

Table 1

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f001.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:05:50.92	+35:20:57.4	OPEN	"Mon Jul 31 1989"	08:25:46		
fr89f002.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:05:50.92	+35:20:57.4	OPEN	"Mon Jul 31 1989"	08:29:24		
fr89f003.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:05:50.92	+35:20:57.4	B/DICHR	"Mon Jul 31 1989"	08:34:48		
fr89f004.fits	BD +253941	19:44:26.14	+26:13:16.7	OPEN	"Tue Aug 01 1989"	05:49:53		
fr89f005.fits	BD +253941	19:44:26.14	+26:13:16.7	"NH2 6624"	"Tue Aug 01 1989"	06:05:35		
fr89f006.fits	BD +253941	19:44:26.14	+26:13:16.7	"NH2 6624"	"Tue Aug 01 1989"	06:06:44		
fr89f007.fits	BD +253941	19:44:26.14	+26:13:16.7	"CONT 6450"	"Tue Aug 01 1989"	06:10:14		
fr89f008.fits	BD +253941	19:44:26.14	+26:13:16.7	"CONT 6450"	"Tue Aug 01 1989"	06:11:44		
fr89f009.fits	BD +253941	19:44:26.14	+26:13:16.7	"NH2 6338"	"Tue Aug 01 1989"	06:15:28		
fr89f010.fits	BD +253941	19:44:26.14	+26:13:16.7	"NH2 6338"	"Tue Aug 01 1989"	06:16:48		
fr89f011.fits	BD +253941	19:44:26.14	+26:13:16.7	"CONT 6250"	"Tue Aug 01 1989"	06:23:05		
fr89f012.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:41.99	+36:18:35.4	B/DICHR	"Tue Aug 01 1989"	09:04:10		
fr89f013.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:46.50	+36:18:58.7	B/DICHR	"Tue Aug 01 1989"	09:13:18		
fr89f014.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:51.02	+36:19:21.9	B/DICHR	"Tue Aug 01 1989"	09:23:19		
fr89f015.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:13.59	+36:21:18.1	NH2 6624	"Tue Aug 01 1989"	10:12:48	xFilter	Image is blurry
fr89f016.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:18.11	+36:21:41.3	CONT 6450	"Tue Aug 01 1989"	10:22:35	xFilter	Image is blurry
fr89f017.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:22.62	+36:22:04.4	"NH2 6624"	"Tue Aug 01 1989"	10:29:31		Image is blurry
fr89f018.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:27.14	+36:22:27.6	"CONT 6450"	"Tue Aug 01 1989"	10:35:34		Image is blurry
fr89f019.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:27.14	+36:22:27.6	"NH2 6624"	"Tue Aug 01 1989"	10:42:10		Image is blurry
fr89f020.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:36.16	+36:23:13.8	6185	"Tue Aug 01 1989"	10:55:11		Image is blurry

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f021.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:40.68	+36:23:37.0	CO+	"Tue Aug 01 1989"	11:07:15		Image is blurry
fr89f022.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:45.19	+36:24:00.0	"CONT 6250"	"Tue Aug 01 1989"	11:20:03		Image is blurry
fr89f023.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:17:49.71	+36:24:23.1	"NH2 6338"	"Tue Aug 01 1989"	11:30:53		Image is blurry
fr89f024.fits	"FLAT FIELD"			"NH2 6624"	"Wed Aug 02 1989"	03:11:41		
fr89f025.fits	"FLAT FIELD"			"NH2 6624"	"Wed Aug 02 1989"	03:13:06		
fr89f026.fits	"FLAT FIELD"			"NH2 6624"	"Wed Aug 02 1989"	03:13:54		
fr89f027.fits	"FLAT FIELD"			"CONT 6450"	"Wed Aug 02 1989"	03:17:23		Image is faulty
