



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9500

UT Date 2001-09-11 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-----------------------------------|
| 0001.BIAS | 0 | 6:28 | 22:25:52.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | ***start of FAST run*** |
| 0002-0010.BIAS | 0 | 6:30 | 22:27:18.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0011.FLAT | 8 | 6:30 | 22:27:56.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | big problems with ccd reading out |
| 0012-0020.FLAT | 8 | 6:33 | 22:30:20.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0021.BIAS | 0 | 6:33 | 22:30:59.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | working ok now with old cpu |
| 0022-0030.BIAS | 0 | 6:35 | 22:33:09.6 | 31:29:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0031.FLAT | 16 | 6:35 | 22:34:14.6 | 31:29:55 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | clearing. |
| 0032-0040.FLAT | 16 | 6:41 | 22:38:43.5 | 31:29:55 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0041.N7331 | 120 | 6:41 | 22:34:46.9 | +34:09:43 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0042.COMP | 5 | 6:41 | 22:34:46.9 | +34:09:43 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0043.BDp284211 | 45 | 6:41 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | Hi Susan!! |
| 0044.BDp284211 | 45 | 6:41 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | |
| 0045.COMP | 10 | 6:41 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | |
| 0046.N7469 | 120 | 6:41 | 23:03:15.7 | +08:52:27 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |
| 0047.N7469 | 120 | 6:41 | 23:03:15.7 | +08:52:27 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |
| 0048.COMP | 5 | 6:41 | 23:03:15.7 | +08:52:27 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |
| 0049.Feige110 | 150 | 6:41 | 23:17:23.5 | -05:26:22 | 300 | 0 | 3.0 | #56 Spectropho | 2 | |
| 0050.COMP | 10 | 6:41 | 23:17:23.5 | -05:26:22 | 300 | 0 | 3.0 | #56 Spectropho | 2 | |
| 0051.Akn564 | 180 | 6:41 | 22:42:39.4 | +29:43:31 | 300 | 77 | 3.0 | #6 AGN Monitor | 4 | |
| 0052.Akn564 | 180 | 6:41 | 22:42:39.4 | +29:43:31 | 300 | 77 | 3.0 | #6 AGN Monitor | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9501

UT Date 2001-09-11 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0053.COMP | 5 | 6:41 | 22:42:39.4 | +29:43:31 | 300 | 77 | 3.0 | #6 AGN Monitor | 4 | |
| 0054.2M204854.3m082708 | 420 | 6:41 | 20:48:54.3 | -08:27:08 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0055.COMP | 5 | 6:41 | 20:48:54.3 | -08:27:08 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | BAD COMP |
| 0056.2M211917.4m043351 | 240 | 6:41 | 21:19:17.4 | -04:33:51 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0057.COMP | 5 | 6:41 | 21:19:17.4 | -04:33:51 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | BAD COMP |
| 0058.2M211936.4p004215 | 240 | 6:41 | 21:19:36.4 | +00:42:15 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0059.COMP | 5 | 6:41 | 21:19:36.4 | +00:42:15 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0060.2M212803.6p020238 | 180 | 6:41 | 21:28:03.6 | +02:02:38 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0061.COMP | 5 | 6:41 | 21:28:03.6 | +02:02:38 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0062.2M212908.4p024759 | 480 | 6:41 | 21:29:08.4 | +02:47:59 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0063.COMP | 5 | 6:41 | 21:29:08.4 | +02:47:59 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0064.2M213225.0p083242 | 210 | 6:41 | 21:32:25.0 | +08:32:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0065.COMP | 5 | 6:41 | 21:32:25.0 | +08:32:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0066.2M215623.6p012150 | 360 | 6:41 | 21:56:23.6 | +01:21:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0067.COMP | 5 | 6:41 | 21:56:23.6 | +01:21:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0068.2M222944.8p075918 | 240 | 6:41 | 22:29:44.8 | +07:59:18 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0069.COMP | 5 | 6:41 | 22:29:44.8 | +07:59:18 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | BAD COMP |
| 0070.2M223453.6p021117 | 360 | 6:41 | 22:34:53.6 | +02:11:17 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0071.COMP | 5 | 6:41 | 22:34:53.6 | +02:11:17 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | BAD COMP |
| 0072.COMP | 5 | 6:41 | 22:34:53.6 | +02:11:17 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | BAD COMP |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9502

UT Date 2001-09-11 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------------|
| 0073.COMP | 5 | 6:41 | 22:34:53.6 | +02:11:17 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | ok a good one. |
| 0074.2M224612.4p103325 | 300 | 6:41 | 22:46:12.4 | +10:33:25 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0075.COMP | 5 | 6:41 | 22:46:12.4 | +10:33:25 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0076.2M232928.8p103158 | 300 | 6:41 | 23:29:28.8 | +10:31:58 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0077.COMP | 5 | 6:41 | 23:29:28.8 | +10:31:58 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0078.2M234430.4p091550 | 300 | 6:41 | 23:44:30.4 | +09:15:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0079.COMP | 5 | 6:41 | 23:44:30.4 | +09:15:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0080.2M235858.3m052035 | 330 | 6:41 | 23:58:58.3 | -05:20:35 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0081.COMP | 5 | 6:41 | 23:58:58.3 | -05:20:35 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0082.ZAnd | 1 | 6:41 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0083.ZAnd | 2 | 6:41 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0084.ZAnd | 10 | 6:41 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0085.ZAnd | 45 | 6:41 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0086.COMP | 5 | 6:41 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0087.MRK335 | 120 | 6:41 | 00:06:19.6 | +20:12:11 | 300 | 45 | 3.0 | #6 AGN Monitor | 4 | |
| 0088.MRK335 | 120 | 6:41 | 00:06:19.6 | +20:12:11 | 300 | 45 | 3.0 | #6 AGN Monitor | 4 | |
| 0089.COMP | 5 | 6:41 | 00:06:19.6 | +20:12:11 | 300 | 45 | 3.0 | #6 AGN Monitor | 4 | |
| 0090.2M000237.9p163837 | 180 | 6:41 | 00:02:37.9 | +16:38:37 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0091.COMP | 5 | 6:41 | 00:02:37.9 | +16:38:37 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0092.2M000653.8p082102 | 300 | 6:41 | 00:06:53.8 | +08:21:02 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9503

UT Date 2001-09-11 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0093.COMP | 5 | 6:41 | 00:06:53.8 | +08:21:02 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0094.2M001639.7p013638 | 240 | 6:41 | 00:16:39.7 | +01:36:38 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0095.COMP | 5 | 6:41 | 00:16:39.7 | +01:36:38 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0096.2M002024.9p101522 | 300 | 6:41 | 00:20:24.9 | +10:15:22 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0097.COMP | 5 | 6:41 | 00:20:24.9 | +10:15:22 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0098.2M003955.0p065054 | 300 | 6:41 | 00:39:56.0 | +06:50:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0099.COMP | 5 | 6:41 | 00:39:56.0 | +06:50:54 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0100.2M010523.3m064905 | 300 | 6:41 | 01:05:23.3 | -06:49:05 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0101.COMP | 5 | 6:41 | 01:05:23.3 | -06:49:05 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0102.2M010858.0p214450 | 300 | 6:41 | 01:08:59.0 | +21:44:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0103.COMP | 5 | 6:41 | 01:08:59.0 | +21:44:50 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0104.2M011315.7p153059 | 300 | 6:41 | 01:13:15.7 | +15:30:59 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0105.COMP | 5 | 6:41 | 01:13:15.7 | +15:30:59 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0106.sn2001ed | 1200 | 6:41 | 01:51:51.0 | +06:17:27 | 300 | 12 | 3.0 | #2 SN Observat | 2 | |
| 0107.COMP | 10 | 6:41 | 01:51:51.0 | +06:17:27 | 300 | 12 | 3.0 | #2 SN Observat | 2 | |
| 0108.sn2001ec | 1200 | 6:41 | 02:12:00.4 | +31:32:43 | 300 | 45 | 3.0 | #2 SN Observat | 2 | |
| 0109.COMP | 10 | 6:41 | 02:12:00.4 | +31:32:43 | 300 | 45 | 3.0 | #2 SN Observat | 2 | |
| 0110.M32 | 30 | 6:41 | 00:39:58 | +40:35:30 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0111.M32 | 30 | 6:41 | 00:39:58 | +40:35:30 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0112.COMP | 5 | 6:41 | 00:39:58 | +40:35:30 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9504

UT Date 2001-09-11 Observers P Berlind

Coll. Focus 980 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|--------------|
| 0113.158m213 | 300 | 6:41 | 00:40:30.2 | +40:50:55 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0114.COMP | 5 | 6:41 | 00:40:30.2 | +40:50:55 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0115.2M000313.3p535215 | 240 | 6:41 | 00:03:13.3 | +53:52:15 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0116.COMP | 5 | 6:41 | 00:03:13.3 | +53:52:15 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0117.2M001038.9p532504 | 240 | 6:41 | 00:10:38.9 | +53:25:04 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0118.COMP | 5 | 6:41 | 00:10:38.9 | +53:25:04 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0119.2M002320.8p540542 | 330 | 6:41 | 00:23:20.8 | +54:05:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0120.COMP | 5 | 6:41 | 00:23:20.8 | +54:05:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0121.sn2001eb | 1200 | 6:41 | 04:30:45.1 | +00:52:17 | 300 | -15 | 3.0 | #2 SN Observat | 2 | |
| 0122.COMP | 10 | 6:41 | 04:30:45.1 | +00:52:17 | 300 | -15 | 3.0 | #2 SN Observat | 2 | |
| 0123.sn2001x2 | 600 | 6:41 | 04:44:28.5 | +75:38:30 | 300 | 15 | 3.0 | #2 SN Observat | 2 | clear @ dawn |
| 0124.COMP | 10 | 6:41 | 04:44:28.5 | +75:38:30 | 300 | 15 | 3.0 | #2 SN Observat | 2 | |
| 0125.HD12623 | 4 | 6:41 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0126.HD12623 | 4 | 6:41 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0127.HD12623 | 4 | 6:41 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0128.COMP | 5 | 6:41 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0129-0138.BIAS | 0 | 12:21 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0139-0148.FLAT | 8 | 12:24 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0149-0158.BIAS | 0 | 12:27 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0159-0168.FLAT | 16 | 12:33 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9505

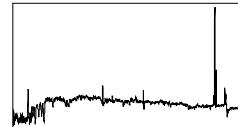
UT Date 2001-09-11 Observers P BerlindColl. Focus 980 Grating/Grism 300

| <i>File</i> | <i>Exp Time</i> | <i>UT Start</i> | <i>RA</i> | <i>Dec</i> | <i>Gr.</i> | <i>P.A.</i> | <i>Slit</i> | <i>Program</i> | <i>Bir</i> | <i>Comments</i> |
|----------------|-----------------|-----------------|-----------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0169-0178.DARK | 900 | 15:06 | 02:02:19 | +62:56:04 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9505

UT Date 2001-09-12 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|-------------|
| 0001.DARK | 1200 | 23:31 | 15:51:16.2 | 31:30:24 | 300 | 90 | 3.0 | #57 Velocity S | 2 | ouch. |
| 0002.DARK | 1200 | 23:31 | 16:11:32.3 | 31:30:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0003.DARK | 1200 | 23:31 | 16:31:48.3 | 31:30:20 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0004.DARK | 1200 | 23:31 | 16:52:04.3 | 31:30:18 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0005.DARK | 1200 | 23:31 | 17:12:20.4 | 31:30:15 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0006.DARK | 1200 | 23:31 | 17:32:39.4 | 31:30:13 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0007-0020.BIAS | 0 | 1:38 | 17:38:52.4 | 31:30:13 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0021-0030.FLAT | 8 | 1:41 | 17:41:41.4 | 31:30:12 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0031-0040.BIAS | 0 | 1:43 | 17:44:13.4 | 31:30:12 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0041.FLAT | 16 | 1:43 | 17:45:14.4 | 31:30:12 | 300 | 90 | 3.0 | #57 Velocity S | 2 | clearing... |
| 0042-0043.FLAT | 16 | 1:45 | 17:46:15.4 | 31:30:12 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0044-0050.FLAT | 16 | 1:49 | 17:49:43.4 | 31:30:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0051.id2636 | 420 | 1:49 | 20:00:00.2 | 35:06:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0052.id1971 | 600 | 1:49 | 20:05:45.9 | 35:49:30 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0053.COMP | 5 | 1:49 | 20:05:45.9 | 35:49:30 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0054.id1598 | 720 | 1:49 | 20:06:25.3 | 35:41:20 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0055.id1700 | 720 | 1:49 | 20:06:14.4 | 35:53:41 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0056.COMP | 5 | 1:49 | 20:06:14.4 | 35:53:41 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0057.id1748 | 720 | 1:49 | 20:06:09.1 | 35:35:42 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0058.id1280 | 720 | 1:49 | 20:07:06.2 | 35:40:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9506

UT Date 2001-09-12 Observers P Berlind

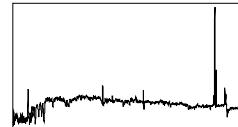
Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|-------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------------------|
| 0059.id1497 | 720 | 1:49 | 20:06:42.3 | 35:55:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0060.COMP | 5 | 1:49 | 20:06:42.3 | 35:55:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0061.id2077 | 900 | 1:49 | 20:05:28.1 | 35:48:22 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0062.id1026 | 900 | 1:49 | 20:07:32.3 | 35:42:34 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0063.COMP | 5 | 1:49 | 20:07:32.3 | 35:42:34 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0064.id1126 | 900 | 1:49 | 20:07:22.9 | 35:47:13 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0065.id2545 | 900 | 1:49 | 20:04:08.5 | 35:50:06 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0066.COMP | 5 | 1:49 | 20:04:08.5 | 35:50:06 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0067.id1162 | 900 | 1:49 | 20:07:19.2 | 35:35:28 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0068.id1474 | 900 | 1:49 | 20:06:45.0 | 35:47:03 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0069.COMP | 5 | 1:49 | 20:06:45.0 | 35:47:03 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0070.id1153 | 900 | 1:49 | 20:07:20.6 | 35:52:36 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0071.id2526 | 900 | 1:49 | 20:04:11.3 | 35:49:11 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0072.COMP | 5 | 1:49 | 20:04:11.3 | 35:49:11 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0073.id1407 | 900 | 1:49 | 20:06:53.8 | 35:49:32 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0074.id1974 | 900 | 1:49 | 20:05:45.4 | 35:43:08 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0075.COMP | 5 | 1:49 | 20:05:45.4 | 35:43:08 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0076.id1565 | 900 | 1:49 | 20:06:30.0 | 35:42:56 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0077.id1928 | 900 | 1:49 | 20:05:50.1 | 35:47:27 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | bright stars to east |
| 0078.COMP | 5 | 1:49 | 20:05:50.1 | 35:47:27 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9507

