MDI Guide
Calibration Report

Ver 0.72
Sep-94

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MDI-????
SOI Tech Note#: ??

Some suggested reference books, material, and methods of finding more information:

- "MDI Guide: An Overview of the /mdisw System"
- TBD - what is useful to list here????
- The official MDI IDL software should have a detailed description of the routine in the header of the source file. It is possible to access this header from within IDL by using DOC_LIBRARY. A sample call is:

  IDL> **doc_library,'mdipict'**

If you have general comments, suggestions, or questions regarding this document or software, please send them to:

`morrison@quake.stanford.edu`

Contents

List of Figures

Preface

The conventions used in this manual are:

- Bold face for examples of what the user should type
- Program names are capitalized when mentioned in the text, but are not capitalized in the user input examples
- Variable names are italicized when mentioned in the text
- Dates and times are in Universal Time (UT) and have the convention "dd-mmm-yy"
- There are several different types of prompts that appear in the examples. The prompt IDL> is used for when the user has already entered and is running IDL. The prompt % is used to signify Unix commands, and the prompt $ signifies VMS commands. There are also FTP> prompts for 'File Transfer Protocol.'

For example, you would only type **.run show_data** for the following description. You would not type IDL>.

IDL> **.run show_data**

1 Introduction

1.1 Overview of the MDI Instrument

1.2 Optical Ray Traces and Relations

TODO - DARRELL/TED/MONS - Three figures

TODO - DARRELL/TED/MONS - Table of relations/conversion factors
1.21 * OBS location for location on Michelson-2 surface
0.699 * OBS location for location on Michelson-1 surface
size of the full sun on the michelsons (in cm?) (in pixels?) (in ??)

1.3 Overview of the Calibration Setup

1.3.1 Calculating Solar P-Angle and Heliostat Offset Values

TODO - MONS/PHIL - program and information = c code in ~soi/src/misc

1.4 Definition of the Coordinate System

TODO - MONS/TED - Figures and explanation of -1 to 1 over CCD

TODO - MONS - Figure of CCD with Fudicial mark (dark spike pixel)

TODO - MONS - Expand/Add words "relationship shown is viewing the CCD as if the sun was behind the viewer's head)

TODO - MONS - EID Figure/reference - North to left when looking into box (?)

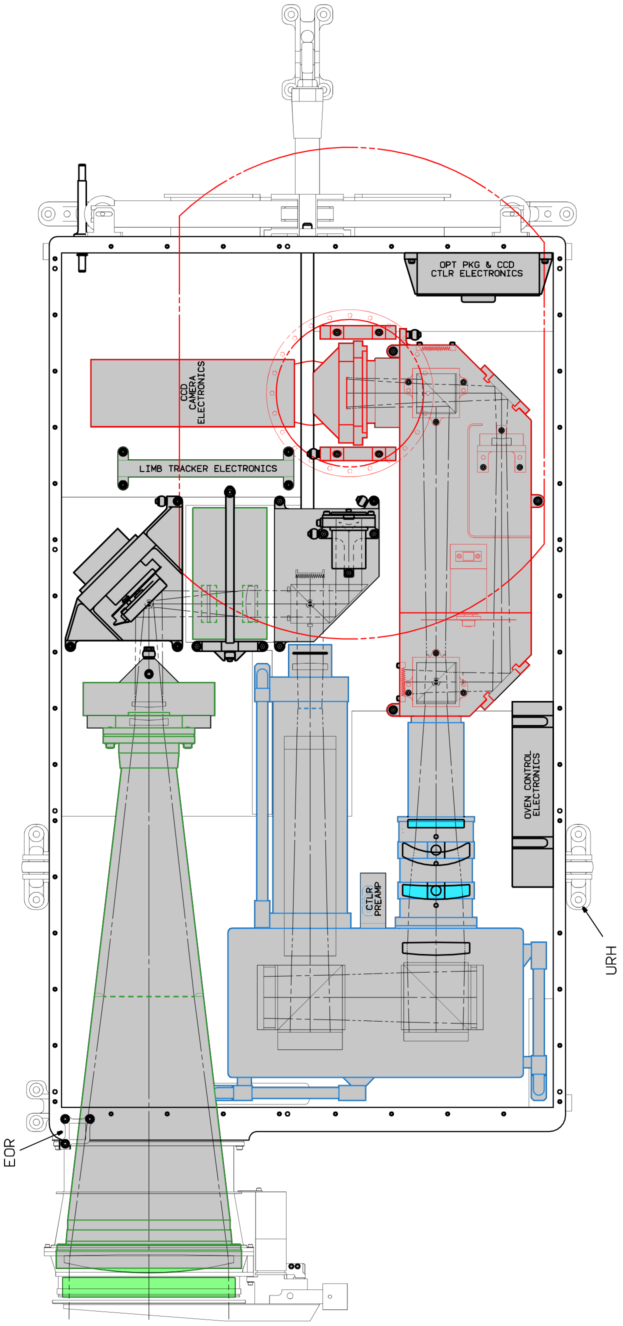


Figure 1: Block Diagram of MDI Instrument

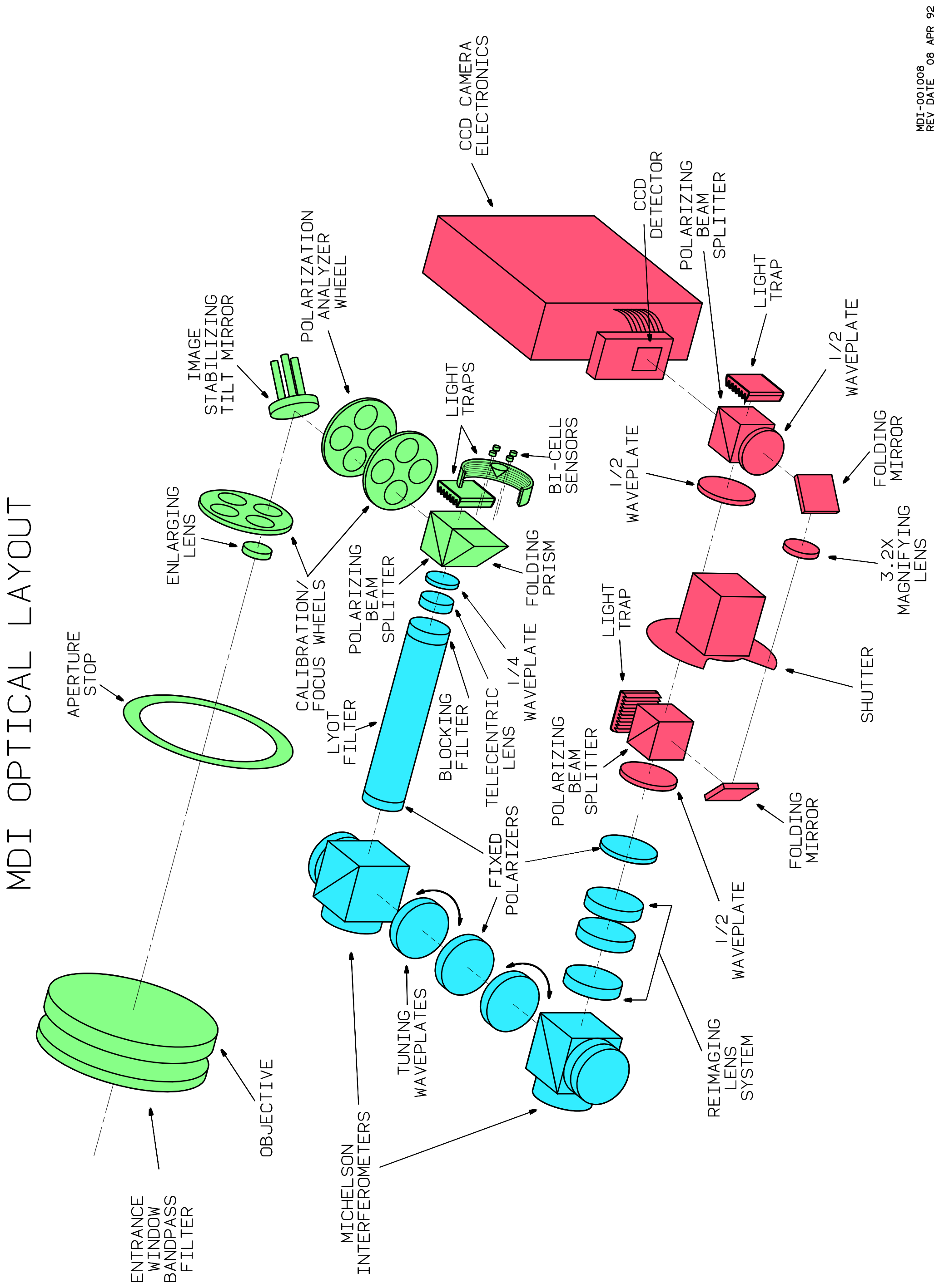


Figure 2: Block Diagram of Optics Path

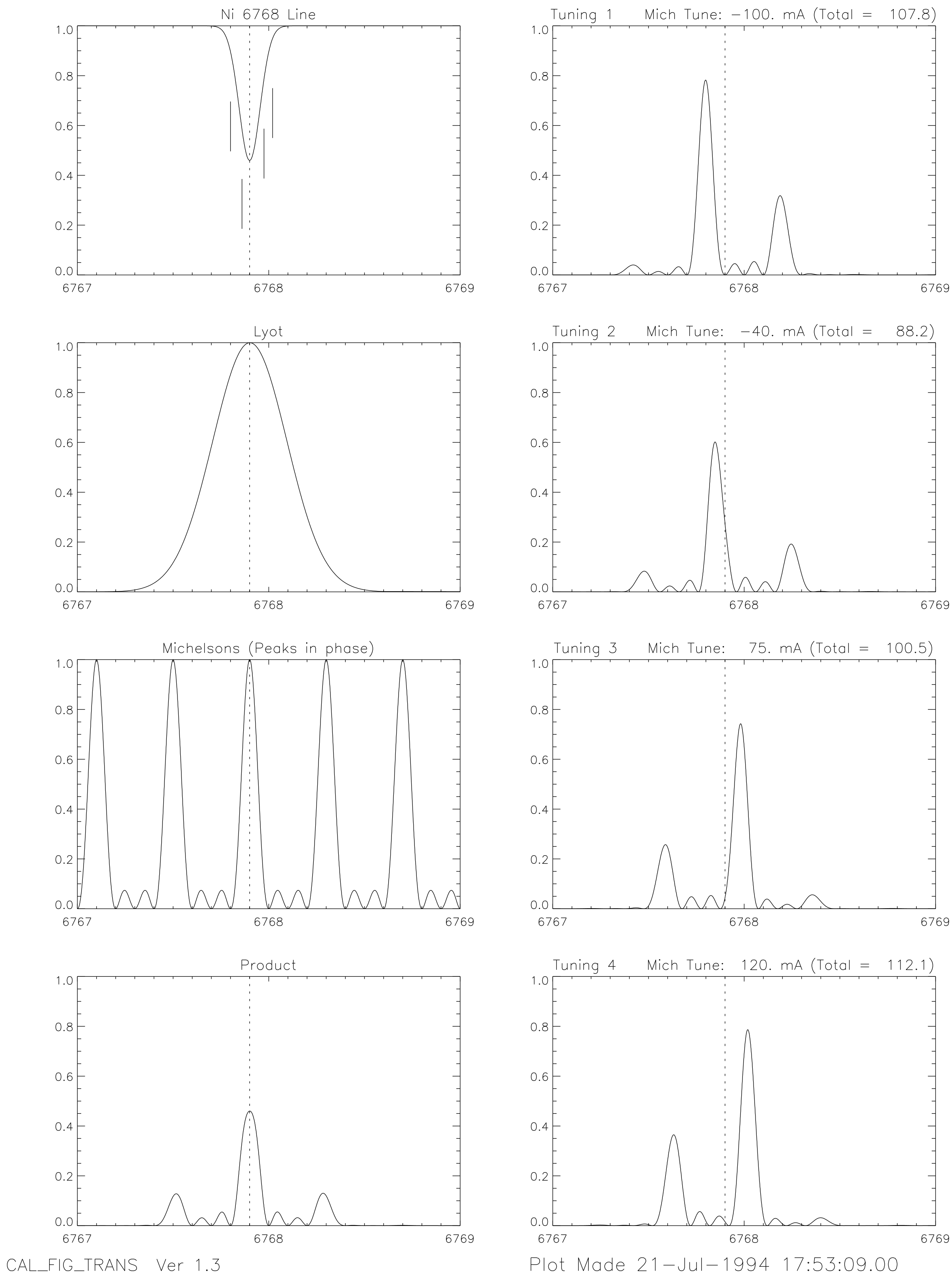


Figure 3: Solar Line, Lyot and Michelson Transmission Profile

Figure 4: Schematic/Block Diagram of the Layout for Calibration Experiments

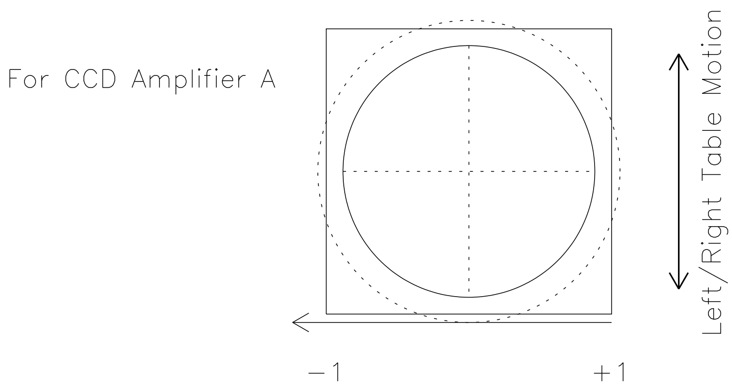


Figure 5: Definition of the Coordinate System

Part I

Sub-Systems

2 Front Window

2.1 Introduction

2.1.1 Principle of the Measurements

Transmission curves were provided by Andover Corporation. The curve was digitized on an X-Y Digitizer in Building 157 at Lockheed Sunnyvale by manually clicking along the curve. Two curves were digitized and then combined – the full range curve covered 6668.0 Å to 6868.0 Å and the expanded wavelength scale covered 6763.0 Å to 6773.0 Å. Some adjustments and corrections had to be performed to the raw data to make it match the plotted curve. The information on the curves from Andover is as follows:

Test Instrument	SPEX 1.26 Meter
Test Technician	J.Davis
Date	92 Jun 9
Customer Name	L.P.A.R.L.
Job Number	AM-18109
Part Number	MDI-011041-101
Serial Number	01

2.2 Transmission Profile

MONS

2.3 Spatial Map

NOT AVAILABLE?

TODO - Mons/Igor - IR "holes" in the filter

2.4 Angle Dependence

??

Figure 8 shows ...

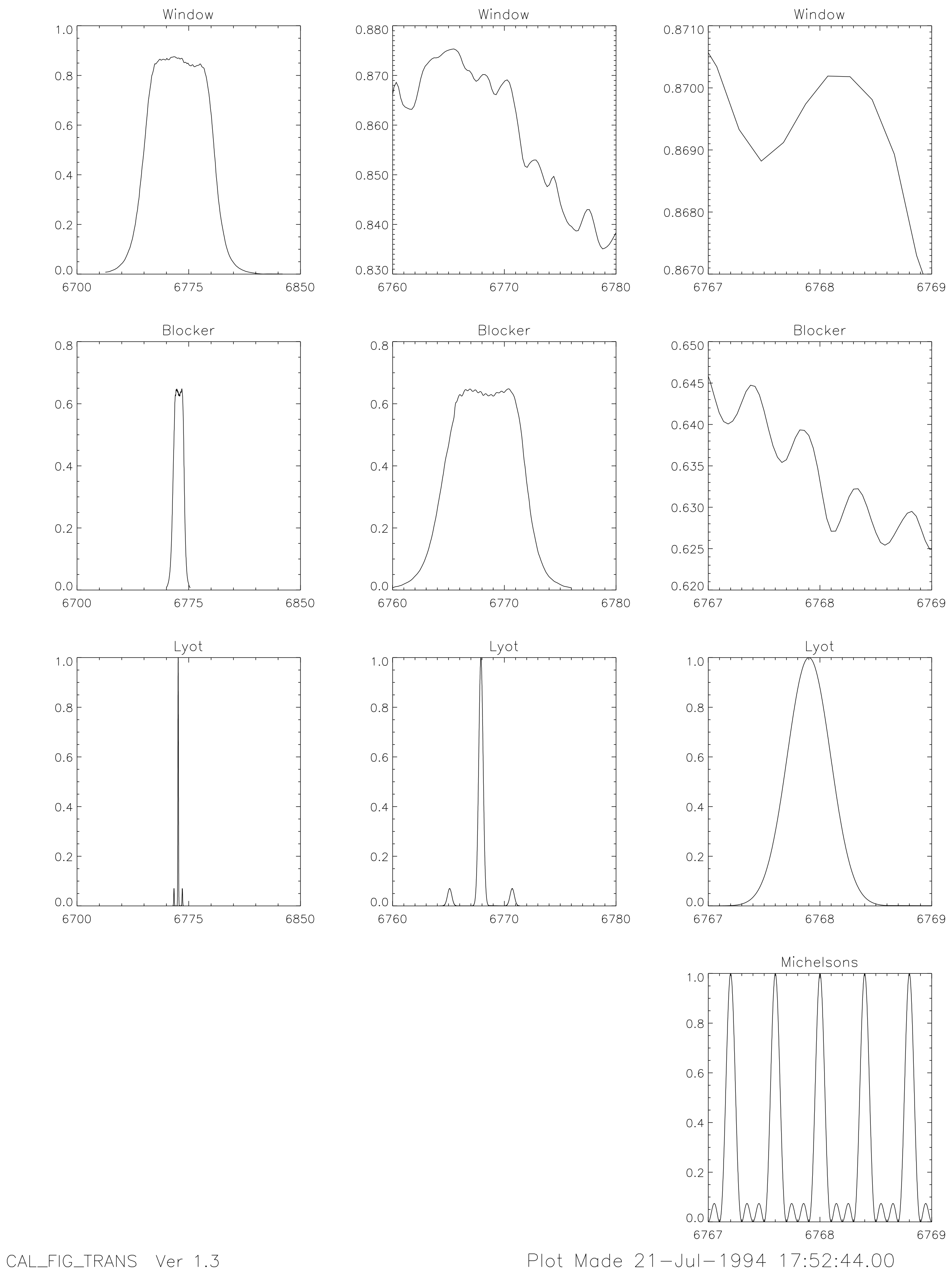


Figure 6: Window, Blocker, Lyot and Michelson Transmission Profile

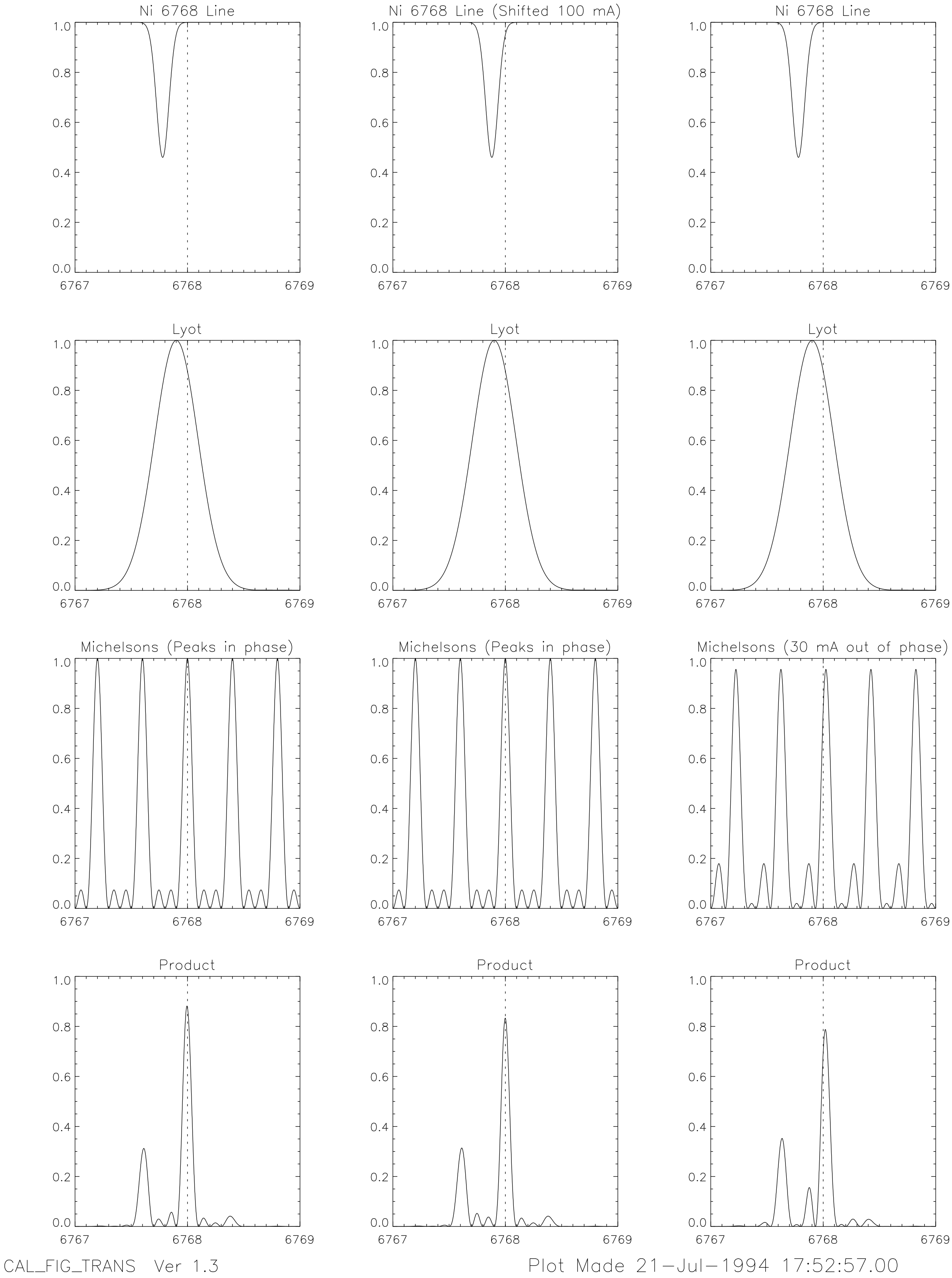


Figure 7: Lyot and Michelson Transmission Profile

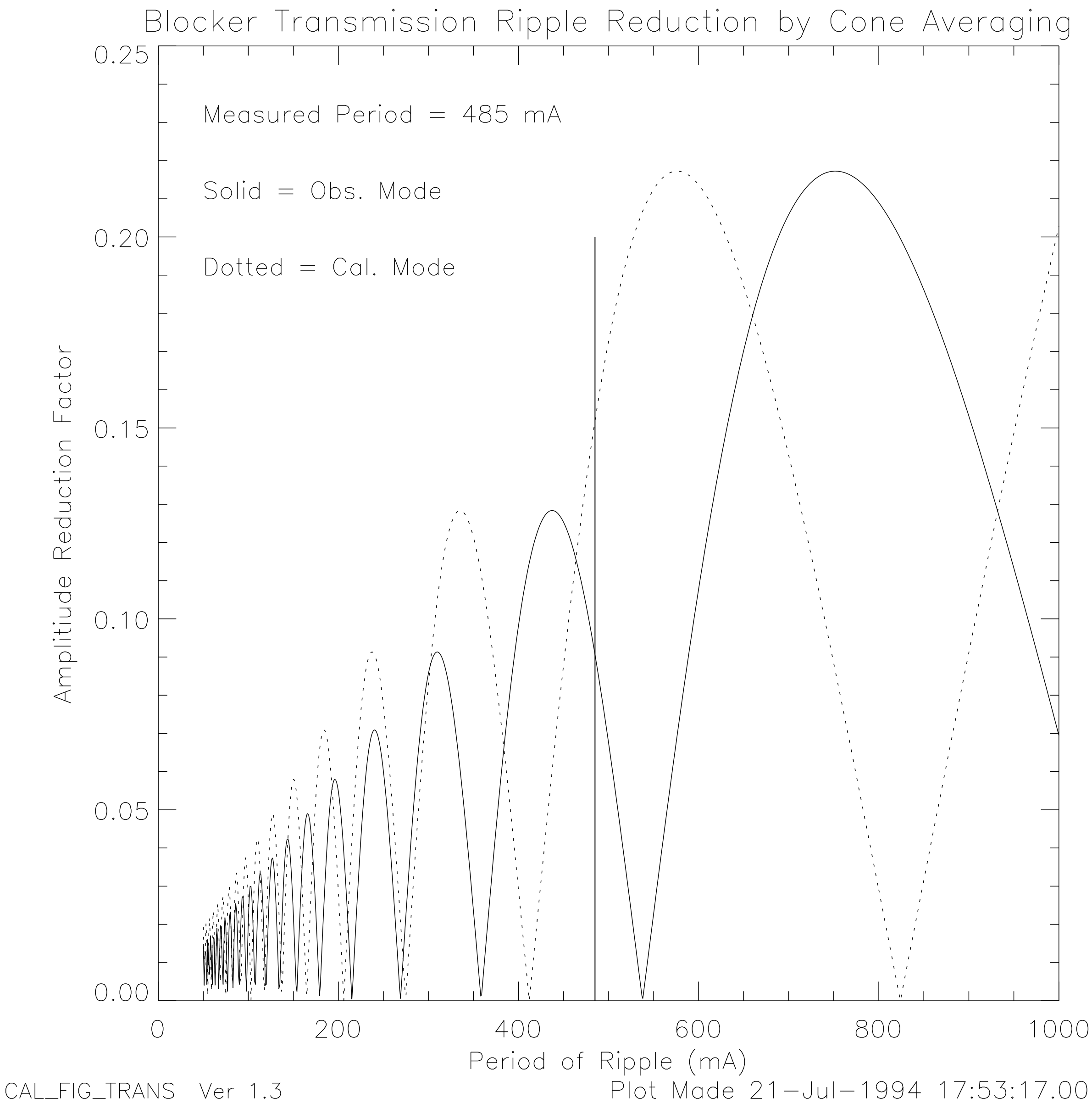


Figure 8: Blocker Transmission Ripple Reduction by Cone Averaging

3 Blocking Filter

3.1 Introduction

Transmission curves were provided by Andover Corporation. The curve was digitized on an X-Y Digitizer in Building 157 at Lockheed Sunnyvale by manually clicking along the curve. Two curves were digitized and then combined – the full range curve covered 6752.0 Å to 6784.0 Å and the expanded wavelength scale covered 6765.3 Å to 6770.3 Å. Some adjustments and corrections had to be performed to the raw data to make it match the plotted curve. The information on the curves from Andover is as follows:

Test Instrument	SPEX 1.26 Meter
Test Technician	M.Tiner
Date	92 Aug 31
Customer Name	L.P.A.R.L.
Job Number	AM-17847
Part Number	MDI-051015-01
Serial Number	01

3.2 Transmission Profile

MONS

Ripple Amplitude and Freq

3.3 Spatial Map

NOT AVAILABLE?

3.4 Angle Dependence

TODO - TED - Theoretical dependence (EQUATION)

4 Lyot

4.1 Introduction

4.1.1 Principle of the Measurements

TODO - TED - Fill In

4.1.2 Data

On 5-Nov-93 a series of laser tuning experiments were run. For a given laser wavelength tuning, a the "mdilaser" control sequence was run which took 27 images, 10 of which have the M1 tuning varying and 10 others which have the M2 tuning varying.

Series Numbers		Date	Temperature		Comments
Starting	Ending				
OCT575	OCT586	5-NOV-93	Normal	(36.7 C)	
OCT592	OCT611	5-NOV-93	Normal	(36.7 C)	
NOV623	NOV643	26-NOV-93	Cold	(34.1 C)	Bad Data - Laser Multimode
NOV656	NOV676	29-NOV-93	Hot	(42.2 C)	
NOV688	NOV706	30-NOV-93	Normal	(36.7 C)	Bad Data - Laser Multimode

```
MMAP_SUMMARY Ver 4.01   Program Run:  1-Sep-1994 20:40:28.00
Output File: /mdisw/dbase/cal/summary/seq592-seq612.tr_summary

Ser  Pos Rep    Wave     L_Pow  L_Cng  Trans  Trans    Trans   Trans  LaserObsPos    Uncertainty     Date       Time
                                        Avg    Dev      Min     Max     X        Y

 592  0   0  6767.840    7.00   0.00 11500.  2173.   5740.  16453.    32.0     32.0   0.043697022   5-NOV-93  23:33:00
 593  0   0  6767.727    6.60   0.00  8312.  1869.   4413.  12625.    31.0     33.0   0.036539610   5-NOV-93  23:49:36
 594  0   0  6767.625    5.70   3.51  3889.   911.   2076.   5983.    31.0     33.0   0.010984750   5-NOV-93  23:59:34
 595  0   0  6767.840    6.68   0.75 12077.  2448.   6734.  19365.    31.0     32.0   0.039946262   6-NOV-93  00:09:28
 596  0   0  6767.992    6.40   0.00 12010.  2713.   6198.  18350.    32.0     33.0   0.220712274   6-NOV-93  00:50:30
 597  0   0  6768.105    6.00   3.33  6173.  1019.   3623.   8701.    31.0      0.0   0.024925584   6-NOV-93  00:59:16
 598  0   0  6768.015    6.40   3.12 10162.  1767.   5901.  14293.    31.0     32.0   0.017206188   6-NOV-93  01:40:51
 599  0   0  6768.117    6.75   4.44  6830.  1099.   3834.   9844.    31.0      0.0   0.032091554   6-NOV-93  01:50:49
 601  0   0  6768.361    5.50   0.00   365.    82.    113.    576.    31.0     33.0   0.007505410   6-NOV-93  02:09:28
 602  0   0  6768.470    4.60 -10.00 99999. 99999. -99999.  99999.    32.0     32.0   1.000000000   6-NOV-93  02:20:42
 603  0   0  6767.566    4.65   2.15  1889.   456.    994.   2934.    30.0     33.0   0.005888457   6-NOV-93  02:31:07
 604  0   0  6767.475    5.25   5.71   565.   153.    274.    915.    31.0     32.0   0.027387556   6-NOV-93  02:38:39
 605  0   0  6767.386    4.85   2.06   109.    34.     40.    185.    31.0     33.0   0.173965365   6-NOV-93  02:51:51
 606  0   0  6767.261    4.00 -10.00     8.     4.      0.     18.    30.0     32.0   0.159859702   6-NOV-93  03:07:18
 607  0   0  6765.110    4.00   5.00   856.   208.    351.   1389.    31.0     32.0   0.278442144   6-NOV-93  03:40:50
 608  0   0  6764.990    4.10   0.00   605.   164.    256.   1256.    31.0     33.0   0.057770375   6-NOV-93  03:50:56
 609  0   0  6765.370    4.70   0.00   538.   189.     61.    973.    31.0     32.0   0.098613486   6-NOV-93  03:59:25
 610  0   0  6770.930    4.10   4.88   468.   175.    115.    884.    31.0     32.0   0.034863867   6-NOV-93  04:20:43
 611  0   0  6771.050    4.10   4.88   255.    92.     64.    467.    31.0     33.0   0.006440688   6-NOV-93  04:29:58
 612  0   0  6771.182    4.00 -10.00    71.   363.   -379.  10163.    31.0     32.0   1.000000000   6-NOV-93  04:37:56
```

4.1.3 Calculations

See section TODO?? for a description of the laser tuning. The laser wavelength is known from ....

- Select and read the dark frame from the series of images
- Select and read the 10 images where M1 tuning goes through a full cycle while M2 tuning is held fixed.
- Select and read the 10 images where M2 tuning goes through a full cycle while M1 tuning is held fixed.
- Subtract the dark frame from the 20 M tuning images
- For a given pixel, there are 10 points (a point per image). Fit a sine wave plus constant offset to the curve to return the PHASE, AMPLITUDE, and OFFSET for the sine wave.
- The transmission is given by the following:

$$S1 = OFF1 - AMP1 \times COS(PHASE1\_SHIFT - PHASE1)$$
$$S2 = OFF2 - AMP2 \times COS(PHASE2\_SHIFT - PHASE2)$$
$$I0av = \frac{(S1 + S1)}{2}$$
$$TRANS = \frac{(AMP1 + OFF1) * (AMP2 + OFF2)}{I0av \times Laser\_Power}$$

  where PHASE_SHIFT is the shift needed to have M1 and M2 co-tuned.

- The transmission uncertainty is given by the following:

$$sigT1 = m1sigma^2 \times \left(\frac{3.}{(OFF1 + AMP1)^2} + \frac{9.}{(4 \times I0av^2)} - \frac{(AMP1 + 4 \times alphabeta1)}{(AMP1 \times (OFF1 + AMP1) \times I0av)} \right)$$
$$sigT2 = m2sigma^2 \times \left(\frac{3.}{(OFF2 + AMP2)^2} + \frac{9.}{(4 \times I0av^2)} - \frac{(AMP2 + 4 \times alphabeta2)}{(AMP2 \times (OFF2 + AMP2) \times I0av)} \right)$$
$$Tsigma = \sqrt{\frac{1}{N} \times (sigT1 + sigT2)}$$

  where *m1sigma* and *m2sigma* are the standard deviations of the M1 and M2 scans, *alphabeta1* and *alphabeta2* are ???, and N is the number of points in the sine fit (normally 10 points).

- For the transmision profile (Figure 9), the average transmission for a given series is used, only using the values within the illuminated circle. Variable exposure times are normalized to the standard value.
- For the spatial wavelength map (Figure 10), each pixel has a gaussian fit to give the central wavelength.

4.1.4 Results

4.2 Transmission Profile

4.3 Spatial Map

The wavelength unformity of the Lyot is shown in Figure 10. A gaussian function was fit for every pixel to find the central wavelength. The variation is ...TODO?

4.4 Angle Dependence

TODO - TED - Fill in
- mounting tilt angle - shift in central wave versus angle

4.5 Side Lobes

TODO - MONS/TED - Fill in - amplitude (blue and red) and location - datasets used

Dataset		Date	Method	Blue Lobe	Red Lobe	Comments
Spectrograph	tubev99.dat	4-Apr-93	Spectrograph	4.6%	1.8%	
Laser Scan	OCT592 - 612	5-Nov-93	Single point peak	2.4%	1.3%	Red lobe not centered
Laser Scan	APR880 - 909	9-Apr-94	3 point parabola fit	7.5%	2.0%	

4.6 Temperature Dependence

TODO - TED - FILL IN EQUATION

4.7 Central Wavelength with Respect to Solar Line

TODO - TED - FILL IN

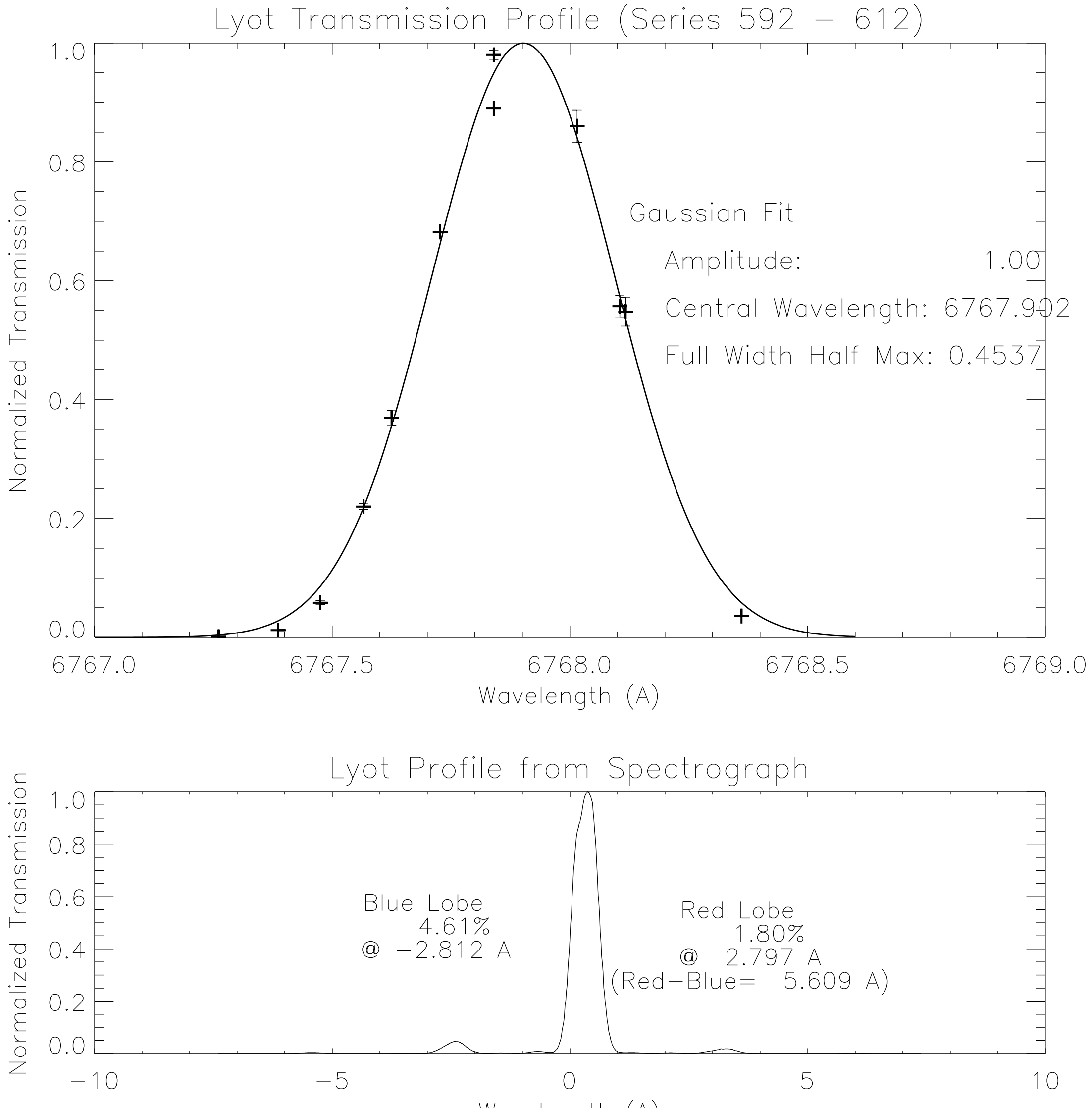


Figure 9: Lyot Transmission Profile with Gaussian Fit

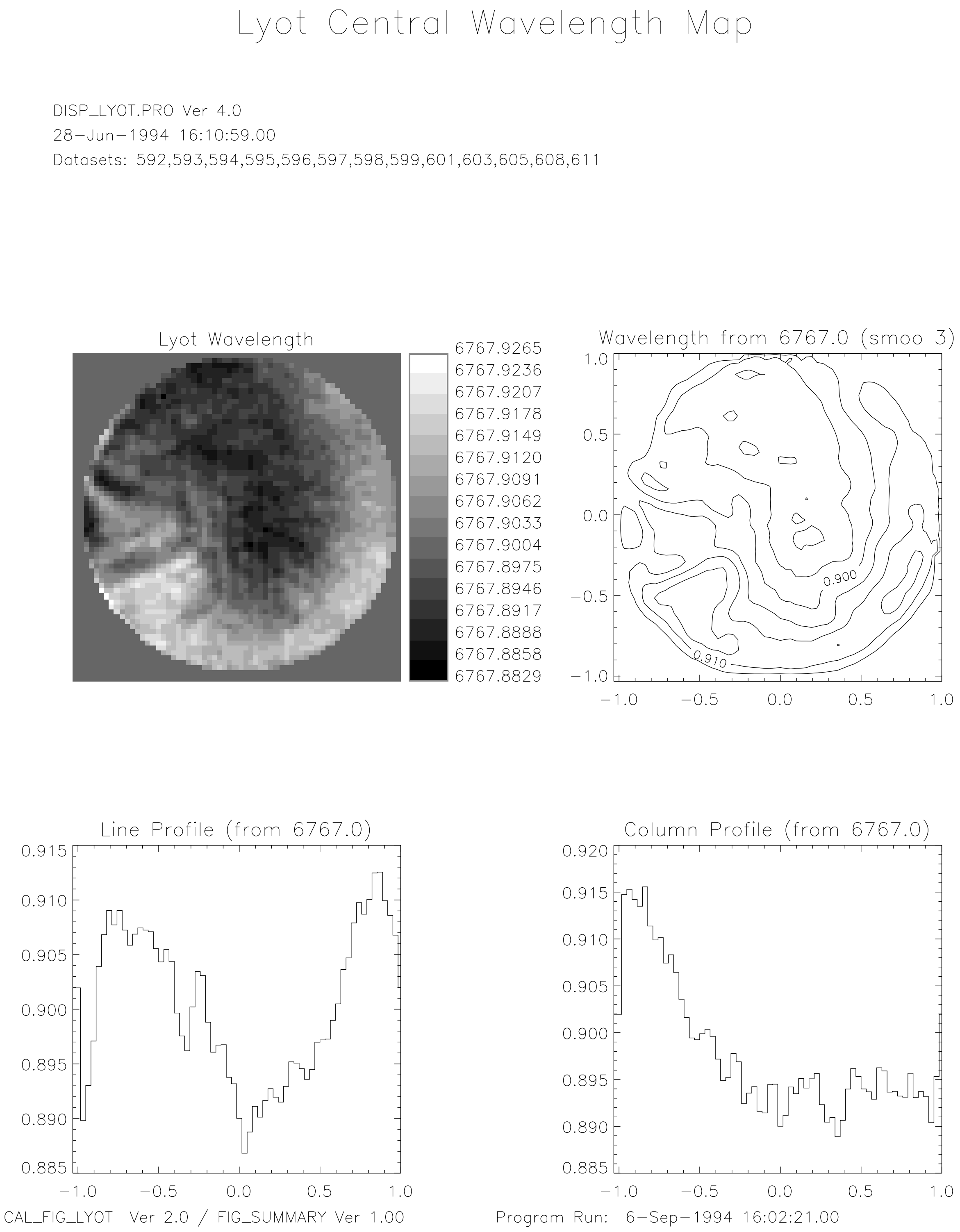


Figure 10: Lyot Wavelength Spatial Map

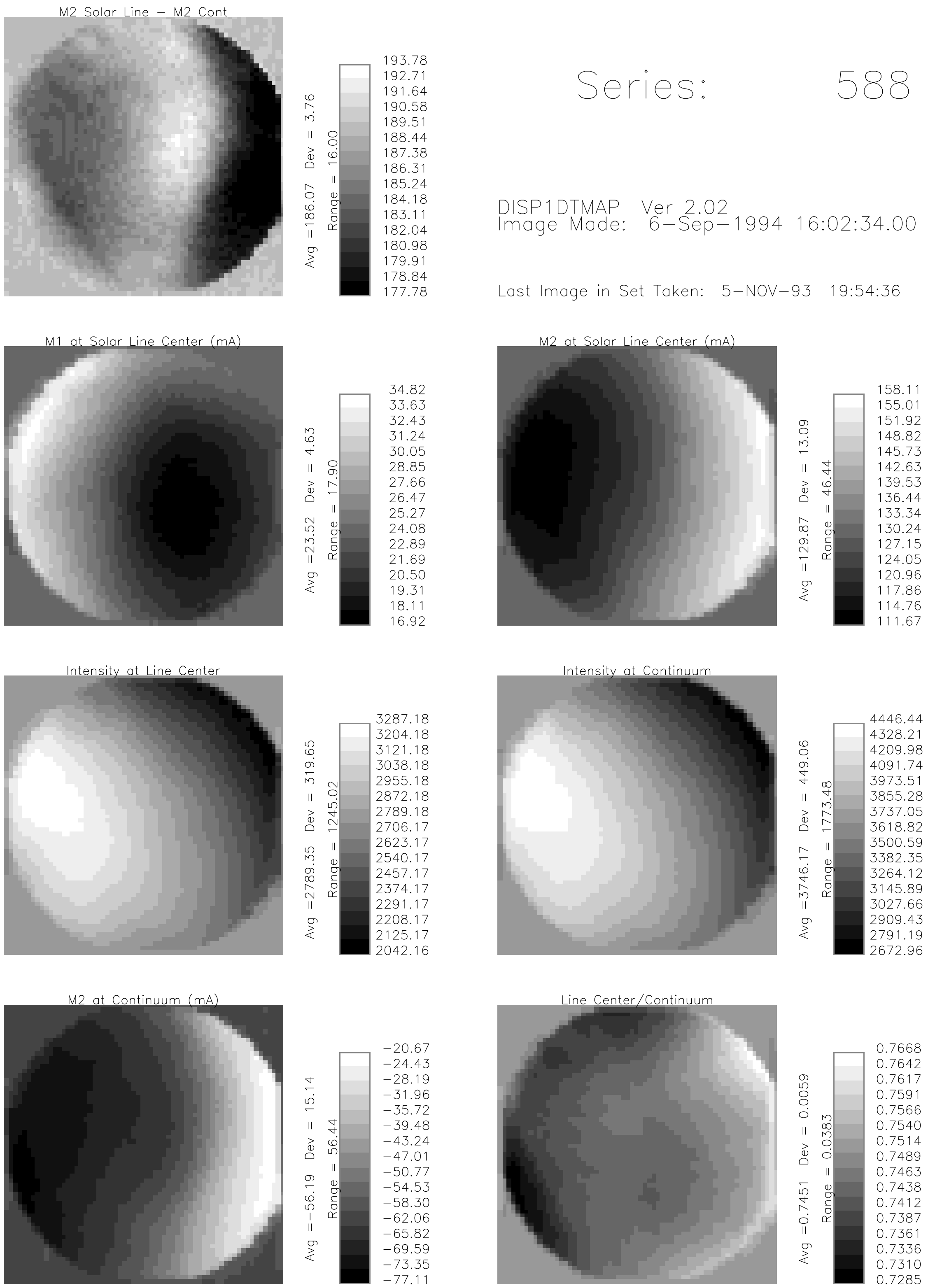


Figure 11: Lyot Solar Tuning

5 Michelsons

5.1 Introduction

5.1.1 Principle of the Measurements

TODO - TED

5.1.2 Data

There are several different datasets which are available to establish the wavelength spatial maps of the Michelson's. A few of these are:

Series Numbers	Radius	# Images	Date	Temperature	
OCT613	Large	10x10	6-NOV-93	Normal	??
OCT614	Small	10x10	6-NOV-93	Normal	??
NOV678	Large	2x10	29-NOV-93	Warm	(40 C)
NOV680	Small	2x10	29-NOV-93	Warm	(40 C)
NOV687	Large	2x10	30-NOV-93	Normal	(35 C)

5.1.3 Calculations

TODO - Mons

5.1.4 Results

5.2 Transmission Profile

TODO - MONS

5.3 Free Spectral Range

TODO - TED - Words/Table

5.4 Spatial Map

TODO - MONS - Mark size of full sun in obs mode on figure

TODO - MONS - change solar michelson map to be same size as laser image(?)

