Table 1

| File | Object | RA set | DEC set | Filter | Date | UT-STRT | Log Differences | Comments ( N left E up, rotate 90 CCW ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| fr90e001.fits | Comet 2P/ Encke | 11:02:21.85 | +14:54:03.9 | B/DICHR | "Tue Oct 09 1990" | 12:00:02 |  |  |
| fr90e002.fits | Comet 2P/ Encke | 11:02:26.72 | +14:53:17.3 | B/DICHR | "Tue Oct 09 1990" | 12:12:57 |  |  |
| fr90e003.fits | Comet 2P/ Encke | 11:02:31.60 | +14:52:30.8 | B/DICHR | "Tue Oct 09 1990" | 12:28:43 |  |  |
| fr90e004.fits | Comet 2P/ Encke | 11:10:09.97 | +13:38:31.5 | B/DICHR | "Wed Oct 10 1990" | 12:09:46 |  |  |
| fr90e005.fits | Comet 2P/ <br> Encke | 11:10:13.16 | +13:38:00.2 | B/DICHR | "Wed Oct <br> 10 1990" | 12:21:32 |  |  |
| fr90e006.fits | Comet 22P/ <br> Kopff | 02:11:47.25 | +05:36:31.5 | OPEN | "Thu Oct <br> 11 1990" | 09:54:12 |  |  |
| fr90e007.fits | Comet 22P/ <br> Kopff | 02:11:46.86 | +05:36:29.3 | OPEN | "Thu Oct <br> 11 1990" | 09:59:13 |  |  |
| fr90e008.fits | Comet 22P/ <br> Kopff | 02:11:46.47 | +05:36:27.1 | B/DICHR | "Thu Oct $11 \text { 1990" }$ | 10:08:05 |  |  |
| fr90e009.fits | Comet 22P/ Kopff | 02:11:45.31 | +05:36:20.6 | B/DICHR | "Thu Oct 11 1990" | 10:42:04 |  |  |
| fr90e010.fits | Comet 22P/ <br> Kopff | 02:11:44.16 | +05:36:14.0 | B/DICHR | "Thu Oct <br> 11 1990" | 11:06:51 |  |  |
| fr90e011.fits | Comet 22P/ <br> Kopff | 02:11:43.39 | +05:36:09.6 | B/DICHR | "Thu Oct 11 1990" | 11:30:19 |  |  |
| fr90e012.fits | $\begin{aligned} & \text { Comet 22P/ } \\ & \text { Kopff } \end{aligned}$ | 02:11:43.00 | +05:36:07.4 | B/DICHR | "Thu Oct <br> 11 1990" | 11:40:22 |  |  |
| fr90e013.fits | Comet 22P/ <br> Kopff | 02:11:42.62 | +05:36:05.3 | OPEN | "Thu Oct 11 1990" | 11:46:12 |  |  |
| fr90e014.fits | Comet 22P/ Kopff | 02:11:42.62 | +05:36:05.3 | OPEN | "Thu Oct 11 1990" | 11:48:03 |  |  |
| fr90e015.fits | Comet 22P/ <br> Kopff | 02:11:42.62 | +05:36:05.3 | OPEN | "Thu Oct 11 1990" | 11:50:01 |  |  |
| fr90e016.fits | Comet 2P/ <br> Encke | 11:17:45.61 | +12:23:18.4 | B/DICHR | "Thu Oct <br> 11 1990" | 12:04:03 |  |  |
| File 17 |  |  |  |  |  |  |  | Log is written, but no file exists |
| File 18 |  |  |  |  |  |  |  | Log is written, but no file exists |
| File 104-139 |  |  |  |  |  |  |  | Log is written, but no file exists |
| sp90e001.fits | Comet 2P/ <br> Encke | 11:02:25.10 | +14:53:32.9 |  | "Tue Oct 09 1990" | 12:11:48 |  |  |
| sp90e002.fits | Comet 2P/ Encke | 11:02:28.35 | +14:53:01.8 |  | "Tue Oct 09 1990" | 12:18:16 |  |  |
| sp90e003.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Tue Oct 09 1990" | 12:35:41 | xName | BS3862 according to log. |
| sp90e004.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Tue Oct 09 1990" | 12:39:03 | xName | BS3862 according to log. |
| sp90e005.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Tue Oct 09 1990" | 12:40:10 | xName | BS3862 according to log. |
| sp90e006.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Tue Oct 09 1990" | 12:42:03 | xName | BS3862 according to log. |
| sp90e007.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Tue Oct 09 1990" | 12:44:55 | xName | BS3862 according to log. |
| sp90e008.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Tue Oct 09 1990" | 12:46:21 | xName | BS3862 according to log. |
| sp90e009.fits | HELIUM |  |  |  | "Wed Oct 10 1990" | 02:21:55 |  | No log |
| sp90e010.fits | HELIUM |  |  |  | "Wed Oct <br> 10 1990" | 02:23:24 |  | No log |


