

UT Date 2019-06-05 Observers M Giovanazzi, M CalkinsColl. Focus 1290 Grating/Grism 600

| File | Exp Time | UT Start | RA | Dec | Gr. | P.A. | Slit | Program | Bin | Comments |
|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------------------------|
| 0001.COMP | 5 | 02:27 | 03:31:00.3 | +31:30:48 | 300 | 86 | 3.0 | 0 Calibration | 2 | |
| 0002-0003.DARK | 900 | 02:43 | 03:31:00.3 | +31:30:48 | 300 | 86 | 3.0 | 0 Calibration | 2 | |
| 0004-0013.BIAS | 0 | 03:07 | 03:31:00.3 | +31:30:48 | 600 | 86 | 3.0 | 0 Calibration | 2 | |
| 0014-0023.FLAT | 15 | 03:14 | 03:31:00.3 | +31:30:48 | 600 | 86 | 3.0 | 0 Calibration | 2 | |
| 0024.IC745 | 1200 | 03:29 | 11:54:12.3 | +00:08:12 | 600 | 86 | 3.0 | #99 Directors | 2 | PA=90 |
| 0025.IC745 | 1200 | 03:50 | 11:54:12.3 | +00:08:12 | 600 | 86 | 3.0 | #99 Directors | 2 | PA=90 |
| 0026.COMP | 15 | 04:11 | 11:54:12.3 | +00:08:12 | 600 | 86 | 3.0 | 0 Calibration | 2 | PA=90 |
| 0027.IC745 | 1200 | 04:13 | 11:54:12.3 | +00:08:12 | 600 | 0 | 3.0 | #99 Directors | 2 | PA=00 |
| 0028.IC745 | 1200 | 04:34 | 11:54:12.3 | +00:08:12 | 600 | 0 | 3.0 | #99 Directors | 2 | PA=00 |
| 0029.COMP | 15 | 04:54 | 11:54:12.3 | +00:08:12 | 600 | 0 | 3.0 | 0 Calibration | 2 | PA=00 |
| 0030.IC745 | 1200 | 04:56 | 11:54:12.3 | +00:08:12 | 600 | 2 | 3.0 | #99 Directors | 2 | PA=02, offset 5arcsec East |
| 0031.IC745 | 1200 | 05:17 | 11:54:12.3 | +00:08:12 | 600 | 2 | 3.0 | #99 Directors | 2 | PA=02, offset 5arcsec East |
| 0032.COMP | 15 | 05:37 | 11:54:12.3 | +00:08:12 | 600 | 2 | 3.0 | 0 Calibration | 2 | PA=02 |
| 0033.Feige66 | 100 | 05:40 | 12:37:23.5 | +25:04:00 | 600 | 90 | 3.0 | #56 Spectropho | 2 | PA=90, cnts a little high |
| 0034.COMP | 15 | 05:43 | 12:37:23.5 | +25:04:00 | 600 | 90 | 3.0 | 0 Calibration | 2 | |
| 0035.Feige66 | 60 | 05:44 | 12:37:23.5 | +25:04:00 | 600 | 90 | 3.0 | #56 Spectropho | 2 | PA=90 |
| 0036.COMP | 15 | 05:45 | 12:37:23.5 | +25:04:00 | 600 | 90 | 3.0 | 0 Calibration | 2 | |
| 0037.Feige66 | 65 | 05:47 | 12:37:23.5 | +25:04:00 | 600 | 70 | 3.0 | #56 Spectropho | 2 | PA=70 |
| 0038.COMP | 15 | 05:48 | 12:37:23.5 | +25:04:00 | 600 | 71 | 3.0 | 0 Calibration | 2 | |
| 0039.BDp262606 | 90 | 06:04 | 14:49:02.4 | +25:42:09 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |

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|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0040.COMP | 10 | 06:05 | 14:49:02.4 | +25:42:09 | 300 | 90 | 3.0 | 0 Calibration | 2 | |
| 0041.BDp332642 | 120 | 06:07 | 15:51:59.9 | +32:56:54 | 300 | 90 | 3.0 | #56 Spectropho | 2 | |
| 0042.COMP | 10 | 06:10 | 15:51:59.9 | +32:56:54 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0043.JS101197 | 900 | 06:13 | 12:25:10.2 | +14:45:43 | 300 | 61 | 3.0 | 232 Missing SD | 2 | |
| 0044.COMP | 10 | 06:28 | 12:25:10.2 | +14:45:43 | 300 | 60 | 3.0 | 0 Calibration | 2 | |
| 0045.JS118303 | 1200 | 06:30 | 12:27:17.3 | +17:01:41 | 300 | 89 | 3.0 | 232 Missing SD | 2 | |
| 0046.COMP | 10 | 06:50 | 12:27:17.3 | +17:01:41 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0047.JS014678 | 1500 | 06:57 | 13:45:57.7 | +06:13:42 | 300 | 90 | 3.0 | 232 Missing SD | 2 | |
| 0048.COMP | 10 | 07:23 | 13:45:57.7 | +06:13:42 | 300 | 90 | 3.0 | 0 Calibration | 2 | |
| 0049.JS044258 | 1200 | 07:28 | 14:14:32.6 | +01:44:02 | 300 | 90 | 3.0 | 232 Missing SD | 2 | |
| 0050.COMP | 10 | 07:49 | 14:14:32.6 | +01:44:02 | 300 | 90 | 3.0 | 0 Calibration | 2 | |
| 0051.JS116638 | 780 | 07:52 | 14:15:43.1 | +08:55:39 | 300 | 90 | 3.0 | 232 Missing SD | 2 | |
| 0052.COMP | 10 | 08:06 | 14:15:43.1 | +08:55:39 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0053.JS011707 | 1500 | 08:11 | 14:15:52.3 | +63:29:50 | 300 | 89 | 3.0 | 232 Missing SD | 2 | |
| 0054.COMP | 10 | 08:36 | 14:15:52.3 | +63:29:50 | 300 | 90 | 3.0 | 0 Calibration | 2 | |
| 0055.JS055938 | 1500 | 08:39 | 17:03:48.0 | +37:40:25 | 300 | 90 | 3.0 | 232 Missing SD | 2 | |
| 0056.COMP | 10 | 09:04 | 17:03:48.0 | +37:40:25 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0057-0066.FLAT | 12 | 09:09 | 17:03:48.0 | +37:40:25 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0067-0076.FLAT | 7 | 09:13 | 17:03:48.0 | +37:40:25 | 300 | 89 | 3.0 | 0 Calibration | 2 | |
| 0077.gaia78 | 201 | 09:25 | 17:21:38.2 | +21:06:28 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |

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|----------------|----------|----------|------------|-----------|-----|------|------|----------------|-----|----------|
| 0078.COMP | 10 | 09:28 | 17:21:38.2 | +21:06:28 | 600 | 89 | 1.5 | 0 Calibration | 4 | |
| 0079.gaia79 | 231 | 09:31 | 17:22:48.5 | +27:23:00 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |
| 0080.COMP | 10 | 09:35 | 17:22:48.5 | +27:23:00 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0081.gaia80 | 526 | 09:41 | 17:24:41.5 | +19:31:20 | 600 | 88 | 1.5 | #230 Gravitati | 4 | |
| 0082.COMP | 10 | 09:50 | 17:24:41.5 | +19:31:20 | 600 | 89 | 1.5 | 0 Calibration | 4 | |
| 0083.j1729p02 | 991 | 09:52 | 17:29:45.1 | +02:08:18 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |
| 0084.COMP | 10 | 10:08 | 17:29:45.1 | +02:08:18 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0085.gaia81 | 164 | 10:17 | 17:31:13.8 | +21:07:21 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |
| 0086.COMP | 10 | 10:20 | 17:31:13.8 | +21:07:21 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0087.j1733p30 | 1844 | 10:23 | 17:33:38.8 | +30:13:33 | 600 | 88 | 1.5 | #230 Gravitati | 4 | |
| 0088.COMP | 10 | 10:54 | 17:33:38.8 | +30:13:33 | 600 | 89 | 1.5 | 0 Calibration | 4 | |
| 0089.j2037p14 | 398 | 10:57 | 20:37:28.7 | +14:53:53 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |
| 0090.COMP | 10 | 11:04 | 20:37:28.7 | +14:53:53 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0091.BDp284211 | 210 | 11:06 | 21:51:11.0 | +28:51:50 | 600 | 88 | 1.5 | #56 Spectropho | 4 | |
| 0092.COMP | 10 | 11:10 | 21:51:11.0 | +28:51:50 | 600 | 89 | 1.5 | 0 Calibration | 4 | |
| 0093.j1857p40 | 340 | 11:13 | 18:57:28.6 | +40:35:36 | 600 | 89 | 1.5 | #230 Gravitati | 4 | |
| 0094.COMP | 10 | 11:20 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0095-0104.FLAT | 12 | 11:26 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0105-0114.BIAS | 0 | 11:27 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0115-0124.BIAS | 0 | 11:30 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 2 | |



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Coll. Focus 1290 Grating/Grism 600

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|----------------|-----------------|-----------------|------------|------------|------------|-------------|-------------|----------------|------------|-----------------|
| 0125-0134.BIAS | 0 | 11:32 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0135-0144.FLAT | 4 | 11:35 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |
| 0145-0154.BIAS | 0 | 11:36 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 2 | |
| 0155-0169.FLAT | 7 | 11:41 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 2 | |
| 0170-0174.DARK | 900 | 12:43 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 2 | |
| 0175-0179.DARK | 900 | 13:59 | 18:57:28.6 | +40:35:36 | 600 | 88 | 1.5 | 0 Calibration | 4 | |