M1 feature is a bad stonehenge pad exerting stress?

contrast map

5.5 Angle Dependence

TODO - MONS

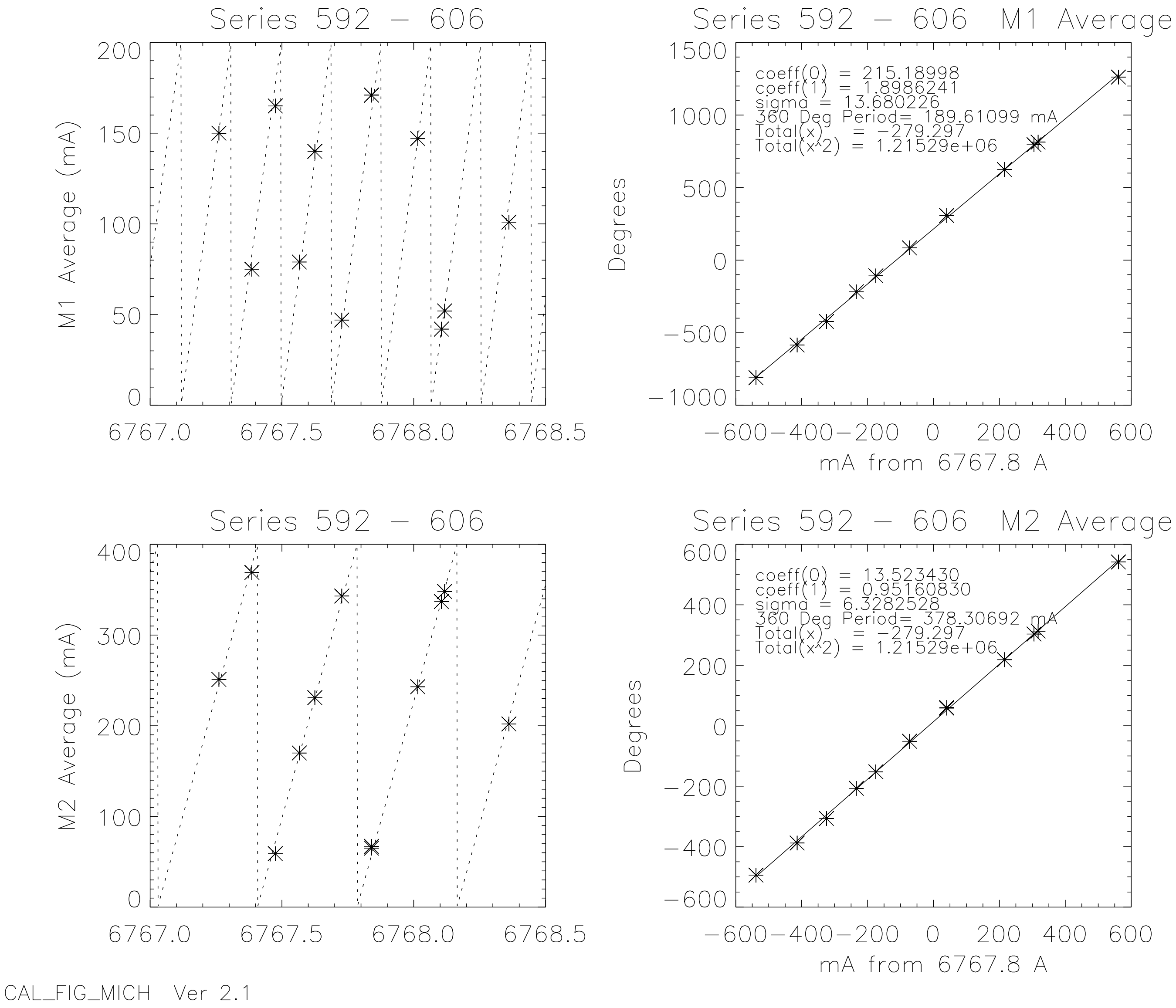


Figure 12: Michelson 1 and 2 Free Spectral Range

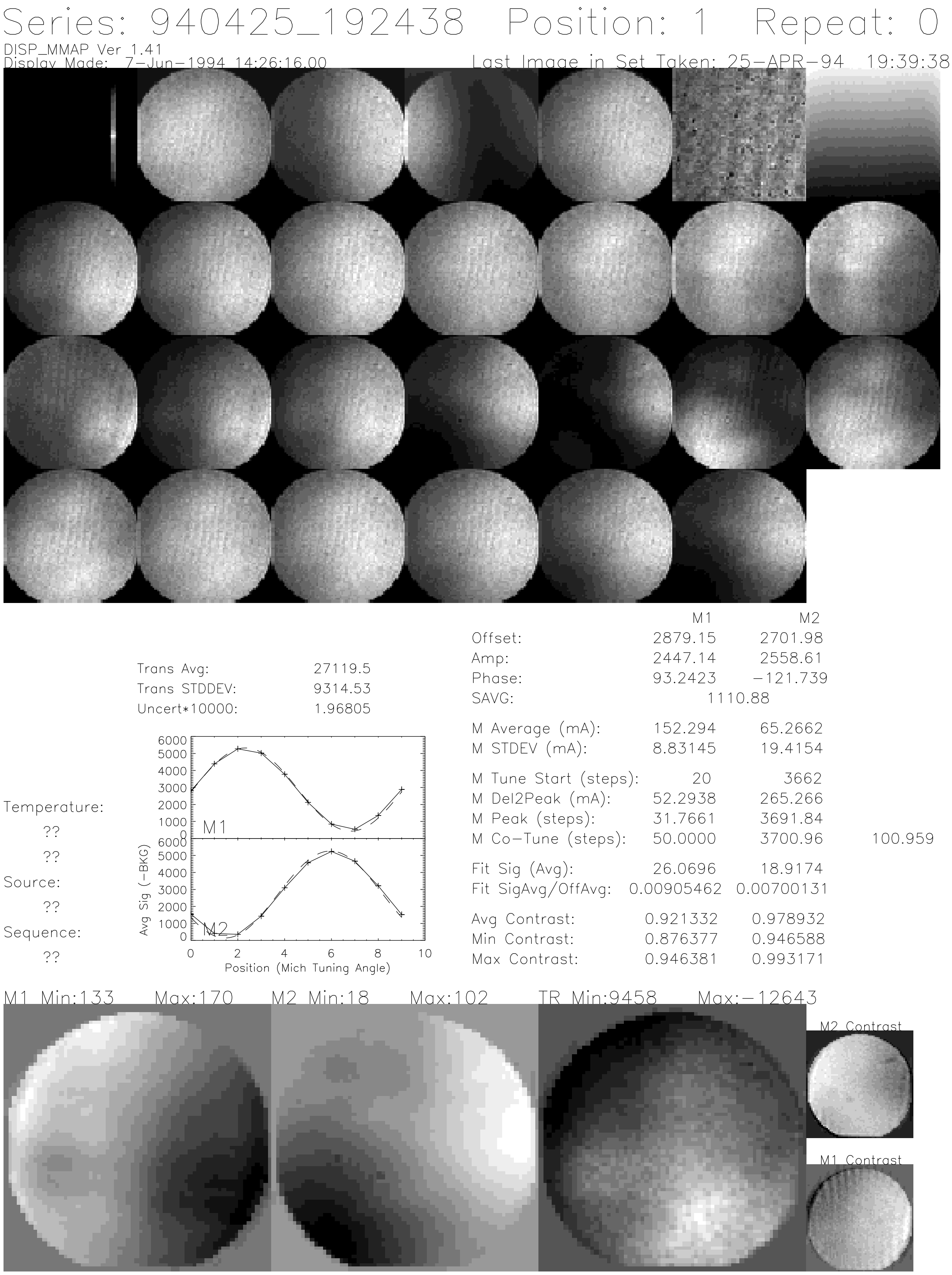


Figure 13: Sample Output for MDILASER Analysis

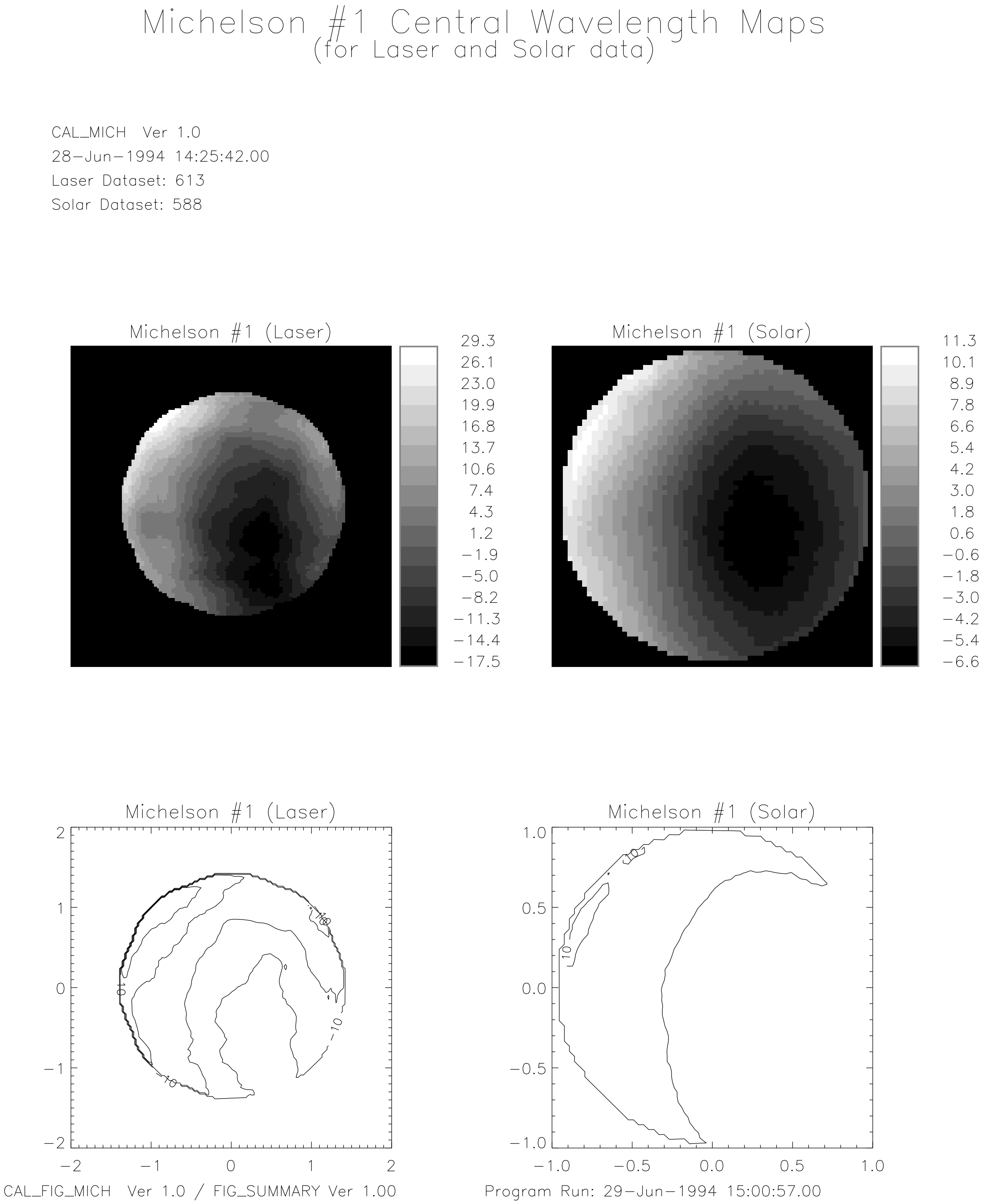


Figure 14: Michelson #1 Wavelength Spatial Non-Uniformity Images

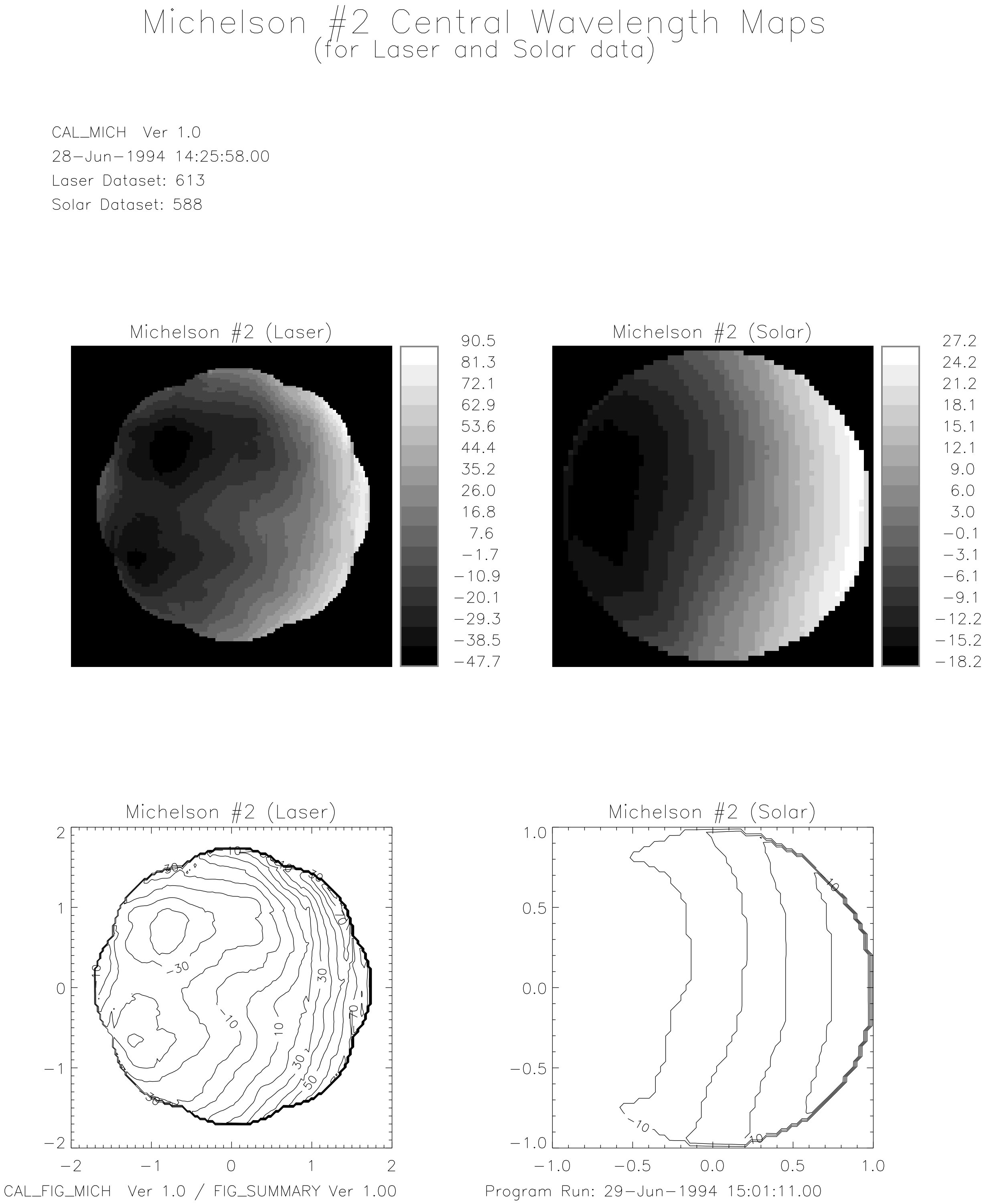


Figure 15: Michelson #2 Wavelength Spatial Non-Uniformity Images

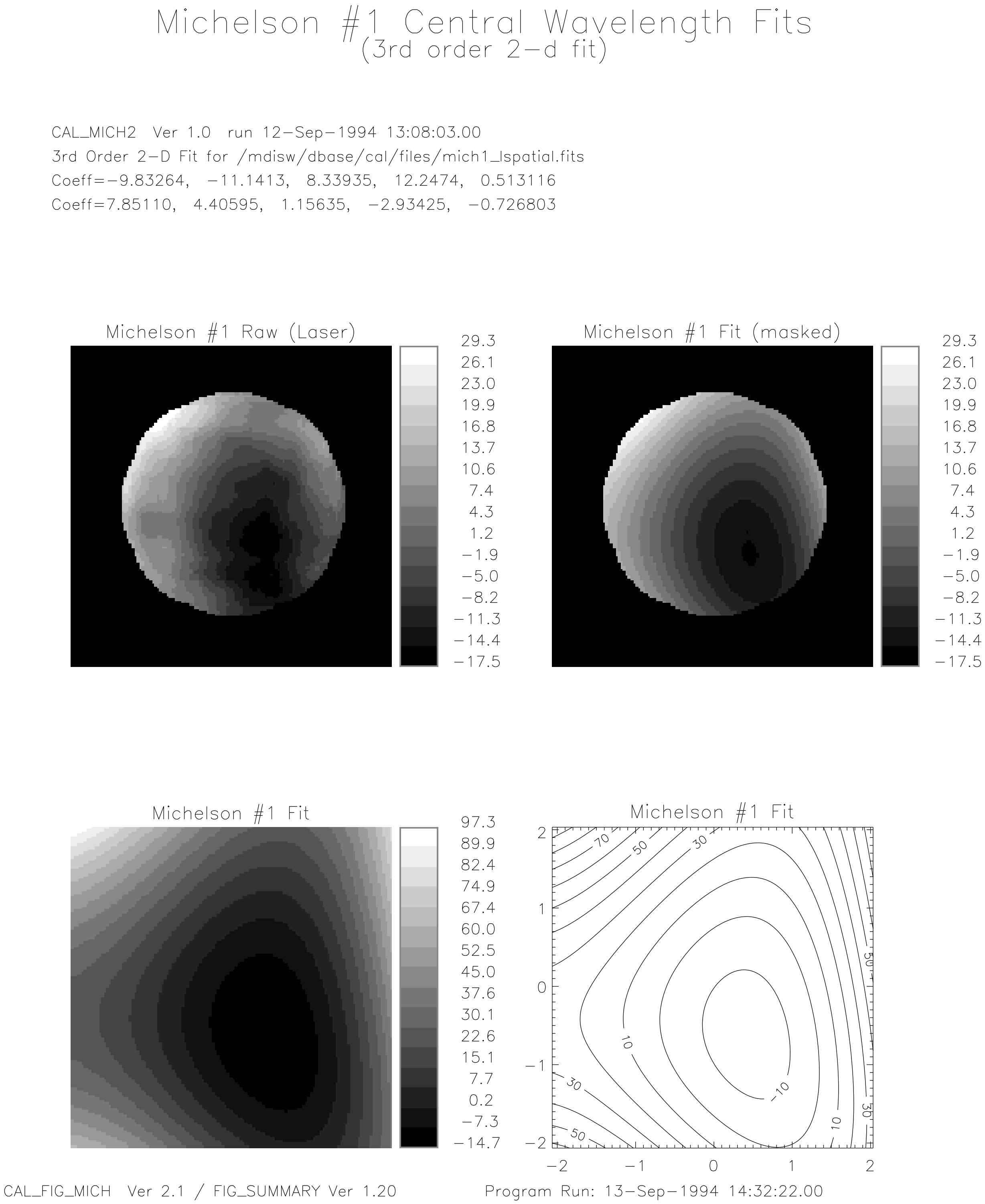


Figure 16: Michelson #1 Fit to Wavelength Spatial Non-Uniformity Images

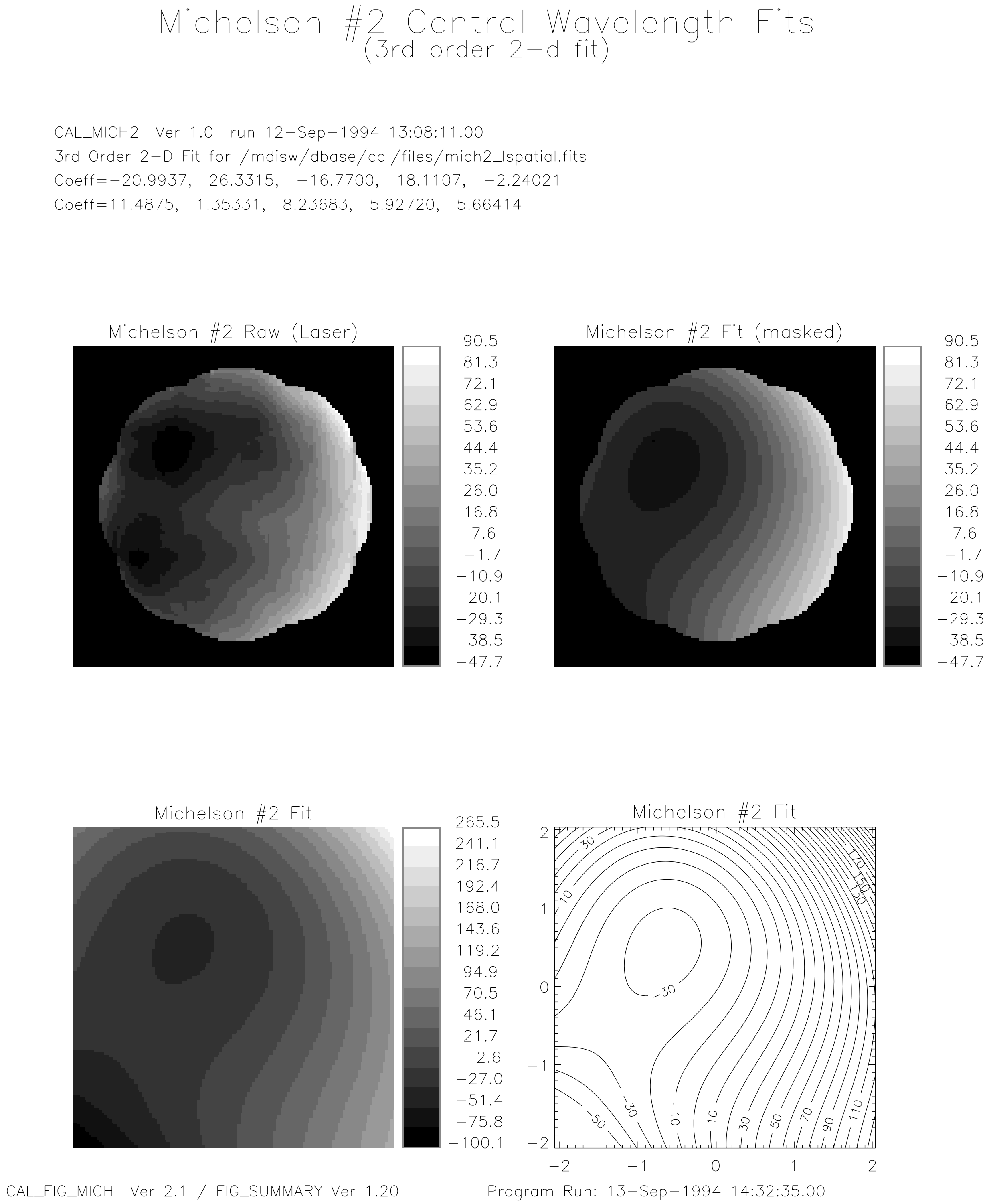


Figure 17: Michelson #2 Fit to Wavelength Spatial Non-Uniformity Images

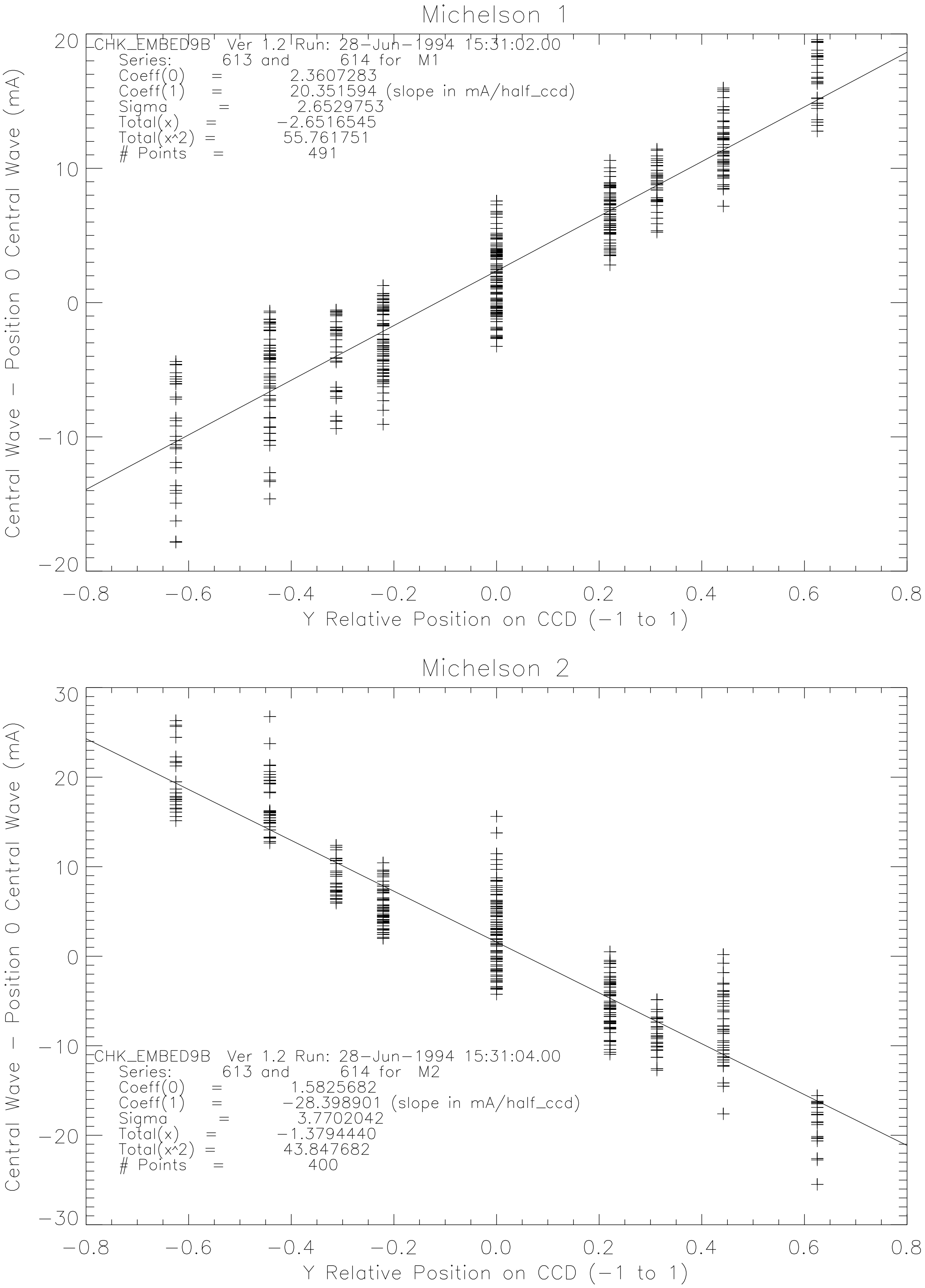
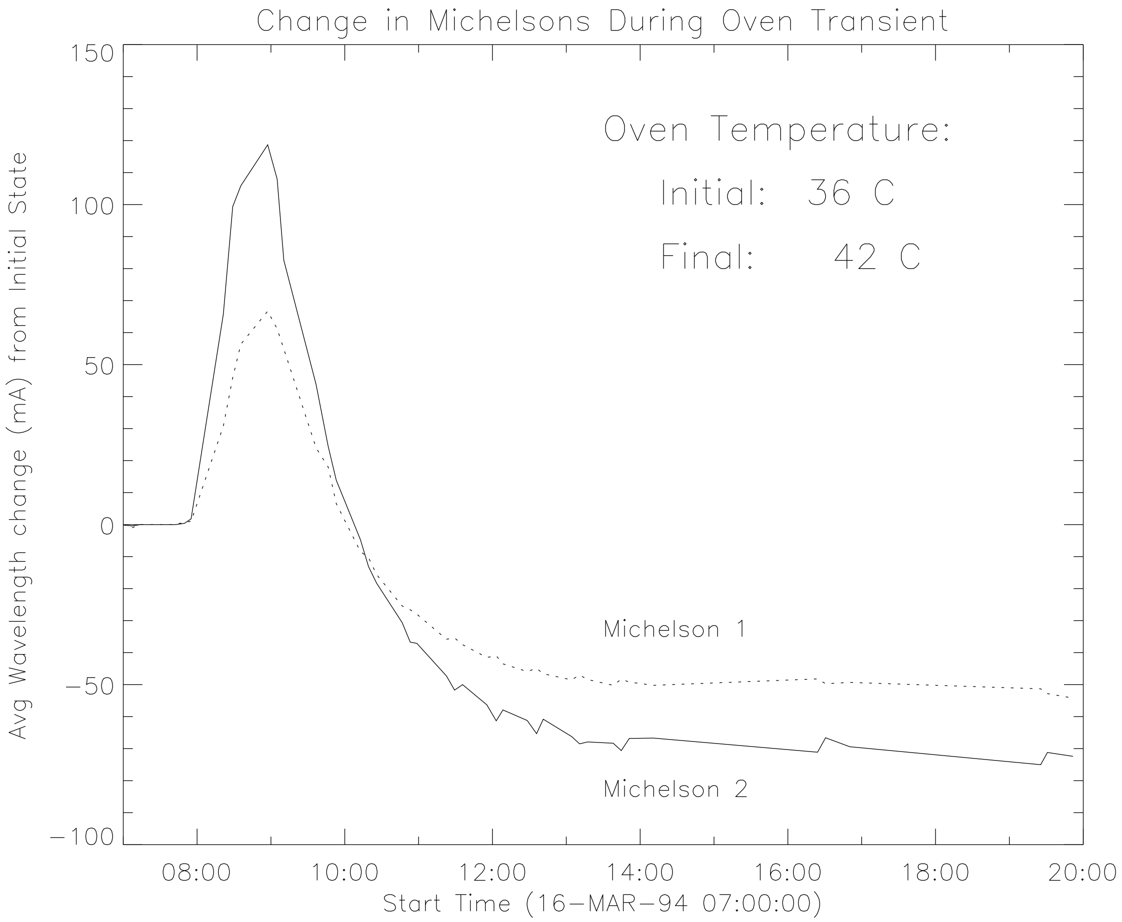


Figure 18: Michelson Angle Dependence



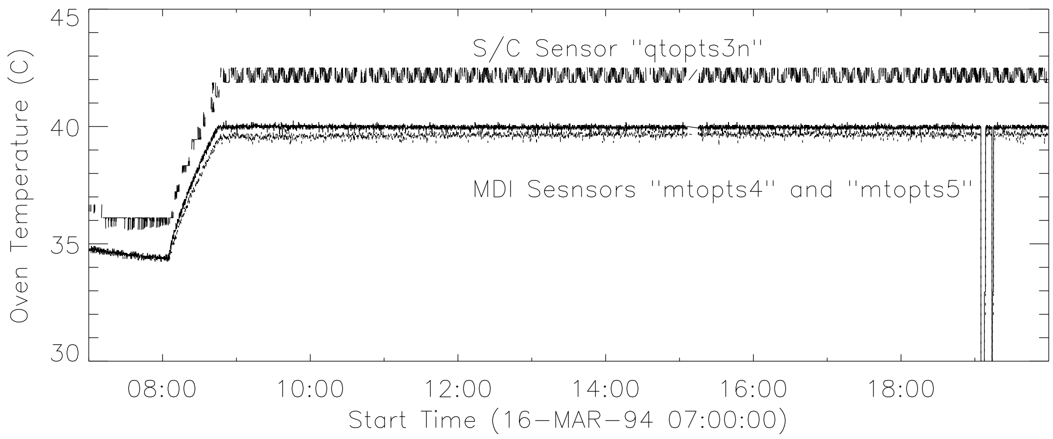


Figure 19: Michelson Average Wavelength Change During Oven Temperature Transient

5.6 Temperature Dependence

5.7 Continuum Modulation

TODO - TED?

6 Shutter

6.1 Introduction

6.1.1 Principle of the Measurements

The control file *SHUTEST* was ran several times with similar results. It was run prior to and after the thermal vacuum test, and prior to and after the vibration tests.

The shutter electronics includes some RAM. This RAM contains, as data, times since the encoder was turned on (a ONEX, THREEX, or RESET command turns on the encoder) that the encoder was last at a particular position. Times are 16-bit values (1 count = 1/256 millisecond) stored in successive addresses corresponding to the various encoder positions:

```
TIME(position)| LSB(0) | MSB(0) | LSB(1) | MSB(1) | LSB(2) | MSB(2) |....
----------------------------------------------------------------------
RAM ADDRESS   |   00   |   01   |   02   |   03   |   04   |   05   |....
```

The exposure at different parts of the field can be found by subtracting the time when the opening edge went by from when the closing edge went by that same position.

To calculate the exposure at various places in the 1X path you subtract the following times:

```
PLACE SHUTTER FIELD              ENCODER POSITIONS
-----------------------------------------------------
BEGINNING OF ONEX                   T(23) - T(39)
                                    T(24) - T(40)
                                    T(25) - T(41)
                                    T(26) - T(42)
CENTER OF ONEX                      T(27) - T(43)
                                    T(28) - T(44)
                                    T(29) - T(45)
                                    T(30) - T(46)
END OF ONEX                         T(31) - T(47)
```

```
And for the 3X path:
```

```
PLACE SHUTTER FIELD              ENCODER POSITIONS
-----------------------------------------------------
BEGINNING OF THREEX                 T(59) - T(03)
                                    T(60) - T(04)
                                    T(61) - T(05)
                                    T(62) - T(06)
CENTER OF THREEX                    T(63) - T(07)
                                    T(64) - T(08)
                                    T(65) - T(09)
```

```
                                   T(66) - T(10)
    END OF THREEX                  T(67) - T(11)
```

MDI puts the opening and closing times at the center of the field into HK telemetry. *SHUTEST* puts these times into the log file.

These times are measured using the same clock (X1MHZ) that is used to control the shutter, so its variations are not measured.

6.1.2 Data

The repeatability data was obtained by running the control file *SHUTEST*. This control file causes MDI to take 100 1X (full disk resolution) exposures (100 ms), followed by 100 3X (high resolution) exposures. The time-to-shutter-open and the time-to-shutter- closed for each exposure is written to a log file. The realized exposure may be calculated by subtracting these two times. The absolute time values saved in the log file are measured with respect to when the last command was sent to the shutter (the units are 1/256 msec). The data shown below in figure 20 is from the 23-Dec-93 tests.

6.1.3 Performance Specifications

- Capable of uniform exposures from 40 msec. to 65 sec. in increments of 1/4 millisecond
- Uniformity across the field (max - min exposure) about 40 microseconds at the shutter
- Design life of 30,000,000 exposures, with a very low probability of any sort of failure.
- Measurement of the exposure at 9 places in the field. Resolution = 1/256 millisecond.
- Repeatability: +/- 40 microseconds.
- WEIGHT: Motor, encoder & shutter blade = 121 grams

Motor Characteristics	
MOTOR INERTIA	.020 oz in^2
SHUTTER INERTIA	.095 oz in^2 (3.75 dia blade)
SYSTEM MECHANICAL TIME CONSTANT	5 msec running, 4 msec stopping
WIRE SIZE	36 gage
TORQUE CONSTANT	Kt = 26 oz in / A
BEMF CONSTANT	Kb = .184 V / rad/sec
TERMINAL RESISTANCE	Rm = 103 ohms
COGGING TORQUE	1.2 oz in max
PEAK TORQUE	3.8 oz in
NO-LOAD SPEED	81 rad / sec

6.2 Spatial Uniformity

Uniformity measurements were made while the shutter was being controlled by a PC, not the DEP. They consisted of reading the shuttter RAM for all locations in the appropriate table

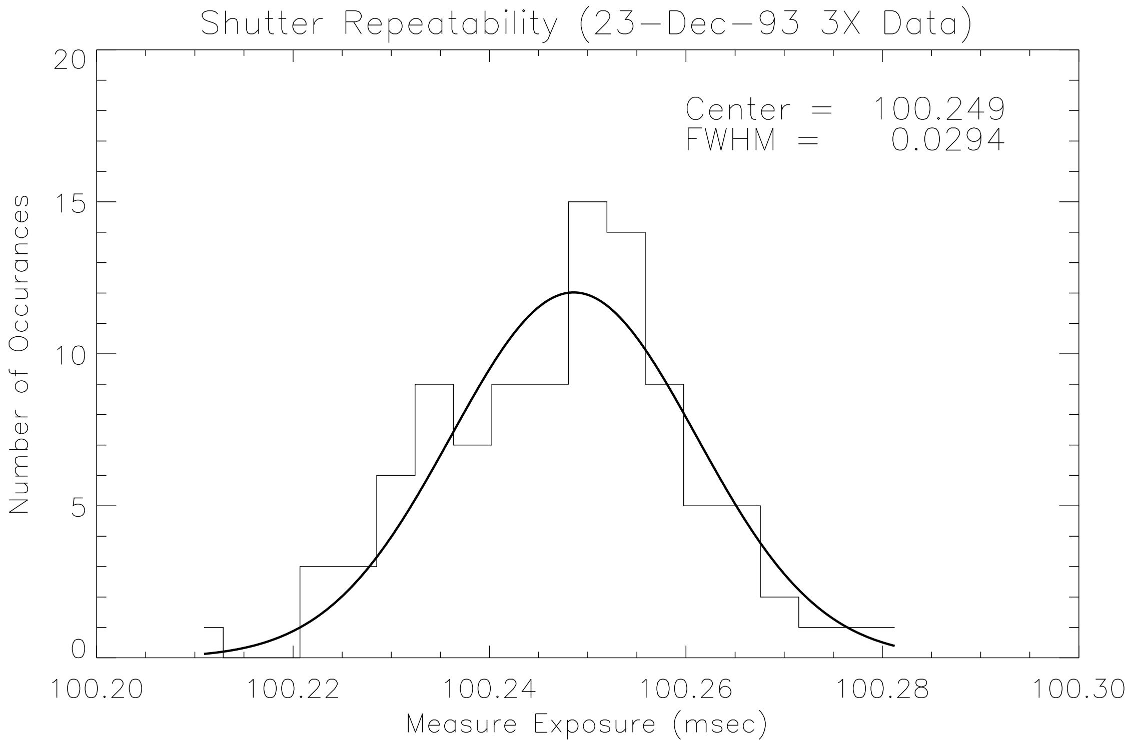


Figure 20: Shutter Repeatability

(above), and then:

$$uniformity = (maxexposure) - (minexposure)$$

Note that this is the spatial uniformity at the shutter, different than at the CCD (the uniformity at the CCD is better than at the shutter).

6.3 Repeatability

Figure 20 shows the repeatability of a given 100 msec exposure. The standard deviation of the 100 repeats of the 3X exposures is 13 microseconds.

7 Camera and CCD

7.1 Introduction

TODO - IGOR - distinguish CCD chip and camera electronics; summing modes

7.1.1 Principle of the Measurements

TODO - IGOR - lab, calmode im MDI, LTC, Fe55

7.1.2 Data

TODO - IGOR - Fe55 exposures, LTC pairs; 1024x1024 vs. 256 extract

7.1.3 Calculations

TODO - IGOR - Dnyanesh's LTC program, Igor's Fe55 program, Mons' trap program

7.1.4 Results

7.2 Cosmetics

TODO - IGOR - bad columns, traps, hot pixels

7.3 Noise

TODO - IGOR - read noise histogram, noise patterns in DC exposure

7.4 Dark Current

TODO - IGOR - from LTC, slope, bright edges

7.5 System Gain

TODO - IGOR - histogram from ltc

7.6 Linearity and Full Well

TODO - IGOR - std. linearity plot, pix-pix picture?

