EUROPEAN SPACE AGENCY
DIRECTORATE OF TECHNICAL & OPERATIONAL SUPPORT
MISSION OPERATIONS DEPARTMENT

INTEGRAL
Mission Report

INT-MOC-SYS-RP-1001-TOS-OF

No. 045
Week 31

04.08.03

Routine Phase

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1 General

The Flight Control Team at MOC has compiled this report with some input provided by the Flight Dynamics Team.

It addresses the activities from 26.07.03 until 01.08.03 (both dates inclusive) and covers the revolutions 96 & 97.

2 Summary of Activities

The operations were performed according to the planning inputs from ISOC combined with some manual commanding by MOC.

The targets of these revolutions were Algol (RA 03:08:10.13; DEC +40:57:20.3), an Empty Field target (RA 00:45:34.13; DEC +02:50:18.0), Scorpius X-1 (RA 16:19:55.00; DEC -15:38:24.0) and the galactic centre. The activities performed consisted of raster dithering, staring and GCDE observations. In addition, JEM-X Diagnostic operations were performed.

Note: Some further information concerning the activities is provided in the Appendix.

3 Satellite Status

3.1 Platform

The performance of the platform was good. No unexpected behaviour / malfunction was identified.

3.1.1 AOCS

The AOCS operations were performed from the timeline during this period.

There was a problem with a star that was selected by the FDS for a Close-Loop slew. In three Mappings and two Search/Tracks that were performed with this star in the field-of-view, the star was found in two mappings and was not seen in the other three occasions. Since this star was located very close to the pixel border, one explanation could be a neighbouring dark blemish pixel. This however, has not yet been proved and more case study is needed before a conclusion can be reached.

In addition to the above-mentioned problem, which resulted in the missing/manual-execution of two slews, other problems caused further slews to be missed. Specifically, these were a false PTV failure, a glitch in telemetry and the failure of the FDS to reconstruct the attitude due to a paucity of stars in the STR FoV. There

was also a case of loss of Guide Star due to detected False Events, the accumulated number of which exceeded the STR SEU Filter threshold.

The fuel consumption over the period between 25/07/2003 and 01/08/2003 was 0.139Kg. The remaining propellant is in the order of 175.657 Kg on the 1st of August.

Note: Some more information concerning the AOCS operations and the fuel budget is provided in the Appendix.

3.1.2 Power

The power subsystem is working as specified. The available power from the arrays is in the order of **2230W**. This means that there is no noticeable degradation of the solar arrays since launch.

3.1.3 Thermal

The thermal control of the satellite is working well. The temperatures are currently all within the specified operational limits.

3.1.4 OBDH

The OBDH subsystem is working flawlessly. No on-board communications problem identified.

3.1.5 RF

The RF subsystem is working properly. The link margin is sufficient to ensure proper TM reception and execution of commands with the ranging channel enabled.

3.2 Payload

3.2.1 SPI

The status is nominal.

During the reporting period all the planned annealing operations were terminated: the SPI GeD detectors were switched on at the exit of the rev.96 belts and science data acquisition started to assess the camera performances post annealing; the active cooling phase ended at 85K and the fine tuning phase started. In this phase the cooler is commanded to maintain the temperature.

The new commands to disable the generation of undesired OEMs and to increase the photon science TM downlink priority were successfully up-linked: this allowed to re-enable the spectra science TM of the vetoed events. The HSL data length between DPE and DFEE subassembly had to be increased in order to fit the increased data rate from the DFEE generated spectra.
Since camera switch on, the instrument was put in photon-by-photon mode with spectra TM enabled and an assigned TM bandwidth in the science windows of 98 pkts/cycle. During rev.96, however, short transitions to configuration mode and back to photon mode had to be commanded for testing/ parameter tuning purposes.

Note: Some more information concerning the SPI operations is provided in the Appendix.

3.2.2 IBIS

The Status of the unit is Nominal.
The TM bandwidth assigned to IBIS is 134 pkts/8sec.

Note: Some more information concerning the IBIS operations is provided in the Appendix.

3.2.3 JEM-X

During the reporting period, JEM-X2 operations were executed from the Automatic Timeline and JEM-X1 was dormant, with the exception of a diagnostics test performed on the 01/08.

Note: Some more information concerning the JEM-X operations is provided in the Appendix

3.2.4 OMC

During the reporting period, OMC operations were interrupted several times, due to either incorrect Imaging commands, or other problems causing lost pointings.

Note: Some more information concerning the OMC operations is provided in the Appendix.

3.2.5 IREM

The status of the unit is Nominal, after the last SEU, which occurred on 19/07/03.

Note: Some more information concerning the IREM operations is provided in the Appendix.

4 Ground Facilities

The other problems during this week were a short interruption in the TM/TC from, DSS-16 and Redu, and an auto-track problem at Redu.

4.1 Mission Operations Centre

There was one problem concerning the performance of the IMCS reported this week:

- On DoY 212 at 10:21, there was a false pre-Transmission Validation no-go condition that prevented transmission of an AOCS command, and resulted in slew 00970020 being missed. This problem is already known, but no fix is currently available.