UT Date 2001-09-12 Observers P Berlind

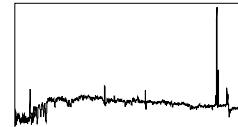
Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-----------------------------|
| 0079.Feige110 | 150 | 1:49 | 23:17:23.5 | -05:26:22 | 300 | 0 | 3.0 | #56 Spectropho | 2 | |
| 0080.COMP | 10 | 1:49 | 23:17:23.5 | -05:26:22 | 300 | 0 | 3.0 | #56 Spectropho | 2 | |
| 0081.sn2001da | 1200 | 1:49 | 23:53:32.7 | +08:07:02 | 300 | -5 | 3.0 | #2 SN Observat | 2 | chilly night |
| 0082.COMP | 10 | 1:49 | 23:53:32.7 | +08:07:02 | 300 | -5 | 3.0 | #2 SN Observat | 2 | |
| 0083.BDp284211 | 45 | 1:49 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | |
| 0084.BDp284211 | 45 | 1:49 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | |
| 0085.COMP | 10 | 1:49 | 21:48:57.1 | 28:37:48 | 300 | 77 | 3.0 | #56 Spectropho | 2 | |
| 0086.BIAS | 0 | 1:49 | 1:38:12.1 | 41:39:18 | 300 | 77 | 3.0 | #56 Spectropho | 2 | engineering: pointing model |
| 0087.sn2001eh | 1200 | 1:49 | 1:38:12.1 | 41:39:18 | 300 | -40 | 3.0 | #2 SN Observat | 2 | |
| 0088.COMP | 10 | 1:49 | 1:38:12.1 | 41:39:18 | 300 | 69 | 3.0 | #2 SN Observat | 2 | |
| 0089.sn2001ec | 1200 | 1:49 | 02:12:00.4 | +31:32:43 | 300 | 90 | 3.0 | #2 SN Observat | 2 | |
| 0090.COMP | 10 | 1:49 | 02:12:00.4 | +31:32:43 | 300 | 90 | 3.0 | #2 SN Observat | 2 | clouds! |
| 0091.2M002533.1p682141 | 720 | 1:49 | 00:25:33.1 | +68:21:41 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | possible sup *; gal has em |
| 0092.COMP | 10 | 1:49 | 00:25:33.1 | +68:21:41 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0093.2M003241.9p531644 | 300 | 1:49 | 00:32:41.9 | +53:16:44 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0094.COMP | 5 | 1:49 | 00:32:41.9 | +53:16:44 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0095.BGGem | 300 | 1:49 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0096.BGGem | 540 | 1:49 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | stopped by clouds |
| 0097.COMP | 10 | 1:49 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0098-0107.BIAS | 0 | 11:54 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9508

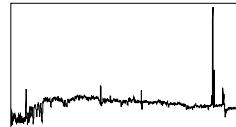
UT Date 2001-09-12 Observers P BerlindColl. Focus 1000 Grating/Grism 300

| <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> |
|----------------|-----------------|-----------------|-----------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0108-0117.FLAT | 8 | 11:57 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0118-0127.BIAS | 0 | 12:00 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0128-0137.FLAT | 16 | 12:06 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9508

UT Date 2001-09-15 Observers M Calkins

Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|-------------------|
| 0001.DARK | 900 | 1:04 | 17:31:17.2 | 31:30:14 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0002.DARK | 900 | 1:04 | 17:46:28.2 | 31:30:12 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0003.DARK | 900 | 1:04 | 18:01:36.2 | 31:30:10 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0004.DARK | 900 | 1:04 | 18:16:47.2 | 31:30:08 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0005.DARK | 900 | 1:04 | 18:31:55.2 | 31:30:07 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0006.DARK | 900 | 1:04 | 18:47:06.1 | 31:30:05 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0007.DARK | 900 | 1:04 | 19:02:14.1 | 31:30:03 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0008.DARK | 900 | 1:04 | 19:17:25.1 | 31:30:02 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0009.DARK | 900 | 1:04 | 19:32:34.1 | 31:30:00 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0010.DARK | 900 | 1:04 | 19:47:45.0 | 31:29:59 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0011-0020.BIAS | 0 | 3:38 | 19:51:05.0 | 31:29:59 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0021-0028.FLAT | 6 | 4:11 | 20:24:22.9 | 31:29:57 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0029-0030.FLAT | 6 | 4:12 | 20:24:52.9 | 31:29:56 | 300 | 90 | 3.0 | #100 BGGem | 4 | |
| 0031-0040.BIAS | 0 | 4:14 | 20:27:37.9 | 31:29:56 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0041-0050.FLAT | 12 | 4:19 | 20:31:57.9 | 31:29:56 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0051.Feige24 | 240 | 4:19 | 02:32:31 | 03:30:51 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0052.COMP | 5 | 4:19 | 02:32:31 | 03:30:51 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0053.Feige24 | 240 | 4:19 | 02:32:31 | 03:30:51 | 300 | -18 | 3.0 | #56 Spectropho | 2 | marginal humidity |
| 0054.COMP | 12 | 4:19 | 02:32:31 | 03:30:51 | 300 | -18 | 3.0 | #56 Spectropho | 2 | |
| 0055.sn2001eh | 1200 | 4:19 | 01:38:12.1 | 41:39:18 | 300 | -31 | 3.0 | #2 SN Observat | 2 | row=83 |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9509

UT Date 2001-09-15 Observers M CalkinsColl. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|--------------------|
| 0056.COMP | 12 | 4:19 | 01:38:12.1 | 41:39:18 | 300 | -31 | 3.0 | #2 SN Observat | 2 | |
| 0057.sn2001ec | 900 | 4:19 | 02:12:00.4 | 31:32:43 | 300 | 87 | 3.0 | #2 SN Observat | 2 | |
| 0058.sn2001ec | 900 | 4:19 | 02:12:00.4 | 31:32:43 | 300 | 87 | 3.0 | #2 SN Observat | 2 | |
| 0059.COMP | 12 | 4:19 | 02:12:00.4 | 31:32:43 | 300 | 87 | 3.0 | #2 SN Observat | 2 | |
| 0060.a119c_471 | 1200 | 4:19 | 00:51:58.8 | -3:01:26 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0061.COMP | 5 | 4:19 | 00:51:58.8 | -3:01:26 | 300 | 90 | 3.0 | #64 Cluster In | 4 | close for humidity |
| 0062-0071.BIAS | 0 | 12:01 | 01:01:17.9 | -2:42:58 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0072-0081.FLAT | 6 | 12:04 | 01:01:17.9 | -2:42:58 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0082-0091.BIAS | 0 | 12:07 | 01:01:17.9 | -2:42:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0092-0101.FLAT | 12 | 12:12 | 01:01:17.9 | -2:42:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0102-0111.DARK | 900 | 14:37 | 01:01:17.9 | -2:42:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9509

UT Date 2001-09-17 Observers P Berlind

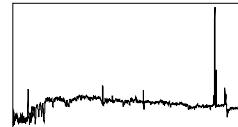
Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|------------------------------------|
| 0001-0012.BIAS | 0 | 1:47 | 18:07:10.2 | 31:30:10 | 600 | 90 | 2.0 | Function | 2 | |
| 0013-0020.BIAS | 0 | 1:48 | 18:08:58.2 | 31:30:09 | 600 | 90 | 2.0 | Function | 2 | |
| 0021.FLAT | 30 | 1:48 | 18:09:42.2 | 31:30:09 | 600 | 90 | 2.0 | Function | 2 | message from massfunc PIs: |
| 0022-0026.FLAT | 30 | 1:52 | 18:13:23.2 | 31:30:09 | 600 | 90 | 2.0 | Function | 2 | |
| 0027-0036.FLAT | 30 | 2:00 | 18:20:41.2 | 31:30:08 | 600 | 90 | 2.0 | Function | 2 | |
| 0037-0040.FLAT | 30 | 2:02 | 18:23:35.2 | 31:30:07 | 600 | 90 | 2.0 | Function | 2 | |
| 0041.BIAS | 0 | 2:02 | 18:43:55.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 4 | none of our objects are observable |
| 0042-0050.BIAS | 0 | 2:24 | 18:45:09.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0051-0060.FLAT | 8 | 2:27 | 18:47:54.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0061.BIAS | 0 | 2:27 | 18:51:39.1 | 31:30:04 | 300 | 90 | 3.0 | #57 Velocity S | 2 | switch to combo observing |
| 0062-0070.BIAS | 0 | 2:33 | 18:53:41.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0071.FLAT | 16 | 2:33 | 18:54:15.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 2 | clearing an hour after sunset |
| 0072.FLAT | 16 | 2:33 | 18:54:46.1 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0073-0080.FLAT | 16 | 2:38 | 18:58:45.1 | 31:30:04 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0081.2M204854.3m082708 | 480 | 2:38 | 20:48:54.3 | -08:27:08 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0082.COMP | 5 | 2:38 | 20:48:54.3 | -08:27:08 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0083.2M205102.1m085756 | 600 | 2:38 | 20:51:02.1 | -08:57:56 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0084.COMP | 5 | 2:38 | 20:51:02.1 | -08:57:56 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0085.2M205148.6m074326 | 300 | 2:38 | 20:51:48.6 | -07:43:26 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0086.COMP | 5 | 2:38 | 20:51:48.6 | -07:43:26 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9510

UT Date 2001-09-17 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0087.2M205728.3m081824 | 420 | 2:38 | 20:57:28.3 | -08:18:24 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0088.COMP | 5 | 2:38 | 20:57:28.3 | -08:18:24 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0089.2M210725.4m082032 | 240 | 2:38 | 21:07:25.4 | -08:20:32 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0090.COMP | 5 | 2:38 | 21:07:25.4 | -08:20:32 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0091.2M210949.8m085053 | 210 | 2:38 | 21:09:49.8 | -08:50:53 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0092.COMP | 5 | 2:38 | 21:09:49.8 | -08:50:53 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0093.2M211209.9m082747 | 210 | 2:38 | 21:12:09.9 | -08:27:47 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0094.COMP | 5 | 2:38 | 21:12:09.9 | -08:27:47 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0095.2M211816.0m073507 | 360 | 2:38 | 21:18:16.0 | -07:35:07 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0096.COMP | 5 | 2:38 | 21:18:16.0 | -07:35:07 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0097.2M211454.2m072427 | 240 | 2:38 | 21:14:54.2 | -07:24:27 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0098.COMP | 5 | 2:38 | 21:14:54.2 | -07:24:27 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0099.2M211422.6m085939 | 240 | 2:38 | 21:14:22.6 | -08:59:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0100.COMP | 5 | 2:38 | 21:14:22.6 | -08:59:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0101.2M211407.0p014633 | 210 | 2:38 | 21:14:08.0 | +01:46:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0102.COMP | 5 | 2:38 | 21:14:08.0 | +01:46:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0103.2M211917.4m043351 | 210 | 2:38 | 21:19:17.4 | -04:33:51 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0104.COMP | 5 | 2:38 | 21:19:17.4 | -04:33:51 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0105.2M222944.8p075918 | 210 | 2:38 | 22:29:44.8 | +07:59:18 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0106.COMP | 5 | 2:38 | 22:29:44.8 | +07:59:18 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9511

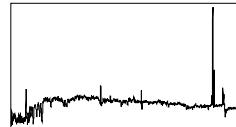
UT Date 2001-09-17 Observers P BerlindColl. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0107.MRK509 | 180 | 2:38 | 20:44:09.8 | -10:43:24 | 300 | 7 | 3.0 | #6 AGN Monitor | 4 | |
| 0108.MRK509 | 180 | 2:38 | 20:44:09.8 | -10:43:24 | 300 | 7 | 3.0 | #6 AGN Monitor | 4 | |
| 0109.COMP | 5 | 2:38 | 20:44:09.8 | -10:43:24 | 300 | 7 | 3.0 | #6 AGN Monitor | 4 | |
| 0110.id2540 | 600 | 2:38 | 20:04:09.0 | 35:50:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0111.COMP | 5 | 2:38 | 20:04:09.0 | 35:50:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0112.id1227 | 600 | 2:38 | 20:07:13.8 | 35:50:07 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0113.id1113 | 600 | 2:38 | 20:07:24.0 | 35:41:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0114.COMP | 5 | 2:38 | 20:07:24.0 | 35:41:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0115.id1736 | 720 | 2:38 | 20:06:10.8 | 35:45:00 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0116.id1929 | 720 | 2:38 | 20:05:50.0 | 35:48:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0117.COMP | 5 | 2:38 | 20:05:50.0 | 35:48:52 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0118.BDp284211 | 60 | 2:38 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0119.BDp284211 | 60 | 2:38 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0120.COMP | 10 | 2:38 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0121.id1469 | 720 | 2:38 | 20:06:45.5 | 35:47:25 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0122.id1454 | 600 | 2:38 | 20:06:47.8 | 35:52:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0123.COMP | 10 | 2:38 | 20:06:47.8 | 35:52:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0124.id2524 | 720 | 2:38 | 20:04:11.7 | 35:46:50 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0125.id1822 | 720 | 2:38 | 20:06:00.9 | 35:42:17 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0126.COMP | 10 | 2:38 | 20:06:00.9 | 35:42:17 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9512

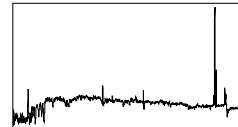
UT Date 2001-09-17 Observers P BerlindColl. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0127.Akn564 | 240 | 2:38 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 4 | |
| 0128.Akn564 | 240 | 2:38 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 4 | |
| 0129.COMP | 5 | 2:38 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 4 | |
| 0130.N7469 | 150 | 2:38 | 23:03:15.7 | +08:52:27 | 300 | 11 | 3.0 | #6 AGN Monitor | 4 | |
| 0131.N7469 | 150 | 2:38 | 23:03:15.7 | +08:52:27 | 300 | 11 | 3.0 | #6 AGN Monitor | 4 | |
| 0132.COMP | 5 | 2:38 | 23:03:15.7 | +08:52:27 | 300 | 11 | 3.0 | #6 AGN Monitor | 4 | |
| 0133.Feige110 | 120 | 2:38 | 23:17:23.5 | -05:26:22 | 300 | 5 | 3.0 | #56 Spectropho | 4 | |
| 0134.COMP | 5 | 2:38 | 23:17:23.5 | -05:26:22 | 300 | 5 | 3.0 | #56 Spectropho | 4 | |
| 0135.2M233743.3m003104 | 330 | 2:38 | 23:37:43.3 | -00:31:04 | 300 | 5 | 3.0 | #68 2MASS Reds | 4 | |
| 0136.COMP | 5 | 2:38 | 23:37:43.3 | -00:31:04 | 300 | 5 | 3.0 | #68 2MASS Reds | 4 | |
| 0137.MRK335 | 120 | 2:38 | 00:06:19.6 | +20:12:11 | 300 | -20 | 3.0 | #6 AGN Monitor | 4 | |
| 0138.MRK335 | 120 | 2:38 | 00:06:19.6 | +20:12:11 | 300 | -20 | 3.0 | #6 AGN Monitor | 4 | |
| 0139.COMP | 5 | 2:38 | 00:06:19.6 | +20:12:11 | 300 | -20 | 3.0 | #6 AGN Monitor | 4 | |
| 0140.ZAnd | 2 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0141.ZAnd | 1 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0142.ZAnd | 5 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0143.ZAnd | 10 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0144.ZAnd | 15 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0145.COMP | 5 | 2:38 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0146.ch2235p34 | 720 | 2:38 | 22:35:33.8 | 34:02:18 | 300 | 90 | 3.0 | #129 CHAMP Sou | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9513