| File | Object | RA set | DEC set | Filter | Date | UT-STRT | Log <br> Differences | Comments ( N left E up, rotate 90 CCW) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| sp90e011.fits | XENON |  |  |  | "Wed Oct 10 1990" | 02:25:08 |  | No log |
| sp90e012.fits | XENON |  |  |  | "Wed Oct 10 1990" | 02:26:49 |  | No log |
| sp90e013.fits | MERCURY |  |  |  | "Wed Oct 10 1990" | 02:28:31 |  | No log |
| sp90e014.fits | MERCURY |  |  |  | "Wed Oct 10 1990" | 02:29:19 |  | No log |
| sp90e015.fits | BS8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 06:18:07 |  | No log |
| sp90e016.fits | BS8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 06:22:34 |  | No log |
| sp90e017.fits | BS8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 06:23:55 |  | No log |
| sp90e018.fits | BS8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 06:25:30 |  | No log |
| sp90e019.fits | BS8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 06:27:31 |  | No log |
| sp90e020.fits | "ARP 150B" |  |  |  | "Wed Oct 10 1990" | 06:40:34 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e021.fits | "ARP 150B" |  |  |  | "Wed Oct <br> 10 1990" | 06:51:43 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e022.fits | "ARP 150A" |  |  |  | "Wed Oct 10 1990" | 07:09:43 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e023.fits | "ARP 150A" |  |  |  | "Wed Oct 10 1990" | 07:20:32 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e024.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:38:44 |  | No log |
| sp90e025.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:41:07 |  | No log |
| sp90e026.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:42:12 |  | No log |
| sp90e027.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:43:23 |  | No log |
| sp90e028.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:44:32 |  | No log |
| sp90e029.fits | BS 8781 | 23:04:45.65 | +15:12:19.0 |  | "Wed Oct 10 1990" | 07:45:20 |  | No log |
| sp90e030.fits | "ARP 150B" |  |  |  | "Wed Oct 10 1990" | 07:52:26 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e031.fits | "ARP 150B" |  |  |  | "Wed Oct 10 1990" | 08:03:23 |  | No log; could be ARP 150 (NGC 7609) galaxy. |
| sp90e032.fits | DEIMOS | 04:50:40.60 | +21:40:44.5 |  | "Wed Oct <br> 10 1990" | 10:02:22 |  |  |
| sp90e033.fits | DEIMOS | 04:50:40.88 | +21:40:46.5 |  | "Wed Oct <br> 10 1990" | 10:12:21 |  |  |
| sp90e034.fits | DEIMOS | 04:50:41.43 | +21:40:50.6 |  | "Wed Oct 10 1990" | 10:33:55 |  |  |
| sp90e035.fits | DEIMOS | 04:50:41.71 | +21:40:52.6 |  | "Wed Oct 10 1990" | 10:43:07 |  |  |
| sp90e036.fits | DEIMOS | 04:50:41.98 | +21:40:54.5 |  | "Wed Oct 10 1990" | 10:53:23 |  |  |
| sp90e037.fits | BS 3750 | 09:27:46.78 | -06:04:16.3 |  | "Wed Oct 10 1990" | 11:55:18 | xName | Log sheet says BS 3750 |
| sp90e038.fits | BS 3750 | 09:27:46.78 | -06:04:16.3 |  | "Wed Oct <br> 10 1990" | 11:56:31 | xName | Log sheet says BS 3750 |
| sp90e039.fits | BS 3750 | 09:27:46.78 | -06:04:16.3 |  | "Wed Oct 10 1990" | 11:57:33 | xName | Log sheet says BS 3750 |


| File | Object | RA set | DEC set | Filter | Date | UT-STRT | Log <br> Differences | Comments ( N left E up, rotate 90 CCW) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| sp90e040.fits | Comet 2P/ Encke | 11:10:09.97 | +13:38:31.5 |  | "Wed Oct 10 1990" | 12:09:42 |  |  |
| sp90e041.fits | Comet 2P/ Encke | 11:10:13.16 | +13:38:00.2 |  | "Wed Oct 10 1990" | 12:20:26 |  |  |
| sp90e042.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Wed Oct 10 1990" | 12:38:54 |  |  |
