-0234.FLAT	16	12:12	19:38:21.5	+31:29:32	300	90	3.0	#56 Spectropho	2	
0235-0237.FLAT	16	12:14	19:39:52.4	+31:29:31	300	90	3.0	#56 Spectropho	2	
0238.DARK	900	12:17	19:58:10.4	+31:29:23	300	90	3.0	#56 Spectropho	4	
0239.DARK	900	12:32	20:13:24.8	+31:29:17	300	90	3.0	#56 Spectropho	4	
0240.DARK	900	12:47	20:28:36.0	+31:29:12	300	90	3.0	#56 Spectropho	4	
0241.DARK	900	13:03	20:43:50.8	+31:29:06	300	90	3.0	#56 Spectropho	4	
0242.DARK	900	13:18	20:59:01.7	+31:29:01	300	90	3.0	#56 Spectropho	4	
0243.DARK	900	13:33	21:14:16.3	+31:28:55	300	90	3.0	#56 Spectropho	2	
0244.DARK	900	13:48	21:29:32.0	+31:28:50	300	90	3.0	#56 Spectropho	2	



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## FAST SPECTROGRAPH LOG



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UT Date 2005-05-05 Observers T Groner

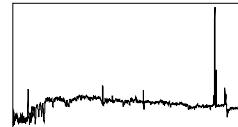
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.BIAS	0	23:46	07:13:42.6	+31:30:13	300	90	3.0	#56 Spectropho	4	
0011-0012.FLAT	8	23:46	07:14:25.8	+31:30:13	300	90	3.0	#56 Spectropho	4	
0013-0019.FLAT	8	23:49	07:16:48.7	+31:30:14	300	90	3.0	#56 Spectropho	4	
0020.FLAT	8	23:49	07:17:06.4	+31:30:15	300	90	3.0	#56 Spectropho	4	
0021-0029.BIAS	0	23:51	07:19:07.2	+31:30:15	300	90	3.0	#56 Spectropho	2	
0030.BIAS	0	23:51	07:19:20.2	+31:30:16	300	90	3.0	#56 Spectropho	2	
0031-0034.FLAT	16	23:53	07:21:26.4	+31:30:16	300	90	3.0	#56 Spectropho	2	
0035-0038.FLAT	16	23:55	07:23:27.8	+31:30:17	300	90	3.0	#56 Spectropho	2	
0039-0043.FLAT	16	23:58	07:25:59.7	+31:30:18	300	90	3.0	#56 Spectropho	2	
0044-0048.FLAT	16	0:00	07:28:31.3	+31:30:19	300	90	3.0	#56 Spectropho	2	
0049-0051.FLAT	16	0:02	07:30:02.4	+31:30:20	300	90	3.0	#56 Spectropho	2	
0052.DARK	900	0:05	07:47:40.7	+31:30:27	300	90	3.0	#56 Spectropho	4	
0053.DARK	900	0:20	08:02:52.0	+31:30:33	300	90	3.0	#56 Spectropho	4	
0054.DARK	900	0:35	08:18:06.7	+31:30:39	300	90	3.0	#56 Spectropho	4	
0055.DARK	900	1:16	08:59:19.4	+31:30:55	300	90	3.0	#56 Spectropho	2	
0056.DARK	900	1:31	09:14:35.3	+31:31:00	300	90	3.0	#56 Spectropho	2	
0057.DARK	900	1:47	09:29:51.2	+31:31:05	300	90	3.0	#56 Spectropho	2	
0058.COMP	5	2:16	09:41:16.4	+31:31:08	300	90	3.0	#56 Spectropho	2	
0059-0063.sky	6	2:25	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	
0064.COMP	10	2:25	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-05 Observers T Groner

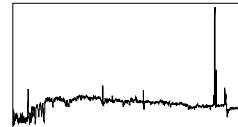
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0065.HD84937	10	2:51	09:48:54.8	13:45:13	300	20	3.0	#56 Spectropho	2	
0066.HD84937	10	2:51	09:48:54.8	13:45:13	300	20	3.0	#56 Spectropho	2	
0067.HD84937	10	2:51	09:48:54.8	13:45:13	300	20	3.0	#56 Spectropho	2	
0068.COMP	10	2:52	09:48:54.8	13:45:13	300	20	3.0	#56 Spectropho	2	
0069.N3377	180	2:56	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0070.COMP	10	2:59	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0071.N3227	300	3:03	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0072.COMP	10	3:08	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0073.N3227	150	3:09	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0074.COMP	10	3:12	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0075.2M10473124+3900114	300	3:16	10:47:31.2	+39:00:11	300	90	3.0	#141 Mapping t	2	
0076.COMP	10	3:21	10:47:31.2	+39:00:11	300	90	3.0	#141 Mapping t	2	
0077.Feige34	120	3:26	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0078.COMP	10	3:29	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0079.Feige34	120	3:29	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0080.COMP	10	3:32	10:39:36.8	43:06:10	300	0	3.0	#56 Spectropho	2	
0081.2M10460320+3908580	360	3:38	10:46:3.2	+39:08:58	300	90	3.0	#141 Mapping t	2	
0082.COMP	10	3:44	10:46:3.2	+39:08:58	300	90	3.0	#141 Mapping t	2	
0083.sn2005bf	1200	3:56	10:23:57.2	-03:11:28	300	22	3.0	#2 SN Observat	2	
0084.COMP	10	4:16	10:23:57.2	-03:11:28	300	22	3.0	#2 SN Observat	2	



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## FAST SPECTROGRAPH LOG



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UT Date 2005-05-05 Observers T Groner

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0085.TXCVn	10	4:25	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0086.TXCVn	30	4:26	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0087.COMP	10	4:27	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0088.1913_19	600	4:51	14:26:48.2	16:40:46	300	90	3.0	#64 Cluster an	2	
0089.COMP	10	5:01	14:26:48.2	16:40:46	300	90	3.0	#64 Cluster an	2	
0090.sn2005az	1500	5:23	13:05:46.9	+27:44:08	300	-40	3.0	#2 SN Observat	2	
0091.COMP	10	5:49	13:05:46.9	+27:44:08	300	-40	3.0	#2 SN Observat	2	
0092.TCrB	10	6:43	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0093.TCrB	30	6:44	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0094.COMP	10	6:45	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0095.2M14003658-0254321	1800	7:12	14:00:36.5	-02:54:32	300	90	3.0	#141 Mapping t	2	
0096.COMP	10	7:42	14:00:36.5	-02:54:32	300	90	3.0	#141 Mapping t	2	
0097.2M15214119-0731520	1800	7:48	15:21:41.1	-07:31:52	300	90	3.0	#141 Mapping t	2	
0098.COMP	10	8:19	15:21:41.1	-07:31:52	300	90	3.0	#141 Mapping t	2	
0099.3C338	1800	8:40	16:28:38.5	+39:33:06	300	0	3.0	#161 FR I_II d	2	
0100.COMP	10	9:10	16:28:38.5	+39:33:06	300	0	3.0	#161 FR I_II d	2	
0101.RSOph	10	9:21	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0102.RSOph	60	9:22	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0103.RSOph	150	9:24	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0104.COMP	10	9:27	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0105.YYHer	10	9:30	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	
0106.YYHer	60	9:31	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	
0107.COMP	10	9:34	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	
0108.sn2004_n6060	1300	9:44	16:05:52.0	21:29:05	300	65	3.0	#2 SN Observat	2	
0109.COMP	10	10:06	16:05:52.0	21:29:05	300	65	3.0	#2 SN Observat	2	
0110.152348-03230	600	10:10	15:26:20.1	-03:32:48	300	90	3.0	#84f Updated Z	2	
0111.COMP	10	10:21	15:26:20.1	-03:32:48	300	90	3.0	#84f Updated Z	2	
0112.2319_09	1200	10:27	19:18:6.1	43:48:25	300	90	3.0	#64 Cluster an	2	
0113.COMP	10	10:47	19:18:6.1	43:48:25	300	90	3.0	#64 Cluster an	2	
0114.2M18082315+0841030	1800	10:53	18:08:23.1	+08:41:3	300	90	3.0	#141 Mapping t	2	
0115.COMP	10	11:24	18:08:23.1	+08:41:3	300	90	3.0	#141 Mapping t	2	
0116-0125.BIAS	0	11:27	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	4	
0126-0135.FLAT	8	11:30	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	4	
0136-0145.BIAS	0	11:33	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	2	
0146-0166.FLAT	16	11:43	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	2	
0167-0171.DARK	900	12:57	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	4	
0172-0176.DARK	900	14:13	18:08:23.1	+08:41:3	300	90	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-06 Observers T Groner

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.BIAS	0	23:42	07:13:21.3	+31:30:13	300	90	3.0	#56 Spectropho	4	
0011-0012.FLAT	8	23:42	07:14:04.3	+31:30:13	300	90	3.0	#56 Spectropho	4	
0013-0019.FLAT	8	23:44	07:16:23.7	+31:30:14	300	90	3.0	#56 Spectropho	4	
0020.FLAT	8	23:45	07:16:45.0	+31:30:15	300	90	3.0	#56 Spectropho	4	
0021-0030.BIAS	0	23:47	07:18:55.3	+31:30:15	300	90	3.0	#56 Spectropho	2	
0031-0034.FLAT	16	23:49	07:21:05.0	+31:30:16	300	90	3.0	#56 Spectropho	2	
0035-0039.FLAT	16	23:51	07:23:36.8	+31:30:17	300	90	3.0	#56 Spectropho	2	
0040-0044.FLAT	16	23:54	07:26:08.5	+31:30:18	300	90	3.0	#56 Spectropho	2	
0045-0049.FLAT	16	23:57	07:28:40.3	+31:30:19	300	90	3.0	#56 Spectropho	2	
0050.FLAT	16	23:57	07:29:10.6	+31:30:20	300	90	3.0	#56 Spectropho	2	
0051.DARK	900	0:02	07:49:17.1	+31:30:28	300	90	3.0	#56 Spectropho	4	
0052.DARK	900	0:18	08:04:31.8	+31:30:34	300	90	3.0	#56 Spectropho	4	
0053.DARK	900	0:33	08:19:43.3	+31:30:40	300	90	3.0	#56 Spectropho	4	
0054.DARK	900	0:48	08:35:15.7	+31:30:46	300	90	3.0	#56 Spectropho	2	
0055.DARK	900	1:03	08:50:31.7	+31:30:51	300	90	3.0	#56 Spectropho	2	
0056.DARK	900	1:19	09:05:51.4	+31:30:57	300	90	3.0	#56 Spectropho	2	
0063-0067.sky	6	2:29	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	
0068.COMP	10	2:29	9:40:00	32:00:00	300	90	3.0	#57 Velocity S	2	
0069.HD84937	10	2:51	09:48:54.8	13:45:13	300	23	3.0	#56 Spectropho	2	
0070.HD84937	10	2:51	09:48:54.8	13:45:13	300	23	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-06 Observers T Groner

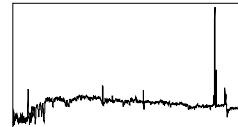
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0071.HD84937	10	2:51	09:48:54.8	13:45:13	300	23	3.0	#56 Spectropho	2	
0072.COMP	10	2:52	09:48:54.8	13:45:13	300	23	3.0	#56 Spectropho	2	
0073.N3377	180	2:58	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0074.COMP	10	3:02	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	2	
0075.GRB	1200	3:20	09:27:03.2	30:16:21	300	90	3.0	#12 Symbiotic	2	
0076.COMP	10	3:40	09:27:03.2	30:16:21	300	90	3.0	#12 Symbiotic	2	
0077.N3227	180	3:46	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0078.COMP	10	3:49	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0079.N3227	150	3:50	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0080.COMP	10	3:53	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0081.N4051	150	3:57	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0082.N4051	150	4:00	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0083.COMP	10	4:03	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0084.N4151	30	4:05	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0085.N4151	30	4:06	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0086.COMP	10	4:07	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0087.N5548	150	4:22	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0088.N5548	150	4:24	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0089.N5548	150	4:27	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0090.COMP	10	4:30	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 2005-05-06 Observers T Groner

Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0091.2M10511728-0946362	900	4:35	10:51:17.2	-09:46:36	300	90	3.0	#141 Mapping t	2	
0092.COMP	10	4:51	10:51:17.2	-09:46:36	300	90	3.0	#141 Mapping t	2	
0093.2M11003642-0856378	900	4:55	11:00:36.4	-08:56:37	300	90	3.0	#141 Mapping t	2	
0094.COMP	10	5:10	11:00:36.4	-08:56:37	300	90	3.0	#141 Mapping t	2	
0095.Feige34	120	5:15	10:39:36.8	43:06:10	300	104	3.0	#56 Spectropho	2	
0096.Feige34	120	5:17	10:39:36.8	43:06:10	300	104	3.0	#56 Spectropho	2	
0097.COMP	10	5:19	10:39:36.8	43:06:10	300	104	3.0	#56 Spectropho	2	
0098.sn2005bf	1200	5:27	10:23:57.2	-03:11:28	300	48	3.0	#2 SN Observat	2	
0099.COMP	10	5:48	10:23:57.2	-03:11:28	300	48	3.0	#2 SN Observat	2	
0100.sn2005ay	1200	6:17	11:52:48.0	+44:06:18	300	110	3.0	#2 SN Observat	2	
0101.COMP	10	6:38	11:52:48.0	+44:06:18	300	110	3.0	#2 SN Observat	2	
0102.1377_17	1200	6:47	11:47:50.8	55:59:21	300	90	3.0	#64 Cluster an	2	
0103.COMP	10	7:08	11:47:50.8	55:59:21	300	90	3.0	#64 Cluster an	2	
0104.1383_16	1200	7:23	11:47:36.5	54:45:04	300	90	3.0	#64 Cluster an	2	
0105.COMP	10	7:44	11:47:36.5	54:45:04	300	90	3.0	#64 Cluster an	2	
0106.142600-03070	1800	8:34	14:28:38.3	-03:19:55	300	90	3.0	#84f Updated Z	2	
0107.COMP	10	9:04	14:28:38.3	-03:19:55	300	90	3.0	#84f Updated Z	2	
0108.sn2004_n6060	1800	9:16	16:05:52.0	21:29:05	300	90	3.0	#2 SN Observat	2	
0109.COMP	10	9:47	16:05:52.0	21:29:05	300	90	3.0	#2 SN Observat	2	
0110.3C346	1500	9:53	16:43:48.7	+17:15:49	300	90	3.0	#161 FR I_II d	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-06 Observers T Groner

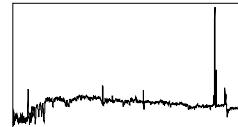
Coll. Focus 1000 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0111.COMP	10	10:18	16:43:48.7	+17:15:49	300	90	3.0	#161 FR I_II d	2	
0112.3C381	1500	10:26	18:33:46.3	+47:27:03	300	90	3.0	#161 FR I_II d	2	
0113.COMP	10	10:51	18:33:46.3	+47:27:03	300	90	3.0	#161 FR I_II d	2	
0114.2M18025078+1406074	1200	10:57	18:02:50.7	+14:06:7	300	90	3.0	#141 Mapping t	2	
0115.COMP	10	11:17	18:02:50.7	+14:06:7	300	90	3.0	#141 Mapping t	2	
0116-0125.BIAS	0	11:25	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	4	
0126-0135.FLAT	8	11:28	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	4	
0136-0145.BIAS	0	11:30	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	2	
0146-0165.FLAT	16	11:40	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	2	
0166.BIAS	0	11:42	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	2	
0167-0171.DARK	900	12:48	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	4	
0172-0176.DARK	900	14:04	18:02:50.7	+14:06:7	300	90	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	21:07	04:42:10.8	+31:29:11	300	90	3.0	#56 Spectropho	4	
0002.COMP	5	21:08	04:43:07.3	+31:29:11	300	90	3.0	#56 Spectropho	4	
0003.fastfoc	10	21:11	04:46:22.7	+31:29:12	300	90	3.0	#56 Spectropho	4	focus 1035
0004.fastfoc	10	21:11	04:46:44.1	+31:29:12	300	90	3.0	#56 Spectropho	4	
0005.fastfoc	10	21:12	04:47:05.5	+31:29:12	300	90	3.0	#56 Spectropho	4	
0006.fastfoc	10	21:12	04:47:23.2	+31:29:13	300	90	3.0	#56 Spectropho	4	
0007.fastfoc	10	21:12	04:47:44.7	+31:29:13	300	90	3.0	#56 Spectropho	4	
0008.fastfoc	10	21:13	04:48:02.5	+31:29:13	300	90	3.0	#56 Spectropho	4	
0009.fastfoc	10	21:13	04:48:23.8	+31:29:13	300	90	3.0	#56 Spectropho	4	
0010.fastfoc	10	21:13	04:48:45.2	+31:29:13	300	90	3.0	#56 Spectropho	4	
0011.fastfoc	10	21:14	04:49:02.9	+31:29:13	300	90	3.0	#56 Spectropho	4	
0012.fastfoc	10	21:14	04:49:24.3	+31:29:13	300	90	3.0	#56 Spectropho	4	
0013.fastfoc	10	21:14	04:49:41.9	+31:29:13	300	90	3.0	#56 Spectropho	4	
0014.DARK	900	21:24	05:14:03.2	+31:29:23	300	90	3.0	#56 Spectropho	4	x5
0015.DARK	900	21:39	05:29:14.3	+31:29:29	300	90	3.0	#56 Spectropho	4	
0016.DARK	900	21:54	05:44:29.0	+31:29:35	300	90	3.0	#56 Spectropho	4	
0017.DARK	900	22:09	05:59:40.3	+31:29:42	300	90	3.0	#56 Spectropho	4	
0018.DARK	900	22:24	06:14:51.6	+31:29:48	300	90	3.0	#56 Spectropho	4	
0019.DARK	900	22:39	06:30:06.5	+31:29:55	300	90	3.0	#56 Spectropho	2	x5
0020.DARK	900	22:55	06:45:22.3	+31:30:01	300	90	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