7.7 Charge Transfer Efficiency

TODO - IGOR - Fe55 measurements, EPER/ELER

7.8 QE-hysteresis, Residual Image (?)

TODO - IGOR - plots of QE catching up; time constant vs. temperature

8 Image Stabilization System (ISS)

8.1 Introduction

TODO - IGOR

8.1.1 Principle of the Measurements

TODO - IGOR

8.1.2 Data

TODO - IGOR

8.1.3 Calculations

TODO - IGOR

8.1.4 Results

TODO - IGOR

Part II

Overall Transmission for the MDI Instrument

9 Large Scale Transmission Gradients

9.1 Introduction

9.1.1 Principle of the Measurements

TODO - TED

9.1.2 Data

MAPGRAD takes a series of images using a lamp as the source. There is a pin hole approximately ?? cm in diameter. There are nine images: one in the center and eight around in a circle separated by 45 degrees. The images are 256x256 images which have been 4x4 summed by the IP (not on-chip).

The MAPGRAD control file takes the following images:

- (1) dark at OBS image exposure duration
- (9) repeats of the following seven images. Each repeat is a different MDI pointing
  - (1) OBS image
  - (4) FD CAL images (one for each polarization)
  - (1) HR CAL image
  - (1) dark at CAL image exposure duration

for a total of 64 images (some series have extra darks at the end to make 65 images). MAPGRAD was run for the following series:

Series Numbers	Radius	Date
727a	Large	29-Dec-93
727b	Small	29-Dec-93
855	Large	8-Apr-94
856	Small	8-Apr-94

9.1.3 Calculations

There are 18 sampled positions (two pointings are for the center location since it is repeated between the large and small radius series). For the OBS mode images, the following is done:

- The short dark current image is removed
- The OBS image intensity is capped at 15centroid of the OBS is found

- The average of a 40 pixel radius around the OBS image is calculated.
- A 2-D 3rd order polynomial least squares fit is performed on the 18 points using the derived centroid X,Y locations.

For the CAL mode images, the following is done:

- The nine dark images are averaged to give a single dark image
- For each of the 8 offpoints:
  - The offpoint image is offset in the X and Y by

```
dX = cos(angle) * (-11) for large radius
dY = sin(angle) * (-7) for small radius
```

  - The center and offpoint image is smoothed by 4
  - The two images are ratioed
  - The average signal for a 150x150 box in the center of the image is calculated

9.1.4 Results

The transmission change due to changes in the angle of the ray is given by the ratio of the CAL images. This is because the spatial effects are removed by the ratio.

9.2 Spatial Map

The spatial transmission can be derived from one of four methods.

1. From the DTMAP series
   (a) The intensity of the continuum image
2. From the MAPGRAD data
   (a) Averaging all CAL images
   (b) Know the lamp intensity profile from lab measurements
   (c) Spatial Trans = AVG_CAL_DATA / LAMP_INTENSITY
3. From the MAPGRAD data
   (a) Averaging all OBS images
4. From Phil's gradient technique
   (a) ??
   (b) ??

TODO - TED

9.3 Angle Dependence

TODO - TED/MONS - The images of the ratios of CAL mode images were reviewed and they were fairly flat, thereby allowing us to state that there was not a pixel to pixel (spatial) variation of the angle dependence.

TODO - TED

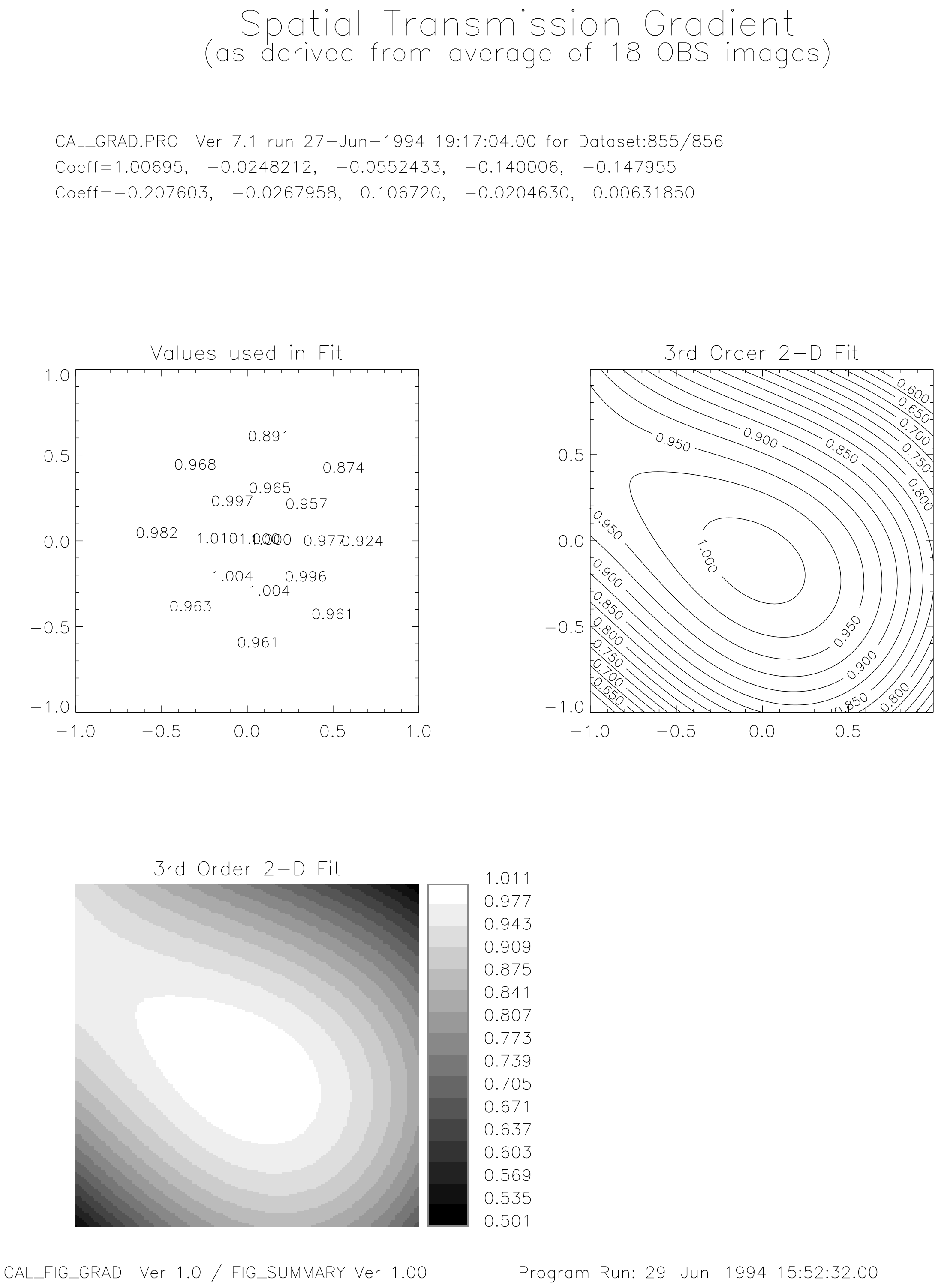


Figure 21: Spatial Transmission Non-Uniformity (determined by 18 OBS images)

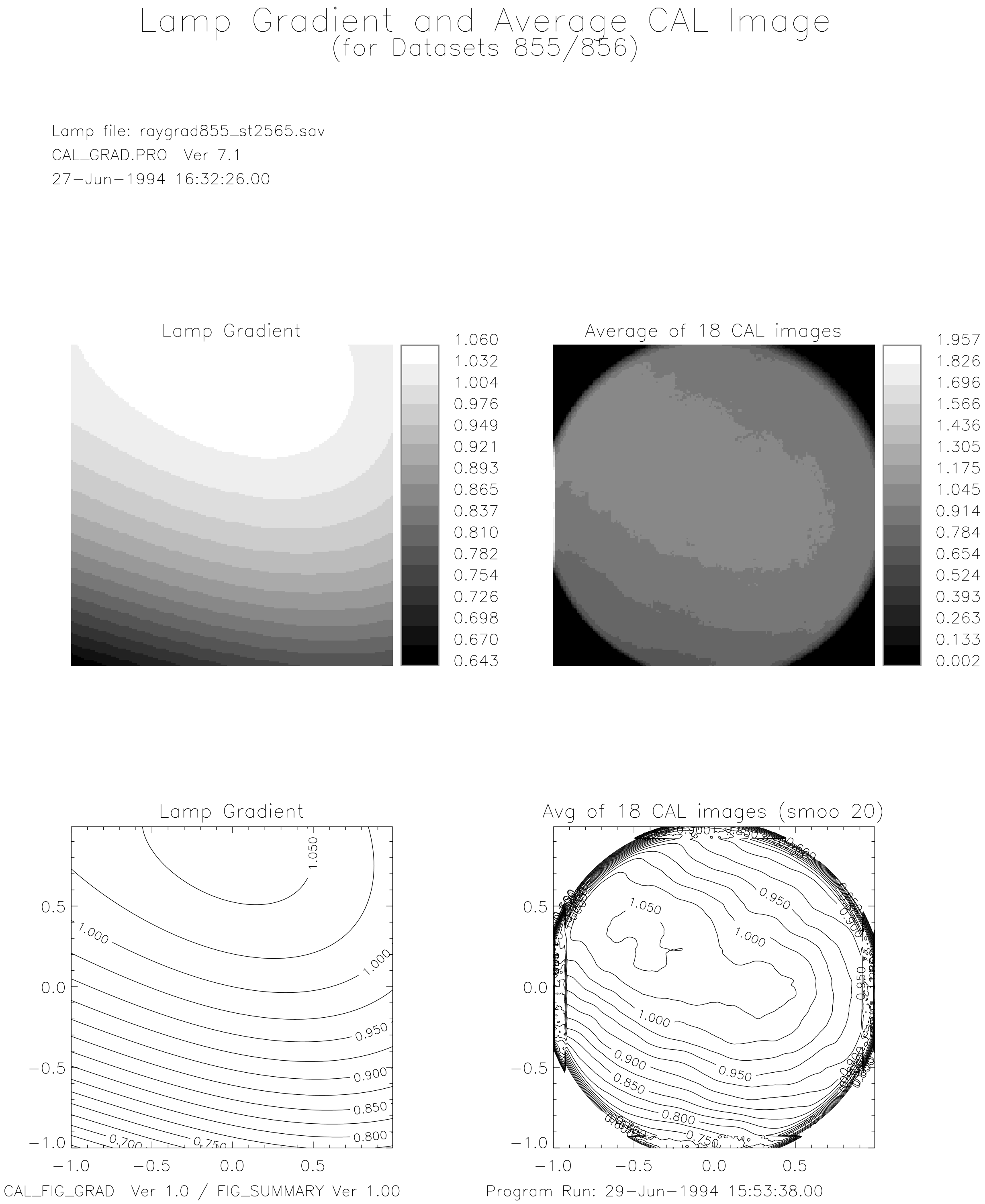


Figure 22: Lamp Gradient and Average CAL Image

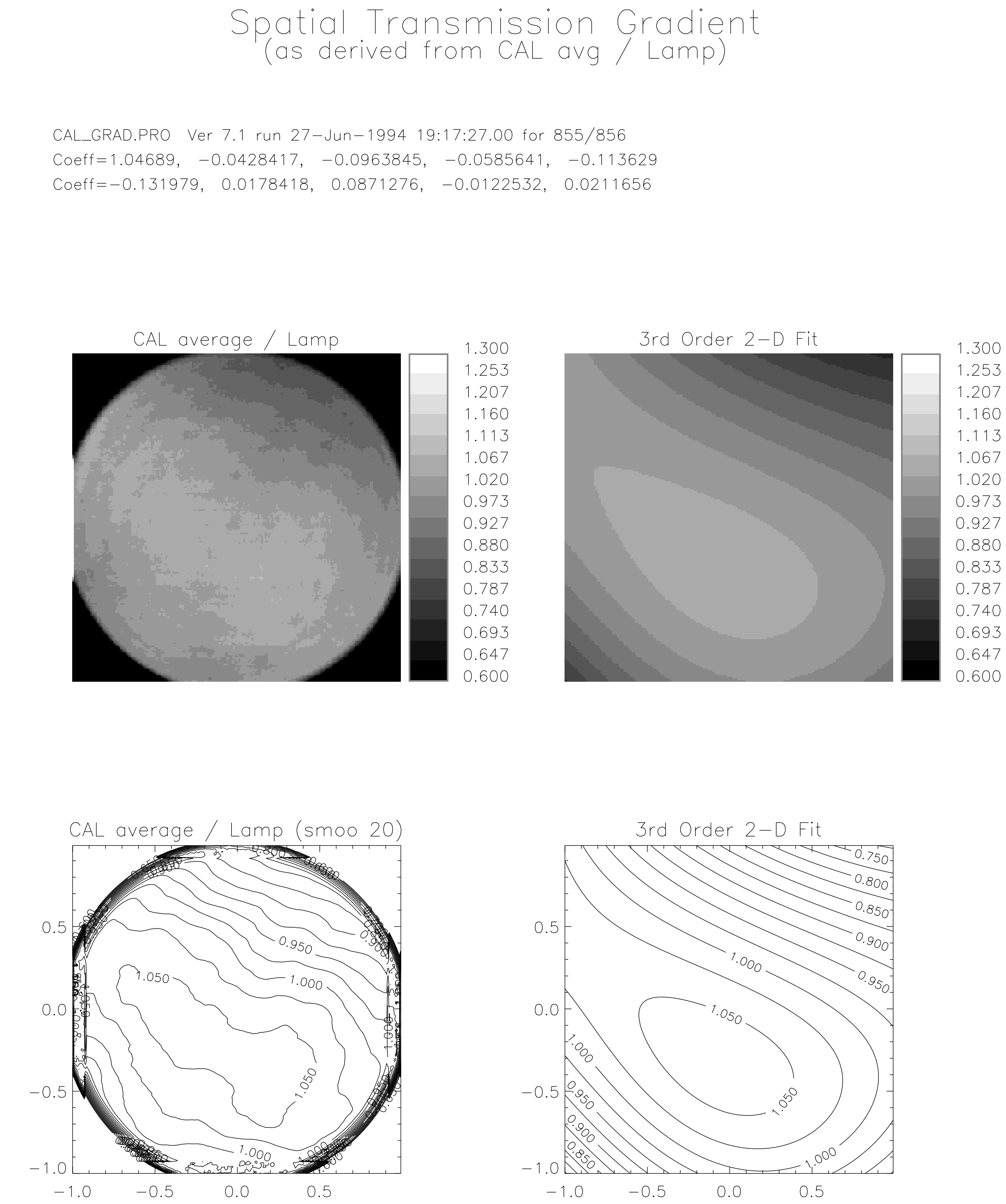


Figure 23: Spatial Transmission Non-Uniformity (determined by CAL Average Normalized by Lamp Gradient)

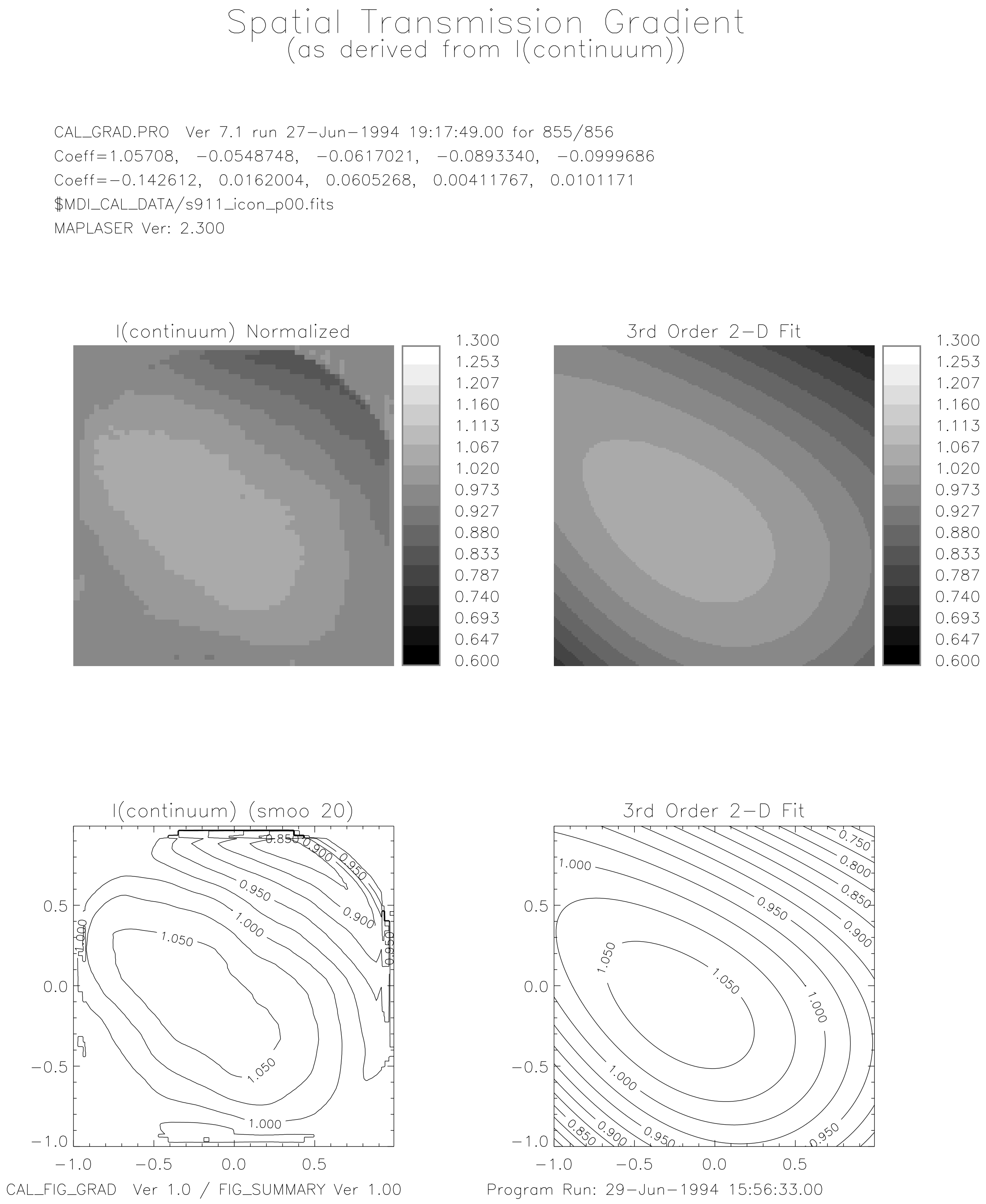


Figure 24: Spatial Transmission Non-Uniformity (determined by Solar Continuum Intensity)

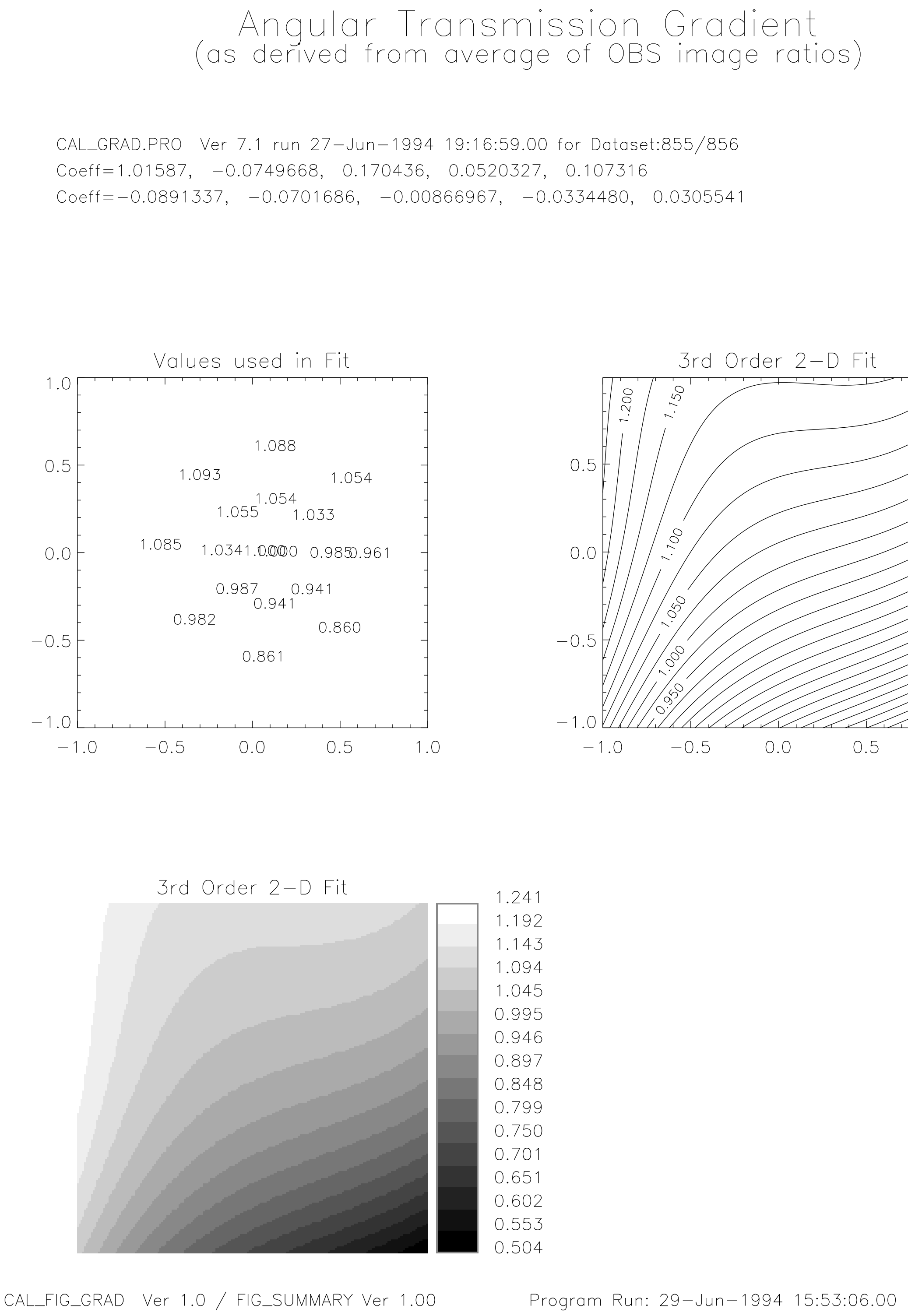


Figure 25: Angle Dependence on the Transmision

9.4 Wavelength Dependence

NONE (Included in Lyot and Michelson corrections)

10 Flat Fielding (Small Scale Non-uniformities)

TODO - MONS/IGOR - Peter/Luiz - step and repeat pattern of CCD

10.1 Introduction

10.1.1 Principle of the Measurements

10.1.2 Data

10.1.3 Calculations

10.1.4 Results

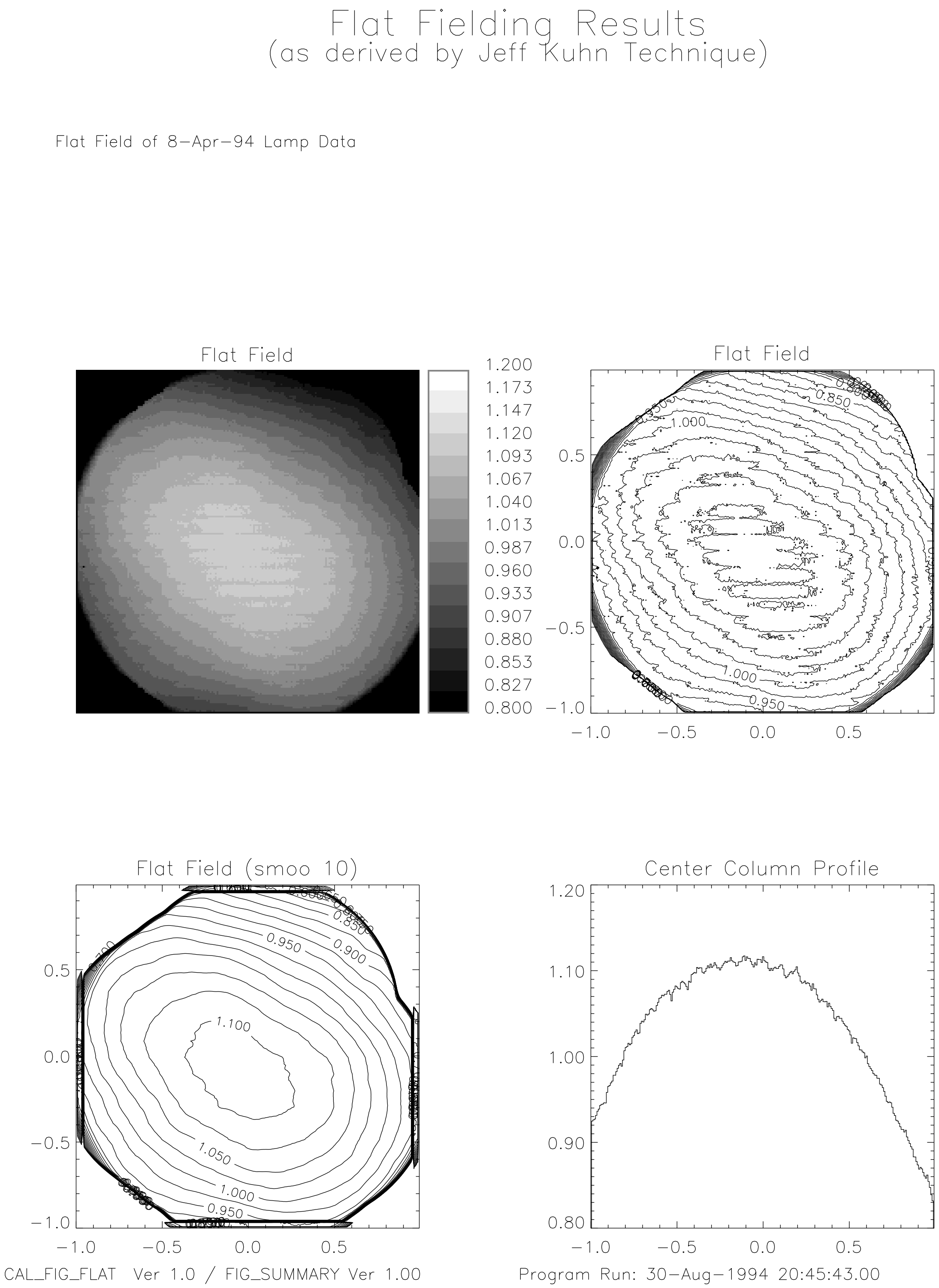


Figure 26: Flat Fielding Results

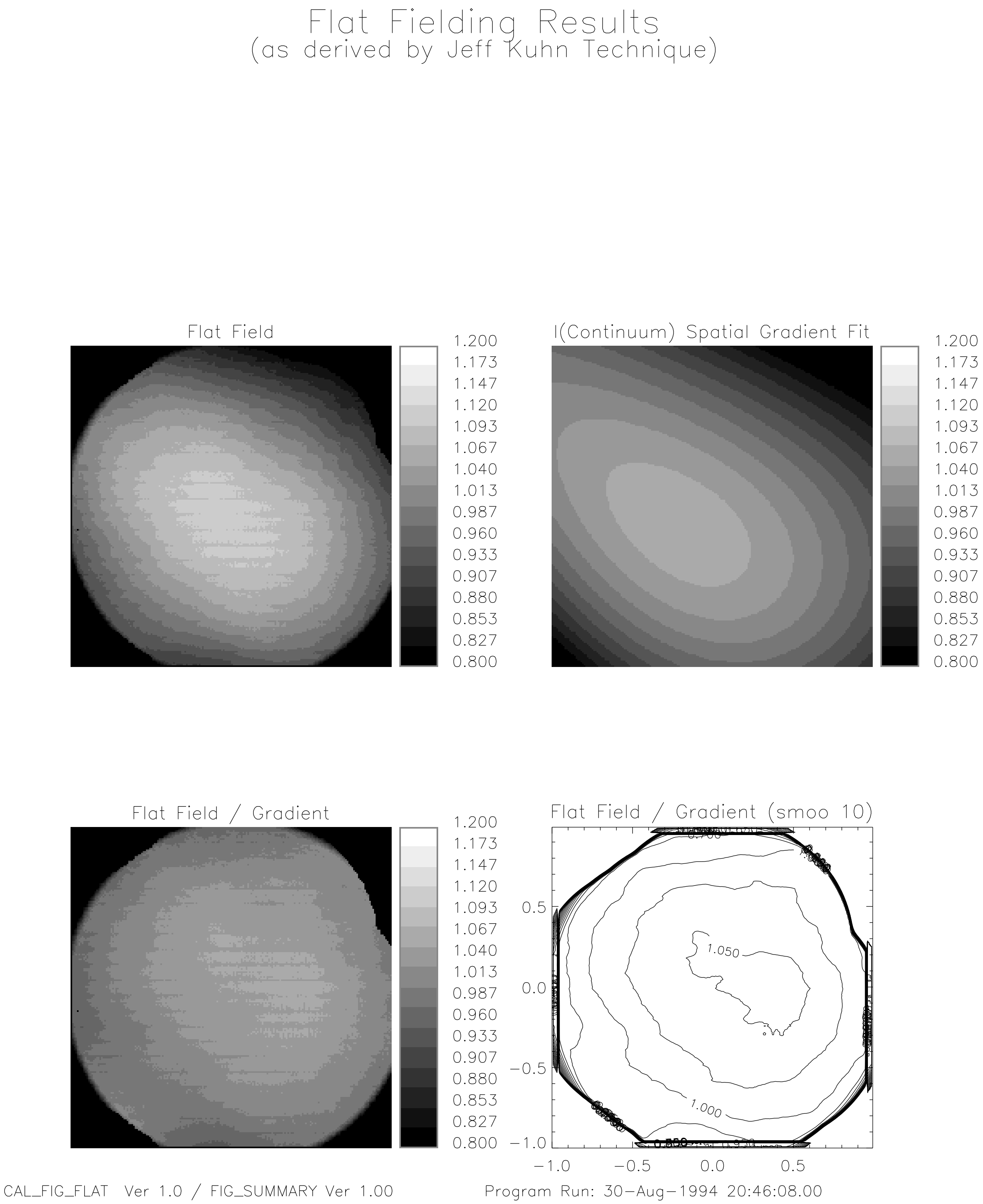


Figure 27: Flat Fielding Results

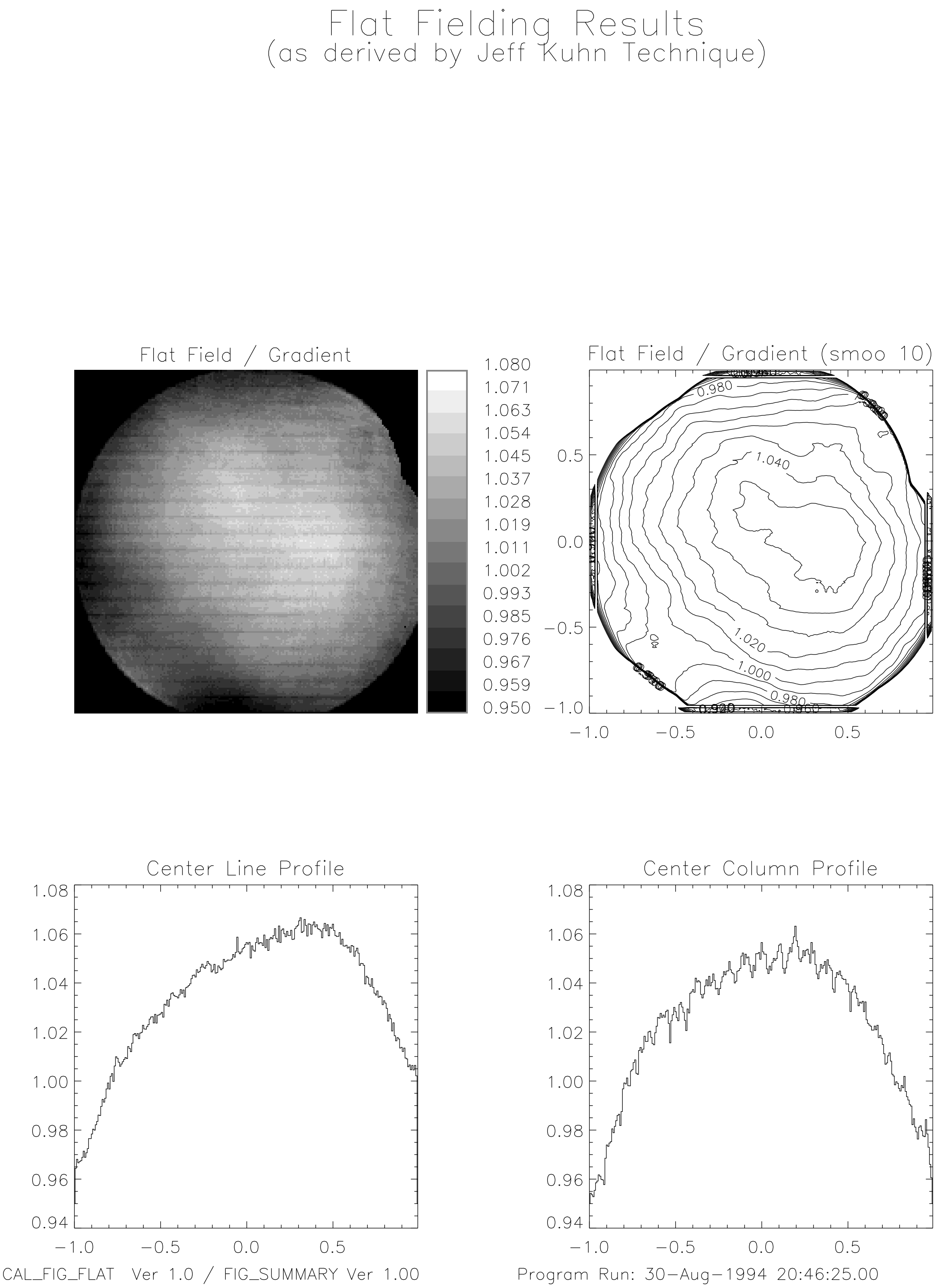


Figure 28: Flat Fielding Results

11 Throughput

11.1 Introduction

TODO - IGOR/TED

11.1.1 Principle of the Measurements

TODO - IGOR/TED

11.1.2 Data

TODO - IGOR/TED

11.1.3 Calculations

TODO - IGOR/TED

11.1.4 Results

TODO - IGOR/TED

11.2 End-to-end Loss

11.3 Dust and Particulate Contamination

TODO - MONS/JESPER

Part III

Imaging Properties for the MDI Instrument

12 Image Stability with Rotating Optical Elements

12.1 Introduction

The Michelson tuning waveplates rotate as they tune between the filtergrams in a Doppler set. Any image motion (e.g., due to a wedge in the waveplates) will not be corrected by the ISS, and the mis-registration of the filtergrams would result in noise in Doppler measurements.

In addition to the MTM's tuning, the PAW rotates to alternate postitions (RCP, LCP) between filtergrams in a magnetic measurement. Any image motion due to the PAW results in an erroneus magnetic signal. In theory, this image motion should be corrected for by the ISS since the PAW precedes the limb tracker's sensors.

This presents another problem, however: a difference in ISS error signal in the two polarizations will actually *introduce* an image offset between filtergrams in RCP and LCP. It is very difficult to accurately asses the magnitude of this effect in space; it can only be estimated to be very small due to the very small degree and the symmetry of polarization of the solar continuum near the limb. With truly unpolarized input light, no ISS-induced image offset would be expected; in our laboratory environment however, the partial polarization of the light source combined with MDI's instrument polarization and transmission non-uniformity gives rise to a significant image displacement.

12.1.1 Principle of the Measurements

To measure the image displacement, a positive contrast grid target (opaque grid-lines on transparent background) was imaged with MDI in HR mode using a white light source. The magnification in HR mode virtually isolates one grid-cross within the FOV and provides maximum sensitivity to image motion. For each relevant mechanism (MTM 1 & 2, PAW), a series of exposures were taken while rotating the mechanism repeatedly several steps per full revolution. The MTM's were rotated in 36 degree increments, i.e. 10 exposures per revolution, while the PAW was rotated through its four possible positions per revolution. The image stability is measured by determining the position of the grid-cross on the CCD as a function of mechanism orientation. The measurement is by nature sensitive to any disturbance/drift in the stimulus-MDI alignment. Thus, to isolate the systematic effect from random errors and drifts, the wheels were moved for several revolutions to build a statistically significant sample. It has proven to be the more reliable method for the "separation of variables" than to rely on engaging the ISS to remove laboratory "jitter". The MTM series were taken with the ISS off, while the PAW series were taken with both the ISS engaged (introducing a displacement of its own as mentioned above) as well as with the ISS in open loop.

12.1.2 Data

The data for the MTM's consist of 102 ??? images (10 ??? revolutions a 10 images for MTM1 and MTM2 including 2 ??? dark exposures) acquired by running the control file MDIMROT. The datafiles used to obtain the present results are from serial No. ??? .

The PAW series are acquired by running the control file MDIPROT; the serial No. ??? (ISS open loop) and ??? (ISS closed loop) used here consist of 42 ??? images (10 ??? revolutions a 4 images including 2 ??? dark exposures).

12.1.3 Calculations

The analysis routines MDIMROT and MDIPROT, process the images from the respective control files. Each of them uses the routine FIT_GCROSS, which first locates all of the grid crossings in the image by finding the array of intensity minima along each axis. It produces a local mean intensity cross-section through each of the X and Y grid lines at the grid crossing by averaging 20 ??? rows, resp. columns. It then fits a Gaussian to each of the X and Y average cross-sections to find the location of the grid crossing to within a few hundreds of a pixel. The location of the cross in all images in the series is analyzed for systematic displacement as a function of wheel position.

A long term drift of the stimulus telescope (thermal changes and disturbances in the laboratory) is eliminated by subtracting a smoothed mean from the data. There is still some high frequency noise in the results (stimulus pointing or calculations) evident by the lack of repeatablility for the same motor position.

12.1.4 Results

12.2 Image Displacement Caused by the Michelson Tuning

Figures 29, show the raw, smoothed and differenced grid-cross locations when rotating (tuning) MTM1 and MTM2.

The results for the MTM's (see Figure 32) shows some distinct clustering for M1 tunings, especially when comparing tuning 0 with tuning 6. The amplitude of the variation between average tuning positions (lower right plot) is less than ± 0.2 HR pixels, i.e. ± 0.13 arcsec, and the scatter for each position is less than ± 0.10 HR pixels (± 0.06 arcsec).

12.3 Image Displacement Caused by the Polarization Wheel

The results for MDIPROT (with ISS off) in Figure 33 show less than ± 0.05 HR pixels (± 0.03 arcsec) variation in the average PAW positions, and the scatter for each position is less than ± 0.10 HR pixels (± 0.06 arcsec).