4.2 Ground Stations & Network

During this week, there were the three problems related to the ground stations, two of which had no consequences, the other triggered a chain of problems that led to the loss of four pointings:

- On DoY 210 at 10:24 to 10:28 there was a TC drop from Redu, this was near the start of the pass, and there was no impact.
- On DoY 211, at 03:04, there was a glitch in the TM from DSS-16, this caused the failure of an AOCS command, which led to the loss of pointing 00960029. Further unrelated problems led to the loss of 3 more pointings.
- Later that day, at 13:16, there were problems with the auto-track at Redu, due to a faulty tracking receiver. The antenna steering then continued on program track, there was no impact.

4.3 Science Ground Segment

4.3.1 ISOC

No ISOC Input has been provided

4.3.2 ISDC

There was one problem relating to the link between the MOC and ISDC reported this week.

- On DoY 213 at 07:04, ISDC reported that no auxiliary files had been received since 13:12 on DoY 212. Computer restarted IFTS on IDDA, and at 07:44 ISDC reported that the files were now being received ok.

5 Special Events

End of SPI annealing.

6 Anomalies

The problems related to the ground segment are already mentioned in chapter 4.

A list of the pending anomalies since Launch is presented in the Appendix. New anomalies raised during the past week are listed below:

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002400	31/07/2003	Loss of TM & TC links	Ground	NASA Sta.	Pending
INT - 002401	31/07/2003	Link MADDS - ISDS toggled between connected and TM flow.	Ground	IMCS	Pending
INT - 002402	31/07/2003	IREM Failure	Space	IREM	Pending
INT - 002403	31/07/2003	TM drop from DSS-16	Ground	NASA Sta.	Pending
INT - 002404	31/07/2003	NCTRS-A Application restart to clear Ghost link	Ground	NCTRS	Pending
INT - 002405	31/07/2003	ISDC not Receiving Auxiliary Files	Ground	I/F to SGS	Pending
INT - 002406	31/07/2003	Link MADDS/ISDS Disconnected	Ground	IMCS	Pending
INT - 002407	31/07/2003	TM drop from DSS-16	Ground	NASA Sta.	Pending
INT - 002408	31/07/2003	Late TC Link from DSS-16	Ground	NASA Sta.	Pending
INT - 002409	31/07/2003	Drop of VC0 & VC7 Telemetry.	Ground	NCTRS	Pending
INT - 002410	31/07/2003	Strange Disconnection Messages.	Ground	NCTRS	Pending
INT - 002411	31/07/2003	DSS-16 Transmitter Failure	Ground	NASA Sta.	Pending
INT - 002412	31/07/2003	OMC (OMCAS) IASW Crashed	Space	OMC	Pending
INT - 002413	01/08/2003	CMD failure caused slew to be missed.	Ground	FDS	Pending

7 Future Milestones

8 Appendix

The appendix includes various detailed information.

8.1 Overview of Revolutions

Revolution 96
The observations in revolution 96 consisted of a staring observation of Algol (RA 03:08:10.13; DEC +40:57:20.3) lasting about 46 hours, followed by a raster dithering observation of an Empty Field (RA 00:45:34.13; DEC +02:50:18.0) for the remaining ~15 hours of observation time.

During this revolution, SPI was undergoing the camera switch on and performance tests following the annealing operations. IBIS and JEM-X2 were in their nominal science modes and JEM-X1 remained in Safe mode. OMC was in Fast Monitoring Mode for the Algol observation and in Normal Mode for the Empty Field observation. The TM allocation throughout both observations in this revolution was 134 IBIS, 98 SPI, 1 JEM-X1, 8 JEM-X2, 5 OMC.

Revolution 97
The observations in revolution 97 began with a raster dithering observation of Scorpius X-1 (RA 16:19:55.00; DEC -15:38:24.0) lasting about 51 hours. Following this, a staring observation centred on Scorpius X-1 was performed for ~4 hours and during this time JEM-X Diagnostic operations were executed. A GCDE was then performed for the remaining ~4 hours of observation time.

The instrument modes were as follows for these observations:
· SPI and IBIS were in their nominal science modes throughout all observations.
· JEM-X1 was in Diagnostic mode for the Sco X-1/JEMXdiagnostic observation, but otherwise remained in Safe mode.
· JEM-X2 was in Data Taking mode (Spectrum Telemetry Format) for the Scorpius X-1 dithering observation, Diagnostic mode for the Sco X-1/JEMXdiagnostic observation and in its nominal science mode (Data Taking, Full Imaging TM format) for the GCDE observation.
· OMC was in Fast Monitoring Mode for the Scorpius X-1 dithering observation and in Normal Mode for the other observations.

The TM allocation during the JEM-X Diagnostic observation was 90 IBIS, 61 SPI, 45 JEM-X1, 45 JEM-X2, 5 OMC. During the other observations, the TM allocation was 134 IBIS, 98 SPI, 1 JEM-X1, 8 JEM-X2, 5 OMC.

