$\qquad$ 0

| File | Exp Time | $\begin{gathered} U T \\ \text { Start } \end{gathered}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0001. DARK | 900 | 1:31 | 08:36:15.4 | +31:30:34 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0002.DARK | 900 | 1:47 | 08:51:26.0 | +31:30:39 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0003.DARK | 900 | 2:02 | 09:06:32.5 | +31:30:43 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0004.DARK | 900 | 2:17 | 09:21:42.0 | +31:30:47 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0005.DARK | 900 | 2:32 | 09:36:51.7 | +31:30:51 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0006-0015.BIAS | 0 | 2:48 | 09:38:20.9 | +31:30:51 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0016-0021.FLAT | 6 | 2:50 | 09:40:11.6 | +31:30:51 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0022-0025.FLAT | 6 | 2:51 | 09:41:02.5 | +31:30:52 | 300 | 90 | 3.0 | \#0 Calibration | 4 |  |
| 0026-0035.BIAS | 0 | 2:53 | 09:43:23.1 | +31:30:52 | 300 | 90 | 3.0 | \#0 Calibration | 2 |  |
| 0036-0037.FLAT | 12 | 2:54 | 09:44:22.4 | +31:30:52 | 300 | 90 | 3.0 | \#0 Calibration | 2 |  |
| 0038-0045.FLAT | 12 | 2:57 | 09:47:38.4 | +31:30:53 | 300 | 90 | 3.0 | \#0 Calibration | 2 |  |
| 0046.Feige34 | 70 | 3:02 | 10:36:41.2 | 43:21:50 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |
| 0047.Feige34 | 70 | 3:04 | 10:36:41.2 | 43:21:50 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |
| 0048. COMP | 5 | 3:05 | 10:36:41.2 | 43:21:50 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |
| 0049.Feige34 | 70 | 3:07 | 10:36:41.2 | 43:21:50 | 300 | 41 | 3.0 | \#56 Spectropho | 2 |  |
| 0050.Feige34 | 70 | 3:09 | 10:36:41.2 | 43:21:50 | 300 | 41 | 3.0 | \#56 Spectropho | 2 |  |
| 0051. COMP | 12 | 3:10 | 10:36:41.2 | 43:21:50 | 300 | 41 | 3.0 | \#56 Spectropho | 2 |  |
| 0052.HD84937 | 8 | 3:13 | 09:48:56.1 | 13:44:39 | 300 | 9 | 3.0 | \#56 Spectropho | 2 |  |
| 0053.HD84937 | 8 | 3:13 | 09:48:56.1 | 13:44:39 | 300 | 9 | 3.0 | \#56 Spectropho | 2 |  |
| 0054.COMP | 12 | 3:14 | 09:48:56.1 | 13:44:39 | 300 | 9 | 3.0 | \#56 Spectropho | 2 |  |

UT Date 2004-04-25 Observers M Calkins $\qquad$ Coll. Focus 1000 Grating/Grism $\qquad$ 300

| File | Exp <br> Time | $\begin{gathered} U T \\ \text { Start } \end{gathered}$ | $R A$ | Dec | Gr. | P.A. | Slit |  | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0055.c0121 | 300 | 3:22 | 11:12:54.3 | 28:00:03 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0056.COMP | 12 | 3:28 | 11:12:54.3 | 28:00:03 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0057.c0122 | 480 | 3:29 | 11:14:6.5 | 28:08:27 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0058. COMP | 12 | 3:38 | 11:14:6.5 | 28:08:27 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0059.c0123 | 660 | 3:40 | 11:09:2.8 | 28:16:56 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0060.COMP | 12 | 3:51 | 11:09:2.8 | 28:16:56 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0061.c0124 | 1200 | 3:52 | 11:07:9.9 | 28:25:33 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0062. COMP | 12 | 4:13 | 11:07:9.9 | 28:25:33 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0063.c0125 | 660 | 4:15 | 11:14:44.3 | 28:34:25 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0064. COMP | 12 | 4:26 | 11:14:44.3 | 28:34:25 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0065.c0126 | 360 | 4:27 | 11:09:8.8 | 28:40:21 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0066. COMP | 12 | 4:34 | 11:09:8.8 | 28:40:21 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0067.c0127 | 720 | 4:35 | 11:10:40.3 | 28:41:08 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0068. COMP | 12 | 4:47 | 11:10:40.3 | 28:41:08 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0069.c0128 | 720 | 4:49 | 11:16:23.8 | 28:37:35 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0070. COMP | 12 | 5:01 | 11:16:23.8 | 28:37:35 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0071.c0129 | 660 | 5:02 | 11:16:27.5 | 29:11:32 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0072.COMP | 12 | 5:14 | 11:16:27.5 | 29:11:32 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0073.c0130 | 600 | 5:14 | 11:16:10.8 | 29:26:33 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0074.COMP | 12 | 5:25 | 11:16:10.8 | 29:26:33 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |

UT Date 2004-04-25 Observers M Calkins
Coll. Focus 1000 Grating/Grism $\qquad$ 0

| File | Exp <br> Time | $\stackrel{U T}{\text { Start }}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0075.c0131 | 1080 | 5:26 | 11:15:28.4 | 29:49:05 | 300 | 90 | 3.0 | \#64 Cluster In | 2 |  |
| 0076. COMP | 12 | 5:44 | 11:15:28.4 | 29:49:05 | 300 | 90 | 3.0 | \#64 Cluster In | 2 |  |
| 0077.sn2004bg | 1200 | 5:46 | 11:21:01.5 | +21:20:23 | 300 | 54 | 3.0 | \#2 SN Observat | 2 | row $=79$ |
| 0078. COMP | 12 | 6:07 | 11:21:01.5 | +21:20:23 | 300 | 54 | 3.0 | \#2 SN Observat | 2 |  |
| 0079.sn2004bj | 1020 | 6:11 | 13:16:18.0 | +07:02:52 | 300 | -8 | 3.0 | \#2 SN Observat | 2 | increase exposure time, add a frame... |
| 0080.sn2004bj | 1200 | 6:28 | 13:16:18.0 | +07:02:52 | 300 | -8 | 3.0 | \#2 SN Observat | 2 |  |
| 0081.sn2004bj | 1200 | 6:48 | 13:16:18.0 | +07:02:52 | 300 | -8 | 3.0 | \#2 SN Observat | 2 |  |
| 0082.COMP | 12 | 7:09 | 13:16:18.0 | +07:02:52 | 300 | -8 | 3.0 | \#2 SN Observat | 2 |  |
| 0083.114924p17050_c | 1920 | 7:12 | 11:51:54.8 | 16:50:44 | 300 | 65 | 3.0 | \#113 Interacti | 2 |  |
| 0084.COMP | 12 | 7:45 | 11:51:54.8 | 16:50:44 | 300 | 65 | 3.0 | \#113 Interacti | 2 |  |
| 0085.120942p29270_d | 1050 | 7:48 | 12:12:20.3 | 29:12:41 | 300 | -44 | 3.0 | \#113 Interacti | 2 | spectra is from row 55 to row 122 |
| 0086.120942p29270_d | 1050 | 8:06 | 12:12:20.3 | 29:12:41 | 300 | -44 | 3.0 | \#113 Interacti | 2 |  |
| 0087. COMP | 12 | 8:24 | 12:12:20.3 | 29:12:41 | 300 | -44 | 3.0 | \#113 Interacti | 2 |  |
| 0088.142912p06220_d | 1050 | 8:29 | 14:31:28.3 | 6:14:37 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0089.142912p06220_d | 1050 | 8:47 | 14:31:28.3 | 6:14:37 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0090.COMP | 12 | 9:05 | 14:31:28.3 | 6:14:37 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0091.162012p39030_c | 1050 | 9:06 | 16:21:51.9 | 38:57:13 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0092.162012p39030_c | 1050 | 9:24 | 16:21:51.9 | 38:57:13 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0093. COMP | 12 | 9:42 | 16:21:51.9 | 38:57:13 | 300 | 27 | 3.0 | \#113 Interacti | 2 |  |
| 0094.162012p39030_d | 1050 | 9:44 | 16:21:57.1 | 38:56:42 | 300 | -50 | 3.0 | \#113 Interacti | 2 |  |