fr89f028.fits	"FLAT FIELD"			"CONT 6450"	"Wed Aug 02 1989"	03:18:18		
fr89f029.fits	"FLAT FIELD"			"CONT 6450"	"Wed Aug 02 1989"	03:20:19		
fr89f030.fits	"FLAT FIELD"			"NH2 6338"	"Wed Aug 02 1989"	03:23:16	xFilter	
fr89f031.fits	"FLAT FIELD"			"NH2 6338"	"Wed Aug 02 1989"	03:24:13	xFilter	
fr89f032.fits	"FLAT FIELD"			"NH2 6338"	"Wed Aug 02 1989"	03:25:08	xFilter	
fr89f033.fits	"FLAT FIELD"			"NH2 6338"	"Wed Aug 02 1989"	03:25:59	xFilter	
fr89f034.fits	"FLAT FIELD"			"CONT 6250"	"Wed Aug 02 1989"	03:27:13	xFilter	
fr89f035.fits	"FLAT FIELD"			"CONT 6250"	"Wed Aug 02 1989"	03:28:24	xFilter	
fr89f036.fits	"FLAT FIELD"			"CONT 6250"	"Wed Aug 02 1989"	03:29:34	xFilter	
fr89f037.fits	"FLAT FIELD"			"CONT 6250"	"Wed Aug 02 1989"	03:30:31	xFilter	
fr89f038.fits	"FLAT FIELD"			"H20+"	"Wed Aug 02 1989"	03:41:38	xFilter	
fr89f039.fits	"FLAT FIELD"			"H20+"	"Wed Aug 02 1989"	03:42:35	xFilter	
fr89f040.fits	"FLAT FIELD"			"H20+"	"Wed Aug 02 1989"	03:43:26	xFilter	

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f041.fits	"FLAT FIELD"			CO+	"Wed Aug 02 1989"	03:45:49		
fr89f042.fits	"FLAT FIELD"			CO+	"Wed Aug 02 1989"	03:47:10		
fr89f043.fits	"FLAT FIELD"			RED	"Wed Aug 02 1989"	03:50:50		
fr89f044.fits	"FLAT FIELD"			RED	"Wed Aug 02 1989"	03:51:52		
fr89f045.fits	"FLAT FIELD"			RED	"Wed Aug 02 1989"	03:52:41		
fr89f046.fits	"FLAT FIELD"			OPEN	"Wed Aug 02 1989"	03:57:40		
fr89f047.fits	"FLAT FIELD"			OPEN	"Wed Aug 02 1989"	03:58:49		
fr89f048.fits	"FLAT FIELD"			OPEN	"Wed Aug 02 1989"	03:59:51		
fr89f049.fits	"FLAT FIELD"			B/DICHR	"Wed Aug 02 1989"	04:03:04		
fr89f050.fits	"FLAT FIELD"			B/DICHR	"Wed Aug 02 1989"	04:03:59		
fr89f051.fits	"FLAT FIELD"			B/DICHR	"Wed Aug 02 1989"	04:04:40		
fr89f052.fits	"FLAT FIELD"			B/DICHR	"Wed Aug 02 1989"	04:06:29		
fr89f053.fits	"FLAT FIELD"			B/DICHR	"Wed Aug 02 1989"	04:09:34		
fr89f054.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6624"	"Wed Aug 02 1989"	07:22:11		
fr89f055.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CONT 6450"	"Wed Aug 02 1989"	07:25:53		
fr89f056.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Wed Aug 02 1989"	07:26:56		
fr89f057.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CONT 6250"	"Wed Aug 02 1989"	07:28:27		
fr89f058.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6624"	"Wed Aug 02 1989"	07:29:47		
fr89f059.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CONT 6450"	"Wed Aug 02 1989"	07:31:20		
fr89f060.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Wed Aug 02 1989"	07:32:24		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f061.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CONT 6250"	"Wed Aug 02 1989"	07:33:43		
fr89f062.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"H2O+ 6185"	"Wed Aug 02 1989"	07:54:30		
fr89f063.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"H2O+ 6185"	"Wed Aug 02 1989"	07:55:39		
fr89f064.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"H2O+ 6185"	"Wed Aug 02 1989"	07:59:46	xName	Only 1 star, assuming BS 9107 based on log.