UT Date 2001-09-17 Observers P Berlind

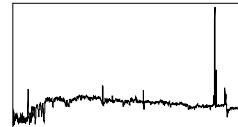
Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0147.COMP | 5 | 2:38 | 22:35:33.8 | 34:02:18 | 300 | 90 | 3.0 | #129 CHAMP Sou | 4 | |
| 0148.ch2236p33 | 1200 | 2:38 | 22:36:06.7 | 33:56:25 | 300 | 90 | 3.0 | #129 CHAMP Sou | 4 | |
| 0149.COMP | 5 | 2:38 | 22:36:06.7 | 33:56:25 | 300 | 90 | 3.0 | #129 CHAMP Sou | 4 | |
| 0150.a168_041 | 330 | 2:38 | 01:13:32.0 | -2:08:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0151.COMP | 5 | 2:38 | 01:13:32.0 | -2:08:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0152.a168_042 | 300 | 2:38 | 01:20:00.4 | -0:28:26 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0153.COMP | 5 | 2:38 | 01:20:00.4 | -0:28:26 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0154.a168_043 | 300 | 2:38 | 01:16:59.5 | 0:19:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0155.COMP | 5 | 2:38 | 01:16:59.5 | 0:19:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0156.a168_047 | 480 | 2:38 | 01:20:53.9 | -1:19:50 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0157.COMP | 5 | 2:38 | 01:20:53.9 | -1:19:50 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0158.a168_048 | 300 | 2:38 | 01:15:16.7 | 0:11:08 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0159.COMP | 5 | 2:38 | 01:15:16.7 | 0:11:08 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0160.a168_050 | 240 | 2:38 | 01:15:31.2 | 0:17:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0161.COMP | 5 | 2:38 | 01:15:31.2 | 0:17:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0162.a168_080 | 360 | 2:38 | 01:15:31.8 | 0:17:22 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0163.COMP | 5 | 2:38 | 01:15:31.8 | 0:17:22 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0164.a168_051 | 600 | 2:38 | 01:09:41.8 | 1:09:16 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0165.COMP | 5 | 2:38 | 01:09:41.8 | 1:09:16 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0166.sn2001eh | 1200 | 2:38 | 01:38:12.1 | 41:39:18 | 300 | 0 | 3.0 | #2 SN Observat | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9514

UT Date 2001-09-17 Observers P Berlind

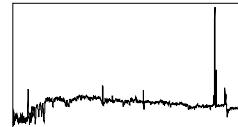
Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0167.COMP | 10 | 2:38 | 01:38:12.1 | 41:39:18 | 300 | 0 | 3.0 | #2 SN Observat | 2 | |
| 0168.2M003858.6p592756 | 210 | 2:38 | 00:38:58.6 | +59:27:56 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | ref neb |
| 0169.COMP | 5 | 2:38 | 00:38:58.6 | +59:27:56 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0170.2M004955.6p654339 | 900 | 2:38 | 00:49:55.6 | +65:43:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0171.COMP | 5 | 2:38 | 00:49:55.6 | +65:43:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0172.2M005441.5p554623 | 210 | 2:38 | 00:54:41.5 | +55:46:23 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0173.COMP | 5 | 2:38 | 00:54:41.5 | +55:46:23 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0174.2M005842.1p562833 | 420 | 2:38 | 00:58:42.1 | +56:28:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0175.COMP | 5 | 2:38 | 00:58:42.1 | +56:28:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0176.2M010215.4p594823 | 270 | 2:38 | 01:02:15.4 | +59:48:23 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0177.COMP | 5 | 2:38 | 01:02:15.4 | +59:48:23 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0178.2M010330.2p563028 | 180 | 2:38 | 01:03:30.2 | +56:30:28 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0179.COMP | 5 | 2:38 | 01:03:30.2 | +56:30:28 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0180.2M011636.7p645042 | 300 | 2:38 | 01:16:36.7 | +64:50:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0181.COMP | 5 | 2:38 | 01:16:36.7 | +64:50:42 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0182.2M011926.7p583114 | 330 | 2:38 | 01:19:26.7 | +58:31:14 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0183.COMP | 5 | 2:38 | 01:19:26.7 | +58:31:14 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0184.2M012023.0p580136 | 180 | 2:38 | 01:20:24.0 | +58:01:36 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0185.COMP | 5 | 2:38 | 01:20:24.0 | +58:01:36 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0186.2M012706.1p582633 | 180 | 2:38 | 01:27:06.1 | +58:26:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9515

UT Date 2001-09-17 Observers P Berlind

Coll. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-------------------|
| 0187.COMP | 5 | 2:38 | 01:27:06.1 | +58:26:33 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0188.2M013150.4p710328 | 180 | 2:38 | 01:31:50.4 | +71:03:28 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0189.COMP | 5 | 2:38 | 01:31:50.4 | +71:03:28 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0190.2M013430.2p664125 | 120 | 2:38 | 01:34:30.2 | +66:41:25 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | sup * |
| 0191.2M014640.9p575407 | 210 | 2:38 | 01:46:40.9 | +57:54:07 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0192.COMP | 5 | 2:38 | 01:46:40.9 | +57:54:07 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0193.2M014651.7p661839 | 720 | 2:38 | 01:46:51.7 | +66:18:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | hmmm, H+K @ 5300? |
| 0194.COMP | 5 | 2:38 | 01:46:51.7 | +66:18:39 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0195.2M015325.9p711506 | 210 | 2:38 | 01:53:25.9 | +71:15:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0196.COMP | 5 | 2:38 | 01:53:25.9 | +71:15:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0197.2M015516.9p711306 | 360 | 2:38 | 01:55:16.9 | +71:13:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0198.COMP | 5 | 2:38 | 01:55:16.9 | +71:13:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0199.2M015755.0p572606 | 210 | 2:38 | 01:57:55.0 | +57:26:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0200.COMP | 5 | 2:38 | 01:57:55.0 | +57:26:06 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0201.2M015927.6p660624 | 720 | 2:38 | 01:59:27.6 | +66:06:24 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0202.COMP | 5 | 2:38 | 01:59:27.6 | +66:06:24 | 300 | 90 | 3.0 | #68 2MASS Reds | 4 | |
| 0203.BGGem | 1200 | 2:38 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0204.BGGem | 300 | 2:38 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0205.COMP | 10 | 2:38 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | #100 BGGem | 2 | |
| 0206.Akn120 | 150 | 2:38 | 05:13:38.0 | -00:12:15 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9516

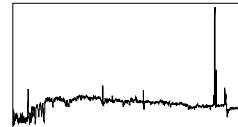
UT Date 2001-09-17 Observers P BerlindColl. Focus 1000 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|--------------|
| 0207.Akn120 | 150 | 2:38 | 05:13:38.0 | -00:12:15 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |
| 0208.COMP | 5 | 2:38 | 05:13:38.0 | -00:12:15 | 300 | 0 | 3.0 | #6 AGN Monitor | 4 | |
| 0209.HD52971 | 3 | 2:38 | 06:57:51 | +27:13:42 | 300 | 0 | 3.0 | #57 Velocity S | 4 | |
| 0210.HD52971 | 3 | 2:38 | 06:57:51 | +27:13:42 | 300 | 0 | 3.0 | #57 Velocity S | 4 | |
| 0211.HD52971 | 3 | 2:38 | 06:57:51 | +27:13:42 | 300 | 0 | 3.0 | #57 Velocity S | 4 | |
| 0212.COMP | 5 | 2:38 | 06:57:51 | +27:13:42 | 300 | 0 | 3.0 | #57 Velocity S | 4 | |
| 0213.BIAS | 0 | 2:38 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 4 | clear @ dawn |
| 0214-0222.BIAS | 0 | 12:27 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0223-0232.FLAT | 8 | 12:29 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0233-0242.BIAS | 0 | 12:32 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0243-0252.FLAT | 16 | 12:37 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0253-0262.DARK | 900 | 14:56 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9516

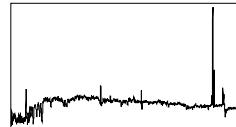
UT Date 2001-09-18 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-----------------------------------|
| 0001-0009.DARK | 1200 | 0:29 | 06:57:51 | +27:13:42 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0010.BIAS | 0 | 0:29 | 17:44:45.2 | 31:30:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | clear skies!! |
| 0011.FLAT | 55 | 0:29 | 17:46:29.2 | 31:30:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | yes: 600-line grating; 2-sec slit |
| 0012-0016.FLAT | 55 | 1:27 | 17:52:12.2 | 31:30:10 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0017.FLAT | 55 | 1:27 | 17:53:21.2 | 31:30:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0018-0020.FLAT | 55 | 1:31 | 17:56:46.2 | 31:30:10 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0021.HD143107 | 40 | 1:31 | 15:57:35.2 | 26:52:40 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0022.HD143107 | 40 | 1:31 | 15:57:35.2 | 26:52:40 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0023.COMP | 20 | 1:31 | 15:57:35.2 | 26:52:40 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0024.HD145457 | 45 | 1:31 | 16:10:03.9 | 26:44:33 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0025.HD145457 | 45 | 1:31 | 16:10:03.9 | 26:44:33 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0026.COMP | 20 | 1:31 | 16:10:03.9 | 26:44:33 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0027.HD147025 | 90 | 1:31 | 16:18:23.7 | 25:53:48 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0028.HD147025 | 60 | 1:31 | 16:18:23.7 | 25:53:48 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0029.COMP | 20 | 1:31 | 16:18:23.7 | 25:53:48 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0030.HD147677 | 90 | 1:31 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0031.HD147677 | 80 | 1:31 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0032.COMP | 20 | 1:31 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0033.HD152224 | 60 | 1:31 | 16:50:43.1 | 32:33:13 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0034.HD152224 | 60 | 1:31 | 16:50:43.1 | 32:33:13 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9517

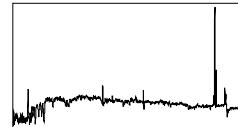
UT Date 2001-09-18 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0035.COMP | 20 | 1:31 | 16:50:43.1 | 32:33:13 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0036.HD153312 | 60 | 1:31 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0037.HD153312 | 60 | 1:31 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0038.COMP | 20 | 1:31 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0039.COMP | 20 | 1:31 | 16:32:58.9 | 23:11:50 | 600 | 90 | 2.0 | #88 Mass Funct | 2 | |
| 0040.MF7007 | 900 | 1:31 | 16:32:58.9 | 23:11:50 | 600 | 70 | 2.0 | #88 Mass Funct | 2 | |
| 0041.MF7007 | 900 | 1:31 | 16:32:58.9 | 23:11:50 | 600 | 70 | 2.0 | #88 Mass Funct | 2 | |
| 0042.MF7007 | 900 | 1:31 | 16:32:58.9 | 23:11:50 | 600 | 70 | 2.0 | #88 Mass Funct | 2 | |
| 0043.COMP | 20 | 1:31 | 16:32:58.9 | 23:11:50 | 600 | 70 | 2.0 | #88 Mass Funct | 2 | |
| 0044.COMP | 20 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 70 | 2.0 | #88 Mass Funct | 2 | |
| 0045.MF7037 | 1200 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0046.MF7037 | 1200 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0047.COMP | 20 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0048.MF7037 | 1200 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0049.MF7037 | 1200 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0050.COMP | 20 | 1:31 | 18:02:45.7 | 26:14:12 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0051.BIAS | 0 | 1:31 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | 10 bias |
| 0052-0060.BIAS | 0 | 4:50 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0061.HD192281 | 5 | 4:50 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0062.HD192281 | 5 | 4:50 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9518

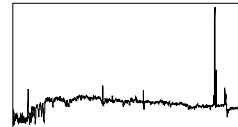
UT Date 2001-09-18 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|--|
| 0063.HD192281 | 5 | 4:50 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0064.COMP | 20 | 4:50 | 20:10:46.8 | 40:07:01 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0065.BDp284211 | 90 | 4:50 | 21:48:57.1 | 28:37:48 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0066.BDp284211 | 90 | 4:50 | 21:48:57.1 | 28:37:48 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0067.COMP | 20 | 4:50 | 21:48:57.1 | 28:37:48 | 600 | 80 | 2.0 | #88f Mass Func | 2 | |
| 0068.COMP | 20 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | 80 | 2.0 | #88 Mass Funct | 2 | |
| 0069.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | file 71 is ok, fifo/binning shifted position |
| 0070.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0071.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0072.COMP | 20 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0073.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0074.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0075.MF3145 | 900 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0076.COMP | 10 | 4:50 | 23:13:12.0 | 16:46:17 | 600 | -60 | 2.0 | #88 Mass Funct | 2 | |
| 0077.NGC7331 | 180 | 4:50 | 22:34:46.6 | 34:09:20 | 600 | -9 | 2.0 | #88f Mass Func | 2 | |
| 0078.NGC7331 | 180 | 4:50 | 22:34:46.6 | 34:09:20 | 600 | -9 | 2.0 | #88f Mass Func | 2 | |
| 0079.COMP | 20 | 4:50 | 22:34:46.6 | 34:09:20 | 600 | -9 | 2.0 | #88f Mass Func | 2 | |
| 0080.M32 | 180 | 4:50 | 00:39:57.7 | 40:35:26 | 600 | -10 | 2.0 | #88f Mass Func | 2 | |
| 0081.M32 | 180 | 4:50 | 00:39:57.7 | 40:35:26 | 600 | -10 | 2.0 | #88f Mass Func | 2 | |
| 0082.COMP | 20 | 4:50 | 00:39:57.7 | 40:35:26 | 600 | -10 | 2.0 | #88f Mass Func | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9519

UT Date 2001-09-18 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0083.COMP | 20 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | -10 | 2.0 | #88 Mass Funct | 2 | |
| 0084.MF2015 | 1200 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0085.MF2015 | 1200 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0086.COMP | 20 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0087.MF2015 | 1200 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0088.MF2015 | 1200 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0089.COMP | 20 | 4:50 | 00:06:40.1 | 26:09:16 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0090.COMP | 20 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 8 | 2.0 | #88 Mass Funct | 2 | |
| 0091.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0092.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0093.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0094.COMP | 20 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0095.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0096.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0097.MF2104 | 900 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0098.COMP | 20 | 4:50 | 00:42:48.9 | 23:29:24 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0099.COMP | 20 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 53 | 2.0 | #88 Mass Funct | 2 | |
| 0100.MF2176 | 900 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |
| 0101.MF2176 | 900 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |
| 0102.COMP | 20 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9520