8.2 Consumables

8.2.1 Detailed Fuel Book-keeping

```
2003-07-12T15:37:18.000Z     176.0318    F   Automatic TM processing.
2003-07-15T15:20:54.000Z     175.9901    F   Automatic TM processing.
2003-07-16T00:47:11.000Z     175.9590    F   Automatic TM processing.
2003-07-17T01:26:57.000Z     175.9438    F   Automatic TM processing.
2003-07-18T15:03:26.000Z     175.9290    F   Automatic TM processing.
2003-07-20T00:58:01.000Z     175.9240    F   Automatic TM processing.
2003-07-21T14:26:45.000Z     175.8879    F   Automatic TM processing.
2003-07-23T13:58:10.000Z     175.8573    F   Automatic TM processing.
2003-07-24T06:36:03.000Z     175.8060    F   Automatic TM processing.
2003-07-24T14:20:44.000Z     175.7966    F   Automatic TM processing.
2003-07-25T20:38:39.000Z     175.7564    F   Automatic TM processing.
2003-07-27T07:18:59.000Z     175.7354    F   Automatic TM processing.
2003-07-27T14:00:59.000Z     175.7008    F   Automatic TM processing.
2003-07-30T13:44:59.000Z     175.6756    F   Automatic TM processing.
2003-08-01T00:51:34.000Z     175.6575    F   Automatic TM processing.

This report was generated  Fri Aug 1 08:00:18 GMT 2003
```

8.3 Detailed Satellite Information

This section contains some detailed information concerning the various subsystems of the satellite and instruments.

8.3.1 AOCS Operations

AOCS operations were executed from the Automatic Timeline.

During this period, 31 Open Loop Slews, 88 Closed Loop Slews and 4 Momentum Bias were executed. 7 slews were missed or executed manually. This is equivalent to a 6%.

26/07/03 (Day of Year 207, Revolution 95)

Nothing to report.

27/07/03 (Day of Year 208, Revolution 95-96)

Loss of Guide Star due to STR SEU Filter: At 16:10:02 the guide star was released when the STR SEU Filter threshold was exceeded. The guide star, which was picked by the ACC after an Open Loop Slew was of magnitude 5.8 and had CCD coordinates (23122, 3196) at the time it was released. A mapping was commanded by the ACC and a new Guide Star was picked. This happened at an ascending altitude of about 43000km. The OTF went low and remained like that for the remaining of pointing 00960004

28/07/03 (Day of Year 209, Revolution 96)

Nothing to Report.

29/07/03 (Day of Year 210, Revolution 96)

Nothing to report.

30/07/03 (Day of Year 211, Revolution 96-97)

Slews lost due to short drop in telemetry and failure to reconstruct the attitude: At 03:04, a glitch in TM caused the AOCS command to report the loaded slew parameters to fail verification. The next interlocked command then failed uplink. The AOCS commanding stopped and slew 00960029 was missed. The timeline recovery tool was used to manually perform the missed slew. As usual, an attempt was made then to update the parameters for slew 00960030 using the recovery tool. However, the FDS failed to generate this update due to insufficient stars in the STR FoV, necessary to reconstruct the attitude. Finally, in the presence of the Flight Dynamics engineer, a manual Open-Loop slew was performed out of this attitude and to the attitude of pointing 00960032. Next, the parameters for slew 00960033 were updated. In total, slews 00960029 to 00960032 were missed. The RMU calibration that was planned to start at 03:06:36 was also missed. This calibration was done manually at 06:11.

31/07/03 (Day of Year 212, Revolution 97)

Slew lost due to false PTV failure: At 10:21, a false pre-Transmission Validation no-go condition prevented the uplink of an AOCS command and resulted in slew 00970020 being missed. This false PTV failure is a known IMCS problem, which causes occasional failures of command PTVs while the actual condition for the uplink of the command is green. The timeline recovery tool was used to slew to the attitude of pointing 00970020 and then to update the parameters for the next slew.

Slew lost because the Close-Loop-Slew Search and Track failed to find the commanded star: There was a problem with a star that was supposed to be used for the Close-Loop-Slew 00970028 with start time 18:36:42.

In the mapping after close loop slew 00970027 with start time 17:38:10, which was used to update slew 00980028, a magnitude 8.2 star was found at CCD coordinates (-12246, 19277) and was selected by the FDS for the Close-Loop-Slew. However, during the execution of the slew, the Search/Track could not locate this star and the slew failed. The star coordinates commanded for this Search/Track were (-12251, 19282), from the slew TPF. A manual mapping was then commanded, starting at 18:38:29, in which the same star was found and was selected once more to perform the manual recovery slew. Again, the slew SRCH/TRCK failed to find the star and the slew failed. Another mapping was then commanded starting at 18:58:16. The star was not seen at all in this mapping. This last mapping was used to perform an Open-Loop-Slew to the attitude of pointing 00970029.

The pixel coordinates of this star in the first mapping were (268.062, 263.727), which is close to the pixel border in "Y". Making an analogy for the transition in the location of the stars based on the change in the location of the guide star between the mapping and the SRCH/TRCK times, the SRCH/TRCK star gets even closer to the pixel border during the SRCH/TRCK, namely (268.025, 263.739). This is also the

case for the second mapping and SRCH/TRCK. Using the same analogy in the last mapping and taking the time when the Elementary Search Window with the SRCH/TRCK star was being processed, this star falls again very close to the border between pixels (268, 263) and (267, 263). It is not clear if this implies pixel (267, 263) to be a candidate for a dark blemish, but it is worth investigation.

