UT Date 2002-01-06 Observers M Calkins $\qquad$ Coll. Focus 1000 Grating/Grism $\qquad$ _

| File | Exp <br> Time | $\underset{\text { Start }}{U T}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0001-0005.DARK | 900 | 0:59 | 15:06:09.4 | +53:24:41 | 300 | 73 | 3.0 | \#2 SN Observat | 4 |  |
| 0006-0015.BIAS | 0 | 1:15 | 15:06:09.4 | +53:24:41 | 300 | 73 | 3.0 | \#2 SN Observat | 4 |  |
| 0016-0025.FLAT | 6 | 1:18 | 15:06:09.4 | +53:24:41 | 300 | 73 | 3.0 | \#2 SN Observat | 4 |  |
| 0026-0035.BIAS | 0 | 1:20 | 15:06:09.4 | +53:24:41 | 300 | 73 | 3.0 | \#2 SN Observat | 2 |  |
| 0036-0045.FLAT | 12 | 1:25 | 15:06:09.4 | +53:24:41 | 300 | 73 | 3.0 | \#2 SN Observat | 2 |  |
| 0046.Feige25 | 120 | 1:25 | 02:36:00 | 05:15:16 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |
| 0047. COMP | 5 | 1:25 | 02:36:00 | 05:15:16 | 300 | 90 | 3.0 | \#56 Spectropho | 4 |  |
| 0048.Feige25 | 120 | 1:25 | 02:36:00 | 05:15:16 | 300 | 90 | 3.0 | \#56 Spectropho | 2 |  |
| 0049.COMP | 12 | 1:25 | 02:36:00 | 05:15:16 | 300 | 90 | 3.0 | \#56 Spectropho | 2 |  |
| $0050 . \mathrm{M} 31$ | 60 | 1:25 | 00:40:00.0 | +40:59:42 | 300 | 90 | 3.0 | \#57 Velocity S | 2 |  |
| 0051.COMP | 12 | 1:25 | 00:40:00.0 | +40:59:42 | 300 | 90 | 3.0 | \#57 Velocity S | 2 |  |
| 0052. ZAnd | 2 | 1:25 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | \#12 Symbiotic | 2 |  |
| 0053. ZAnd | 10 | 1:25 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | $\# 12$ Symbiotic | 2 |  |
| 0054.ZAnd | 60 | 1:25 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | \#12 Symbiotic | 2 |  |
| 0055.COMP | 12 | 1:25 | 23:33:40 | 48:49:06 | 300 | 90 | 3.0 | \#12 Symbiotic | 2 |  |
| 0056. Akn564 | 180 | 1:25 | 22:42:39.4 | +29:43:31 | 300 | 74 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0057. Akn564 | 180 | 1:25 | 22:42:39.4 | +29:43:31 | 300 | 74 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0058.COMP | 12 | 1:25 | 22:42:39.4 | +29:43:31 | 300 | 74 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0059.a168_230 | 1200 | 1:25 | 01:10:41.8 | 3:36:49 | 300 | 69 | 3.0 | \#64 Cluster In | 2 |  |
| 0060.COMP | 12 | 1:25 | 01:10:41.8 | 3:36:49 | 300 | 69 | 3.0 | \#64 Cluster In | 2 |  |

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| File | Exp <br> Time | $\begin{gathered} U T \\ \text { Start } \end{gathered}$ | $R A$ | Dec | Gr. | P.A. | Slit |  | Program | Bin | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0061.a168_239 | 780 | 1:25 | 01:17:24.0 | -3:37:27 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0062. COMP | 12 | 1:25 | 01:17:24.0 | $-3: 37: 27$ | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0063.a168_245 | 900 | 1:25 | 01:22:18.3 | 3:25:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0064.COMP | 12 | 1:25 | 01:22:18.3 | 3:25:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0065.a168_265 | 1200 | 1:25 | 01:22:04.2 | 2:24:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0066. COMP | 12 | 1:25 | 01:22:04.2 | 2:24:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0067.a496_425 | 1200 | 1:25 | 04:27:08.4 | -10:03:02 | 300 | -10 | 3.0 | \#64 | Cluster In | 2 |  |
| 0068. COMP | 12 | 1:25 | 04:27:08.4 | -10:03:02 | 300 | -10 | 3.0 | \#64 | Cluster In | 2 |  |
| 0069.a496_440 | 1200 | 1:25 | 04:18:00.0 | -10:21:04 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0070. COMP | 12 | 1:25 | 04:18:00.0 | -10:21:04 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0071.a496_447 | 1200 | 1:25 | 04:49:10.3 | -15:20:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0072.COMP | 12 | 1:25 | 04:49:10.3 | -15:20:15 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0073.a496_449 | 1200 | 1:25 | 04:15:53.8 | -12:43:53 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0074.COMP | 12 | 1:25 | 04:15:53.8 | -12:43:53 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0075.a496_450 | 1020 | 1:25 | 04:21:32.3 | $-15: 44: 13$ | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0076.COMP | 12 | 1:25 | 04:21:32.3 | -15:44:13 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0077.a496_452 | 720 | 1:25 | 04:47:01.2 | -15:09:24 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0078.COMP | 12 | 1:25 | 04:47:01.2 | -15:09:24 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0079.a496_454 | 1200 | 1:25 | 04:52:16.8 | -13:06:52 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |
| 0080.COMP | 12 | 1:25 | 04:52:16.8 | -13:06:52 | 300 | 90 | 3.0 | \#64 | Cluster In | 2 |  |