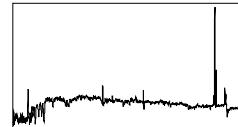
UT Date 2001-09-18 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|---------------|
| 0103.MF2176 | 900 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |
| 0104.MF2176 | 900 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |
| 0105.COMP | 20 | 4:50 | 01:12:00.5 | 17:18:34 | 600 | 55 | 2.0 | #88 Mass Funct | 2 | |
| 0106.MF2297 | 900 | 4:50 | 01:55:36.5 | 21:19:03 | 600 | -88 | 2.0 | #88 Mass Funct | 2 | |
| 0107.MF2297 | 900 | 4:50 | 01:55:36.5 | 21:19:03 | 600 | -88 | 2.0 | #88 Mass Funct | 2 | |
| 0108.MF2297 | 900 | 4:50 | 01:55:36.5 | 21:19:03 | 600 | -88 | 2.0 | #88 Mass Funct | 2 | |
| 0109.COMP | 20 | 4:50 | 01:55:36.5 | 21:19:03 | 600 | -88 | 2.0 | #88 Mass Funct | 2 | |
| 0110.NGC1023 | 180 | 4:50 | 02:37:15.8 | 38:50:55 | 600 | 92 | 2.0 | #88f Mass Func | 2 | |
| 0111.NGC1023 | 180 | 4:50 | 02:37:15.8 | 38:50:55 | 600 | 92 | 2.0 | #88f Mass Func | 2 | |
| 0112.COMP | 20 | 4:50 | 02:37:15.8 | 38:50:55 | 600 | 92 | 2.0 | #88f Mass Func | 2 | |
| 0113.HZ14 | 300 | 4:50 | 04:38:15.6 | 10:53:57 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0114.COMP | 20 | 4:50 | 04:38:15.6 | 10:53:57 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0115.HD27371 | 45 | 4:50 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #88f Mass Func | 2 | |
| 0116.HD27371 | 30 | 4:50 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #88f Mass Func | 2 | |
| 0117.COMP | 20 | 4:50 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #88f Mass Func | 2 | clear @ dawn! |
| 0118-0127.BIAS | 0 | 12:28 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0128-0137.FLAT | 55 | 12:39 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0138-0142.DARK | 1200 | 14:15 | 04:19:47.6 | 15:37:39 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9520

UT Date 2001-09-19 Observers P Berlind

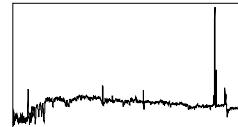
Coll. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------------------|
| 0001.BIAS | 0 | 22:32 | 14:59:43.8 | 31:30:31 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0002.BIAS | 1 | 22:32 | 15:00:00.8 | 31:30:31 | 600 | 0 | 2.0 | #56 Spectropho | 2 | |
| 0003.DARK | 1200 | 22:32 | 16:34:14.1 | 31:30:20 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0004.DARK | 1200 | 22:32 | 16:54:30.1 | 31:30:17 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0005.DARK | 1200 | 22:32 | 17:14:48.1 | 31:30:15 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0006.DARK | 1200 | 22:32 | 17:35:04.2 | 31:30:12 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0007.BIAS | 0 | 22:32 | 17:35:47.2 | 31:30:12 | 600 | 90 | 2.0 | #56 Spectropho | 2 | 600-line; 2-sec slit |
| 0008-0025.BIAS | 0 | 1:12 | 17:40:16.2 | 31:30:12 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0026-0030.BIAS | 0 | 1:13 | 17:41:26.2 | 31:30:11 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0031.FLAT | 55 | 1:13 | 17:42:48.2 | 31:30:11 | 600 | 90 | 2.0 | #56 Spectropho | 2 | tilt=494; abs setup |
| 0032-0034.FLAT | 55 | 1:17 | 17:46:16.2 | 31:30:11 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0035.FLAT | 55 | 1:17 | 17:47:26.2 | 31:30:10 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0036-0040.FLAT | 55 | 1:24 | 17:53:09.2 | 31:30:11 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0041-0046.FLAT | 55 | 1:31 | 18:00:04.2 | 31:30:10 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0047-0050.FLAT | 55 | 1:35 | 18:04:38.2 | 31:30:09 | 600 | 90 | 2.0 | #56 Spectropho | 2 | |
| 0051.HD147677 | 40 | 1:35 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0052.HD147677 | 40 | 1:35 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0053.COMP | 20 | 1:35 | 16:22:05.8 | 30:53:31 | 600 | 90 | 2.0 | #88f Mass Func | 2 | clear skies! |
| 0054.HD153312 | 50 | 1:35 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0055.HD153312 | 50 | 1:35 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9521

UT Date 2001-09-19 Observers P Berlind

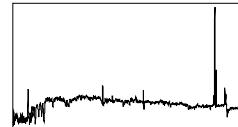
Coll. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|------------|----------|-----|------|------|----------------|-----|--------------------|
| 0056.COMP | 20 | 1:35 | 16:57:42.3 | 24:22:52 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0057.HD154084 | 45 | 1:35 | 17:02:18.7 | 25:30:20 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0058.HD154084 | 45 | 1:35 | 17:02:18.7 | 25:30:20 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0059.COMP | 20 | 1:35 | 17:02:18.7 | 25:30:20 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0060.HD155344 | 60 | 1:35 | 17:09:56.9 | 26:27:19 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0061.HD155344 | 60 | 1:35 | 17:09:56.9 | 26:27:19 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0062.COMP | 20 | 1:35 | 17:09:56.9 | 26:27:19 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0063.HD156874 | 45 | 1:35 | 17:18:48.5 | 28:49:22 | 600 | 90 | 2.0 | #88f Mass Func | 2 | DOME FAILURE AGAIN |
| 0064.HD156874 | 45 | 1:35 | 17:18:48.5 | 28:49:22 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0065.COMP | 20 | 1:35 | 17:18:48.5 | 28:49:22 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0066.HD192281 | 5 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | run dome manually |
| 0067.HD192281 | 5 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0068.HD192281 | 5 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0069.HD192281 | 5 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0070.HD192281 | 5 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0071.COMP | 20 | 1:35 | 20:10:46.8 | 40:07:01 | 600 | 90 | 2.0 | #88f Mass Func | 2 | |
| 0072.COMP | 20 | 1:35 | 16:18:33.3 | 43:04:53 | 600 | 90 | 2.0 | #88 Mass Funct | 2 | |
| 0073.MF4088 | 900 | 1:35 | 16:18:33.3 | 43:04:53 | 600 | 30 | 2.0 | #88 Mass Funct | 2 | |
| 0074.MF4088 | 900 | 1:35 | 16:18:33.3 | 43:04:53 | 600 | 30 | 2.0 | #88 Mass Funct | 2 | |
| 0075.MF4088 | 900 | 1:35 | 16:18:33.3 | 43:04:53 | 600 | 30 | 2.0 | #88 Mass Funct | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9522

UT Date 2001-09-19 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|------------------------|
| 0076.COMP | 20 | 1:35 | 16:18:33.3 | 43:04:53 | 600 | 30 | 2.0 | #88 Mass Funct | 2 | |
| 0077.COMP | 20 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0078.MF0088 | 900 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0079.MF0088 | 900 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0080.COMP | 20 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0081.MF0088 | 900 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0082.MF0088 | 900 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0083.COMP | 20 | 1:35 | 17:42:50.7 | 16:12:50 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0084.COMP | 20 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -37 | 2.0 | #88 Mass Funct | 2 | |
| 0085.MF7060 | 900 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0086.MF7060 | 900 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0087.COMP | 20 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0088.MF7060 | 900 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | ok, dome working again |
| 0089.MF7060 | 900 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0090.COMP | 20 | 1:35 | 18:35:58.5 | 51:27:32 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0091.BDp284211 | 90 | 1:35 | 21:48:57.1 | 28:37:48 | 600 | -80 | 2.0 | #88f Mass Func | 2 | |
| 0092.BDp284211 | 90 | 1:35 | 21:48:57.1 | 28:37:48 | 600 | -80 | 2.0 | #88f Mass Func | 2 | |
| 0093.BDp284211 | 90 | 1:35 | 21:48:57.1 | 28:37:48 | 600 | -80 | 2.0 | #88f Mass Func | 2 | |
| 0094.COMP | 20 | 1:35 | 21:48:57.1 | 28:37:48 | 600 | -80 | 2.0 | #88f Mass Func | 2 | |
| 0095.COMP | 20 | 1:35 | 00:12:15.7 | 22:19:18 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9523

UT Date 2001-09-19 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|--------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0096.MF2024 | 900 | 1:35 | 00:12:15.7 | 22:19:18 | 600 | -73 | 2.0 | #88 Mass Funct | 2 | |
| 0097.MF2024 | 900 | 1:35 | 00:12:15.7 | 22:19:18 | 600 | -73 | 2.0 | #88 Mass Funct | 2 | |
| 0098.MF2024 | 900 | 1:35 | 00:12:15.7 | 22:19:18 | 600 | -73 | 2.0 | #88 Mass Funct | 2 | |
| 0099.COMP | 20 | 1:35 | 00:12:15.7 | 22:19:18 | 600 | -73 | 2.0 | #88 Mass Funct | 2 | |
| 0100.COMP | 20 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -73 | 2.0 | #88 Mass Funct | 2 | |
| 0101.MF2266 | 1200 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0102.MF2266 | 1200 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0103.COMP | 20 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0104.MF2266 | 1200 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0105.MF2266 | 1200 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0106.COMP | 20 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0107.MF2266 | 1200 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0108.COMP | 20 | 1:35 | 01:49:08.5 | 13:03:34 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0109.NGC0636 | 240 | 1:35 | 01:36:36.4 | -07:45:57 | 600 | -82 | 2.0 | #88f Mass Func | 2 | |
| 0110.NGC0636 | 240 | 1:35 | 01:36:36.4 | -07:45:57 | 600 | -82 | 2.0 | #88f Mass Func | 2 | |
| 0111.COMP | 20 | 1:35 | 01:36:36.4 | -07:45:57 | 600 | -82 | 2.0 | #88f Mass Func | 2 | |
| 0112.COMP | 20 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -82 | 2.0 | #88 Mass Funct | 2 | |
| 0113.MF2399 | 1200 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0114.MF2399 | 1200 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0115.COMP | 20 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9524

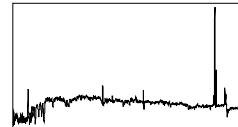
UT Date 2001-09-19 Observers P BerlindColl. Focus 1075 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|---------------|
| 0116.MF2399 | 1200 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0117.MF2399 | 1200 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0118.COMP | 20 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0119.MF2399 | 1200 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0120.COMP | 20 | 1:35 | 02:22:37.4 | 25:56:23 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0121.COMP | 20 | 1:35 | 01:51:45.4 | 33:32:14 | 600 | -80 | 2.0 | #88 Mass Funct | 2 | |
| 0122.MF2279 | 900 | 1:35 | 01:51:45.4 | 33:32:14 | 600 | 43 | 2.0 | #88 Mass Funct | 2 | |
| 0123.MF2279 | 900 | 1:35 | 01:51:45.4 | 33:32:14 | 600 | 43 | 2.0 | #88 Mass Funct | 2 | |
| 0124.MF2279 | 900 | 1:35 | 01:51:45.4 | 33:32:14 | 600 | 43 | 2.0 | #88 Mass Funct | 2 | |
| 0125.COMP | 20 | 1:35 | 01:51:45.4 | 33:32:14 | 600 | 43 | 2.0 | #88 Mass Funct | 2 | |
| 0126.COMP | 20 | 1:35 | 02:29:38.9 | 28:59:15 | 600 | 43 | 2.0 | #88 Mass Funct | 2 | |
| 0127.MF2441 | 900 | 1:35 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | |
| 0128.MF2441 | 900 | 1:35 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | |
| 0129.MF2441 | 900 | 1:35 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | |
| 0130.COMP | 20 | 1:35 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | clear @ dawn! |
| 0131-0140.BIAS | 0 | 12:22 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | |
| 0141-0150.FLAT | 55 | 12:32 | 02:29:38.9 | 28:59:15 | 600 | 83 | 2.0 | #88 Mass Funct | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9523

UT Date 2001-09-20 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001.DARK | 900 | 1:12 | 17:59:20.2 | 31:30:10 | 300 | 90 | 3.0 | | 4 | |
| 0002.DARK | 900 | 1:12 | 18:14:30.2 | 31:30:07 | 300 | 90 | 3.0 | | 4 | |
| 0003.DARK | 900 | 1:12 | 18:29:41.2 | 31:30:06 | 300 | 90 | 3.0 | | 4 | |
| 0004-0013.BIAS | 0 | 1:59 | 18:31:08.2 | 31:30:06 | 300 | 90 | 3.0 | | 4 | |
| 0014-0023.FLAT | 6 | 2:01 | 18:34:02.2 | 31:30:06 | 300 | 90 | 3.0 | | 4 | |
| 0024-0033.BIAS | 0 | 2:04 | 18:36:30.2 | 31:30:05 | 300 | 90 | 3.0 | | 2 | |
| 0034-0042.FLAT | 12 | 2:08 | 18:41:02.1 | 31:30:05 | 300 | 90 | 3.0 | | 2 | |
| 0043.FLAT | 12 | 2:08 | 18:41:24.1 | 31:30:04 | 300 | 90 | 3.0 | | 2 | |
| 0044.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0045.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0046.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0047.COMP | 12 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0048.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0049.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0050.CygOB2no9 | 20 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0051.COMP | 5 | 2:08 | 20:31:23.0 | 41:04:50 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0052.BDp284211 | 30 | 2:08 | 21:48:57.1 | 28:37:48 | 300 | 106 | 3.0 | #56 Spectropho | 2 | |
| 0053.BDp284211 | 30 | 2:08 | 21:48:57.1 | 28:37:48 | 300 | 106 | 3.0 | #56 Spectropho | 2 | |
| 0054.COMP | 12 | 2:08 | 21:48:57.1 | 28:37:48 | 300 | 106 | 3.0 | #56 Spectropho | 2 | |
| 0055.MRK509 | 180 | 2:08 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9524

UT Date 2001-09-20 Observers M Calkins

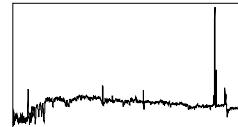
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-------------------|
| 0056.MRK509 | 180 | 2:08 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0057.COMP | 12 | 2:08 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0058.id1811 | 480 | 2:08 | 20:06:01.8 | 35:35:18 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | row=85 |
| 0059.COMP | 12 | 2:08 | 20:06:01.8 | 35:35:18 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0060.id2447 | 480 | 2:08 | 20:04:27.3 | 35:52:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0061.COMP | 12 | 2:08 | 20:04:27.3 | 35:52:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0062.id1053 | 600 | 2:08 | 20:07:29.5 | 35:46:02 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0063.COMP | 12 | 2:08 | 20:07:29.5 | 35:46:02 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0064.id1397 | 720 | 2:08 | 20:06:54.8 | 35:45:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0065.COMP | 12 | 2:08 | 20:06:54.8 | 35:45:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0066.id2029 | 900 | 2:08 | 20:05:36.3 | 35:45:06 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0067.COMP | 12 | 2:08 | 20:05:36.3 | 35:45:06 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0068.id2637 | 720 | 2:08 | 20:00:00.7 | 35:23:16 | 300 | 100 | 3.0 | #115 PMS NGC68 | 2 | rotate to isolate |
| 0069.COMP | 12 | 2:08 | 20:00:00.7 | 35:23:16 | 300 | 100 | 3.0 | #115 PMS NGC68 | 2 | |
| 0070.id1713 | 720 | 2:08 | 20:06:12.8 | 35:51:37 | 300 | 100 | 3.0 | #115 PMS NGC68 | 2 | |
| 0071.COMP | 12 | 2:08 | 20:06:12.8 | 35:51:37 | 300 | 100 | 3.0 | #115 PMS NGC68 | 2 | |
| 0072.id2216 | 720 | 2:08 | 20:05:11.6 | 35:37:54 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0073.COMP | 12 | 2:08 | 20:05:11.6 | 35:37:54 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0074.id2693 | 480 | 2:08 | 19:59:42.3 | 35:11:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0075.COMP | 12 | 2:08 | 19:59:42.3 | 35:11:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9525

