

UT Date 2019-03-14 Observers M CalkinsColl. Focus 1290 Grating/Grism 300

| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.DARK | 900      | 06:03    | 06:04:41.4 | +31:30:35 | 300 | 92   | 3.0  | 0 Calibration  | 4   |          |
| 0011-0020.BIAS | 0        | 07:10    | 09:48:56.1 | +13:44:39 | 300 | 92   | 3.0  | 0 Calibration  | 4   |          |
| 0021-0040.FLAT | 7        | 07:16    | 09:48:56.1 | +13:44:39 | 300 | 92   | 3.0  | 0 Calibration  | 2   |          |
| 0041-0050.BIAS | 0        | 07:17    | 09:48:56.1 | +13:44:39 | 300 | 92   | 3.0  | 0 Calibration  | 2   |          |
| 0051.HD84937   | 25       | 07:20    | 09:48:56.1 | +13:44:39 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0052.COMP      | 10       | 07:21    | 09:48:56.1 | +13:44:39 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0053.Feige34   | 180      | 07:23    | 10:39:36.7 | +43:06:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0054.COMP      | 10       | 07:27    | 10:39:36.7 | +43:06:09 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0055.N3377     | 180      | 07:31    | 10:47:42.4 | +13:59:08 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0056.COMP      | 10       | 07:34    | 10:47:42.4 | +13:59:08 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0057.PaulGreen | 900      | 07:38    | 12:07:51.8 | -04:34:40 | 300 | 90   | 3.0  | #99 Falco      | 2   |          |
| 0058.COMP      | 10       | 07:54    | 12:07:51.8 | -04:34:40 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0059.JS040914  | 1800     | 07:59    | 11:20:24.7 | -01:23:16 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0060.COMP      | 10       | 08:29    | 11:20:24.7 | -01:23:16 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0061.JS141777  | 1200     | 08:31    | 11:15:12.7 | +00:35:24 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0062.COMP      | 10       | 08:52    | 11:15:12.7 | +00:35:24 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0063.JS151576  | 1200     | 08:55    | 11:21:33.6 | +25:02:03 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0064.COMP      | 10       | 09:16    | 11:21:33.6 | +25:02:03 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0065.Mkn110    | 300      | 09:19    | 09:25:12.9 | +52:17:10 | 300 | 90   | 3.0  | #227 Changing- | 2   |          |
| 0066.COMP      | 10       | 09:25    | 09:25:12.9 | +52:17:10 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |

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| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0067.JS075999  | 1200     | 09:27    | 12:58:13.9 | +39:46:22 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0068.COMP      | 10       | 09:48    | 12:58:13.9 | +39:46:22 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0069.JS059185  | 1800     | 09:52    | 12:58:48.2 | +65:48:13 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0070.COMP      | 10       | 10:22    | 12:58:48.2 | +65:48:13 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0071.JS069383  | 1800     | 10:24    | 12:59:18.6 | +39:09:04 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0072.COMP      | 10       | 10:56    | 12:59:18.6 | +39:09:04 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0073.JS053866  | 1800     | 10:59    | 13:00:03.4 | +48:14:02 | 300 | 89   | 3.0  | 232 Missing SD | 2   |          |
| 0074.COMP      | 10       | 11:30    | 13:00:03.4 | +48:14:02 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0075.JS076086  | 1800     | 11:34    | 13:00:58.1 | +39:35:02 | 300 | 100  | 3.0  | 232 Missing SD | 2   |          |
| 0076.COMP      | 10       | 12:05    | 13:00:58.1 | +39:35:02 | 300 | 100  | 3.0  | 0 Calibration  | 2   |          |
| 0077.JS040730  | 1800     | 12:08    | 15:00:39.9 | +49:20:06 | 300 | 90   | 3.0  | 232 Missing SD | 2   |          |
| 0078.COMP      | 10       | 12:39    | 15:00:39.9 | +49:20:06 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0079.BDp262606 | 30       | 12:41    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0080.COMP      | 10       | 12:42    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0081.BDp262606 | 60       | 12:43    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0082.COMP      | 10       | 12:44    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0083.BDp332642 | 150      | 12:47    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0084.COMP      | 10       | 12:50    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0085-0094.BIAS | 0        | 12:54    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0095-0114.FLAT | 5        | 12:59    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |

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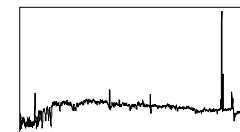
| File              | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|-------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.DARK    | 900      | 01:46    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 4   |          |
| 0011-0020.BIAS    | 0        | 02:06    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 4   |          |
| 0021-0040.FLAT    | 6        | 02:16    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0041-0050.BIAS    | 0        | 02:18    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0051.GITau        | 300      | 02:29    | 04:33:34.0 | +24:21:18 | 300 | 90   | 3.0  | #12 Symbiotic  | 2   |          |
| 0052.COMP         | 10       | 02:35    | 04:33:34.0 | +24:21:18 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0053.GKTau        | 300      | 02:36    | 04:33:34.5 | +24:21:07 | 300 | 90   | 3.0  | #12 Symbiotic  | 2   |          |
| 0054.COMP         | 10       | 02:42    | 04:33:34.5 | +24:21:07 | 300 | 91   | 3.0  | 0 Calibration  | 2   |          |
| 0055.BXMon        | 15       | 02:48    | 07:25:23.0 | -03:35:51 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0056.BXMon        | 180      | 02:49    | 07:25:23.0 | -03:35:51 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0057.COMP         | 10       | 02:53    | 07:25:23.0 | -03:35:51 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0058.SS129        | 300      | 02:58    | 07:32:45.0 | -26:49:16 | 300 | 75   | 3.0  | #12 Symbiotic  | 2   |          |
| 0059.SS129        | 300      | 03:03    | 07:32:45.0 | -26:49:16 | 300 | 75   | 3.0  | #12 Symbiotic  | 2   |          |
| 0060.COMP         | 10       | 03:09    | 07:32:45.0 | -26:49:16 | 300 | 76   | 3.0  | 0 Calibration  | 2   |          |
| 0061.snAT2018lkg  | 1080     | 03:13    | 07:06:34.8 | +63:50:57 | 300 | 90   | 3.0  | #2 SN Observat | 2   |          |
| 0062.COMP         | 10       | 03:32    | 07:06:34.8 | +63:50:57 | 300 | 91   | 3.0  | 0 Calibration  | 2   |          |
| 0063.snAT2019azh  | 900      | 03:34    | 08:13:16.9 | +22:38:54 | 300 | 91   | 3.0  | #2 SN Observat | 2   |          |
| 0064.COMP         | 10       | 03:50    | 08:13:16.9 | +22:38:54 | 300 | 91   | 3.0  | 0 Calibration  | 2   |          |
| 0065.BRUTUS8556_6 | 1800     | 03:52    | 09:26:02.5 | +18:56:24 | 300 | 91   | 3.0  | #220 ASASSN Tr | 2   |          |
| 0066.COMP         | 10       | 04:22    | 09:26:02.5 | +18:56:24 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |

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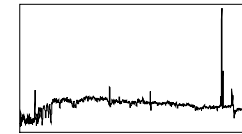
| File          | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|---------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0067.sn2019np | 1200     | 04:25    | 10:29:22.0 | +29:30:38 | 300 | 90   | 3.0  | #2 SN Observat | 2   |          |
| 0068.COMP     | 10       | 04:46    | 10:29:22.0 | +29:30:38 | 300 | 85   | 3.0  | 0 Calibration  | 2   |          |
| 0069.HD84937  | 25       | 05:28    | 09:48:56.1 | +13:44:39 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0070.COMP     | 10       | 05:29    | 09:48:56.1 | +13:44:39 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0071.Feige34  | 120      | 05:31    | 10:39:36.7 | +43:06:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0072.COMP     | 10       | 05:34    | 10:39:36.7 | +43:06:09 | 300 | 87   | 3.0  | 0 Calibration  | 2   |          |
| 0073.j0856p62 | 2100     | 05:45    | 08:56:19.3 | +62:06:33 | 600 | 87   | 1.5  | #178 Low Mass  | 4   |          |
| 0074.COMP     | 10       | 06:21    | 08:56:19.3 | +62:06:33 | 600 | 91   | 1.5  | 0 Calibration  | 4   |          |
| 0075.j1134p61 | 720      | 06:26    | 11:34:44.6 | +61:08:26 | 600 | 91   | 1.5  | #178 Low Mass  | 4   |          |
| 0076.COMP     | 10       | 06:38    | 11:34:44.6 | +61:08:26 | 600 | 89   | 1.5  | 0 Calibration  | 4   |          |
| 0077.j1150p29 | 1800     | 06:52    | 11:50:34.3 | +29:03:44 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0078.COMP     | 10       | 07:22    | 11:50:34.3 | +29:03:44 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0079.gaia38   | 1200     | 07:24    | 11:53:59.4 | +24:07:30 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0080.COMP     | 10       | 07:44    | 11:53:59.4 | +24:07:30 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0081.gaia39   | 120      | 07:53    | 11:55:49.6 | -12:42:43 | 600 | 88   | 1.5  | #178 Low Mass  | 4   |          |
| 0082.COMP     | 10       | 07:55    | 11:55:49.6 | -12:42:43 | 600 | 88   | 1.5  | 0 Calibration  | 4   |          |
| 0083.gaia40   | 900      | 07:59    | 12:03:54.6 | +46:45:30 | 600 | 89   | 1.5  | #178 Low Mass  | 4   |          |
| 0084.COMP     | 10       | 08:14    | 12:03:54.6 | +46:45:30 | 600 | 88   | 1.5  | 0 Calibration  | 4   |          |
| 0085.j1207p68 | 1800     | 08:20    | 12:07:46.1 | +68:55:56 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0086.COMP     | 10       | 08:51    | 12:07:46.1 | +68:55:56 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |

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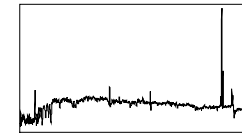
| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0087.gaia41    | 120      | 08:53    | 12:29:40.7 | +24:30:21 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0088.COMP      | 10       | 08:56    | 12:29:40.7 | +24:30:21 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0089.gaia42    | 720      | 08:57    | 12:35:16.0 | +24:49:38 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0090.COMP      | 10       | 09:10    | 12:35:16.0 | +24:49:38 | 600 | 88   | 1.5  | 0 Calibration  | 4   |          |
| 0091.gaia43    | 124      | 09:12    | 12:42:36.1 | +52:33:44 | 600 | 88   | 1.5  | #178 Low Mass  | 4   |          |
| 0092.COMP      | 10       | 09:14    | 12:42:36.1 | +52:33:44 | 600 | 89   | 1.5  | 0 Calibration  | 4   |          |
| 0093.gaia44    | 720      | 09:16    | 12:53:44.9 | +55:03:28 | 600 | 89   | 1.5  | #178 Low Mass  | 4   |          |
| 0094.COMP      | 10       | 09:29    | 12:53:44.9 | +55:03:28 | 600 | 89   | 1.5  | 0 Calibration  | 4   |          |
| 0095.gaia45    | 465      | 09:31    | 12:58:44.1 | +42:21:55 | 600 | 89   | 1.5  | #178 Low Mass  | 4   |          |
| 0096.COMP      | 10       | 09:39    | 12:58:44.1 | +42:21:55 | 600 | 89   | 1.5  | 0 Calibration  | 4   |          |
| 0097.gaia46    | 210      | 09:41    | 13:07:54.1 | -18:11:35 | 600 | 89   | 1.5  | #178 Low Mass  | 4   |          |
| 0098.COMP      | 10       | 09:46    | 13:07:54.1 | -18:11:35 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0099.gaia47    | 1200     | 09:49    | 13:45:00.7 | +46:35:46 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0100.COMP      | 10       | 10:11    | 13:45:00.7 | +46:35:46 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0101.gaia48    | 145      | 10:12    | 13:45:38.1 | +44:11:05 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0102.COMP      | 10       | 10:15    | 13:45:38.1 | +44:11:05 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0103.gaia49    | 500      | 10:17    | 13:48:40.2 | +52:50:40 | 600 | 90   | 1.5  | #178 Low Mass  | 4   |          |
| 0104.COMP      | 10       | 10:26    | 13:48:40.2 | +52:50:40 | 600 | 90   | 1.5  | 0 Calibration  | 4   |          |
| 0105.BDp332642 | 180      | 10:27    | 15:51:59.9 | +32:56:54 | 600 | 90   | 1.5  | #56 Spectropho | 4   |          |
| 0106.COMP      | 10       | 10:31    | 15:51:59.9 | +32:56:54 | 600 | 88   | 1.5  | 0 Calibration  | 4   |          |