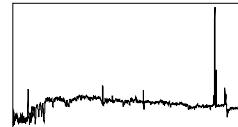
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0021.DARK	900	23:10	07:00:41.4	+31:30:08	300	90	3.0	#56 Spectropho	2	
0022.DARK	900	23:25	07:16:00.4	+31:30:14	300	90	3.0	#56 Spectropho	2	
0023.DARK	900	23:40	07:31:15.9	+31:30:21	300	90	3.0	#56 Spectropho	2	
0024.BIAS	0	1:49	09:25:03.6	+31:31:03	300	90	3.0	#56 Spectropho	2 x10	
0025-0032.BIAS	0	1:51	09:26:43.3	+31:31:03	300	90	3.0	#56 Spectropho	2	
0033.BIAS	0	1:51	09:26:56.4	+31:31:04	300	90	3.0	#56 Spectropho	2	
0034.FLAT	16	1:53	09:29:32.5	+31:31:04	300	90	3.0	#56 Spectropho	2 x20	
0035-0041.FLAT	16	1:57	09:33:00.8	+31:31:05	300	90	3.0	#56 Spectropho	2	
0042-0048.FLAT	16	2:00	09:36:20.2	+31:31:06	300	90	3.0	#56 Spectropho	2	
0049-0053.FLAT	16	2:02	09:38:39.4	+31:31:07	300	90	3.0	#56 Spectropho	2	
0054.BIAS	0	2:04	09:40:05.7	+31:31:08	300	90	3.0	#56 Spectropho	4 x10	
0055-0063.BIAS	0	2:05	09:41:06.7	+31:31:08	300	90	3.0	#56 Spectropho	4	
0064.FLAT	8	2:06	09:42:07.3	+31:31:08	300	90	3.0	#56 Spectropho	4 x10	
0065-0067.FLAT	8	2:07	09:43:16.9	+31:31:08	300	90	3.0	#56 Spectropho	4	
0068-0073.FLAT	8	2:08	09:44:44.0	+31:31:09	300	90	3.0	#56 Spectropho	4	
0074.SKYFLAT	1	2:18	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4 x10 start 8 min after sunset	
0075.SKYFLAT	2	2:20	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0076.SKYFLAT	2	2:20	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0077.SKYFLAT	2	2:21	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0078.SKYFLAT	3	2:21	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

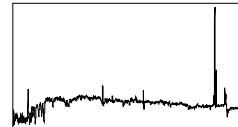
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0079.SKYFLAT	3	2:22	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0080.SKYFLAT	3	2:22	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0081.SKYFLAT	4	2:23	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0082.SKYFLAT	5	2:23	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0083.SKYFLAT	6	2:24	10:0:0	31:30:0	300	90	3.0	#56 Spectropho	4	
0084.HD84937	10	3:05	09:48:54.8	13:45:13	300	25	3.0	#56 Spectropho	4	
0085.COMP	5	3:09	09:48:54.8	13:45:13	300	25	3.0	#56 Spectropho	4	8:05pm
0086.HD84937	20	3:10	09:48:54.8	13:45:13	300	25	3.0	#56 Spectropho	2	
0087.COMP	10	3:10	09:48:54.8	13:45:13	300	25	3.0	#56 Spectropho	2	
0088.Feige34	240	3:14	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	2	
0089.COMP	10	3:18	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	2	
0090.Feige34	120	3:19	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	4	
0091.COMP	5	3:21	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	4	
0092.N3377	180	3:23	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	4	
0093.COMP	5	3:26	10:45:02.6	+14:14:51	300	90	3.0	#57 Velocity S	4	
0094.N3227	150	3:27	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	4	
0095.N3227	150	3:29	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	4	
0096.COMP	5	3:32	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	4	
0097.sn2005bf	1200	3:35	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0098.COMP	10	3:55	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0099.115354+50430	900	3:58	11:56:28.6	+50:25:46	300	20	3.0	#84f Updated Z	4	
0100.COMP	5	4:13	11:56:28.6	+50:25:46	300	20	3.0	#84f Updated Z	4	
0101.1291_08	900	4:16	11:32:42.4	56:15:04	300	90	3.0	#64 Cluster an	4	
0102.COMP	5	4:32	11:32:42.4	56:15:04	300	90	3.0	#64 Cluster an	4	
0103.1291_09	900	4:33	11:29:48.6	56:16:15	300	90	3.0	#64 Cluster an	4	
0104.COMP	5	4:48	11:29:48.6	56:16:15	300	90	3.0	#64 Cluster an	4	
0105.1291_10	1080	4:49	11:30:14.3	56:20:18	300	90	3.0	#64 Cluster an	4	
0106.COMP	5	5:07	11:30:14.3	56:20:18	300	90	3.0	#64 Cluster an	4	
0107.1291_11	810	5:08	11:29:34.7	56:22:36	300	90	3.0	#64 Cluster an	4	
0108.COMP	5	5:22	11:29:34.7	56:22:36	300	90	3.0	#64 Cluster an	4	
0109.1291_12	900	5:23	11:31:55.7	56:23:09	300	90	3.0	#64 Cluster an	4	
0110.COMP	5	5:38	11:31:55.7	56:23:09	300	90	3.0	#64 Cluster an	4	
0111.1291_13	1200	5:39	11:33:4.5	56:24:19	300	90	3.0	#64 Cluster an	4	
0112.COMP	5	6:00	11:33:4.5	56:24:19	300	90	3.0	#64 Cluster an	4	
0113.1291_14	1200	6:01	11:30:46.8	56:24:55	300	90	3.0	#64 Cluster an	4	
0114.COMP	5	6:21	11:30:46.8	56:24:55	300	90	3.0	#64 Cluster an	4	
0115.1291_15	1080	6:23	11:32:13.5	56:26:30	300	90	3.0	#64 Cluster an	4	
0116.COMP	5	6:41	11:32:13.5	56:26:30	300	90	3.0	#64 Cluster an	4	
0117.1291_16	720	6:42	11:31:12.9	56:27:04	300	90	3.0	#64 Cluster an	4	
0118.COMP	5	6:54	11:31:12.9	56:27:04	300	90	3.0	#64 Cluster an	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0119.1291_17	1020	6:55	11:30:40.8	56:29:10	300	90	3.0	#64 Cluster an	4	
0120.COMP	5	7:12	11:30:40.8	56:29:10	300	90	3.0	#64 Cluster an	4	
0121.1291_18	1020	7:13	11:31:7.2	56:31:29	300	90	3.0	#64 Cluster an	4	
0122.COMP	5	7:30	11:31:7.2	56:31:29	300	90	3.0	#64 Cluster an	4	
0123.1291_19	1200	7:31	11:30:58.0	56:31:45	300	90	3.0	#64 Cluster an	4	obj in center of slit
0124.COMP	5	7:52	11:30:58.0	56:31:45	300	90	3.0	#64 Cluster an	4	
0125.N4051	150	7:53	12:03:09.7	+44:31:53	300	90	3.0	#2 SN Observat	4	
0126.N4051	150	7:55	12:03:09.7	+44:31:53	300	90	3.0	#2 SN Observat	4	
0127.COMP	5	7:58	12:03:09.7	+44:31:53	300	90	3.0	#2 SN Observat	4	
0128.sn2005az	1200	8:00	13:05:46.9	+27:44:08	300	73	3.0	#2 SN Observat	2	
0129.COMP	10	8:21	13:05:46.9	+27:44:08	300	73	3.0	#2 SN Observat	2	
0130.N5548	150	8:22	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	4	
0131.N5548	150	8:25	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	4	
0132.N5548	150	8:28	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	4	
0133.COMP	5	8:30	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	4	
0134.MRK279	120	8:32	13:51:53.6	69:33:13	300	90	3.0	#6 AGN Monitor	4	
0135.MRK279	120	8:34	13:51:53.6	69:33:13	300	90	3.0	#6 AGN Monitor	4	
0136.COMP	5	8:36	13:51:53.6	69:33:13	300	90	3.0	#6 AGN Monitor	4	
0137.DracoC1	1200	8:38	17:19:58	57:50:06	300	90	3.0	#12 Symbiotic	4	
0138.COMP	5	8:58	17:19:58	57:50:06	300	90	3.0	#12 Symbiotic	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-07 Observers W. Brown

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0139.RSOph	10	9:01	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0140.RSOph	60	9:01	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0141.RSOph	150	9:02	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0142.COMP	5	9:05	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0143.145218+00500	1800	9:07	14:54:53.3	+00:38:23	300	90	3.0	#84f Updated Z	4	
0144.COMP	5	9:37	14:54:53.3	+00:38:23	300	90	3.0	#84f Updated Z	4	
0145.150406+09380	1440	9:39	15:06:32.4	+09:27:00	300	90	3.0	#84f Updated Z	4	clouds getting heavier; but this has emission lines
0146.COMP	5	10:03	15:06:32.4	+09:27:00	300	90	3.0	#84f Updated Z	4	
0147.sn2004et	1500	10:45	20:35:25.4	60:07:17	300	50	3.0	#2 SN Observat	2	
0148.COMP	10	11:11	20:35:25.4	60:07:17	300	50	3.0	#2 SN Observat	2	purged this too
0149.BIAS	0	11:14	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	2	x10
0150-0158.BIAS	0	11:16	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	2	
0159.BIAS	0	11:17	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	x10
0160-0168.BIAS	0	11:18	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-08 Observers W. Brown

Coll. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	19:14	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	x5
0002-0005.DARK	900	20:15	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	
0006.DARK	900	20:30	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	2	x5
0007-0010.DARK	900	21:31	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	2	
0011.DARK	900	21:55	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	x10
0012-0020.DARK	900	0:35	20:35:25.4	60:07:17	300	50	3.0	#84f Updated Z	4	
0021.BIAS	0	1:52	20:35:25.4	60:07:17	600	90	3.0	#84f Updated Z	4	x10
0022-0030.BIAS	0	1:53	20:35:25.4	60:07:17	600	90	3.0	#84f Updated Z	4	
0031.FLAT	24	1:54	20:35:25.4	60:07:17	600	90	2.0	#84f Updated Z	4	x20
0032-0050.FLAT	24	2:04	20:35:25.4	60:07:17	600	90	2.0	#84f Updated Z	4	
0051.Feige34	300	3:08	10:39:36.8	43:06:10	600	90	2.0	#56 Spectropho	4	clouds on horizon; clear overhead
0052.COMP	10	3:13	10:39:36.8	43:06:10	600	90	2.0	#56 Spectropho	4	
0053.hs2438	510	3:15	13:04:45.5	34:30:16	600	90	2.0	#122 Halo Star	4	
0054.COMP	10	3:24	13:04:45.5	34:30:16	600	90	2.0	#122 Halo Star	4	
0055.hs2424	510	3:24	12:59:49.1	36:30:36	600	90	2.0	#122 Halo Star	4	
0056.COMP	10	3:33	12:59:49.1	36:30:36	600	90	2.0	#122 Halo Star	4	
0057.hs2412	630	3:34	12:56:01.9	47:27:00	600	90	2.0	#122 Halo Star	4	
0058.COMP	10	3:45	12:56:01.9	47:27:00	600	90	2.0	#122 Halo Star	4	
0059.hs2432	630	3:46	13:01:59.6	62:50:42	600	90	2.0	#122 Halo Star	4	
0060.COMP	10	3:57	13:01:59.6	62:50:42	600	90	2.0	#122 Halo Star	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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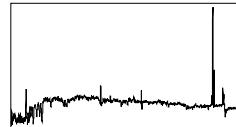
UT Date 2005-05-08 Observers W. BrownColl. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0061.hss350	1200	3:59	14:32:57.0	49:11:43	600	90	2.0	#122 Halo Star	4	
0062.COMP	10	4:19	14:32:57.0	49:11:43	600	90	2.0	#122 Halo Star	4	
0063.hss351	600	4:20	14:34:59.4	49:05:07	600	90	2.0	#122 Halo Star	4	
0064.COMP	10	4:30	14:34:59.4	49:05:07	600	90	2.0	#122 Halo Star	4	
0065.hss353	900	4:31	14:35:46.0	49:41:54	600	90	2.0	#122 Halo Star	4	
0066.COMP	10	4:46	14:35:46.0	49:41:54	600	90	2.0	#122 Halo Star	4	
0067.hss352	900	4:47	14:35:13.1	50:37:44	600	90	2.0	#122 Halo Star	4	
0068.COMP	10	5:03	14:35:13.1	50:37:44	600	90	2.0	#122 Halo Star	4	
0069.hss354	900	5:04	14:43:29.5	50:37:58	600	90	2.0	#122 Halo Star	4	
0070.COMP	10	5:19	14:43:29.5	50:37:58	600	90	2.0	#122 Halo Star	4	
0071.hss355	720	5:20	14:46:15.5	49:52:48	600	90	2.0	#122 Halo Star	4	
0072.COMP	10	5:32	14:46:15.5	49:52:48	600	90	2.0	#122 Halo Star	4	
0073.hs2513	600	5:35	13:26:16.6	78:09:46	600	90	2.0	#122 Halo Star	4	
0074.COMP	10	5:45	13:26:16.6	78:09:46	600	90	2.0	#122 Halo Star	4	
0075.hss282	1800	5:46	14:25:50.6	50:26:17	600	90	2.0	#122 Halo Star	4	
0076.COMP	10	6:17	14:25:50.6	50:26:17	600	90	2.0	#122 Halo Star	4	
0077.hss284	1680	6:17	14:30:59.7	49:22:29	600	90	2.0	#122 Halo Star	4	
0078.COMP	10	6:46	14:30:59.7	49:22:29	600	90	2.0	#122 Halo Star	4	
0079.hss295	1560	6:47	14:50:13.4	50:31:29	600	90	2.0	#122 Halo Star	4	
0080.COMP	10	7:13	14:50:13.4	50:31:29	600	90	2.0	#122 Halo Star	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-08 Observers W. Brown

Coll. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0081.hss320	1800	7:14	15:28:14.4	50:19:45	600	90	2.0	#122 Halo Star	4	
0082.COMP	10	7:45	15:28:14.4	50:19:45	600	90	2.0	#122 Halo Star	4	
0083.hss323	1680	7:46	15:32:41.8	49:00:54	600	90	2.0	#122 Halo Star	4	
0084.COMP	10	8:14	15:32:41.8	49:00:54	600	90	2.0	#122 Halo Star	4	
0085.hss362	900	8:15	14:56:16.1	50:38:11	600	90	2.0	#122 Halo Star	4	
0086.COMP	10	8:30	14:56:16.1	50:38:11	600	90	2.0	#122 Halo Star	4	
0087.hss363	900	8:31	14:57:55.4	50:47:41	600	90	2.0	#122 Halo Star	4	
0088.COMP	10	8:47	14:57:55.4	50:47:41	600	90	2.0	#122 Halo Star	4	
0089.hss364	960	8:48	15:19:21.8	49:39:52	600	90	2.0	#122 Halo Star	4	
0090.COMP	10	9:04	15:19:21.8	49:39:52	600	90	2.0	#122 Halo Star	4	
0091.hss365	1050	9:05	15:20:11.1	49:46:46	600	90	2.0	#122 Halo Star	4	seeing got lousy
0092.COMP	10	9:23	15:20:11.1	49:46:46	600	90	2.0	#122 Halo Star	4	
0093.hss366	840	9:24	15:20:33.5	49:05:21	600	90	2.0	#122 Halo Star	4	
0094.COMP	10	9:38	15:20:33.5	49:05:21	600	90	2.0	#122 Halo Star	4	
0095.hss367	660	9:39	15:21:09.0	49:34:42	600	90	2.0	#122 Halo Star	4	
0096.COMP	10	9:50	15:21:09.0	49:34:42	600	90	2.0	#122 Halo Star	4	
0097.hss368	1020	9:50	15:21:36.4	49:43:41	600	90	2.0	#122 Halo Star	4	
0098.COMP	10	10:08	15:21:36.4	49:43:41	600	90	2.0	#122 Halo Star	4	
0099.hss369	1020	10:09	15:23:44.5	50:55:54	600	90	2.0	#122 Halo Star	4	
0100.COMP	10	10:26	15:23:44.5	50:55:54	600	90	2.0	#122 Halo Star	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-08 Observers W. BrownColl. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0101.hss380	1020	10:27	16:06:56.6	50:09:58	600	90	2.0	#122 Halo Star	4	
0102.COMP	10	10:44	16:06:56.6	50:09:58	600	90	2.0	#122 Halo Star	4	
0103.hss384	1200	10:45	16:10:26.6	50:05:54	600	90	2.0	#122 Halo Star	4	
0104.COMP	10	11:06	16:10:26.6	50:05:54	600	90	2.0	#122 Halo Star	4	
0105.hss383	1410	11:07	16:08:50.7	50:39:19	600	90	2.0	#122 Halo Star	4	
0106.COMP	10	11:30	16:08:50.7	50:39:19	600	90	2.0	#122 Halo Star	4	
0107.BDp284211	180	11:36	21:51:11.1	28:51:53	600	105	2.0	#56 Spectropho	4	
0108.COMP	10	11:39	21:51:11.1	28:51:53	600	105	2.0	#56 Spectropho	4	
0109.BIAS	0	11:41	21:51:11.1	28:51:53	600	90	2.0	#122 Halo Star	4	x10
0110-0118.BIAS	0	11:42	21:51:11.1	28:51:53	600	90	2.0	#122 Halo Star	4	
0119-0128.DARK	900	14:40	21:51:11.1	28:51:53	600	90	2.0	#122 Halo Star	4	
0129-0138.DARK	900	17:12	21:51:11.1	28:51:53	600	90	2.0	#122 Halo Star	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. Brown