UT Date 2001-09-20 Observers M Calkins

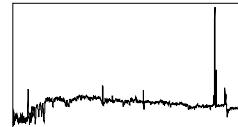
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0076.id2575 | 480 | 2:08 | 20:04:02.2 | 35:54:35 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0077.COMP | 12 | 2:08 | 20:04:02.2 | 35:54:35 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0078.id1568 | 540 | 2:08 | 20:06:29.5 | 35:41:28 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0079.COMP | 12 | 2:08 | 20:06:29.5 | 35:41:28 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0080.id2836 | 420 | 2:08 | 19:58:49.8 | 35:09:31 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0081.COMP | 12 | 2:08 | 19:58:49.8 | 35:09:31 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0082.ngcsh.1-99 | 480 | 2:08 | 21:52:18.8 | 62:24:40 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0083.COMP | 12 | 2:08 | 21:52:18.8 | 62:24:40 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0084.ngcsh.1-175 | 300 | 2:08 | 21:52:16.3 | 62:25:28 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | row=81 |
| 0085.COMP | 12 | 2:08 | 21:52:16.3 | 62:25:28 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0086.ngcsh.1-384 | 240 | 2:08 | 21:52:38.9 | 62:27:16 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0087.COMP | 12 | 2:08 | 21:52:38.9 | 62:27:16 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0088.ngcsh.1-506 | 300 | 2:08 | 21:52:21.9 | 62:28:14 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0089.COMP | 12 | 2:08 | 21:52:21.9 | 62:28:14 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0090.ngcsh.1-837 | 240 | 2:08 | 21:52:18.4 | 62:31:11 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0091.COMP | 12 | 2:08 | 21:52:18.4 | 62:31:11 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0092.ngcsh.1-1018 | 360 | 2:08 | 21:52:43.5 | 62:32:56 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0093.COMP | 12 | 2:08 | 21:52:43.5 | 62:32:56 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0094.ngcsh.2-21 | 420 | 2:08 | 21:54:49.3 | 62:24:03 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | row=82 |
| 0095.COMP | 12 | 2:08 | 21:54:49.3 | 62:24:03 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9526

UT Date 2001-09-20 Observers M Calkins

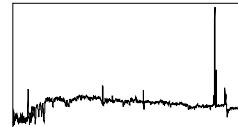
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|------------------|----------|----------|------------|----------|-----|------|------|----------------|-----|--------------------------|
| 0096.ngcsh.2-34 | 420 | 2:08 | 21:54:00.2 | 62:24:12 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0097.COMP | 12 | 2:08 | 21:54:00.2 | 62:24:12 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0098.ngcsh.2-854 | 300 | 2:08 | 21:55:01.7 | 62:32:52 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0099.COMP | 12 | 2:08 | 21:55:01.7 | 62:32:52 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0100.ngcsh.3-30 | 300 | 2:08 | 21:54:42.9 | 62:36:24 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0101.COMP | 12 | 2:08 | 21:54:42.9 | 62:36:24 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0102.ngcsh.3-107 | 360 | 2:08 | 21:54:55.8 | 62:37:11 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0103.COMP | 12 | 2:08 | 21:54:55.8 | 62:37:11 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0104.ngcsh.3-147 | 180 | 2:08 | 21:54:49.9 | 62:37:42 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0105.COMP | 12 | 2:08 | 21:54:49.9 | 62:37:42 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0106.ngcsh.3-448 | 300 | 2:08 | 21:54:28.9 | 62:41:15 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0107.COMP | 12 | 2:08 | 21:54:28.9 | 62:41:15 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0108.ngcsh.3-477 | 240 | 2:08 | 21:54:42.9 | 62:41:31 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0109.COMP | 12 | 2:08 | 21:54:42.9 | 62:41:31 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0110.ngcsh.3-623 | 270 | 2:08 | 21:54:42.5 | 62:43:10 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0111.COMP | 12 | 2:08 | 21:54:42.5 | 62:43:10 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0112.ngcsh.3-651 | 270 | 2:08 | 21:55:07.8 | 62:43:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0113.COMP | 12 | 2:08 | 21:55:07.8 | 62:43:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0114.ngcsh.3-655 | 240 | 2:08 | 21:55:07.8 | 62:43:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | 655 is NW of 651 and 660 |
| 0115.COMP | 12 | 2:08 | 21:55:07.8 | 62:43:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9527

UT Date 2001-09-20 Observers M Calkins

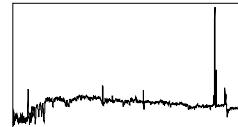
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0116.ngcsh.3-660 | 240 | 2:08 | 21:55:09.2 | 62:43:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0117.COMP | 12 | 2:08 | 21:55:09.2 | 62:43:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0118.ZAnd | 2 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0119.ZAnd | 10 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0120.ZAnd | 60 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0121.ZAnd | 1 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0122.ZAnd | 6 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0123.ZAnd | 17 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0124.COMP | 12 | 2:08 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0125.Akn564 | 240 | 2:08 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0126.Akn564 | 240 | 2:08 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0127.COMP | 12 | 2:08 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0128.N7469 | 150 | 2:08 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0129.N7469 | 150 | 2:08 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0130.COMP | 12 | 2:08 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0131.MRK335 | 120 | 2:08 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0132.MRK335 | 120 | 2:08 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0133.COMP | 12 | 2:08 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0134.sn2001eh | 1200 | 2:08 | 01:38:12.1 | 41:39:18 | 300 | 65 | 3.0 | #2 SN Observat | 2 | |
| 0135.COMP | 12 | 2:08 | 01:38:12.1 | 41:39:18 | 300 | 65 | 3.0 | #2 SN Observat | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9528

UT Date 2001-09-20 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0136.ch0018p16a | 1200 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0137.COMP | 12 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0138.ch0018p16a | 1200 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0139.COMP | 12 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0140.ch0018p16a | 1200 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0141.COMP | 12 | 2:08 | 00:18:10.1 | 16:29:43 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0142.ch0018p16b | 1200 | 2:08 | 00:18:31.9 | 16:29:26 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0143.COMP | 12 | 2:08 | 00:18:31.9 | 16:29:26 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0144.ch0101p31a | 1200 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0145.COMP | 12 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0146.ch0101p31a | 1200 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0147.COMP | 12 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0148.ch0101p31a | 1200 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0149.COMP | 12 | 2:08 | 01:01:42.7 | 31:46:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0150.a496_470 | 720 | 2:08 | 04:44:49.7 | -13:28:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0151.COMP | 12 | 2:08 | 04:44:49.7 | -13:28:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0152.a496_471 | 780 | 2:08 | 04:33:22.1 | -15:31:49 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0153.COMP | 12 | 2:08 | 04:33:22.1 | -15:31:49 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0154.a496_475 | 1200 | 2:08 | 04:39:06.1 | -13:48:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | row=82 |
| 0155.COMP | 12 | 2:08 | 04:39:06.1 | -13:48:58 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9529

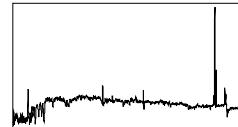
UT Date 2001-09-20 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0156.a496_472 | 1200 | 2:08 | 04:45:38.1 | -12:16:17 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0157.COMP | 12 | 2:08 | 04:45:38.1 | -12:16:17 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0158.sn2001ej | 1200 | 2:08 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #2 SN Observat | 2 | row=82 |
| 0159.COMP | 12 | 2:08 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #2 SN Observat | 2 | |
| 0160-0164.sky | 2 | 12:58 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0165.COMP | 5 | 12:58 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0166-0175.BIAS | 0 | 13:01 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0176-0185.FLAT | 6 | 13:04 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0186-0195.BIAS | 0 | 13:07 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 2 | |
| 0196-0205.FLAT | 12 | 13:11 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 2 | |
| 0206-0215.DARK | 900 | 15:45 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9530

UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.DARK | 900 | 1:45 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0011-0020.BIAS | 0 | 2:01 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0021-0030.FLAT | 6 | 2:04 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 4 | |
| 0031-0040.BIAS | 0 | 2:08 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 2 | |
| 0041-0050.FLAT | 12 | 2:12 | 07:23:43.2 | 33:26:38 | 300 | 99 | 3.0 | #57 Velocity S | 2 | |
| 0051.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0052.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0053.COMP | 5 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0054.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0055.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0056.COMP | 12 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0057.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 62 | 3.0 | #56 Spectropho | 2 | |
| 0058.HD192281 | 30 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 62 | 3.0 | #56 Spectropho | 2 | |
| 0059.COMP | 12 | 2:12 | 20:10:46.8 | 40:07:01 | 300 | 62 | 3.0 | #56 Spectropho | 2 | |
| 0060.Hen1341 | 10 | 2:12 | 17:08:36 | -17:26:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0061.Hen1341 | 30 | 2:12 | 17:08:36 | -17:26:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0062.Hen1341 | 5 | 2:12 | 17:08:36 | -17:26:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0063.Hen1341 | 90 | 2:12 | 17:08:36 | -17:26:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0064.COMP | 12 | 2:12 | 17:08:36 | -17:26:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0065.M1m21 | 15 | 2:12 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=85 |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9531

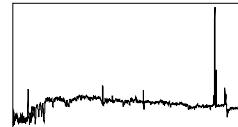
UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|---------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|------------------------------------|
| 0066.M1m21 | 300 | 2:12 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0067.M1m21 | 30 | 2:12 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0068.COMP | 12 | 2:12 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | From this file until file 99, comp |
| 0069.UUSer | 120 | 2:12 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | mirror is not functioning. |
| 0070.UUSer | 600 | 2:12 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | Will get these stars again. |
| 0071.UUSer | 60 | 2:12 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0072.COMP | 12 | 2:12 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0073.V2416Sgr | 60 | 2:12 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0074.V2416Sgr | 300 | 2:12 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0075.V2416Sgr | 30 | 2:12 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0076.COMP | 12 | 2:12 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0077.AS270 | 20 | 2:12 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0078.AS270 | 300 | 2:12 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0079.COMP | 12 | 2:12 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0080.Hen1591 | 300 | 2:12 | 18:07:32 | -25:53:43 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0081.COMP | 12 | 2:12 | 18:07:32 | -25:53:43 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0082.V2601Sgr | 20 | 2:12 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0083.V2601Sgr | 200 | 2:12 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0084.COMP | 12 | 2:12 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0085.AS316 | 10 | 2:12 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9532

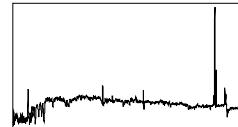
UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|--------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|------------|
| 0086.AS316 | 300 | 2:12 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0087.COMP | 12 | 2:12 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0088.MWC960 | 10 | 2:12 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=83 |
| 0089.MWC960 | 300 | 2:12 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0090.COMP | 12 | 2:12 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0091.AS327 | 10 | 2:12 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0092.AS327 | 300 | 2:12 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0093.COMP | 12 | 2:12 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0094.FNSgr | 10 | 2:12 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0095.FNSgr | 480 | 2:12 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0096.COMP | 12 | 2:12 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | (bad comp) |
| 0097.YYHer | 10 | 2:12 | 18:14:34 | 20:59:19 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0098.YYHer | 300 | 2:12 | 18:14:34 | 20:59:19 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0099.COMP | 5 | 2:12 | 18:14:34 | 20:59:19 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0100.S149 | 30 | 2:12 | 18:18:56 | 27:26:27 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0101.S149 | 300 | 2:12 | 18:18:56 | 27:26:27 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0102.COMP | 5 | 2:12 | 18:18:56 | 27:26:27 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0103.V443Her | 5 | 2:12 | 18:22:07 | 23:27:20 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0104.V443Her | 300 | 2:12 | 18:22:07 | 23:27:20 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |
| 0105.COMP | 5 | 2:12 | 18:22:07 | 23:27:20 | 300 | 90 | 3.0 | #12 Symbiotic | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9533

UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|----------|----------|-----|------|------|---------------|-----|----------|
| 0106.RJ105 | 600 | 2:12 | 18:35:02 | 01:46:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0107.COMP | 12 | 2:12 | 18:35:02 | 01:46:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0108.DQSer | 60 | 2:12 | 18:44:40 | 05:02:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=83 |
| 0109.DQSer | 180 | 2:12 | 18:44:40 | 05:02:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0110.DQSer | 720 | 2:12 | 18:44:40 | 05:02:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0111.COMP | 12 | 2:12 | 18:44:40 | 05:02:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0112.V1413Aql | 30 | 2:12 | 19:03:47 | 16:26:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0113.V1413Aql | 300 | 2:12 | 19:03:47 | 16:26:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0114.COMP | 12 | 2:12 | 19:03:47 | 16:26:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0115.BFCyg | 1 | 2:12 | 19:23:53 | 29:40:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0116.BFCyg | 60 | 2:12 | 19:23:53 | 29:40:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0117.COMP | 12 | 2:12 | 19:23:53 | 29:40:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0118.CH Cyg | 1 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0119.CH Cyg | 5 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0120.CH Cyg | 30 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0121.COMP | 12 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0122.CH Cyg | 0 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0123.COMP | 12 | 2:12 | 19:24:33 | 50:14:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0124.HMSge | 1 | 2:12 | 19:41:57 | 16:44:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0125.HMSge | 10 | 2:12 | 19:41:57 | 16:44:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9534

UT Date 2001-09-21 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0126.HMSge | 2 | 2:12 | 19:41:57 | 16:44:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0127.HMSge | 60 | 2:12 | 19:41:57 | 16:44:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0128.COMP | 12 | 2:12 | 19:41:57 | 16:44:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0129.AS360 | 3 | 2:12 | 19:45:49 | 18:36:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0130.AS360 | 300 | 2:12 | 19:45:49 | 18:36:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0131.COMP | 12 | 2:12 | 19:45:49 | 18:36:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0132.AS360 | 50 | 2:12 | 19:45:49 | 18:36:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0133.COMP | 12 | 2:12 | 19:45:49 | 18:36:49 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0134.S169 | 120 | 2:12 | 19:49:57 | 46:15:20 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0135.S169 | 420 | 2:12 | 19:49:57 | 46:15:20 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0136.COMP | 12 | 2:12 | 19:49:57 | 46:15:20 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0137.CICyg | 2 | 2:12 | 19:50:12 | 35:41:02 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0138.CICyg | 20 | 2:12 | 19:50:12 | 35:41:02 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0139.CICyg | 60 | 2:12 | 19:50:12 | 35:41:02 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0140.COMP | 12 | 2:12 | 19:50:12 | 35:41:02 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0141.id2861 | 600 | 2:12 | 19:58:42.0 | 35:24:57 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0142.COMP | 12 | 2:12 | 19:58:42.0 | 35:24:57 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0143.id1626 | 660 | 2:12 | 20:06:23.1 | 35:52:13 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0144.COMP | 12 | 2:12 | 20:06:23.1 | 35:52:13 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0145.id1223 | 1020 | 2:12 | 20:07:13.8 | 35:40:16 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9535