12.4 Image Displacement Caused by the ISS

The very large displacements in Figure **??** from MDIPROT with the ISS closed loop as compared to Figure 33, show the effect of changing error signal with the different PAW waveplates

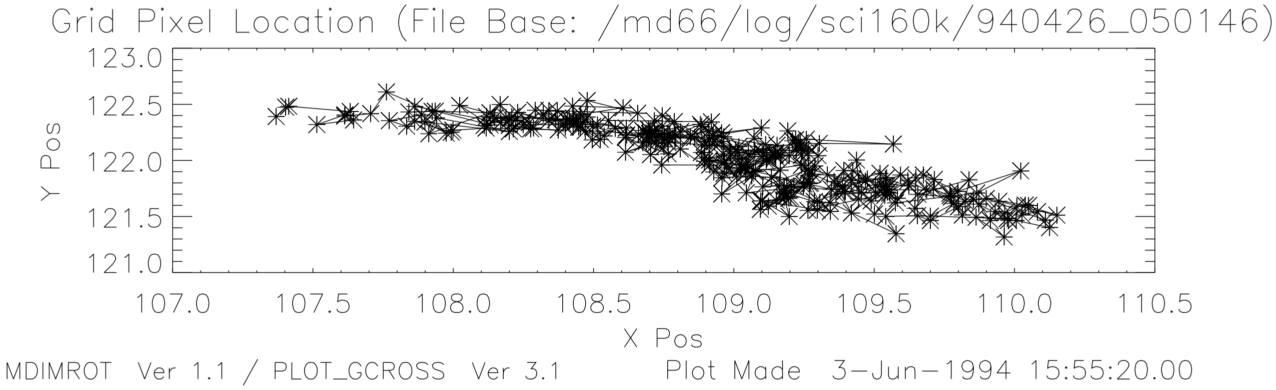


Figure 29: MDIMROT Sample - Raw Grid Positions

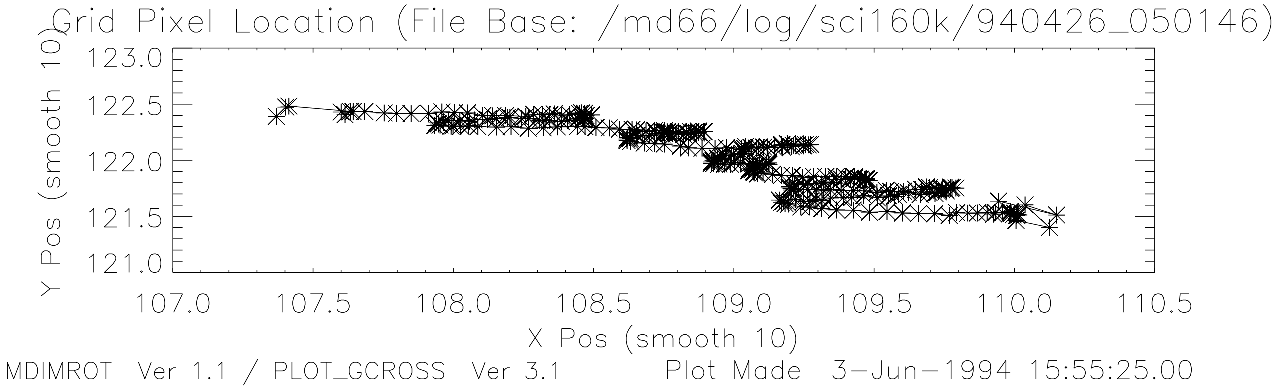


Figure 30: MDIMROT Sample - Positions Smoothed

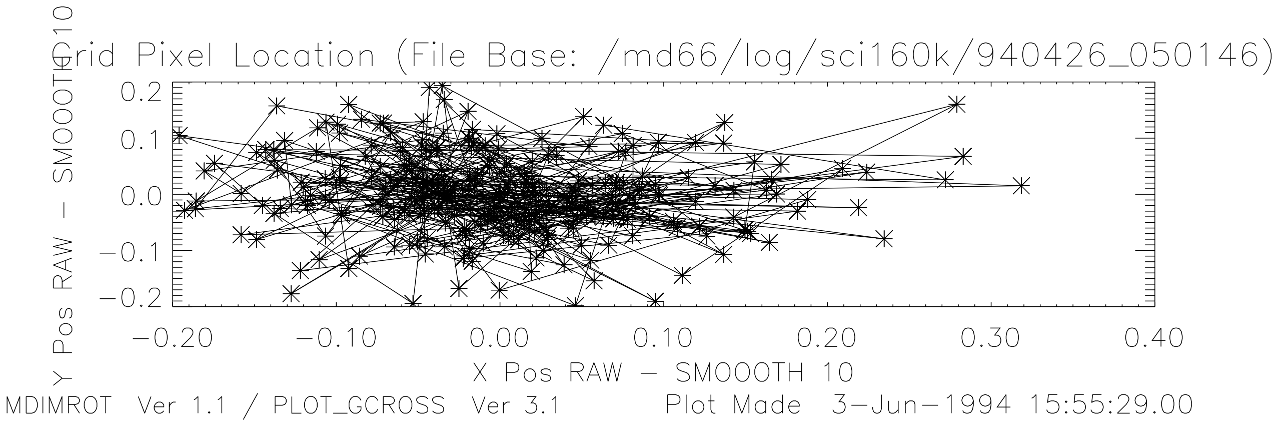


Figure 31: MDIMROT Sample - Remove Stimulus Drift

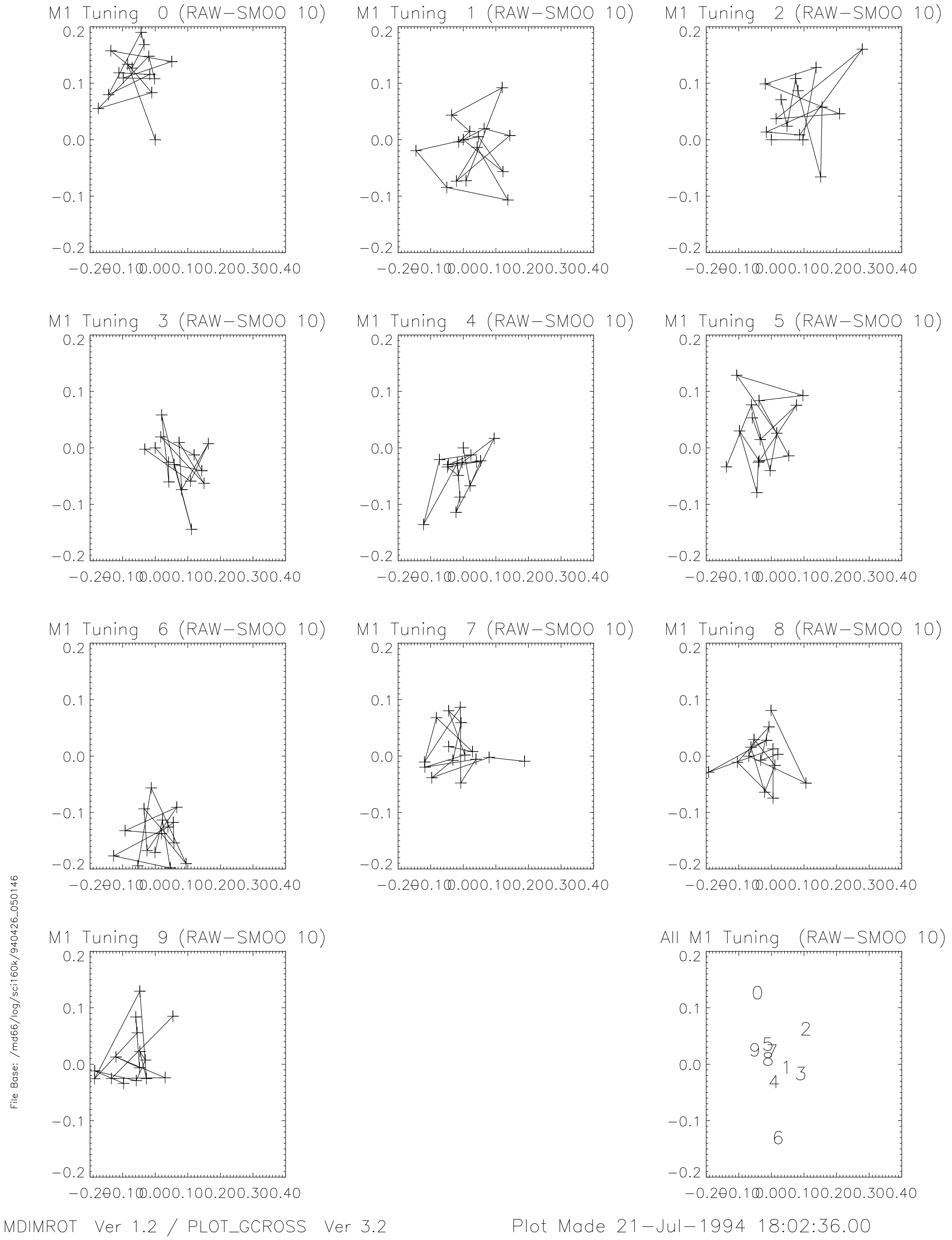


Figure 32: MDIMROT Sample - Michelson 1 Position Shifts for Tunings

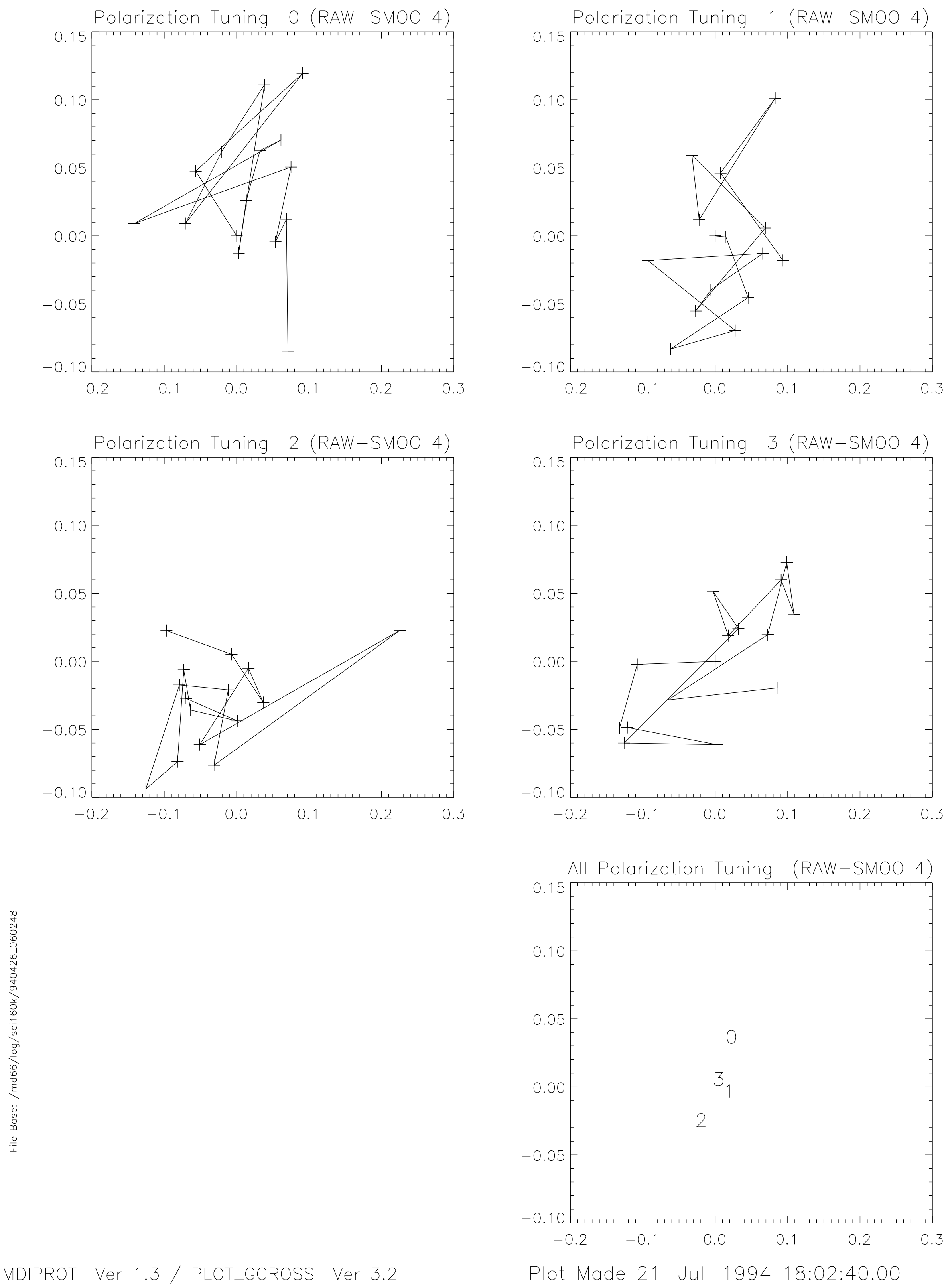


Figure 33: MDIPROT Sample - Position Shifts for Each Polarization

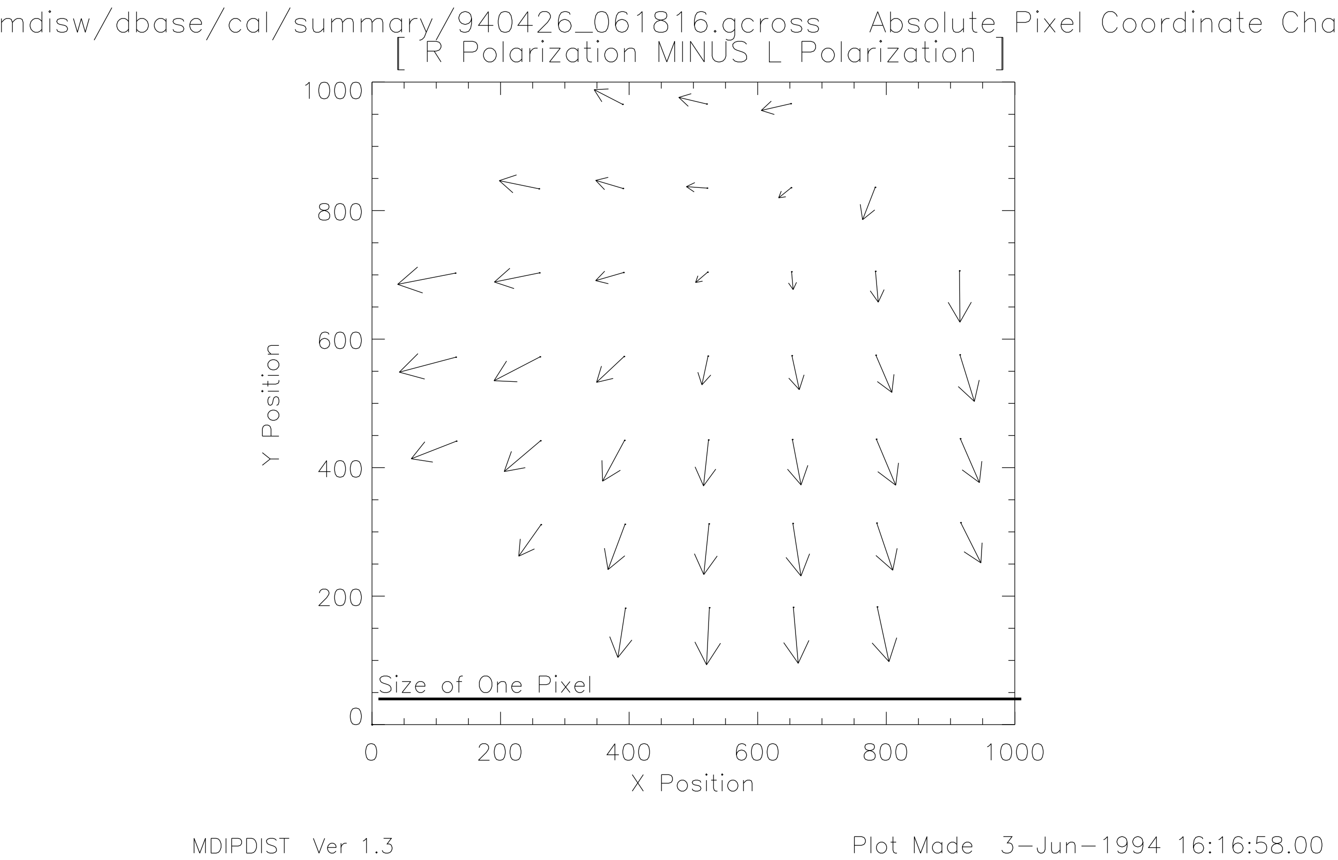


Figure 34: MDIPDIST Sample - Displacement Caused By Polarization

in the optical path (upstream from the ISS' feed-back limb sensors).

13 Focus and Magnification

13.1 Introduction

TODO - IGOR - description of focus blocks

13.1.1 Principle of the Measurements

TODO - IGOR - targets: grid / cross-hair / sun????

13.1.2 Data

TODO - IGOR - focus series / dual aperture solar focus series????; grid image in FD/HR, sun -¿ diameter

13.1.3 Calculations

TODO - IGOR - Igor's sharpness analysis / Jesper's solar limb pictures????; gridsize (Tom's theodolite measurements), solar diameter

13.2 FD/HR Focus Curves

TODO - IGOR - focus blocks

13.3 Plate-Scale Size

TODO - IGOR - FD/HR focus curves / solar limb????; plate-scale from grid/sun

14 Image Quality

14.1 Introduction

TODO - IGOR anti-aliasing philosophy, FD/HR relationship

In addition to resolution, we are concerned with optical aberrations that affect the image quality. Optical distortion (local non-uniformity in image plate-scale) generate errors in transverse velocity measurements by correlation tracking.

A fixed pattern distortion common to each filtergram in a Doppler set has ideally no effect on the Dopplergram itself (line-of-sight velocity measurement); this assumes negligible differential distortion between MTM tuning waveplate positons.

Differential distortion between PAW positions introduces errors into magnetic measurements: it mixes the Doppler signal into the magnetograms. The relevant entity in this case is the differential distortion between RCP and LCP.

14.1.1 Principle of the Measurements

TODO - IGOR AF target, knife-edge????, sun off-pointing????

A positive contrast (opaque tri-bars on transparent background) Air Force resolutioin target was used to verify the resolution and measure the MTF of the instrument. Strictly speaking, the optical quality of the entire stimulus + MDI system contributes to the quality of the target image. However, independent measurements of the stimulus telescope (being a flight-quality MDI spare telescope) and the imaging optics therein confirm its diffraction-limited performance - the same being true of MDI's imaging optics. The assumption that the major contribution to any optical aberrations stem from MDI's polarization and filter optics is, therefore, valid to first order.

To measure the opticdistortion

14.1.2 Data

TODO - IGOR AF target images, knife-edge images????, off-pointed sun????

14.1.3 Calculations

TODO - IGOR Ted's MTF analysis, Scott's phase diversity program MDIPDIST takes full disk images of the grid stimulus through the four polarizations. There are typically 10 or 15 repeats of the four polarization set. The grid crossing is located for each grid and averaged. These average grid locations can be compared for different polarizations (the long term stimulous drift is effectively removed because the polarization images are interleaved).

The difference in the absolute pixel grid location between two polarizations is shown in Figure 34. This result shows the shift in the image between two polarizations, and the amplitude is approximately 0.1 pixels.

Another plot can show the change in magnification or plate scale size. By chosing four grid locations which form a square, we can examine how the box size changes between the different polarizations. This is done by ratioing two polarization results. Figure **??** shows the results for "left" versus "right" polarization.

14.1.4 Results

14.2 Resolution

TODO - IGOR profiles through tri-bar, MTF curves, edge transitions...

14.3 Modulation Transfer Function (MTF)

14.4 Straylight

14.5 Optical Distortion in Nominal Observing Mode

TODO - IGOR distortion map a) assuming perfect grid b) following grid around; magnification componet?? higher order distortion??

14.6 Differential Distortion in Polarization Measurements

TODO - IGOR relative distortion map a) lcp-rcp b) p-s wave???; rigid component, magnification component, higher order distortion...

14.7 Differential Distortion from Michelson Tuning Waveplates

TODO - IGOR relative distortion map as MTM 1/2 is rotated through 180deg; magnification component, higher order distortion...

??? Is the transmission gradient the same between HR and FD ??

15 Fringes

15.1 Introduction

TODO - IGOR

15.1.1 Principle of the Measurements

TODO - IGOR

15.1.2 Data

TODO - IGOR

15.1.3 Calculations

TODO - IGOR

15.1.4 Results

TODO - IGOR

Part IV

Polarization Properties for the MDI Instrument

16 Waveplate Efficiency

16.1 Introduction

TODO - IGOR

16.1.1 Principle of the Measurements

TODO - IGOR

16.1.2 Data

TODO - IGOR

16.1.3 Calculations

TODO - IGOR

16.1.4 Results

TODO - IGOR

17 Instrument Polarization and Crosstalk

17.1 Introduction

TODO - IGOR

17.1.1 Principle of the Measurements

TODO - IGOR

17.1.2 Data

TODO - IGOR

17.1.3 Calculations

TODO - IGOR

17.1.4 Results

Part V

Thermal Aspects of the MDI Instrument

18 Oven Performance

18.1 Introduction

The following are the results from oven testing in vacuum on 20-May-92.

18.1.1 Principle of the Measurements

The flight oven assembly with the "flight" preamp were wrapped in aluminum foil (for contamination prevention) and installed in the Bimco thermal/vacuum chamber. The oven temperature was controlled by the primary control system located outside the chamber. The backup system was inoperative and unpowered during these tests.

18.1.2 Data

The following is a summary of measured and calculated results from these tests. All data logger data was originally contained in the files TEST1MAY.20, TEST2MAY.20 and TEST4MAY.20 found on Galaxy in DSK30:[DUSENBURY.THERMAL.DATA].

18.1.3 Results

Warm Enviornment, Primary Contoller

The chamber was set to its maximum test temperature of 30 deg C and the control system was commanded through an ascending sequence of its eight set points, stablizing the control system briefly at each point. The 30 deg C environment operates the control system at minimum control margins, since there is no active cooling in the control loop.

Set Point	TIme	PRI MA	V-Temp	T-CALC	PRI %	Watts Total (calculated)
000	17:26:04	25	-2.563	34.20	4.6	0.38
001	17:28:34	40	-3.024	34.55	8.7	0.73
010	17:30:56	57	-3.490	34.78	9.7	0.81
011	17:32:54	60	-3.953	35.03	10.8	0.90
100	17:36:24	63	-4.410	35.27	11.2	0.98
101	17:38:04	110	-4.875	35.52	12.4	1.03
110	17:40:14	111	-5.340	35.76	12.9	1.07
111	17:36:59	111	-5.806	36.01	13.9	1.15

PRI MA are the primary circuit current readings taken manually from an integrating digital voltmeter. They varied significantly from reading to reading and are included for comparison purposes.

V-Temp is the primary controller's temperature amplifier output measured on the data logger.

T-CALC is the temperature calculated from V-Temp in the data logger using thermistor equations.

Pri % is the controller duty cycle (percent "on") measured on the data logger.

Total watts is (% duty cycle measured on primary circuit) * 8.3

Cold Enviornment, Maximum Primary Set Point

The chamber was set to 10 deg C, its coldest test temperature, and data was taken with the primary control system set to its maximum temperature (111). This represents the maximum heating power from the control system.

Set Point	TIme	PRI MA	V-Temp	T-CALC	PRI %	Watts Total (calculated)
11	19:00:03	131	-5.787	36.00	26.0	2.15

18.2 Oven Turn-on Profile

TODO - MONS/SUSAN - Temperature profile when oven is turned on?

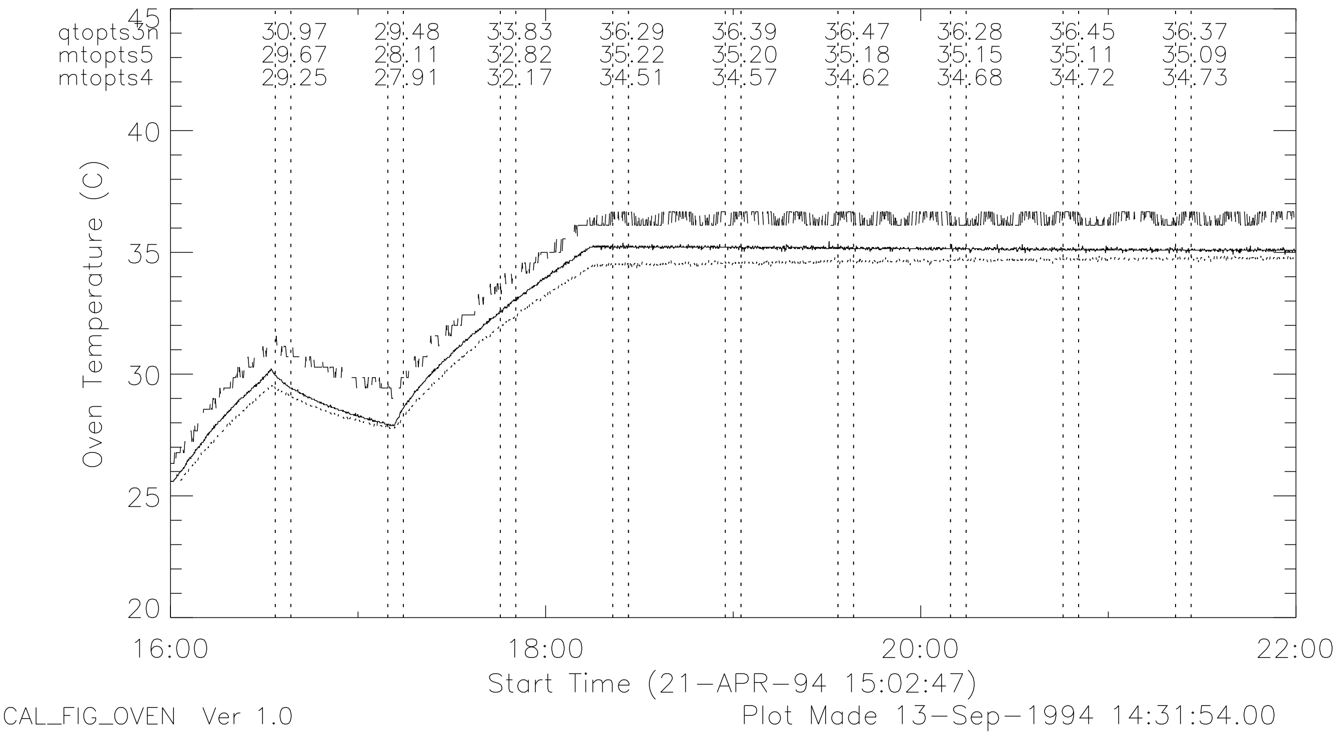


Figure 35: Oven Turn-on Profile

A Equations for the Fits

A.1 3rd Order 2-D Fit (TWODPOLY)

$$\begin{aligned} FIT &= c(0) + c(1)*x + c(2)*y + \\ &\quad c(3)*x^2 + c(4)*x*y + c(5)*y^2 + \\ &\quad x^2*[c(6)*x + c(7)*y] + y^2*[c(8)*x + c(9)*y] \end{aligned}$$

A.2 2nd Order 2-D Fit (TWODPOLY)

$$\begin{aligned} FIT &= c(0) + c(1)*x + c(2)*y + \\ &\quad c(3)*x^2 + c(4)*x*y + c(5)*y^2 \end{aligned}$$

A.3 1st Order 2-D Fit (TWODPOLY)

$$FIT = c(0) + c(1)*x + c(2)*y$$

A.4 Gaussian Fit with No Background Term (GAUSSFIT3)

$$FIT = c(0)*e^{\frac{x-c(1)}{c(2)}}$$

[0]TWODPOLY actually has a variable *a0* which is the same as *c(0)* above, and *acof* which are the last N-1 elements of c above (so the subscript is off by one).

B Chronological of Milestone Events

Start Date	*End Date*	*Event*	*Category*
5-Nov-93		"The Plugstrip Incident" damages CCD (S/N 28)	Camera
12-Nov-93	23-Nov-93	Thermal Vacuum Testing in Bldg 252	MDI Test
6-Dec-93	13-Dec-93	Thermal Balance Testing in Bldg 205	MDI Test
17-Jan-94		MDI at MMS-UK	Shipment
19-Jan-94		MDI first turned on at MMS-UK	MDI
14-Feb-94		MDI back at LPARL	Shipment
15-Feb-94		Short Form Functional Test (SFFT)	MDI Test
??-Feb-94		OP into vacuum	MDI Test
16-Feb-94		Remove MTM & Power Distribution #3 PWB's	MDI
28-Feb-94		CCD heater on (accidently)	Camera
3-Mar-94		Remove OP from vacuum	MDI Test
?		Remove CCD Camera (S/N 28)	Camera
?		Install CCD Camera (S/N 22)	Camera
?		Replace OP into white tank	MDI Test
25-Mar-94		Install CCD variable heater (S/N 22)	Camera
29-Mar-94		Install CCD flight camera (S/N 22)	Camera
31-Mar-94		Metal beam splitter installed	Optical
5-Apr-94		Shake OP	MDI Test
28-Apr-94		MDI arrives at MMS-UK	Shipment
3-May-94		MDI turned on	MDI
??-???-??		MDI team leaves MMS-UK	MDI Team
??-Aug-94		PLM (MDI attached) delivered to MMS-F	Shipment
8-Sep-94		PLM mated to SVM	MDI
13-Sep-94		MDI first turned on at MMS-F	MDI
14-Sep-94		Start SFFT	MDI

C Table of MDI Calibration Files

All files are located in the directory `/mdisw/dbase/cal/files`.

Extension	*Description*
_trans	transmission profile
_spatial	Spatial non-uniformity
_lspatial	Wavelength Spatial non-uniformity
_angle	Angular dependence
.raw	Raw data in table form
.curve	Final interpolated data
.coeff	Coefficients of a fit to the raw data
.fits	Image

blocker_trans.raw1	X,Y digitizer output of blocker curve
blocker_trans.raw2	X,Y digitizer output of blocker curve
blocker_trans.curve	Blocker (wavlength X transmission) profile for full wavelength range (interpolated and smoothed)
window_trans.raw1	X,Y digitizer output of window curve
window_trans.raw2	X,Y digitizer output of window curve
window_trans.curve	Window (wavlength X transmission) profile for full wavelength range (interpolated and smoothed)
lyot_trans.raw	Lyot transmission profile
lyot_trans.curve	Lyot (wavlength X transmission) profile for full wavelength range (from gaussian fit)
lyot_trans.coeff	Gaussian fit coefficients for Lyot profile
lyot_lspatial.fits	Lyot spatial non-uniformity in wavelength
mich1_lspatial.fits	"embeded" full spatial map using Laser data for Michelson #1
mich1_lspatial_sol.fits	Michelson #1 spatial map using solar DTMAP
mich1_angle.raw	Angular dependence of Michelson #1 (wavelength shift)
mich1_angle.coeff	Fit of the angular dependence of Michelson #1
mich2_...	(same as mich1_...)
mich_oven.m1_summary	Michelson wavelength sensitivity to the oven temperature
grad_data.txt	The intermediate processed spatial gradient information
grad_spatial1.fits	Spatial gradient calculated using AvgCAL divided by the lamp shape
grad_spatial1.coeff	Spatial gradient calculated using AvgCAL divided by the lamp shape
grad_spatial2.coeff	Spatial gradient calculated using the average signal of the 18 OBS mode images
grad_spatial3.fits	Spatial gradient calculated using I(continuum) (DTUNE)
grad_spatial3.coeff	Spatial gradient calculated using I(continuum) (DTUNE)
grad_spatial_avgcal.fits	Average of all 18 CAL mode images and two polarities
grad_spatial_lamp.fits	The spatial mapping of the lamp intensity
grad_spatial_lamp5.fits	The spatial mapping of the lamp intensity (subset of points used) [THIS SET IS THE BEST]
grad_spatial_lamp0.fits	The spatial mapping of the lamp intensity (subset of points used)
grad_angle.coeff	Transmission gradient caused by off-axis rays (fit 18 points, CAL mode ratios)

D Chronological Listing of When Control Files were Run (CAL_LOG output)

CAL_LOG.PRO Ver 3.1
Program Run: 24-Aug-1994 13:25:13.00 on sxt

Ser	Telemetry	#Img	Date	Time	Duration (min)	Control File Info	On Disk? Tlm	FITS	Tape #	File	CCD	Oven
opt347		206	1-JAN-90	00:00:00 ?	0.	vbigtune	No	No	40	1	??	??
opt348		68	1-JAN-90	00:00:00 ?	0.	vdetune	No	No	40	1	??	??
opt013		3	1-JAN-92	00:00:00 ?	0.	cracks	No	No	-1	-1	??	??
opt017		36	10-NOV-92	19:09:00	46.	fdfocus	No	No	9	5	??	??
opt018		11	10-NOV-92	20:01:00	26.	hrfocus	No	No	5	1	??	??
opt022		4	13-NOV-92	21:36:00	3.	calpos	No	No	6	1	??	??
opt024		4	14-NOV-92	01:17:00	3.	calpos	No	No	6	2	??	??
opt028		45	17-NOV-92	02:06:00	36.	exposerence	No	No	9	2	??	??
opt029		36	17-NOV-92	02:52:00	23.	exposercale	No	No	9	1	??	??
opt036		1	17-NOV-92	16:15:00	0.	dpmtest	No	No	7	1	??	??
opt030		42	17-NOV-92	22:41:00	26.	magdopfd	No	No	9	3	??	??
opt034		16	18-NOV-92	19:57:00	18.	sunlimbhr	No	No	11	3	??	??
opt035		14	18-NOV-92	21:05:00	7.	nilinetune	No	No	11	4	??	??
opt030a		14	19-NOV-92	21:09:00	8.	nilinetune	No	No	9	3	??	??
opt031		14	19-NOV-92	21:22:00	8.	nilinetune	No	No	11	1	??	??
opt037		3	19-NOV-92	21:43:00	1.	irleak	No	No	7	2	??	??
opt040		21	20-NOV-92	02:21:00	11.	nomove	No	No	11	5	??	??
opt042		41	20-NOV-92	14:47:00	18.	sunmagdop	No	No	1	2	??	??
opt041		3	20-NOV-92	22:26:00	1.	sunir	No	No	7	3	??	??
opt043		44	20-NOV-92	23:29:00	18.	sunmagdop	No	No	13	1	??	??
opt044		7	20-NOV-92	23:57:00	3.	sunir	No	No	7	4	??	??
opt045		11	25-NOV-92	00:39:00	5.	covernair	No	No	7	5	??	??
opt046		11	25-NOV-92	00:50:00	5.	covered	No	No	7	6	??	??
opt047		10	25-NOV-92	01:13:00	10.	polcheck	No	No	5	2	??	??
opt048		1695	25-NOV-92	12:45:00	0.	magdopser	No	No	2	1	??	??
opt049		302	29-NOV-92	01:17:00	148.	m1rotser	No	No	9	4	??	??
opt050		305	30-NOV-92	18:29:00	151.	m2rotser	No	No	10	1	??	??
opt051		4	1-DEC-92	23:58:00	17.	windows	No	No	5	3	??	??
opt053		1164	4-DEC-92	12:14:00	213.	sundopser	No	No	1	1	??	??
opt052		19	4-DEC-92	19:38:00	9.	sundopser	No	No	11	6	??	??
opt054		9	7-DEC-92	23:06:00	****	lamponoff	No	No	5	4	??	??
opt059		14	9-DEC-92	00:14:00	13.	lasdop	No	No	5	5	??	??
opt060		206	10-DEC-92	00:52:00	100.	protser	No	No	1	3	??	??
opt062		203	10-DEC-92	20:04:00	102.	tunerotser	No	No	11	2	??	??
opt063		843	12-DEC-92	10:26:00	223.	sunobsser	No	No	3	1	??	??
opt065		45	12-DEC-92	23:26:00	13.	sunmagtdt	No	No	5	6	??	??
opt066		129	12-DEC-92	23:49:00	35.	suncaltdt	No	No	8	1	??	??
opt067		867	13-DEC-92	18:51:00	230.	sunmixser	No	No	14	1	??	??
opt068		106	14-DEC-92	19:53:00	32.	lamscan	No	No	1	4	??	??
opt069		56	14-DEC-92	20:41:00	26.	sunmix	No	No	1	5	??	??
opt070		399	14-DEC-92	21:31:00	105.	sunmixser	No	No	13	2	??	??
opt071		724	15-DEC-92	17:05:00	192.	sunmixser	No	No	13	3	??	??
opt072		74	15-DEC-92	20:38:00	23.	lamscan	No	No	12	1	??	??
opt073		48	15-DEC-92	21:05:00	13.	sundop2	No	No	12	2	??	??
opt074		60	15-DEC-92	21:19:00	17.	sundop3	No	No	12	3	??	??
opt075		30	15-DEC-92	21:37:00	8.	sundop	No	No	12	4	??	??
opt076		83	15-DEC-92	22:04:00	28.	sunmix	No	No	12	5	??	??
opt077		45	15-DEC-92	22:37:00	21.	suncalblock	No	No	12	6	??	??
opt080		41	16-DEC-92	17:39:00	62.	sundop	No	No	12	7	??	??
opt081		202	16-DEC-92	18:43:00	83.	sundop	No	No	12	8	??	??

opt084	72	16-DEC-92	23:31:00	51.	darks	No	No	12	9	??	??
opt085	60	17-DEC-92	02:46:00	17.	darks	No	No	12	10	??	??
opt062a	1	23-DEC-92	02:26:00	0.	tdtrotser	No	No	11	2	??	??
opt089	34	1-JAN-93	00:00:00 ?	0.	protseriss	No	No	15	1	??	??
opt090	177	1-JAN-93	00:00:00 ?	0.	protseriss	No	No	15	1	??	??
opt091	25	1-JAN-93	00:00:00 ?	0.	apr15tst	No	No	15	1	??	??
opt092	10	1-JAN-93	00:00:00 ?	0.	apr15tst	No	No	15	1	??	??
opt100	8	1-JAN-93	00:00:00 ?	0.	lscanobs	No	No	15	1	??	??
opt101	13	1-JAN-93	00:00:00 ?	0.	lscanobs	No	No	15	1	??	??
opt102	7	1-JAN-93	00:00:00 ?	0.	sundop	No	No	15	1	??	??
opt103	7	1-JAN-93	00:00:00 ?	0.	sundopcal	No	No	15	1	??	??
opt104	3	1-JAN-93	00:00:00 ?	0.	pfmwindowcal	No	No	15	1	??	??
opt105	13	1-JAN-93	00:00:00 ?	0.	lscancal	No	No	16	1	??	??
opt106	6	1-JAN-93	00:00:00 ?	0.	caldop	No	No	16	1	??	??
opt107	6	1-JAN-93	00:00:00 ?	0.	sundop	No	No	16	1	??	??
opt108	6	1-JAN-93	00:00:00 ?	0.	sundop	No	No	16	1	??	??
opt109	6	1-JAN-93	00:00:00 ?	0.	caldop	No	No	16	1	??	??
opt110	11	1-JAN-93	00:00:00 ?	0.	sunmag	No	No	16	1	??	??
opt111	13	1-JAN-93	00:00:00 ?	0.	sunmag	No	No	16	1	??	??
opt112	14	1-JAN-93	00:00:00 ?	0.	fdfocser	No	No	16	1	??	??
opt113	12	1-JAN-93	00:00:00 ?	0.	hrfocser	No	No	16	1	??	??
opt114	6	1-JAN-93	00:00:00 ?	0.	fdwldop	No	No	16	1	??	??
opt088	41	1-JAN-93	00:00:00 ?	0.	firstiss	No	No	15	1	??	??
opt115	6	1-JAN-93	00:00:00 ?	0.	fdwlcaldop	No	No	16	1	??	??
opt156	34	1-JAN-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt116	12	1-JAN-93	00:00:00 ?	0.	fdfocser	No	No	15	1	??	??
opt117	12	1-JAN-93	00:00:00 ?	0.	hrfocser	No	No	15	1	??	??
opt118	12	1-JAN-93	00:00:00 ?	0.	hrfocser	No	No	15	1	??	??
opt119	12	1-JAN-93	00:00:00 ?	0.	fdfocser	No	No	15	1	??	??
opt120	10	1-JAN-93	00:00:00 ?	0.	calexpser	No	No	15	1	??	??
opt121	7	1-JAN-93	00:00:00 ?	0.	sundopiss	No	No	16	1	??	??
opt122	9	1-JAN-93	00:00:00 ?	0.	sunmagiss	No	No	16	1	??	??
opt123	12	1-JAN-93	00:00:00 ?	0.	sunmagiss	No	No	16	1	??	??
opt124	20	1-JAN-93	00:00:00 ?	0.	suncalgrad	No	No	16	1	??	??
opt125	7	1-JAN-93	00:00:00 ?	0.	isspolser	No	No	16	1	??	??
opt126	14	1-JAN-93	00:00:00 ?	0.	isspolser	No	No	16	1	??	??
opt130	71	1-JAN-93	00:00:00 ?	0.	halfwave	No	No	15	1	??	??
opt131	30	1-JAN-93	00:00:00 ?	0.	pretty	No	No	16	1	??	??
opt132	29	1-JAN-93	00:00:00 ?	0.	pretty	No	No	16	1	??	??
opt133	33	1-JAN-93	00:00:00 ?	0.	pretty	No	No	16	1	??	??
opt134	25	1-JAN-93	00:00:00 ?	0.	halfwave	No	No	16	1	??	??
opt135	84	1-JAN-93	00:00:00 ?	0.	fddetune	No	No	16	1	??	??
opt137	114	1-JAN-93	00:00:00 ?	0.	sunmixser	No	No	15	1	??	??
opt138	113	1-JAN-93	00:00:00 ?	0.	sunmixser	No	No	15	1	??	??
opt139	104	1-JAN-93	00:00:00 ?	0.	sunmixser	No	No	16	1	??	??
opt140	113	1-JAN-93	00:00:00 ?	0.	sunmixser	No	No	16	1	??	??
opt141	6	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	16	1	??	??
opt142	33	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	16	1	??	??
opt143	91	1-JAN-93	00:00:00 ?	0.	sunmixsum	No	No	16	1	??	??
opt144	51	1-JAN-93	00:00:00 ?	0.	sunmixsum	No	No	16	1	??	??
opt145	127	1-JAN-93	00:00:00 ?	0.	sunmixsumdt	No	No	17	1	??	??
opt146	129	1-JAN-93	00:00:00 ?	0.	newmixsum	No	No	17	1	??	??
opt147	122	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt148	251	1-JAN-93	00:00:00 ?	0.	cycle	No	No	17	1	??	??
opt149	122	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt150	81	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt151	54	1-JAN-93	00:00:00 ?	0.	newdetune	No	No	17	1	??	??
opt152	50	1-JAN-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt153	62	1-JAN-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt154	70	1-JAN-93	00:00:00 ?	0.	openbox	No	No	17	1	??	??

opt155	6	1-JAN-93	00:00:00 ?	0.	openbox	No	No	17	1	??	??
opt086	234	3-FEB-93	23:23:00	116.	m2rotser	No	No	8	2	??	??
opt087	189	4-FEB-93	18:50:00	154.	m1rotser	No	No	8	3	??	??
opt168	17	1-MAY-93	00:00:00 ?	0.	hrdop	No	No	17	1	??	??
opt170	165	1-MAY-93	00:00:00 ?	0.	mixsum	No	No	18	1	??	??
opt169	95	1-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt171	76	1-MAY-93	00:00:00 ?	0.	hrmag	No	No	17	1	??	??
opt163	34	8-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt164	8	8-MAY-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt165	76	8-MAY-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt157	20	8-MAY-93	00:00:00 ?	0.	fdlscan	No	No	17	1	??	??
opt166	120	8-MAY-93	00:00:00 ?	0.	mixsum	No	No	17	1	??	??
opt157a	47	8-MAY-93	00:00:00 ?	0.	newlscan	No	No	17	1	??	??
opt167	236	8-MAY-93	00:00:00 ?	0.	mixsum	No	No	18	1	??	??
opt158	30	8-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt159	240	8-MAY-93	00:00:00 ?	0.	mixsum	No	No	17	1	??	??
opt160	21	8-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt161	33	8-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt162	5	8-MAY-93	00:00:00 ?	0.	detune	No	No	17	1	??	??
opt172	4	11-MAY-93	14:01:00	1.	detune	No	No	18	1	??	??
opt173	4	11-MAY-93	14:03:00	2.	detune	No	No	18	1	??	??
opt174	22	11-MAY-93	19:34:00	10.	sptfdfoc	No	No	18	1	??	??
opt175	37	11-MAY-93	20:19:00	14.	sptfdfoc	No	No	18	1	??	??
opt176	39	11-MAY-93	20:34:00	19.	spthrfoc	No	No	18	1	??	??
opt177	24	11-MAY-93	21:06:00	4.	sptfdlsn	No	No	18	1	??	??
opt178	26	11-MAY-93	21:11:00	0.	spthrlsn	No	No	18	1	??	??
opt179	30	11-MAY-93	21:34:00	18.	sptccdlt	No	No	18	1	??	??
opt180	26	11-MAY-93	23:13:00	7.	sptlsn	No	No	18	1	??	??
opt181	20	11-MAY-93	23:21:00	4.	spthrlsn	No	No	18	1	??	??
opt182	24	11-MAY-93	23:26:00	4.	spthrlsn	No	No	18	1	??	??
opt183	9	11-MAY-93	23:55:00	4.	fdfoc	No	No	18	1	??	??
opt185	11	12-MAY-93	00:00:00 ?	0.	fdfoc	No	No	18	1	??	??
opt186	9	12-MAY-93	00:00:00 ?	0.	hrfoc	No	No	18	1	??	??
opt184	11	12-MAY-93	00:00:00	7.	hrfoc	No	No	18	1	??	??
opt187	36	12-MAY-93	17:43:00	13.	sptfdfoc	No	No	18	1	??	??
opt188	36	12-MAY-93	17:57:00	18.	spthrfoc	No	No	18	1	??	??
opt189	24	12-MAY-93	18:48:00	4.	sptfdlsn	No	No	18	1	??	??
opt190	26	12-MAY-93	18:54:00	7.	spthrlsn	No	No	18	1	??	??
opt191	9	12-MAY-93	20:13:00	3.	hrfoc	No	No	18	1	??	??
opt192	12	12-MAY-93	20:17:00	8.	fdfoc	No	No	18	1	??	??
opt193	13	12-MAY-93	20:50:00	5.	sptprot	No	No	18	1	??	??
opt194	26	12-MAY-93	21:01:00	10.	sptprot	No	No	18	1	??	??
opt195	41	12-MAY-93	21:33:00	16.	sptmtmrot	No	No	18	1	??	??
opt196	11	12-MAY-93	22:17:00	12.	issoffset	No	No	18	1	??	??
opt197	11	12-MAY-93	23:29:00	4.	laserlscan	No	No	20	1	??	??
opt197a	28	13-MAY-93	00:07:00	13.	laserscan	No	No	20	1	??	??
opt198	39	13-MAY-93	00:22:00	19.	ldetune	No	No	20	1	??	??
opt199	12	13-MAY-93	22:22:00	2.	laserscan	No	No	20	1	??	??
opt200	12	13-MAY-93	22:26:00	2.	laserhrscan	No	No	20	1	??	??
opt201	42	13-MAY-93	22:39:00	9.	ldetune	No	No	20	1	??	??
opt202	20	13-MAY-93	23:19:00	5.	fdsundop	No	No	20	1	??	??
opt203	14	13-MAY-93	23:25:00	3.	sunlscan	No	No	20	1	??	??
opt204	12	13-MAY-93	23:40:00	6.	fdsunmag	No	No	20	1	??	??
opt205	16	14-MAY-93	15:56:00	3.	seq1_	No	No	20	1	??	??
opt206	67	14-MAY-93	20:50:00	13.	laserscan	No	No	20	1	??	??
opt207	77	14-MAY-93	21:12:00	19.	detune	No	No	20	1	??	??
opt208	26	14-MAY-93	21:32:00	6.	sunlscan	No	No	20	1	??	??
opt209	26	14-MAY-93	22:23:00	17.	wlscan	No	No	20	1	??	??
opt210	52	18-MAY-93	19:09:00	11.	sptfdlsn	No	No	18	1	??	??
opt211	21	18-MAY-93	19:25:00	9.	sptfoc	No	No	18	1	??	??

