

Table 1

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89b001.fits	SA77C			IJ	"Sat Feb 11 1989"	08:08:22	xName	Unknown object
fr89b002.fits	SA771N			IJ	"Sat Feb 11 1989"	08:13:01	xName	Unknown object; extremely blurry
fr89b003.fits	SA771N			V+R	"Sat Feb 11 1989"	08:36:02	xName	Unknown object; extremely blurry
fr89b004.fits	SA 76-280	08:21:00.96	+14:45:25.2	V+R	"Sat Feb 11 1989"	09:12:02	xName	
fr89b005.fits	SA 76-280	08:21:00.96	+14:45:25.2	V+R	"Sat Feb 11 1989"	09:13:22	xName	
fr89b006.fits	SA 76-280	08:21:00.96	+14:45:25.2	R	"Sat Feb 11 1989"	09:15:18	xName	
fr89b007.fits	SA 76-280	08:21:00.96	+14:45:25.2	R	"Sat Feb 11 1989"	09:16:46	xName	
fr89b008.fits	SA 76-280	08:21:00.96	+14:45:25.2	IK	"Sat Feb 11 1989"	09:19:04	xName	
fr89b009.fits	SA 76-280	08:21:00.96	+14:45:25.2	IK	"Sat Feb 11 1989"	09:20:21	xName	
fr89b010.fits	SA 76-280	08:21:00.96	+14:45:25.2	IJ	"Sat Feb 11 1989"	09:22:04	xName	
fr89b011.fits	SA 76-280	08:21:00.96	+14:45:25.2	IJ	"Sat Feb 11 1989"	09:23:15	xName	
fr89b012.fits	SA772N			V+R	"Sat Feb 11 1989"	09:30:29		Unknown object
fr89b013.fits	SA772N			V+R	"Sat Feb 11 1989"	09:58:28		Unknown object
fr89b014.fits	DARK			R	"Sat Feb 11 1989"	10:23:45		
fr89b015.fits	SA772N			R	"Sat Feb 11 1989"	10:35:55		Unknown object
fr89b016.fits	Flat Field			R	"Sat Feb 11 1989"	10:57:49		
fr89b017.fits	Flat Field			R	"Sat Feb 11 1989"	10:58:50		
fr89b018.fits	Flat Field			V+R	"Sat Feb 11 1989"	11:00:34		
fr89b019.fits	Flat Field			V+R	"Sat Feb 11 1989"	11:01:44		
fr89b020.fits	Flat Field			IK	"Sat Feb 11 1989"	11:03:28		
fr89b021.fits	Flat Field			IK	"Sat Feb 11 1989"	11:04:33		
fr89b022.fits	Flat Field			IJ	"Sat Feb 11 1989"	11:05:46		
fr89b023.fits	Flat Field			IJ	"Sat Feb 11 1989"	11:06:35		
fr89b024.fits	Flat Field			IJ	"Sun Feb 12 1989"	02:31:19		
fr89b025.fits	Flat Field			IJ	"Sun Feb 12 1989"	02:32:38		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89b026.fits	Flat Field			IK	"Sun Feb 12 1989"	02:46:29		
fr89b027.fits	Flat Field			IK	"Sun Feb 12 1989"	02:47:36		
fr89b028.fits	Flat Field			R	"Sun Feb 12 1989"	02:50:19		
fr89b029.fits	Flat Field			R	"Sun Feb 12 1989"	02:51:11		
fr89b030.fits	Flat Field			V+R	"Sun Feb 12 1989"	02:52:46		
fr89b031.fits	Flat Field			V+R	"Sun Feb 12 1989"	02:53:37		
fr89b032.fits	Flat Field			V+R	"Sun Feb 12 1989"	02:54:34		
fr89b033.fits	Flat Field			V+R	"Sun Feb 12 1989"	02:55:20		
fr89b034.fits	"LAN EQ #49"			V+R	"Sun Feb 12 1989"	04:08:29	xName	Lookup on astrometry.net failed. Field neither matches LAN 49 nor SA 49
fr89b035.fits	"LAN EQ #49"			R	"Sun Feb 12 1989"	04:12:46	xName	Lookup on astrometry.net failed. Field neither matches LAN 49 nor SA 49