01/08/03 (Day of Year 213, Revolution 98)

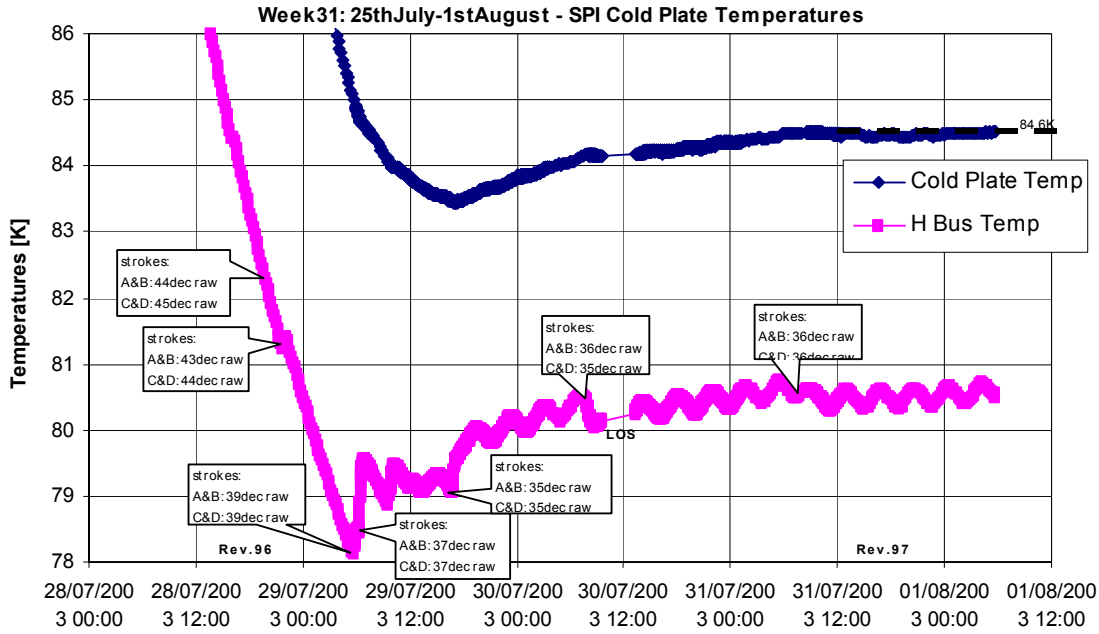
Nothing to report.

8.3.2 SPI Operations

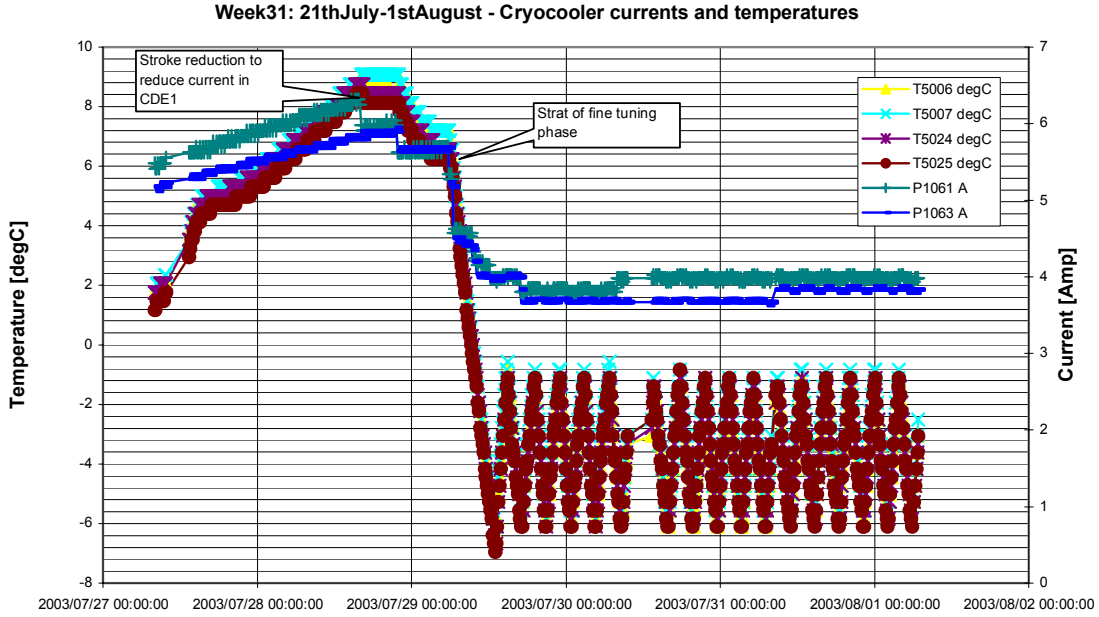
Cryocooler:
During the active cooling and the initial fine tuning phase, the following strokes were commanded:

Event	DATE	CDE1 CMP1	CDE1 CMP2	CDE2 CMP1	CDE2 CMP2	T° GED E0392 (K)	T° HBUS E0398 (K)
Start active cooling phase	205 24/07/03 07:00	45	45	45	45	313	308
Adjustment to reduce the current drawn by compressors A&B	209 28/07/03 16 :03	44	44	45	45	94.12	84.43
Adjustment to delay the Start of fine tuning	209 28/07/03 21:46	43	43	44	44	89.60	81.25
End active cooling – Start fine tuning	210 29/07/03 05:48	42	42	42	42	84.99	78.13
	210 29/07/03 06:22	39	39	39	39	84.73	78.45
Leveling off at 85K	210 29/07/03 09:32	38	38	38	38	84.10	78.87
	210 29/07/03 09:55	37	37	37	37	84.04	79.11
	210 29/07/03 12:06	36	36	37	37	83.78	79.13
	210 29/07/03 16:48	36	36	36	36	83.46	79.08
	210 29/07/03 16:58	35	35	35	35	83.46	79.27
	211 30/07/03 07:54	36	36	35	35	84.17	80.50
Final command to level off	212 31/07/03 09 :57	36	36	36	36	84.50	80.50

The following plot shows the evolution of the cold plate and H bus temperatures:



The following plot shows the current and the temperature parameters of the cryo-cooler during the active cooling: current, power, temperatures and phase were all nominal.