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| File | Exp <br> Time | $\underset{\text { Start }}{U T}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0081.a496_457 | 660 | 1:25 | 04:15:18.8 | -13:49:42 | 300 | 90 | 3.0 | \#64 Cluster In | 2 |  |
| 0082. COMP | 12 | 1:25 | 04:15:18.8 | $-13: 49: 42$ | 300 | 90 | 3.0 | \#64 Cluster In | 2 |  |
| 0083.sn2001is | 1200 | 1:25 | 05:42:09.0 | +69:21:54 | 300 | -17 | 3.0 | \#2 SN Observat | 2 | row $=78$ |
| 0084.COMP | 12 | 1:25 | 05:42:09.0 | +69:21:54 | 300 | -17 | 3.0 | \#2 SN Observat | 2 |  |
| 0085.Hiltner600 | 45 | 1:25 | 06:42:37.2 | 02:11:25 | 300 | 4 | 3.0 | \#56 Spectropho |  | excellent seeing! |
| 0086. COMP | 12 | 1:25 | 06:42:37.2 | 02:11:25 | 300 | 4 | 3.0 | \#56 Spectropho | 2 |  |
| 0087. BGGem | 300 | 1:25 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | \#100 BGGem | 2 |  |
| 0088.COMP | 12 | 1:25 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | \#100 BGGem | 2 |  |
| 0089.BGGem | 1200 | 1:25 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | \#100 BGGem | 2 |  |
| 0090.COMP | 12 | 1:25 | 6:03:31 | 27:41:50 | 300 | 90 | 3.0 | \#100 BGGem | 2 |  |
| 0091.ch0827p29d | 1200 | 1:25 | 08:27:29.8 | 29:19:05 | 300 | 90 | 3.0 | \#129 CHAMP Sou | 2 |  |
| 0092.COMP | 12 | 1:25 | 08:27:29.8 | 29:19:05 | 300 | 90 | 3.0 | \#129 ChamP Sou | 2 |  |
| 0093.ch0827p29e | 720 | 1:25 | 08:27:55.2 | 29:27:00 | 300 | 90 | 3.0 | \#129 ChamP Sou | 2 | galaxy |
| 0094.COMP | 12 | 1:25 | 08:27:55.2 | 29:27:00 | 300 | 90 | 3.0 | \#129 ChamP Sou | 2 |  |
| 0095.ch0848p45a | 480 | 1:25 | 08:48:54.0 | 45:02:31 | 300 | 90 | 3.0 | \#129 CHAMP Sou | 2 |  |
| 0096. COMP | 12 | 1:25 | 08:48:54.0 | 45:02:31 | 300 | 90 | 3.0 | \#129 ChamP Sou | 2 |  |
| 0097.ch1025p47a | 1200 | 1:25 | 10:25:13.6 | 47:06:54 | 300 | 90 | 3.0 | \#129 ChamP Sou | 2 | faint gal |
| 0098.COMP | 12 | 1:25 | 10:25:13.6 | 47:06:54 | 300 | 90 | 3.0 | \#129 CHAMP Sou | 2 |  |
| 0099.ch1025p47b | 1200 | 1:25 | 10:25:54.6 | 47:14:24 | 300 | 90 | 3.0 | \#129 CHAMP Sou | 2 |  |
| 0100.COMP | 12 | 1:25 | 10:25:54.6 | 47:14:24 | 300 | 90 | 3.0 | \#129 CHAMP Sou | 2 |  |