fr89f065.fits	"BS 7906"	20:39:38.29	+15:54:43.5	"H2O+ 6185"	"Wed Aug 02 1989"	08:07:42		
fr89f066.fits	"BS 7906"	20:39:38.29	+15:54:43.5	"H2O+ 6185"	"Wed Aug 02 1989"	08:07:42		Image is duplicate of 65
fr89f067.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:27:52.30	+37:12:44.5	B/DICHR	"Wed Aug 02 1989"	09:08:01		
fr89f068.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:27:57.01	+37:13:06.6	B/DICHR	"Wed Aug 02 1989"	09:19:40		
fr89f069.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:06.42	+37:13:50.7	B/DICHR	"Wed Aug 02 1989"	09:38:36		
fr89f070.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:11.13	+37:14:12.7	B/DICHR	"Wed Aug 02 1989"	09:51:59		
fr89f071.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:15.83	+37:14:34.7	H2O+	"Wed Aug 02 1989"	09:59:49		Image is blurry
fr89f072.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:20.53	+37:14:56.7	"NH2 6338"	"Wed Aug 02 1989"	10:13:22		Image is blurry
fr89f073.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:25.24	+37:15:18.7	"CONT 6250"	"Wed Aug 02 1989"	10:24:14		Image is blurry
fr89f074.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:34.64	+37:16:02.6	"CONT 6450"	"Wed Aug 02 1989"	10:35:06		Image is blurry
fr89f075.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:39.35	+37:16:24.5	"NH2 6624"	"Wed Aug 02 1989"	10:45:57		Image is blurry
fr89f076.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:44.05	+37:16:46.4	"NH2 6624"	"Wed Aug 02 1989"	10:56:45		Image is blurry
fr89f077.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:48.75	+37:17:08.3	"NH2 6338"	"Wed Aug 02 1989"	11:07:37		Image is blurry
fr89f078.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:53.46	+37:17:30.2	"CONT 6450"	"Wed Aug 02 1989"	11:18:28		Image is blurry
fr89f079.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:58.16	+37:17:52.0	6250	"Wed Aug 02 1989"	11:29:33		Image is blurry
fr89f080.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:29:02.86	+37:18:13.9	6250	"Wed Aug 02 1989"	11:41:07	xFilter	Image is duplicate of 79

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f081.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:29:02.86	+37:18:13.9	H2O+	"Wed Aug 02 1989"	11:41:07		Image is blurry
fr89f082.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:29:07.56	+37:18:35.7	C2	"Wed Aug 02 1989"	11:52:50		Image is blurry
File 83								Log is written but no file exists
fr89f084.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:57.81	+39:36:46.9	C2	"Sat Aug 05 1989"	11:33:51	xFilter	Image is blurry
fr89f085.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:05:08.23	+39:37:20.5	C2	"Sat Aug 05 1989"	11:45:58	xFilter	Image is blurry
fr89f086.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT 6338	"Mon Aug 07 1989"	07:29:49	xFilter	
fr89f087.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT 6338	"Mon Aug 07 1989"	07:31:56	xFilter	
fr89f088.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT 6338	"Mon Aug 07 1989"	07:34:07	xFilter	
fr89f089.fits	BD +28 4211	21:51:11.02	+28:51:50.4	NH2 6338	"Mon Aug 07 1989"	07:37:56	xFilter	
fr89f090.fits	BD +28 4211	21:51:11.02	+28:51:50.4	NH2 6338	"Mon Aug 07 1989"	07:40:20	xFilter	
fr89f091.fits	BD +28 4211	21:51:11.02	+28:51:50.4	NH2 6338	"Mon Aug 07 1989"	07:44:25	xFilter	
fr89f092.fits	BD +28 4211	21:51:11.02	+28:51:50.4	NH2 6338	"Mon Aug 07 1989"	07:46:26	xFilter	