UT Date 2004-04-25 Observers M Calkins $\qquad$ Coll. Focus 1000 Grating/Grism $\qquad$ 300

| File | Exp <br> Time | $\begin{gathered} \text { UT } \\ \text { Start } \end{gathered}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0095.162012p39030_d | 1050 | 10:02 | 16:21:57.1 | 38:56:42 | 300 | -50 | 3.0 | \#113 Interacti | 2 |  |
| 0096.COMP | 12 | 10:20 | 16:21:57.1 | 38:56:42 | 300 | -50 | 3.0 | \#113 Interacti | 2 |  |
| 0097.sn2004ao | 1200 | 10:28 | 17:28:09.3 | +07:24:55 | 300 | -5 | 3.0 | \#2 SN Observat | 2 | row=84 |
| 0098. COMP | 12 | 10:49 | 17:28:09.3 | +07:24:55 | 300 | -5 | 3.0 | \#2 SN Observat | 2 |  |
| 0099.2M164228.2+011913 | 300 | 10:51 | 16:42:28.2 | +01:19:13 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0100.COMP | 12 | 10:56 | 16:42:28.2 | +01:19:13 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0101.2M164847.9+091521 | 900 | 10:58 | 16:48:47.9 | +09:15:21 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0102.COMP | 12 | 11:13 | 16:48:47.9 | +09:15:21 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0103.2M164932.8+614306 | 960 | 11:16 | 16:49:32.8 | +61:43:6 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0104.COMP | 12 | 11:32 | 16:49:32.8 | +61:43:6 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0105.2M165053.2+352837 | 300 | 11:34 | 16:50:53.2 | +35:28:37 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0106.COMP | 12 | 11:39 | 16:50:53.2 | +35:28:37 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0107.2M165551. $5+473130$ | 300 | 11:41 | 16:55:51.5 | +47:31:30 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0108. COMP | 12 | 11:46 | 16:55:51.5 | +47:31:30 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0109.2M165729.1+272102 | 330 | 11:48 | 16:57:29.1 | +27:21:2 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0110.COMP | 12 | 11:54 | 16:57:29.1 | +27:21:2 | 300 | 90 | 3.0 | \#68 2MASS Reds | 2 |  |
| 0111.BDp404032 | 45 | 11:57 | 20:06:40.0 | 41:06:15 | 300 | 90 | 3.0 | \#56 Spectropho | 2 |  |
| 0112.BDp404032 | 45 | 11:58 | 20:06:40.0 | 41:06:15 | 300 | 90 | 3.0 | \#56 Spectropho | 2 |  |
| 0113. COMP | 12 | 11:59 | 20:06:40.0 | 41:06:15 | 300 | 90 | 3.0 | \#56 Spectropho | 2 |  |
| 0114-0123.BIAS | 0 | 12:04 | 20:06:40.0 | 41:06:15 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |

UT Date 2004-04-25 Observers M Calkins
Coll. Focus 1000 Grating/Grism $\qquad$ 300

| File | Exp <br> Time | $U T$ <br> Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
| :---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0124 -0133.FLAT | 6 | $12: 06$ | $20: 06: 40.0$ | $41: 06: 15$ | 300 | 90 | 3.0 | $\# 56$ Spectropho | 4 |  |
| 0134 -0143.BIAS | 0 | $12: 10$ | $20: 06: 40.0$ | $41: 06: 15$ | 300 | 90 | 3.0 | $\# 56$ Spectropho | 2 |  |
| 0144 -0153.FLAT | 12 | $12: 14$ | $20: 06: 40.0$ | $41: 06: 15$ | 300 | 90 | 3.0 | $\# 56$ Spectropho | 2 |  |
| $0154-0163$. DARK | 900 | $14: 35$ | $20: 06: 40.0$ | $41: 06: 15$ | 300 | 90 | 3.0 | $\# 56$ Spectropho | 2 |  |