fr89b036.fits	"LAN EQ #49"			IK	"Sun Feb 12 1989"	04:16:38	xName	Lookup on astrometry.net failed. Field neither matches LAN 49 nor SA 49
fr89b037.fits	"LAN EQ #49"			IJ	"Sun Feb 12 1989"	04:18:54	xName	Lookup on astrometry.net failed. Field neither matches LAN 49 nor SA 49
fr89b038.fits	SA 76-280	08:21:00.96	+14:45:25.2	IJ	"Sun Feb 12 1989"	04:28:51		
fr89b039.fits	SA 76-280	08:21:00.96	+14:45:25.2	IK	"Sun Feb 12 1989"	04:31:05		
fr89b040.fits	SA 76-280	08:21:00.96	+14:45:25.2	R	"Sun Feb 12 1989"	04:33:12		
fr89b041.fits	SA 76-280	08:21:00.96	+14:45:25.2	V+R	"Sun Feb 12 1989"	04:36:17		
fr89b042.fits	SA 76-280	08:21:00.96	+14:45:25.2	V+R	"Sun Feb 12 1989"	04:38:57		
fr89b043.fits	Comet C/1989 A6 (Shoemaker)	08:58:03.64	+52:25:21.5	V+R	"Sun Feb 12 1989"	07:05:32	xName	
fr89b044.fits	Comet C/1989 A6 (Shoemaker)	08:58:03.64	+52:25:21.5	V+R	"Sun Feb 12 1989"	07:11:50		
fr89b045.fits	SA771N			V+R	"Sun Feb 12 1989"	07:39:48	xName	Unknown object

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89b046.fits	SA771N			IJ	"Sun Feb 12 1989"	07:57:07	xName	Unknown object
fr89b047.fits	SA772N			IJ	"Sun Feb 12 1989"	08:12:17	xName	Unknown object
fr89b048.fits	SA772N			V+R	"Sun Feb 12 1989"	08:28:12	xName	Unknown object
fr89b049.fits	SA773N			V+R	"Sun Feb 12 1989"	08:42:37	xName	Unknown object
fr89b050.fits	SA773N			IJ	"Sun Feb 12 1989"	08:59:06	xName	Unknown object
fr89b051.fits	LYNX			IJ	"Sun Feb 12 1989"	09:37:29	xName,xFilter	Field does not match with Lynx; useless
fr89b052.fits	LYNX			V+R	"Sun Feb 12 1989"	09:52:24	xName	Field does not match with Lynx; useless
fr89b053.fits	SA773N			R	"Sun Feb 12 1989"	10:11:42	xName	Unknown object
fr89b054.fits	SA772N			R	"Sun Feb 12 1989"	10:42:08	xName	Unknown object
fr89b055.fits	SA773N			R	"Sun Feb 12 1989"	10:54:32	xName	Unknown object
fr89b056.fits	Comet 71P/ Clark [1989]	11:27:50.48	+18:44:05.6	V+R	"Sun Feb 12 1989"	11:17:56	xName	
fr89b057.fits	Comet 71P/ Clark [1989]	11:27:49.75	+18:44:13.1	V+R	"Sun Feb 12 1989"	11:44:41	xName	
fr89b058.fits	Comet 7P/ Pons-Winnecke [1989]			V+R	"Sun Feb 12 1989"	11:57:21	xName	Log indicates that comet was not found in image, useless
fr89b059.fits	Comet 7P/ Pons-Winnecke [1989]			V+R	"Sun Feb 12 1989"	12:20:57	xName	Log indicates that comet was not found in image, useless
fr89b060.fits	Comet C/1989 A5 (Shoemaker)			B	"Mon Feb 13 1989"	06:44:20		Log indicates that comet was not found in image, useless
fr89b061.fits	Comet C/1989 A5 (Shoemaker)	09:19:25.22	+39:59:29.4	B	"Mon Feb 13 1989"	08:50:45		RA/DEC obtained using astrometry.net and is close to handwritten log.
fr89b062.fits	Comet C/1989 A5 (Shoemaker)	09:19:20.00	+40:00:13.5	B	"Mon Feb 13 1989"	09:41:34		RA/DEC obtained using astrometry.net and is close to handwritten log.