Coll. Focus 1075 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	21:17	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	x8
0002-0008.DARK	900	23:03	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	
0009.DARK	900	23:19	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	x6
0010-0014.DARK	900	0:35	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	
0015.FLAT	16	1:08	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	x20
0016-0034.FLAT	16	1:18	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	
0035.BIAS	0	1:19	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	x10
0036-0044.BIAS	0	1:20	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	2	
0045.FLAT	8	1:22	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	x10
0046-0054.FLAT	8	1:24	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	
0055.BIAS	0	1:26	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	x10
0056-0064.BIAS	0	1:27	21:51:11.1	28:51:53	300	90	3.0	#57 Standards	4	
0065.skyflat	10	2:21	12:10:32.6	+39:24:21	300	90	3.0	#57 Velocity S	4	x5
0066.skyflat	12	2:21	12:10:32.6	+39:24:21	300	90	3.0	#57 Velocity S	4	
0067.skyflat	15	2:21	12:10:32.6	+39:24:21	300	90	3.0	#57 Velocity S	4	
0068.skyflat	18	2:22	12:10:32.6	+39:24:21	300	90	3.0	#57 Velocity S	4	
0069.skyflat	20	2:23	12:10:32.6	+39:24:21	300	90	3.0	#57 Velocity S	4	
0070.N4151	30	3:00	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	4	
0071.N4151	30	3:01	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	4	
0072.COMP	5	3:02	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. Brown

Coll. Focus 1075 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0073.N4051	150	3:03	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	4	
0074.N4051	150	3:05	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	4	
0075.COMP	5	3:08	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	4	
0076.HD84937	10	3:11	09:48:54.8	13:45:13	300	30	3.0	#56 Spectropho	4	
0077.COMP	5	3:11	09:48:54.8	13:45:13	300	30	3.0	#56 Spectropho	4	
0078.HD84937	20	3:11	09:48:54.8	13:45:13	300	30	3.0	#56 Spectropho	2	
0079.COMP	10	3:12	09:48:54.8	13:45:13	300	30	3.0	#56 Spectropho	2	
0080.sn2005am	1200	3:14	09:16:12.4	-16:18:16	300	30	3.0	#2 SN Observat	2	obj is faint spectrum, north side
0081.COMP	10	3:34	09:16:12.4	-16:18:16	300	30	3.0	#2 SN Observat	2	
0082.sn2005bf	1200	3:36	10:23:57.2	-03:11:28	300	30	3.0	#6 AGN Monitor	2	
0083.COMP	10	3:56	10:23:57.2	-03:11:28	300	30	3.0	#6 AGN Monitor	2	
0084.N3227	150	3:58	10:23:30.6	+19:51:54	300	30	3.0	#6 AGN Monitor	2	
0085.N3227	150	4:01	10:23:30.6	+19:51:54	300	30	3.0	#6 AGN Monitor	2	
0086.COMP	10	4:03	10:23:30.6	+19:51:54	300	30	3.0	#6 AGN Monitor	2	
0087.MRK421	300	4:06	11:04:27.4	+38:12:32	300	110	3.0	#6 AGN Monitor	2	
0088.MRK421	300	4:11	11:04:27.4	+38:12:32	300	110	3.0	#6 AGN Monitor	2	
0089.COMP	10	4:16	11:04:27.4	+38:12:32	300	110	3.0	#6 AGN Monitor	2	
0090.sn2005az	1200	4:19	13:05:46.9	+27:44:08	300	110	3.0	#2 SN Observat	2	
0091.COMP	10	4:39	13:05:46.9	+27:44:08	300	110	3.0	#2 SN Observat	2	
0092.MRK279	120	4:41	13:51:53.6	69:33:13	300	110	3.0	#6 AGN Monitor	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. Brown

Coll. Focus 1075 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0093.MRK279	120	4:43	13:51:53.6	69:33:13	300	110	3.0	#6 AGN Monitor	2	
0094.COMP	10	4:45	13:51:53.6	69:33:13	300	110	3.0	#6 AGN Monitor	2	
0095.N5548	150	4:47	14:17:59.6	+25:08:12	300	110	3.0	#6 AGN Monitor	2	
0096.N5548	150	4:50	14:17:59.6	+25:08:12	300	110	3.0	#6 AGN Monitor	2	
0097.N5548	150	4:53	14:17:59.6	+25:08:12	300	110	3.0	#6 AGN Monitor	2	
0098.COMP	10	4:55	14:17:59.6	+25:08:12	300	110	3.0	#6 AGN Monitor	2	
0099.Feige34	210	4:58	10:39:36.8	43:06:10	300	105	3.0	#56 Spectropho	2	
0100.COMP	10	5:02	10:39:36.8	43:06:10	300	105	3.0	#56 Spectropho	2	
0101.Feige34	90	5:02	10:39:36.8	43:06:10	300	105	3.0	#56 Spectropho	4	
0102.COMP	5	5:04	10:39:36.8	43:06:10	300	105	3.0	#56 Spectropho	4	
0103.Feige34	60	5:07	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4 5	
0104.Feige34	60	5:08	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4 5	
0105.Feige34	60	5:09	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4 5	
0106.COMP	5	5:11	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4 5	
0107.FLAT	5	5:11	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4 5	
0108-0116.FLAT	5	5:13	10:39:36.8	43:06:10	300	105	5.0	#56 Spectropho	4	
0117.FLAT	28	5:18	10:39:36.8	43:06:10	600	99	2.0	#56 Spectropho	4	x10; changing to 6001 and 2
0118-0126.FLAT	28	5:23	10:39:36.8	43:06:10	600	99	2.0	#56 Spectropho	4	
0127.Feige34	210	5:24	10:39:36.8	43:06:10	600	99	2.0	#56 Spectropho	4	
0128.COMP	10	5:28	10:39:36.8	43:06:10	600	99	2.0	#56 Spectropho	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. Brown

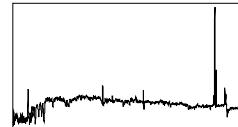
Coll. Focus 1075 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0129.hss356	900	5:30	14:50:54.4	50:42:39	600	90	2.0	#122 Halo Star	4	
0130.COMP	10	5:46	14:50:54.4	50:42:39	600	90	2.0	#122 Halo Star	4	
0131.hss357	900	5:47	14:51:51.6	50:39:13	600	90	2.0	#122 Halo Star	4	
0132.COMP	10	6:02	14:51:51.6	50:39:13	600	90	2.0	#122 Halo Star	4	
0133.hss358	960	6:03	14:52:02.1	50:28:05	600	90	2.0	#122 Halo Star	4	
0134.COMP	10	6:19	14:52:02.1	50:28:05	600	90	2.0	#122 Halo Star	4	
0135.hss359	780	6:20	14:52:25.9	49:35:47	600	90	2.0	#122 Halo Star	4	
0136.COMP	10	6:33	14:52:25.9	49:35:47	600	90	2.0	#122 Halo Star	4	
0137.hss360	780	6:34	14:54:45.2	49:28:22	600	90	2.0	#122 Halo Star	4	
0138.COMP	10	6:47	14:54:45.2	49:28:22	600	90	2.0	#122 Halo Star	4	
0139.hss361	540	6:48	14:55:39.5	50:24:21	600	90	2.0	#122 Halo Star	4	
0140.COMP	10	6:57	14:55:39.5	50:24:21	600	90	2.0	#122 Halo Star	4	
0141.hs2723	510	6:58	15:00:12.5	59:34:37	600	90	2.0	#122 Halo Star	4	
0142.COMP	10	7:07	15:00:12.5	59:34:37	600	90	2.0	#122 Halo Star	4	
0143.hss321	1680	7:08	15:29:56.1	49:46:08	600	90	2.0	#122 Halo Star	4	
0144.COMP	10	7:36	15:29:56.1	49:46:08	600	90	2.0	#122 Halo Star	4	
0145.hss327	1500	7:38	15:36:53.9	49:59:42	600	90	2.0	#122 Halo Star	4	
0146.COMP	10	8:03	15:36:53.9	49:59:42	600	90	2.0	#122 Halo Star	4	
0147.grb	1200	8:09	12:36:13.6	28:58:58	600	90	2.0	#126 GRB	4	GRB galaxy; very faint
0148.COMP	10	8:29	12:36:13.6	28:58:58	600	90	2.0	#126 GRB	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. Brown

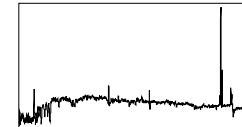
Coll. Focus 1075 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0149.hss370	900	8:31	15:32:22.7	49:56:45	600	90	2.0	#122 Halo Star	4	
0150.COMP	10	8:47	15:32:22.7	49:56:45	600	90	2.0	#122 Halo Star	4	
0151.hss371	900	8:47	15:32:23.3	50:16:58	600	90	2.0	#122 Halo Star	4	
0152.COMP	10	9:03	15:32:23.3	50:16:58	600	90	2.0	#122 Halo Star	4	
0153.hss372	1020	9:04	15:37:34.4	49:49:39	600	90	2.0	#122 Halo Star	4	
0154.COMP	10	9:21	15:37:34.4	49:49:39	600	90	2.0	#122 Halo Star	4	
0155.hss373	960	9:22	15:46:36.9	49:49:28	600	90	2.0	#122 Halo Star	4	
0156.COMP	10	9:39	15:46:36.9	49:49:28	600	90	2.0	#122 Halo Star	4	
0157.hss375	1020	9:39	15:49:04.8	49:17:35	600	90	2.0	#122 Halo Star	4	
0158.COMP	10	9:57	15:49:04.8	49:17:35	600	90	2.0	#122 Halo Star	4	
0159.hss379	1800	9:58	16:01:49.5	49:05:23	600	90	2.0	#122 Halo Star	4	
0160.COMP	10	10:28	16:01:49.5	49:05:23	600	90	2.0	#122 Halo Star	4	
0161.hss382	1140	10:29	16:08:49.8	50:36:33	600	90	2.0	#122 Halo Star	4	
0162.COMP	10	10:48	16:08:49.8	50:36:33	600	90	2.0	#122 Halo Star	4	
0163.hss381	990	10:50	16:08:47.4	49:58:20	600	90	2.0	#122 Halo Star	4	
0164.COMP	10	11:07	16:08:47.4	49:58:20	600	90	2.0	#122 Halo Star	4	
0165.hss376	840	11:08	15:49:10.2	49:52:16	600	90	2.0	#122 Halo Star	4	
0166.COMP	10	11:22	15:49:10.2	49:52:16	600	90	2.0	#122 Halo Star	4	
0167.RSOph	150	11:30	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	300 line grating
0168.RSOph	60	11:33	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-09 Observers W. BrownColl. Focus 1075 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>
0169.RSOph	10	11:34	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0170.COMP	5	11:34	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0171.FLAT	8	11:35	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	x10
0172-0180.FLAT	8	11:37	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-10 Observers W. Brown

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	22:18	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	4	x10
0002-0010.BIAS	0	22:19	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	4	
0011.FLAT	8	22:21	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	4	x10
0012-0020.FLAT	8	22:24	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	4	
0021.BIAS	0	22:25	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	2	x10
0022-0030.BIAS	0	22:27	05:26:17.5	+28:36:28	300	90	3.0	#12 Symbiotic	2	
0031.FLAT	16	22:40	06:28:06.6	+31:29:54	300	90	3.0	#12 Symbiotic	2	x20
0032.FLAT	16	22:41	06:28:33.2	+31:29:54	300	90	3.0	#12 Symbiotic	2	
0033-0037.FLAT	16	22:43	06:30:56.0	+31:29:55	300	90	3.0	#12 Symbiotic	2	
0038-0042.FLAT	16	22:46	06:33:18.8	+31:29:56	300	90	3.0	#12 Symbiotic	2	
0043-0047.FLAT	16	22:48	06:35:38.0	+31:29:57	300	90	3.0	#12 Symbiotic	2	
0048-0050.FLAT	16	22:49	06:37:04.2	+31:29:58	300	90	3.0	#12 Symbiotic	2	
0051.N4051	150	3:05	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0052.N4051	150	3:07	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0053.COMP	10	3:10	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0054.N3377	180	3:12	10:45:02.6	+14:14:51	300	36	3.0	#57 Velocity S	4	
0055.COMP	5	3:15	10:45:02.6	+14:14:51	300	36	3.0	#57 Velocity S	4	
0056.HD84937	7	3:16	09:48:54.8	13:45:13	300	36	3.0	#56 Spectropho	4	
0057.COMP	5	3:16	09:48:54.8	13:45:13	300	36	3.0	#56 Spectropho	4	
0058.HD84937	15	3:17	09:48:54.8	13:45:13	300	36	3.0	#56 Spectropho	2	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0059.COMP	10	3:17	09:48:54.8	13:45:13	300	36	3.0	#56 Spectropho	2	
0060.N3227	150	3:18	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0061.N3227	150	3:21	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0062.COMP	10	3:24	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0063.N5548	150	3:26	14:17:59.6	+25:08:12	300	20	3.0	#6 AGN Monitor	2	
0064.N5548	150	3:29	14:17:59.6	+25:08:12	300	20	3.0	#6 AGN Monitor	2	
0065.N5548	150	3:32	14:17:59.6	+25:08:12	300	20	3.0	#6 AGN Monitor	2	
0066.COMP	10	3:35	14:17:59.6	+25:08:12	300	20	3.0	#6 AGN Monitor	2	
0067.sn2005bf	1200	3:37	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0068.COMP	10	3:57	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0069.3C236	1320	4:00	10:06:01.7	+34:54:10	300	90	3.0	#161 FR I_II d	2	
0070.COMP	10	4:22	10:06:01.7	+34:54:10	300	90	3.0	#161 FR I_II d	2	
0071.1383_01	600	4:24	11:47:25.8	54:24:26	300	90	3.0	#64 Cluster an	4	
0072.COMP	5	4:37	11:47:25.8	54:24:26	300	90	3.0	#64 Cluster an	4	
0073.1383_02	840	4:38	11:46:10.2	54:27:53	300	90	3.0	#64 Cluster an	4	nice emission lines
0074.COMP	5	4:52	11:46:10.2	54:27:53	300	90	3.0	#64 Cluster an	4	
0075.1383_04	600	4:53	11:47:41.7	54:29:55	300	90	3.0	#64 Cluster an	4	also has emission lines
0076.COMP	5	5:04	11:47:41.7	54:29:55	300	90	3.0	#64 Cluster an	4	
0077.1383_05	600	5:04	11:47:40.1	54:30:53	300	90	3.0	#64 Cluster an	4	
0078.COMP	5	5:14	11:47:40.1	54:30:53	300	90	3.0	#64 Cluster an	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0079.1383_06	600	5:15	11:45:42.9	54:32:28	300	90	3.0	#64 Cluster an	4	
0080.COMP	5	5:25	11:45:42.9	54:32:28	300	90	3.0	#64 Cluster an	4	
0081.121442+09140	1080	5:27	12:17:14.5	+08:56:34	300	90	3.0	#84f Updated Z	4	
0082.COMP	5	5:45	12:17:14.5	+08:56:34	300	90	3.0	#84f Updated Z	4	
0083.4C73.08	1500	5:49	09:49:46.0	+73:14:23	300	110	3.0	#161 FR I_II d	2	
0084.COMP	10	6:14	09:49:46.0	+73:14:23	300	110	3.0	#161 FR I_II d	2	
0085.sn2005bh	1200	6:17	11:29:44.0	22:07:39	300	65	3.0	#2 SN Observat	2	
0086.COMP	10	6:38	11:29:44.0	22:07:39	300	65	3.0	#2 SN Observat	2	
0087.sn2005bo	1200	6:41	12:49:41	03	-11:05:340	27	3.0		#2 SN Observat	
0088.COMP	10	7:01	12:49:41	03	-11:05:340	27	3.0		#2 SN Observat	
0089.BDp332642	120	7:04	15:51:59.9	32:56:54	300	85	3.0	#56 Spectropho	2	
0090.COMP	10	7:06	15:51:59.9	32:56:54	300	85	3.0	#56 Spectropho	2	
0091.BDp332642	50	7:07	15:51:59.9	32:56:54	300	85	3.0	#56 Spectropho	4	
0092.COMP	5	7:08	15:51:59.9	32:56:54	300	85	3.0	#56 Spectropho	4	
0093.BDp332642	120	7:11	15:51:59.9	32:56:54	600	85	2.0	#56 Spectropho	4	600 line grating
0094.COMP	10	7:13	15:51:59.9	32:56:54	600	85	2.0	#56 Spectropho	4	
0095.hss283	1800	7:15	14:29:26.5	51:12:55	600	90	2.0	#122 Halo Star	4	
0096.COMP	10	7:45	14:29:26.5	51:12:55	600	90	2.0	#122 Halo Star	4	
0097.hss286	1800	7:48	14:32:32.5	51:57:58	600	90	2.0	#122 Halo Star	4	
0098.COMP	10	8:18	14:32:32.5	51:57:58	600	90	2.0	#122 Halo Star	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0099.hss301	900	8:19	14:54:20.0	49:14:52	600	90	2.0	#122 Halo Star	4	
0100.COMP	10	8:34	14:54:20.0	49:14:52	600	90	2.0	#122 Halo Star	4	
0101.hss308	1440	8:35	15:10:41.4	50:16:52	600	90	2.0	#122 Halo Star	4	
0102.COMP	10	9:00	15:10:41.4	50:16:52	600	90	2.0	#122 Halo Star	4	
0103.hss317	900	9:01	15:25:20.1	50:09:51	600	90	2.0	#122 Halo Star	4	
0104.COMP	10	9:16	15:25:20.1	50:09:51	600	90	2.0	#122 Halo Star	4	
0105.hss325	1440	9:17	15:34:55.8	49:29:08	600	90	2.0	#122 Halo Star	4	
0106.COMP	10	9:41	15:34:55.8	49:29:08	600	90	2.0	#122 Halo Star	4	
0107.hss326	1080	9:42	15:36:02.3	50:41:57	600	90	2.0	#122 Halo Star	4	
0108.COMP	10	10:00	15:36:02.3	50:41:57	600	90	2.0	#122 Halo Star	4	
0109.hss374	900	10:01	15:48:42.9	49:24:57	600	90	2.0	#122 Halo Star	4	
0110.COMP	10	10:16	15:48:42.9	49:24:57	600	90	2.0	#122 Halo Star	4	
0111.hss377	960	10:17	15:51:11.3	49:47:15	600	90	2.0	#122 Halo Star	4	
0112.COMP	10	10:34	15:51:11.3	49:47:15	600	90	2.0	#122 Halo Star	4	
0113.hss378	930	10:34	15:53:08.3	49:22:23	600	90	2.0	#122 Halo Star	4	
0114.COMP	10	10:50	15:53:08.3	49:22:23	600	90	2.0	#122 Halo Star	4	
0115.hss319	1320	10:51	15:26:45.4	51:50:02	600	90	2.0	#122 Halo Star	4	
0116.COMP	10	11:13	15:26:45.4	51:50:02	600	90	2.0	#122 Halo Star	4	
0117.hss322	900	11:14	15:31:25.6	47:19:13	600	90	2.0	#122 Halo Star	4	
0118.COMP	10	11:29	15:31:25.6	47:19:13	600	90	2.0	#122 Halo Star	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0119.FLAT	28	11:30	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	4	x15
0120-0133.FLAT	28	11:38	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	4	
0134.BIAS	0	11:40	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	4	x10
0135-0143.BIAS	0	11:41	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	4	
0144-0148.DARK	900	13:17	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	4	
0149-0153.DARK	900	14:33	15:31:25.6	47:19:13	600	90	2.0	#56 Spectropho	2	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	22:18	06:24:11.5	+31:29:52	600	90	2.0	#56 Spectropho	4	x4
0002.DARK	900	22:43	06:49:42.3	+31:30:03	600	90	2.0	#56 Spectropho	4	
0003.DARK	900	22:58	07:04:53.0	+31:30:10	600	90	2.0	#56 Spectropho	4	
0004.DARK	900	23:14	07:20:00.2	+31:30:16	600	90	2.0	#56 Spectropho	4	
0005.DARK	900	23:29	07:35:41.3	+31:30:23	600	90	2.0	#56 Spectropho	2	x5
0006.DARK	900	23:44	07:50:52.8	+31:30:29	600	90	2.0	#56 Spectropho	2	
0007.DARK	900	0:00	08:06:08.0	+31:30:35	600	90	2.0	#56 Spectropho	2	
0008.DARK	900	0:15	08:21:23.3	+31:30:41	600	90	2.0	#56 Spectropho	2	
0009.DARK	900	0:30	08:36:38.5	+31:30:46	600	90	2.0	#56 Spectropho	2	
0010.BIAS	0	1:33	09:24:21.7	+31:31:03	300	90	3.0	#56 Spectropho	4	x10
0011-0019.BIAS	0	1:34	09:25:22.8	+31:31:03	300	90	3.0	#56 Spectropho	4	
0020.FLAT	8	1:34	09:26:05.4	+31:31:03	300	90	3.0	#56 Spectropho	4	x10
0021-0023.FLAT	8	1:35	09:26:49.0	+31:31:03	300	90	3.0	#56 Spectropho	4	
0024-0029.FLAT	8	1:36	09:28:15.9	+31:31:04	300	90	3.0	#56 Spectropho	4	
0030.BIAS	0	1:38	09:29:29.7	+31:31:04	300	90	3.0	#56 Spectropho	2	x10
0031-0033.BIAS	0	1:38	09:30:08.5	+31:31:04	300	90	3.0	#56 Spectropho	2	
0034-0039.BIAS	0	1:40	09:31:22.8	+31:31:05	300	90	3.0	#56 Spectropho	2	
0040.FLAT	16	1:40	09:32:01.2	+31:31:05	300	90	3.0	#56 Spectropho	2	x20
0041-0043.FLAT	16	1:41	09:33:24.3	+31:31:05	300	90	3.0	#56 Spectropho	2	
0044-0050.FLAT	16	1:45	09:36:43.6	+31:31:06	300	90	3.0	#56 Spectropho	2	