UT Date 2001-09-21 Observers M Calkins

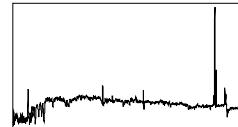
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------------------|
| 0146.COMP | 12 | 2:12 | 20:07:13.8 | 35:40:16 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0147.id2153 | 900 | 2:12 | 20:05:20.0 | 35:55:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0148.COMP | 12 | 2:12 | 20:05:20.0 | 35:55:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0149.id2670 | 780 | 2:12 | 19:59:50.7 | 35:22:34 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0150.COMP | 12 | 2:12 | 19:59:50.7 | 35:22:34 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0151.id2823 | 1080 | 2:12 | 19:58:53.6 | 35:20:12 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0152.COMP | 12 | 2:12 | 19:58:53.6 | 35:20:12 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0153.sn2001eh | 1200 | 2:12 | 01:38:12.1 | 41:39:18 | 300 | 48 | 3.0 | #2 SN Observat | 2 | |
| 0154.COMP | 12 | 2:12 | 01:38:12.1 | 41:39:18 | 300 | 48 | 3.0 | #2 SN Observat | 2 | |
| 0155.ch0101p31b | 300 | 2:12 | 01:01:45.3 | 31:53:59 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0156.COMP | 12 | 2:12 | 01:01:45.3 | 31:53:59 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0157.ch0102p31c | 1200 | 2:12 | 01:02:06.4 | 31:43:15 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0158.COMP | 12 | 2:12 | 01:02:06.4 | 31:43:15 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0159.ch0102p31c | 1200 | 2:12 | 01:02:06.4 | 31:43:15 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0160.COMP | 12 | 2:12 | 01:02:06.4 | 31:43:15 | 300 | 89 | 3.0 | #129 CHAMP Sou | 2 | |
| 0161.2M000006.4p531913 | 180 | 2:12 | 00:00:06.4 | +53:19:13 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | row=81 |
| 0162.COMP | 12 | 2:12 | 00:00:06.4 | +53:19:13 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0163.2M000141.7p450020 | 90 | 2:12 | 00:01:41.7 | +45:00:20 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0164.COMP | 12 | 2:12 | 00:01:41.7 | +45:00:20 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0165.2M000313.3p535215 | 150 | 2:12 | 00:03:13.3 | +53:52:15 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | too faint, get again |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9536

UT Date 2001-09-21 Observers M Calkins

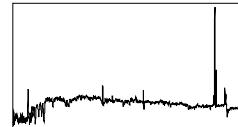
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0166.COMP | 12 | 2:12 | 00:03:13.3 | +53:52:15 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0167.2M000313.3p535215 | 240 | 2:12 | 00:03:13.3 | +53:52:15 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | row=81 |
| 0168.COMP | 12 | 2:12 | 00:03:13.3 | +53:52:15 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0169.2M000742.3p472047 | 270 | 2:12 | 00:07:42.3 | +47:20:47 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0170.COMP | 12 | 2:12 | 00:07:42.3 | +47:20:47 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0171.2M000831.0p530149 | 300 | 2:12 | 00:08:31.0 | +53:01:49 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | row=82 |
| 0172.COMP | 12 | 2:12 | 00:08:31.0 | +53:01:49 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0173.2M001038.9p532504 | 240 | 2:12 | 00:10:38.9 | +53:25:04 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0174.COMP | 12 | 2:12 | 00:10:38.9 | +53:25:04 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0175.2M001412.5p703644 | 420 | 2:12 | 00:14:12.5 | +70:36:44 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0176.COMP | 12 | 2:12 | 00:14:12.5 | +70:36:44 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0177.2M001834.0p535905 | 180 | 2:12 | 00:18:34.0 | +53:59:05 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0178.COMP | 12 | 2:12 | 00:18:34.0 | +53:59:05 | 300 | 89 | 3.0 | #68 2Mass Reds | 2 | |
| 0179.a496_476 | 900 | 2:12 | 04:22:45.1 | -11:11:13 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0180.COMP | 12 | 2:12 | 04:22:45.1 | -11:11:13 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0181.a496_479 | 540 | 2:12 | 04:30:39.7 | -12:23:12 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0182.COMP | 12 | 2:12 | 04:30:39.7 | -12:23:12 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0183.a496_480 | 270 | 2:12 | 04:40:31.1 | -15:10:40 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0184.COMP | 12 | 2:12 | 04:40:31.1 | -15:10:40 | 300 | 89 | 3.0 | #64 Cluster In | 2 | |
| 0185.BGGem | 300 | 2:12 | 6:03:31 | 27:41:50 | 300 | 89 | 3.0 | #100 BGGem | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9537

UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|---------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0186.COMP | 12 | 2:12 | 6:03:31 | 27:41:50 | 300 | 89 | 3.0 | #100 BGGem | 2 | |
| 0187.BGGem | 1200 | 2:12 | 6:03:31 | 27:41:50 | 300 | 89 | 3.0 | #100 BGGem | 2 | |
| 0188.COMP | 12 | 2:12 | 6:03:31 | 27:41:50 | 300 | 89 | 3.0 | #100 BGGem | 2 | |
| 0189.sn2001ej | 1200 | 2:12 | 07:23:43.2 | 33:26:38 | 300 | 101 | 3.0 | #2 SN Observat | 2 | |
| 0190.COMP | 12 | 2:12 | 07:23:43.2 | 33:26:38 | 300 | 101 | 3.0 | #2 SN Observat | 2 | |
| 0191.AXPer | 4 | 2:12 | 1:36:23 | 54:15:03 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0192.AXPer | 30 | 2:12 | 1:36:23 | 54:15:03 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0193.AXPer | 90 | 2:12 | 1:36:23 | 54:15:03 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0194.COMP | 12 | 2:12 | 1:36:23 | 54:15:03 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0195.EGAnd | 0 | 2:12 | 0:44:37 | 40:40:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0196.COMP | 12 | 2:12 | 0:44:37 | 40:40:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0197.V741Per | 20 | 2:12 | 1:58:50 | 52:53:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0198.COMP | 12 | 2:12 | 1:58:50 | 52:53:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0199.BXMon | 15 | 2:12 | 7:25:23 | -03:35:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0200.BXMon | 180 | 2:12 | 7:25:23 | -03:35:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0201.COMP | 12 | 2:12 | 7:25:23 | -03:35:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0202.S32 | 120 | 2:12 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0203.COMP | 12 | 2:12 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0204.S32 | 45 | 2:12 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0205.COMP | 12 | 2:12 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9538

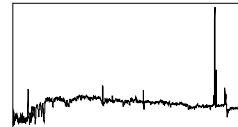
UT Date 2001-09-21 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|---------|-----------|-----|------|------|----------------|-----|----------|
| 0206-0210.sky | 2 | 12:57 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0211.COMP | 5 | 12:57 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0212-0221.BIAS | 0 | 13:35 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0222-0231.FLAT | 6 | 13:39 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0232-0241.BIAS | 0 | 13:42 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0242-0251.FLAT | 12 | 13:47 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0252-0261.DARK | 900 | 16:06 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9539

UT Date 2001-09-22 Observers M CalkinsColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.DARK | 900 | 1:47 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0011-0020.BIAS | 0 | 2:05 | 4:37:45 | -01:19:11 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0021-0030.FLAT | 6 | 2:20 | 19:00:25.1 | 31:30:03 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0031-0032.BIAS | 0 | 2:21 | 19:01:48.1 | 31:30:03 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0033-0040.BIAS | 0 | 2:23 | 19:03:41.1 | 31:30:02 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0041-0050.FLAT | 12 | 2:28 | 19:08:17.1 | 31:30:02 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0051.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0052.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0053.COMP | 12 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0054.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0055.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0056.COMP | 5 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0057.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 103 | 3.0 | #56 Spectropho | 2 | |
| 0058.BDp284211 | 30 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 103 | 3.0 | #56 Spectropho | 2 | |
| 0059.COMP | 12 | 2:28 | 21:48:57.1 | 28:37:48 | 300 | 103 | 3.0 | #56 Spectropho | 2 | |
| 0060.HD154791 | 1 | 2:28 | 17:06:34 | 23:58:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0061.HD154791 | 10 | 2:28 | 17:06:34 | 23:58:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0062.COMP | 12 | 2:28 | 17:06:34 | 23:58:17 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0063.M1m21 | 5 | 2:28 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0064.M1m21 | 300 | 2:28 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9540

UT Date 2001-09-22 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|----------|
| 0065.COMP | 12 | 2:28 | 17:34:17 | -19:09:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0066.RTSer | 10 | 2:28 | 17:39:52 | -11:56:39 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0067.RTSer | 300 | 2:28 | 17:39:52 | -11:56:39 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=84 |
| 0068.COMP | 12 | 2:28 | 17:39:52 | -11:56:39 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0069.UUSer | 120 | 2:28 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0070.UUSer | 600 | 2:28 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0071.COMP | 12 | 2:28 | 17:42:39 | -15:24:45 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0072.XXOph | 1 | 2:28 | 17:43:56 | -06:16:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0073.XXOph | 5 | 2:28 | 17:43:56 | -06:16:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0074.XXOph | 10 | 2:28 | 17:43:56 | -06:16:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0075.COMP | 12 | 2:28 | 17:43:56 | -06:16:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0076.RSOph | 10 | 2:28 | 17:50:13 | -06:42:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0077.RSOph | 150 | 2:28 | 17:50:13 | -06:42:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0078.COMP | 12 | 2:28 | 17:50:13 | -06:42:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0079.V2416Sgr | 5 | 2:28 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0080.V2416Sgr | 300 | 2:28 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0081.V2416Sgr | 60 | 2:28 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0082.COMP | 12 | 2:28 | 17:57:16 | -21:41:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0083.AS270 | 25 | 2:28 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0084.AS270 | 360 | 2:28 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9541

UT Date 2001-09-22 Observers M Calkins

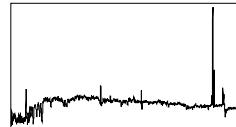
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|----------|
| 0085.COMP | 12 | 2:28 | 18:05:33 | -20:20:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0086.Hen1591 | 300 | 2:28 | 18:07:32 | -25:53:43 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0087.COMP | 12 | 2:28 | 18:07:32 | -25:53:43 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0088.AS289 | 7 | 2:28 | 18:12:22 | -11:40:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0089.AS289 | 70 | 2:28 | 18:12:22 | -11:40:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0090.COMP | 12 | 2:28 | 18:12:22 | -11:40:08 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0091.V2601Sgr | 20 | 2:28 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0092.V2601Sgr | 200 | 2:28 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0093.COMP | 12 | 2:28 | 18:38:02 | -22:41:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0094.AS316 | 10 | 2:28 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0095.AS316 | 300 | 2:28 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0096.COMP | 12 | 2:28 | 18:42:33 | -21:17:47 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0097.MWC960 | 10 | 2:28 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=82 |
| 0098.MWC960 | 300 | 2:28 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0099.COMP | 12 | 2:28 | 18:47:56 | -20:05:52 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0100.AS327 | 10 | 2:28 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0101.AS327 | 300 | 2:28 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0102.COMP | 12 | 2:28 | 18:53:17 | -24:22:59 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0103.FNSgr | 16 | 2:28 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0104.FNSgr | 600 | 2:28 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9542

UT Date 2001-09-22 Observers M Calkins

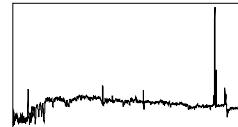
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|----------|
| 0105.COMP | 12 | 2:28 | 18:53:55 | -18:59:41 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0106.DracoC1 | 1200 | 2:28 | 17:19:58 | 57:50:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0107.COMP | 12 | 2:28 | 17:19:58 | 57:50:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0108.V919Sgr | 10 | 2:28 | 19:03:45 | -16:59:56 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | row=83 |
| 0109.V919Sgr | 540 | 2:28 | 19:03:45 | -16:59:56 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0110.COMP | 12 | 2:28 | 19:03:45 | -16:59:56 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0111.CMAql | 10 | 2:28 | 19:03:35 | -03:03:14 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0112.CMAql | 600 | 2:28 | 19:03:35 | -03:03:14 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0113.COMP | 12 | 2:28 | 19:03:35 | -03:03:14 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0114.S164 | 45 | 2:28 | 19:28:41 | -06:03:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0115.S164 | 300 | 2:28 | 19:28:41 | -06:03:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0116.COMP | 12 | 2:28 | 19:28:41 | -06:03:51 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0117.V1016Cyg | 0 | 2:28 | 19:57:05 | 39:49:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0118.V1016Cyg | 3 | 2:28 | 19:57:05 | 39:49:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0119.V1016Cyg | 60 | 2:28 | 19:57:05 | 39:49:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0120.COMP | 12 | 2:28 | 19:57:05 | 39:49:37 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0121.PUVul | 3 | 2:28 | 20:21:13 | 21:34:21 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0122.PUVul | 120 | 2:28 | 20:21:13 | 21:34:21 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0123.PUVul | 1 | 2:28 | 20:21:13 | 21:34:21 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0124.COMP | 12 | 2:28 | 20:21:13 | 21:34:21 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9543

UT Date 2001-09-22 Observers M Calkins

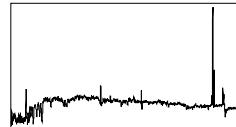
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|---------------|----------|----------|----------|-----------|-----|------|------|---------------|-----|----------|
| 0125.V1515Cyg | 120 | 2:28 | 20:23:48 | 42:12:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0126.COMP | 12 | 2:28 | 20:23:48 | 42:12:24 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0127.He2m467 | 10 | 2:28 | 20:35:57 | 20:11:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0128.He2m467 | 30 | 2:28 | 20:35:57 | 20:11:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0129.He2m467 | 360 | 2:28 | 20:35:57 | 20:11:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0130.COMP | 12 | 2:28 | 20:35:57 | 20:11:27 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0131.S180 | 45 | 2:28 | 20:39:20 | -05:17:16 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0132.S180 | 180 | 2:28 | 20:39:20 | -05:17:16 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0133.COMP | 12 | 2:28 | 20:39:20 | -05:17:16 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0134.He2m468 | 60 | 2:28 | 20:41:19 | 34:44:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0135.He2m468 | 600 | 2:28 | 20:41:19 | 34:44:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0136.COMP | 12 | 2:28 | 20:41:19 | 34:44:53 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0137.V1329Cyg | 10 | 2:28 | 20:51:01 | 35:34:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0138.V1329Cyg | 5 | 2:28 | 20:51:01 | 35:34:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0139.V1329Cyg | 360 | 2:28 | 20:51:01 | 35:34:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0140.COMP | 12 | 2:28 | 20:51:01 | 35:34:55 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0141.V1057Cyg | 90 | 2:28 | 20:58:54 | 44:15:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0142.COMP | 12 | 2:28 | 20:58:54 | 44:15:30 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0143.V407Cyg | 5 | 2:28 | 21:02:09 | 45:46:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0144.V407Cyg | 240 | 2:28 | 21:02:09 | 45:46:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9544