IASW/DPE:

Duplicated packets in VC7 TM : As reported last week, an AR has been opened (see INT-002390). The problem is likely to be a ground station problem. MOC is still waiting information about other occurrences of the for further investigation.

New commands : New commands to disable OEM243 and increase priority of Photon VC7 TM downlink priority, have been developed by CNES and tested in-house using the SPI simulator. They were then implemented in the MOC TM/TC database and successfully up-linked and tested in-flight after camera switch on.
The commands to disable OEM243 were developed to suppress the OEM class1 id243, which occurs too often if many spectra data are transmitted by the DFEE (which is the case when spectra of vetoed events is generated). This problem was noted during commissioning, for this reason the spectra of vetoed events has so far not been used. Before up-linking the command, a test was performed on-board confirm the problem still existed.
After enabling the spectra TM, the priority of the photon science TM was increased over the spectra one. This is now possible, without losing spectra TM thanks to the increased TM allocation to SPI (98pkts/cycle) available since the S/C overall TM rate was increased in May.

ACS: Nothing to report.

AFEE :
The switch on of the camera, performed in steps of 500V with some intermediate data acquisition, was successful.
The PI still has to report the effects in terms of camera overall performance improvement after annealing.

DFEE :
It was necessary to increase the length of the HSL data blocks from 3KB to 5KB so as not to loose spectra TM in the data link between DPE and DFEE. The problem was immediately noted thanks to exception OEM "Partial Flag Overflow" occurring every about 2hrs after spectra TM enable.

PSD : Nothing to report.

8.3.3 IBIS Operations

There were a few reports during Belt passage the OEM ID 167 Class 2<<IBIS1 PICsIT NOISY SEMIMODULE>> due to the PICsIT detectors being ON without the VETO anticoincidence system, as required by PIs.

On **DOY 2003.209 (28/07)** at 18.29Z, the OEM ID 183 Class 2 <<IBIS1 VETO +5V VECU VOLTAGE OUT OF RANGE>> was reported. The relevant TM_para G6106 reported a value inside limits and therefore the problem has been disregarded, as suggested by the nominal reaction to this OEM.

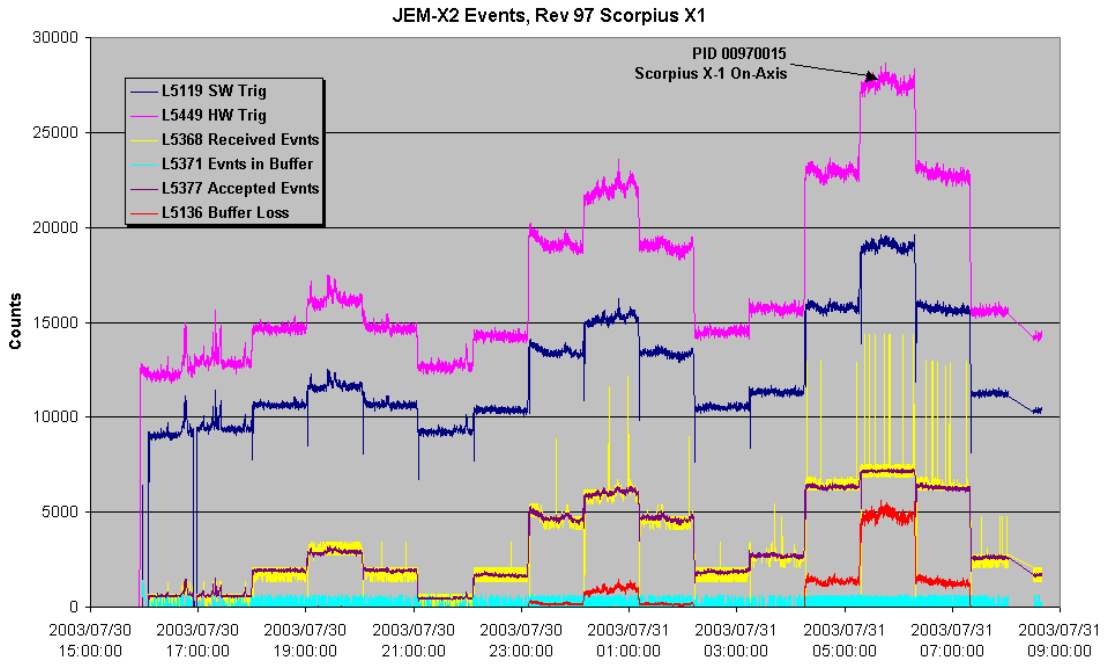
On **DOY 2003.211 (30/07)** at 05.31Z, a problem with IBIS Histogram production was reported. Both Standard Hist and Calibration Hist processes were stopped since the last Ground Station Handover at 02.16Z. ISDC was informed and the recovery action foresaw the forcing of the last Hist accumulated on board by using FCP_IBIS1_0312. Investigations are still on-going but the anomaly could be related to the coincidence of the two processes: Calibration Histograms and set of Ground Station Handover Flag.