| sp90e043.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Wed Oct 10 1990" | 12:40:48 |  |  |
| sp90e044.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Wed Oct 10 1990" | 12:42:41 |  |  |
| sp90e045.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Wed Oct 10 1990" | 12:44:34 |  |  |
| sp90e046.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Wed Oct <br> 10 1990" | 12:45:50 |  |  |
| sp90e047.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Wed Oct 10 1990" | 12:47:16 |  |  |
| sp90e048.fits | BS 7906 | 20:39:38.29 | +15:54:43.5 |  | "Thu Oct 11 1990" | 03:11:08 |  |  |
| sp90e049.fits | BS 7906 | 20:39:38.29 | +15:54:43.5 |  | "Thu Oct <br> 11 1990" | 03:12:06 |  |  |
| sp90e050.fits | BS 7906 | 20:39:38.29 | +15:54:43.5 |  | "Thu Oct $11 \text { 1990" }$ | 03:14:06 |  |  |
| sp90e051.fits | BS 7906 | 20:39:38.29 | +15:54:43.5 |  | "Thu Oct <br> 11 1990" | 03:14:59 |  |  |
| sp90e052.fits | BS 7906 | 20:39:38.29 | +15:54:43.5 |  | "Thu Oct <br> 11 1990" | 03:16:26 |  |  |
| sp90e053.fits | BS 508 | 01:44:55.82 | +20:04:59.3 |  | "Thu Oct <br> 11 1990" | 08:00:19 |  |  |
| sp90e054.fits | BS 508 | 01:44:55.82 | +20:04:59.3 |  | "Thu Oct <br> 11 1990" | 08:01:10 |  |  |
| sp90e055.fits | BS 508 | 01:44:55.82 | +20:04:59.3 |  | "Thu Oct <br> 11 1990" | 08:01:59 |  |  |
| sp90e056.fits | BS 508 | 01:44:55.82 | +20:04:59.3 |  | "Thu Oct <br> 11 1990" | 08:03:58 |  |  |
| sp90e057.fits | BS 2251 | 06:17:16.14 | +05:06:00.4 |  | "Thu Oct <br> 11 1990" | 08:14:14 |  |  |
| sp90e058.fits | BS 2251 | 06:17:16.14 | +05:06:00.4 |  | "Thu Oct <br> 11 1990" | 08:15:08 |  |  |
| sp90e059.fits | BS 2251 | 06:17:16.14 | +05:06:00.4 |  | "Thu Oct <br> 11 1990" | 08:16:11 |  |  |
| sp90e060.fits | BS 2251 | 06:17:16.14 | +05:06:00.4 |  | "Thu Oct <br> 11 1990" | 08:17:00 |  |  |
| sp90e061.fits | $\begin{aligned} & \text { Comet 22P/ } \\ & \text { Kopff } \end{aligned}$ | 02:11:50.08 | +05:36:53.2 |  | "Thu Oct <br> 11 1990" | 10:16:55 |  |  |
| sp90e062.fits | $\begin{aligned} & \text { Comet 22P/ } \\ & \text { Kopff } \end{aligned}$ | 02:11:49.11 | +05:36:47.7 |  | "Thu Oct <br> 11 1990" | 10:40:14 |  |  |
| sp90e063.fits | Comet 22P/ <br> Kopff | 02:11:47.95 | +05:36:41.2 |  | "Thu Oct <br> 11 1990" | 11:11:57 |  |  |
| sp90e064.fits | Comet 2P/ <br> Encke | 11:17:47.18 | +12:23:02.6 |  | "Thu Oct <br> 11 1990" | 12:08:00 |  |  |
| sp90e065.fits | Comet 2P/ <br> Encke | 11:17:50.33 | +12:22:31.2 |  | "Thu Oct <br> 11 1990" | 12:18:42 |  |  |
| sp90e066.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Thu Oct <br> 11 1990" | 12:35:21 |  |  |
| sp90e067.fits | BS 3862 | 09:42:14.42 | $-23: 54: 56.1$ |  | "Thu Oct <br> 11 1990" | 12:36:35 |  |  |
| sp90e068.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Thu Oct <br> 11 1990" | 12:38:19 |  |  |


| File | Above output obtained by running: hselect fr*.fits \$I,object,ra, dec,filter,date, ut-strt yqififfeqpideselect |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| sp90e069.fits | The Log Differen BS 3862 | ces and Com $09: 42: 14.42$ | nents column $-23: 54: 56.1$ | s are the obse | rvations note "Thu Oct 11 1990" | $\begin{aligned} & \text { d after comp } \\ & 12: 39: 56 \end{aligned}$ | paring the FITS head | der with $\log$ sheets. |
| sp90e070.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Thu Oct <br> 11 1990" | 12:42:11 |  |  |
| sp90e071.fits | BS 3862 | 09:42:14.42 | -23:54:56.1 |  | "Thu Oct <br> 11 1990" | 12:44:02 |  |  |