fr89b063.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.98	+52:26:48.8	B	"Tue Feb 14 1989"	07:13:28		Field matches, astrometry.net failed
fr89b064.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.10	+52:26:49.4	B	"Tue Feb 14 1989"	08:09:31		
fr89b066.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.10	+52:26:49.4	B	"Tue Feb 14 1989"	08:09:31		

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fr89b067.fits	Comet C/1989 A6 (Shoemaker)	08:57:20.33	+52:26:49.8	B	"Tue Feb 14 1989"	08:59:24		
fr89b068.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.10	+52:26:49.4	B	"Tue Feb 14 1989"	08:59:24		
fr89b069.fits	Comet C/1989 A6 (Shoemaker)	08:57:19.84	+52:26:49.9	V+R	"Tue Feb 14 1989"	09:32:15		
fr89b070.fits	Comet C/1989 A6 (Shoemaker)	08:57:19.63	+52:26:49.9	OPEN	"Tue Feb 14 1989"	09:45:34		
fr89b071.fits	Comet 71P/ Clark [1989]	11:26:30.51	+18:57:59.1	V+R	"Tue Feb 14 1989"	10:27:10		
fr89b072.fits	Comet 71P/ Clark [1989]	11:26:29.72	+18:58:06.7	V+R	"Tue Feb 14 1989"	11:53:46		
fr89b073.fits	Comet 71P/ Clark [1989]	11:26:27.61	+18:58:27.2	V+R	"Tue Feb 14 1989"	12:04:26		No log written
fr89b074.fits	SA 84-334	16:16:51.66	+14:41:47.4	V+R	"Thu Feb 16 1989"	11:45:57	xName	
fr89b075.fits	SA 84-334	16:16:51.66	+14:41:47.4	V+R	"Thu Feb 16 1989"	11:49:50	xName	
fr89b076.fits	SA 84-334	16:16:51.66	+14:41:47.4	R	"Thu Feb 16 1989"	11:52:49	xName,xFilter	
fr89b077.fits	SA 84-334	16:16:51.66	+14:41:47.4	R	"Thu Feb 16 1989"	11:54:22	xName,xFilter	
fr89b078.fits	SA 84-334	16:16:51.66	+14:41:47.4	ik	"Thu Feb 16 1989"	11:56:47	xName	
fr89b079.fits	SA 84-334	16:16:51.66	+14:41:47.4	ik	"Thu Feb 16 1989"	11:58:23	xName	
fr89b080.fits	SA 84-334	16:16:51.66	+14:41:47.4	ij	"Thu Feb 16 1989"	12:01:34	xName	
fr89b081.fits	SA 84-334	16:16:51.66	+14:41:47.4	ij	"Thu Feb 16 1989"	12:03:43	xName	
fr89b082.fits	SA 84-334	16:16:51.66	+14:41:47.4	v	"Thu Feb 16 1989"	12:08:25	xName	
fr89b083.fits	SA 84-334	16:16:51.66	+14:41:47.4	v	"Thu Feb 16 1989"	12:09:48	xName	
fr89b084.fits	SA 84-334	16:16:51.66	+14:41:47.4	b	"Thu Feb 16 1989"	12:11:46	xName	
fr89b085.fits	SA 84-334	16:16:51.66	+14:41:47.4	b	"Thu Feb 16 1989"	12:14:34	xName	
fr89b086.fits	VB8	16:55:35.29	-08:23:40.1	V+R	"Thu Feb 16 1989"	12:24:08		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
fr89b087.fits	VB8	16:55:35.29	-08:23:40.1	r	"Thu Feb 16 1989"	12:28:47		
fr89b088.fits	VB8	16:55:35.29	-08:23:40.1	ik	"Thu Feb 16 1989"	12:34:12		
fr89b089.fits	VB8	16:55:35.29	-08:23:40.1	ij	"Thu Feb 16 1989"	12:38:40		
fr89b090.fits	VB8	16:55:35.29	-08:23:40.1	v	"Thu Feb 16 1989"	12:45:32		
fr89b091.fits	VB8	16:55:35.29	-08:23:40.1	v	"Thu Feb 16 1989"	12:48:43		
fr89b092.fits	VB8	16:55:35.29	-08:23:40.1	b	"Thu Feb 16 1989"	12:50:36		
fr89b093.fits	VB8	16:55:35.29	-08:23:40.1	b	"Thu Feb 16 1989"	12:52:27		
fr89b094.fits	VB8	16:55:35.29	-08:23:40.1	v+r	"Thu Feb 16 1989"	12:59:29		
fr89b095.fits	VB8	16:55:35.29	-08:23:40.1	v+r	"Thu Feb 16 1989"	13:01:22		
fr89b096.fits	VB8	16:55:35.29	-08:23:40.1	r	"Thu Feb 16 1989"	13:03:21		
fr89b097.fits	VB8	16:55:35.29	-08:23:40.1	ik	"Thu Feb 16 1989"	13:06:18		