8.3.4 JEM-X Operations

During this week, there was not a great deal to report apart from Friday, when a diagnostic data dump was performed, see below.

On 01/08/2003 (DoY 213, Rev 97) at 19:30 the activation of JEM-X1 High Voltages started and was completed by 20:00. At 20:44:45, during the Scorpius X-1 pointing, the uplink of the diagnostic commands by the automatic timeline was started.
With the first transition to Diagnostic mode, JEM-X2 went to SAFE mode due to high Software Trigger Rates, the number of which exceeded the HV switch Off threshold. These rates were also high on JEM-X1 but they did not exceed the threshold. At this time commanding to JEM-X2 was disabled from the timeline and the process to reactivate the unit was started. This took about 30 minutes. After the reactivation of JEM-X2, commanding to the unit was re-enable, but with the next transition to diagnostic mode JEM-X2 again went to SAFE mode due to high S/W trigger rates. A few minutes later JEM-X1 also went to SAFE mode for the same reason. At this stage, as suggested by the JEM-X PI, it was decided to temporarily increase the HV switch Off threshold by patching the relevant DFEE memory address (1 word). This was done and for both units the threshold was increased from 20000 to 30000. The HVs were activated again and commanding to JEM-X1 and JEM-X2 were re-enabled at 21:55 and 22:08 respectively. From this time the diagnostic operation went smoothly without any interruptions. Out-Of-Limit warnings/alarms on the S/W trigger rates and On-Event-Messages related to the HSL loss of synchronization were received, which were expected (not nominal but expected). The diagnostic data dump operations was finally completed by 02/08/2003T00:50:00. Both units were commanded to SAFE mode and the relevant DFEE memory address was patched again to set the HV switch OFF threshold back to the nominal value of 20000. After this, JEM-X2 was reactivated to rejoin the timeline at 01:20 and JEM-X1 was left in SAFE mode, as planned.

It should be noted that throughout the recent Scorpius X-1 observations, higher than normal S/W trigger rates were observed and when pointed on-axis to the source, the S/W trigger rates almost reached the SAFE threshold. It was fortunate that the unit did not go to SAFE during these observations. In the plot below, which shows the JEM-X2 event counts during a part of a raster pattern that contained an on-axis pointing to the source, the S/W Trigger rate (TM L5119) approaching the HV switch Off limit of 20000 can be seen. This source is too "bright" for the nominal settings of JEM-X.



8.3.5 OMC Operations

During this period 102 OMC images were acquired with 8 missed.

26/07/2003, DOY 207, Revolution 95
Nothing to report

27/07/2003, DOY 208, Revolution 95-96
Nothing to report

28/07/2003, DOY 209, Revolution 96
At 15:23, the OTF toggled due to on-going SPI maintenance, which caused OMC to go to STAND-BY, at 15:36 the OMC imaging commands were manually re-uplinked.

29/07/2003, DOY 210, Revolution 96
Nothing to report

30/07/2003, DOY 211, Revolution 96-97
At 03:05, there was a rejected OMC command, and then from 03:46 until 04:51, there were 19 Science window rejections, these were all caused by incorrect attitudes during the recovery after AOCS problems at this time, exposures 00960029 to 00960032 were lost.