opt212	42	19-MAY-93	20:37:00	0.	sptfoc	No	No	18	1	??	??
opt213	31	19-MAY-93	21:10:00	20.	sptccdlt	No	No	20	1	??	??
opt214	13	20-MAY-93	01:06:00	3.	laslscan	No	No	20	1	??	??
opt215	127	20-MAY-93	14:36:00	55.	detune	No	No	20	1	??	??
opt217	43	20-MAY-93	17:54:00	133.	vacldetune	No	No	18	1	??	??
opt218	40	20-MAY-93	20:53:00	13.	vacldetune	No	No	18	1	??	??
opt220	33	20-MAY-93	21:00:00 ?	0.	sunvacdetune	No	No	18	1	??	??
opt221	14	20-MAY-93	21:00:00 ?	0.	sunvaclscan	No	No	18	1	??	??
opt219	44	20-MAY-93	21:07:00	17.	vacldetune	No	No	18	1	??	??
opt222	21	20-MAY-93	21:24:00	78.	vacsundop	No	No	18	1	??	??
opt216	43	20-MAY-93	22:29:00	0.	vacldetune	No	No	20	1	??	??
opt223	27	21-MAY-93	00:32:00	112.	sundop	No	No	23	1	??	??
opt224	77	21-MAY-93	14:24:00	14.	vmixser	No	No	23	1	??	??
opt225	88	21-MAY-93	14:39:00	20.	vmixser	No	No	23	1	??	??
opt226	30	21-MAY-93	15:04:00	5.	vdetune	No	No	19	1	??	??
opt227	45	21-MAY-93	15:11:00	18.	vfdlscan	No	No	19	1	??	??
opt228	32	21-MAY-93	15:30:00	6.	vdetune	No	No	19	1	??	??
opt229	42	21-MAY-93	16:48:00	7.	vldetune	No	No	19	1	??	??
opt230	42	21-MAY-93	16:58:00	8.	vldetune	No	No	19	1	??	??
opt231	42	21-MAY-93	17:13:00	8.	vldetune	No	No	19	1	??	??
opt232	37	21-MAY-93	17:58:00	10.	vldetune	No	No	19	1	??	??
opt233	67	21-MAY-93	20:19:00	84.	issonoff	No	No	19	1	??	??
opt234	42	21-MAY-93	23:12:00	16.	protseriss	No	No	23	1	??	??
opt235	37	21-MAY-93	23:55:00	10.	vdetune	No	No	19	1	??	??
opt236	67	22-MAY-93	00:10:00	21.	vmixser	No	No	23	1	??	??
opt237	40	22-MAY-93	14:19:00	14.	vldetune	No	No	20	1	??	??
opt238	33	22-MAY-93	15:00:00	6.	vdetune	No	No	20	1	??	??
opt239	86	22-MAY-93	15:17:00	23.	vmixser	No	No	20	1	??	??
opt240	186	22-MAY-93	15:49:00	32.	vdopser	No	No	20	1	??	??
opt241	45	22-MAY-93	17:01:00	20.	vldetune	No	No	20	1	??	??
opt242	47	22-MAY-93	17:44:00	8.	vldetune	No	No	20	1	??	??
opt243	43	22-MAY-93	18:06:00	13.	vldetune	No	No	20	1	??	??
opt244	42	22-MAY-93	18:51:00	7.	vldetune	No	No	109	4	??	??
opt245	42	22-MAY-93	20:03:00	8.	vldetune	No	No	109	4	??	??
opt246	196	22-MAY-93	22:01:00	64.	vdetune	No	No	20	1	??	??
opt247	44	25-MAY-93	04:43:00	11.	vldetune	No	No	109	4	??	??
opt248	43	25-MAY-93	04:55:00	9.	vldetune	No	No	109	4	??	??
opt249	43	25-MAY-93	05:33:00	14.	vldetune	No	No	109	4	??	??
opt250	43	25-MAY-93	06:06:00	8.	vldetune	No	No	109	4	??	??
opt251	43	25-MAY-93	07:10:00	9.	vldetune	No	No	109	4	??	??
opt252	43	25-MAY-93	08:26:00	9.	vldetune	No	No	109	4	??	??
opt253	43	25-MAY-93	09:10:00	10.	vldetune	No	No	109	4	??	??
opt254	32	25-MAY-93	12:27:00	7.	vldetune	No	No	109	4	??	??
opt255	41	25-MAY-93	12:38:00	21.	vldetune	No	No	109	4	??	??
opt256	42	25-MAY-93	13:03:00	11.	vldetune	No	No	109	4	??	??
opt257	44	25-MAY-93	13:25:00	10.	vldetune	No	No	109	4	??	??
opt258	42	25-MAY-93	14:03:00	8.	vldetune	No	No	109	4	??	??
opt259	42	25-MAY-93	14:13:00	8.	vldetune	No	No	109	4	??	??
opt260	42	25-MAY-93	14:28:00	8.	vldetune	No	No	109	4	??	??
opt261	42	25-MAY-93	14:41:00	8.	vldetune	No	No	109	4	??	??
opt262	42	25-MAY-93	15:02:00	9.	vldetune	No	No	109	4	??	??
opt263	42	25-MAY-93	15:26:00	9.	vldetune	No	No	109	4	??	??
opt264	42	25-MAY-93	16:26:00	8.	vldetune	No	No	109	4	??	??
opt265	42	25-MAY-93	16:37:00	8.	vldetune	No	No	109	4	??	??
opt266	43	25-MAY-93	17:39:00	9.	vldetune	No	No	109	4	??	??
opt267	42	25-MAY-93	18:04:00	8.	vldetune	No	No	109	4	??	??
opt268	43	25-MAY-93	19:14:00	10.	vldetune	No	No	109	4	??	??
opt269	42	25-MAY-93	21:24:00	8.	vldetune	No	No	109	4	??	??
opt270	42	25-MAY-93	22:52:00	8.	vldetune	No	No	109	4	??	??
opt271	44	26-MAY-93	00:17:00	8.	vldetune	No	No	109	4	??	??

opt272		57	26-MAY-93	13:05:00	0.	v1detune		No	No	109	4	??	??
opt273		46	26-MAY-93	14:37:00	9.	v1detune		No	No	20	1	??	??
opt274		20	26-MAY-93	17:42:00	10.	sptfoc		No	No	20	1	??	??
opt275		26	26-MAY-93	18:01:00	15.	sptlscan		No	No	20	1	??	??
opt276		12	26-MAY-93	22:25:00	18.	align		No	No	20	1	??	??
opt277		79	27-MAY-93	17:53:00	83.	djaiqt		No	No	20	1	??	??
opt278		42	28-MAY-93	00:42:00	17.	m1rotser		No	No	20	1	??	??
opt279		31	28-MAY-93	01:08:00	13.	m2rotser		No	No	20	1	??	??
opt280		29	29-MAY-93	13:26:00	9.	cdpser		No	No	21	1	??	??
opt281		208	29-MAY-93	13:38:00	36.	vdopser		No	No	21	1	??	??
opt282		29	29-MAY-93	14:23:00	11.	cdopser		No	No	21	1	??	??
opt283		1128	29-MAY-93	14:37:00	225.	vdopser		No	No	21	1	??	??
opt284		752	29-MAY-93	18:31:00	145.	vdopser		No	No	21	1	??	??
opt285		10	2-JUN-93	01:03:00	3.	grandhunt		No	No	21	1	??	??
opt286		11	2-JUN-93	01:23:00	8.	roger		No	No	21	1	??	??
opt287		30	2-JUN-93	15:04:00	6.	cdopser		No	No	21	1	??	??
opt288		74	2-JUN-93	15:12:00	15.	vdopser		No	No	21	1	??	??
opt289		13	2-JUN-93	17:28:00	24.	isstest		No	No	21	1	??	??
opt290		82	2-JUN-93	22:14:00	32.	sptfoc		No	No	21	1	??	??
opt291		50	2-JUN-93	22:48:00	20.	sptprot		No	No	21	1	??	??
opt292		83	2-JUN-93	23:10:00	40.	sptmrot		No	No	21	1	??	??
opt293		26	3-JUN-93	00:01:00	6.	sptfdlscan		No	No	21	1	??	??
opt294		32	3-JUN-93	00:32:00	25.	sunisstest		No	No	21	1	??	??
opt295		25	3-JUN-93	20:36:00	8.	wlscan		No	No	22	1	??	??
opt296		26	3-JUN-93	20:54:00	11.	sunlscan		No	No	22	1	??	??
opt297		32	3-JUN-93	21:48:00	119.	holemove		No	No	22	1	??	??
opt298		33	4-JUN-93	20:04:00	39.	polhunt		No	No	22	1	??	??
opt299		43	5-JUN-93	00:06:00	9.	v1detune		No	No	22	1	??	??
opt300		10	5-JUN-93	00:48:00	11.	michtest		No	No	22	1	??	??
opt301		26	7-JUN-93	19:40:00	15.	lfringe		No	No	22	1	??	??
opt302		19	7-JUN-93	21:56:00	31.	qwave		No	No	22	1	??	??
opt303		52	7-JUN-93	23:45:00	****	qwave		No	No	22	1	??	??
opt304		28	8-JUN-93	21:33:00	44.	finger		No	No	22	1	??	??
opt305		10	8-JUN-93	23:54:00	40.	bdsbs		No	No	22	1	??	??
opt306		51	9-JUN-93	02:50:00	17.	pawlscan		No	No	23	1	??	??
opt307		12	9-JUN-93	17:51:00	9.	beforecamera		No	No	23	1	??	??
opt309		119	9-JUN-93	22:05:00	165.	diode_scan		No	No	22	1	??	??
opt308		12	9-JUN-93	30:31:00	0.	aftercamera		No	No	23	1	??	??
opt310		36	10-JUN-93	17:24:00	29.	ccd_sat_test		No	No	23	1	??	??
opt311		16	10-JUN-93	18:01:00	23.	window_off		No	No	22	1	??	??
opt312		7	10-JUN-93	18:46:00	2.	window_stim		No	No	22	1	??	??
opt313		31	11-JUN-93	02:46:00	77.	bs1_bbx		No	No	23	1	??	??
opt314		27	18-JUN-93	00:00:00 ?	0.	oven_move		No	No	23	1	??	??
opt315		11	21-JUN-93	23:39:00	0.	bs2_bbx		No	No	23	1	??	??
opt316		100	22-JUN-93	17:34:00	359.	bs2_bbx		No	No	23	1	??	??
opt317		38	25-JUN-93	01:48:00	14.	two_bit		No	No	23	1	??	??
opt318		13	25-JUN-93	03:12:00	8.	sunblock		No	No	23	1	??	??
opt319		58	26-JUN-93	00:55:00	30.	twobits		No	No	23	1	??	??
opt320		44	26-JUN-93	02:41:00	12.	v1detune		No	No	23	1	??	??
cat000	930629_171246	5	29-JUN-93	17:17:00	1.			Yes	No	115	2	??	??
cat001	930629_204340	3	29-JUN-93	20:44:00	0.			Yes	No	109	2	??	??
cat004	930702_222529	1	2-JUL-93	22:25:29 ?	0.		swldseq1	Yes	No	-1	-1	??	??
cat005	930702_230529	1	2-JUL-93	23:05:29 ?	0.		swldseq1	Yes	No	-1	-1	??	??
cat011	930703_184101	15	3-JUL-93	18:42:00	7.		tp	Yes	No	115	2	??	??
cat012	930703_190236	189	3-JUL-93	19:04:00	49.		swldseq2	Yes	No	115	2	??	??
cat013	930703_204142	820	3-JUL-93	20:49:00	163.			Yes	No	115	2	??	??
opt321		41	3-JUL-93	21:14:00	12.	vdetune		No	No	24	1	??	??
opt322		27	3-JUL-93	21:28:00	5.	fdlscan		No	No	24	1	??	??
opt323		30	4-JUL-93	15:02:00	5.	vdetune		No	No	25	1	??	??
opt324		26	4-JUL-93	15:11:00	9.	fdlscan		No	No	25	1	??	??

cat014	930704_153134	90	4-JUL-93	15:32:00	18.			Yes	No	115	3	??	??
cat015	930704_163051	3	4-JUL-93	16:32:00	0.			Yes	No	115	3	??	??
cat016	930704_163310	39	4-JUL-93	16:34:00	7.			Yes	No	115	3	??	40.7
cat018	930704_184933	81	4-JUL-93	18:51:00	16.			Yes	No	115	3	??	??
opt325		105	4-JUL-93	20:14:00	20.	sun		No	No	25	1	??	??
opt326		945	4-JUL-93	20:58:00	204.	sun		No	No	25	1	??	??
opt327		68	5-JUL-93	01:13:00	19.	sun		No	No	25	1	??	??
opt328		323	5-JUL-93	01:39:00	70.	sun		No	No	25	1	??	??
opt329		57	5-JUL-93	03:00:00	11.	sun		No	No	25	1	??	??
cat019	930705_142958	3376	5-JUL-93	14:31:00	686.			No	No	109	9	??	??
opt330		3491	5-JUL-93	15:31:00	700.	sun		No	No	26	1	??	??
opt331		8	6-JUL-93	03:16:00	2.	ccd		No	No	27	1	??	??
opt333		2256	6-JUL-93	17:55:00	456.	sun		No	No	27	1	??	??
opt334		330	7-JUL-93	01:34:00	64.	sun		No	No	27	1	??	??
opt336		274	9-JUL-93	23:31:00	86.	focus		No	No	28	1	??	??
cat023	930710_155702	3103	10-JUL-93	15:58:00	607.		pdown	No	Yes	109	3	??	??
opt337		2979	10-JUL-93	15:59:00	606.	caldop		No	No	29	1	??	??
opt338		6148	11-JUL-93	18:47:00	****	darks		No	No	41	1	??	??
cat024	930711_184559	3355	11-JUL-93	18:47:00	671.			No	No	115	1	??	??
opt339		36	14-JUL-93	14:19:00	17.	fdfocser		No	No	39	1	56.0	32.9
opt340		205	14-JUL-93	14:41:00	40.	vbigtune		No	No	39	1	56.0	32.9
opt341		244	14-JUL-93	16:12:00	51.	depseq		No	No	39	1	??	30.7
cat025	930714_161132	240	14-JUL-93	16:13:00	51.		vbigtune	No	No	115	2	??	30.7
opt342		302	15-JUL-93	00:08:00	64.	vbigtune		No	No	39	1	??	33.2
opt343		661	15-JUL-93	14:03:00	50.	vmagser		No	No	39	1	??	40.7
opt344		144	15-JUL-93	15:05:00	28.	vmagser		No	No	39	1	??	40.7
opt345		372	16-JUL-93	01:01:00	26.	vdopmix		No	No	39	1	??	35.1
opt346		565	16-JUL-93	01:44:00	38.	vdopmix		No	No	39	1	??	35.0
opt351		22	19-JUL-93	22:32:00	6.	fdfocser		No	No	40	1	??	??
opt352		20	19-JUL-93	23:00:00	4.	fdfocser		No	No	40	1	??	??
opt353		24	19-JUL-93	23:56:00	7.	fdfocser		No	No	40	1	??	??
opt354		24	20-JUL-93	00:23:00	10.	fdfocser		No	No	40	1	??	??
opt355		24	20-JUL-93	22:48:00	102.	finger		No	No	43	1	??	??
opt356		21	21-JUL-93	15:00:00	19.	darks		No	No	43	1	??	40.7
opt357		58	28-JUL-93	02:10:00	10.	fdfocrot		No	No	45	1	??	25.6
opt358		58	28-JUL-93	02:21:00	9.	hrfocrot		No	No	52	1	??	25.6
opt359		64	28-JUL-93	02:36:00	11.	pawrot		No	No	52	1	??	25.6
opt360		64	28-JUL-93	02:47:00	11.	pawrot		No	No	45	1	??	25.6
opt361		248	28-JUL-93	03:28:00	44.	mtmrot		No	No	-1	-1	??	25.6
cat026	930729_200816	100	29-JUL-93	20:10:00	19.		shutest	Yes	No	115	1	26.7	25.6
opt407		370	31-JUL-93	00:00:00 ?	0.	qwavesnholes		No	No	81	1	-11.4	35.0
opt362		104	31-JUL-93	14:03:00	10.	lasdetune		No	No	43	1	-48.6	35.2
cat027	930731_144820	345	31-JUL-93	14:50:00	86.		vbigtune	Yes	No	115	4	-48.6	35.2
opt363		435	31-JUL-93	15:00:00	73.	suncal		No	Yes	43	1	-48.6	35.2
opt364		106	31-JUL-93	16:28:00	11.	lasdetune		No	No	43	1	-48.6	35.2
opt365		432	31-JUL-93	16:45:00	72.	suncal		No	No	109	4	-48.6	35.2
cat028	930731_164519	1	31-JUL-93	16:45:19 ?	0.		vbigtune	Yes	No	-1	-1	-48.6	35.2
opt366		106	31-JUL-93	18:12:00	11.	lasdetune		No	No	43	1	-48.6	35.1
opt367		432	31-JUL-93	18:32:00	74.	suncal		No	No	43	1	-48.6	35.2
cat029	930731_183233	340	31-JUL-93	18:32:00	76.		vbigtune	Yes	No	115	4	-48.6	35.2
opt368		106	31-JUL-93	19:55:00	10.	lasdetune		No	Yes	45	1	-48.6	35.2
opt369		144	31-JUL-93	20:18:00	7.	suncal		No	No	45	1	-48.6	35.2
opt370		20	31-JUL-93	20:29:00	1.	suncal		No	No	45	1	-48.6	35.1
opt371		33	31-JUL-93	20:38:00	3.	suncal		No	No	45	1	-48.6	35.1
opt372		430	31-JUL-93	20:44:00	73.	suncal		No	Yes	45	1	-45.7	35.1
cat032	930731_203902	335	31-JUL-93	20:54:00	66.		calmodev	Yes	No	115	3	-45.7	35.2
opt373		140	31-JUL-93	22:12:00	31.	lasdetune		No	Yes	46	1	-45.7	35.2
opt374		432	31-JUL-93	22:51:00	72.	suncal		No	No	43	1	-45.7	35.1
cat033	930731_225227	340	31-JUL-93	22:54:00	73.			Yes	No	115	4	-48.6	35.0
opt408		590	1-AUG-93	00:00:00 ?	0.	waveplate		No	No	81	1	-48.6	35.2

opt409		103	1-AUG-93	00:00:00	?	0.	bigtune		No	No	81	1	-48.6	35.2
opt375		133	1-AUG-93	00:36:00		25.	lasdetune		No	No	46	1	-48.6	35.2
opt376		106	1-AUG-93	01:18:00		10.	lasdetune		No	No	46	1	-48.6	35.2
opt377		318	1-AUG-93	01:33:00		49.	suncal		No	No	45	1	-48.6	35.1
cat034	930801_013337	220	1-AUG-93	01:35:00		50.		calmodev	Yes	No	115	4	-48.6	35.2
opt378		101	1-AUG-93	13:04:00		32.	darks		No	No	46	1	-48.6	35.2
opt379		3	1-AUG-93	13:40:00		1.	darks		No	No	43	1	-48.6	35.2
opt380		22	1-AUG-93	14:16:00		6.	mag		No	No	43	1	-45.7	35.2
opt381		20	1-AUG-93	14:26:00		2.	mag		No	No	43	1	-48.6	35.2
opt382		8	1-AUG-93	14:33:00		1.	dop		No	No	43	1	-48.6	35.2
opt383		3193	1-AUG-93	14:45:00		637.	dop		No	No	45	1	-45.7	35.2
cat036	930801_144602	1790	1-AUG-93	14:48:00		357.		obsmodev	Yes	No	115	3	-48.6	35.2
opt384		104	2-AUG-93	01:29:00		38.	mag		No	No	43	1	-45.7	35.1
opt385		122	2-AUG-93	02:17:00		40.	door		No	No	45	1	-48.6	35.1
cat037	930802_021910	200	2-AUG-93	02:21:00		39.		pdown	Yes	No	115	1	-48.6	35.2
opt386		14	2-AUG-93	14:40:00		4.	hrfocser		No	No	43	1	-51.4	35.3
opt387		18	2-AUG-93	15:11:00		3.	ltc		No	No	46	1	-51.4	35.3
opt400		9	4-AUG-93	00:00:00	?	0.	sorensondark		No	No	80	1	??	40.7
opt388		103	4-AUG-93	01:46:00		9.	lasdetune		No	No	46	1	-45.7	35.2
opt389		103	4-AUG-93	05:27:00		8.	lasdetune		No	No	46	1	-48.6	35.2
opt390		103	4-AUG-93	05:44:00		8.	lasdetune		No	No	46	1	-45.7	35.2
opt391		103	4-AUG-93	06:09:00		7.	lasdetune		No	No	46	1	-48.6	35.2
opt392		103	4-AUG-93	06:19:00		8.	lasdetune		No	No	46	1	-45.7	35.2
opt393		103	4-AUG-93	06:30:00		9.	lasdetune		No	No	46	1	-51.4	35.2
opt394		103	4-AUG-93	13:42:00		10.	lasdetune		No	No	46	1	-51.4	35.3
opt395		29	4-AUG-93	20:01:00		9.	sunfdfoc		No	No	46	1	-45.7	33.4
opt396		39	4-AUG-93	20:15:00		10.	sunhrfoc		No	No	46	1	-48.6	35.2
opt397		19	4-AUG-93	20:30:00		4.	sunfdfoc		No	No	46	1	-45.7	35.5
opt398		25	4-AUG-93	20:38:00		4.	fdlscan		No	No	46	1	-45.7	35.4
opt399		25	4-AUG-93	21:32:00		3.	fdlscan		No	No	46	1	-48.6	35.4
opt401		19	4-AUG-93	23:04:00		5.	fdfocser		No	No	46	1	-45.7	35.3
opt402		6	6-AUG-93	21:31:00		3.	icehunt		No	No	47	1	??	??
opt403		4	6-AUG-93	21:58:00		1.	issdarks		No	No	47	1	23.3	30.8
opt404		19	6-AUG-93	22:36:00		5.	hrfocser		No	No	47	1	23.3	31.6
opt405		11	6-AUG-93	23:05:00		2.	hrfocser		No	No	47	1	23.3	32.0
opt406		26	7-AUG-93	00:49:00		27.	issperf		No	No	47	1	23.3	33.0
opt410		65	18-AUG-93	14:45:00		314.	turnon		No	No	49	1	??	??
opt411		4	18-AUG-93	20:10:00		98.	ice		No	No	50	1	-45.7	25.6
opt412		78	18-AUG-93	23:27:00		137.	focus		No	No	50	1	??	25.6
opt413		26	19-AUG-93	02:19:00		261.	ice		No	No	49	1	??	??
opt414		7	19-AUG-93	14:03:00		6.	ice		No	No	51	1	-51.4	25.9
opt415		9	19-AUG-93	15:55:00		6.	ice		No	No	49	1	-48.6	31.7
opt416		184	19-AUG-93	19:34:00		151.	focus		No	No	51	1	-48.6	26.7
opt417		20	19-AUG-93	23:00:00		4.	focus		No	No	52	1	-48.6	25.6
opt418		29	19-AUG-93	23:33:00		25.	ice		No	No	50	1	-48.6	25.6
opt419		3	20-AUG-93	01:36:00		2.	ice		No	No	49	1	-45.7	25.6
opt420		50	20-AUG-93	06:09:00		28.	foc		No	No	81	1	-14.3	25.6
opt421		10	20-AUG-93	23:21:00		4.	southwall		No	No	49	1	??	??
opt422		77	20-AUG-93	23:30:00		14.	bigtune		No	No	49	1	??	??
opt423		207	21-AUG-93	01:04:00		29.	bigtune		No	No	49	1	??	??
opt424		128	21-AUG-93	20:30:00		38.	waveplate		No	No	50	1	??	??
opt425		409	21-AUG-93	21:24:00		83.	waveplate		No	No	50	1	??	??
opt426		34	23-SEP-93	18:29:00		19.	sunhrfoc		No	No	52	1	??	??
opt427		5	23-SEP-93	18:59:00		1.	bs1test		No	No	52	1	??	??
opt428		5	23-SEP-93	19:55:00		3.	bs1test		No	No	52	1	??	??
opt429		5	23-SEP-93	20:11:00		1.	bs1test		No	No	52	1	??	??
opt430		10	23-SEP-93	20:21:00		5.	bs1test		No	No	52	1	??	??
opt431		6	23-SEP-93	20:33:00		3.	bs1test		No	No	52	1	??	??
opt432		5	23-SEP-93	20:48:00		2.	bs1test		No	No	52	1	??	??
opt433		5	23-SEP-93	20:59:00		2.	bs1test		No	No	52	1	??	??

opt434		5	23-SEP-93	21:15:00	2.	bs1test		No	No	52	1	??	??
opt435		19	24-SEP-93	15:17:00	4.	stimfoc		No	No	80	1	??	??
opt436		82	24-SEP-93	16:06:00	21.	sunhrfoc		No	No	52	1	??	??
opt437		40	24-SEP-93	16:42:00	23.	sunholes		No	No	80	1	??	??
oct503	xxxxxx_xxxxxx	40	1-OCT-93	00:00:00 ?	0.	magneto		No	Yes	74	1	??	??
oct502	xxxxxx_xxxxxx	121	1-OCT-93	00:00:00 ?	0.	magneto		No	Yes	74	1	??	??
oct500	xxxxxx_xxxxxx	49	1-OCT-93	00:00:00 ?	0.	diodes		No	No	75	1	??	??
cat038	931001_152636	6	1-OCT-93	15:27:00	9.		lcmcom	No	Yes	82	1	23.3	25.6
cat039	931001_164601	34	1-OCT-93	16:47:00	6.		lsqcom	No	No	83	1	23.3	27.6
cat040	931001_194438	7	1-OCT-93	19:45:00	12.		mdipict	No	No	84	1	23.3	25.6
cat041	931001_200012	48	1-OCT-93	20:00:00	13.		mdiltc	No	No	85	1	23.3	25.6
cat042	931001_202439	74	1-OCT-93	20:25:00	15.		mdifocus	No	No	84	1	23.3	25.6
cat043	931001_204141	4	1-OCT-93	20:44:00	2.		mdiiss	No	No	83	1	23.3	25.6
cat044	931001_205218	27	1-OCT-93	20:53:00	24.		mdiiss	No	No	83	1	23.3	25.6
cat045	931001_212119	301	1-OCT-93	21:22:00	55.		mdimrot	No	No	96	1	26.7	25.6
cat046	931001_221920	122	1-OCT-93	22:20:00	22.		mdiprot	No	No	84	1	23.3	25.6
cat047	931001_224409	21	1-OCT-93	22:44:00	42.		mdipdist	No	No	84	1	23.3	25.6
cat048	931001_234506	100	1-OCT-93	23:46:00	48.		mdidust	No	No	85	1	26.7	25.6
opt438		41	2-OCT-93	19:32:00	11.	sundop		No	No	-1	-1	??	??
cat049	931002_211056	101	2-OCT-93	21:11:00	21.		mdidtune	No	No	86	1	23.3	25.6
cat050	931002_214453	100	2-OCT-93	21:45:00	32.		mdidust	No	No	86	1	23.3	25.6
cat051	931007_223139	6	7-OCT-93	22:32:00	9.		lcmcom	No	No	85	1	26.7	25.6
cat052	931007_234103	35	7-OCT-93	23:42:00	6.		lsqcom	No	No	86	1	26.7	26.9
cat053	931008_010431	7	8-OCT-93	01:05:00	11.		mdipict	No	No	86	1	26.7	25.6
cat054	931008_011902	48	8-OCT-93	01:19:00	13.		mdiltc	No	No	85	1	23.3	25.6
cat055	931008_013816	73	8-OCT-93	01:39:00	12.		mdifocus	No	No	82	1	23.3	25.6
cat056	931008_015736	27	8-OCT-93	01:58:00	21.		mdiiss	No	No	84	1	23.3	25.6
cat057	931008_022351	21	8-OCT-93	02:24:00	38.		mdipdist	No	No	87	1	23.3	25.6
cat058	931008_030637	122	8-OCT-93	03:07:00	26.		mdioff	No	No	86	1	23.3	25.6
cat059	931008_152008	301	8-OCT-93	15:20:00	56.		shutest	No	No	84	1	26.7	25.6
cat060	931008_201704	100	8-OCT-93	20:22:00	32.		mdidust	Yes	No	84	1	23.3	25.6
cat061	931008_211021	101	8-OCT-93	21:11:00	17.		mdidtune	No	No	82	1	26.7	25.6
cat062	931012_185700	6	12-OCT-93	18:57:00	9.		lcmcom	No	No	84	1	23.3	25.6
cat063	931012_210906	29	12-OCT-93	21:10:00	6.		lsqcom	No	No	84	1	30.0	28.9
cat064	931013_174524	1	13-OCT-93	17:45:24 ?	0.			No	No	-1	-1	??	25.6
cat065	931013_181655	1	13-OCT-93	18:17:00	0.			No	No	84	1	??	25.6
cat066	931013_182509	1	13-OCT-93	18:25:00	0.			No	No	84	1	??	25.6
cat067	931013_183603	1	13-OCT-93	18:36:00	0.		daveoff	No	No	84	1	??	25.6
cat068	931013_185517	1	13-OCT-93	18:56:00	0.			No	No	84	1	??	25.6
cat069	931013_194318	1	13-OCT-93	19:44:00	0.		mdiofred	No	No	84	1	??	25.6
cat070	931014_214929	1	14-OCT-93	21:50:00	0.			No	No	84	1	??	25.6
cat071	931014_215820	1	14-OCT-93	21:59:00	0.		daveoff	No	No	84	1	??	25.6
cat072	931014_221648	1	14-OCT-93	22:17:00	0.			No	No	84	1	??	25.6
cat073	931014_222505	1	14-OCT-93	22:25:00	0.		mdiofred	No	No	84	1	??	25.6
cat074	931018_205132	51	18-OCT-93	20:52:00	9.			No	No	84	1	40.0	38.6
cat075	931018_210208	8	18-OCT-93	21:02:00	14.		mdipict	No	No	84	1	44.0	38.5
cat076	931019_212049	1	19-OCT-93	21:21:00	0.		bigtune	No	No	84	1	30.0	35.6
oct501	931019_215619	101	19-OCT-93	21:56:00	17.	xxx	mdidtune	No	No	73	1	30.0	36.1
oct504	931020_214216	101	20-OCT-93	21:42:00	17.	xxx	mdidtune	No	No	74	1	-11.4	35.2
cat077	931021_205245	183	21-OCT-93	21:00:00	36.		mdidtune	No	No	96	2	-17.1	35.9
oct505	931021_230906	104	21-OCT-93	23:09:00	16.	xxx	mdidtune	No	No	76	1	-14.3	35.9
oct506	931022_002305	104	22-OCT-93	00:23:00	16.	xxx	mdidtune	No	No	77	1	-8.6	34.7
oct507	931022_015725	104	22-OCT-93	01:57:00	16.	xxx	mdidtune	No	No	76	1	-8.6	36.0
cat078	931022_161640	90	22-OCT-93	16:19:00	18.		obsmode	No	No	96	3	-14.3	33.9
oct508	931022_163919	2190	22-OCT-93	16:41:00	442.	sun		No	No	73	1	-14.3	35.8
oct509	931023_000744	105	23-OCT-93	00:08:00	16.	sun	mdidtune	No	No	74	1	-14.3	36.1
oct510	931023_013033	104	23-OCT-93	01:31:00	15.	xxx	mdidtune	No	No	73	1	-17.1	35.4
oct511	931023_141805	232	23-OCT-93	14:20:00	46.	darks	lfdopen	No	No	89	1	-14.3	35.0
oct512	931023_153723	1666	23-OCT-93	15:39:00	333.	satcal	obsmode	No	No	73	1	-14.3	33.6
oct513	931024_153756	2645	24-OCT-93	15:38:00	529.	sun	closelog	No	Yes	76	1	-17.1	35.0

oct514	931025_205717	16	25-OCT-93	20:57:17	?	0.	compress	openlog	Yes	Yes	-1	-1	-14.3	35.4
cat079	931025_212304	1	25-OCT-93	21:23:04	?	0.		closelog	Yes	No	-1	-1	56.0	32.9
oct515	931025_231427	388	25-OCT-93	23:15:00		61.	xxx	supersun	No	No	77	1	-14.3	34.8
oct516	xxxxxx_xxxxxx	203	26-OCT-93	18:05:00		22.	drift		No	Yes	74	1	-14.3	36.2
oct518	931026_184901	1	26-OCT-93	18:51:00		0.	xxx	calmodev	Yes	No	-1	-1	-14.3	35.0
oct517	xxxxxx_xxxxxx	58	26-OCT-93	19:12:00		61.	scatter		No	No	75	1	-14.3	35.0
oct519	xxxxxx_xxxxxx	328	26-OCT-93	20:40:00		26.	supertune		No	Yes	90	1	-14.3	35.0
oct520	xxxxxx_xxxxxx	102	26-OCT-93	23:40:00		7.	fringes		No	No	78	1	-14.3	35.0
oct521	xxxxxx_xxxxxx	104	27-OCT-93	00:06:00		35.	fringes		No	No	90	1	-14.3	35.2
oct522	xxxxxx_xxxxxx	444	27-OCT-93	17:04:00		35.	newmix		No	No	79	1	-23.3	35.3
oct523	xxxxxx_xxxxxx	104	27-OCT-93	17:52:00		33.	fringes		No	No	75	1	-20.0	35.7
oct524	xxxxxx_xxxxxx	104	27-OCT-93	18:32:00		33.	fringes		No	No	75	1	-23.3	33.1
oct524a	931027_195942	20	27-OCT-93	20:00:00		5.	xxx		No	No	79	1	-20.0	35.3
oct524b	931027_201301	10	27-OCT-93	20:13:00		3.	xxx	lltsetup	No	No	79	1	-20.0	34.8
oct524c	931027_202241	9	27-OCT-93	20:23:00		2.	xxx	lltsetup	No	No	74	1	-23.3	34.9
oct524d	931027_202633	15	27-OCT-93	20:27:00		4.	xxx	lltsetup	No	No	79	1	-20.0	35.0
oct524e	931027_203119	5	27-OCT-93	20:32:00		0.	xxx		No	No	74	1	-20.0	35.0
oct524f	931027_203724	10	27-OCT-93	20:38:00		2.	xxx	bigtune	No	No	74	1	-23.3	34.9
oct525	xxxxxx_xxxxxx	454	27-OCT-93	21:39:00		43.	newmxr		No	No	79	1	-20.0	35.4
oct526	931027_233428	104	27-OCT-93	23:35:00		15.	xxx	mdidtune	No	No	75	1	-20.0	34.5
oct526a	931028_002639	104	28-OCT-93	00:27:00		16.	xxx	mdidtune	No	No	77	1	-20.0	35.7
oct527	931028_155016	104	28-OCT-93	15:50:00		16.	xxx	mdidtune	No	No	75	1	-20.0	35.2
oct528	931028_183039	102	28-OCT-93	18:31:00		16.	xxx	mdidtune	No	No	77	1	-23.3	34.8
oct528a	931028_190116	90	28-OCT-93	19:01:00		19.	xxx	mdidtune	No	No	75	1	-17.1	35.0
oct529	931028_195052	104	28-OCT-93	19:51:00		16.	xxx	mdidtune	No	No	77	1	-20.0	34.3
oct530	xxxxxx_xxxxxx	8	28-OCT-93	20:45:00		1.	lasdust		No	No	79	1	-20.0	35.2
oct531	931028_212849	104	28-OCT-93	21:29:00		16.	xxx	mdidtune	No	No	78	1	-20.0	35.3
oct532	xxxxxx_xxxxxx	8	28-OCT-93	21:58:00		2.	lasdust		No	No	79	1	??	??
oct533	931028_223530	104	28-OCT-93	22:36:00		15.	xxx	mdidtune	No	No	75	1	-20.0	35.9
oct534	xxxxxx_xxxxxx	8	28-OCT-93	23:27:00		0.	lasdust		No	No	76	1	-20.0	35.0
oct535	931028_234149	104	28-OCT-93	23:42:00		16.	xxx	mdidtune	No	No	77	1	-20.0	35.6
oct536	xxxxxx_xxxxxx	9	29-OCT-93	00:08:00		39.	lasdust		No	No	76	1	-20.0	34.0
oct537	931029_014038	104	29-OCT-93	01:41:00		16.	xxx	mdidtune	No	No	78	1	??	??
oct538	xxxxxx_xxxxxx	8	29-OCT-93	02:02:00		1.	lasdust		No	No	75	1	-20.0	35.4
oct539	931029_021639	104	29-OCT-93	02:17:00		17.	xxx	mdidtune	No	No	75	1	-23.3	34.7
oct540	xxxxxx_xxxxxx	8	29-OCT-93	02:38:00		1.	lasdust		No	No	76	1	-23.3	35.6
oct541	931029_024958	104	29-OCT-93	02:50:00		16.	xxx	mdidtune	No	No	77	1	??	??
oct542	xxxxxx_xxxxxx	8	29-OCT-93	03:19:00		1.	lasdust		No	No	75	1	-23.3	34.0
oct543	931029_034842	104	29-OCT-93	03:49:00		16.	xxx	mdidtune	No	No	78	1	-23.3	34.0
oct544	xxxxxx_xxxxxx	8	29-OCT-93	04:06:00		1.	lasdust		No	No	76	1	-20.0	35.6
oct545	931029_041446	104	29-OCT-93	04:15:00		19.	xxx	mdidtune	No	No	75	1	-23.3	35.2
oct546	xxxxxx_xxxxxx	8	29-OCT-93	04:36:00		0.	lasdust		No	No	75	1	-23.3	34.5
oct547	xxxxxx_xxxxxx	283	29-OCT-93	04:36:00		39.	supertune		No	No	75	1	-23.3	34.5
oct548	xxxxxx_xxxxxx	658	29-OCT-93	15:56:00		55.	newmixv		No	No	79	1	-23.3	35.8
oct549	931029_173353	104	29-OCT-93	17:34:00		16.	mdidtune	mdidtune	No	No	77	1	-26.7	35.7
oct550	xxxxxx_xxxxxx	625	29-OCT-93	18:02:00		50.	newmixv		No	No	75	1	-23.3	35.0
oct551	931029_191854	104	29-OCT-93	19:19:00		16.	mdidtune	mdidtune	No	No	78	1	-23.3	34.7
oct552	xxxxxx_xxxxxx	141	29-OCT-93	20:19:00		26.	vmagmix		No	Yes	76	1	-23.3	33.2
cat080	931029_203324	32	29-OCT-93	20:34:00		3.		bigtune	No	No	96	3	-20.0	35.5
oct553	xxxxxx_xxxxxx	650	29-OCT-93	20:54:00		52.	newmixv		No	No	78	1	-20.0	35.1
cat081	931029_224151	7	29-OCT-93	22:42:00		1.		mdidtune	No	No	96	2	-23.3	35.3
oct554	931029_225806	104	29-OCT-93	22:58:00		16.	xxx	mdidtune	No	No	75	1	-20.0	35.2
oct555	xxxxxx_xxxxxx	247	29-OCT-93	23:18:00		52.	newmixv		No	No	77	1	-23.3	35.2
oct558	xxxxxx_xxxxxx	89	30-OCT-93	00:00:00	?	0.	caldopser		No	No	95	1	-23.3	35.0
oct559	xxxxxx_xxxxxx	118	30-OCT-93	00:00:00	?	0.	ldopser		No	No	95	1	-23.3	35.0
oct562	xxxxxx_xxxxxx	122	30-OCT-93	00:00:00	?	0.	vmagmix		No	Yes	95	1	-23.3	35.0
oct561	xxxxxx_xxxxxx	41	30-OCT-93	00:00:00	?	0.	vmagmix		No	Yes	95	2	-23.3	35.0
oct556	xxxxxx_xxxxxx	250	30-OCT-93	02:02:00		32.	supertune		No	No	76	1	-20.0	36.1
oct557	xxxxxx_xxxxxx	328	30-OCT-93	02:39:00		25.	supertune		No	Yes	78	1	-20.0	34.7
cat082	931030_175712	90	30-OCT-93	17:58:00		18.		obsmodev	No	No	96	2	-33.3	34.8

oct560	931030_190831	145	30-OCT-93	19:08:31	?	0.	caldopser	vmagmix	Yes	Yes	-1	-1	??	40.7
cat083	931030_221644	1	30-OCT-93	22:16:44	?	0.		rundepsq	No	No	96	4	-33.3	34.9
oct564	931030_222634	185	30-OCT-93	22:27:00		35.	dopser	sleep	No	No	95	4	-33.3	34.4
oct569a	xxxxxx_xxxxxx	200	1-NOV-93	00:00:00	?	0.	boiloff		No	No	-1	-1	-33.3	34.8
oct570	xxxxxx_xxxxxx	228	1-NOV-93	00:00:00	?	0.	sundust		No	No	93	1	-33.3	34.8
oct565	xxxxxx_xxxxxx	187	1-NOV-93	21:46:00		101.	sundust		No	No	78	1	-36.7	37.1
cat084	931102_144232	4	2-NOV-93	14:43:00		18.			No	No	96	4	??	??
oct566	931102_163611	2300	2-NOV-93	16:37:00		461.	xxx	openlog	No	No	90	1	??	??
cat085	931103_005403	3	3-NOV-93	00:56:00		7.			No	No	96	4	??	??
cat086	931103_011224	2	3-NOV-93	01:14:00		2.			No	No	96	4	??	??
cat087	931103_012818	1	3-NOV-93	01:32:00		0.			No	No	96	4	??	??
cat088	931103_013705	6	3-NOV-93	01:38:00		10.		mdiltc	No	No	96	4	??	??
oct567	xxxxxx_xxxxxx	30	3-NOV-93	02:41:00		10.	ltc		No	No	93	1	??	??
oct568	xxxxxx_xxxxxx	21	3-NOV-93	03:20:00		2.	ltc		No	No	95	5	??	??
oct569	931103_155221	2460	3-NOV-93	15:51:00		491.	dopmixv	openlog	No	No	95	6	??	??
cat089	931104_155245	2	4-NOV-93	15:57:00		0.		obsmode	No	No	96	4	??	??
cat090	931104_171445	2	4-NOV-93	17:17:00		0.			No	No	96	4	??	??
cat091	931104_172850	2	4-NOV-93	17:31:00		2.		errdump	No	No	96	4	??	??
cat092	931104_174502	4	4-NOV-93	17:45:00		8.			No	No	96	4	??	??
cat093	931104_181657	2	4-NOV-93	18:20:00		0.		calmode	No	No	-1	-1	??	??
cat094	931104_195727	8	4-NOV-93	19:57:00		14.		vfdlscan	No	No	107	4	??	??
oct571	xxxxxx_xxxxxx	12	4-NOV-93	22:53:00		2.	sunlscan		No	No	93	1	??	??
oct572	931104_234942	104	4-NOV-93	23:50:00		16.	dyedtune	mdidtune	No	No	93	1	??	??
oct573	931105_002930	104	5-NOV-93	00:30:00		16.	dyedtune	mdidtune	No	No	93	1	??	??
oct574	xxxxxx_xxxxxx	100	5-NOV-93	01:09:00		7.	dyestable		No	No	93	1	??	??
oct575	931105_022023	24	5-NOV-93	02:20:00		4.	xxx		No	No	93	1	??	??
oct576	931105_022943	24	5-NOV-93	02:30:00		3.	xxx		No	No	93	1	??	??
oct577	931105_023819	24	5-NOV-93	02:38:00		4.	xxx		No	No	93	1	??	??
oct578	931105_024723	24	5-NOV-93	02:47:00		4.	xxx		No	No	93	1	??	??
oct579	931105_025443	24	5-NOV-93	02:55:00		3.	xxx		No	No	93	1	??	??
oct580	931105_031013	24	5-NOV-93	03:10:00		4.	xxx		No	No	93	1	??	??
oct581	931105_031848	24	5-NOV-93	03:19:00		4.	xxx		No	No	93	1	??	??
oct582	931105_033054	24	5-NOV-93	03:31:00		4.	xxx		No	No	93	1	??	??
oct583	931105_033938	24	5-NOV-93	03:40:00		3.	xxx		No	No	93	1	??	??
oct584	931105_040742	24	5-NOV-93	04:08:00		3.	xxx		No	No	93	1	??	??
oct585	931105_041540	24	5-NOV-93	04:16:00		3.	xxx		No	No	93	1	??	??
oct586	931105_042326	24	5-NOV-93	04:23:00		4.	xxx		No	No	93	1	??	??
oct587	931105_045923	1000	5-NOV-93	05:00:00		174.	xxx	wakeup	No	No	93	1	??	??
cat095	931105_164442	2	5-NOV-93	16:45:00		2.		obsmode	No	No	107	4	??	??
cat096	931105_170855	2	5-NOV-93	17:09:00		2.			No	No	107	4	??	??
cat097	931105_174036	2	5-NOV-93	17:41:00		0.		errdump	No	No	115	4	??	??
cat098	931105_175852	2	5-NOV-93	17:59:00		0.			No	No	115	4	??	??
cat099	931105_181831	2	5-NOV-93	18:19:00		0.			No	No	115	4	??	??
cat100	931105_182100	2	5-NOV-93	18:21:00		0.		mdidtune	No	No	115	4	??	??
oct588	931105_194016	104	5-NOV-93	19:40:00		16.	xxx	mdidtune	No	No	93	1	??	??
oct589	931105_195912	11	5-NOV-93	20:00:00		2.	xxx	vfdlscan	No	No	93	1	??	??
oct590	931105_201216	104	5-NOV-93	20:12:00		16.	xxx	mdidtune	No	No	93	1	??	??
oct591	931105_203049	11	5-NOV-93	20:32:00		2.	xxx	vfdlscan	No	No	93	1	??	??
cat101	931105_205546	2	5-NOV-93	20:56:00		2.			No	No	107	4	??	??
cat102	931105_210122	4	5-NOV-93	21:01:00		6.		ipdynmac	No	No	107	4	??	??
cat103	931105_214744	2	5-NOV-93	21:48:00		2.		lmchson	No	No	107	4	??	??
oct592	931105_232820	29	5-NOV-93	23:28:00		5.	xxx	mtmtune	No	Yes	93	1	??	??
oct593	931105_234456	29	5-NOV-93	23:45:00		5.	xxx	mtmtune	No	Yes	93	1	??	??
oct594	931105_235455	29	5-NOV-93	23:55:00		5.	xxx	mtmtune	No	Yes	93	1	??	??
oct595	931106_000448	29	6-NOV-93	00:05:00		4.	xxx	mtmtune	No	Yes	93	1	??	??
oct596	931106_004551	29	6-NOV-93	00:46:00		4.	xxx	mtmtune	No	Yes	95	7	??	??
oct597	931106_005437	29	6-NOV-93	00:55:00		4.	xxx	mtmtune	No	Yes	93	1	??	??
oct598	931106_013612	29	6-NOV-93	01:36:00		5.	xxx	mtmtune	No	No	94	1	??	??
oct599	931106_014445	29	6-NOV-93	01:45:00		6.	xxx	mtmtune	No	No	94	1	??	??
oct600	931106_015624	1	6-NOV-93	01:56:00		0.	xxx	mtmtune	No	No	94	1	??	??