fr89f093.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT 6250	"Mon Aug 07 1989"	07:51:00	xFilter	
fr89f094.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT CN 8600	"Mon Aug 07 1989"	07:52:59	xFilter	
fr89f095.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT CN 8600	"Mon Aug 07 1989"	07:54:51	xFilter	
fr89f096.fits	BD +28 4211	21:51:11.02	+28:51:50.4	CONT CN 8600	"Mon Aug 07 1989"	07:56:42	xFilter	
fr89f097.fits	BD +28 4211	21:51:11.02	+28:51:50.4	"CN 9180"	"Mon Aug 07 1989"	08:00:47		
fr89f098.fits	BD +28 4211	21:51:11.02	+28:51:50.4	"CN 9180"	"Mon Aug 07 1989"	08:03:22		
fr89f099.fits	BD +28 4211	21:51:11.02	+28:51:50.4	"CN 9180"	"Mon Aug 07 1989"	08:06:25		
fr89f100.fits	"BS 9107"	00:04:53.76	+34:39:35.3	CN on band	"Mon Aug 07 1989"	08:13:53	xFilter	
fr89f101.fits	"BS 9107"	00:04:53.76	+34:39:35.3	CN on band	"Mon Aug 07 1989"	08:15:15	xFilter	

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f102.fits	"BS 9107"	00:04:53.76	+34:39:35.3	CN on band	"Mon Aug 07 1989"	08:16:26	xFilter	
fr89f103.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CN OFF"	"Mon Aug 07 1989"	08:18:20		
fr89f104.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CN OFF"	"Mon Aug 07 1989"	08:19:41		
fr89f105.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"CN OFF"	"Mon Aug 07 1989"	08:20:40		
fr89f106.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Mon Aug 07 1989"	08:22:05		
fr89f107.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Mon Aug 07 1989"	08:23:26		
fr89f108.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Mon Aug 07 1989"	08:24:34		
fr89f109.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 6338"	"Mon Aug 07 1989"	08:25:33		
fr89f110.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 CONT"	"Mon Aug 07 1989"	08:26:38		
fr89f111.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 CONT"	"Mon Aug 07 1989"	08:27:52		
fr89f112.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 CONT"	"Mon Aug 07 1989"	08:28:56		
fr89f113.fits	"BS 9107"	00:04:53.76	+34:39:35.3	"NH2 CONT"	"Mon Aug 07 1989"	08:29:53		
fr89f114.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:18.11	+40:42:57.4	"CN 9180"	"Mon Aug 07 1989"	08:51:10		Image is blurry
fr89f115.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:23.59	+40:43:20.3	"CN 9180"	"Mon Aug 07 1989"	09:03:30		Image is blurry
fr89f116.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:29.07	+40:43:23.1	"CN OFF"	"Mon Aug 07 1989"	09:14:42	xFilter	Image is blurry
fr89f117.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:40.02	+40:43:48.7	"NH2 ON"	"Mon Aug 07 1989"	09:26:51		Image is blurry
fr89f118.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:45.49	+40:44:01.5	"NH2 ON"	"Mon Aug 07 1989"	09:38:53		Image is blurry
fr89f119.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:50.96	+40:44:14.3	"NH2 CONT"	"Mon Aug 07 1989"	09:49:58		Image is blurry
fr89f120.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:29:56.43	+40:44:27.0	"NH2 CONT"	"Mon Aug 07 1989"	10:01:32		Image is blurry
fr89f121.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:01.90	+40:44:39.7	"NH2 ON"	"Mon Aug 07 1989"	10:12:31		Image is blurry

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f122.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:07.37	+40:44:52.4	"NH2 ON"	"Mon Aug 07 1989"	10:24:30		Image is blurry