UT Date 2001-09-22 Observers M Calkins

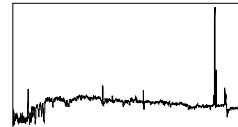
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0145.COMP | 12 | 2:28 | 21:02:09 | 45:46:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0146.S190 | 10 | 2:28 | 21:41:45 | 02:43:54 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0147.S190 | 60 | 2:28 | 21:41:45 | 02:43:54 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0148.COMP | 12 | 2:28 | 21:41:45 | 02:43:54 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0149.AGPeg | 1 | 2:28 | 21:51:02 | 12:37:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0150.AGPeg | 10 | 2:28 | 21:51:02 | 12:37:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0151.AGPeg | 30 | 2:28 | 21:51:02 | 12:37:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0152.COMP | 12 | 2:28 | 21:51:02 | 12:37:33 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0153.ZAnd | 1 | 2:28 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0154.ZAnd | 3 | 2:28 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0155.ZAnd | 5 | 2:28 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0156.ZAnd | 13 | 2:28 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0157.COMP | 12 | 2:28 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0158.RAqr | 0 | 2:28 | 23:43:49 | -15:17:05 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0159.RAqr | 1 | 2:28 | 23:43:49 | -15:17:05 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0160.RAqr | 5 | 2:28 | 23:43:49 | -15:17:05 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0161.RAqr | 10 | 2:28 | 23:43:49 | -15:17:05 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0162.COMP | 12 | 2:28 | 23:43:49 | -15:17:05 | 300 | 90 | 3.0 | #12 Symbiotic | 2 | |
| 0163.id1216 | 600 | 2:28 | 20:07:14.5 | 35:49:39 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0164.COMP | 12 | 2:28 | 20:07:14.5 | 35:49:39 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9545

UT Date 2001-09-22 Observers M Calkins

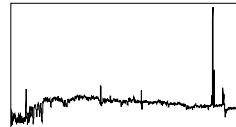
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0165.id1893 | 1020 | 2:28 | 20:05:54.4 | 35:42:07 | 300 | 79 | 3.0 | #115 PMS NGC68 | 2 | row=80 |
| 0166.COMP | 12 | 2:28 | 20:05:54.4 | 35:42:07 | 300 | 79 | 3.0 | #115 PMS NGC68 | 2 | |
| 0167.id1029 | 1080 | 2:28 | 20:07:32.3 | 35:43:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | row=80 |
| 0168.COMP | 12 | 2:28 | 20:07:32.3 | 35:43:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0169.sn2001eh | 1200 | 2:28 | 01:38:12.1 | 41:39:18 | 300 | 51 | 3.0 | #2 SN Observat | 2 | |
| 0170.COMP | 12 | 2:28 | 01:38:12.1 | 41:39:18 | 300 | 51 | 3.0 | #2 SN Observat | 2 | |
| 0171.a119c_395 | 480 | 2:28 | 00:48:51.6 | -4:18:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0172.COMP | 5 | 2:28 | 00:48:51.6 | -4:18:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0173.a119c_396 | 780 | 2:28 | 00:53:44.4 | 01:57:21 | 300 | 90 | 3.0 | #64 Cluster In | 4 | row=42 |
| 0174.COMP | 5 | 2:28 | 00:53:44.4 | 01:57:21 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0175.a119c_405 | 360 | 2:28 | 00:44:22.8 | 00:12:17 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0176.COMP | 5 | 2:28 | 00:44:22.8 | 00:12:17 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0177.a119c_406 | 300 | 2:28 | 00:46:48.2 | -4:03:58 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0178.COMP | 5 | 2:28 | 00:46:48.2 | -4:03:58 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0179.a119c_414 | 300 | 2:28 | 01:03:12.1 | -4:20:30 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0180.COMP | 5 | 2:28 | 01:03:12.1 | -4:20:30 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0181.a119c_417 | 1020 | 2:28 | 00:48:10.0 | -4:02:38 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0182.COMP | 5 | 2:28 | 00:48:10.0 | -4:02:38 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0183.ch0414p05 | 360 | 2:28 | 04:14:48.2 | 05:30:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |
| 0184.COMP | 12 | 2:28 | 04:14:48.2 | 05:30:58 | 300 | 90 | 3.0 | #129 CHAMP Sou | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9546

UT Date 2001-09-22 Observers M Calkins

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|------------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0185.2M001428.2p642847 | 1200 | 2:28 | 00:14:28.2 | +64:28:47 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0186.COMP | 12 | 2:28 | 00:14:28.2 | +64:28:47 | 300 | 90 | 3.0 | #68 2MASS Reds | 2 | |
| 0187.a496_481 | 900 | 2:28 | 04:43:38.7 | -12:03:00 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0188.COMP | 12 | 2:28 | 04:43:38.7 | -12:03:00 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0189.a496_370 | 1200 | 2:28 | 04:37:22.3 | -10:37:52 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0190.COMP | 12 | 2:28 | 04:37:22.3 | -10:37:52 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0191.a496_375 | 1200 | 2:28 | 04:39:39.0 | -16:00:55 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0192.COMP | 12 | 2:28 | 04:39:39.0 | -16:00:55 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0193.a496_488 | 1200 | 2:28 | 04:40:02.2 | -16:02:20 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0194.COMP | 12 | 2:28 | 04:40:02.2 | -16:02:20 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0195.sn2001ej | 1200 | 2:28 | 07:23:43.2 | 33:26:38 | 300 | 97 | 3.0 | #2 SN Observat | 2 | row=85 |
| 0196.COMP | 12 | 2:28 | 07:23:43.2 | 33:26:38 | 300 | 97 | 3.0 | #2 SN Observat | 2 | |
| 0197-0201.sky | 2 | 12:58 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0202.COMP | 5 | 12:58 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0203-0212.BIAS | 0 | 13:01 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0213-0222.FLAT | 6 | 13:08 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0223-0232.BIAS | 0 | 13:12 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0233-0242.FLAT | 12 | 13:16 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0243-0252.DARK | 900 | 15:34 | 07:23:43.2 | 33:26:38 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9547

UT Date 2001-09-23 Observers P Berlind

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|------------------------------|
| 0001-0010.BIAS | 0 | 1:34 | 18:18:38.2 | 31:30:07 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0011.FLAT | 8 | 1:34 | 18:18:59.2 | 31:30:07 | 300 | 90 | 3.0 | #57 Velocity S | 4 | a few clouds, clearing |
| 0012-0018.FLAT | 8 | 1:36 | 18:20:48.2 | 31:30:07 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0019-0020.FLAT | 8 | 1:37 | 18:21:22.2 | 31:30:06 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0021-0030.BIAS | 0 | 1:40 | 18:23:46.2 | 31:30:06 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0031-0037.FLAT | 16 | 1:43 | 18:27:19.2 | 31:30:06 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0038-0040.FLAT | 16 | 1:44 | 18:28:46.2 | 31:30:05 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0041.HD192281 | 5 | 1:44 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | Hi Susan! |
| 0042.HD192281 | 5 | 1:44 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0043.HD192281 | 5 | 1:44 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0044.COMP | 10 | 1:44 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0045.id1789 | 600 | 1:44 | 20:06:03.7 | 35:54:37 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0046.id2340 | 600 | 1:44 | 20:04:47.5 | 35:47:29 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0047.COMP | 10 | 1:44 | 20:04:47.5 | 35:47:29 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0048.id1108 | 600 | 1:44 | 20:07:24.3 | 35:45:02 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0049.id1869 | 660 | 1:44 | 20:05:56.6 | 35:42:29 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0050.COMP | 5 | 1:44 | 20:05:56.6 | 35:42:29 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0051.id2574 | 660 | 1:44 | 20:04:02.3 | 35:49:32 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0052.id2624 | 660 | 1:44 | 20:00:03.8 | 35:13:21 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | extended nebulosity in field |
| 0053.COMP | 5 | 1:44 | 20:00:03.8 | 35:13:21 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9548

UT Date 2001-09-23 Observers P Berlind

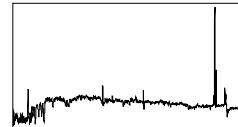
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|----------|-----|------|------|----------------|-----|------------------------------|
| 0054.id1066 | 660 | 1:44 | 20:07:28.4 | 35:50:47 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0055.id1650 | 660 | 1:44 | 20:06:20.8 | 35:40:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0056.COMP | 5 | 1:44 | 20:06:20.8 | 35:40:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0057.id1307 | 660 | 1:44 | 20:07:04.1 | 35:55:11 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0058.id2415 | 660 | 1:44 | 20:04:32.4 | 35:48:28 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0059.COMP | 5 | 1:44 | 20:04:32.4 | 35:48:28 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0060.id2477 | 660 | 1:44 | 20:04:21.0 | 35:50:05 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0061.id2733 | 660 | 1:44 | 19:59:27.4 | 35:15:51 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | extended nebulosity in field |
| 0062.COMP | 5 | 1:44 | 19:59:27.4 | 35:15:51 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0063.BDp284211 | 60 | 1:44 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0064.BDp284211 | 60 | 1:44 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0065.COMP | 10 | 1:44 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0066.id1471 | 660 | 1:44 | 20:06:45.2 | 35:42:54 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0067.id1265 | 660 | 1:44 | 20:07:07.8 | 35:51:42 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0068.COMP | 5 | 1:44 | 20:07:07.8 | 35:51:42 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0069.id1674 | 720 | 1:44 | 20:06:16.8 | 35:39:40 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0070.id1574 | 720 | 1:44 | 20:06:28.8 | 35:48:14 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0071.COMP | 5 | 1:44 | 20:06:28.8 | 35:48:14 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0072.id1892 | 720 | 1:44 | 20:05:54.5 | 35:52:16 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0073.id1193 | 720 | 1:44 | 20:07:17.1 | 35:48:39 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9549

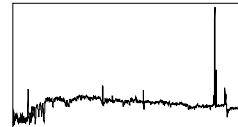
UT Date 2001-09-23 Observers P BerlindColl. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|-------------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0074.COMP | 5 | 1:44 | 20:07:17.1 | 35:48:39 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0075.ngcsh.3-713 | 600 | 1:44 | 21:55:21.9 | 62:43:56 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0076.COMP | 5 | 1:44 | 21:55:21.9 | 62:43:56 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0077.ngcsh.3-815 | 480 | 1:44 | 21:55:17.5 | 62:44:51 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0078.COMP | 5 | 1:44 | 21:55:17.5 | 62:44:51 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0079.ngcsh.3-869 | 420 | 1:44 | 21:54:20.2 | 62:45:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0080.COMP | 5 | 1:44 | 21:54:20.2 | 62:45:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0081.ngcsh.3-1028 | 480 | 1:44 | 21:54:42.9 | 62:47:01 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0082.COMP | 5 | 1:44 | 21:54:42.9 | 62:47:01 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0083.ngcsh.4-27 | 480 | 1:44 | 21:52:21.7 | 62:36:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0084.COMP | 5 | 1:44 | 21:52:21.7 | 62:36:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0085.ngcsh.4-90 | 600 | 1:44 | 21:52:08.5 | 62:37:04 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0086.COMP | 5 | 1:44 | 21:52:08.5 | 62:37:04 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0087.ngcsh.4-207 | 480 | 1:44 | 21:52:13.9 | 62:38:21 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0088.COMP | 5 | 1:44 | 21:52:13.9 | 62:38:21 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0089.ngcsh.4-212 | 660 | 1:44 | 21:52:20.5 | 62:38:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0090.COMP | 5 | 1:44 | 21:52:20.5 | 62:38:23 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0091.ngcsh.4-265 | 540 | 1:44 | 21:52:39.9 | 62:38:50 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0092.COMP | 5 | 1:44 | 21:52:39.9 | 62:38:50 | 300 | 90 | 3.0 | #89 Ae/Be Star | 4 | |
| 0093.a168_052 | 300 | 1:44 | 01:23:40.1 | 0:40:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9550

UT Date 2001-09-23 Observers P Berlind

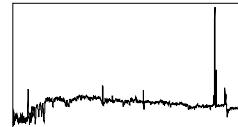
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0094.COMP | 5 | 1:44 | 01:23:40.1 | 0:40:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0095.a168_054 | 360 | 1:44 | 01:16:55.4 | 1:37:48 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0096.COMP | 5 | 1:44 | 01:16:55.4 | 1:37:48 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0097.a168_058 | 360 | 1:44 | 01:21:28.3 | 2:10:24 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0098.COMP | 5 | 1:44 | 01:21:28.3 | 2:10:24 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0099.sn2001eh | 1200 | 1:44 | 01:38:12.1 | 41:39:18 | 300 | 0 | 3.0 | #2 SN Observat | 2 | |
| 0100.COMP | 10 | 1:44 | 01:38:12.1 | 41:39:18 | 300 | 0 | 3.0 | #2 SN Observat | 2 | |
| 0101.a168_060 | 240 | 1:44 | 01:19:17.0 | -0:06:49 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0102.COMP | 10 | 1:44 | 01:19:17.0 | -0:06:49 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0103.a168_061 | 600 | 1:44 | 01:19:35.6 | 2:18:59 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0104.COMP | 5 | 1:44 | 01:19:35.6 | 2:18:59 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0105.a168_063 | 330 | 1:44 | 01:12:42.1 | 1:08:39 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0106.COMP | 5 | 1:44 | 01:12:42.1 | 1:08:39 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0107.a168_064 | 420 | 1:44 | 01:14:13.2 | -0:17:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0108.COMP | 5 | 1:44 | 01:14:13.2 | -0:17:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0109.a168_065 | 300 | 1:44 | 01:19:04.0 | 0:26:29 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0110.COMP | 5 | 1:44 | 01:19:04.0 | 0:26:29 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0111.a168_068 | 420 | 1:44 | 01:22:46.0 | -0:25:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0112.COMP | 5 | 1:44 | 01:22:46.0 | -0:25:35 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0113.a168_069 | 480 | 1:44 | 01:23:02.6 | -0:19:28 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9551

UT Date 2001-09-23 Observers P Berlind

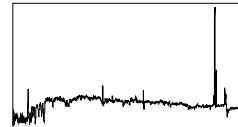
Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-----------------------|
| 0114.COMP | 5 | 1:44 | 01:23:02.6 | -0:19:28 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0115.a496_486 | 1200 | 1:44 | 04:27:59.2 | -14:21:01 | 300 | 90 | 3.0 | #64 Cluster In | 4 | hey! clouds. |
| 0116.COMP | 5 | 1:44 | 04:27:59.2 | -14:21:01 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0117.a496_489 | 600 | 1:44 | 04:23:50.5 | -12:46:02 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0118.COMP | 5 | 1:44 | 04:23:50.5 | -12:46:02 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0119.a496_494 | 600 | 1:44 | 04:37:46.4 | -11:40:16 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0120.COMP | 5 | 1:44 | 04:37:46.4 | -11:40:16 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0121.a496_495 | 600 | 1:44 | 04:39:31.0 | -11:26:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0122.COMP | 5 | 1:44 | 04:39:31.0 | -11:26:56 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0123.a496_497 | 660 | 1:44 | 04:25:25.1 | -15:07:01 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0124.COMP | 5 | 1:44 | 04:25:25.1 | -15:07:01 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0125.a496_498 | 660 | 1:44 | 04:44:13.6 | -15:17:46 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0126.COMP | 5 | 1:44 | 04:44:13.6 | -15:17:46 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0127.a496_499 | 360 | 1:44 | 04:31:59.1 | -10:00:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | stop; clouds all over |
| 0128.COMP | 5 | 1:44 | 04:31:59.1 | -10:00:03 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0129-0138.BIAS | 0 | 11:37 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0139-0148.FLAT | 8 | 11:40 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0149-0158.BIAS | 0 | 11:42 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0159-0168.FLAT | 16 | 11:47 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0169-0178.DARK | 900 | 14:04 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9552