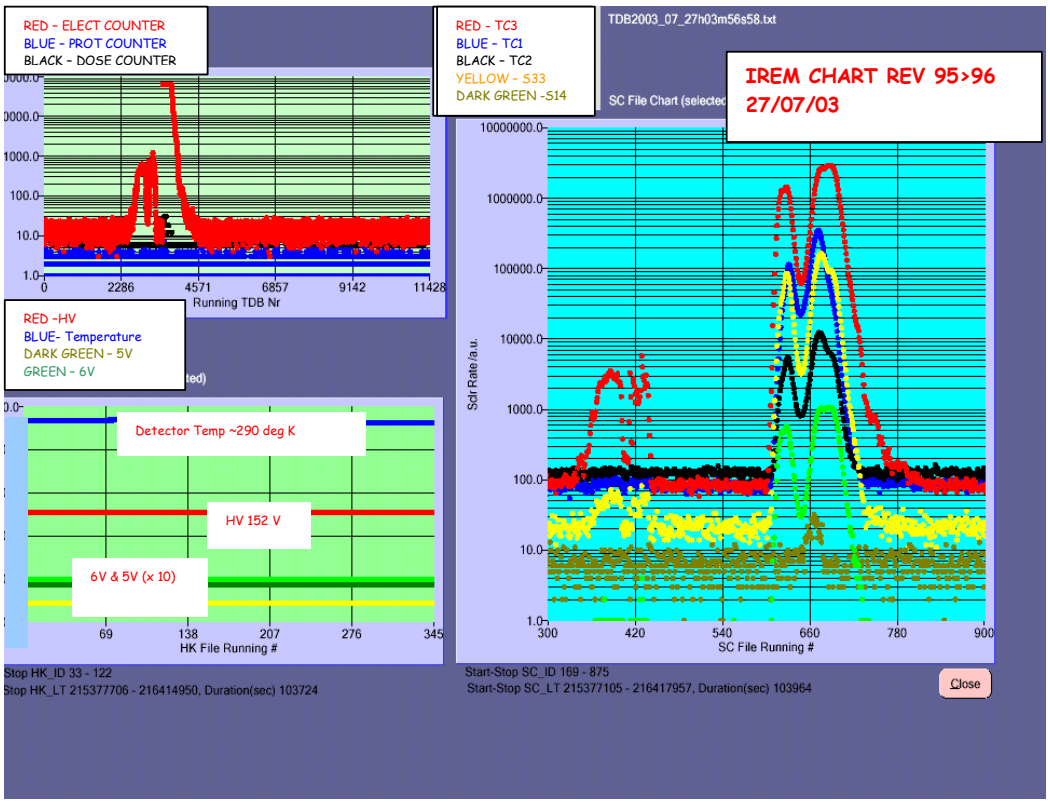
31/07/2003, DOY 212, Revolution 97

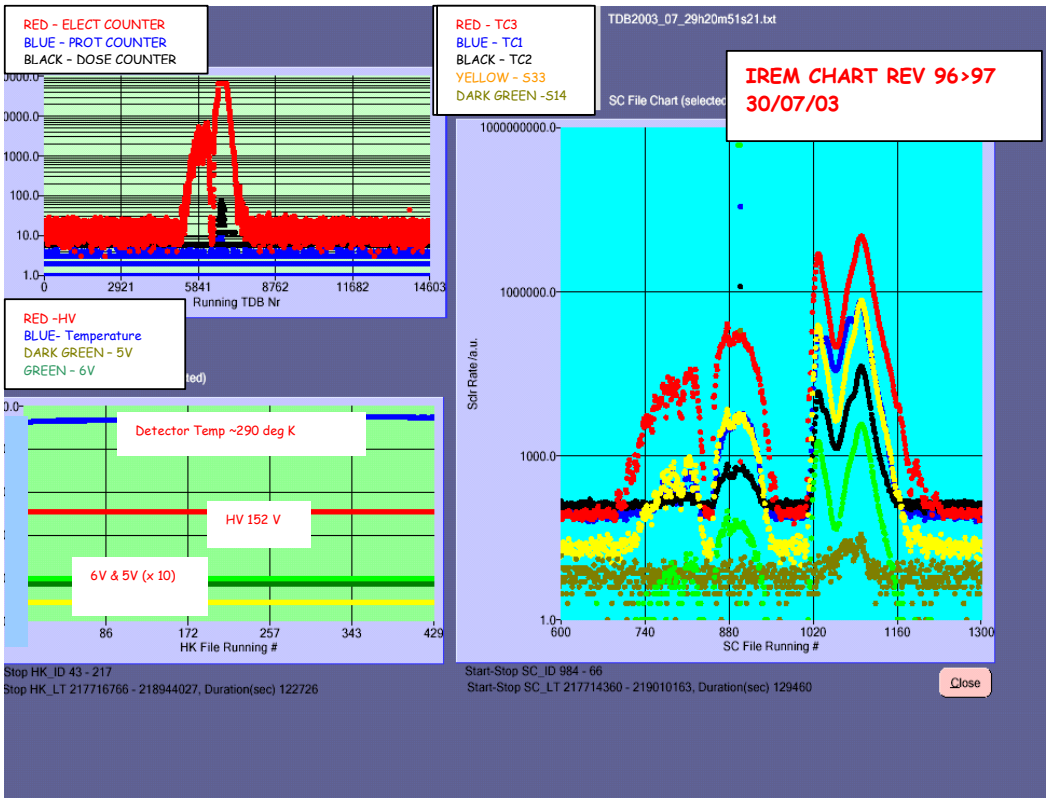
At 09:22, the OMC commands failed, an attempt was made at 09:34 to manually uplink the same commands, which also failed. An investigation is on-going as to the reason for these rejections. The impact was that exposure 00970019 was lost.
At 18:37, two OMC commands were rejected due to AOCS problems, the impact was that exposures 00970028 and 00970029 were lost.

01/08/2003, DOY 213, Revolution 97
At 02:14, the OMC commands were rejected, an investigation is on-going as to the reason for this rejection, the impact was that exposure 00970035 was lost.

8.3.6 IREM Operations

The following plots show the IREM count rates for the Belts passage in rev 96, 97.




RED - ELECT COUNTER
BLUE - PROT COUNTER
BLACK - DOSE COUNTER
Running TDB Nr
RED -HV
BLUE- Temperature
DARK GREEN - 5V
GREEN - 6V
Detector Temp ~290 deg K
HV 152 V
6V & 5V (x 10)
HK File Running #
Stop HK_ID 43 - 217
Stop HK_LT 217716766 - 218944027, Duration(sec) 122726
RED - TC3
BLUE - TC1
BLACK - TC2
YELLOW - S33
DARK GREEN -S14
TDB2003_07_29h20m51s21.txt
IREM CHART REV 96>97
30/07/03
Sdr Rate /a.u.
SC File Running #
Start-Stop SC_ID 984 - 66
Start-Stop SC_LT 217714360 - 219010163, Duration(sec) 129460
Close

8.4 List of Anomalies since Launch

The following table presents the list of all identified anomalies that have been registered since Launch and that are still pending. Though these Anomaly Reports still have a pending status most of the problems have been analysed and solutions or at least workarounds are already in place.