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Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0051-0057.FLAT	16	1:48	09:40:02.9	+31:31:07	300	90	3.0	#56 Spectropho	2	
0058-0059.FLAT	16	1:49	09:40:59.5	+31:31:08	300	90	3.0	#56 Spectropho	2	
0060.N4151	30	3:05	12:10:32.6	+39:24:21	300	36	3.0	#6 AGN Monitor	2	clear skies
0061.N4151	30	3:06	12:10:32.6	+39:24:21	300	36	3.0	#6 AGN Monitor	2	
0062.COMP	10	3:07	12:10:32.6	+39:24:21	300	36	3.0	#6 AGN Monitor	2	
0063.N4051	150	3:08	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0064.N4051	150	3:10	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0065.COMP	10	3:13	12:03:09.7	+44:31:53	300	36	3.0	#6 AGN Monitor	2	
0066.HD84937	12	3:15	09:48:54.8	13:45:13	300	36	3.0	#6 AGN Monitor	2	
0067.COMP	10	3:15	09:48:54.8	13:45:13	300	36	3.0	#6 AGN Monitor	2	
0068.N3227	150	3:16	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0069.N3227	150	3:19	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0070.COMP	10	3:22	10:23:30.6	+19:51:54	300	36	3.0	#6 AGN Monitor	2	
0071.sn2005bf	1200	3:24	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0072.COMP	10	3:44	10:23:57.2	-03:11:28	300	20	3.0	#2 SN Observat	2	
0073.N5548	150	3:46	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0074.N5548	150	3:49	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0075.N5548	150	3:52	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0076.COMP	10	3:55	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0077.1383_07	900	3:57	11:47:45.8	54:35:05	300	90	3.0	#64 Cluster an	4	



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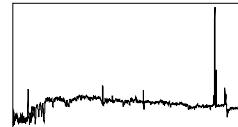
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0078.COMP	5	4:12	11:47:45.8	54:35:05	300	90	3.0	#64 Cluster an	4	
0079.1383_08	900	4:13	11:49:31.7	54:38:54	300	90	3.0	#64 Cluster an	4	
0080.COMP	5	4:28	11:49:31.7	54:38:54	300	90	3.0	#64 Cluster an	4	
0081.1383_10	720	4:29	11:50:24.1	54:40:03	300	90	3.0	#64 Cluster an	4	
0082.COMP	5	4:41	11:50:24.1	54:40:03	300	90	3.0	#64 Cluster an	4	
0083.122112+12450	1080	4:43	12:23:43.8	+12:28:27	300	90	3.0	#84f Updated Z	4	
0084.COMP	5	5:01	12:23:43.8	+12:28:27	300	90	3.0	#84f Updated Z	4	
0085.123006+13030	1200	5:02	12:32:40.6	+12:46:15	300	90	3.0	#84f Updated Z	4	very low surface brightness
0086.COMP	5	5:23	12:32:40.6	+12:46:15	300	90	3.0	#84f Updated Z	4	
0087.124012+13320	1200	5:23	12:42:40.6	+13:15:59	300	90	3.0	#84f Updated Z	4	
0088.COMP	5	5:44	12:42:40.6	+13:15:59	300	90	3.0	#84f Updated Z	4	
0089.sn2005az	1200	5:46	13:05:46.9	+27:44:08	300	45	3.0	#2 SN Observat	2	
0090.COMP	10	6:07	13:05:46.9	+27:44:08	300	45	3.0	#2 SN Observat	2	
0091.sn2004gk	1200	6:08	12:25:33.2	+12:15:39	300	45	3.0	#2 SN Observat	2	
0092.COMP	10	6:28	12:25:33.2	+12:15:39	300	45	3.0	#2 SN Observat	2	
0093.BDp332642	90	6:30	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0094.COMP	10	6:32	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0095.BDp332642	100	6:37	15:51:59.9	32:56:54	600	90	2.0	#56 Spectropho	4	600 line grating
0096.COMP	10	6:39	15:51:59.9	32:56:54	600	90	2.0	#56 Spectropho	4	
0097.hss285	1800	6:40	14:31:00.6	46:44:36	600	90	2.0	#122 Halo Star	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0098.COMP	10	7:10	14:31:00.6	46:44:36	600	90	2.0	#122 Halo Star	4	
0099.hss290	1800	7:12	14:38:48.5	45:37:03	600	90	2.0	#122 Halo Star	4	
0100.COMP	10	7:43	14:38:48.5	45:37:03	600	90	2.0	#122 Halo Star	4	
0101.hss291	1080	7:43	14:41:55.8	45:09:12	600	90	2.0	#122 Halo Star	4	
0102.COMP	10	8:02	14:41:55.8	45:09:12	600	90	2.0	#122 Halo Star	4	
0103.hss293	1320	8:03	14:45:07.3	45:22:03	600	90	2.0	#122 Halo Star	4	
0104.COMP	10	8:25	14:45:07.3	45:22:03	600	90	2.0	#122 Halo Star	4	
0105.hss294	1080	8:26	14:49:36.8	48:33:13	600	90	2.0	#122 Halo Star	4	
0106.COMP	10	8:44	14:49:36.8	48:33:13	600	90	2.0	#122 Halo Star	4	
0107.hss296	1440	8:45	14:51:57.2	46:13:52	600	90	2.0	#122 Halo Star	4	
0108.COMP	10	9:09	14:51:57.2	46:13:52	600	90	2.0	#122 Halo Star	4	
0109.hss297	720	9:10	14:52:07.0	47:53:17	600	90	2.0	#122 Halo Star	4	
0110.COMP	10	9:22	14:52:07.0	47:53:17	600	90	2.0	#122 Halo Star	4	
0111.hss298	1170	9:23	14:53:05.0	48:25:48	600	90	2.0	#122 Halo Star	4	
0112.COMP	10	9:43	14:53:05.0	48:25:48	600	90	2.0	#122 Halo Star	4	
0113.hss328	1020	9:44	15:39:17.0	46:29:32	600	90	2.0	#122 Halo Star	4	
0114.COMP	10	10:01	15:39:17.0	46:29:32	600	90	2.0	#122 Halo Star	4	
0115.hss330	1200	10:02	15:39:48.5	48:39:12	600	90	2.0	#122 Halo Star	4	
0116.COMP	10	10:22	15:39:48.5	48:39:12	600	90	2.0	#122 Halo Star	4	
0117.hss331	1440	10:23	15:41:49.1	45:55:19	600	90	2.0	#122 Halo Star	4	



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Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0118.COMP	10	10:48	15:41:49.1	45:55:19	600	90	2.0	#122 Halo Star	4	
0119.hss332	840	10:48	15:43:41.9	46:50:45	600	90	2.0	#122 Halo Star	4	
0120.COMP	10	11:03	15:43:41.9	46:50:45	600	90	2.0	#122 Halo Star	4	
0121.hss337	1020	11:03	15:49:48.8	46:53:14	600	90	2.0	#122 Halo Star	4	
0122.COMP	10	11:21	15:49:48.8	46:53:14	600	90	2.0	#122 Halo Star	4	
0123.RSOph	150	11:29	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	300 line grating
0124.RSOph	60	11:32	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0125.RSOph	10	11:33	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0126.COMP	10	11:33	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0127.BIAS	0	11:34	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	x10
0128-0136.BIAS	0	11:36	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0137.FLAT	16	11:38	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	x10
0138-0146.FLAT	16	11:42	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0147-0151.DARK	900	13:31	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	4	
0152-0156.DARK	900	14:47	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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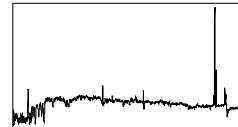
Coll. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	21:20	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	x10; 600 line grating
0002-0010.BIAS	0	21:21	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	
0011.FLAT	28	21:21	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	x20
0012-0030.FLAT	28	21:32	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	
0031.DARK	900	21:38	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	x15
0032-0045.DARK	900	1:09	17:50:13	-06:42:30	500	90	2.0	#56 Standards	4	
0046.Feige34	180	3:04	10:39:36.8	43:06:10	600	90	2.0	#56 Spectropho	4	
0047.COMP	10	3:08	10:39:36.8	43:06:10	600	90	2.0	#56 Spectropho	4	
0048.hss288	720	3:12	14:35:34.5	46:17:24	600	90	2.0	#122 Halo Star	4	
0049.COMP	10	3:25	14:35:34.5	46:17:24	600	90	2.0	#122 Halo Star	4	
0050.hss300	1440	3:25	14:53:58.0	46:53:01	600	90	2.0	#122 Halo Star	4	
0051.COMP	10	3:50	14:53:58.0	46:53:01	600	90	2.0	#122 Halo Star	4	
0052.hss287	1800	3:51	14:35:26.4	51:45:33	600	90	2.0	#122 Halo Star	4	focus changed suddenly
0053.COMP	10	4:21	14:35:26.4	51:45:33	600	90	2.0	#122 Halo Star	4	
0054.hss289	1800	4:22	14:38:18.8	51:24:30	600	90	2.0	#122 Halo Star	4	
0055.COMP	10	4:53	14:38:18.8	51:24:30	600	90	2.0	#122 Halo Star	4	
0056.hss302	1560	4:54	14:59:03.9	45:34:22	600	90	2.0	#122 Halo Star	4	
0057.COMP	10	5:20	14:59:03.9	45:34:22	600	90	2.0	#122 Halo Star	4	
0058.hss307	1560	5:21	15:09:41.0	51:00:13	600	90	2.0	#122 Halo Star	4	
0059.COMP	10	5:47	15:09:41.0	51:00:13	600	90	2.0	#122 Halo Star	4	



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0060.hss309	1740	5:48	15:11:10.8	51:36:22	600	90	2.0	#122 Halo Star	4	
0061.COMP	10	6:17	15:11:10.8	51:36:22	600	90	2.0	#122 Halo Star	4	
0062.hss303	1680	6:19	14:59:07.8	48:27:26	600	90	2.0	#122 Halo Star	4	
0063.COMP	10	6:47	14:59:07.8	48:27:26	600	90	2.0	#122 Halo Star	4	
0064.hss299	1800	6:48	14:53:41.7	48:17:12	600	90	2.0	#122 Halo Star	4	
0065.COMP	10	7:19	14:53:41.7	48:17:12	600	90	2.0	#122 Halo Star	4	
0066.hss324	1800	7:20	15:34:35.1	47:41:44	600	90	2.0	#122 Halo Star	4	
0067.COMP	10	7:50	15:34:35.1	47:41:44	600	90	2.0	#122 Halo Star	4	
0068.hss314	1800	7:51	15:15:20.6	45:45:30	600	90	2.0	#122 Halo Star	4	
0069.COMP	10	8:21	15:15:20.6	45:45:30	600	90	2.0	#122 Halo Star	4	
0070.hss311	1740	8:22	15:13:13.2	48:04:30	600	90	2.0	#122 Halo Star	4	
0071.COMP	10	8:52	15:13:13.2	48:04:30	600	90	2.0	#122 Halo Star	4	
0072.hss312	1320	8:52	15:13:46.1	48:09:50	600	90	2.0	#122 Halo Star	4	
0073.COMP	10	9:15	15:13:46.1	48:09:50	600	90	2.0	#122 Halo Star	4	
0074.hss313	1200	9:15	15:15:03.0	48:51:18	600	90	2.0	#122 Halo Star	4	
0075.COMP	10	9:36	15:15:03.0	48:51:18	600	90	2.0	#122 Halo Star	4	
0076.hss315	840	9:36	15:16:31.3	48:06:22	600	90	2.0	#122 Halo Star	4	
0077.COMP	10	9:51	15:16:31.3	48:06:22	600	90	2.0	#122 Halo Star	4	
0078.hss336	1020	9:52	15:49:43.4	51:36:38	600	90	2.0	#122 Halo Star	4	
0079.COMP	10	10:09	15:49:43.4	51:36:38	600	90	2.0	#122 Halo Star	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-12 Observers W. BrownColl. Focus 1055 Grating/Grism 600

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0080.hss339	1300	10:10	15:52:04.0	49:00:29	600	90	2.0	#122 Halo Star	4	
0081.COMP	10	10:32	15:52:04.0	49:00:29	600	90	2.0	#122 Halo Star	4	
0082.hss340	1140	10:32	15:52:50.9	51:26:50	600	90	2.0	#122 Halo Star	4	
0083.COMP	10	10:52	15:52:50.9	51:26:50	600	90	2.0	#122 Halo Star	4	
0084.hss338	1080	10:52	15:49:56.1	51:22:21	600	90	2.0	#122 Halo Star	4	
0085.COMP	10	11:11	15:49:56.1	51:22:21	600	90	2.0	#122 Halo Star	4	
0086.hss310	780	11:12	15:11:56.8	45:30:01	600	90	2.0	#122 Halo Star	4	
0087.COMP	10	11:25	15:11:56.8	45:30:01	600	90	2.0	#122 Halo Star	4	
0088.BIAS	0	11:27	15:11:56.8	45:30:01	600	90	2.0	#122 Halo Star	4	x10
0089-0097.BIAS	0	11:28	15:11:56.8	45:30:01	600	90	2.0	#122 Halo Star	4	