fr89f123.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:18.31	+40:45:17.7	"NH2 CONT"	"Mon Aug 07 1989"	10:35:31		Image is blurry
fr89f124.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:23.77	+40:45:30.4	"NH2 ON"	"Mon Aug 07 1989"	10:47:21		Image is blurry
fr89f125.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:29.23	+40:45:43.0	"NH2 ON"	"Mon Aug 07 1989"	10:58:17		Image is blurry
fr89f126.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:34.70	+40:45:55.6	"NH2 CONT"	"Mon Aug 07 1989"	11:09:21		Image is blurry
fr89f127.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:40.16	+40:46:08.1	H2O+	"Mon Aug 07 1989"	11:23:18		Image is blurry
fr89f128.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:45.62	+40:46:20.6	H2O+	"Mon Aug 07 1989"	11:34:13		Image is blurry
fr89f129.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:56.54	+40:46:45.6	C2	"Mon Aug 07 1989"	11:45:16		Image is blurry
fr89f130.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:30:56.54	+40:46:45.6	C2	"Mon Aug 07 1989"	11:49:06		Image is blurry
fr89f131.fits	"FLAT F"			C2	"Mon Aug 07 1989"	12:00:56		
fr89f132.fits	"FLAT F"			C2	"Mon Aug 07 1989"	12:02:14		
fr89f133.fits	"FLAT F"			C2	"Mon Aug 07 1989"	12:03:05		
File 134								Log is written, but no file exists
fr89f135.fits	"FLAT F"			CN ON	"Mon Aug 07 1989"	12:09:08	xFilter	
fr89f136.fits	"FLAT F"			CN ON	"Mon Aug 07 1989"	12:09:58	xFilter	
fr89f137.fits	"FLAT F"			"CN OFF"	"Mon Aug 07 1989"	12:13:36		
fr89f138.fits	"FLAT F"			"CN OFF"	"Mon Aug 07 1989"	12:14:34		
fr89f139.fits	"FLAT F"			"CN OFF"	"Mon Aug 07 1989"	12:15:23		
fr89f140.fits	"FLAT F"			"NH2 ON"	"Mon Aug 07 1989"	12:18:04		
fr89f141.fits	"FLAT F"			"NH2 ON"	"Mon Aug 07 1989"	12:19:01		
fr89f142.fits	"FLAT F"			"NH2 ON"	"Mon Aug 07 1989"	12:19:54		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89f143.fits	"FLAT F"			"NH2 OFF"	"Mon Aug 07 1989"	12:21:09		
fr89f144.fits	"FLAT F"			"NH2 OFF"	"Mon Aug 07 1989"	12:22:19		
fr89f145.fits	"FLAT F"			"NH2 OFF"	"Mon Aug 07 1989"	12:23:14		
sp89f001.fits	"BS 7272"	19:09:04.39	+34:36:01.6		"Mon Jul 31 1989"	07:19:17		
sp89f002.fits	"BS 7272"	19:09:04.39	+34:36:01.6		"Mon Jul 31 1989"	07:20:31		
sp89f003.fits	"BS 7272"	19:09:04.39	+34:36:01.6		"Mon Jul 31 1989"	07:22:03		
sp89f004.fits	BS 9107	00:04:53.76	+34:39:35.3		"Mon Jul 31 1989"	07:49:22		
sp89f005.fits	BS 9107	00:04:53.76	+34:39:35.3		"Mon Jul 31 1989"	07:51:27		
sp89f006.fits	BS 9107	00:04:53.76	+34:39:35.3		"Mon Jul 31 1989"	07:52:59		
sp89f007.fits	BS 9107	00:04:53.76	+34:39:35.3		"Mon Jul 31 1989"	07:54:49		
sp89f008.fits	BS 9107	00:04:53.76	+34:39:35.3		"Mon Jul 31 1989"	07:56:43		
sp89f009.fits	BS 660	02:17:03.23	+34:13:27.2		"Mon Jul 31 1989"	08:06:16		
sp89f010.fits	BS 660	02:17:03.23	+34:13:27.2		"Mon Jul 31 1989"	08:07:38		
sp89f011.fits	BS 660	02:17:03.23	+34:13:27.2		"Mon Jul 31 1989"	08:09:12		
sp89f012.fits	BS 660	02:17:03.23	+34:13:27.2		"Mon Jul 31 1989"	08:12:14		
sp89f013.fits	BS 660	02:17:03.23	+34:13:27.2		"Mon Jul 31 1989"	08:13:54		
sp89f014.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:05:50.92	+35:20:57.4		"Mon Jul 31 1989"	08:34:51		
sp89f015.fits	"BS 9107"	00:04:53.76	+34:39:35.3		"Tue Aug 01 1989"	06:47:21		
sp89f016.fits	"BS 9107"	00:04:53.76	+34:39:35.3		"Tue Aug 01 1989"	06:48:46		