fr89b098.fits	VB8	16:55:35.29	-08:23:40.1	ik	"Thu Feb 16 1989"	13:07:52		
fr89b099.fits	VB8	16:55:35.29	-08:23:40.1	ij	"Thu Feb 16 1989"	13:09:58		
fr89b100.fits	VB8	16:55:35.29	-08:23:40.1	ij	"Thu Feb 16 1989"	13:11:04		
fr89b101.fits	VB8	16:55:35.29	-08:23:40.1	ij	"Thu Feb 16 1989"	13:12:36		
fr89b102.fits	VB8	16:55:35.29	-08:23:40.1	v+r	"Thu Feb 16 1989"	13:23:35		
sp89b001.fits	Comet C/1989 A6 (Shoemaker)	08:58:04.01	+52:25:20.5		02/12/89	+06:44:53		
sp89b002.fits	Comet C/1989 A6 (Shoemaker)	08:58:03.76	+52:25:21.2		02/12/89	+06:57:39		
sp89b003.fits	BS 3625	09:08:51.06	+33:52:55.5		02/13/89	+06:12:04		
sp89b004.fits	BS 3625	09:08:51.06	+33:52:55.5		02/13/89	+06:14:02		
sp89b005.fits	BS 3625	09:08:51.06	+33:52:55.5		02/13/89	+06:15:08		
sp89b006.fits	BS 3625	09:08:51.06	+33:52:55.5		02/13/89	+06:15:54		

File	Object	RA set	DEC set	Filter	Date	UT-STRT	Log Differences	Comments (N left E up, rotate 90 CCW)
sp89b008.fits	Comet C/1989 A5 (Shoemaker)	09:19:19.82	+39:59:11.9		02/13/89	+09:12:23	xName	Spectrum is a bit different from sp89b002.fits
sp89b009.fits	Comet C/1989 A5 (Shoemaker)	09:19:18.61	+39:59:30.3		02/13/89	+09:23:00	xName	
sp89b010.fits	Comet C/1989 A5 (Shoemaker)	09:19:17.41	+39:59:48.6		02/13/89	+09:36:10		
sp89b011.fits	Comet C/1989 A5 (Shoemaker)	09:19:15.01	+40:00:25.3		02/13/89	+09:59:05		
sp89b012.fits	Comet C/1989 A5 (Shoemaker)	09:19:12.81	+40:00:58.8		02/13/89	+10:21:35		
sp89b013.fits	BS 4030	10:16:32.29	+23:30:11.1		02/13/89	+11:18:45		
sp89b014.fits	BS 4030	10:16:32.29	+23:30:11.1		02/13/89	+11:19:43		
sp89b015.fits	BS 4030	10:16:32.29	+23:30:11.1		02/13/89	+11:20:30		
sp89b016.fits	HR 5511	14:46:14.93	+01:53:34.4		02/13/89	+11:43:26		
sp89b017.fits	HR 5511	14:46:14.93	+01:53:34.4		02/13/89	+11:44:59		
sp89b018.fits	HR 5511	14:46:14.93	+01:53:34.4		02/13/89	+11:45:46		
sp89b019.fits	Comet C/1989 A6 (Shoemaker)	08:57:22.29	+52:26:48.6		02/14/89	+06:54:09		
sp89b020.fits	Comet C/1989 A6 (Shoemaker)	08:57:22.07	+52:26:48.8		02/14/89	+07:08:12		
sp89b021.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.70	+52:26:49.1		02/14/89	+07:32:14		
sp89b022.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.35	+52:26:49.3		02/14/89	+07:54:11		
sp89b023.fits	Comet C/1989 A6 (Shoemaker)	08:57:21.01	+52:26:49.5		02/14/89	+08:16:52		
sp89b024.fits	Comet C/1989 A6 (Shoemaker)	08:57:20.67	+52:26:49.6		02/14/89	+08:38:50		
sp89b025.fits	Comet 71P/Clark [1989]	11:26:30.03	+18:58:03.8		02/14/89	+10:43:33		
sp89b026.fits	Comet 71P/Clark [1989]	11:26:28.82	+18:58:15.5		02/14/89	+11:24:57		
sp89b027.fits	Comet 71P/Clark [1989]	11:26:28.15	+18:58:21.9		02/14/89	+11:46:57		
<p>The above output obtained by running: <code>hselect fr *.fits \$!,object,ra,dec,filter,date,ut-strtr yes > 89b_hselect</code></p> <p>The Log Differences and Comments columns are the observations noted after comparing the FITS header with log sheets.</p>								
sp89b028.fits	BS 5534	14:50:15.86	+23:54:42.7		02/14/89	+12:21:41		
sp89b029.fits	BS 5534	14:50:15.86	+23:54:42.7		02/14/89	+12:22:53		
sp89b030.fits	BS 5534	14:50:15.86	+23:54:42.7		02/14/89	+12:24:16		