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## FAST SPECTROGRAPH LOG



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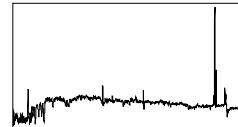
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	21:38	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	x5
0002-0005.DARK	900	22:39	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	
0006.DARK	900	22:54	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	x5
0007-0010.DARK	900	23:55	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	
0011.BIAS	0	1:07	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	x10
0012-0020.BIAS	0	1:08	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	
0021.FLAT	16	1:09	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	x20
0022-0041.FLAT	16	1:19	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	2	
0042.BIAS	0	1:22	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	x10
0043-0051.BIAS	0	1:23	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	
0052.FLAT	8	1:24	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	x10
0053-0061.FLAT	8	1:26	15:11:56.8	45:30:01	300	90	3.0	#56 Standards	4	
0062.N4151	30	3:05	12:10:32.6	+39:24:21	300	46	3.0	#6 AGN Monitor	2	
0063.N4151	30	3:06	12:10:32.6	+39:24:21	300	46	3.0	#6 AGN Monitor	2	
0064.COMP	10	3:07	12:10:32.6	+39:24:21	300	46	3.0	#6 AGN Monitor	2	
0065.N4051	150	3:08	12:03:09.7	+44:31:53	300	46	3.0	#6 AGN Monitor	2	
0066.N4051	150	3:11	12:03:09.7	+44:31:53	300	46	3.0	#6 AGN Monitor	2	
0067.COMP	10	3:14	12:03:09.7	+44:31:53	300	46	3.0	#6 AGN Monitor	2	
0068.N3377	180	3:15	10:45:02.6	+14:14:51	300	46	3.0	#57 Velocity S	2	
0069.COMP	10	3:19	10:45:02.6	+14:14:51	300	46	3.0	#57 Velocity S	2	



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## FAST SPECTROGRAPH LOG



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Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0070.HD84937	10	3:20	09:48:54.8	13:45:13	300	46	3.0	#56 Spectropho	2	
0071.COMP	10	3:21	09:48:54.8	13:45:13	300	46	3.0	#56 Spectropho	2	
0072.N3227	150	3:22	10:23:30.6	+19:51:54	300	46	3.0	#6 AGN Monitor	2	
0073.N3227	150	3:24	10:23:30.6	+19:51:54	300	46	3.0	#6 AGN Monitor	2	
0074.COMP	10	3:27	10:23:30.6	+19:51:54	300	46	3.0	#6 AGN Monitor	2	
0075.MRK421	300	3:29	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0076.MRK421	300	3:34	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0077.COMP	10	3:40	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0078.sn2005bf	1200	3:43	10:23:57.2	-03:11:28	300	28	3.0	#2 SN Observat	2	
0079.COMP	10	4:04	10:23:57.2	-03:11:28	300	28	3.0	#2 SN Observat	2	
0080.1318_01	600	4:07	11:34:37.0	54:53:29	300	90	3.0	#64 Cluster an	4	
0081.COMP	5	4:17	11:34:37.0	54:53:29	300	90	3.0	#64 Cluster an	4	
0082.1318_02	1020	4:19	11:36:4.8	54:55:14	300	90	3.0	#64 Cluster an	4	ok?
0083.COMP	5	4:37	11:36:4.8	54:55:14	300	90	3.0	#64 Cluster an	4	
0084.1318_03	660	4:38	11:34:38.2	54:59:30	300	90	3.0	#64 Cluster an	4	
0085.COMP	5	4:49	11:34:38.2	54:59:30	300	90	3.0	#64 Cluster an	4	
0086.1318_04	720	4:50	11:38:49.1	55:00:28	300	90	3.0	#64 Cluster an	4	
0087.COMP	5	5:02	11:38:49.1	55:00:28	300	90	3.0	#64 Cluster an	4	
0088.1318_05	780	5:03	11:38:54.0	55:03:27	300	90	3.0	#64 Cluster an	4	
0089.COMP	5	5:16	11:38:54.0	55:03:27	300	90	3.0	#64 Cluster an	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0090.1318_06	1200	5:17	11:33:22.6	55:07:01	300	90	3.0	#64 Cluster an	4	
0091.COMP	5	5:38	11:33:22.6	55:07:01	300	90	3.0	#64 Cluster an	4	
0092.XS00821B3_001	60	5:40	12:49:38.7	-06:04:44	300	90	3.0	#129 CHAMP Sou	4	saturated...trying again
0093.COMP	5	5:42	12:49:38.7	-06:04:44	300	90	3.0	#129 CHAMP Sou	4	
0094.XS00821B3_001	20	5:42	12:49:38.7	-06:04:44	300	90	3.0	#129 CHAMP Sou	4	
0095.XS02108B6_004	60	5:43	12:37:29.6	+08:43:03	300	90	3.0	#129 CHAMP Sou	4	
0096.COMP	5	5:45	12:37:29.6	+08:43:03	300	90	3.0	#129 CHAMP Sou	4	
0097.PKS1227+119	1500	5:47	12:29:52.3	+11:40:39	300	39	3.0	#161 FR I_II d	2	
0098.COMP	10	6:13	12:29:52.3	+11:40:39	300	39	3.0	#161 FR I_II d	2	
0099.sn2005az	1200	6:15	13:05:46.9	+27:44:08	300	70	3.0	#2 SN Observat	2	
0100.COMP	10	6:35	13:05:46.9	+27:44:08	300	70	3.0	#2 SN Observat	2	
0101.N5548	150	6:37	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0102.N5548	150	6:40	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0103.N5548	150	6:43	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0104.COMP	10	6:45	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0105.1383_15	1020	6:48	11:47:30.7	54:44:38	300	90	3.0	#64 Cluster an	4	
0106.COMP	5	7:05	11:47:30.7	54:44:38	300	90	3.0	#64 Cluster an	4	
0107.1383_17	900	7:06	11:47:43.2	54:53:05	300	90	3.0	#64 Cluster an	4	
0108.COMP	5	7:21	11:47:43.2	54:53:05	300	90	3.0	#64 Cluster an	4	
0109.1383_13	810	7:22	11:46:55.0	54:42:24	300	90	3.0	#64 Cluster an	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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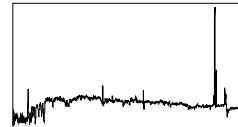
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0110.COMP	5	7:36	11:46:55.0	54:42:24	300	90	3.0	#64 Cluster an	4	
0111.1383_11	1110	7:37	11:50:27.4	54:40:07	300	90	3.0	#64 Cluster an	4	obj in center of slit
0112.COMP	5	7:55	11:50:27.4	54:40:07	300	90	3.0	#64 Cluster an	4	
0113.1383_12	1020	7:56	11:49:47.8	54:40:35	300	90	3.0	#64 Cluster an	4	
0114.COMP	5	8:13	11:49:47.8	54:40:35	300	90	3.0	#64 Cluster an	4	
0115.BDp332642	90	8:15	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0116.COMP	10	8:17	15:51:59.9	32:56:54	300	90	3.0	#56 Spectropho	2	
0117.sn2005bz	1500	8:20	18:13:01.7	+29:41:51	300	102	3.0	#2 SN Observat	2	
0118.COMP	10	8:46	18:13:01.7	+29:41:51	300	102	3.0	#2 SN Observat	2	
0119.1991_12	960	8:49	14:54:54.8	18:41:36	300	90	3.0	#64 Cluster an	4	
0120.COMP	5	9:06	14:54:54.8	18:41:36	300	90	3.0	#64 Cluster an	4	
0121.1991_13	1020	9:06	14:53:2.1	18:46:53	300	90	3.0	#64 Cluster an	4	
0122.COMP	5	9:23	14:53:2.1	18:46:53	300	90	3.0	#64 Cluster an	4	
0123.1991_14	900	9:24	14:53:56.7	18:47:24	300	90	3.0	#64 Cluster an	4	
0124.COMP	5	9:39	14:53:56.7	18:47:24	300	90	3.0	#64 Cluster an	4	
0125.1991_15	720	9:40	14:53:46.8	18:57:35	300	90	3.0	#64 Cluster an	4	
0126.COMP	5	9:52	14:53:46.8	18:57:35	300	90	3.0	#64 Cluster an	4	
0127.1991_16	720	9:53	14:54:15.9	18:57:51	300	90	3.0	#64 Cluster an	4	
0128.COMP	5	10:05	14:54:15.9	18:57:51	300	90	3.0	#64 Cluster an	4	
0129.1991_17	1020	10:06	14:54:2.7	19:01:50	300	90	3.0	#64 Cluster an	4	



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Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0130.COMP	5	10:23	14:54:2.7	19:01:50	300	90	3.0	#64 Cluster an	4	
0131.RSOPh	150	10:25	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0132.RSOPh	60	10:28	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0133.RSOPh	10	10:29	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0134.COMP	10	10:30	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0135.2319_06	720	10:32	19:22:13.7	43:35:17	300	90	3.0	#64 Cluster an	4	
0136.COMP	5	10:44	19:22:13.7	43:35:17	300	90	3.0	#64 Cluster an	4	
0137.2319_07	900	10:45	19:20:21.0	43:38:29	300	90	3.0	#64 Cluster an	4	
0138.COMP	5	11:00	19:20:21.0	43:38:29	300	90	3.0	#64 Cluster an	4	
0139.2319_08	1020	11:01	19:18:45.8	43:47:56	300	90	3.0	#64 Cluster an	4	
0140.COMP	5	11:18	19:18:45.8	43:47:56	300	90	3.0	#64 Cluster an	4	
0141.Akn564	180	11:23	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0142.Akn564	180	11:27	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0143.COMP	10	11:30	22:42:39.4	+29:43:31	300	90	3.0	#6 AGN Monitor	2	
0144.BIAS	0	11:31	22:42:39.4	+29:43:31	300	90	3.0	#64 Cluster an	2 x 10	
0145-0153.BIAS	0	11:33	22:42:39.4	+29:43:31	300	90	3.0	#64 Cluster an	2	
0154-0158.DARK	900	13:09	22:42:39.4	+29:43:31	300	90	3.0	#57 Standards	4	
0159-0163.DARK	900	14:26	22:42:39.4	+29:43:31	300	90	3.0	#57 Standards	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-14 Observers W. Peters

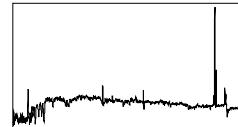
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	0:23	08:26:10.2	+31:30:43	300	90	3.0	#57 Standards	2	x20
0002-0005.BIAS	0	0:25	08:28:37.5	+31:30:43	300	90	3.0	#57 Standards	2	
0006-0018.BIAS	0	0:28	08:31:22.6	+31:30:44	300	90	3.0	#57 Standards	2	
0019-0020.BIAS	0	0:28	08:31:48.6	+31:30:45	300	90	3.0	#57 Standards	2	
0021.BIAS	0	0:36	08:39:28.3	+31:30:47	300	90	3.0	#57 Standards	4	x10
0022-0030.BIAS	0	0:37	08:40:32.9	+31:30:48	300	90	3.0	#57 Standards	4	
0031.FLAT	8	0:37	08:40:54.5	+31:30:48	300	90	3.0	#57 Standards	4	x10
0032-0035.FLAT	8	0:39	08:42:13.1	+31:30:48	300	90	3.0	#57 Standards	4	
0036-0040.FLAT	8	0:40	08:43:56.8	+31:30:49	300	90	3.0	#57 Standards	4	
0041.BIAS	0	0:41	08:44:10.5	+31:30:49	300	90	3.0	#57 Standards	2	x10
0042-0045.BIAS	0	0:42	08:45:02.2	+31:30:49	300	90	3.0	#57 Standards	2	
0046-0050.BIAS	0	0:43	08:46:07.1	+31:30:50	300	90	3.0	#57 Standards	2	
0051.FLAT	16	0:43	08:46:45.9	+31:30:50	300	90	3.0	#57 Standards	2	x20
0052-0053.FLAT	16	0:44	08:47:46.6	+31:30:50	300	90	3.0	#57 Standards	2	
0054-0059.FLAT	16	0:47	08:50:45.0	+31:30:51	300	90	3.0	#57 Standards	2	
0060-0064.FLAT	16	0:49	08:53:16.8	+31:30:52	300	90	3.0	#57 Standards	2	
0065-0070.FLAT	16	0:52	08:56:19.0	+31:30:53	300	90	3.0	#57 Standards	2	
0071.FLAT	16	0:53	08:56:49.3	+31:30:54	300	90	3.0	#57 Standards	2	
0072.COMP	5	1:19	09:23:03.4	+31:31:02	300	90	3.0	#57 Standards	4	
0073.COMP	10	1:25	09:28:46.3	+31:31:04	300	90	3.0	#57 Standards	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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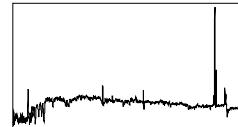
UT Date 2005-05-14 Observers W. PetersColl. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0074.HD84937	20	3:03	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0075.HD84937	20	3:03	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0076.COMP	10	3:08	09:48:54.8	13:45:13	300	40	3.0	#56 Spectropho	2	
0077.N3377	60	3:24	10:45:02.6	+14:14:51	300	26	3.0	#57 Velocity S	2	
0078.N3377	180	3:27	10:45:02.6	+14:14:51	300	26	3.0	#57 Velocity S	2	
0079.N3377	180	3:31	10:45:02.6	+14:14:51	300	26	3.0	#57 Velocity S	2	
0080.COMP	10	3:41	10:45:02.6	+14:14:51	300	26	3.0	#57 Velocity S	2	
0081.sn2005bf	1200	4:51	10:23:57.2	-03:11:28	300	40	3.0	#2 SN Observat	2	
0082.COMP	10	5:15	10:23:57.2	-03:11:28	300	40	3.0	#2 SN Observat	2	
0083.Feige34	120	5:39	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	2	
0084.Feige34	120	5:42	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	2	
0085.COMP	10	5:50	10:39:36.8	43:06:10	300	90	3.0	#56 Spectropho	2	
0086.N3227	150	5:56	10:23:30.6	+19:51:54	300	65	3.0	#6 AGN Monitor	2	
0087.N3227	150	6:00	10:23:30.6	+19:51:54	300	65	3.0	#6 AGN Monitor	2	
0088.COMP	10	6:03	10:23:30.6	+19:51:54	300	65	3.0	#6 AGN Monitor	2	
0089.N4051	150	6:11	12:03:09.7	+44:31:53	300	105	3.0	#6 AGN Monitor	2	
0090.N4051	150	6:19	12:03:09.7	+44:31:53	300	105	3.0	#6 AGN Monitor	2	
0091.COMP	10	6:21	12:03:09.7	+44:31:53	300	105	3.0	#6 AGN Monitor	2	
0092.N5548	150	6:30	14:17:59.6	+25:08:12	300	24	3.0	#6 AGN Monitor	2	
0093.N5548	150	6:33	14:17:59.6	+25:08:12	300	24	3.0	#6 AGN Monitor	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-14 Observers W. Peters

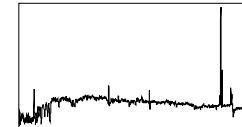
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0094.N5548	150	6:37	14:17:59.6	+25:08:12	300	24	3.0	#6 AGN Monitor	2	
0095.COMP	10	6:41	14:17:59.6	+25:08:12	300	24	3.0	#6 AGN Monitor	2	
0096.sn2005az	1200	6:52	13:05:46.9	+27:44:08	300	74	3.0	#2 SN Observat	2	
0097.COMP	10	7:14	13:05:46.9	+27:44:08	300	74	3.0	#2 SN Observat	2	
0098.sn2004gt	1200	7:26	12:01:50.3	-18:52:12	300	44	3.0	#2 SN Observat	2	
0099.COMP	10	7:48	12:01:50.3	-18:52:12	300	44	3.0	#2 SN Observat	2	
0100.RSOph	10	8:50	17:50:13	-06:42:30	300	-37	3.0	#12 Symbiotic	2	
0101.RSOph	10	8:50	17:50:13	-06:42:30	300	-37	3.0	#12 Symbiotic	2	
0102.RSOph	60	8:51	17:50:13	-06:42:30	300	-37	3.0	#12 Symbiotic	2	
0103.RSOph	150	8:52	17:50:13	-06:42:30	300	-37	3.0	#12 Symbiotic	2	
0104.COMP	10	8:56	17:50:13	-06:42:30	300	-37	3.0	#12 Symbiotic	2	
0105.152030+08140	1500	9:15	15:22:57.7	+08:02:25	300	80	3.0	#84f Updated Z	2	
0106.COMP	10	9:42	15:22:57.7	+08:02:25	300	80	3.0	#84f Updated Z	2	
0107.2319_11	1200	10:09	19:22:16.2	43:51:50	300	90	3.0	#64 Cluster an	2	
0108.COMP	10	10:29	19:22:16.2	43:51:50	300	90	3.0	#64 Cluster an	2	
0109.2319_10	1200	10:41	19:19:55.5	43:48:57	300	90	3.0	#64 Cluster an	2	
0110.COMP	10	11:05	19:19:55.5	43:48:57	300	90	3.0	#64 Cluster an	2	
0111.2319_11	1200	11:13	19:22:16.2	43:51:50	300	90	3.0	#64 Cluster an	2	
0112.COMP	10	11:33	19:22:16.2	43:51:50	300	90	3.0	#64 Cluster an	2	
0113.BIAS	0	11:37	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2 x10	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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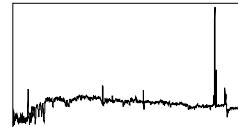
UT Date 2005-05-14 Observers W. PetersColl. Focus 1035 Grating/Grism 300