File 17								Log is written, but no file exists
File 18								Log is written, but no file exists
sp89f019.fits	"BS 9107"	00:04:53.76	+34:39:35.3		"Tue Aug 01 1989"	06:57:38		



File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
sp89f020.fits	"BS 7906"	20:39:38.29	+15:54:43.5		"Tue Aug 01 1989"	07:52:44		
sp89f021.fits	"BS 7906"	20:39:38.29	+15:54:43.5		"Tue Aug 01 1989"	07:57:18		
sp89f022.fits	"BS 7906"	20:39:38.29	+15:54:43.5		"Tue Aug 01 1989"	07:58:44		
sp89f023.fits	"BS 7906"	20:39:38.29	+15:54:43.5		"Tue Aug 01 1989"	07:59:46		
sp89f024.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:27:45		
sp89f025.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:28:46		
sp89f026.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:31:23		
sp89f027.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:36:26		
sp89f028.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:37:34		
sp89f029.fits	BS 660	02:17:03.23	+34:13:27.2		"Tue Aug 01 1989"	08:40:59		
sp89f030.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:37.47	+36:18:12.1		"Tue Aug 01 1989"	08:53:27		
sp89f031.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:41.99	+36:18:35.4		"Tue Aug 01 1989"	09:00:04		
sp89f032.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:46.50	+36:18:58.7		"Tue Aug 01 1989"	09:11:06		
sp89f033.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:16:51.02	+36:19:21.9		"Tue Aug 01 1989"	09:24:58		
sp89f034.fits	BS 9107	00:04:53.76	+34:39:35.3		"Wed Aug 02 1989"	06:54:11		
sp89f035.fits	BS 9107	00:04:53.76	+34:39:35.3		"Wed Aug 02 1989"	06:57:32		
sp89f036.fits	BS 9107	00:04:53.76	+34:39:35.3		"Wed Aug 02 1989"	07:03:44		
sp89f037.fits	BS 9107	00:04:53.76	+34:39:35.3		"Wed Aug 02 1989"	07:06:57		
sp89f038.fits	BS 7906	20:39:38.29	+15:54:43.5		"Wed Aug 02 1989"	08:17:24		
sp89f039.fits	BS 7906	20:39:38.29	+15:54:43.5		"Wed Aug 02 1989"	08:18:24		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
sp89f040.fits	BS 7906	20:39:38.29	+15:54:43.5		"Wed Aug 02 1989"	08:20:06		
sp89f041.fits	BS 7906	20:39:38.29	+15:54:43.5		"Wed Aug 02 1989"	08:20:54		
sp89f042.fits	BS 660	02:17:03.23	+34:13:27.2		"Wed Aug 02 1989"	08:36:50		
sp89f043.fits	BS 660	02:17:03.23	+34:13:27.2		"Wed Aug 02 1989"	08:41:42		
sp89f044.fits	BS 660	02:17:03.23	+34:13:27.2		"Wed Aug 02 1989"	08:44:22		
sp89f045.fits	BS 660	02:17:03.23	+34:13:27.2		"Wed Aug 02 1989"	08:45:38		
sp89f046.fits	BS 660	02:17:03.23	+34:13:27.2		"Wed Aug 02 1989"	08:47:04		
sp89f047.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:27:52.30	+37:12:44.5		"Wed Aug 02 1989"	09:08:37		
sp89f048.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:27:57.01	+37:13:06.6		"Wed Aug 02 1989"	09:20:09		
sp89f049.fits	Comet 23P/ Brorsen-Metcalf [1989]	03:28:01.72	+37:13:28.6		"Wed Aug 02 1989"	09:33:32		
sp89f050.fits	"BS 8622"	22:39:15.68	+39:03:01.0		"Sat Aug 05 1989"	08:56:38		
sp89f051.fits	"BS 8622"	22:39:15.68	+39:03:01.0		"Sat Aug 05 1989"	08:57:23		
sp89f052.fits	"BS 8622"	22:39:15.68	+39:03:01.0		"Sat Aug 05 1989"	08:58:17		
sp89f053.fits	"BS 8622"	22:39:15.68	+39:03:01.0		"Sat Aug 05 1989"	08:59:02		
sp89f054.fits	"BS 8622"	22:39:15.68	+39:03:01.0		"Sat Aug 05 1989"	09:02:55		
sp89f055.fits	"BS 660"	02:17:03.23	+34:13:27.2		"Sat Aug 05 1989"	09:12:20		
sp89f056.fits	"BS 660"	02:17:03.23	+34:13:27.2		"Sat Aug 05 1989"	09:13:12		