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| File             | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0107-0116.FLAT   | 12       | 10:35    | 15:51:59.9 | +32:56:54 | 600 | 88   | 1.5  | 0 Calibration  | 4   |          |
| 0117.COMP        | 5        | 10:39    | 15:51:59.9 | +32:56:54 | 300 | 88   | 3.0  | 0 Calibration  | 2   | - test   |
| 0118.COMP        | 5        | 10:40    | 15:51:59.9 | +32:56:54 | 300 | 88   | 3.0  | 0 Calibration  | 2   | - test   |
| 0119.sn2019axf   | 1020     | 10:54    | 16:24:26.4 | +82:47:42 | 300 | 88   | 3.0  | #2 SN Observat | 2   |          |
| 0120.COMP        | 10       | 11:14    | 16:24:26.4 | +82:47:42 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0121.snAT2019bpc | 1200     | 11:17    | 12:34:43.5 | +46:57:33 | 300 | 89   | 3.0  | #2 SN Observat | 2   |          |
| 0122.COMP        | 10       | 11:39    | 12:34:43.5 | +46:57:33 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0123.sn2019va    | 1500     | 11:48    | 13:35:14.7 | +44:45:59 | 300 | 89   | 3.0  | #2 SN Observat | 2   |          |
| 0124.COMP        | 10       | 12:13    | 13:35:14.7 | +44:45:59 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0125.BDp262606   | 120      | 12:16    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0126.COMP        | 10       | 12:19    | 14:49:02.4 | +25:42:09 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0127.BDp332642   | 150      | 12:21    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0128.COMP        | 10       | 12:24    | 15:51:59.9 | +32:56:54 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0129.AS210       | 5        | 12:27    | 16:51:20.3 | -26:00:33 | 300 | 89   | 3.0  | #12 Symbiotic  | 2   |          |
| 0130.AS210       | 300      | 12:27    | 16:51:20.3 | -26:00:33 | 300 | 89   | 3.0  | #12 Symbiotic  | 2   |          |
| 0131.COMP        | 10       | 12:33    | 16:51:20.3 | -26:00:33 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0132.Hen1341     | 12       | 12:35    | 17:08:36.0 | -17:26:30 | 300 | 90   | 3.0  | #12 Symbiotic  | 2   |          |
| 0133.Hen1341     | 30       | 12:35    | 17:08:36.0 | -17:26:30 | 300 | 90   | 3.0  | #12 Symbiotic  | 2   |          |
| 0134.Hen1341     | 60       | 12:36    | 17:08:36.0 | -17:26:30 | 300 | 90   | 3.0  | #12 Symbiotic  | 2   |          |
| 0135.COMP        | 10       | 12:38    | 17:08:36.0 | -17:26:30 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |

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| <i>File</i>    | <i>Exp Time</i> | <i>UT Start</i> | <i>RA</i>  | <i>Dec</i> | <i>Gr.</i> | <i>P.A.</i> | <i>Slit</i> | <i>Program</i> | <i>Bin</i> | <i>Comments</i> |
|----------------|-----------------|-----------------|------------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0136.RS0ph     | 10              | 12:40           | 17:50:13.0 | -06:42:30  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0137.RS0ph     | 60              | 12:40           | 17:50:13.0 | -06:42:30  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0138.RS0ph     | 150             | 12:41           | 17:50:13.0 | -06:42:30  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0139.COMP      | 10              | 12:44           | 17:50:13.0 | -06:42:30  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0140.TCrB      | 15              | 12:46           | 15:59:30.0 | +25:55:12  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0141.TCrB      | 60              | 12:49           | 15:59:30.0 | +25:55:12  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0142.COMP      | 10              | 12:50           | 15:59:30.0 | +25:55:12  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0143.AGDra     | 2               | 12:52           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0144.AGDra     | 15              | 12:53           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0145.AGDra     | 60              | 12:53           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | #12 Symbiotic  | 2          |                 |
| 0146.COMP      | 10              | 12:54           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0147.COMP      | 10              | 12:57           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0148-0157.BIAS | 0               | 13:00           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0158-0177.FLAT | 7               | 13:06           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0178-0187.DARK | 900             | 15:37           | 16:01:41.0 | +66:48:10  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |

UT Date 2019-03-16 Observers M CalkinsColl. Focus 1290 Grating/Grism 300

| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0007.DARK | 900      | 02:33    | 22:47:52.9 | +31:30:49 | 300 | 88   | 3.0  | 0 Calibration  | 4   |          |
| 0008-0017.BIAS | 0        | 02:49    | 22:47:52.9 | +31:30:49 | 300 | 88   | 3.0  | 0 Calibration  | 4   |          |
| 0018-0040.FLAT | 7        | 02:56    | 22:47:52.9 | +31:30:49 | 300 | 88   | 3.0  | 0 Calibration  | 2   |          |
| 0041-0050.BIAS | 0        | 02:58    | 22:47:52.9 | +31:30:49 | 300 | 88   | 3.0  | 0 Calibration  | 2   |          |
| 0051.RWHya     | 3        | 12:03    | 13:34:18.0 | -25:22:51 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0052.RWHya     | 15       | 12:04    | 13:34:18.0 | -25:22:51 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0053.RWHya     | 45       | 12:04    | 13:34:18.0 | -25:22:51 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0054.COMP      | 10       | 12:06    | 13:34:18.0 | -25:22:51 | 300 | 91   | 3.0  | 0 Calibration  | 2   |          |
| 0055.TXCVn     | 15       | 12:09    | 12:44:42.0 | +36:45:48 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0056.TXCVn     | 60       | 12:09    | 12:44:42.0 | +36:45:48 | 300 | 91   | 3.0  | #12 Symbiotic  | 2   |          |
| 0057.COMP      | 10       | 12:11    | 12:44:42.0 | +36:45:48 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0058.Feige98   | 300      | 12:17    | 14:38:15.8 | +27:29:33 | 300 | 86   | 3.0  | #56 Spectropho | 2   |          |
| 0059.COMP      | 10       | 12:22    | 14:38:15.8 | +27:29:33 | 300 | 86   | 3.0  | 0 Calibration  | 2   |          |
| 0060.BDp332642 | 300      | 12:25    | 15:51:59.9 | +32:56:54 | 300 | 86   | 3.0  | #56 Spectropho | 2   |          |
| 0061.COMP      | 10       | 12:30    | 15:51:59.9 | +32:56:54 | 300 | 87   | 3.0  | 0 Calibration  | 2   |          |
| 0062-0071.BIAS | 0        | 12:38    | 15:51:59.9 | +32:56:54 | 300 | 87   | 3.0  | 0 Calibration  | 2   |          |
| 0072-0091.FLAT | 7        | 12:43    | 15:51:59.9 | +32:56:54 | 300 | 87   | 3.0  | 0 Calibration  | 2   |          |
| 0092-0101.DARK | 900      | 15:25    | 15:51:59.9 | +32:56:54 | 300 | 87   | 3.0  | 0 Calibration  | 2   |          |



UT Date 2019-03-17 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

| <i>File</i>    | <i>Exp Time</i> | <i>UT Start</i> | <i>RA</i>  | <i>Dec</i> | <i>Gr.</i> | <i>P.A.</i> | <i>Slit</i> | <i>Program</i> | <i>Bin</i> | <i>Comments</i> |
|----------------|-----------------|-----------------|------------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0001.COMP      | 10              | 01:46           | 15:51:59.9 | +32:56:54  | 300        | 87          | 3.0         | 0 Calibration  | 2          |                 |
| 0002.COMP      | 10              | 02:08           | 15:51:59.9 | +32:56:54  | 300        | 87          | 3.0         | 0 Calibration  | 2          |                 |
| 0003-0022.DARK | 900             | 07:44           | 15:51:59.9 | +32:56:54  | 300        | 87          | 3.0         | 0 Calibration  | 2          |                 |

UT Date 2019-03-20 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

| File            | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|-----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.BIAS  | 0        | 02:08    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0011-0020.FLAT  | 7        | 02:11    | 15:51:59.9 | +32:56:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0021.HD52071    | 20       | 02:31    | 07:00:58.2 | +27:09:27 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0022.HD52071    | 2        | 02:33    | 07:00:58.2 | +27:09:27 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0023.COMP       | 10       | 02:34    | 07:00:58.2 | +27:09:27 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0024.Hiltner600 | 150      | 02:37    | 06:45:13.4 | +02:08:15 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0025.COMP       | 10       | 02:40    | 06:45:13.4 | +02:08:15 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0026.G191B2B    | 360      | 02:42    | 05:05:30.6 | +52:49:52 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0027.AT2019bs1  | 1415     | 03:09    | 05:14:11.2 | +22:06:41 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0028.alphaCMa   | 0        | 03:09    | 06:45:08.9 | -16:42:58 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0029.?          | 0        | 03:09    | 06:45:08.9 | -16:42:58 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0030.alphaCMa   | 1        | 03:45    | 06:45:08.9 | -16:42:58 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0031.alphaCMa   | 0        | 03:48    | 06:45:08.9 | -16:42:58 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0032.alphaCMa   | 0        | 03:48    | 06:45:08.9 | -16:42:58 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0033.BD+202465  | 120      | 05:42    | 10:19:36.2 | +19:52:12 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0034.BD+202465  | 60       | 05:46    | 10:19:36.2 | +19:52:12 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0035.COMP       | 10       | 05:48    | 10:19:36.2 | +19:52:12 | 300 | 91   | 3.0  | 0 Calibration  | 2   |          |
| 0036.11Lmi      | 10       | 05:55    | 09:35:39.5 | +35:48:37 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0037.11Lmi      | 0        | 05:56    | 09:35:39.5 | +35:48:37 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0038.11Lmi      | 1        | 05:57    | 09:35:39.5 | +35:48:37 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |

UT Date 2019-03-20 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

| File          | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|---------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0039.HD77484  | 30       | 06:10    | 09:02:50.6 | +00:24:30 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0040.HD77484  | 60       | 06:14    | 09:02:50.6 | +00:24:30 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0041.HD77484  | 60       | 06:16    | 09:02:50.6 | +00:24:30 | 300 | 91   | 3.0  | #56 Spectropho | 2   |          |
| 0042.HD110166 | 60       | 07:49    | 12:39:57.0 | +36:59:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0043.HD110166 | 45       | 07:51    | 12:39:57.0 | +36:59:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0044.COMP     | 10       | 07:52    | 12:39:57.0 | +36:59:54 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0045.HD103966 | 60       | 07:57    | 11:58:27.0 | +26:50:14 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0046.HD103966 | 45       | 07:59    | 11:58:27.0 | +26:50:14 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0047.GamUMa   | 0        | 08:16    | 11:53:49.8 | +53:41:41 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0048.HD110463 | 45       | 08:23    | 12:41:44.5 | +55:43:29 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0049.HD110463 | 45       | 08:25    | 12:41:44.5 | +55:43:29 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0050.HD110463 | 30       | 08:26    | 12:41:44.5 | +55:43:29 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0051.HR4891   | 10       | 08:34    | 12:53:11.2 | -03:33:11 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0052.HR4891   | 1        | 08:34    | 12:53:11.2 | -03:33:11 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0053.HR4891   | 4        | 08:35    | 12:53:11.2 | -03:33:11 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0054.HD118915 | 45       | 09:14    | 13:39:46.4 | +12:46:40 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0055.HD118915 | 30       | 09:16    | 13:39:46.4 | +12:46:40 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0056.83UMa    | 5        | 09:22    | 13:40:44.3 | +54:40:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0057.83UMa    | 1        | 09:23    | 13:40:44.3 | +54:40:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0058.83UMa    | 1        | 09:24    | 13:40:44.3 | +54:40:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |

UT Date 2019-03-20 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

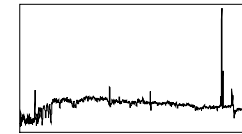
| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0059.83UMa     | 1        | 09:24    | 13:40:44.3 | +54:40:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0060.83UMa     | 1        | 09:26    | 13:40:44.3 | +54:40:54 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0061.AT2019bvt | 1800     | 09:46    | 18:28:48.5 | +50:22:23 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0062.AT2019bvt | 1800     | 10:20    | 18:28:48.5 | +50:22:23 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0063.COMP      | 10       | 10:55    | 18:28:48.5 | +50:22:23 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0064.pallas    | 30       | 11:11    | 14:08:07.3 | +11:34:08 | 300 | 82   | 3.0  | #57 Velocity S | 2   |          |
| 0065.pallas    | 300      | 11:14    | 14:08:07.3 | +11:34:08 | 300 | 82   | 3.0  | #57 Velocity S | 2   |          |
| 0066.eunike    | 738      | 11:27    | 13:45:31.2 | +12:26:29 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0067.HD147470  | 45       | 12:02    | 16:22:12.9 | +00:29:54 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0068.HD147470  | 30       | 12:03    | 16:22:12.9 | +00:29:54 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0069.HD147470  | 20       | 12:05    | 16:22:12.9 | +00:29:54 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0070.HR6096    | 10       | 12:09    | 16:22:38.9 | -02:04:48 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0071.HR6096    | 10       | 12:14    | 16:22:38.9 | -02:04:48 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0072.HR6096    | 5        | 12:15    | 16:22:38.9 | -02:04:48 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0073-0080.DARK | 900      | 14:32    | 17:13:00.8 | +31:30:47 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |

UT Date 2019-03-21 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

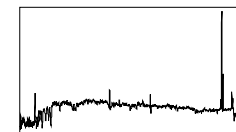
| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0020.BIAS | 0        | 00:52    | 17:13:00.8 | +31:30:47 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0021-0035.FLAT | 7        | 00:59    | 17:13:00.8 | +31:30:47 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0036-0037.FLAT | 5        | 07:18    | 11:46:03.1 | +47:46:46 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0038.Feige34   | 180      | 07:25    | 10:39:36.7 | +43:06:09 | 300 | 90   | 3.0  | #56 Spectropho | 2   |          |
| 0039.HD93521   | 60       | 07:44    | 10:48:23.0 | +37:34:13 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0040.HD93521   | 60       | 07:48    | 10:48:23.0 | +37:34:13 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0041.HD93521   | 10       | 07:52    | 10:48:23.0 | +37:34:13 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0042.HD93521   | 10       | 07:53    | 10:48:23.0 | +37:34:13 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0043.AT2019bth | 873      | 09:12    | 13:31:06.9 | +37:14:55 | 300 | 88   | 3.0  | #57 Velocity S | 2   |          |
| 0044.AT2019bum | 1800     | 09:40    | 14:49:47.8 | +54:48:47 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0045.HD138749  | 1        | 10:23    | 15:32:55.0 | +31:21:33 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0046.HD143454  | 60       | 10:33    | 15:59:30.0 | +25:55:12 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0047.HD143454  | 30       | 10:36    | 15:59:30.0 | +25:55:12 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0048.NGC6543   | 120      | 10:43    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0049.NGC6543   | 10       | 10:46    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0050.NGC6543   | 1        | 10:47    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0051.NGC6543   | 1        | 10:48    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0052.NGC6543   | 30       | 10:50    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0053.NGC6543   | 30       | 10:54    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0054.NGC6543   | 30       | 10:54    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |

UT Date 2019-03-21 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

| File               | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|--------------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0055.NGC6543       | 30       | 10:55    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0056.NGC6543       | 30       | 10:56    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0057.NGC6543       | 30       | 10:56    | 17:58:33.0 | +66:37:59 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0058.HD134807      | 15       | 11:07    | 15:08:19.0 | +65:47:19 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0059.HD134807      | 7        | 11:09    | 15:08:19.0 | +65:47:19 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0060.COMP          | 10       | 11:10    | 15:08:19.0 | +65:47:19 | 300 | 90   | 3.0  | 0 Calibration  | 2   |          |
| 0061.UCAC189       | 180      | 11:21    | 15:48:02.0 | +04:21:39 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0062.UCAC189       | 600      | 11:26    | 15:48:02.0 | +04:21:39 | 300 | 90   | 3.0  | #57 Velocity S | 2   |          |
| 0063.BD472298      | 60       | 11:41    | 16:06:40.0 | +47:30:13 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0064.HD147470      | 15       | 11:51    | 16:22:12.0 | +00:29:53 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0065.HD148816      | 30       | 12:01    | 16:30:28.0 | +04:10:41 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0066.HD156074      | 15       | 12:10    | 17:13:31.0 | +42:06:25 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0067.HD156074      | 15       | 12:11    | 17:13:31.0 | +42:06:25 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0068.HD156074      | 15       | 12:11    | 17:13:31.0 | +42:06:25 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0069.HD148816      | 15       | 12:15    | 16:30:28.0 | +04:10:41 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0070.PHANTOMSTREAK | 30       | 12:20    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0071.PHANTOMSTREAK | 30       | 12:22    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0072.PHANTOMSTREAK | 300      | 12:23    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |

UT Date 2019-03-22 Observers Astro 100Coll. Focus 1290 Grating/Grism 300

| File           | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0001-0010.BIAS | 0        | 00:59    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0011-0025.FLAT | 7        | 01:06    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0026-0030.DARK | 900      | 02:08    | 19:02:37.0 | -00:26:56 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0031.Feige34   | 180      | 04:48    | 10:39:36.7 | +43:06:09 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0032.HD84937   | 30       | 04:54    | 09:48:56.1 | +13:44:39 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0033.1994JS1   | 120      | 05:15    | 11:27:39.2 | +09:59:48 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0034.1994JS1   | 120      | 05:20    | 11:27:39.2 | +09:59:53 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0035.1994JS1   | 120      | 05:24    | 11:27:39.1 | +09:59:59 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0036.Herculina | 45       | 05:32    | 09:08:07.0 | +33:24:56 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0037.COMP      | 10       | 05:34    | 09:08:07.0 | +33:24:56 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0038.Dembowska | 60       | 05:40    | 10:37:13.8 | +18:21:53 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0039.Dembowska | 120      | 05:42    | 10:37:13.8 | +18:21:53 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0040.Antigone  | 120      | 05:51    | 09:44:13.9 | +19:52:32 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0041.COMP      | 10       | 05:54    | 09:44:13.9 | +19:52:32 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0042.Doris     | 200      | 06:14    | 08:56:49.6 | +11:52:48 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0043.COMP      | 10       | 06:23    | 08:56:49.6 | +11:52:48 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0044.OwlNebula | 10       | 06:31    | 11:14:47.7 | +55:01:09 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0045.OwlNebula | 60       | 06:32    | 11:14:47.7 | +55:01:09 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0046.OwlNebula | 300      | 06:35    | 11:14:47.7 | +55:01:09 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0047.COMP      | 10       | 06:47    | 11:14:47.7 | +55:01:09 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |

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| File          | Exp Time | UT Start | RA         | Dec       | Gr. | P.A. | Slit | Program        | Bin | Comments |
|---------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0048.Ilmatar  | 120      | 06:52    | 11:35:34.4 | -02:51:05 | 300 | 89   | 3.0  | #56 Spectropho | 2   |          |
| 0049.IC3568   | 120      | 07:46    | 12:33:06.9 | +82:33:49 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0050.COMP     | 10       | 07:49    | 12:33:06.9 | +82:33:49 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0051.IC3568   | 30       | 07:50    | 12:33:06.9 | +82:33:49 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0052.Moon     | 0        | 08:00    | 13:00:00.0 | -03:25:17 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0053.Moon     | 3        | 08:02    | 13:00:00.0 | -03:25:17 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0054.Moon     | 10       | 08:06    | 13:15:57.6 | -03:25:17 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0055.Moon     | 1        | 08:12    | 13:15:57.6 | -03:25:17 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0056.NGC6058  | 60       | 10:18    | 16:04:26.0 | +40:40:59 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0057.NGC6058  | 60       | 10:19    | 16:04:26.0 | +40:40:59 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0058.COMP     | 10       | 10:21    | 16:04:26.0 | +40:40:59 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0059.NGC6058  | 60       | 10:23    | 16:04:26.0 | +40:40:59 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0060.M3       | 30       | 10:29    | 13:42:11.6 | +28:22:38 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0061.Arcturus | 0        | 10:45    | 14:15:39.7 | +19:10:57 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0062.Arcturus | 0        | 10:45    | 14:15:39.7 | +19:10:57 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0063.Arcturus | 0        | 10:46    | 14:15:39.7 | +19:10:57 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0064.COMP     | 10       | 10:47    | 14:15:39.7 | +19:10:57 | 300 | 89   | 3.0  | 0 Calibration  | 2   |          |
| 0065.Ceres    | 30       | 10:55    | 16:49:28.7 | -16:20:23 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0066.Ceres    | 20       | 10:56    | 16:49:28.7 | -16:20:23 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |
| 0067.Ceres    | 10       | 10:56    | 16:49:28.7 | -16:20:23 | 300 | 89   | 3.0  | #57 Velocity S | 2   |          |



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| <i>File</i>    | <i>Exp Time</i> | <i>UT Start</i> | <i>RA</i>  | <i>Dec</i> | <i>Gr.</i> | <i>P.A.</i> | <i>Slit</i> | <i>Program</i> | <i>Bin</i> | <i>Comments</i> |
|----------------|-----------------|-----------------|------------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0068.Ceres     | 5               | 10:57           | 16:49:28.7 | -16:20:23  | 300        | 89          | 3.0         | #57 Velocity S | 2          |                 |
| 0069.COMP      | 10              | 10:57           | 16:49:28.7 | -16:20:23  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0070.SN2019bvt | 1800            | 11:04           | 18:28:48.5 | +50:22:23  | 300        | 89          | 3.0         | #57 Velocity S | 2          |                 |
| 0071.COMP      | 10              | 11:35           | 18:28:48.5 | +50:22:23  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| 0072.SN2019bvt | 75              | 11:37           | 18:28:48.5 | +50:22:23  | 300        | 89          | 3.0         | #57 Velocity S | 2          |                 |
| 0073.SN2019bvt | 1800            | 11:39           | 18:28:48.5 | +50:22:23  | 300        | 89          | 3.0         | #57 Velocity S | 2          |                 |
| 0074.COMP      | 10              | 12:10           | 18:28:48.5 | +50:22:23  | 300        | 89          | 3.0         | 0 Calibration  | 2          |                 |
| comp300+600.ms | 10              | 05:47           | 10:39:36.9 | +43:06:11  | 300        | 90          | 3.0         | #56 Spectropho | 1          |                 |