<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>Bir</i>	<i>Comments</i>
0114-0122.BIAS	0	11:39	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	
0123.FLAT	16	11:39	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	x20
0124-0143.FLAT	16	11:49	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	
0144.BIAS	0	12:09	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	
0145-0154.DARK	900	14:29	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	4	
0155-0164.DARK	900	17:02	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-15 Observers W. Peters

Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	1:18	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	x10
0002-0010.BIAS	0	1:20	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	
0011.FLAT	16	1:21	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	x20
0012-0031.FLAT	16	1:31	19:22:16.2	43:51:50	300	90	3.0	#2 SN Observat	2	
0032.BDp262606	180	8:15	14:49:02.4	25:42:09	300	70	3.0	#56 Spectropho	2	
0033.COMP	10	8:19	14:49:02.4	25:42:09	300	70	3.0	#56 Spectropho	2	
0034.N4853	300	8:30	12:58:35.1	+27:35:47	300	70	3.0	#57 Velocity S	2	
0035.COMP	10	8:36	12:58:35.1	+27:35:47	300	70	3.0	#57 Velocity S	2	
0036.sn2005az	1200	8:55	13:05:46.9	+27:44:08	300	70	3.0	#2 SN Observat	2	
0037.COMP	10	9:16	13:05:46.9	+27:44:08	300	70	3.0	#2 SN Observat	2	
0038.sn2005bz	1200	9:48	18:13:01.7	+29:41:51	300	106	3.0	#2 SN Observat	2	
0039.COMP	10	10:08	18:13:01.7	+29:41:51	300	106	3.0	#2 SN Observat	2	
0040.RSOPh	10	10:18	17:50:13	-06:42:30	300	2	3.0	#12 Symbiotic	2	
0041.RSOPh	60	10:20	17:50:13	-06:42:30	300	2	3.0	#12 Symbiotic	2	
0042.RSOPh	150	10:21	17:50:13	-06:42:30	300	2	3.0	#12 Symbiotic	2	
0043.COMP	10	10:26	17:50:13	-06:42:30	300	2	3.0	#12 Symbiotic	2	
0044.BDp284211	120	10:40	21:51:11.1	28:51:53	300	105	3.0	#56 Spectropho	2	
0045.COMP	10	10:43	21:51:11.1	28:51:53	300	105	3.0	#56 Spectropho	2	
0046.sn2005bz	1500	10:51	18:13:01.7	+29:41:51	300	76	3.0	#2 SN Observat	2	
0047.COMP	10	11:16	18:13:01.7	+29:41:51	300	76	3.0	#2 SN Observat	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-15 Observers W. PetersColl. Focus 1055 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>Bir</i>	<i>Comments</i>
0048.sn2005bz	1500	11:17	18:13:01.7	+29:41:51	300	76	3.0	#2 SN Observat	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-16 Observers W. Peters

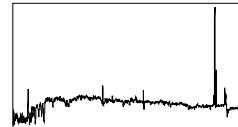
Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	0:09	18:13:01.7	+29:41:51	300	90	3.0	#2 SN Observat	2	x10
0002-0010.BIAS	0	0:11	18:13:01.7	+29:41:51	300	90	3.0	#2 SN Observat	2	
0011.FLAT	16	0:11	18:13:01.7	+29:41:51	300	90	3.0	#2 SN Observat	2	x20
0012-0031.FLAT	16	0:21	18:13:01.7	+29:41:51	300	90	3.0	#2 SN Observat	2	
0032.sn2005am	1200	4:11	09:16:12.4	-16:18:16	300	42	3.0	#2 SN Observat	2	
0033.COMP	10	4:32	09:16:12.4	-16:18:16	300	42	3.0	#2 SN Observat	2	
0034.Feige34	180	4:41	10:39:36.8	43:06:10	300	103	3.0	#56 Spectropho	2	
0035.COMP	10	4:45	10:39:36.8	43:06:10	300	103	3.0	#56 Spectropho	2	
0036.sn2005bf	1200	5:06	10:23:57.2	-03:11:28	300	44	3.0	#2 SN Observat	2	
0037.COMP	10	5:27	10:23:57.2	-03:11:28	300	44	3.0	#2 SN Observat	2	
0040.N3227	150	5:47	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0041.N3227	150	5:51	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0042.COMP	10	5:54	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0043.sn2005ay	1200	6:04	11:52:48.0	+44:06:18	300	105	3.0	#2 SN Observat	2	
0044.COMP	10	6:25	11:52:48.0	+44:06:18	300	105	3.0	#2 SN Observat	2	
0045.N3377	180	6:30	10:45:02.6	+14:14:51	300	61	3.0	#57 Velocity S	2	
0046.COMP	10	6:34	10:45:02.6	+14:14:51	300	61	3.0	#57 Velocity S	2	
0047.sn2005az	1200	6:41	13:05:46.9	+27:44:08	300	74	3.0	#2 SN Observat	2	
0048.COMP	10	7:02	13:05:46.9	+27:44:08	300	74	3.0	#2 SN Observat	2	
0049.BDp262606	60	7:07	14:49:02.4	25:42:09	300	46	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-16 Observers W. Peters

Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0050.COMP	10	7:09	14:49:02.4	25:42:09	300	46	3.0	#56 Spectropho	2	
0051.BDp262606	45	7:12	14:49:02.4	25:42:09	300	46	3.0	#56 Spectropho	2	
0052.COMP	10	7:13	14:49:02.4	25:42:09	300	46	3.0	#56 Spectropho	2	
0053.N4051	150	7:17	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0054.N4051	150	7:20	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0055.COMP	10	7:23	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0056.N4151	30	7:24	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0057.N4151	30	7:25	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0058.COMP	10	7:27	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0059.N5548	150	7:29	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0060.N5548	150	7:32	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0061.COMP	10	7:36	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0062.RSOPh	10	7:44	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0063.RSOPh	60	7:44	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0064.RSOPh	150	7:46	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0065.COMP	10	7:49	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0066.145336+12040	900	7:58	14:55:56.5	+11:52:27	300	90	3.0	#84f Updated Z	2	
0067.COMP	10	8:14	14:55:56.5	+11:52:27	300	90	3.0	#84f Updated Z	2	
0068.145454+14290	600	8:21	14:57:14.0	+14:16:59	300	90	3.0	#84f Updated Z	2	
0069.COMP	10	8:32	14:57:14.0	+14:16:59	300	90	3.0	#84f Updated Z	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-16 Observers W. Peters

Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0070.150024-02240	900	8:41	15:03:01.9	-02:34:56	300	90	3.0	#84f Updated Z	2	
0071.COMP	10	8:57	15:03:01.9	-02:34:56	300	90	3.0	#84f Updated Z	2	
0072.150212+10320	900	9:03	15:04:36.9	+10:23:56	300	90	3.0	#84f Updated Z	2	
0073.COMP	10	9:19	15:04:36.9	+10:23:56	300	90	3.0	#84f Updated Z	2	
0074.150312+05580	600	9:23	15:05:39.2	+05:45:45	300	90	3.0	#84f Updated Z	2	
0075.COMP	10	9:36	15:05:39.2	+05:45:45	300	90	3.0	#84f Updated Z	2	
0076.2319_12	1200	9:45	19:21:43.0	43:53:02	300	90	3.0	#64 Cluster an	2	
0077.COMP	10	10:05	19:21:43.0	43:53:02	300	90	3.0	#64 Cluster an	2	
0078.2319_13	1200	10:33	19:23:6.7	43:53:48	300	90	3.0	#64 Cluster an	2	
0079.COMP	10	10:54	19:23:6.7	43:53:48	300	90	3.0	#64 Cluster an	2	
0080.2319_14	1200	11:00	19:23:10.0	43:56:02	300	90	3.0	#64 Cluster an	2	
0081.COMP	10	11:20	19:23:10.0	43:56:02	300	90	3.0	#64 Cluster an	2	
0082.PG1708p602	180	11:25	17:09:15.8	60:10:10	300	90	3.0	#56 Spectropho	2	
0083.COMP	10	11:29	17:09:15.8	60:10:10	300	90	3.0	#56 Spectropho	2	
0084-0093.BIAS	0	11:35	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	
0094-0114.FLAT	16	11:46	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	
0115-0124.DARK	900	14:12	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	4	
0125-0134.DARK	900	16:45	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-17 Observers W. Peters

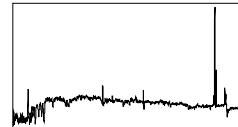
Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.BIAS	0	0:23	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	x10
0002-0010.BIAS	0	0:25	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	
0011.FLAT	16	0:25	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	x20
0012-0031.FLAT	16	0:35	17:09:15.8	60:10:10	300	90	3.0	#84f Updated Z	2	
0032.Feige34	180	2:54	10:39:36.8	43:06:10	300	-21	3.0	#56 Spectropho	2	Row81
0033.COMP	10	2:59	10:39:36.8	43:06:10	300	-21	3.0	#56 Spectropho	2	
0034.sn2005am	1500	3:10	09:16:12.4	-16:18:16	300	36	3.0	#2 SN Observat	2	row 71
0035.COMP	10	3:36	09:16:12.4	-16:18:16	300	36	3.0	#2 SN Observat	2	row71
0036.BDp262606	180	3:50	14:49:02.4	25:42:09	300	110	3.0	#56 Spectropho	2	
0037.COMP	10	3:54	14:49:02.4	25:42:09	300	110	3.0	#56 Spectropho	2	row 77
0038.N5866	400	5:25	15:05:07.2	+55:57:18	300	90	3.0	#57 Velocity S	2	
0039.COMP	10	5:37	15:05:07.2	+55:57:18	300	90	3.0	#57 Velocity S	2	
0040.3C296	1800	5:47	14:16:53.2	+10:48:11	300	-10	3.0	#161 FR I_II d	2	
0041.COMP	10	6:19	14:16:53.2	+10:48:11	300	-10	3.0	#161 FR I_II d	2	
0042.MRK421	300	6:36	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0043.COMP	10	6:42	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0044.MRK421	300	6:43	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0045.COMP	10	6:48	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0046.N4051	150	6:51	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0047.COMP	10	6:54	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	



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## FAST SPECTROGRAPH LOG



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UT Date 2005-05-17 Observers W. Peters

Coll. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0048.N4051	150	6:55	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0049.COMP	10	6:57	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0050.N5548	150	7:02	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0051.N5548	150	7:05	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0052.N5548	150	7:07	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0053.COMP	10	7:10	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0054.RSOph	10	7:18	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0055.RSOph	60	7:19	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0056.RSOph	150	7:20	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0057.COMP	10	7:23	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0058.3C285	1800	7:30	13:21:17.8	+42:35:15	300	93	3.0	#161 FR I_II d	2	
0059.COMP	10	8:01	13:21:17.8	+42:35:15	300	93	3.0	#161 FR I_II d	2	
0060.3C293	1800	8:08	13:52:17.8	+31:26:47	300	75	3.0	#161 FR I_II d	2	
0061.COMP	10	8:39	13:52:17.8	+31:26:47	300	75	3.0	#161 FR I_II d	2	
0062.3C321	1800	9:21	15:31:43.5	+24:04:19	300	67	3.0	#161 FR I_II d	2	
0063.COMP	10	9:52	15:31:43.5	+24:04:19	300	67	3.0	#161 FR I_II d	2	
0064.2M18182145+5043078	900	10:33	18:18:21.4	+50:43:7	300	90	3.0	#141 Mapping t	2	weak? clouds
0065.COMP	10	10:53	18:18:21.4	+50:43:7	300	90	3.0	#141 Mapping t	2	
0066.2M18182145+5043078	1200	11:05	18:18:21.4	+50:43:7	300	90	3.0	#141 Mapping t	2	
0067.COMP	10	11:33	18:18:21.4	+50:43:7	300	90	3.0	#141 Mapping t	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-17 Observers W. PetersColl. Focus 1055 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0068.BIAS	0	11:46	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	2	x10
0069-0077.BIAS	0	11:48	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	2	
0078.FLAT	16	11:48	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	2	x20
0079-0098.FLAT	16	11:58	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	2	
0099-0108.DARK	900	14:36	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	4	
0109-0114.DARK	900	16:08	18:18:21.4	+50:43:7	300	90	3.0	#57 Velocity S	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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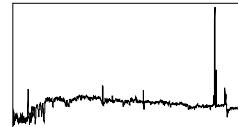
UT Date 2005-05-28 Observers M CalkinsColl. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0001.DARK	900	2:29	11:43:23.0	+31:31:30	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	2:44	11:58:35.3	+31:31:31	300	90	3.0	#57 Velocity S	4	
0003-0005.DARK	900	3:30	12:44:02.2	+31:31:32	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	3:45	12:59:13.4	+31:31:31	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	4:00	13:14:21.0	+31:31:30	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	4:15	13:29:28.8	+31:31:28	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	4:30	13:44:40.2	+31:31:26	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	4:45	13:59:47.9	+31:31:24	300	90	3.0	#57 Velocity S	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-29 Observers M Calkins

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0001.DARK	900	0:05	09:22:58.5	+31:31:02	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	0:20	09:38:06.1	+31:31:06	300	90	3.0	#57 Velocity S	4	
0003.DARK	900	0:36	09:53:16.9	+31:31:10	300	90	3.0	#57 Velocity S	4	
0004.DARK	900	0:51	10:08:24.4	+31:31:14	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	1:06	10:23:35.5	+31:31:18	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	1:21	10:38:43.2	+31:31:21	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	1:36	10:53:54.2	+31:31:24	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	1:51	11:09:01.9	+31:31:26	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	2:06	11:24:12.8	+31:31:28	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	2:21	11:39:20.0	+31:31:29	300	90	3.0	#57 Velocity S	4	
0011-0020.FLAT	6	3:52	12:55:00.3	+31:31:31	300	90	3.0	#57 Velocity S	4	
0021-0024.BIAS	0	4:59	14:02:47.6	+31:31:24	300	90	3.0	#57 Velocity S	4	
0025-0030.BIAS	0	5:00	14:03:27.0	+31:31:23	300	90	3.0	#57 Velocity S	4	
0031-0035.FLAT	12	5:05	14:08:26.1	+31:31:23	300	90	3.0	#57 Velocity S	2	
0036-0040.FLAT	12	5:07	14:10:27.5	+31:31:22	300	90	3.0	#57 Velocity S	2	
0041-0043.BIAS	0	6:06	15:09:56.0	+31:31:09	300	90	3.0	#57 Velocity S	2	
0044-0050.BIAS	0	6:08	15:11:23.2	+31:31:08	300	90	3.0	#57 Velocity S	2	
0051.DARK	900	7:38	16:57:08.4	+31:30:32	300	90	3.0	#57 Velocity S	2	
0052.DARK	900	7:53	17:12:24.1	+31:30:26	300	90	3.0	#57 Velocity S	2	
0053.DARK	900	8:09	17:27:40.0	+31:30:20	300	90	3.0	#57 Velocity S	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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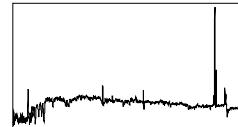
UT Date 2005-05-29 Observers M CalkinsColl. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0054.DARK	900	8:24	17:42:52.1	+31:30:14	300	90	3.0	#57 Velocity S	2	
0055.DARK	900	8:39	17:58:07.8	+31:30:08	300	90	3.0	#57 Velocity S	2	
0056.DARK	900	8:54	18:13:23.5	+31:30:01	300	90	3.0	#57 Velocity S	2	
0057.DARK	900	9:09	18:28:38.9	+31:29:55	300	90	3.0	#57 Velocity S	2	
0058.DARK	900	9:25	18:43:51.1	+31:29:48	300	90	3.0	#57 Velocity S	2	
0059.DARK	900	9:40	18:59:06.6	+31:29:42	300	90	3.0	#57 Velocity S	2	
0060.DARK	900	9:55	19:14:22.2	+31:29:36	300	90	3.0	#57 Velocity S	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-30 Observers M Calkins

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001.DARK	900	0:01	09:22:14.8	+31:31:01	300	90	3.0	#57 Velocity S	4	
0002.DARK	900	0:16	09:37:22.5	+31:31:06	300	90	3.0	#57 Velocity S	4	
0003.DARK	900	0:31	09:52:30.3	+31:31:10	300	90	3.0	#57 Velocity S	4	
0004.DARK	900	0:46	10:07:41.2	+31:31:14	300	90	3.0	#57 Velocity S	4	
0005.DARK	900	1:01	10:22:52.5	+31:31:17	300	90	3.0	#57 Velocity S	4	
0006.DARK	900	1:16	10:38:00.1	+31:31:21	300	90	3.0	#57 Velocity S	4	
0007.DARK	900	1:31	10:53:07.8	+31:31:23	300	90	3.0	#57 Velocity S	4	
0008.DARK	900	1:46	11:08:19.0	+31:31:26	300	90	3.0	#57 Velocity S	4	
0009.DARK	900	2:02	11:23:26.6	+31:31:28	300	90	3.0	#57 Velocity S	4	
0010.DARK	900	2:17	11:38:38.0	+31:31:29	300	90	3.0	#57 Velocity S	4	
0011-0020.BIAS	0	2:33	11:40:00.4	+31:31:29	300	90	3.0	#57 Velocity S	4	
0021-0030.FLAT	6	2:36	11:43:15.8	+31:31:30	300	90	3.0	#57 Velocity S	4	
0031-0040.BIAS	0	2:42	11:48:41.2	+31:31:30	300	90	3.0	#57 Velocity S	2	
0041-0050.FLAT	12	2:46	11:53:02.0	+31:31:30	300	90	3.0	#57 Velocity S	2	
0051.Feige34	70	4:06	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	4	
0052.Feige34	70	4:07	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	4	
0053.COMP	5	4:09	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	4	
0054.Feige34	90	4:10	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	2	
0055.Feige34	90	4:14	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	2	
0056.COMP	12	4:16	10:39:36.8	43:06:10	300	98	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-30 Observers M Calkins