sp89f057.fits	"BS 660"	02:17:03.23	+34:13:27.2		"Sat Aug 05 1989"	09:15:51		
sp89f058.fits	"BS 660"	02:17:03.23	+34:13:27.2		"Sat Aug 05 1989"	09:17:14		
sp89f059.fits	"BS 660"	02:17:03.23	+34:13:27.2		"Sat Aug 05 1989"	09:17:58		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
sp89f060.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:05.67	+39:33:57.3		"Sat Aug 05 1989"	09:47:05		
sp89f061.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:10.88	+39:34:14.3		"Sat Aug 05 1989"	10:03:34		
sp89f062.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:16.10	+39:34:31.4		"Sat Aug 05 1989"	10:14:46		
sp89f063.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:26.53	+39:35:05.4		"Sat Aug 05 1989"	10:28:40		
sp89f064.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:36.96	+39:35:39.3		"Sat Aug 05 1989"	10:47:46		
sp89f065.fits	Comet 23P/ Brorsen-Metcalf [1989]	04:04:42.17	+39:35:56.2		"Sat Aug 05 1989"	10:58:42		No log written
sp89f066.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	03:18:03		
sp89f067.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	03:22:33		
sp89f068.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	03:27:00		
sp89f069.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	03:28:21		
sp89f070.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	03:30:59		
sp89f071.fits	TRITON	18:44:20.68	-22:07:33.0		"Mon Aug 07 1989"	03:41:53		
sp89f072.fits	TRITON	18:44:20.63	-22:07:33.1		"Mon Aug 07 1989"	03:50:37		
sp89f073.fits	TRITON	18:44:20.59	-22:07:33.2		"Mon Aug 07 1989"	03:58:40		
sp89f074.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	05:15:23		
sp89f075.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	05:16:10		
sp89f076.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	05:17:03		
sp89f077.fits	Above output obtained by running: <code>hselect fr*.fits \$!,object,ra,dec,filter,date,ut-stirt yes &gt; 89f_hselect</code> The Log Differences and Comments columns are the observations noted after comparing the FITS header with log sheets.							
sp89f078.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	05:17:50		
sp89f079.fits	NEPTUNE	18:44:19.44	-22:07:23.0		"Mon Aug 07 1989"	05:25:15		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
sp89f080.fits	NEPTUNE	18:44:19.44	-22:07:23.0		"Mon Aug 07 1989"	05:27:02		
sp89f081.fits	NEPTUNE	18:44:19.44	-22:07:23.0		"Mon Aug 07 1989"	05:29:56		
sp89f082.fits	NEPTUNE	18:44:19.41	-22:07:23.0		"Mon Aug 07 1989"	05:38:39		
sp89f083.fits	NEPTUNE/ TRITON	18:43:44.25	-22:07:59.0		"Mon Aug 07 1989"	05:46:17		RA/DEC updated from log, but name is not clear. Probably between Neptune and Triton, could be classified under calibration.
sp89f084.fits	TRITON	18:44:20.05	-22:07:34.4		"Mon Aug 07 1989"	05:55:11		
sp89f085.fits	TRITON	18:44:20.05	-22:07:34.4		"Mon Aug 07 1989"	06:02:51		
sp89f086.fits	TRITON	18:44:20.01	-22:07:34.5		"Mon Aug 07 1989"	06:10:00		
sp89f087.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	06:27:02		
sp89f088.fits	"BS 6998"	18:38:53.40	-21:03:06.7				xTime, xDate	Log indicates 06:29 and Mon Aug 07 1989
sp89f089.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	06:33:15		
sp89f090.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	06:34:52		
sp89f091.fits	"BS 6998"	18:38:53.40	-21:03:06.7		"Mon Aug 07 1989"	06:36:17		