oct601	931106_020449	29	6-NOV-93	02:05:00	4.	xxx	mtmtune	No	Yes	94	1	??	??
oct602	931106_021515	29	6-NOV-93	02:15:00	6.	xxx	mtmtune	No	No	94	1	??	??
oct603	931106_022629	29	6-NOV-93	02:27:00	4.	xxx	mtmtune	No	No	94	1	??	??
oct604	931106_023402	29	6-NOV-93	02:34:00	5.	xxx	mtmtune	No	No	94	1	??	??
oct605	931106_024713	29	6-NOV-93	02:47:00	5.	xxx	mtmtune	No	No	94	1	??	??
oct606	931106_030239	29	6-NOV-93	03:03:00	4.	xxx	mtmtune	No	No	94	1	??	??
oct607	931106_033611	29	6-NOV-93	03:36:00	5.	xxx	mtmtune	No	No	94	1	??	??
oct608	931106_034618	29	6-NOV-93	03:46:00	5.	xxx	mtmtune	No	No	94	1	??	??
oct609	931106_035446	29	6-NOV-93	03:55:00	4.	xxx	mtmtune	No	No	94	1	??	??
oct610	931106_041603	29	6-NOV-93	04:16:00	5.	xxx	mtmtune	No	No	94	1	??	??
oct611	931106_042520	29	6-NOV-93	04:25:00	5.	xxx	mtmtune	No	Yes	94	1	??	??
oct612	931106_043318	29	6-NOV-93	04:33:00	5.	xxx	vfdlscan	No	Yes	94	1	??	??
oct613	931106_073424	964	6-NOV-93	07:35:00	152.	xxx	bigtune	No	No	94	1	??	??
oct614	931106_101607	963	6-NOV-93	10:16:00	150.	xxx	bigtune	No	No	94	1	??	??
oct615	xxxxxx_xxxxxx	9	7-NOV-93	00:41:00	1.	absimg		No	No	95	7	-17.1	35.9
oct616	xxxxxx_xxxxxx	81	7-NOV-93	01:03:00	11.	pdist		No	No	95	7	-17.1	34.3
oct617	xxxxxx_xxxxxx	210	7-NOV-93	01:53:00	76.	distgrid		No	Yes	93	1	-14.3	34.7
cat104	931120_175953	6	20-NOV-93	18:00:00	9.		lcmcom	No	No	107	4	26.7	25.6
cat105	931120_184514	31	20-NOV-93	18:46:00	6.		lsqcom	No	No	107	4	26.7	27.3
cat106	931120_202146	5	20-NOV-93	20:22:00	9.		lcmcom	No	No	107	3	26.7	27.7
cat107	931120_210453	32	20-NOV-93	21:06:00	5.		lsqcom	No	No	107	3	30.0	29.1
cat108	931121_180055	6	21-NOV-93	18:01:00	9.		lcmcom	No	No	107	4	20.0	25.6
cat109	931121_192739	30	21-NOV-93	19:29:00	5.		lsqcom	No	No	107	4	23.3	31.3
cat110	931121_200140	46	21-NOV-93	20:02:00	16.		mdifocus	No	No	107	3	23.3	29.7
cat111	931121_201948	10	21-NOV-93	20:20:00	2.		mdioff	No	No	107	3	26.7	29.3
cat112	931122_215549	6	22-NOV-93	21:56:00	9.		lcmcom	No	No	107	4	48.0	40.2
cat113	931122_230301	34	22-NOV-93	23:04:00	6.		lsqcom	No	No	107	3	48.0	40.3
cat114	931122_235018	48	22-NOV-93	23:50:00	10.		mdiltc	No	No	107	4	44.0	40.1
cat115	931123_001958	73	23-NOV-93	00:21:00	13.		mdifocus	No	No	107	4	44.0	40.1
cat116	931123_004238	7	23-NOV-93	00:43:00	11.		brbpict	No	No	107	3	48.0	40.1
cat117	931123_055608	6	23-NOV-93	05:57:00	8.		lcmcom	No	No	107	3	-8.6	37.9
cat118	931123_070030	33	23-NOV-93	07:01:00	6.		lsqcom	No	No	107	4	-2.9	37.8
cat119	931123_083619	7	23-NOV-93	08:36:00	14.		brbpict	No	No	107	4	-8.6	35.2
cat120	931123_085214	48	23-NOV-93	08:52:00	13.		mdiltc	No	No	107	4	-8.6	34.8
cat121	931123_100920	73	23-NOV-93	10:10:00	12.			No	No	107	3	-8.6	33.5
cat122	931123_102437	4	23-NOV-93	10:25:00	2.		lltsetup	No	No	107	4	-5.7	33.4
cat123	931123_103215	27	23-NOV-93	10:33:00	22.		mdicom	No	No	107	4	-8.6	33.2
cat124	931123_214817	6	23-NOV-93	21:49:00	8.		lcmcom	No	No	107	3	-26.7	25.6
cat125	931123_225411	27	23-NOV-93	22:55:00	5.		lsqcom	No	No	107	4	-23.3	25.6
cat126	931123_230951	7	23-NOV-93	23:10:00	12.		brbpict	No	No	107	4	-20.0	25.6
cat127	931123_232756	32	23-NOV-93	23:28:00	6.		mdiltc	No	No	107	4	-23.3	25.6
cat128	931123_233841	73	23-NOV-93	23:39:00	13.		brbfocus	No	No	107	4	-23.3	25.6
cat129	931124_044913	6	24-NOV-93	04:50:00	8.		lcmcom	No	No	107	3	-23.3	25.8
cat130	931124_072950	27	24-NOV-93	07:30:00	24.			No	No	107	4	-20.0	35.6
cat131	931124_075730	43	24-NOV-93	07:58:00	7.			No	No	107	3	-20.0	35.6
cat132	931124_081016	73	24-NOV-93	08:11:00	12.		brbfocus	No	No	107	4	-20.0	35.7
cat133	931124_082454	14	24-NOV-93	08:25:00	2.		mdiltc	No	No	107	3	-20.0	35.6
cat134	931124_083139	13	24-NOV-93	08:32:00	2.		mdiltc	No	No	107	4	-20.0	35.6
cat135	931124_083549	1	24-NOV-93	08:36:00	0.		mdiltc	No	No	107	3	-20.0	35.5
cat136	931124_083856	46	24-NOV-93	08:39:00	8.		mdiltc	No	No	107	4	-20.0	35.6
cat137	931124_084903	7	24-NOV-93	08:49:00	12.		ipcom	No	No	107	3	-20.0	35.6
cat138	931124_223018	1	24-NOV-93	22:30:18 ?	0.		ipdynmac	No	No	-1	-1	-11.4	35.3
cat139	931125_230840	1	25-NOV-93	23:09:00	0.		obsmodev	No	No	107	3	-5.7	33.2
nov618a	931125_231103	9	25-NOV-93	23:11:00	19.		fdhrprot	No	No	107	9	-5.7	33.2
nov618b	931126_071012	10	26-NOV-93	07:10:00	19.		fdprot	No	No	107	9	8.0	33.5
nov618c	931126_074541	10	26-NOV-93	07:46:00	19.		fdhrprot	No	No	107	10	-8.6	33.2
nov618d	931126_081339	10	26-NOV-93	08:14:00	20.		fdhrprot	No	No	107	9	-11.4	33.2
nov618e	931126_084410	10	26-NOV-93	08:44:00	18.		fdhrprot	No	No	107	10	-11.4	33.2
nov618f	931126_091104	10	26-NOV-93	09:11:00	17.		fdhrprot	No	No	107	9	-14.3	33.2
nov619	931126_095713	396	26-NOV-93	09:58:00	122.		obsmodev	No	No	107	10	-14.3	33.2

nov620	931126_200554	104	26-NOV-93	20:06:00	18.	mdidtune	No	No	107	9	-14.3	33.2
nov621	931126_223814	29	26-NOV-93	22:38:00	5.		No	No	107	9	-11.4	33.2
nov622	931126_225405	29	26-NOV-93	22:54:00	5.		No	No	107	9	-14.3	33.1
nov623	931126_230423	29	26-NOV-93	23:04:00	6.	mtmtune	No	No	107	9	-14.3	33.2
nov624	931126_231551	30	26-NOV-93	23:16:00	6.	mtmtune	No	No	107	9	-14.3	33.2
nov625	931126_232631	29	26-NOV-93	23:27:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov626	931126_233710	29	26-NOV-93	23:37:00	5.	mtmtune	No	No	107	9	-14.3	33.2
nov627	931126_234525	29	26-NOV-93	23:46:00	5.	mtmtune	No	No	107	10	-14.3	33.2
nov628	931126_235528	29	26-NOV-93	23:56:00	5.	mtmtune	No	No	107	9	-14.3	33.2
nov629	931127_000834	29	27-NOV-93	00:09:00	5.	mtmtune	No	No	107	10	-14.3	33.2
nov630	931127_001658	29	27-NOV-93	00:17:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov631	931127_003129	29	27-NOV-93	00:32:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov632	931127_004016	29	27-NOV-93	00:40:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov633	931127_004909	29	27-NOV-93	00:49:00	5.	mtmtune	No	No	107	9	-14.3	33.2
nov634	931127_005846	29	27-NOV-93	00:59:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov635	931127_010818	29	27-NOV-93	01:08:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov636	931127_011818	29	27-NOV-93	01:18:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov637	931127_012814	8	27-NOV-93	01:28:00	2.	mtmtune	No	No	116	5	-14.3	33.2
nov638	931127_031747	29	27-NOV-93	03:18:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov639	931127_032724	29	27-NOV-93	03:27:00	6.	mtmtune	No	No	107	9	-14.3	33.1
nov640	931127_035144	29	27-NOV-93	03:52:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov641	931127_040155	29	27-NOV-93	04:02:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov642	931127_041431	29	27-NOV-93	04:15:00	5.		No	No	107	10	-14.3	33.2
nov643	931127_042725	29	27-NOV-93	04:28:00	5.	mtmtune	No	No	107	9	-14.3	33.1
nov644a	931128_014411	52	28-NOV-93	01:44:00	39.	obsmodev	No	No	107	10	-14.3	40.1
nov644b	931128_045909	61	28-NOV-93	04:59:00	32.	obsmodev	No	No	107	9	-17.1	40.1
nov645	931128_062210	100	28-NOV-93	06:22:00	87.	legscntr	No	No	107	11	-14.3	40.1
nov646	931128_080748	104	28-NOV-93	08:08:00	53.	leghyst	No	No	107	10	-14.3	40.1
nov647	931129_010728	30	29-NOV-93	01:08:00	14.	obsmodev	No	No	107	9	-11.4	40.1
nov648	931129_012618	32	29-NOV-93	01:26:00	16.	isshyst	No	No	107	9	-11.4	40.1
nov649	931129_015525	94	29-NOV-93	01:56:00	47.	isshyst	No	No	107	9	-11.4	40.1
nov650	931129_024915	27	29-NOV-93	02:52:00	19.	mdiiss	No	No	107	11	-14.3	40.1
nov651	931129_032516	22	29-NOV-93	03:26:00	13.	mdiiss	No	No	107	10	-14.3	40.1
nov652	931129_041502	27	29-NOV-93	04:15:00	18.	mdiiss	No	No	107	11	-14.3	40.1
nov653	931129_044855	27	29-NOV-93	04:49:00	17.	mdiiss	No	No	107	10	-14.3	40.1
nov654	931129_051101	27	29-NOV-93	05:12:00	16.	mdiiss	No	No	107	11	-14.3	40.1
nov655	931129_061106	27	29-NOV-93	06:11:00	17.	mdiiss	No	No	116	5	-14.3	40.0
nov656	931129_073924	29	29-NOV-93	07:39:00	6.		No	No	107	10	-14.3	40.1
nov657	931129_080328	29	29-NOV-93	08:04:00	5.		No	No	107	9	-14.3	40.1
nov658	931129_081446	29	29-NOV-93	08:15:00	5.		No	No	107	11	-14.3	40.1
nov659	931129_082350	29	29-NOV-93	08:24:00	5.		No	No	107	10	-14.3	40.1
nov660	931129_083342	29	29-NOV-93	08:34:00	5.		No	No	107	9	-14.3	40.1
nov661	931129_084437	29	29-NOV-93	08:45:00	5.		No	No	107	11	-14.3	40.0
nov662	931129_085417	29	29-NOV-93	08:54:00	5.		No	No	107	10	-14.3	40.1
nov663	931129_090730	29	29-NOV-93	09:08:00	5.		No	No	107	9	-14.3	40.1
nov664	931129_092044	29	29-NOV-93	09:21:00	5.		No	No	107	11	-14.3	40.1
nov665	931129_093056	29	29-NOV-93	09:31:00	5.		No	No	107	10	-14.3	40.1
nov666	931129_094248	29	29-NOV-93	09:43:00	5.		No	No	107	9	-14.3	40.1
nov667	931129_095303	29	29-NOV-93	09:53:00	5.		No	No	107	11	-14.3	40.1
nov668	931129_100542	29	29-NOV-93	10:06:00	5.		No	No	107	10	-14.3	40.1
nov669	931129_101604	29	29-NOV-93	10:16:00	5.		No	No	107	9	-14.3	40.1
nov670	931129_103018	29	29-NOV-93	10:30:00	5.		No	No	107	11	-14.3	40.1
nov671	931129_103954	29	29-NOV-93	10:40:00	5.		No	No	107	10	-14.3	40.1
nov672	931129_105309	29	29-NOV-93	10:53:00	5.		No	No	107	9	-14.3	40.1
nov673	931129_110224	29	29-NOV-93	11:02:00	6.		No	No	107	11	-14.3	40.1
nov674	931129_111340	29	29-NOV-93	11:14:00	5.		No	No	107	10	-14.3	40.1
nov675	931129_112337	29	29-NOV-93	11:24:00	5.		No	No	107	9	-14.3	40.1
nov676	931129_113649	29	29-NOV-93	11:37:00	5.		No	No	107	11	-14.3	40.1
nov677	931129_121424	62	29-NOV-93	12:15:00	28.		No	No	107	10	-14.3	40.1
nov678	931129_124511	243	29-NOV-93	12:46:00	60.		No	No	107	9	-14.3	40.1

nov679	931129_140205	37	29-NOV-93	14:03:00	8.		No	No	107	11	-14.3	40.1
nov680	931129_143330	243	29-NOV-93	14:34:00	53.	openlog	No	No	107	10	-14.3	40.1
cat140	931129_202205	4	29-NOV-93	20:22:00	5.		No	No	107	4	-14.3	35.1
cat141	931129_203723	2	29-NOV-93	20:38:00	2.		No	No	107	4	-17.1	35.2
cat142	931129_212531	1	29-NOV-93	21:30:00	0.	ipseqtst	No	No	107	3	-14.3	35.1
cat143	931129_213607	11	29-NOV-93	21:41:00	21.	ipseqtst	No	No	107	3	-14.3	35.2
cat144	931129_225853	2	29-NOV-93	23:01:00	2.	closelog	No	No	107	4	-14.3	35.2
nov681	931130_000601	57	30-NOV-93	00:06:00	28.	pztgrid	No	No	107	11	-14.3	35.2
nov682	931130_003605	125	30-NOV-93	00:36:00	63.	pzthyst	No	No	107	11	-14.3	35.2
nov683a	931130_021014	20	30-NOV-93	02:10:00	38.		No	No	107	11	-14.3	35.2
nov683b	931130_025307	10	30-NOV-93	02:53:00	21.	obsmodev	No	No	107	9	-14.3	34.4
nov684	931130_035815	33	30-NOV-93	03:58:00	16.	pztmax	No	No	107	10	-14.3	35.2
nov685	931130_070421	242	30-NOV-93	07:05:00	130.	mapgrad	No	No	107	10	-14.3	35.2
nov686	931130_094918	243	30-NOV-93	09:50:00	95.	vfdlscan	No	No	107	9	-14.3	35.2
nov687	931130_155254	245	30-NOV-93	15:53:00	79.		No	No	107	11	-8.6	35.2
cat145	931130_173229	6	30-NOV-93	17:33:00	1.	mtmtune	No	No	107	4	-14.3	35.3
nov688	931130_173658	29	30-NOV-93	17:37:00	5.	mtmtune	No	No	107	10	-14.3	35.2
nov689	931130_174943	9	30-NOV-93	17:50:00	1.	mtmtune	No	No	107	10	-14.3	35.2
cat146	931130_181423	8	30-NOV-93	18:14:00	5.	mtmtune	No	No	107	4	-14.3	35.2
cat147	931130_182423	29	30-NOV-93	18:24:00	6.		No	No	107	4	-14.3	35.2
nov691	931130_183856	29	30-NOV-93	18:39:00	5.	mtmtune	No	No	107	10	-14.3	35.2
nov692	931130_185106	29	30-NOV-93	18:51:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov693	931130_190908	29	30-NOV-93	19:09:00	5.	mtmtune	No	No	107	10	-14.3	35.0
cat148	931130_190908	29	30-NOV-93	19:09:00	5.	mtmtune	No	No	107	4	-14.3	35.0
nov694	931130_192229	29	30-NOV-93	19:23:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov695	931130_193403	29	30-NOV-93	19:34:00	5.	mtmtune	No	No	107	10	-14.3	35.1
nov696	931130_194548	29	30-NOV-93	19:46:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov697	931130_195705	29	30-NOV-93	19:57:00	5.	mtmtune	No	No	107	10	-14.3	35.3
nov698	931130_201256	29	30-NOV-93	20:13:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov699	931130_202811	29	30-NOV-93	20:28:00	5.	mtmtune	No	No	107	10	-14.3	35.2
nov700	931130_203918	29	30-NOV-93	20:39:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov701	931130_205003	29	30-NOV-93	20:50:00	5.	mtmtune	No	No	107	10	-14.3	35.1
nov702	931130_210035	29	30-NOV-93	21:01:00	5.	mtmtune	No	No	107	11	-14.3	35.3
nov703	931130_211400	29	30-NOV-93	21:14:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov704	931130_212832	29	30-NOV-93	21:29:00	5.	mtmtune	No	No	107	10	-14.3	35.2
nov705	931130_214300	29	30-NOV-93	21:43:00	5.	mtmtune	No	No	107	11	-14.3	35.2
nov706	931130_220201	29	30-NOV-93	22:02:00	5.	mtmtune	No	No	107	9	-14.3	35.2
nov707	931130_222455	11	30-NOV-93	22:28:00	19.	ipseqtst	No	No	107	10	-14.3	35.2
cat149	931201_181306	3	1-DEC-93	18:14:00	0.	iptbltst	Yes	No	115	4	23.3	25.6
nov708	931201_211929	14	1-DEC-93	21:21:00	23.	iptbltst	No	No	107	11	23.3	25.6
cat150	931201_221344	1	1-DEC-93	22:14:00	0.	mdidtune	No	No	109	8	26.7	25.6
nov709	931201_221559	104	1-DEC-93	22:16:00	18.	bigtune	No	No	107	9	23.3	25.6
nov710	931202_190458	103	2-DEC-93	19:05:00	19.	mdidtune	No	No	107	9	23.3	25.6
cat151	931203_004511	12	3-DEC-93	00:48:00	26.	ipseqtst	No	No	109	6	26.7	25.6
nov711	931203_192121	4	3-DEC-93	19:25:00	6.	obsmode	No	No	116	1	26.7	25.6
nov712	931203_201023	42	3-DEC-93	20:12:00	8.	fddair	No	No	107	13	26.7	25.6
nov713	931204_165529	16	4-DEC-93	16:56:00	43.	ipmemtst	No	No	116	9	23.3	25.6
cat152	931205_221408	6	5-DEC-93	22:15:00	8.	lcmcom	No	No	109	9	23.3	25.6
cat153	931214_004957	6	14-DEC-93	00:50:00	9.	lcmcom	No	Yes	109	9	23.3	25.6
cat154	931215_024536	7	15-DEC-93	02:46:00	12.	brbpict	No	No	109	8	26.7	25.6
cat155	931215_152905	1	15-DEC-93	15:29:05 ?	0.	ipvelmac	No	No	-1	-1	26.7	25.6
cat156	931215_163228	11	15-DEC-93	16:38:00	21.	ipseqtst	No	No	109	8	26.7	25.6
cat157	931217_022821	5	17-DEC-93	02:31:00	17.	mdioff	No	No	109	9	??	25.6
cat158	931217_222334	6	17-DEC-93	22:24:00	9.	lcmcom	No	No	109	5	26.7	25.9
cat159	931217_230607	33	17-DEC-93	23:07:00	6.	ipcom	Yes	No	109	9	26.7	27.9
cat160	931217_233315	1	17-DEC-93	23:33:15 ?	0.	lfdopen	No	No	-1	-1	26.7	27.0
cat161	931218_010148	48	18-DEC-93	01:02:00	13.	mdiltc	No	No	109	5	26.7	26.3
cat162	931218_011846	7	18-DEC-93	01:19:00	12.	mdipict	No	No	109	5	26.7	26.2
cat163	931218_013527	73	18-DEC-93	01:36:00	13.	mdifocus	No	No	115	5	30.0	26.2
cat164	931218_203257	6	18-DEC-93	20:33:00	9.	mdicom	No	No	109	9	23.3	25.7

cat165	931218_211911	30	18-DEC-93	21:21:00	5.	ipcom	No	No	107	6	26.7	31.8
cat166	931218_214831	7	18-DEC-93	21:49:00	11.	mdipict	No	No	107	6	26.7	34.2
cat167	931218_220431	48	18-DEC-93	22:05:00	12.	mdiltc	No	Yes	107	7	26.7	35.2
cat168	931218_221904	73	18-DEC-93	22:20:00	15.	mdifocus	No	No	115	5	26.7	35.2
cat169	931219_174652	6	19-DEC-93	17:47:00	9.	lcmcom	No	No	107	7	-2.9	37.6
cat170	931219_190432	31	19-DEC-93	19:06:00	6.	ipcom	No	No	109	9	-2.9	38.1
cat171	931219_192526	6	19-DEC-93	19:26:00	39.	tvipcom	No	No	109	2	-2.9	38.1
cat172	931220_064308	7	20-DEC-93	06:43:00	12.	mdipict	No	No	107	5	-17.1	27.3
cat173	931220_065852	48	20-DEC-93	06:59:00	13.	mdiltc	No	Yes	107	5	-17.1	28.5
cat174	931220_071334	73	20-DEC-93	07:14:00	14.	mdifocus	No	No	107	5	-17.1	29.2
cat175	931220_074608	6	20-DEC-93	07:47:00	8.	lcmcom	No	No	107	5	-20.0	30.9
cat176	931220_084656	2	20-DEC-93	08:50:00	2.	lsqcom	No	No	107	5	-20.0	32.6
cat177	931220_090106	4	20-DEC-93	09:05:00	12.	mdicom	No	No	107	5	-17.1	31.1
cat178	931220_210852	6	20-DEC-93	21:09:00	9.	lcmcom	No	No	107	5	-11.4	35.2
cat179	931220_215334	36	20-DEC-93	21:55:00	6.	ipcom	No	No	107	5	-8.6	35.8
cat180	931220_223624	73	20-DEC-93	22:37:00	16.	mdifocus	No	No	107	5	-8.6	36.4
cat181	931220_231205	14	20-DEC-93	23:12:00	28.	calmode	No	No	109	6	-8.6	36.7
cat182	931220_235934	5	21-DEC-93	00:00:00	7.	closelog	No	No	107	5	-14.3	37.1
cat183	931221_075531	6	21-DEC-93	07:56:00	9.	lcmcom	No	No	107	5	-42.9	35.8
cat184	931221_082209	27	21-DEC-93	08:24:00	5.	ipcom	No	No	107	5	-45.7	35.7
cat185	931221_084934	14	21-DEC-93	08:50:00	27.	mdioff	No	No	109	5	-48.6	35.7
cat186	931221_182624	6	21-DEC-93	18:27:00	9.	lcmcom	No	No	107	5	??	??
cat187	931221_191940	30	21-DEC-93	19:21:00	6.	ipcom	No	No	107	5	-33.3	36.1
cat188	931221_194038	14	21-DEC-93	19:41:00	28.	mdipict	No	No	109	7	-30.0	36.2
cat189	931221_203349	1	21-DEC-93	20:34:00	0.	llton	No	No	107	5	-30.0	36.4
cat190	931221_210002	7	21-DEC-93	21:00:00	12.	mdipict	No	No	107	5	-30.0	36.4
cat191	931222_030252	1	22-DEC-93	03:02:52 ?	0.	mdicom	No	No	-1	-1	??	25.6
cat192	931222_032258	6	22-DEC-93	03:23:00	9.	lcmcom	No	No	107	5	-48.6	35.8
cat193	931222_042245	1	22-DEC-93	04:22:45 ?	0.	lsqcom	No	No	-1	-1	-51.4	35.7
cat194	931222_052755	1225	22-DEC-93	05:28:00	245.	mdicom	No	No	107	8	-51.4	31.8
cat195	931222_103549	6	22-DEC-93	10:36:00	9.	lcmcom	No	No	107	5	-33.3	34.9
cat196	931222_105703	5	22-DEC-93	10:59:00	5.	ipcom	No	No	115	5	-33.3	35.0
cat197	931222_111407	14	22-DEC-93	11:14:00	25.	closelog	No	No	109	5	??	??
cat198	931222_163837	7	22-DEC-93	16:39:00	11.	mdipict	No	No	115	5	-54.3	35.5
cat199	931222_173317	6	22-DEC-93	17:34:00	8.	mdicom	No	No	107	5	-60.0	35.7
cat200	931222_182058	3	22-DEC-93	18:23:00	3.	ipcom	No	No	107	5	-60.0	35.7
cat201	931222_184012	14	22-DEC-93	18:41:00	26.	lfdopen	No	No	109	2	-60.0	36.2
cat202	931222_202513	73	22-DEC-93	20:26:00	13.	mdifocus	No	No	107	5	-65.7	36.4
cat203	931222_204349	2	22-DEC-93	20:45:00	3.	lcalmode	No	No	115	5	-71.4	35.8
cat204	931222_221349	3	22-DEC-93	22:15:00	0.	iptbltst	Yes	No	109	5	-82.9	35.8
cat205	931222_224109	2	22-DEC-93	22:49:00	2.	ipseqtst	No	No	109	9	??	25.6
cat206	931223_004152	27	23-DEC-93	00:42:00	19.	mdiiss	No	No	109	5	-88.6	35.6
cat207	931223_010434	73	23-DEC-93	01:05:00	14.	mdifocus	No	No	107	5	-88.6	35.6
cat208	931223_012013	7	23-DEC-93	01:20:00	12.	mdipict	No	No	109	9	-80.0	35.5
cat209	931223_013528	48	23-DEC-93	01:36:00	12.	mdiltc	No	No	107	5	-85.7	35.6
cat210	931223_053833	73	23-DEC-93	05:40:00	14.	mdifocus	No	No	109	9	-74.3	35.3
cat211	931223_055631	7	23-DEC-93	05:57:00	11.	mdipict	No	No	107	5	-74.3	35.2
cat212	931223_061445	48	23-DEC-93	06:15:00	13.	mdiltc	No	Yes	109	9	-74.3	35.2
cat213	931223_074514	27	23-DEC-93	07:45:00	18.	mdiiss	No	No	107	5	-71.4	35.2
cat214	931223_092008	6	23-DEC-93	09:21:00	11.	closelog	No	No	115	5	-74.3	35.1
cat215	931223_111900	6	23-DEC-93	11:19:00	12.	mdicom	No	No	107	5	-80.0	35.2
cat216	931223_134655	6	23-DEC-93	13:47:00	9.	lcmcom	No	Yes	107	3	-85.7	35.4
cat217	931223_145437	37	23-DEC-93	14:58:00	6.	ipcom	No	No	109	5	-85.7	34.4
cat218	931223_152145	14	23-DEC-93	15:22:00	30.	lobsmode	No	No	109	5	-85.7	35.3
cat219	931223_163917	7	23-DEC-93	16:39:00	12.	mdipict	No	No	109	5	-85.7	35.4
cat220	931223_165515	48	23-DEC-93	16:55:00	13.	mdiltc	No	Yes	107	3	-85.7	35.4
cat221	931223_170953	73	23-DEC-93	17:11:00	13.	mdifocus	No	No	109	9	-85.7	35.4
cat222	931223_174402	73	23-DEC-93	17:45:00	14.	mdifocus	No	No	107	5	-85.7	35.4
cat223	931223_180435	301	23-DEC-93	18:05:00	53.	mdimrot	No	No	107	3	-85.7	35.4
cat224	931223_190425	122	23-DEC-93	19:05:00	25.	mdiprot	No	No	109	9	-85.7	35.3

cat225	931223_193352	21	23-DEC-93	19:34:00		38.	mdiiss	No	No	107	5	-85.7	35.5
cat226	931223_222528	1	23-DEC-93	22:25:28	?	0.	mdircsca	No	No	-1	-1	-85.7	35.3
cat227	931223_225040	3	23-DEC-93	22:51:00		0.		No	No	109	6	-85.7	35.3
cat228	931223_235525	2	23-DEC-93	23:55:00		6.	liptlm2	No	No	109	8	-85.7	33.1
nov714	931227_195520	10	27-DEC-93	19:56:00		18.	lltsetup	No	No	107	10	-17.1	35.2
nov715	931227_213353	98	27-DEC-93	21:34:00		194.	maphrfov	No	No	116	1	-17.1	35.3
nov716	931228_012649	10	28-DEC-93	01:27:00		2.		No	No	107	13	-14.3	35.3
nov717	931228_015435	10	28-DEC-93	01:55:00		1.	hrfocser	No	No	107	13	-17.1	35.2
nov718	931228_015834	10	28-DEC-93	01:59:00		1.	hrfocser	No	No	107	12	-14.3	35.2
cat229	931228_020234	10	28-DEC-93	02:03:00		1.	hrfocser	No	No	109	9	-14.3	35.3
nov719	931228_032318	202	28-DEC-93	03:23:00		412.	closelog	No	No	107	13	-14.3	35.3
nov720	931228_163045	19	28-DEC-93	16:31:00		35.	mdiltcs1	No	No	107	12	-14.3	35.2
nov721	931228_172003	15	28-DEC-93	17:20:00		29.	mdiltcs2	No	No	107	10	-14.3	35.2
nov723	931228_195938	48	28-DEC-93	20:00:00		95.	mdiltcs4	No	No	107	11	-14.3	35.2
nov724	931228_221532	48	28-DEC-93	22:16:00		95.	mdiltcs1	No	No	107	9	-14.3	35.2
nov725	931228_235936	48	29-DEC-93	00:00:00		95.	mdiltcs2	No	No	107	12	-14.3	35.2
nov726	931229_024235	52	29-DEC-93	02:43:00		99.		No	No	107	10	-14.3	35.2
nov727a	931229_070623	64	29-DEC-93	07:06:00		39.	mdilaser	No	No	107	14	-14.3	35.2
nov727b	931229_075956	65	29-DEC-93	08:00:00		32.	obsmodev	No	No	107	14	-14.3	35.3
nov728	931229_084005	328	29-DEC-93	08:40:00		56.	suprtune	No	No	107	14	-14.3	35.2
nov729	931229_095517	206	29-DEC-93	09:55:00		84.	closelog	No	No	107	11	-14.3	35.2
nov730	931229_112150	36	29-DEC-93	11:22:00		68.	pztff	No	No	107	9	-14.3	35.2
nov731	931229_123316	36	29-DEC-93	12:33:00		70.		No	No	107	12	-14.3	35.2
nov732	931229_134517	48	29-DEC-93	13:45:00		96.	mdiltcs2	No	No	107	14	-14.3	35.2
cat230	931229_225715	11	29-DEC-93	22:58:00		21.	ipseqtst	No	No	115	2	??	25.6
cat231	931230_002209	1	30-DEC-93	00:22:09	?	0.	iptmtst	No	No	-1	-1	12.0	35.2
cat232	940104_190945	7	4-JAN-94	19:10:00		11.	fdfocser	No	No	109	5	26.7	25.6
cat233	940104_192544	9	4-JAN-94	19:26:00		16.	fdfocser	No	No	115	4	26.7	25.6
cat234	940104_194606	9	4-JAN-94	19:46:00		17.	hrfocser	No	No	115	4	26.7	25.6
cat235	940104_211609	5	4-JAN-94	21:17:00		9.	hrfocser	No	No	109	8	26.7	25.6
cat236	940104_212753	19	4-JAN-94	21:28:00		11.	fdfocser	No	No	115	4	26.7	25.6
cat237	940104_215812	9	4-JAN-94	21:58:00		2.	fdfocser	No	No	109	5	26.7	25.6
cat238	940104_220112	20	4-JAN-94	22:01:00		7.	fdfocser	No	No	109	5	26.7	25.6
cat239	940104_222402	20	4-JAN-94	22:24:00		6.	fdfocser	No	No	109	8	26.7	25.6
cat240	940104_234101	3	4-JAN-94	23:41:00		1.	fdfocser	No	No	109	5	26.7	25.6
cat241	940104_234326	20	4-JAN-94	23:44:00		7.	fdfocser	No	No	109	8	26.7	25.6
cat242	940104_235604	20	4-JAN-94	23:56:00		6.	fdfocser	No	No	109	5	26.7	25.6
cat243	940105_000329	21	5-JAN-94	00:04:00		6.	fdfocser	No	No	115	2	26.7	25.6
cat244	940105_001032	20	5-JAN-94	00:11:00		6.	fdfocser	No	No	109	8	26.7	25.6
cat245	940105_001755	21	5-JAN-94	00:18:00		9.	fdfocser	No	No	109	5	26.7	25.6
cat246	940105_015305	20	5-JAN-94	01:53:00		6.	fdfocser	No	No	115	2	26.7	25.6
cat247	940106_232957	73	6-JAN-94	23:30:00		12.	mdifocus	No	No	109	8	23.3	25.6
cat248	940110_192724	3	10-JAN-94	19:28:00		6.	iptmtst	No	No	109	5	26.7	25.6
cat249	940110_195133	3	10-JAN-94	19:53:00		3.	iptmtst	No	No	109	6	26.7	25.6
cat250	940111_012617	584	11-JAN-94	01:26:00		73.	mdioff	Yes	No	-1	-1	20.0	25.6
cat251	940111_035400	6	11-JAN-94	03:55:00		8.	lcmcom	No	No	109	5	26.7	25.7
cat252	940111_043557	32	11-JAN-94	04:37:00		6.	lsqcom	No	No	109	7	26.7	27.5
cat253	940111_151731	18	11-JAN-94	15:18:00		36.	ipmemtst	No	No	109	5	23.3	25.6
cat254	940111_185730	12	11-JAN-94	18:58:00		23.	iptbltst	No	No	109	2	26.7	25.6
cat255	940111_202554	5	11-JAN-94	20:29:00		8.	mdioff	No	No	115	2	26.7	25.6
cat256	940112_145145	6	12-JAN-94	14:52:00		9.	lcmcom	No	No	109	5	23.3	25.6
cat257	940112_154832	35	12-JAN-94	15:50:00		6.	ipcom	Yes	No	109	2	26.7	27.7
cat258	940112_161848	21	12-JAN-94	16:19:00		59.	closelog	No	No	109	7	26.7	26.7
cat259	940112_224104	7	12-JAN-94	22:41:00		12.	mdipict	No	No	109	5	26.7	25.6
cat260	940112_230148	48	12-JAN-94	23:02:00		13.	mdiltc	No	No	109	9	26.7	25.6
cat261	940112_233031	73	12-JAN-94	23:31:00		14.	mdifocus	No	No	109	8	26.7	25.6
cat262	940113_011157	245	13-JAN-94	01:12:00		63.	mdilaser	No	No	115	2	26.7	25.6
cat263	940113_073052	27	13-JAN-94	07:31:00		23.	mdiiss	No	No	109	5	23.3	25.6
cat264	940113_172735	27	13-JAN-94	17:28:00		31.	mdiiss	No	No	109	9	23.3	25.6
cat265	940113_181243	27	13-JAN-94	18:14:00		23.	mdiiss	No	No	109	5	26.7	25.6