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0057.sn2005bf	1200	4:20	10:23:57.2	-03:11:28	300	48	3.0	#2 SN Observat	2	
0058.COMP	12	4:41	10:23:57.2	-03:11:28	300	48	3.0	#2 SN Observat	2	
0059.N3227	150	4:43	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0060.N3227	150	4:46	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0061.COMP	12	4:49	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0062.MRK421	300	4:51	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0063.MRK421	300	4:56	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0064.MRK421	300	5:01	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0065.COMP	12	5:07	11:04:27.4	+38:12:32	300	90	3.0	#6 AGN Monitor	2	
0066.N4051	150	5:09	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0067.N4051	150	5:12	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0068.COMP	12	5:15	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0069.N4151	30	5:16	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0070.N4151	30	5:17	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0071.COMP	12	5:18	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0072.sn2005az	1200	5:21	13:05:46.9	+27:44:08	300	72	3.0	#2 SN Observat	2	
0073.COMP	12	5:42	13:05:46.9	+27:44:08	300	72	3.0	#2 SN Observat	2	
0074.sn2005cc	1200	5:47	13:57:04.8	41:50:41	300	-50	3.0	#2 SN Observat	2	
0075.COMP	12	6:08	13:57:04.8	41:50:41	300	-50	3.0	#2 SN Observat	2	
0076.N5548	150	6:11	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 2005-05-30 Observers M Calkins

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0077.N5548	150	6:14	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0078.N5548	150	6:17	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0079.COMP	12	6:20	14:17:59.6	+25:08:12	300	90	3.0	#6 AGN Monitor	2	
0080.TXCVn	10	6:22	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0081.TXCVn	30	6:22	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0082.COMP	12	6:23	12:44:42	36:45:48	300	90	3.0	#12 Symbiotic	2	
0083.RWHyA	2	6:26	13:34:18	-25:22:51	300	90	3.0	#12 Symbiotic	2	
0084.RWHyA	10	6:26	13:34:18	-25:22:51	300	90	3.0	#12 Symbiotic	2	
0085.RWHyA	20	6:27	13:34:18	-25:22:51	300	90	3.0	#12 Symbiotic	2	
0086.COMP	12	6:28	13:34:18	-25:22:51	300	90	3.0	#12 Symbiotic	2	
0087.TCrB	15	6:31	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0088.TCrB	60	6:32	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0089.COMP	12	6:33	15:59:30	25:55:12	300	90	3.0	#12 Symbiotic	2	
0090.AGDra	2	6:36	16:01:41	66:48:10	300	90	3.0	#12 Symbiotic	2	
0091.AGDra	15	6:36	16:01:41	66:48:10	300	90	3.0	#12 Symbiotic	2	
0092.AGDra	45	6:36	16:01:41	66:48:10	300	90	3.0	#12 Symbiotic	2	
0093.COMP	12	6:38	16:01:41	66:48:10	300	90	3.0	#12 Symbiotic	2	
0094.DracoC1	1200	6:40	17:19:58	57:50:06	300	90	3.0	#12 Symbiotic	2	
0095.COMP	12	7:01	17:19:58	57:50:06	300	90	3.0	#12 Symbiotic	2	
0096.3C305	1200	7:15	14:49:21.7	+63:16:14	300	-32	3.0	FR I/II dichot	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-30 Observers M Calkins

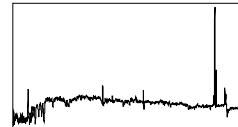
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0097.COMP	12	7:35	14:49:21.7	+63:16:14	300	-32	3.0	FR I/II dichot	2	
0098.3C310	1800	7:40	15:04:57.1	+26:00:58	300	69	3.0	FR I/II dichot	2	
0099.COMP	12	8:11	15:04:57.1	+26:00:58	300	69	3.0	FR I/II dichot	2	
0100.1991_01	1200	8:13	14:54:40.1	18:17:01	300	90	3.0	#64 Cluster an	2	
0101.COMP	12	8:34	14:54:40.1	18:17:01	300	90	3.0	#64 Cluster an	2	
0102.1991_02	1200	8:35	14:54:17.7	18:25:18	300	90	3.0	#64 Cluster an	2	
0103.COMP	12	8:55	14:54:17.7	18:25:18	300	90	3.0	#64 Cluster an	2	
0104.1991_03	1200	8:56	14:54:52.2	18:25:32	300	90	3.0	#64 Cluster an	2	
0105.COMP	12	9:17	14:54:52.2	18:25:32	300	90	3.0	#64 Cluster an	2	
0106.2022_14	1140	9:19	15:03:53.3	28:31:31	300	90	3.0	#64 Cluster an	2	
0107.COMP	12	9:40	15:03:53.3	28:31:31	300	90	3.0	#64 Cluster an	2	
0108.2022_15	1200	9:41	15:02:54.3	28:32:24	300	90	3.0	#64 Cluster an	2	add an exp for cnts
0109.COMP	12	10:02	15:02:54.3	28:32:24	300	90	3.0	#64 Cluster an	2	
0110.2022_15	1200	10:03	15:02:54.3	28:32:24	300	90	3.0	#64 Cluster an	2	
0111.COMP	12	10:24	15:02:54.3	28:32:24	300	90	3.0	#64 Cluster an	2	
0112.RSOph	10	10:26	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0113.RSOph	60	10:26	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0114.RSOph	150	10:27	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0115.COMP	12	10:30	17:50:13	-06:42:30	300	90	3.0	#12 Symbiotic	2	
0116.YYHer	10	10:32	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-30 Observers M Calkins

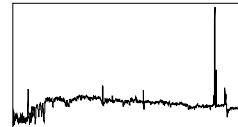
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0117.YYHer	60	10:33	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	
0118.COMP	12	10:34	18:14:34	20:59:19	300	90	3.0	#12 Symbiotic	2	
0119.V443Her	5	10:35	18:22:07	23:27:20	300	90	3.0	#12 Symbiotic	2	
0120.V443Her	45	10:36	18:22:07	23:27:20	300	90	3.0	#12 Symbiotic	2	
0121.V443Her	90	10:37	18:22:07	23:27:20	300	90	3.0	#12 Symbiotic	2	
0122.COMP	12	10:39	18:22:07	23:27:20	300	90	3.0	#12 Symbiotic	2	
0123.BFCyg	1	10:40	19:23:53	29:40:27	300	90	3.0	#12 Symbiotic	2	
0124.BFCyg	60	10:40	19:23:53	29:40:27	300	90	3.0	#12 Symbiotic	2	
0125.COMP	12	10:42	19:23:53	29:40:27	300	90	3.0	#12 Symbiotic	2	
0126.CHCyg	1	10:44	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	2	
0127.CHCyg	5	10:44	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	2	
0128.CHCyg	30	10:45	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	2	
0129.COMP	12	10:46	19:24:33	50:14:30	300	90	3.0	#12 Symbiotic	2	
0130.CICyg	2	10:47	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	2	
0131.CICyg	20	10:47	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	2	
0132.CICyg	60	10:48	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	2	close early for humidity
0133.COMP	12	10:50	19:50:12	35:41:02	300	90	3.0	#12 Symbiotic	2	
0134-0136.BIAS	0	11:51	20:59:44.1	+31:28:56	300	110	3.0	#64 Cluster an	4	
0137-0143.BIAS	0	11:52	21:00:32.0	+31:28:55	300	110	3.0	#64 Cluster an	4	
0144.FLAT	6	11:54	21:02:38.2	+31:28:55	300	110	3.0	#64 Cluster an	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-30 Observers M Calkins

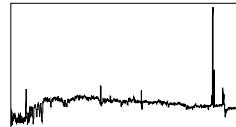
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0145-0153.FLAT	6	11:56	21:04:35.1	+31:28:54	300	110	3.0	#64 Cluster an	4	
0154-0163.BIAS	0	11:59	21:07:59.5	+31:28:53	300	110	3.0	#64 Cluster an	2	
0164-0165.FLAT	12	12:00	21:08:51.2	+31:28:53	300	110	3.0	#64 Cluster an	2	
0166-0172.FLAT	12	12:03	21:11:40.8	+31:28:52	300	110	3.0	#64 Cluster an	2	
0173.FLAT	12	12:03	21:12:06.4	+31:28:51	300	110	3.0	#64 Cluster an	2	
0174.DARK	900	12:05	21:28:31.4	+31:28:46	300	110	3.0	#64 Cluster an	2	
0175.DARK	900	12:20	21:43:43.3	+31:28:42	300	110	3.0	#64 Cluster an	2	
0176.DARK	900	12:35	21:58:58.6	+31:28:38	300	110	3.0	#64 Cluster an	2	
0177.DARK	900	12:50	22:14:14.1	+31:28:34	300	110	3.0	#64 Cluster an	2	
0178.DARK	900	13:06	22:29:29.6	+31:28:31	300	110	3.0	#64 Cluster an	2	
0179.DARK	900	13:21	22:44:44.9	+31:28:28	300	110	3.0	#64 Cluster an	2	
0180.DARK	900	13:36	22:59:56.8	+31:28:25	300	110	3.0	#64 Cluster an	2	
0181.DARK	900	13:51	23:15:12.3	+31:28:23	300	110	3.0	#64 Cluster an	2	
0182.DARK	900	14:07	23:30:27.7	+31:28:21	300	110	3.0	#64 Cluster an	2	
0183.DARK	900	14:22	23:45:43.0	+31:28:20	300	110	3.0	#64 Cluster an	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P Berlind

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0001-0010.BIAS	0	1:20	10:30:21.7	+31:31:19	300	90	3.0	#57 Velocity S	4	
0011-0014.FLAT	8	1:21	10:31:44.3	+31:31:19	300	90	3.0	#57 Velocity S	4	
0015-0020.FLAT	8	1:23	10:33:45.9	+31:31:20	300	90	3.0	#57 Velocity S	4	
0021-0030.BIAS	0	1:25	10:35:56.3	+31:31:20	300	90	3.0	#57 Velocity S	2	
0031.FLAT	16	1:26	10:36:35.0	+31:31:20	300	90	3.0	#57 Velocity S	2	
0032-0042.FLAT	16	1:31	10:42:09.0	+31:31:21	300	90	3.0	#57 Velocity S	2	
0043-0051.FLAT	16	1:36	10:46:38.6	+31:31:22	300	90	3.0	#57 Velocity S	2	
0052.DARK	1200	1:50	11:20:37.8	+31:31:27	300	90	3.0	#57 Velocity S	2	
0053.sky	3	2:39	11:45:00	32:00:00	300	90	3.0	#57 Velocity S	4	cirrus is moving off
0054-0057.sky	3	2:39	11:45:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0058.COMP	5	2:40	11:45:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0059.HD84937	15	3:17	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0060.HD84937	15	3:18	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0061.HD84937	15	3:18	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0062.HD84937	15	3:19	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0063.HD84937	15	3:19	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0064.COMP	10	3:20	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0065.Feige34	150	3:22	10:39:36.8	43:06:10	300	108	3.0	#56 Spectropho	2	
0066.Feige34	150	3:25	10:39:36.8	43:06:10	300	108	3.0	#56 Spectropho	2	
0067.COMP	10	3:28	10:39:36.8	43:06:10	300	108	3.0	#56 Spectropho	2	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P Berlind

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0068.N4853	300	3:29	12:58:35.1	+27:35:47	300	90	3.0	#57 Velocity S	2	
0069.COMP	10	3:35	12:58:35.1	+27:35:47	300	90	3.0	#57 Velocity S	2	
0070.sn2005bf	1200	3:37	10:23:57.2	-03:11:28	300	45	3.0	#2 SN Observat	2	
0071.COMP	10	3:57	10:23:57.2	-03:11:28	300	45	3.0	#2 SN Observat	2	
0072.2M10260606-0324468	240	3:58	10:26:6.0	-03:24:46	300	45	3.0	#141 Mapping t	4	
0073.COMP	5	4:03	10:26:6.0	-03:24:46	300	45	3.0	#141 Mapping t	4	
0074.2M10291424-0230477	240	4:03	10:29:14.2	-02:30:47	300	45	3.0	#141 Mapping t	4	
0075.COMP	5	4:08	10:29:14.2	-02:30:47	300	45	3.0	#141 Mapping t	4	
0076.2M10233815+1357273	240	4:08	10:23:38.1	+13:57:27	300	45	3.0	#141 Mapping t	4	
0077.COMP	5	4:13	10:23:38.1	+13:57:27	300	45	3.0	#141 Mapping t	4	
0078.2M10465229+1150201	900	4:14	10:46:52.2	+11:50:20	300	45	3.0	#141 Mapping t	2	beware brighter galaxy also in slit to west
0079.COMP	10	4:29	10:46:52.2	+11:50:20	300	45	3.0	#141 Mapping t	2	ok
0080.2M10484977+1707300	240	4:30	10:48:49.7	+17:07:30	300	45	3.0	#141 Mapping t	2	
0081.COMP	10	4:35	10:48:49.7	+17:07:30	300	45	3.0	#141 Mapping t	2	
0082.sn2005cc	1200	4:37	13:57:04.8	41:50:41	300	80	3.0	#2 SN Observat	2	
0083.COMP	10	4:57	13:57:04.8	41:50:41	300	80	3.0	#2 SN Observat	2	
0084.snmcg	1200	5:01	15:21:33.4	-07:26:56	300	-15	3.0	#2 SN Observat	2	
0085.COMP	10	5:22	15:21:33.4	-07:26:56	300	-15	3.0	#2 SN Observat	2	
0086.2M10525975+1049517	240	5:25	10:52:59.7	+10:49:51	300	90	3.0	#141 Mapping t	4	
0087.COMP	5	5:29	10:52:59.7	+10:49:51	300	90	3.0	#141 Mapping t	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P Berlind

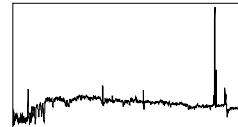
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0088.2M10520881+2056336	330	5:30	10:52:8.8	+20:56:33	300	90	3.0	#141 Mapping t	4	
0089.COMP	5	5:36	10:52:8.8	+20:56:33	300	90	3.0	#141 Mapping t	4	
0090.3C314.1	1800	5:41	15:10:22.5	+70:45:52	300	0	3.0	#161 FR I_II d	2	
0091.COMP	10	6:11	15:10:22.5	+70:45:52	300	0	3.0	#161 FR I_II d	2	
0092.2M14561732+2444511	240	6:14	14:56:17.3	+24:44:51	300	0	3.0	#141 Mapping t	4	
0093.COMP	5	6:18	14:56:17.3	+24:44:51	300	0	3.0	#141 Mapping t	4	
0094.2M14502338+1019401	330	6:19	14:50:23.3	+10:19:40	300	0	3.0	#141 Mapping t	4	
0095.COMP	5	6:25	14:50:23.3	+10:19:40	300	0	3.0	#141 Mapping t	4	
0096.2M14580670-0627236	480	6:26	14:58:6.7	-06:27:23	300	0	3.0	#141 Mapping t	4	
0097.COMP	5	6:34	14:58:6.7	-06:27:23	300	0	3.0	#141 Mapping t	4	
0098.2M14582245-0702248	240	6:35	14:58:22.4	-07:02:24	300	0	3.0	#141 Mapping t	4	
0099.COMP	5	6:39	14:58:22.4	-07:02:24	300	0	3.0	#141 Mapping t	4	
0100.2M14590386-0924597	360	6:40	14:59:3.8	-09:24:59	300	0	3.0	#141 Mapping t	4	
0101.COMP	5	6:46	14:59:3.8	-09:24:59	300	0	3.0	#141 Mapping t	4	
0102.2M15100940-0552595	300	6:47	15:10:9.4	-05:52:59	300	10	3.0	#141 Mapping t	4	
0103.COMP	5	6:52	15:10:9.4	-05:52:59	300	10	3.0	#141 Mapping t	4	
0104.2M15045487+0554325	240	6:53	15:04:54.8	+05:54:32	300	10	3.0	#141 Mapping t	4	
0105.COMP	5	6:58	15:04:54.8	+05:54:32	300	10	3.0	#141 Mapping t	4	
0106.2M15061973+0719566	330	6:58	15:06:19.7	+07:19:56	300	10	3.0	#141 Mapping t	4	
0107.COMP	5	7:04	15:06:19.7	+07:19:56	300	10	3.0	#141 Mapping t	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P\_Berlind