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| File | Exp <br> Time | $\underset{\text { Start }}{U T}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0101.FLAT | 40 | 1:25 | 10:25:54.6 | 47:14:24 | 600 | 90 | 2.0 | \#122 Halo Stre | 4 | 600L, 2arcsec, 430 tilt |
| 0102-0110.FLAT | 40 | 9:37 | 10:25:54.6 | 47:14:24 | 600 | 90 | 2.0 | \#122 Halo Stre | 4 |  |
| 0111.Feige34 | 120 | 9:37 | 10:36:41.2 | 43:21:50 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0112.COMP | 10 | 9:37 | 10:36:41.2 | 43:21:50 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0113.hs644 | 1200 | 9:37 | 9:29:21.1 | 28:59:05 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0114.COMP | 10 | 9:37 | 9:29:21.1 | 28:59:05 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0115.hs647 | 1200 | 9:37 | 9:30:19.7 | 28:52:56 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0116.COMP | 10 | 9:37 | 9:30:19.7 | 28:52:56 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0117.hs648 | 120 | 9:37 | 9:30:51.3 | 28:13:31 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0118.COMP | 10 | 9:37 | 9:30:51.3 | 28:13:31 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0119.hs649 | 780 | 9:37 | 9:31:06.0 | 28:53:19 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0120.COMP | 10 | 9:37 | 9:31:06.0 | 28:53:19 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0121.hs650 | 830 | 9:37 | 9:31:33.5 | 28:24:09 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0122.COMP | 10 | 9:37 | 9:31:33.5 | 28:24:09 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0123.hs651 | 120 | 9:37 | 9:31:56.4 | 27:50:39 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0124.COMP | 10 | 9:37 | 9:31:56.4 | 27:50:39 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0125.hs652 | 600 | 9:37 | 9:32:00.5 | 28:01:40 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0126.COMP | 10 | 9:37 | 9:32:00.5 | 28:01:40 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0127.hs653 | 1200 | 9:37 | 9:32:04.0 | 28:50:44 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0128.COMP | 10 | 9:37 | 9:32:04.0 | 28:50:44 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |

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| File | Exp <br> Time | $\underset{\text { Start }}{U T}$ | $R A$ | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0129.hs654 | 540 | 9:37 | 9:32:20.0 | 29:22:22 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0130.COMP | 10 | 9:37 | 9:32:20.0 | 29:22:22 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0131.hs655 | 540 | 9:37 | 9:32:41.6 | 29:00:02 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0132.COMP | 12 | 9:37 | 9:32:41.6 | 29:00:02 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0133.hs656 | 60 | 9:37 | 9:32:49.3 | 28:10:00 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0134.COMP | 10 | 9:37 | 9:32:49.3 | 28:10:00 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0135.hs657 | 120 | 9:37 | 9:32:50.6 | 28:22:30 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0136.COMP | 10 | 9:37 | 9:32:50.6 | 28:22:30 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0137.hs658 | 540 | 9:37 | 9:32:51.0 | 28:48:16 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0138.COMP | 12 | 9:37 | 9:32:51.0 | 28:48:16 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0139.hs659 | 420 | 9:37 | 9:32:58.7 | 29:23:34 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0140.COMP | 12 | 9:37 | 9:32:58.7 | 29:23:34 | 600 | 90 | 2.0 | \#122 Halo Star | 4 |  |
| 0141. MRK421 | 300 | 9:37 | 11:04:27.4 | +38:12:32 | 300 | 90 | 3.0 | \#6 AGN Monitor | 2 | normal setup |
| 0142. MRK421 | 300 | 9:37 | 11:04:27.4 | +38:12:32 | 300 | 90 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0143. MRK421 | 300 | 9:37 | 11:04:27.4 | +38:12:32 | 300 | 90 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0144.COMP | 12 | 9:37 | 11:04:27.4 | +38:12:32 | 300 | 90 | 3.0 | \#6 AGN Monitor | 2 |  |
| 0145.sn2001it | 1200 | 9:37 | 15:06:09.4 | +53:24:41 | 300 | 62 | 3.0 | \#2 SN Observat | 2 |  |
| 0146.COMP | 12 | 9:37 | 15:06:09.4 | +53:24:41 | 300 | 62 | 3.0 | \#2 SN Observat | 2 |  |
| 0147. HZ44 | 120 | 9:37 | 13:21:19.0 | 36:23:39 | 300 | 32 | 3.0 | \#56 Spectropho | 2 |  |
| 0148.COMP | 12 | 9:37 | 13:21:19.0 | 36:23:39 | 300 | 32 | 3.0 | \#56 Spectropho | 2 |  |

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| File | Exp <br> Time | UT <br> Start | RA | Dec | Gr. | P.A. | Slit | Program | Bir | Comments |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0149-0153.sky | 2 | $14: 01$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 4 |  |
| 0154. COMP | 5 | $14: 01$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 4 |  |
| $0155-0164$. BIAS | 0 | $14: 04$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 4 |  |
| $0165-0174$. FLAT | 6 | $14: 07$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 4 |  |
| $0175-0184$. BIAS | 0 | $14: 09$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 2 |  |
| $0185-0194$. FLAT | 12 | $14: 14$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 2 |  |
| $0195-0204$. DARK | 900 | $16: 36$ | $12: 30: 32$ | $+12: 29: 25$ | 300 | 90 | 3.0 | $\# 57$ Velocity S | 2 |  |