cat266	940120_115542	7	20-JAN-94	11:56:00	12.	mdipict	No	No	109	8	16.0	25.6
cat267	940120_121041	7	20-JAN-94	12:11:00	12.	mdipict	No	No	109	9	20.0	25.6
cat268	940120_131844	73	20-JAN-94	13:20:00	19.	mdifocus	No	No	109	6	20.0	25.6
cat269	940120_134308	82	20-JAN-94	13:43:00	28.	mdiprot	No	No	109	5	20.0	25.6
cat270	940120_141706	201	20-JAN-94	14:17:00	57.	ipcom	No	No	109	5	20.0	25.6
cat271	940120_153426	21	20-JAN-94	15:35:00	52.	mdioff	No	No	109	5	20.0	25.6
cat272	940120_180210	12	20-JAN-94	18:03:00	13.	mdiiss	No	No	109	5	20.0	25.6
cat273	940121_093056	27	21-JAN-94	09:32:00	28.	mdiiss	No	No	109	5	20.0	25.6
cat274	940121_150107	245	21-JAN-94	15:01:00	65.		No	No	109	6	20.0	25.6
cat275	940121_161142	245	21-JAN-94	16:12:00	55.	closelog	No	No	109	5	23.3	25.6
cat276	940215_185257	5	15-FEB-94	18:53:00	9.	lcmcom	No	YES	109	2	23.3	25.6
cat277	940215_210515	30	15-FEB-94	21:05:15 ?	0.	ipcom	Yes	YES	-1	-1	26.7	27.0
cat278	940215_212633	20	15-FEB-94	21:27:00	55.	ldmccom	No	YES	109	9	26.7	26.2
cat279	940218_020247	2	18-FEB-94	02:03:00	4.	ice	No	YES	109	5	-65.7	25.6
cat280	940218_023104	2	18-FEB-94	02:31:00	4.	obsmode	No	YES	109	2	-65.7	25.6
cat281	940218_160854	3	18-FEB-94	16:09:00	4.	ice	No	No	109	5	-71.4	25.6
cat282	940218_161705	3	18-FEB-94	16:17:00	4.	ice	No	No	109	2	-68.6	25.6
cat283	940218_180531	3	18-FEB-94	18:06:00	3.	calmode	No	No	115	4	-68.6	25.6
cat284	940218_221804	3	18-FEB-94	22:18:00	4.	obsmode	No	No	109	5	-65.7	25.6
cat285	940219_025607	73	19-FEB-94	02:56:00	13.	mdifocus	No	No	109	5	-65.7	25.6
cat286	940219_032649	3	19-FEB-94	03:27:00	4.	ice	No	No	109	2	-65.7	25.6
cat287	940219_155830	3	19-FEB-94	15:59:00	4.	calmode	No	No	109	5	-71.4	25.6
cat288	940219_160956	3	19-FEB-94	16:10:00	4.	ice	No	No	115	4	-74.3	25.6
cat289	940219_215106	3	19-FEB-94	21:51:00	4.	calmode	No	No	109	5	-71.4	25.6
cat290	940219_215846	3	19-FEB-94	21:59:00	4.	ice	No	No	109	2	-71.4	25.6
cat291	940220_070232	3	20-FEB-94	07:03:00	4.	ice	No	No	109	5	??	40.7
cat292	940220_071248	48	20-FEB-94	07:13:00	13.	mdiltc	No	No	115	4	-71.4	25.6
cat293	940220_153003	3	20-FEB-94	15:30:00	4.	calmode	No	No	109	5	??	40.7
cat294	940220_154207	3	20-FEB-94	15:42:00	4.	ice	No	No	109	5	??	40.7
cat295	940220_234953	3	20-FEB-94	23:50:00	4.	calmode	No	No	109	2	??	40.7
cat296	940220_235817	3	20-FEB-94	23:59:00	3.	ice	No	No	109	5	??	40.7
cat297	940221_070028	3	21-FEB-94	07:01:00	3.	ice	No	No	109	9	??	40.7
cat298	940221_160347	3	21-FEB-94	16:04:00	4.	ice	No	No	109	6	??	40.7
cat299	940221_234759	3	21-FEB-94	23:48:00	4.	ice	No	No	109	5	-65.7	25.6
cat300	940222_150142	3	22-FEB-94	15:02:00	4.	ice	No	No	109	5	??	40.7
cat301	940222_190140	2	22-FEB-94	19:03:00	0.	lltcal	No	No	115	4	??	40.7
nov735a	940222_190446	58	22-FEB-94	19:06:00	57.	lltcal	No	No	116	2	??	40.7
cat303	940222_201609	12	22-FEB-94	20:19:00	9.	lltcal	No	No	109	2	-65.7	25.6
nov735b	940222_203749	22	22-FEB-94	20:38:00	17.	lltcal	No	No	116	9	-65.7	25.6
cat305	940223_012551	3	23-FEB-94	01:26:00	4.	closelog	No	No	109	9	??	??
cat306	940223_015615	3	23-FEB-94	01:57:00	3.	ice	No	No	109	2	??	??
cat307	940223_021025	3	23-FEB-94	02:11:00	3.	ice	No	No	109	6	??	40.7
cat308	940223_151923	3	23-FEB-94	15:20:00	3.	ice	No	No	109	5	??	40.7
cat309	940223_201113	3	23-FEB-94	20:11:00	4.	ice	No	No	109	5	-62.9	28.5
nov735c	940224_005004	59	24-FEB-94	00:51:00	45.	lltcal	No	No	116	7	-62.9	36.7
nov735d	940224_014138	52	24-FEB-94	01:43:00	38.	closelog	No	No	116	10	-62.9	35.2
cat312	940224_022501	3	24-FEB-94	02:25:00	4.	lltoff	No	No	109	9	-62.9	35.3
cat313	940224_160638	3	24-FEB-94	16:07:00	4.	ice	No	No	109	2	-68.6	35.2
cat314	940224_161413	3	24-FEB-94	16:14:00	4.	ice	No	No	109	6	-65.7	35.3
cat315	940224_162658	48	24-FEB-94	16:27:00	13.	mdiltc	No	No	109	5	-65.7	35.2
nov735e	940224_182543	60	24-FEB-94	18:26:00	46.	vfdlscan	No	No	116	8	-65.7	35.3
cat317	940225_022745	3	25-FEB-94	02:28:00	4.	obsmodev	No	No	109	5	-60.0	35.2
cat318	940225_161235	3	25-FEB-94	16:13:00	3.	ice	No	No	109	9	-65.7	35.5
cat319	940226_004937	3	26-FEB-94	00:50:00	3.	ice	No	No	109	2	-60.0	35.2
cat320	940226_150554	3	26-FEB-94	15:06:00	4.	ice	No	No	115	4	-65.7	35.3
cat321	940226_151309	3	26-FEB-94	15:13:00	4.	ice	No	No	109	6	-65.7	35.2
cat322	940226_151943	3	26-FEB-94	15:20:00	4.	ice	No	No	109	5	-65.7	35.2
cat323	940227_034259	3	27-FEB-94	03:43:00	4.	ice	No	No	109	5	-65.7	35.2
cat324	940227_143117	3	27-FEB-94	14:31:00	4.	ice	No	No	109	5	-65.7	35.2
cat325	940227_143909	2	27-FEB-94	14:39:00	4.	ice	No	YES	109	9	-65.7	35.1

cat326	940227_145237	47	27-FEB-94	14:53:00	12.	mdiltc	No	YES	109	2	-65.7	35.2
cat327	940228_055509	3	28-FEB-94	05:55:00	4.	ice	No	No	115	4	-65.7	35.3
cat328	940228_060250	3	28-FEB-94	06:03:00	4.	ice	No	No	109	6	-65.7	35.3
cat329	940228_151100	3	28-FEB-94	15:11:00	4.	ice	No	No	109	5	-62.9	35.0
cat330	940228_212319	2	28-FEB-94	21:24:00	1.		No	No	109	5	8.0	35.0
cat331	940228_213019	2	28-FEB-94	21:31:00	1.		No	No	109	5	8.0	35.0
cat332	940228_214304	2	28-FEB-94	21:43:00	2.		No	No	109	9	8.0	35.0
cat333	940228_220408	3	28-FEB-94	22:05:00	0.	iptbltst	No	No	115	4	12.0	35.0
cat334	940301_035022	3	1-MAR-94	03:51:00	3.		No	No	109	2	-60.0	35.0
cat335	940301_142036	3	1-MAR-94	14:21:00	4.		No	No	109	5	-62.9	35.4
cat336	940302_004342	3	2-MAR-94	00:44:00	4.	ice	No	No	115	4	-60.0	35.2
cat337	940302_143456	3	2-MAR-94	14:35:00	4.	ipmemtst	No	No	109	6	-65.7	35.2
cat338	940302_164144	2	2-MAR-94	16:42:00	2.		No	No	109	7	-60.0	35.2
cat339	940302_171309	4	2-MAR-94	17:14:00	0.	nwtbltst	No	No	109	5	-60.0	35.1
cat340	940303_003621	3	3-MAR-94	00:37:00	3.	ipmemtst	No	No	109	5	-62.9	34.1
cat341	940303_041552	3	3-MAR-94	04:16:00	1.	sleep	No	No	109	7	-60.0	35.1
cat342	940303_145012	3	3-MAR-94	14:50:00	4.	iptbltst	No	No	109	7	-62.9	35.3
cat343	940303_160110	9	3-MAR-94	16:05:00	3.	nwtbltst	No	No	109	7	0.0	34.3
cat344	940304_210400	4	4-MAR-94	21:05:00	0.	nwtbltst	No	No	109	2	23.3	33.5
cat345	940304_222132	48	4-MAR-94	22:22:00	13.	mdiltc	No	No	109	2	23.3	35.1
cat346	940304_223746	7	4-MAR-94	22:38:00	12.	mdipict	No	No	109	5	23.3	35.2
cat347	940304_225422	3	4-MAR-94	22:55:00	3.	ice	No	No	109	6	23.3	35.2
cat348	940304_233629	16	4-MAR-94	23:37:00	11.	iptbltst	No	No	109	7	23.3	35.0
cat349	940305_004602	4	5-MAR-94	00:47:00	0.	nwtbltst	No	No	109	5	26.7	35.0
cat350	940305_005046	5	5-MAR-94	00:51:00	3.		No	No	109	5	26.7	35.0
cat351	940305_005426	5	5-MAR-94	00:54:00	9.	lobsmode	No	No	109	5	26.7	35.0
cat352	940305_010802	3	5-MAR-94	01:08:00	4.	ice	No	No	109	7	26.7	35.2
cat353	940305_021427	5	5-MAR-94	02:15:00	7.	ice	No	No	109	5	-5.7	35.2
cat354	940305_023056	5	5-MAR-94	02:31:00	8.	ice	No	No	109	2	-17.1	34.9
cat355	940305_025054	5	5-MAR-94	02:51:00	8.	ice	No	No	109	6	-30.0	35.2
cat356	940305_030844	5	5-MAR-94	03:09:00	7.	ice	No	No	109	7	-40.0	35.0
cat357	940305_032836	5	5-MAR-94	03:29:00	7.	ice	No	No	109	5	-48.6	35.6
cat358	940305_035540	5	5-MAR-94	03:56:00	7.	ice	No	No	109	5	-57.1	35.2
cat359	940305_044052	5	5-MAR-94	04:41:00	8.	ice	No	No	109	5	-62.9	35.0
cat360	940305_080636	5	5-MAR-94	08:07:00	7.	ice	No	No	109	2	-62.9	35.3
cat361	940305_081947	73	5-MAR-94	08:21:00	13.	mdifocus	No	No	109	6	-62.9	35.2
cat362	940305_174506	5	5-MAR-94	17:45:00	8.	iptbltst	No	No	115	4	-65.7	35.2
cat363	940305_181445	6	5-MAR-94	18:16:00	4.	nwtbltst	No	No	109	7	-65.7	35.2
cat364	940305_182619	3	5-MAR-94	18:27:00	2.		No	No	109	5	-62.9	35.3
cat365	940305_183501	7	5-MAR-94	18:35:00	15.	lobsmode	No	No	109	9	-65.7	35.3
cat366	940305_191026	3	5-MAR-94	19:11:00	2.	closelog	No	No	109	7	-62.9	35.1
cat367	940305_200817	5	5-MAR-94	20:08:00	8.	closelog	No	No	109	5	-62.9	35.2
cat368	940305_202112	48	5-MAR-94	20:21:00	14.	mdiltc	No	No	109	5	-62.9	35.2
cat369	940306_033557	5	6-MAR-94	03:36:00	8.	ice	No	No	109	5	-65.7	35.5
cat370	940306_040224	3	6-MAR-94	04:03:00	3.		No	No	109	2	-65.7	35.2
cat371	940306_041358	3	6-MAR-94	04:14:00	3.	crop1	No	No	109	7	-65.7	35.2
cat372	940306_042432	3	6-MAR-94	04:25:00	3.	errdump	No	No	109	6	-65.7	35.2
cat373	940306_163420	5	6-MAR-94	16:35:00	7.	ice	No	No	115	4	-65.7	35.2
cat374	940307_040448	5	7-MAR-94	04:05:00	7.	ice	No	No	109	2	-65.7	35.1
cat375	940307_162906	1	7-MAR-94	16:29:00	0.	ldcrpdmp	No	No	109	7	-62.9	35.3
cat376	940307_164649	3	7-MAR-94	16:47:00	4.	closelog	No	No	109	7	-62.9	35.3
cat377	940307_170019	5	7-MAR-94	17:00:00	8.	ice	No	No	109	6	-62.9	35.2
cat378	940307_205914	1	7-MAR-94	20:59:00	0.	ldcrpdmp	No	No	109	5	-62.9	35.2
cat379	940307_211717	2	7-MAR-94	21:18:00	2.	crop1	No	No	109	5	-62.9	35.1
cat380	940307_214852	2	7-MAR-94	21:49:00	2.		No	No	109	5	-62.9	35.2
cat381	940307_220050	2	7-MAR-94	22:02:00	2.		No	No	109	9	-60.0	35.2
cat382	940307_220949	2	7-MAR-94	22:11:00	2.	dpstart	No	No	109	7	-60.0	35.2
cat383	940308_020544	12	8-MAR-94	02:06:00	7.	lltcal1	No	No	109	5	-60.0	35.0
cat384	940308_021438	26	8-MAR-94	02:15:00	14.	lltoff	No	No	109	5	-60.0	35.0
cat385	940308_024939	5	8-MAR-94	02:50:00	7.	ice	No	No	109	5	-60.0	35.0

nov736a	940308_153620	5	8-MAR-94	15:37:00		7.	ice	No	No	116	12	-65.7	35.1
nov736b	940308_174522	104	8-MAR-94	17:46:00		62.	lltsetup	No	No	116	6	-62.9	35.1
cat386	940309_020737	3	9-MAR-94	02:08:00		14.	ldcrpdmp	No	No	109	5	-60.0	35.2
cat387	940309_022837	3	9-MAR-94	02:29:00		2.	ipmemtst	No	No	115	4	-60.0	35.1
cat388	940309_144135	1	9-MAR-94	14:42:00		0.		No	No	109	9	-65.7	35.2
cat389	940309_144714	2	9-MAR-94	14:48:00		1.	crop1	No	No	109	9	-62.9	35.2
cat390	940309_153344	3	9-MAR-94	15:34:00		2.	lfdopen	No	No	109	7	-65.7	35.3
cat391	940309_211426	1	9-MAR-94	21:15:00		0.	ldcrpdmp	No	No	109	5	-62.9	35.0
cat392	940309_212153	1	9-MAR-94	21:22:00		0.		No	No	109	5	-60.0	35.2
cat393	940309_212819	3	9-MAR-94	21:29:00		2.		No	No	109	5	-62.9	35.2
cat394	940309_214441	2	9-MAR-94	21:45:00		2.		No	No	109	2	-60.0	35.1
cat395	940309_215120	2	9-MAR-94	21:52:00		1.	llton	No	No	109	6	-60.0	35.0
cat396	940309_235527	5	9-MAR-94	23:56:00		7.	ice	No	No	109	5	-60.0	35.0
cat397	940311_002501	5	11-MAR-94	00:25:00		8.	ice	No	No	115	3	-65.7	34.6
cat398	940311_003808	12	11-MAR-94	00:38:00		3.	rbihunt	No	No	109	5	-65.7	35.2
cat399	940311_004114	12	11-MAR-94	00:42:00		2.		No	No	109	9	-65.7	35.2
cat400	940311_004445	12	11-MAR-94	00:45:00		3.		No	No	109	5	-62.9	35.2
cat401	940311_004824	12	11-MAR-94	00:49:00		3.		No	No	109	9	-62.9	35.2
cat402	940311_005218	12	11-MAR-94	00:53:00		4.		No	No	109	5	-62.9	35.3
cat403	940311_005645	12	11-MAR-94	00:57:00		5.		No	No	109	9	-62.9	35.2
cat404	940311_010216	12	11-MAR-94	01:03:00		7.		No	No	115	5	-62.9	35.4
cat405	940311_010956	12	11-MAR-94	01:10:00		12.	sleep	No	No	109	8	-62.9	35.2
nov733a	940311_160912	1	11-MAR-94	16:09:12	?	0.	rbihunt	Yes	No	-1	-1	-65.7	35.2
nov733b	940311_161057	12	11-MAR-94	16:11:00		2.		No	No	116	2	-65.7	35.3
nov733c	940311_161309	12	11-MAR-94	16:14:00		1.		No	No	116	9	-68.6	35.3
nov733d	940311_161529	12	11-MAR-94	16:16:00		2.		No	No	116	10	-65.7	35.2
nov733e	940311_161804	12	11-MAR-94	16:18:00		3.		No	No	116	2	-65.7	35.2
nov733f	940311_162112	12	11-MAR-94	16:22:00		3.		No	No	116	9	-65.7	35.3
nov733g	940311_162525	12	11-MAR-94	16:26:00		6.		No	No	116	10	-62.9	35.1
nov733h	940311_163143	12	11-MAR-94	16:32:00		10.		No	No	116	2	-65.7	35.3
cat406	940311_164524	5	11-MAR-94	16:46:00		7.	ice	No	No	115	4	-65.7	35.3
nov734a	940311_194156	1	11-MAR-94	19:41:56	?	0.	closelog	Yes	No	116	9	-62.9	35.2
nov734b	940311_194336	12	11-MAR-94	19:44:00		2.		No	No	116	9	-62.9	35.2
nov734c	940311_194543	12	11-MAR-94	19:46:00		2.		No	No	116	7	-62.9	35.2
nov734d	940311_194757	12	11-MAR-94	19:48:00		2.		No	No	116	10	-62.9	35.2
nov734e	940311_195027	12	11-MAR-94	19:51:00		2.		No	No	116	2	-62.9	35.1
nov734f	940311_195330	12	11-MAR-94	19:54:00		3.		No	No	116	9	-62.9	35.2
nov734g	940311_195737	12	11-MAR-94	19:58:00		6.		No	No	116	7	-62.9	35.2
nov734h	940311_200352	12	11-MAR-94	20:04:00		10.	iptbltst	No	No	116	10	-62.9	35.1
cat407	940311_213455	1	11-MAR-94	21:36:00		0.	ldlmbdmp	No	No	115	2	-62.9	35.0
cat408	940311_220645	11	11-MAR-94	22:07:00		17.	lobsmode	No	No	115	2	-62.9	34.9
cat409	940311_230237	2	11-MAR-94	23:03:00		0.		No	No	109	5	-60.0	35.0
cat410	940311_231528	2	11-MAR-94	23:16:00		0.		No	No	109	5	-62.9	35.2
cat411	940311_232118	5	11-MAR-94	23:21:00		8.		No	No	109	9	-60.0	34.9
cat412	940311_233916	4	11-MAR-94	23:39:00		2.	lasdtun2	No	No	115	5	-62.9	35.2
nov737	940312_025326	212	12-MAR-94	02:54:00		48.	calmlasr	No	No	116	9	-57.1	35.0
nov738a	940312_035601	13	12-MAR-94	03:56:00		2.	calmlasr	No	No	116	2	-57.1	34.9
nov738	940312_041421	13	12-MAR-94	03:56:00		2.	lyotscan	No	No	116	2	-57.1	34.9
nov739	940312_052339	212	12-MAR-94	05:24:00		58.	obsmlasr	No	No	116	10	-57.1	35.0
nov740a	940312_145619	1	12-MAR-94	14:56:19	?	0.	rbihunt	Yes	No	116	10	-62.9	35.3
nov740b	940312_145804	12	12-MAR-94	14:58:00		2.		No	No	116	10	-62.9	35.3
nov740c	940312_150016	12	12-MAR-94	15:01:00		1.		No	No	116	6	-62.9	35.2
nov740d	940312_150237	12	12-MAR-94	15:03:00		2.		No	No	116	3	-62.9	35.2
nov740e	940312_150512	12	12-MAR-94	15:06:00		2.		No	No	116	9	-62.9	35.3
nov740f	940312_150819	12	12-MAR-94	15:09:00		3.		No	No	116	8	-62.9	35.2
nov740g	940312_151231	12	12-MAR-94	15:13:00		6.		No	No	116	4	-65.7	35.2
nov740h	940312_151853	12	12-MAR-94	15:19:00		10.		No	No	116	4	-62.9	35.2
cat413	940312_153119	5	12-MAR-94	15:32:00		7.	ice	No	No	109	5	-62.9	35.1
cat414	940312_161816	3	12-MAR-94	16:19:00		3.	iptbltst	No	No	109	8	-62.9	35.1
cat415	940312_162558	3	12-MAR-94	16:26:00		2.	limb2	No	No	115	5	-62.9	35.2

cat416	940312_165104	2	12-MAR-94	16:51:00		2.	limb2	No	No	109	6	-62.9	35.2
cat417	940312_165822	7	12-MAR-94	16:59:00		5.	sleep	No	No	115	3	-62.9	35.3
nov741a	940313_150536	1	13-MAR-94	15:05:36	?	0.	rbihunt	Yes	No	116	10	-51.4	35.3
nov741b	940313_150719	12	13-MAR-94	15:08:00		1.		No	No	116	10	-51.4	35.3
nov741c	940313_150932	12	13-MAR-94	15:10:00		2.		No	No	116	6	-51.4	35.3
nov741d	940313_151152	12	13-MAR-94	15:12:00		2.		No	No	116	3	-54.3	35.2
nov741e	940313_151429	12	13-MAR-94	15:15:00		2.		No	No	116	9	-54.3	35.3
nov741f	940313_151738	12	13-MAR-94	15:18:00		4.		No	No	116	8	-51.4	35.2
nov741g	940313_152148	12	13-MAR-94	15:22:00		6.		No	No	116	4	-51.4	35.2
nov741h	940313_152808	12	13-MAR-94	15:28:00		11.		No	No	116	4	-51.4	35.2
cat418	940313_154101	5	13-MAR-94	15:42:00		7.	ice	No	No	109	8	-51.4	35.3
cat419	940313_155528	1	13-MAR-94	15:56:00		0.	mdiltc	No	No	115	5	-51.4	35.2
nov742	940313_155733	48	13-MAR-94	15:58:00		12.	closelog	No	No	116	1	-51.4	35.1
nov743b	940314_042520	12	14-MAR-94	04:26:00		1.		No	No	116	2	-36.7	35.1
nov743c	940314_042732	12	14-MAR-94	04:28:00		2.		No	No	116	10	-36.7	35.2
nov743d	940314_042951	12	14-MAR-94	04:30:00		2.		No	No	116	6	-40.0	35.2
nov743e	940314_043226	12	14-MAR-94	04:33:00		2.		No	No	116	1	-36.7	35.2
nov743f	940314_043533	12	14-MAR-94	04:36:00		4.		No	No	116	3	-36.7	35.0
nov743g	940314_043945	12	14-MAR-94	04:40:00		6.		No	No	116	9	-36.7	35.1
nov743h	940314_044606	12	14-MAR-94	04:46:00		11.		No	No	116	8	-40.0	35.2
nov744	940314_050027	5	14-MAR-94	05:01:00		7.	ice	No	No	116	3	-40.0	35.3
nov745a	940314_144255	1	14-MAR-94	14:42:55	?	0.		Yes	No	116	4	-20.0	35.2
nov745b	940314_144439	12	14-MAR-94	14:45:00		2.		No	No	116	4	-20.0	35.2
nov745c	940314_144651	12	14-MAR-94	14:47:00		2.		No	No	116	4	-20.0	35.2
nov745d	940314_144910	12	14-MAR-94	14:50:00		2.		No	No	116	2	-20.0	35.2
nov745e	940314_145144	12	14-MAR-94	14:52:00		3.		No	No	116	10	-20.0	35.2
nov745f	940314_145451	12	14-MAR-94	14:55:00		4.		No	No	116	6	-20.0	35.2
nov745g	940314_145903	12	14-MAR-94	14:59:00		6.		No	No	116	1	-20.0	35.3
nov745h	940314_150524	12	14-MAR-94	15:06:00		10.		No	No	116	3	-20.0	35.1
cat420	940314_153806	1	14-MAR-94	15:38:00		8.	ice	No	No	115	5	-20.0	35.0
nov746	940314_155356	48	14-MAR-94	15:54:00		14.	mdiltc	No	No	116	9	-17.1	35.1
cat421	940314_195747	5	14-MAR-94	19:58:00		2.	lmtm2com	No	No	109	6	-17.1	35.0
cat422	940314_215403	1	14-MAR-94	21:54:00		0.	sleep	No	No	109	7	-5.7	35.0
nov747a	940315_140136	1	15-MAR-94	14:01:36	?	0.	rbihunt	Yes	No	116	9	-5.7	35.1
nov747b	940315_140320	12	15-MAR-94	14:04:00		1.		No	No	116	9	-5.7	35.0
nov747c	940315_140531	12	15-MAR-94	14:06:00		2.		No	No	116	8	-5.7	35.2
nov747d	940315_140751	12	15-MAR-94	14:08:00		2.		No	No	116	4	-5.7	35.0
nov747e	940315_141027	12	15-MAR-94	14:11:00		2.		No	No	116	4	-5.7	35.0
nov747f	940315_141334	12	15-MAR-94	14:14:00		4.		No	No	116	2	-5.7	35.0
nov747g	940315_141747	12	15-MAR-94	14:18:00		6.		No	No	116	10	-5.7	35.0
nov747h	940315_142407	12	15-MAR-94	14:24:00		11.	sleep	No	No	116	6	-5.7	35.1
nov748	940315_210948	7	15-MAR-94	21:10:00		12.	mdipict	No	No	116	8	-2.9	35.0
nov749	940315_212548	48	15-MAR-94	21:26:00		13.	mdiltc	No	No	116	4	-2.9	35.0
cat423	940315_224633	6	15-MAR-94	22:47:00		6.		No	No	109	7	-5.7	35.0
cat424	940315_225859	2	15-MAR-94	22:59:00		1.	lcalmode	No	No	115	4	-2.9	35.0
cat425	940316_024130	20	16-MAR-94	02:42:00		3.	lasdtune	No	No	115	4	??	??
cat426	940316_025102	20	16-MAR-94	02:51:00		3.	calmlasr	No	No	109	6	??	??
nov750a	940316_041320	21	16-MAR-94	04:13:00		4.	obsmlasr	No	No	116	9	-20.0	35.0
nov750b	940316_041906	21	16-MAR-94	04:19:00		3.		No	No	116	5	-17.1	35.0
nov750c	940316_042529	21	16-MAR-94	04:26:00		3.		No	No	116	6	-20.0	34.7
nov750d	940316_043154	21	16-MAR-94	04:32:00		3.		No	No	116	3	-20.0	35.0
nov750e	940316_043822	21	16-MAR-94	04:38:00		4.	calmlasr	No	No	116	8	-20.0	35.0
nov751a	940316_045128	22	16-MAR-94	04:52:00		3.	lyotscan	No	No	116	1	-20.0	35.0
nov751b	940316_045732	22	16-MAR-94	04:58:00		3.		No	No	116	10	-20.0	34.8
nov751c	940316_050426	22	16-MAR-94	05:05:00		3.		No	No	116	9	-20.0	35.0
nov751d	940316_051119	22	16-MAR-94	05:12:00		3.		No	No	116	4	-20.0	35.0
nov751e	940316_051812	22	16-MAR-94	05:18:00		4.		No	No	116	4	-20.0	35.0
nov755	940317_215816	6	17-MAR-94	21:58:00		2.	grad	Yes	No	116	10	??	25.6
nov756	940317_220244	6	17-MAR-94	22:03:00		1.	obsmode	Yes	No	116	10	??	25.6
nov757	940318_214229	6	18-MAR-94	21:43:00		1.	obsmode	No	No	116	10	??	25.6

nov758	940318_215143	6	18-MAR-94	21:52:00		1.		grad	Yes	No	116	2	??	25.6
nov759	940318_215500	6	18-MAR-94	21:55:00		1.			No	No	116	10	??	25.6
nov764	940323_004101	6	23-MAR-94	00:41:00		1.		obsmode	No	No	116	2	??	25.6
nov765	940323_005048	6	23-MAR-94	00:51:00		1.		openlog	Yes	No	116	9	??	25.6
nov766	940329_050729	245	29-MAR-94	05:08:00		63.		closelog	No	No	116	1	??	25.6
cat436	940330_181138	5	30-MAR-94	18:12:00		2.			No	Yes	-1	-1	26.7	25.6
cat440	940331_011035	1	31-MAR-94	01:10:35	?	0.			No	No	-1	-1	23.3	25.6
apr800	940401_025941	65	1-APR-94	03:00:00		137.			No	Yes	-1	-1	23.3	25.6
apr801	940401_061358	56	1-APR-94	06:14:00		125.		mdioff	No	Yes	-1	-1	26.7	25.6
apr802	940401_142048	48	1-APR-94	14:21:00		13.		mdiltc	No	Yes	-1	-1	23.3	25.6
apr803	940401_143902	7	1-APR-94	14:39:00		12.		mdipict	No	Yes	-1	-1	23.3	25.6
apr804	940401_171701	21	1-APR-94	17:17:00		39.		mdipdist	No	Yes	-1	-1	26.7	25.6
apr805	940401_180345	61	1-APR-94	18:04:00		12.		mdiprot	No	Yes	-1	-1	26.7	25.6
apr806	940401_183733	61	1-APR-94	18:38:00		25.		mdiiss	No	Yes	-1	-1	26.7	25.6
apr807	940401_194654	61	1-APR-94	19:47:00		53.		mdimrot	No	Yes	-1	-1	26.7	25.6
apr808	940401_230257	2	1-APR-94	23:03:00		3.		lfdopen	No	Yes	-1	-1	23.3	25.6
apr809	940402_033500	245	2-APR-94	03:35:00		63.		mdilaser	No	Yes	-1	-1	23.3	25.6
apr810	940402_045113	73	2-APR-94	04:52:00		16.		mdifocus	No	Yes	-1	-1	23.3	25.6
apr811	940402_191303	6	2-APR-94	19:14:00		8.		lcmcom	No	Yes	-1	-1	20.0	25.9
apr812	940402_202654	31	2-APR-94	20:28:00		6.		lsqcom	No	Yes	-1	-1	23.3	28.8
apr814	940402_213421	14	2-APR-94	21:34:00		3.		mapfdfov	No	Yes	-1	-1	30.0	28.7
apr813	940402_213420	1	2-APR-94	21:34:20	?	0.			No	No	-1	-1	30.0	28.7
apr815	940402_215656	56	2-APR-94	21:57:00		120.		mdioff	No	Yes	-1	-1	23.3	29.8
apr816	940404_202008	2	4-APR-94	20:20:00		2.			No	Yes	-1	-1	23.3	25.6
apr817	940404_203401	1	4-APR-94	20:34:01	?	0.		dpc84	No	No	-1	-1	23.3	25.6
apr818	940404_205345	1	4-APR-94	20:53:45	?	0.			No	No	-1	-1	23.3	25.6
apr819	940404_205622	1	4-APR-94	20:56:22	?	0.		lfdclose	No	No	-1	-1	23.3	25.6
apr820	940404_205857	1	4-APR-94	20:58:57	?	0.		dpc82	No	No	-1	-1	23.3	25.6
apr821	940404_210847	1	4-APR-94	21:08:47	?	0.		mdioff	No	No	-1	-1	23.3	25.6
apr822	940405_225452	0	5-APR-94	22:54:52		0.			No	No	0	0	23.3	25.6
apr823	940405_225802	0	5-APR-94	22:58:02		0.		mdioff	No	No	0	0	20.0	25.6
apr824	940406_003403	0	6-APR-94	00:34:03		0.		lfdopen	No	No	0	0	23.3	25.6
apr825	940406_004420	0	6-APR-94	00:44:20		0.		sw1x1s	No	No	0	0	23.3	25.6
apr826	940406_010943	0	6-APR-94	01:09:43		0.		mdifocus	No	No	0	0	23.3	25.6
apr827	940406_012550	0	6-APR-94	01:25:50		0.		mdifocus	No	No	0	0	23.3	25.6
apr828	940406_023226	0	6-APR-94	02:32:26		0.		lcmcom	No	No	0	0	23.3	25.6
apr829	940406_031203	0	6-APR-94	03:12:03		0.		lsqcom	No	No	0	0	26.7	27.0
apr830	940406_140020	0	6-APR-94	14:00:20		0.		mdiltc	No	No	0	0	23.3	25.6
apr831	940406_141503	0	6-APR-94	14:15:03		0.		mdipict	No	No	0	0	23.3	25.6
apr832	940406_154133	0	6-APR-94	15:41:33		0.		imgburst	No	No	0	0	23.3	25.6
apr833	940406_160422	0	6-APR-94	16:04:22		0.		set_nk	No	No	0	0	23.3	25.6
apr834	940406_181137	0	6-APR-94	18:11:37		0.			No	No	0	0	23.3	25.6
apr835	940406_181524	0	6-APR-94	18:15:24		0.			No	No	0	0	23.3	25.6
apr836	940406_184839	0	6-APR-94	18:48:39		0.			No	No	0	0	23.3	25.6
apr837	940406_185418	0	6-APR-94	18:54:18		0.		mdilaser	No	No	0	0	23.3	25.6
apr838	940407_000702	0	7-APR-94	00:07:02		0.		mdifocus	No	No	0	0	23.3	30.0
apr839	940407_013442	0	7-APR-94	01:34:42		0.		ldsosld	No	No	0	0	??	25.6
apr840	940407_014019	0	7-APR-94	01:40:19		0.			No	No	0	0	??	26.8
apr841	940407_061445	0	7-APR-94	06:14:45		0.		tsthrfov	No	No	0	0	26.7	35.2
apr850	940407_151311	73	7-APR-94	15:14:00		13.		mdifocus	No	Yes	-1	-1	-11.4	35.0
apr852	940407_154635	27	7-APR-94	15:47:00		49.			Yes	YES	-1	-1	-11.4	35.2
apr853	940407_170218	47	7-APR-94	17:02:18		0.	bigpdist	bigpdist	No	YES	0	0	-14.3	35.0
apr854	940407_184651	28	7-APR-94	18:46:51		0.	bigpdist: di	bigpdist	No	YES	0	0	-14.3	35.1
apr855	940408_012439	63	8-APR-94	01:24:39		0.	mapgrad: Ray	mapgrad	No	YES	0	0	-57.1	35.2
apr856	940408_021453	63	8-APR-94	02:14:53		0.	mapgrad: rad	mapgrad	No	YES	0	0	-60.0	35.1
apr857	940408_063328	36	8-APR-94	06:33:28		0.	mdiltcs1	mdiltcs1	No	YES	0	0	-57.1	35.2
apr858	940408_072850	47	8-APR-94	07:28:50		0.	mdiltcs1	mdiltcs1	Yes	YES	0	0	-60.0	35.2
apr859	940408_083541	47	8-APR-94	08:35:41		0.	mdiltcs2	mdiltcs2	No	YES	0	0	-60.0	35.2
apr860	940408_094207	47	8-APR-94	09:42:07		0.	mdiltcs4	mdiltcs4	No	YES	0	0	-60.0	35.2
apr861	940408_105052	2	8-APR-94	10:50:52		0.	legff (marke	legff	No	YES	0	0	-62.9	35.2

apr862	940408_112834	51	8-APR-94	11:28:34	0.	legff	legff	No	YES	0	0	-60.0	35.1
apr863	940408_125346	35	8-APR-94	12:53:46	0.	pztff, cal m	pztff	No	YES	0	0	-60.0	35.3
apr864	940408_134413	35	8-APR-94	13:44:13	0.	pztff, cal		No	YES	0	0	-60.0	35.3
apr865	940408_162705	97	8-APR-94	16:27:05	0.	maphrfov	maphrfov	Yes	YES	0	0	-60.0	35.2
apr866	940408_183154	28	8-APR-94	18:31:54	0.	mapfdfov	mapfdfov	No	YES	0	0	-60.0	35.2
apr867	940408_204844	28	8-APR-94	20:48:44	0.	mtmtune: tes	mtmtune	No	YES	0	0	-60.0	35.0
apr868	940408_221234	64	8-APR-94	22:12:34	0.	sunclasr: so	vfdlscan	No	YES	0	0	-60.0	35.2
apr869	940408_222903	21	8-APR-94	22:29:03	0.	lyotscan, li	lyotscan	No	YES	0	0	-60.0	35.2
apr870	940408_223506	21	8-APR-94	22:35:06	0.	lyotscan, li		No	YES	0	0	-60.0	35.2
apr871	940408_224150	21	8-APR-94	22:41:50	0.	lyotscan, li		No	YES	0	0	-60.0	35.2
apr872	940408_224831	21	8-APR-94	22:48:31	0.	lyotscan, li		No	YES	0	0	-60.0	35.2
apr873	940408_225515	21	8-APR-94	22:55:15	0.	lyotscan, li		No	YES	0	0	-60.0	35.3
apr874	940409_000359	21	9-APR-94	00:03:59	0.	lyotscan, bl	lyotscan	No	YES	0	0	-45.7	35.3
apr875	940409_001002	21	9-APR-94	00:10:02	0.	lyotscan, bl		No	YES	0	0	-45.7	35.1
apr876	940409_001645	21	9-APR-94	00:16:45	0.	lyotscan, bl		No	YES	0	0	-42.9	35.3
apr877	940409_002323	21	9-APR-94	00:23:23	0.	lyotscan, bl		No	YES	0	0	-42.9	35.2
apr878	940409_003005	21	9-APR-94	00:30:05	0.	lyotscan, bl	calmlasr	No	YES	0	0	-42.9	35.3
apr879	940409_023735	64	9-APR-94	02:37:35	0.	sunclasr, di	vfdlscan	No	YES	0	0	-57.1	35.2
apr880	940409_025529	21	9-APR-94	02:55:29	0.	lyotscan, li	lyotscan	No	YES	0	0	-57.1	35.2
apr881	940409_030130	21	9-APR-94	03:01:30	0.	lyotscn, pos		No	YES	0	0	-57.1	35.0
apr882	940409_030808	21	9-APR-94	03:08:08	0.	lyotscan, po		No	YES	0	0	-60.0	35.2
apr883	940409_031446	21	9-APR-94	03:14:46	0.	lyotscan, po		No	YES	0	0	-60.0	35.1
apr884	940409_032125	21	9-APR-94	03:21:25	0.	lyotscan, po	fdprot	No	YES	0	0	-60.0	35.1
apr885	940409_040550	4	9-APR-94	04:05:50	0.	dark, fdprot	calmlasr	No	YES	0	0	-60.0	35.2
apr886	940409_041006	21	9-APR-94	04:10:06	0.	lyotscan, la	lyotscan	No	YES	0	0	-60.0	34.9
apr887	940409_041609	21	9-APR-94	04:16:09	0.	lyotscan, re		No	YES	0	0	-60.0	35.3
apr888	940409_042257	21	9-APR-94	04:22:57	0.	lyotscan, re		No	YES	0	0	-60.0	35.3
apr889	940409_042936	21	9-APR-94	04:29:36	0.	lyotscan, re		Yes	YES	0	0	-60.0	35.2
apr890	940409_043619	21	9-APR-94	04:36:19	0.	lyotscan, th	calmlasr	No	YES	0	0	-60.0	35.2
apr896	940409_050245	4	9-APR-94	05:02:45	0.	dark, fdprot	calmlasr	No	YES	0	0	-60.0	35.3
apr891	940409_050707	21	9-APR-94	05:07:07	0.	lyotscan, re	lyotscan	No	YES	0	0	-62.9	35.2
apr892	940409_051308	21	9-APR-94	05:13:08	0.	lyotscan, re		No	YES	0	0	-60.0	35.3
apr893	940409_051951	21	9-APR-94	05:19:51	0.	lyotscan, re		No	YES	0	0	-60.0	35.2
apr894	940409_052634	21	9-APR-94	05:26:34	0.	lyotscan, re		No	YES	0	0	-60.0	35.0
apr895	940409_053314	21	9-APR-94	05:33:14	0.	lyotscan, re	calmlasr	Yes	YES	0	0	-60.0	35.2
apr897	940409_055703	4	9-APR-94	05:57:03	0.	dark, fdprot	calmlasr	No	YES	0	0	-60.0	35.2
apr898	940409_060135	21	9-APR-94	06:01:35	0.	lyotscan, re	lyotscan	No	YES	0	0	-60.0	35.3
apr899	940409_060736	21	9-APR-94	06:07:36	0.	lyotscan, re		No	YES	0	0	-60.0	35.1
apr900	940409_061421	21	9-APR-94	06:14:21	0.	lyotscan, re		No	YES	0	0	-60.0	35.3
apr901	940409_062109	21	9-APR-94	06:21:09	0.	lyotscan, re		No	YES	0	0	-60.0	35.2
apr902	940409_062746	6	9-APR-94	06:27:46	0.	lyotscan, re	sleep	No	YES	0	0	-60.0	35.2
apr903	940409_162955	21	9-APR-94	16:29:55	0.	lsltune, lyo	lsltune	Yes	YES	0	0	-65.7	35.3
apr904	940409_164227	22	9-APR-94	16:42:27	0.	lsltune, red	lsltune	No	YES	0	0	-62.9	35.4
apr905	940409_165719	21	9-APR-94	16:57:19	0.	lsltune, red	lsltune	No	YES	0	0	-62.9	35.3
apr906	940409_171247	21	9-APR-94	17:12:47	0.	lsltune, red	lsltune	No	YES	0	0	-62.9	35.3
apr907	940409_180731	21	9-APR-94	18:07:31	0.	lsltune, blu	lsltune	No	YES	0	0	-62.9	35.2
apr908	940409_182056	21	9-APR-94	18:20:56	0.	lsltune, blu	lsltune	No	YES	0	0	-62.9	35.2
apr909	940409_183439	21	9-APR-94	18:34:39	0.	lsltune, blu	lsltune	Yes	YES	0	0	-62.9	35.3
apr910	940409_215413	114	9-APR-94	21:54:13	0.	suncals: Dop	vfdlscan	No	YES	0	0	-60.0	35.3
apr911	940409_221733	100	9-APR-94	22:17:33	0.	bigtune: old	bigtune	No	YES	0	0	-60.0	35.1
apr912	940409_223834	101	9-APR-94	22:38:34	0.	sundrift: dr	sundrift	No	YES	0	0	-57.1	35.2
apr913	940409_233130	24	9-APR-94	23:31:30	0.	sunmagc: 102	obsmsunv	No	YES	0	0	-60.0	35.2
apr914	940410_005300	109	10-APR-94	00:53:00	0.	sundust: dus	obsmsunv	No	YES	0	0	-60.0	35.1
apr914a	940410_025745	9	10-APR-94	02:57:45	0.	unknown		No	No	0	0	-60.0	35.0
apr915	940410_140323	6	10-APR-94	14:03:23	0.	mdipict_ice	mdipict	Yes	YES	0	0	-65.7	35.2
apr916	940410_142922	84	10-APR-94	14:29:22	0.	suncals	vfdlscan	No	YES	0	0	-68.6	35.1
apr917	940410_145207	84	10-APR-94	14:52:07	0.	suncals	vfdlscan	No	YES	0	0	-65.7	35.2
apr918	940410_153430	154	10-APR-94	15:34:30	0.	suncals: Dop	vfdlscan	Yes	YES	0	0	-65.7	35.2
apr919	940410_161313	12	10-APR-94	16:13:13	0.	sunff: conti	dpc84	No	YES	0	0	-65.7	35.3
apr920	940410_164347	30	10-APR-94	16:43:47	0.	sunff: conti	sunff	No	YES	0	0	-62.9	35.2