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0108.2M15072530+0829446	240	7:05	15:07:25.3	+08:29:44	300	10	3.0	#141 Mapping t	4	
0109.COMP	5	7:09	15:07:25.3	+08:29:44	300	10	3.0	#141 Mapping t	4	
0110.NGC6251	900	7:12	16:32:32.0	+82:32:16	300	0	3.0	#161 FR I_II d	2	
0111.COMP	10	7:28	16:32:32.0	+82:32:16	300	0	3.0	#161 FR I_II d	2	
0112.150518-01170	720	7:32	15:07:49.1	-01:28:55	300	90	3.0	#84f Updated Z	2	
0113.COMP	10	7:44	15:07:49.1	-01:28:55	300	90	3.0	#84f Updated Z	2	
0114.2M15192766+0405463	240	7:45	15:19:27.6	+04:05:46	300	90	3.0	#141 Mapping t	4	
0115.COMP	5	7:49	15:19:27.6	+04:05:46	300	90	3.0	#141 Mapping t	4	
0116.2M15213686+0743099	420	7:50	15:21:36.8	+07:43:9	300	90	3.0	#141 Mapping t	4	
0117.COMP	5	7:57	15:21:36.8	+07:43:9	300	90	3.0	#141 Mapping t	4	
0118.2M15214119-0731520	420	7:58	15:21:41.1	-07:31:52	300	90	3.0	#141 Mapping t	4	
0119.COMP	5	8:06	15:21:41.1	-07:31:52	300	90	3.0	#141 Mapping t	4	
0120.2M15233432-0306386	420	8:06	15:23:34.3	-03:06:38	300	90	3.0	#141 Mapping t	4	
0121.COMP	5	8:13	15:23:34.3	-03:06:38	300	90	3.0	#141 Mapping t	4	
0122.2M15260286-0649428	360	8:15	15:26:2.8	-06:49:42	300	90	3.0	#141 Mapping t	4	
0123.COMP	5	8:21	15:26:2.8	-06:49:42	300	90	3.0	#141 Mapping t	4	
0124.2M15325210-0650082	300	8:21	15:32:52.1	-06:50:8	300	90	3.0	#141 Mapping t	4	
0125.COMP	5	8:27	15:32:52.1	-06:50:8	300	90	3.0	#141 Mapping t	4	
0126.2M15312604+0209578	300	8:28	15:31:26.0	+02:09:57	300	90	3.0	#141 Mapping t	4	
0127.COMP	5	8:33	15:31:26.0	+02:09:57	300	90	3.0	#141 Mapping t	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P Berlind

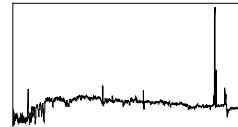
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0128.2M15244924+0421371	360	8:34	15:24:49.2	+04:21:37	300	90	3.0	#141 Mapping t	4	
0129.COMP	5	8:40	15:24:49.2	+04:21:37	300	90	3.0	#141 Mapping t	4	
0130.2M15255426+1339370	270	8:41	15:25:54.2	+13:39:37	300	90	3.0	#141 Mapping t	4	
0131.COMP	5	8:46	15:25:54.2	+13:39:37	300	90	3.0	#141 Mapping t	4	
0132.3C381	1800	8:51	18:33:46.3	+47:27:03	300	-5	3.0	#161 FR I_II d	2	
0133.COMP	10	9:21	18:33:46.3	+47:27:03	300	-5	3.0	#161 FR I_II d	2	
0134.3C388	1800	9:23	18:44:02.4	+45:33:30	300	3	3.0	#161 FR I_II d	2	
0135.COMP	10	9:53	18:44:02.4	+45:33:30	300	3	3.0	#161 FR I_II d	2	
0136.2319_15	720	9:56	19:23:16.7	43:57:14	300	90	3.0	#64 Cluster an	4	
0137.COMP	5	10:08	19:23:16.7	43:57:14	300	90	3.0	#64 Cluster an	4	
0138.2319_16	720	10:09	19:23:15.5	44:01:48	300	90	3.0	#64 Cluster an	4	fainter pair of objects also in slit to east
0139.COMP	5	10:21	19:23:15.5	44:01:48	300	90	3.0	#64 Cluster an	4	
0140.2319_17	900	10:22	19:23:14.9	44:04:46	300	90	3.0	#64 Cluster an	4	
0141.COMP	5	10:37	19:23:14.9	44:04:46	300	90	3.0	#64 Cluster an	4	
0142.2319_19	720	10:38	19:22:11.9	44:09:34	300	90	3.0	#64 Cluster an	4	
0143.COMP	5	10:51	19:22:11.9	44:09:34	300	90	3.0	#64 Cluster an	4	
0144.2319_20	600	10:51	19:22:58.3	44:11:12	300	90	3.0	#64 Cluster an	4	
0145.COMP	5	11:02	19:22:58.3	44:11:12	300	90	3.0	#64 Cluster an	4	
0146.3C454.3	240	11:03	22:53:57.7	+16:08:54	300	90	3.0	#6 AGN Monitor	4	
0147.COMP	5	11:07	22:53:57.7	+16:08:54	300	90	3.0	#6 AGN Monitor	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-05-31 Observers P Berlind

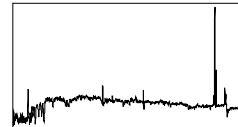
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0148.BDp284211	90	11:09	21:51:11.1	28:51:53	300	90	3.0	#56 Spectropho	2	
0149.BDp284211	90	11:10	21:51:11.1	28:51:53	300	90	3.0	#56 Spectropho	2	
0150.COMP	10	11:12	21:51:11.1	28:51:53	300	90	3.0	#56 Spectropho	2	
0151.HD192281	5	11:13	20:12:33.1	40:16:05	300	90	3.0	#56 Spectropho	2	
0152.HD192281	5	11:14	20:12:33.1	40:16:05	300	90	3.0	#56 Spectropho	2	
0153.COMP	10	11:14	20:12:33.1	40:16:05	300	90	3.0	#56 Spectropho	2	
0154.N7331	120	11:15	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	
0155.COMP	5	11:18	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	
0156-0165.BIAS	0	11:21	22:34:46.9	+34:09:43	300	90	3.0	#2 SN Observat	4	
0166-0175.FLAT	8	11:24	22:34:46.9	+34:09:43	300	90	3.0	#2 SN Observat	4	
0176-0185.BIAS	0	11:26	22:34:46.9	+34:09:43	300	90	3.0	#2 SN Observat	2	
0186-0195.FLAT	16	11:31	22:34:46.9	+34:09:43	300	90	3.0	#2 SN Observat	2	
0196-0204.DARK	900	13:45	22:34:46.9	+34:09:43	300	90	3.0	#2 SN Observat	4	



## WHIPPLE OBSERVATORY

## FAST SPECTROGRAPH LOG



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UT Date 2005-06-01 Observers P Berlind

Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0001-0010.BIAS	0	22:52	08:05:58.9	+31:30:35	300	90	3.0	#2 SN Observat	4	
0011-0012.FLAT	8	22:52	08:06:42.2	+31:30:35	300	90	3.0	#2 SN Observat	4	
0013-0020.FLAT	8	22:55	08:09:23.1	+31:30:36	300	90	3.0	#2 SN Observat	4	
0021-0030.BIAS	0	22:57	08:11:33.2	+31:30:37	300	90	3.0	#2 SN Observat	2	
0031.FLAT	16	22:58	08:12:12.1	+31:30:37	300	90	3.0	#2 SN Observat	2	
0032-0036.FLAT	16	23:00	08:14:40.2	+31:30:38	300	90	3.0	#2 SN Observat	2	
0037-0041.FLAT	16	23:03	08:17:12.1	+31:30:39	300	90	3.0	#2 SN Observat	2	
0042-0046.FLAT	16	23:05	08:19:44.0	+31:30:40	300	90	3.0	#2 SN Observat	2	
0047-0051.FLAT	16	23:08	08:22:15.8	+31:30:41	300	90	3.0	#2 SN Observat	2	
0052.DARK	1200	23:08	08:42:44.3	+31:30:49	300	90	3.0	#2 SN Observat	2	
0053.DARK	1200	23:29	09:02:59.0	+31:30:56	300	90	3.0	#2 SN Observat	2	
0054.DARK	1200	23:49	09:23:15.4	+31:31:02	300	90	3.0	#2 SN Observat	2	
0055.DARK	1200	0:09	09:43:31.0	+31:31:08	300	90	3.0	#2 SN Observat	2	
0056.DARK	1200	0:29	10:03:46.1	+31:31:13	300	90	3.0	#2 SN Observat	2	
0057.DARK	1200	0:49	10:24:01.6	+31:31:18	300	90	3.0	#2 SN Observat	2	
0058.DARK	1200	1:10	10:44:16.9	+31:31:22	300	90	3.0	#2 SN Observat	2	
0059.DARK	1200	1:30	11:04:36.0	+31:31:25	300	90	3.0	#2 SN Observat	2	
0060.DARK	1200	1:50	11:24:51.8	+31:31:28	300	90	3.0	#2 SN Observat	2	
0061-0065.sky	3	2:40	11:55:00	32:00:00	300	90	3.0	#57 Velocity S	4	
0066.COMP	5	2:41	11:55:00	32:00:00	300	90	3.0	#57 Velocity S	4	



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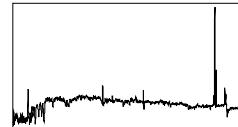
Coll. Focus 1035 Grating/Grism 300

File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bin	Comments
0067.HD84937	15	3:18	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0068.HD84937	15	3:19	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0069.HD84937	15	3:19	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0070.HD84937	15	3:20	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0071.HD84937	15	3:20	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0072.COMP	10	3:21	09:48:54.8	13:45:13	300	57	3.0	#56 Spectropho	2	
0073.Feige34	150	3:23	10:39:36.8	43:06:10	300	107	3.0	#56 Spectropho	2	
0074.Feige34	150	3:26	10:39:36.8	43:06:10	300	107	3.0	#56 Spectropho	2	
0075.COMP	10	3:29	10:39:36.8	43:06:10	300	107	3.0	#56 Spectropho	2	
0076.N3227	180	3:30	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	clouds moving in
0077.N3227	180	3:34	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0078.COMP	10	3:37	10:23:30.6	+19:51:54	300	90	3.0	#6 AGN Monitor	2	
0079.N4151	30	3:38	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0080.N4151	30	3:39	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0081.N4151	90	3:40	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0082.COMP	10	3:41	12:10:32.6	+39:24:21	300	90	3.0	#6 AGN Monitor	2	
0083.N4051	150	3:43	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0084.N4051	150	3:45	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0085.COMP	10	3:48	12:03:09.7	+44:31:53	300	90	3.0	#6 AGN Monitor	2	
0086.2M09500846-0506258	360	3:50	09:50:8.4	-05:06:25	300	90	3.0	#141 Mapping t	2	



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0087.COMP	10	3:56	09:50:8.4	-05:06:25	300	90	3.0	#141 Mapping t	2	
0088.2M10575051-0215059	540	4:01	10:57:50.5	-02:15:5	300	90	3.0	#141 Mapping t	2	clouds, redo
0089.COMP	10	4:10	10:57:50.5	-02:15:5	300	90	3.0	#141 Mapping t	2	
0090.2M10575051-0215059	540	4:11	10:57:50.5	-02:15:5	300	90	3.0	#141 Mapping t	2	ok that is better
0091.COMP	10	4:20	10:57:50.5	-02:15:5	300	90	3.0	#141 Mapping t	2	
0092.2M11114892-0731346	660	4:21	11:11:48.9	-07:31:34	300	90	3.0	#141 Mapping t	4	
0093.COMP	5	4:32	11:11:48.9	-07:31:34	300	90	3.0	#141 Mapping t	4	
0094.2M11221405-0759300	600	4:33	11:22:14.0	-07:59:30	300	90	3.0	#141 Mapping t	4	
0095.COMP	5	4:43	11:22:14.0	-07:59:30	300	90	3.0	#141 Mapping t	4	
0096.2M11174086-0427389	420	4:44	11:17:40.8	-04:27:38	300	90	3.0	#141 Mapping t	4	
0097.COMP	5	4:51	11:17:40.8	-04:27:38	300	90	3.0	#141 Mapping t	4	
0098.2M11214014-0433204	240	4:52	11:21:40.1	-04:33:20	300	90	3.0	#141 Mapping t	4	
0099.COMP	5	4:56	11:21:40.1	-04:33:20	300	90	3.0	#141 Mapping t	4	
0100.2M11234005-0428066	420	4:57	11:23:40.0	-04:28:6	300	90	3.0	#141 Mapping t	4	
0101.COMP	5	5:04	11:23:40.0	-04:28:6	300	90	3.0	#141 Mapping t	4	
0102.2M11254505+1440359	360	5:05	11:25:45.0	+14:40:35	300	90	3.0	#141 Mapping t	4	
0103.COMP	5	5:11	11:25:45.0	+14:40:35	300	90	3.0	#141 Mapping t	4	
0104.sn2005cc	1200	5:13	13:57:04.8	41:50:41	300	90	3.0	#2 SN Observat	2	
0105.COMP	10	5:33	13:57:04.8	41:50:41	300	90	3.0	#2 SN Observat	2	
0106.sn2005az	1500	5:35	13:05:46.9	+27:44:08	300	77	3.0	#2 SN Observat	2	



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0107.COMP	10	6:01	13:05:46.9	+27:44:08	300	77	3.0	#2 SN Observat	2	
0108.sn2005cf	960	6:04	15:21:32.2	-07:24:47	300	5	3.0	#2 SN Observat	2	
0109.COMP	10	6:20	15:21:32.2	-07:24:47	300	5	3.0	#2 SN Observat	2	
0110.2M15355949+3840523north	420	6:22	15:35:53.4	+38:40:52	300	90	3.0	#141 Mapping t	4	
0111.COMP	5	6:30	15:35:53.4	+38:40:52	300	90	3.0	#141 Mapping t	4	
0112.135742-00430	480	6:31	14:00:13.2	-00:57:46	300	90	3.0	#84f Updated Z	4	more clouds...
0113.COMP	5	6:39	14:00:13.2	-00:57:46	300	90	3.0	#84f Updated Z	4	
0114.142224-02510EW	900	6:40	14:24:59.1	-03:04:02	300	90	3.0	#84f Updated Z	2	close EW pair, please extract both
0115.COMP	10	6:56	14:24:59.1	-03:04:02	300	90	3.0	#84f Updated Z	2	E comp at row 83, W at row 72
0116.2M15415827+0746360	660	7:00	15:41:58.2	+07:46:36	300	90	3.0	#141 Mapping t	4	
0117.COMP	5	7:11	15:41:58.2	+07:46:36	300	90	3.0	#141 Mapping t	4	
0118.2M15380306-0308166	480	7:12	15:38:3.0	-03:08:16	300	90	3.0	#141 Mapping t	4	
0119.COMP	5	7:20	15:38:3.0	-03:08:16	300	90	3.0	#141 Mapping t	4	
0120.2M15561554-0845052	360	7:22	15:56:15.5	-08:45:5	300	90	3.0	#141 Mapping t	4	
0121.COMP	5	7:29	15:56:15.5	-08:45:5	300	90	3.0	#141 Mapping t	4	
0122.2M15552243-0852298	480	7:29	15:55:22.4	-08:52:29	300	90	3.0	#141 Mapping t	4	
0123.COMP	5	7:38	15:55:22.4	-08:52:29	300	90	3.0	#141 Mapping t	4	
0124.2M16094042-0834275	240	7:39	16:09:40.4	-08:34:27	300	97	3.0	#141 Mapping t	4	
0125.COMP	5	7:43	16:09:40.4	-08:34:27	300	97	3.0	#141 Mapping t	4	
0126.2M16161102-0630428	360	7:44	16:16:11.0	-06:30:42	300	90	3.0	#141 Mapping t	4	



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0127.COMP	5	7:51	16:16:11.0	-06:30:42	300	90	3.0	#141 Mapping t	4	
0128.XS00981B7_001	300	7:53	15:50:42.6	-03:58:45	300	30	3.0	#129 Bright Ch	2	
0129.COMP	10	7:59	15:50:42.6	-03:58:45	300	30	3.0	#129 Bright Ch	2	
0130.XS02086B6_002	75	7:59	16:04:48.9	-01:15:56	300	30	3.0	#129 Bright Ch	2	
0131.COMP	10	8:01	16:04:48.9	-01:15:56	300	30	3.0	#129 Bright Ch	2	
0132.XS02221B3_008	1500	8:02	16:21:16.9	-00:42:51	300	30	3.0	#129 Bright Ch	2	nice one, z 3
0133.COMP	10	8:28	16:21:16.9	-00:42:51	300	30	3.0	#129 Bright Ch	2	
0134.XS00822B7_002	1200	8:32	15:43:59.4	+53:59:03	300	90	3.0	#129 Bright Ch	2	cool
0135.COMP	10	8:52	15:43:59.4	+53:59:03	300	90	3.0	#129 Bright Ch	2	
0136.XS02127B3_003	900	8:54	16:07:58.5	+66:07:10	300	90	3.0	#129 Bright Ch	2	
0137.COMP	10	9:10	16:07:58.5	+66:07:10	300	90	3.0	#129 Bright Ch	2	
0138.XS02127B7_032	1440	9:11	16:09:52.9	+65:56:18	300	90	3.0	#129 Bright Ch	2	clouds getting thick
0139.COMP	10	9:35	16:09:52.9	+65:56:18	300	90	3.0	#129 Bright Ch	2	
0140.2319_21	600	9:37	19:18:57.9	44:14:01	300	90	3.0	#160 2MACS	4	
0141.COMP	5	9:48	19:18:57.9	44:14:01	300	90	3.0	#160 2MACS	4	
0142.2319_22	360	9:49	19:22:45.1	44:14:18	300	90	3.0	#160 2MACS	4	
0143.COMP	5	9:55	19:22:45.1	44:14:18	300	90	3.0	#160 2MACS	4	
0144.2319_18	1200	9:57	19:22:30.0	44:05:27	300	60	3.0	#160 2MACS	4	
0145.COMP	5	10:17	19:22:30.0	44:05:27	300	60	3.0	#160 2MACS	4	stopped by clouds
0146.N7331	300	10:34	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	eastern sucker hole



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File	Exp Time	UT Start	RA	Dec	Gr.	P.A.	Slit	Program	Bir	Comments
0147.COMP	5	10:39	22:34:46.9	+34:09:43	300	90	3.0	#57 Velocity S	4	
0148-0157.BIAS	0	10:43	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	4	
0158-0167.FLAT	8	10:46	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	4	
0168-0177.BIAS	0	10:49	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	2	
0178-0187.FLAT	16	10:54	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	2	
0188-0197.DARK	900	13:20	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	4	
0198-0207.DARK	900	15:52	22:34:46.9	+34:09:43	300	90	3.0	#84f Updated Z	2	