UT Date 2001-09-24 Observers P Berlind

Coll. Focus 1010 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|-------------------------------|
| 0001-0008.DARK | 1200 | 0:47 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0009.BIAS | 0 | 0:47 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | strong winds; gusts to 55mph! |
| 0010-0020.BIAS | 0 | 1:23 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0021-0030.FLAT | 8 | 1:26 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 4 | |
| 0031-0040.BIAS | 0 | 1:29 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0041-0050.FLAT | 16 | 1:34 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0051.id2273 | 720 | 1:34 | 20:05:02.3 | 35:53:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | winds down to 30-35 |
| 0052.COMP | 5 | 1:34 | 20:05:02.3 | 35:53:38 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0053.id1511 | 720 | 1:34 | 20:06:39.9 | 35:39:12 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0054.COMP | 5 | 1:34 | 20:06:39.9 | 35:39:12 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0055.id1157 | 720 | 1:34 | 20:07:20.0 | 35:40:56 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0056.COMP | 5 | 1:34 | 20:07:20.0 | 35:40:56 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0057.id2144 | 720 | 1:34 | 20:05:20.4 | 35:36:53 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0058.COMP | 5 | 1:34 | 20:05:20.4 | 35:36:53 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0059.id1052 | 900 | 1:34 | 20:07:29.8 | 35:52:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0060.COMP | 5 | 1:34 | 20:07:29.8 | 35:52:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0061.id1495 | 900 | 1:34 | 20:06:42.3 | 35:44:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | close due to high winds |
| 0062.COMP | 5 | 1:34 | 20:06:42.3 | 35:44:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 4 | |
| 0063.HD192281 | 6 | 1:34 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0064.HD192281 | 6 | 1:34 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9553

UT Date 2001-09-24 Observers P BerlindColl. Focus 1010 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> |
|----------------|-----------------|-----------------|------------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0065.HD192281 | 6 | 1:34 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0066.COMP | 5 | 1:34 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0067-0076.DARK | 900 | 10:55 | 20:10:46.8 | 40:07:01 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9553

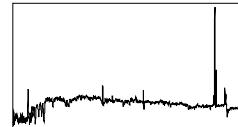
UT Date 09/25/01 Observers P. BerlindColl. Focus 1000 Filter none

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|---------------------|----------|----------|----|-----|-----|------|------|---------|-----|-------------------------|
| 01.07.DARK | 1200 | 22:09 | - | - | 300 | 90 | 3.0 | - | | |
| 08.20.BIAS | 0 | 0:39 | - | - | 300 | 90 | 3.0 | - | | |
| 21.40.FLAT.blue | 20 | 0:44 | - | - | 300 | 90 | 3.0 | - | | |
| 41.50.FLAT.deepblue | 45 | 1:03 | - | - | 300 | 90 | 3.0 | - | | |
| 51.60.BIAS | 0 | 6:16 | - | - | 300 | 90 | 3.0 | - | | snookered by high winds |
| 61.70.FLAT | 8 | 6:55 | - | - | 300 | 90 | 3.0 | - | | |
| 71.80.BIAS | 0 | 6:58 | - | - | 300 | 90 | 3.0 | - | | |
| 81.90.FLAT | 16 | 7:00 | - | - | 300 | 90 | 3.0 | - | | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9554

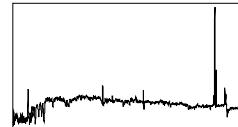
UT Date 2001-09-26 Observers M CalkinsColl. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001.DARK | 900 | 1:00 | 18:11:04.0 | 31:30:08 | 300 | 90 | 3.0 | | 4 | |
| 0002.DARK | 900 | 1:00 | 18:26:12.0 | 31:30:06 | 300 | 90 | 3.0 | | 4 | |
| 0003.DARK | 900 | 1:00 | 18:41:23.0 | 31:30:05 | 300 | 90 | 3.0 | | 4 | |
| 0004-0013.BIAS | 0 | 1:54 | 18:50:21.0 | 31:30:04 | 300 | 90 | 3.0 | | 4 | |
| 0014-0017.FLAT | 6 | 1:55 | 18:51:39.0 | 31:30:04 | 300 | 90 | 3.0 | | 4 | |
| 0018-0023.FLAT | 6 | 1:57 | 18:53:02.0 | 31:30:03 | 300 | 90 | 3.0 | | 4 | |
| 0024-0033.BIAS | 0 | 1:59 | 18:55:37.0 | 31:30:03 | 300 | 90 | 3.0 | | 2 | |
| 0034-0043.FLAT | 12 | 2:04 | 19:00:20.0 | 31:30:03 | 300 | 90 | 3.0 | | 2 | |
| 0044.BDp284211 | 30 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0045.BDp284211 | 30 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0046.COMP | 5 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 4 | |
| 0047.BDp284211 | 30 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0048.BDp284211 | 30 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0049.COMP | 12 | 2:04 | 21:48:57.1 | 28:37:48 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0050.MRK509 | 180 | 2:04 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0051.MRK509 | 180 | 2:04 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0052.COMP | 12 | 2:04 | 20:44:09.8 | -10:43:24 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0053.Akn564 | 240 | 2:04 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0054.Akn564 | 240 | 2:04 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0055.COMP | 12 | 2:04 | 22:42:39.4 | +29:43:31 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9555

UT Date 2001-09-26 Observers M Calkins

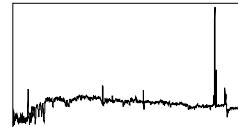
Coll. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------------|----------|----------|------------|----------|-----|------|------|----------------|-----|----------|
| 0056.ngcsh.4-345 | 780 | 2:04 | 21:53:12.3 | 62:39:44 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0057.COMP | 12 | 2:04 | 21:53:12.3 | 62:39:44 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0058.ngcsh.4-469 | 480 | 2:04 | 21:53:12.4 | 62:40:54 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0059.COMP | 12 | 2:04 | 21:53:12.4 | 62:40:54 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0060.ngcsh.4-649 | 300 | 2:04 | 21:53:15.3 | 62:42:41 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0061.COMP | 12 | 2:04 | 21:53:15.3 | 62:42:41 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0062.ngcsh.4-808 | 300 | 2:04 | 21:53:19.4 | 62:44:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0063.COMP | 12 | 2:04 | 21:53:19.4 | 62:44:19 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0064.ngcsh.4-946 | 300 | 2:04 | 21:52:45.3 | 62:45:31 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0065.COMP | 12 | 2:04 | 21:52:45.3 | 62:45:31 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0066.ngcsh.4-966 | 300 | 2:04 | 21:53:07.5 | 62:45:46 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0067.COMP | 12 | 2:04 | 21:53:07.5 | 62:45:46 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0068.ngcsh.4-1058 | 360 | 2:04 | 21:52:11.2 | 62:46:26 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0069.COMP | 12 | 2:04 | 21:52:11.2 | 62:46:26 | 300 | 90 | 3.0 | #89 Ae/Be Star | 2 | |
| 0070.id2175 | 900 | 2:04 | 20:05:16.4 | 35:39:18 | 300 | 110 | 3.0 | #115 PMS NGC68 | 2 | row=83 |
| 0071.COMP | 12 | 2:04 | 20:05:16.4 | 35:39:18 | 300 | 110 | 3.0 | #115 PMS NGC68 | 2 | |
| 0072.id1513 | 1200 | 2:04 | 20:06:39.1 | 35:35:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | row=81 |
| 0073.COMP | 12 | 2:04 | 20:06:39.1 | 35:35:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0074.id2394 | 1200 | 2:04 | 20:04:36.4 | 35:43:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0075.COMP | 12 | 2:04 | 20:04:36.4 | 35:43:33 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9556

UT Date 2001-09-26 Observers M Calkins

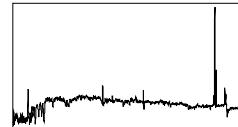
Coll. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0076.id1930 | 1020 | 2:04 | 20:05:50.0 | 35:47:22 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | row=84 |
| 0077.COMP | 12 | 2:04 | 20:05:50.0 | 35:47:22 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0078.id1683 | 1200 | 2:04 | 20:06:16.3 | 35:46:27 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | row=83 |
| 0079.COMP | 12 | 2:04 | 20:06:16.3 | 35:46:27 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0080.id2786 | 1200 | 2:04 | 19:59:05.5 | 35:25:54 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0081.COMP | 12 | 2:04 | 19:59:05.5 | 35:25:54 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0082.id2646 | 1200 | 2:04 | 19:59:57.7 | 35:19:08 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0083.COMP | 12 | 2:04 | 19:59:57.7 | 35:19:08 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0084.id2675 | 900 | 2:04 | 19:59:48.2 | 35:21:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0085.COMP | 12 | 2:04 | 19:59:48.2 | 35:21:43 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0086.id1672 | 1200 | 2:04 | 20:06:17.3 | 35:51:49 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0087.COMP | 12 | 2:04 | 20:06:17.3 | 35:51:49 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0088.id2055 | 1200 | 2:04 | 20:05:32.1 | 35:38:09 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0089.COMP | 12 | 2:04 | 20:05:32.1 | 35:38:09 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0090.id2408 | 1200 | 2:04 | 20:04:34.2 | 35:44:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0091.COMP | 12 | 2:04 | 20:04:34.2 | 35:44:59 | 300 | 90 | 3.0 | #115 PMS NGC68 | 2 | |
| 0092.N7469 | 150 | 2:04 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0093.N7469 | 150 | 2:04 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0094.COMP | 12 | 2:04 | 23:03:15.7 | +08:52:27 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0095.MRK335 | 120 | 2:04 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9557

UT Date 2001-09-26 Observers M Calkins

Coll. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------------------------------|
| 0096.MRK335 | 120 | 2:04 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0097.COMP | 12 | 2:04 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0098.FLAT | 12 | 2:04 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #2 SN Observat | 2 | tilt=726, GG-495 Blocking filter |
| 0099-0107.FLAT | 12 | 8:06 | 00:06:19.6 | +20:12:11 | 300 | 90 | 3.0 | #2 SN Observat | 2 | |
| 0108.HD19445 | 5 | 8:06 | 03:05:28.9 | 26:09:22 | 300 | 109 | 3.0 | #2 SN Observat | 2 | |
| 0109.HD19445 | 5 | 8:06 | 03:05:28.9 | 26:09:22 | 300 | 109 | 3.0 | #2 SN Observat | 2 | |
| 0110.HD19445 | 5 | 8:06 | 03:05:28.9 | 26:09:22 | 300 | 109 | 3.0 | #2 SN Observat | 2 | |
| 0111.COMP | 12 | 8:06 | 03:05:28.9 | 26:09:22 | 300 | 109 | 3.0 | #2 SN Observat | 2 | |
| 0112.sn2001eh | 1200 | 8:06 | 01:38:12.1 | 41:39:18 | 300 | 26 | 3.0 | #2 SN Observat | 2 | |
| 0113.COMP | 12 | 8:06 | 01:38:12.1 | 41:39:18 | 300 | 26 | 3.0 | #2 SN Observat | 2 | |
| 0114.sn2001eh | 1200 | 8:06 | 01:38:12.1 | 41:39:18 | 300 | -4 | 3.0 | #2 SN Observat | 2 | Back to normal setup |
| 0115.COMP | 12 | 8:06 | 01:38:12.1 | 41:39:18 | 300 | -4 | 3.0 | #2 SN Observat | 2 | |
| 0116.Feige25 | 120 | 8:06 | 02:36:00 | 05:15:16 | 300 | -14 | 3.0 | #56 Spectropho | 2 | |
| 0117.COMP | 12 | 8:06 | 02:36:00 | 05:15:16 | 300 | -14 | 3.0 | #56 Spectropho | 2 | |
| 0118.Feige25 | 120 | 8:06 | 02:36:00 | 05:15:16 | 300 | -14 | 3.0 | #56 Spectropho | 2 | |
| 0119.COMP | 12 | 8:06 | 02:36:00 | 05:15:16 | 300 | -14 | 3.0 | #56 Spectropho | 2 | |
| 0120.a119c_426 | 900 | 8:06 | 00:45:07.8 | 00:21:16 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0121.COMP | 12 | 8:06 | 00:45:07.8 | 00:21:16 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0122.a119c_429 | 1200 | 8:06 | 00:52:44.0 | -5:07:23 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0123.COMP | 12 | 8:06 | 00:52:44.0 | -5:07:23 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9558

UT Date 2001-09-26 Observers M Calkins

Coll. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|-----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0124.a119c_430 | 720 | 8:06 | 00:47:32.9 | 01:27:36 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0125.COMP | 12 | 8:06 | 00:47:32.9 | 01:27:36 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0126.a119c_431 | 1200 | 8:06 | 00:43:36.8 | -1:25:56 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0127.COMP | 12 | 8:06 | 00:43:36.8 | -1:25:56 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0128.a119c_435 | 900 | 8:06 | 00:49:31.9 | -4:29:19 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0129.COMP | 12 | 8:06 | 00:49:31.9 | -4:29:19 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0130.a496_502 | 1200 | 8:06 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0131.COMP | 12 | 8:06 | 04:46:09.4 | -14:33:33 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0132.a496_505 | 780 | 8:06 | 04:40:58.2 | -14:30:04 | 300 | 90 | 3.0 | #64 Cluster In | 2 | row=84 |
| 0133.COMP | 12 | 8:06 | 04:40:58.2 | -14:30:04 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0134.a496_506 | 1200 | 8:06 | 04:33:49.5 | -11:26:25 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0135.COMP | 12 | 8:06 | 04:33:49.5 | -11:26:25 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0136.a496_510 | 780 | 8:06 | 04:28:20.0 | -15:10:18 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0137.COMP | 12 | 8:06 | 04:28:20.0 | -15:10:18 | 300 | 90 | 3.0 | #64 Cluster In | 2 | |
| 0138.Hiltner600 | 45 | 8:06 | 06:42:37.2 | 02:11:25 | 300 | -35 | 3.0 | #56 Spectropho | 2 | |
| 0139.Hiltner600 | 45 | 8:06 | 06:42:37.2 | 02:11:25 | 300 | -35 | 3.0 | #56 Spectropho | 2 | |
| 0140.COMP | 12 | 8:06 | 06:42:37.2 | 02:11:25 | 300 | -35 | 3.0 | #56 Spectropho | 2 | |
| 0141.Akn120 | 180 | 8:06 | 05:13:38.0 | -00:12:15 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0142.COMP | 12 | 8:06 | 05:13:38.0 | -00:12:15 | 300 | 90 | 3.0 | #6 AGN Monitor | 2 | |
| 0143.NGC1700 | 240 | 8:06 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |



WHIPPLE OBSERVATORY

FAST SPECTROGRAPH LOG



Page 9559

UT Date 2001-09-26 Observers M CalkinsColl. Focus 1020 Grating/Grism 300

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0144.COMP | 12 | 8:06 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0145-0149.sky | 2 | 13:01 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0150.COMP | 5 | 13:01 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0151-0160.BIAS | 0 | 13:05 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0161-0170.FLAT | 6 | 13:07 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 4 | |
| 0171-0180.BIAS | 0 | 13:10 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0181-0190.FLAT | 12 | 13:15 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |
| 0191-0200.DARK | 900 | 15:33 | 04:56:58.1 | -04:52:22 | 300 | 90 | 3.0 | #57 Velocity S | 2 | |