apr921	940410_172906	144	10-APR-94	17:29:06	0.	suncals:mult	vfdlscan	No	YES	0	0	-62.9	35.1
apr922	940410_180747	9	10-APR-94	18:07:47	0.	sunmagc: FD		No	YES	0	0	-62.9	35.5
apr923	940410_182213	10	10-APR-94	18:22:13	0.	sunmagc: HR		No	YES	0	0	-62.9	35.3
apr924	940410_183254	20	10-APR-94	18:32:54	0.	sunmagc: cal		No	YES	0	0	-62.9	35.3
apr925	940410_184448	9	10-APR-94	18:44:48	0.	sunmagc: big		No	YES	0	0	-62.9	35.2
apr926	940410_185600	9	10-APR-94	18:56:00	0.	sunmagc: big		No	YES	0	0	-62.9	35.2
apr927	940410_190643	20	10-APR-94	19:06:43	0.	sunmagc: vfd		No	YES	0	0	-62.9	35.2
apr928	940410_194930	144	10-APR-94	19:49:30	0.	suncals	vfdlscan	Yes	YES	0	0	-62.9	35.1
apr929	940410_203946	5	10-APR-94	20:39:46	0.	sunmisc	sunmisc	No	YES	0	0	-62.9	35.0
apr930	940410_204949	154	10-APR-94	20:49:49	0.	suncals	vfdlscan	No	YES	0	0	-62.9	35.1
apr931	940410_212750	9	10-APR-94	21:27:50	0.	bigfdmag		No	YES	0	0	-62.9	35.0
apr932	940410_213926	9	10-APR-94	21:39:26	0.	bighrmag		No	YES	0	0	-62.9	34.9
apr933	940410_215014	20	10-APR-94	21:50:14	0.	vfdmag+vhrma		Yes	YES	0	0	-62.9	35.0
apr934	940410_215806	51	10-APR-94	21:58:06	0.	sunff, 1024^	sunff	No	YES	0	0	-62.9	35.0
apr935	940410_231043	154	10-APR-94	23:10:43	0.	suncals	vfdlscan	Yes	YES	0	0	-62.9	35.3
apr936	940410_234821	208	10-APR-94	23:48:21	0.	fringes	fringes	No	YES	0	0	-62.9	35.2
apr937	940411_010818	149	11-APR-94	01:08:18	0.	suncals	vfdlscan	No	YES	0	0	-62.9	35.3
apr938	940411_014643	54	11-APR-94	01:46:43	0.	suncals, abo	suncals	No	YES	0	0	-62.9	35.2
apr939	940411_021952	8	11-APR-94	02:19:52	0.	ccdheat: noi	closelog	No	YES	0	0	-62.9	35.2
apr939a	940411_142101	0	11-APR-94	14:21:01	0.	unknown	rundepsq	Yes	No	0	0	-65.7	35.3
apr939b	940411_143218	4	11-APR-94	14:32:18	0.	unknown	rundepsq	No	No	0	0	-65.7	35.3
apr940	940411_150425	99	11-APR-94	15:04:25	0.	ldop		No	YES	0	0	-65.7	35.2
apr941	940411_162620	189	11-APR-94	16:26:20	0.	ldop941	llton	No	YES	0	0	-62.9	35.3
apr941a	940411_172420	0	11-APR-94	17:24:20	0.	unknown		Yes	No	0	0	-65.7	35.2
apr942	940411_175446	0	11-APR-94	17:54:46	0.	sunmagc cont		Yes	YES	0	0	-62.9	35.3
apr942a	940411_180531	20	11-APR-94	18:05:31	0.	unknown		No	YES	0	0	-62.9	35.4
apr943	940411_182654	0	11-APR-94	18:26:54	0.	sunmagc bett	dpc84	Yes	YES	0	0	-62.9	35.3
apr944	940411_184856	9	11-APR-94	18:48:56	0.	sunmagc FD w		No	YES	0	0	-62.9	35.2
apr945	940411_190129	10	11-APR-94	19:01:29	0.	sunmagc HR		No	YES	0	0	-62.9	35.2
apr945a	940411_191213	20	11-APR-94	19:12:13	0.	sunmagc 4x4	sunmagc	No	YES	0	0	-62.9	35.0
apr945b	940411_193313	9	11-APR-94	19:33:13	0.	unknown	dpc84	No	YES	0	0	-62.9	35.1
apr946	940411_201246	9	11-APR-94	20:12:46	0.	sunmagc FD h		No	YES	0	0	-62.9	35.3
apr947	940411_203008	10	11-APR-94	20:30:08	0.	sunmagc HR h		No	YES	0	0	-62.9	35.6
apr948	940411_204121	20	11-APR-94	20:41:21	0.	sunmagc 4x4	ipcom	No	YES	0	0	-62.9	35.2
apr949	940411_223537	11	11-APR-94	22:35:37	0.	ip commissio	ipdynmac	No	YES	0	0	-62.9	35.1
apr950	940411_234155	97	11-APR-94	23:41:55	0.	sundust: ape	sundust	No	YES	0	0	-60.0	35.0
apr951	940412_012151	200	12-APR-94	01:21:51	0.	rundepsq, in	obsmsunv	No	YES	0	0	-60.0	35.2
apr951a	940412_132049	0	12-APR-94	13:20:49	0.	unknown	0010_05	No	YES	0	0	-65.7	35.3
apr951b	940412_144232	0	12-APR-94	14:42:32	0.	unknown	rundepsq	No	No	0	0	-65.7	35.1
apr952	940412_152042	169	12-APR-94	15:20:42	0.	solar dopple	calmodev	No	YES	0	0	-65.7	35.2
apr953	940412_155609	0	12-APR-94	15:56:09	0.	calmode dopp		No	No	0	0	-65.7	35.1
apr953a	940412_155823	24	12-APR-94	15:58:23	0.	unknown	calmodev	No	No	0	0	-62.9	35.3
apr953b	940412_163913	0	12-APR-94	16:39:13	0.	unknown	calmodev	Yes	No	0	0	-62.9	35.4
apr954	940412_170906	19	12-APR-94	17:09:06	0.	lasdtune	mdilaser	No	YES	0	0	-62.9	35.2
apr955	940412_172802	244	12-APR-94	17:28:02	0.	mdilaser, ra		No	YES	0	0	-62.9	35.2
apr956	940412_183825	244	12-APR-94	18:38:25	0.	mdilaser, ra	mdilaser	No	YES	0	0	-62.9	35.3
apr957	940412_193641	21	12-APR-94	19:36:41	0.	lyotscan, be	lyotscan	No	YES	0	0	-65.7	35.1
apr958	940412_194244	21	12-APR-94	19:42:44	0.	lyotscan		No	YES	0	0	-65.7	35.1
apr959	940412_194924	21	12-APR-94	19:49:24	0.	lyotscan		No	YES	0	0	-65.7	35.2
apr960	940412_195604	21	12-APR-94	19:56:04	0.	lyotscan		No	YES	0	0	-65.7	35.2
apr961	940412_200245	21	12-APR-94	20:02:45	0.	lyotscan		No	YES	0	0	-65.7	35.3
apr962	940412_201045	21	12-APR-94	20:10:45	0.	lyotscan		No	YES	0	0	-65.7	35.3
apr963	940412_201647	21	12-APR-94	20:16:47	0.	lyotscan		No	YES	0	0	-65.7	35.2
apr964	940412_202327	21	12-APR-94	20:23:27	0.	lyotscan		No	YES	0	0	-68.6	35.2
apr965	940412_203007	21	12-APR-94	20:30:07	0.	lyotscan		No	YES	0	0	-68.6	35.0
apr966	940412_203646	21	12-APR-94	20:36:46	0.	lyotscan		No	YES	0	0	-65.7	34.6
apr967	940412_204344	21	12-APR-94	20:43:44	0.	lyotscan		No	YES	0	0	-65.7	34.1
apr968	940412_204945	21	12-APR-94	20:49:45	0.	lyotscan		No	YES	0	0	-65.7	33.9
apr969	940412_205625	21	12-APR-94	20:56:25	0.	lyotscan		No	YES	0	0	-65.7	33.5
apr970	940412_210307	21	12-APR-94	21:03:07	0.	lyotscan		No	No	0	0	-68.6	33.2

apr971	940412_210949	21	12-APR-94	21:09:49	0.	lyotscan	No	No	0	0	-65.7	32.9
apr972	940412_211658	21	12-APR-94	21:16:58	0.	lyotscan	No	No	0	0	-65.7	32.5
apr973	940412_212300	21	12-APR-94	21:23:00	0.	lyotscan	No	No	0	0	-65.7	32.4
apr974	940412_212940	21	12-APR-94	21:29:40	0.	lyotscan	No	No	0	0	-65.7	32.2
apr975	940412_213620	21	12-APR-94	21:36:20	0.	lyotscan	No	YES	0	0	-65.7	32.0
apr976	940412_214301	21	12-APR-94	21:43:01	0.	lyotscan	No	YES	0	0	-65.7	31.7
apr977	940412_215011	21	12-APR-94	21:50:11	0.	lyotscan	No	YES	0	0	-65.7	31.5
apr978	940412_215613	21	12-APR-94	21:56:13	0.	lyotscan	No	YES	0	0	-65.7	31.3
apr979	940412_220254	21	12-APR-94	22:02:54	0.	lyotscan	No	YES	0	0	-65.7	31.3
apr980	940412_220935	21	12-APR-94	22:09:35	0.	lyotscan	No	YES	0	0	-65.7	31.0
apr981	940412_221614	21	12-APR-94	22:16:14	0.	lyotscan	No	YES	0	0	-65.7	30.8
apr982	940412_222325	21	12-APR-94	22:23:25	0.	lyotscan	No	YES	0	0	-65.7	30.6
apr983	940412_222926	21	12-APR-94	22:29:26	0.	lyotscan	No	No	0	0	-65.7	30.5
apr984	940412_223605	21	12-APR-94	22:36:05	0.	lyotscan	No	YES	0	0	-65.7	30.3
apr985	940412_224244	21	12-APR-94	22:42:44	0.	lyotscan	No	YES	0	0	-65.7	30.1
apr986	940412_224923	21	12-APR-94	22:49:23	0.	lyotscan	No	YES	0	0	-65.7	30.1
apr987	940412_225623	21	12-APR-94	22:56:23	0.	lyotscan	No	YES	0	0	-65.7	29.7
apr988	940412_230225	21	12-APR-94	23:02:25	0.	lyotscan	No	YES	0	0	-65.7	29.5
apr989	940412_230905	21	12-APR-94	23:09:05	0.	lyotscan	No	YES	0	0	-65.7	29.5
apr990	940412_231548	21	12-APR-94	23:15:48	0.	lyotscan	No	YES	0	0	-65.7	29.3
apr991	940412_232229	21	12-APR-94	23:22:29	0.	lyotscan	No	YES	0	0	-65.7	29.1
apr992	940412_232937	21	12-APR-94	23:29:37	0.	lyotscan	No	YES	0	0	-62.9	29.1
apr993	940412_233932	21	12-APR-94	23:39:32	0.	lyotscan	No	YES	0	0	-65.7	28.8
apr994	940412_234613	21	12-APR-94	23:46:13	0.	lyotscan	No	YES	0	0	-62.9	28.7
apr995	940412_235252	21	12-APR-94	23:52:52	0.	lyotscan	No	YES	0	0	-62.9	28.6
apr996	940412_235932	21	12-APR-94	23:59:32	0.	lyotscan	No	YES	0	0	-62.9	28.4
apr997	940413_000635	21	13-APR-94	00:06:35	0.	lyotscan	No	YES	0	0	-62.9	28.3
apr998	940413_001237	21	13-APR-94	00:12:37	0.	lyotscan	No	YES	0	0	-62.9	28.1
apr999	940413_001917	21	13-APR-94	00:19:17	0.	lyotscan	No	YES	0	0	-65.7	28.1
apr1000	940413_002556	21	13-APR-94	00:25:56	0.	lyotscan	No	YES	0	0	-65.7	27.9
apr1001	940413_003237	21	13-APR-94	00:32:37	0.	lyotscan	No	YES	0	0	-65.7	27.8
apr1002	940413_003948	21	13-APR-94	00:39:48	0.	lyotscan	No	YES	0	0	-65.7	27.7
apr1003	940413_004552	21	13-APR-94	00:45:52	0.	lyotscan	No	YES	0	0	-62.9	27.4
apr1004	940413_005234	21	13-APR-94	00:52:34	0.	lyotscan	No	YES	0	0	-62.9	27.5
apr1005	940413_005914	21	13-APR-94	00:59:14	0.	lyotscan	No	YES	0	0	-65.7	27.4
apr1006	940413_010556	21	13-APR-94	01:05:56	0.	lyotscan	No	YES	0	0	-62.9	27.2
apr1007	940413_011801	21	13-APR-94	01:18:01	0.	lyotscan	No	YES	0	0	-65.7	27.0
apr1008	940413_012403	21	13-APR-94	01:24:03	0.	lyotscan	No	YES	0	0	-62.9	26.9
apr1009	940413_013044	21	13-APR-94	01:30:44	0.	lyotscan	No	YES	0	0	-62.9	26.8
apr1010	940413_013726	21	13-APR-94	01:37:26	0.	lyotscan	No	YES	0	0	-62.9	26.8
apr1011	940413_014409	21	13-APR-94	01:44:09	0.	lyotscan	No	YES	0	0	-65.7	26.6
apr1012	940413_015115	21	13-APR-94	01:51:15	0.	lyotscan	No	YES	0	0	-65.7	26.6
apr1013	940413_015720	21	13-APR-94	01:57:20	0.	lyotscan	No	YES	0	0	-65.7	26.4
apr1014	940413_020403	21	13-APR-94	02:04:03	0.	lyotscan	No	YES	0	0	-62.9	26.2
apr1015	940413_021045	21	13-APR-94	02:10:45	0.	lyotscan	No	YES	0	0	-62.9	26.3
apr1016	940413_021726	21	13-APR-94	02:17:26	0.	lyotscan	No	YES	0	0	-62.9	26.2
apr1017	940413_022428	21	13-APR-94	02:24:28	0.	lyotscan	No	YES	0	0	-62.9	26.0
apr1018	940413_023125	21	13-APR-94	02:31:25	0.	lyotscan	No	No	0	0	-62.9	25.8
apr1019	940413_023804	21	13-APR-94	02:38:04	0.	lyotscan	No	YES	0	0	-62.9	25.8
apr1020	940413_024741	21	13-APR-94	02:47:41	0.	lyotscan	No	YES	0	0	-65.7	25.7
apr1021	940413_025421	21	13-APR-94	02:54:21	0.	lyotscan	No	YES	0	0	-62.9	25.6
apr1022	940413_030126	21	13-APR-94	03:01:26	0.	lyotscan	No	YES	0	0	-62.9	25.6
apr1023	940413_030728	21	13-APR-94	03:07:28	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1024	940413_031409	21	13-APR-94	03:14:09	0.	lyotscan	No	YES	0	0	-62.9	25.6
apr1025	940413_032049	21	13-APR-94	03:20:49	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1026	940413_032731	21	13-APR-94	03:27:31	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1027	940413_033440	21	13-APR-94	03:34:40	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1028	940413_034042	21	13-APR-94	03:40:42	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1029	940413_034722	21	13-APR-94	03:47:22	0.	lyotscan	No	YES	0	0	-65.7	25.6
apr1030	940413_035403	21	13-APR-94	03:54:03	0.	lyotscan	No	YES	0	0	-62.9	25.6

apr1031	940413_040042	21	13-APR-94	04:00:42	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1032	940413_040754	21	13-APR-94	04:07:54	0.	lyotscan		No	YES	0	0	-62.9	25.6
apr1033	940413_041356	21	13-APR-94	04:13:56	0.	lyotscan		No	YES	0	0	-62.9	25.6
apr1034	940413_042037	21	13-APR-94	04:20:37	0.	lyotscan		No	YES	0	0	-62.9	25.6
apr1035	940413_042715	21	13-APR-94	04:27:15	0.	lyotscan		No	YES	0	0	-62.9	25.6
apr1036	940413_043354	21	13-APR-94	04:33:54	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1037	940413_044052	21	13-APR-94	04:40:52	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1038	940413_044655	21	13-APR-94	04:46:55	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1039	940413_045336	21	13-APR-94	04:53:36	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1040	940413_050015	21	13-APR-94	05:00:15	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1041	940413_050656	21	13-APR-94	05:06:56	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1042	940413_051406	21	13-APR-94	05:14:06	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1043	940413_052009	21	13-APR-94	05:20:09	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1044	940413_052649	21	13-APR-94	05:26:49	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1045	940413_053327	21	13-APR-94	05:33:27	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1046	940413_054008	21	13-APR-94	05:40:08	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1047	940413_054719	21	13-APR-94	05:47:19	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1048	940413_055320	21	13-APR-94	05:53:20	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1049	940413_060000	21	13-APR-94	06:00:00	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1050	940413_060639	21	13-APR-94	06:06:39	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1051	940413_061319	21	13-APR-94	06:13:19	0.	lyotscan		No	YES	0	0	-62.9	25.6
apr1052	940413_062032	21	13-APR-94	06:20:32	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1053	940413_062634	21	13-APR-94	06:26:34	0.	lyotscan		No	YES	0	0	-65.7	25.6
apr1054	940413_063316	21	13-APR-94	06:33:16	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1055	940413_063954	21	13-APR-94	06:39:54	0.	lyotscan		No	No	0	0	-65.7	25.6
apr1056	940413_064634	21	13-APR-94	06:46:34	0.	lyotscan	obsmodev	No	No	0	0	-65.7	25.6
apr1057	940414_030507	0	14-APR-94	03:05:07	0.	unknown		Yes	No	0	0	??	26.8
apr1058	940415_212331	0	15-APR-94	21:23:31	0.	unknown	ldsosld	Yes	No	0	0	??	25.6
apr1059	940416_003810	1	16-APR-94	00:38:10	0.	unknown	closelog	No	No	0	0	??	25.6
apr1060	940416_005624	0	16-APR-94	00:56:24	0.	unknown		No	No	0	0	??	40.7
apr1061	940416_200104	0	16-APR-94	20:01:04	0.	unknown	ldmctap	No	No	0	0	23.3	25.6
apr1062	940416_213358	0	16-APR-94	21:33:58	0.	unknown	lobsmode	No	No	0	0	23.3	25.6
apr1063	940417_021220	5	17-APR-94	02:12:20	0.	unknown	lcmcom	No	No	0	0	23.3	25.8
apr1064	940417_030620	29	17-APR-94	03:06:20	0.	unknown	ipcom	No	No	0	0	23.3	27.3
apr1065	940417_033526	20	17-APR-94	03:35:26	0.	ipcom	mdihoc	No	No	0	0	23.3	26.4
apr1066	940417_070211	0	17-APR-94	07:02:11	0.	unknown		No	No	0	0	??	25.6
apr1066a	940419_015536	4	19-APR-94	01:55:36	0.	sfft		No	YES	0	0	23.3	25.6
apr1066b	940419_184956	1	19-APR-94	18:49:56	0.	unknown		No	No	0	0	23.3	25.6
apr1066c	940419_191048	1	19-APR-94	19:10:48	0.	unknown		No	No	0	0	23.3	25.7
apr1066d	940419_191700	0	19-APR-94	19:17:00	0.	unknown		Yes	No	0	0	23.3	25.7
apr1066e	940419_192358	2	19-APR-94	19:23:58	0.	unknown	closelog	No	No	0	0	23.3	25.9
apr1066f	940419_212453	5	19-APR-94	21:24:53	0.	unknown	lcmcom	No	No	0	0	20.0	26.5
apr1066g	940419_221546	36	19-APR-94	22:15:46	0.	unknown	lsqcom	No	No	0	0	23.3	28.2
apr1066h	940419_231652	3	19-APR-94	23:16:52	0.	unknown		No	No	0	0	23.3	26.2
apr1066i	940419_234346	3	19-APR-94	23:43:46	0.	unknown	closelog	No	No	0	0	23.3	25.8
apr1066j	940420_004906	0	20-APR-94	00:49:06	0.	unknown		No	No	0	0	??	25.6
apr1066k	940420_013337	20	20-APR-94	01:33:37	0.	unknown	iptbltst	No	No	0	0	23.3	25.6
apr1066l	940420_185642	5	20-APR-94	18:56:42	0.	unknown	lcmcom	No	YES	0	0	20.0	25.6
apr1066m	940420_193742	29	20-APR-94	19:37:42	0.	unknown	lsqcom	No	YES	0	0	23.3	26.8
apr1066n	940420_215142	0	20-APR-94	21:51:42	0.	unknown		Yes	YES	0	0	??	26.8
apr1066o	940421_180426	8	21-APR-94	18:04:26	0.	unknown	openlog	No	No	0	0	23.3	34.2
apr1066p	940421_182421	2	21-APR-94	18:24:21	0.	unknown	tbltst22	No	No	0	0	23.3	35.2
apr1066q	940421_222841	2	21-APR-94	22:28:41	0.	unknown	ldcrpdmp	No	YES	0	0	16.0	35.0
apr1067	940422_003739	424	22-APR-94	00:37:39	0.	ldopser05 OB	mdicom	No	YES	0	0	0.0	35.1
apr1067a	940422_024117	5	22-APR-94	02:41:17	0.	unknown	lcmcom	Yes	No	0	0	-2.9	34.8
apr1067b	940422_033011	37	22-APR-94	03:30:11	0.	unknown	ipcom	No	YES	0	0	4.0	34.8
apr1067c	940422_035054	20	22-APR-94	03:50:54	0.	unknown	iptbltst	No	YES	0	0	0.0	35.2
apr1067d	940422_060828	0	22-APR-94	06:08:28	0.	unknown		Yes	YES	0	0	??	25.6
apr1068	940422_150100	304	22-APR-94	15:01:00	0.	rundepsq	closelog	No	YES	0	0	-11.4	35.3
apr1069	940422_170509	78	22-APR-94	17:05:09	0.	rundepsq	rundepsq	No	YES	0	0	-11.4	35.2

apr1070	940422_172414	254	22-APR-94	17:24:14	0.	rundepsq		No	YES	0	0	-11.4	35.2
apr1070a	940422_182514	39	22-APR-94	18:25:14	0.	unknown		No	YES	0	0	-11.4	35.2
apr1070b	940422_185612	234	22-APR-94	18:56:12	0.	unknown		No	YES	0	0	-11.4	35.2
apr1070c	940422_195952	14	22-APR-94	19:59:52	0.	unknown	mdifocus	Yes	YES	0	0	-11.4	35.1
apr1070d	940422_200839	72	22-APR-94	20:08:39	0.	unknown	mdifocus	Yes	YES	0	0	-11.4	35.2
apr1070e	940422_202556	45	22-APR-94	20:25:56	0.	unknown	mdiltc	No	YES	0	0	-11.4	35.2
apr1070f	940422_203742	6	22-APR-94	20:37:42	0.	unknown	mdipict	No	YES	0	0	-11.4	35.2
apr1071	940422_222720	124	22-APR-94	22:27:20	0.	rundepsq	closelog	No	YES	0	0	-11.4	35.0
apr1072	940422_230000	30	22-APR-94	23:00:00	0.	sundopc, bi-	sundopc	No	YES	0	0	-11.4	35.2
apr1072a	940422_235802	9	22-APR-94	23:58:02	0.	sunmagc		Yes	YES	0	0	-11.4	35.2
apr1073	940423_000953	10	23-APR-94	00:09:53	0.	sunmagc, 1x1		No	YES	0	0	-11.4	35.2
apr1073a	940423_002048	20	23-APR-94	00:20:48	0.	unknwon	rundepsq	Yes	YES	0	0	-11.4	35.2
apr1074	940423_002948	239	23-APR-94	00:29:48	0.	rundepsq, ld	lsqcom	No	YES	0	0	-11.4	35.2
apr1075	940423_021755	6	23-APR-94	02:17:55	0.	mdipict (cos	mdipict	No	YES	0	0	-17.1	35.2
apr1076	940423_023654	47	23-APR-94	02:36:54	0.	mdiltc, (CCD	mdiltc	No	YES	0	0	-20.0	35.2
apr1077	940423_025845	8	23-APR-94	02:58:45	0.	ccdheat, CCD	ccdheat	No	YES	0	0	-20.0	35.2
apr1078	940423_032027	334	23-APR-94	03:20:27	0.	Dark Doppler		No	YES	0	0	-20.0	35.2
apr1078a	940423_043634	2	23-APR-94	04:36:34	0.	unknown	mdipict	Yes	YES	0	0	-23.3	35.2
apr1079	940423_045403	82	23-APR-94	04:54:03	0.	dark noise m	closelog	No	YES	0	0	-23.3	35.2
apr1080	940423_052704	51	23-APR-94	05:27:04	0.	legff (flats	legff	No	YES	0	0	-23.3	35.2
apr1081	940423_065147	51	23-APR-94	06:51:47	0.	legff (flats	sleep	No	YES	0	0	-23.3	35.2
apr1081a	940423_223815	0	23-APR-94	22:38:15	0.	unknown	iptbltst	Yes	YES	0	0	20.0	35.1
apr1081b	940424_001530	0	24-APR-94	00:15:30	0.	unknown	ldcrpdmp	No	YES	0	0	23.3	35.1
apr1082	940424_062607	21	24-APR-94	06:26:07	0.	lyotscan; la	calmlasr	No	YES	0	0	-5.7	35.2
apr1083	940424_063208	21	24-APR-94	06:32:08	0.	lyotscan, 12		No	YES	0	0	-8.6	35.2
apr1084	940424_063857	21	24-APR-94	06:38:57	0.	lyotscan, 3		No	YES	0	0	-11.4	35.2
apr1085	940424_064544	21	24-APR-94	06:45:44	0.	6 o'clock		No	YES	0	0	-11.4	35.2
apr1086	940424_065233	21	24-APR-94	06:52:33	0.	lyotscan, 9		No	YES	0	0	-14.3	35.2
apr1087	940424_070204	21	24-APR-94	07:02:04	0.	lyotscan 1/2		No	YES	0	0	-14.3	35.1
apr1088	940424_070710	21	24-APR-94	07:07:10	0.	lyotscan 1/2		No	YES	0	0	-14.3	35.2
apr1089	940424_071237	21	24-APR-94	07:12:37	0.	lyotscan 1/2		No	YES	0	0	-17.1	35.2
apr1090	940424_071802	21	24-APR-94	07:18:02	0.	lyotscan 1/2		No	YES	0	0	-17.1	35.2
apr1091	940424_072328	21	24-APR-94	07:23:28	0.	lyotscan 1/2	obsmodev	No	YES	0	0	-17.1	35.2
apr1092	940424_190751	2	24-APR-94	19:07:51	0.	CCD Cold		No	YES	0	0	-54.3	25.6
apr1093	940424_193854	2	24-APR-94	19:38:54	0.	CCD Cold2	mdiltc	No	YES	0	0	-60.0	25.6
apr1093a	940424_202445	0	24-APR-94	20:24:45	0.	unknown	mdiltc	No	YES	0	0	-68.6	25.6
apr1094	940424_203144	47	24-APR-94	20:31:44	0.	mdiltc	mdiltc	No	YES	0	0	-74.3	25.6
apr1095	940424_204659	6	24-APR-94	20:46:59	0.	mdipict	mdipict	No	YES	0	0	-77.1	25.6
apr1096	940424_211728	5	24-APR-94	21:17:28	0.	ccdwarmup	lhopon	No	YES	0	0	-30.0	25.6
apr1097	940425_054033	21	25-APR-94	05:40:33	0.	lyotscan, OV		No	YES	0	0	-20.0	25.6
apr1098	940425_054637	21	25-APR-94	05:46:37	0.	lyotscan, 12		No	YES	0	0	-20.0	25.6
apr1099	940425_055325	21	25-APR-94	05:53:25	0.	lyotscan, 3		No	YES	0	0	-20.0	25.6
apr1100	940425_060011	21	25-APR-94	06:00:11	0.	lyotscan, 6		No	YES	0	0	-23.3	25.6
apr1101	940425_060657	21	25-APR-94	06:06:57	0.	lyotscan, 9		No	YES	0	0	-23.3	25.6
apr1102	940425_061438	21	25-APR-94	06:14:38	0.	lyotscan 1/2		No	YES	0	0	-23.3	25.6
apr1103	940425_061943	21	25-APR-94	06:19:43	0.	lyotscan 1/2		No	YES	0	0	-23.3	25.6
apr1104	940425_062511	21	25-APR-94	06:25:11	0.	lyotscan 1/2		No	YES	0	0	-23.3	25.6
apr1105	940425_063037	21	25-APR-94	06:30:37	0.	lyotscan 1/2		No	YES	0	0	-20.0	25.6
apr1106	940425_063604	21	25-APR-94	06:36:04	0.	lyotscan 1/2		No	YES	0	0	-23.3	25.6
apr1107	940425_064553	19	25-APR-94	06:45:53	0.	Darks, (soft	obsmlasr	No	YES	0	0	-23.3	25.6
apr1108	940425_065349	9	25-APR-94	06:53:49	0.	Darks, (hard	lfdclose	No	YES	0	0	-23.3	25.6
apr1109	940425_164209	5	25-APR-94	16:42:09	0.	unknown	lcmcom	No	YES	0	0	20.0	25.6
apr1110	940425_173206	0	25-APR-94	17:32:06	0.	unknown	lsqcom	No	YES	0	0	30.0	25.6
apr1111	940425_192438	244	25-APR-94	19:24:38	0.	unknown	mdilaser	No	YES	0	0	23.3	25.6
apr1112	940425_213204	26	25-APR-94	21:32:04	0.	unknown	mdiiss	No	YES	0	0	26.7	25.6
apr1113	940426_035538	6	26-APR-94	03:55:38	0.	unknown	mdipict	No	YES	0	0	23.3	25.6
apr1114	940426_041407	47	26-APR-94	04:14:07	0.	unknown	mdiltc	No	YES	0	0	23.3	25.6
apr1115	940426_043043	72	26-APR-94	04:30:43	0.	unknown	mdifocus	No	YES	0	0	23.3	25.6
apr1116	940426_044621	6	26-APR-94	04:46:21	0.	unknown	mdipict	No	YES	0	0	23.3	25.6
apr1117	940426_050146	301	26-APR-94	05:01:46	0.	unknown	mdimrot	Yes	YES	0	0	23.3	25.6

apr1118	940426_060248	61	26-APR-94	06:02:48	0.	unknown	mdiprot	No	YES	0	0	23.3	25.6
apr1119	940426_061816	20	26-APR-94	06:18:16	0.	unknown	lsqcom	Yes	YES	0	0	23.3	25.6
eur2000	940503_110612	0	3-MAY-94	11:06:12	0.	mdicom	lcmcom	No	No	0	0	16.0	25.6
eur2001	940503_123433	0	3-MAY-94	12:34:33	0.			No	No	0	0	16.0	25.6
eur2002	940503_123543	0	3-MAY-94	12:35:43	0.		ipcom	No	No	0	0	16.0	25.6
eur2003	940503_131002	0	3-MAY-94	13:10:02	0.	mdisci	iptbltst	No	No	0	0	20.0	25.6
eur2004	940503_162350	0	3-MAY-94	16:23:50	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2005	940504_080320	0	4-MAY-94	08:03:20	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2006	940504_092535	0	4-MAY-94	09:25:35	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2007	940504_095350	0	4-MAY-94	09:53:50	0.	mdipict	mdipict	No	No	0	0	16.0	25.6
eur2008	940504_101134	0	4-MAY-94	10:11:34	0.	mdiltc	mdiltc	No	No	0	0	16.0	25.6
eur2009	940504_103717	0	4-MAY-94	10:37:17	0.	mdiiss	mdiiss	No	No	0	0	16.0	25.6
eur2010	940504_110947	0	4-MAY-94	11:09:47	0.	mdipdist	mdipdist	No	No	0	0	20.0	25.6
eur2011	940504_133015	0	4-MAY-94	13:30:15	0.	mdidsos		No	No	0	0	??	26.8
eur2012	940504_140007	0	4-MAY-94	14:00:07	0.			No	No	0	0	16.0	25.6
eur2013	940504_143015	0	4-MAY-94	14:30:15	0.		mdilaser	No	No	0	0	16.0	25.6
eur2014	940504_152724	0	4-MAY-94	15:27:24	0.	mdilaser	closelog	No	No	0	0	16.0	25.6
eur2015	940505_081227	0	5-MAY-94	08:12:27	0.	mdipict		No	No	0	0	16.0	25.6
eur2016	940505_090234	0	5-MAY-94	09:02:34	0.	mdimrot	mdiprot	No	No	0	0	16.0	25.6
eur2017	940505_104648	0	5-MAY-94	10:46:48	0.	mdiprot	mdiprot	No	No	0	0	20.0	25.6
eur2018	940505_115723	0	5-MAY-94	11:57:23	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2019	940505_124057	0	5-MAY-94	12:40:57	0.		mdifocus	No	No	0	0	20.0	25.6
eur2020	940505_141459	0	5-MAY-94	14:14:59	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2021	940505_152950	0	5-MAY-94	15:29:50	0.		lcmcom	No	No	0	0	16.0	25.6
eur2022	940505_155753	0	5-MAY-94	15:57:53	0.		lsqcom	No	No	0	0	16.0	25.6
eur2023	940505_171316	0	5-MAY-94	17:13:16	0.	mdifocus	mdifocus	No	No	0	0	16.0	25.6
eur2024	940506_102651	0	6-MAY-94	10:26:51	0.	mdifocus ("I	mdifocus	No	No	0	0	16.0	25.6
eur2025	940506_110703	0	6-MAY-94	11:07:03	0.	(?? p69)	mdifocus	No	No	0	0	16.0	25.6
eur2026	940506_120808	0	6-MAY-94	12:08:08	0.	mdipict	mdipict	No	No	0	0	16.0	25.6
eur2027	940506_122453	0	6-MAY-94	12:24:53	0.	mdiltc	mdiltc	No	No	0	0	16.0	25.6
eur2028	940506_134533	0	6-MAY-94	13:45:33	0.	(?? p71)		No	No	0	0	16.0	25.6
eur2029	940506_134710	0	6-MAY-94	13:47:10	0.	(?? p71)		No	No	0	0	16.0	25.6
eur2030	940506_140852	0	6-MAY-94	14:08:52	0.	(?? p71)		No	No	0	0	16.0	25.6
eur2031	940506_143749	0	6-MAY-94	14:37:49	0.			No	No	0	0	16.0	25.6
eur2032	940506_144004	0	6-MAY-94	14:40:04	0.		lamcntr	No	No	0	0	16.0	25.6
eur2033	940506_150144	0	6-MAY-94	15:01:44	0.		lfdclose	No	No	0	0	16.0	25.6
eur2034	940510_170524	0	10-MAY-94	17:05:24	0.			No	No	0	0	16.0	25.6
eur2035	940511_085056	0	11-MAY-94	08:50:56	0.			No	No	0	0	16.0	25.6
eur2036	940511_102458	0	11-MAY-94	10:24:58	0.	lipcom		No	No	0	0	16.0	25.6
eur2037	940511_114227	0	11-MAY-94	11:42:27	0.			No	No	0	0	20.0	25.6
eur2038	940511_124426	0	11-MAY-94	12:44:26	0.			No	No	0	0	16.0	25.6
eur2039	940511_125359	0	11-MAY-94	12:53:59	0.			No	No	0	0	16.0	25.6
eur2040	940511_133359	0	11-MAY-94	13:33:59	0.			No	No	0	0	16.0	25.6
eur2041	940511_133809	0	11-MAY-94	13:38:09	0.			No	No	0	0	16.0	25.6
eur2042	940511_134344	0	11-MAY-94	13:43:44	0.			No	No	0	0	16.0	25.6
eur2043	940511_165848	0	11-MAY-94	16:58:48	0.	mdifocus		No	No	0	0	20.0	25.6
eur2044	940512_111945	0	12-MAY-94	11:19:45	0.	lshutcom		No	No	0	0	16.0	25.6
eur2045	940512_143003	0	12-MAY-94	14:30:03	0.	mdifocus (??		No	No	0	0	16.0	25.6
eur2046	940512_151224	0	12-MAY-94	15:12:24	0.	lcmcom (?? p		No	No	0	0	16.0	25.6
eur2047	940513_095622	0	13-MAY-94	09:56:22	0.	mdipict		No	No	0	0	16.0	25.6
eur2048	940513_101712	0	13-MAY-94	10:17:12	0.			No	No	0	0	16.0	25.6
eur2049	940513_105057	0	13-MAY-94	10:50:57	0.	mdiltc		No	No	0	0	16.0	25.6
eur2050	940513_143952	0	13-MAY-94	14:39:52	0.	mdipict		No	No	0	0	20.0	25.6
eur2051	940513_150034	0	13-MAY-94	15:00:34	0.	mdiltc		No	No	0	0	20.0	25.6
eur2052	940513_153629	0	13-MAY-94	15:36:29	0.	mdimrot		No	No	0	0	20.0	25.6
eur2053	940513_162527	0	13-MAY-94	16:25:27	0.	mdiprot		No	No	0	0	20.0	25.6
eur2054	940513_162940	0	13-MAY-94	16:29:40	0.	mdiprot		No	No	0	0	20.0	25.6
eur2055	940513_164257	0	13-MAY-94	16:42:57	0.			No	No	0	0	16.0	25.6
eur2056	940517_120405	0	17-MAY-94	12:04:05	0.	lshutcom (??		No	No	0	0	16.0	25.6
eur2057	940517_122136	0	17-MAY-94	12:21:36	0.	lcmcom (?? p		No	No	0	0	16.0	25.6

eur2058	940517_142442	0	17-MAY-94	14:24:42	0.			No	No	0	0	20.0	25.6
eur2059	940517_151716	0	17-MAY-94	15:17:16	0.	mdifocus		No	No	0	0	20.0	25.6
eur2060	940517_154320	0	17-MAY-94	15:43:20	0.	(?? p79)		No	No	0	0	16.0	25.6
eur2061	940517_155217	0	17-MAY-94	15:52:17	0.			No	No	0	0	16.0	25.6
eur2062	940517_161213	0	17-MAY-94	16:12:13	0.			No	No	0	0	16.0	25.6
eur2063	940518_084715	0	18-MAY-94	08:47:15	0.	mdiiss		No	No	0	0	16.0	25.6
eur2064	940518_095542	0	18-MAY-94	09:55:42	0.	mdipdist		No	No	0	0	16.0	25.6
eur2065	940518_143557	0	18-MAY-94	14:35:57	0.	mdiprot		No	No	0	0	16.0	25.6
eur2066	940518_173144	0	18-MAY-94	17:31:44	0.			No	No	0	0	16.0	25.6
eur2067	940518_175146	0	18-MAY-94	17:51:46	0.	mdilaser		No	No	0	0	16.0	25.6
eur2068	940518_180544	0	18-MAY-94	18:05:44	0.			No	No	0	0	16.0	25.6
eur2069	940519_084005	0	19-MAY-94	08:40:05	0.	lshutcom (??		No	No	0	0	16.0	25.6
eur2070	940519_102926	0	19-MAY-94	10:29:26	0.	mdifocus (??		No	No	0	0	16.0	25.6
eur2071	940519_105918	0	19-MAY-94	10:59:18	0.	em12 (?? p82		No	No	0	0	16.0	25.6
eur2072	940519_112835	0	19-MAY-94	11:28:35	0.	mdi_dsos		No	No	0	0	??	26.8
eur2073	940519_123900	0	19-MAY-94	12:39:00	0.			No	No	0	0	16.0	25.6
eur2074	940519_134119	0	19-MAY-94	13:41:19	0.			No	No	0	0	??	25.6
eur2075	940519_142559	0	19-MAY-94	14:25:59	0.			No	No	0	0	??	26.8
eur2076	940519_161523	0	19-MAY-94	16:15:23	0.			No	No	0	0	16.0	25.6
eur2077	940519_162507	0	19-MAY-94	16:25:07	0.	mdilaser		No	No	0	0	16.0	25.6
eur2078	940520_082742	0	20-MAY-94	08:27:42	0.	mdifocus		No	No	0	0	16.0	25.6
eur2079	940520_090711	0	20-MAY-94	09:07:11	0.	mdioff		No	No	0	0	16.0	25.6
eur2080	940520_093335	0	20-MAY-94	09:33:35	0.	mdi_rcs		No	No	0	0	16.0	25.6
eur2081	940520_093802	0	20-MAY-94	09:38:02	0.	(?? p83)		No	No	0	0	16.0	25.6
eur2082	940520_102059	0	20-MAY-94	10:20:59	0.	lipcom		No	No	0	0	16.0	25.6
eur2083	940520_102857	0	20-MAY-94	10:28:57	0.	lipcom (rest		No	No	0	0	16.0	25.6
eur2084	940520_113325	0	20-MAY-94	11:33:25	0.			No	No	0	0	16.0	25.6
eur2085	940520_113449	0	20-MAY-94	11:34:49	0.			No	No	0	0	20.0	25.6
eur2086	940520_113952	0	20-MAY-94	11:39:52	0.			No	No	0	0	16.0	25.6
eur2087	940520_114425	0	20-MAY-94	11:44:25	0.			No	No	0	0	16.0	25.6
eur2088	940520_114855	0	20-MAY-94	11:48:55	0.			No	No	0	0	16.0	25.6
eur2089	940520_115112	0	20-MAY-94	11:51:12	0.			No	No	0	0	16.0	25.6
eur2090	940520_134102	0	20-MAY-94	13:41:02	0.			No	No	0	0	16.0	25.6
eur2091	940615_155947	0	15-JUN-94	15:59:47	0.			No	No	0	0	16.0	25.6
eur2092	940616_104711	0	16-JUN-94	10:47:11	0.	mdifocus		No	No	0	0	16.0	25.6
eur2093	940616_143010	0	16-JUN-94	14:30:10	0.	mdifocus		No	No	0	0	20.0	25.6
eur2094	940616_145421	0	16-JUN-94	14:54:21	0.			No	No	0	0	16.0	25.6
eur2095	940618_152354	0	18-JUN-94	15:23:54	0.			No	No	0	0	20.0	25.6
eur2096	940618_153343	0	18-JUN-94	15:33:43	0.	lcmcom		No	No	0	0	20.0	25.6
eur2097	940618_155544	0	18-JUN-94	15:55:44	0.	lshut		No	No	0	0	20.0	25.6
eur2099	940618_162148	0	18-JUN-94	16:21:48	0.	ipcom		No	No	0	0	20.0	25.6
eur2100	940618_172352	0	18-JUN-94	17:23:52	0.	mdioff		No	No	0	0	20.0	25.6
eur2101	940618_174623	0	18-JUN-94	17:46:23	0.	mdi_rcs (tab		No	No	0	0	20.0	25.6
eur2102	940618_175119	0	18-JUN-94	17:51:19	0.	mdi_rcs (dat		No	No	0	0	20.0	25.6
eur2103	940620_114017	0	20-JUN-94	11:40:17	0.			No	No	0	0	20.0	25.6
eur2104	940620_144545	0	20-JUN-94	14:45:45	0.			No	No	0	0	20.0	25.6
eur2105	940620_151854	0	20-JUN-94	15:18:54	0.	mdi_ldsos		No	No	0	0	??	25.6
eur2106	940621_135748	0	21-JUN-94	13:57:48	0.	mdipict		No	No	0	0	16.0	25.6
eur2107	940621_141933	0	21-JUN-94	14:19:33	0.	mdiltc		No	No	0	0	16.0	25.6
eur2108	940621_144646	0	21-JUN-94	14:46:46	0.	mdioff		No	No	0	0	16.0	25.6
eur2109	940622_172009	0	22-JUN-94	17:20:09	0.	lcmcom		No	No	0	0	20.0	25.6
eur2110	940622_173153	0	22-JUN-94	17:31:53	0.	lshut		No	No	0	0	20.0	25.6
apr851	void	0	30-NOV-99	00:00:00	0.	void		No	No	0	0	??	??
apr849	reserved	0	30-NOV-99	00:00:00	0.	for non-cal		No	No	0	0	??	??
eur2098		0	30-NOV-99	00:00:00	0.			No	No	0	0	??	??
nov743a	940314_042336	0	30-NOV-99	15:58:00	12.		closelog	Yes	No	0	0	??	??

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