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002010	22/10/2002	Time correlation not applied correctly to time parameters in TM type 8 reports.	Ground	IMCS	Pending
INT - 002066	13/11/2002	Data routing to ISDS	Ground	I/F to SGS	Pending
INT - 002082	13/11/2002	TM packet production lower than allocation.	Space	SPI	Pending
INT - 002094	19/11/2002	TDRS does not work with super-commutated parameters	Ground	IMCS	Pending
INT - 002142	11/12/2002	TDRS Time Interval Setting	Ground	IMCS	Pending
INT - 002145	15/12/2002	Commands failing PTV for no reason	Ground	IMCS	Pending
INT - 002212	29/01/2003	TDRS Interval-by-Interval TM Retrieval Problem	Ground	IMCS	Pending
INT - 002213	29/01/2003	SCOS 2000 Interval-by-Interval TM Retrieval Problem	Ground	IMCS	Pending
INT - 002217	06/02/2003	TC link drop	Ground	NASA Sta.	Pending
INT - 002219	10/02/2003	IBIS: PICsIT PDMs counters SET to 0 (twice) during nominal operation	Space	IBIS	Pending
INT - 002233	24/02/2003	Time Calibration not Coherent among Ground Stations	Ground		Pending
INT - 002234	24/02/2003	S2K unable to access READ ONLY disk in IDDA.	Ground	IMCS	Pending
INT - 002235	25/02/2003	Too narrow window for RMU cal in PSF of rev 49	Ground	I/F to SGS	Pending
INT - 002242	02/03/2003	TM &TC Drop on DSS 16	Ground	NASA Sta.	Pending
INT - 002246	05/03/2003	Loss of Telemetry from DSS16	Ground	NASA Sta.	Pending
INT - 002253	10/03/2003	RX1 and RX2 Locked at the same time	Ground	NASA Sta.	Pending
INT - 002255	10/03/2003	Late AOS at DSS-24	Ground	NASA Sta.	Pending
INT - 002256	14/03/2003	Late AOS at DSS-16	Ground	NASA Sta.	Pending
INT - 002257	17/03/2003	Late AOS at DSS-24	Ground	NASA Sta.	Pending
INT - 002259	21/03/2003	TDRS: Retrieval log is Meaningless.	Ground	IMCS	Pending

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002260	21/03/2003	Monitoring task Printout, sample time	Ground	IMCS	Pending
INT - 002262	21/03/2003	TDRS: FEN Retrievals containing status parameters always fail.	Ground	IMCS	Pending
INT - 002267	25/03/2003	Drop in link from ISDS to ISDC	Ground	I/F to SGS	Pending
INT - 002273	27/03/2003	Drop in VC7 via REDU	Ground	ESA Sta.	Pending
INT - 002279	29/03/2003	Telemetry lost from DSS-16. DR N109197	Ground	NASA Sta.	Pending
INT - 002295	15/04/2003	Telemetry Drops from Goldstone	Ground	NASA Sta.	Pending
INT - 002298	20/04/2003	ISDS - ISDC link outage	Ground	I/F to SGS	Pending
INT - 002299	21/04/2003	Telemetry loss from DSS-24	Ground	NASA Sta.	Pending
INT - 002302	24/04/2003	Telemetry loss via DSS-16 due to RFI	Ground	NASA Sta.	Pending
INT - 002304	26/04/2003	IFTS MCS instance not working	Ground	IMCS	Pending
INT - 002305	04/05/2003	Telemetry Drops from Goldstone. DR GI02720	Ground	NASA Sta.	Pending
INT - 002307	06/05/2003	Wrong sign applied in the S/C delay in the correlator.	Ground	IMCS	Pending
INT - 002308	05/05/2003	Loss of TM/TC link due to hit on line	Ground	COMMS	Pending
INT - 002309	06/05/2003	Command release delayed	Ground	ESA Sta.	Pending
INT - 002311	06/05/2003	Drop in TM on MADDS-ISDSA link	Ground	ESA Sta.	Pending
INT - 002312	06/05/2003	Static PTV in "No Go" State for command A3189	Ground	IMCS	Pending
INT - 002314	12/05/2003	Wrong file displayed for Timeline Summary File	Ground	IMCS	Pending
INT - 002318	09/05/2003	SUN workstation 128 rebooted itself.	Ground	IMCS	Pending
INT - 002323	19/05/2003	Telemetry Drops from Goldstone (DR 109346)	Ground	NASA Sta.	Pending
INT - 002324	19/05/2003	Command A3084 not verified	Ground	IMCS	Pending
INT - 002326	21/05/2003	Hardware failure at DSS-16 during handover DR: GI02772	Ground	NASA Sta.	Pending
INT - 002327	26/05/2003	CLCW: change in ratio of the number of VC-0 / VC-7 CLCWs in VC-0 TM Frames	Space	Platform	Pending
INT - 002328	27/05/2003	TDRS queries for some SPI parameters fail before DOY 2003.034	Ground	IMCS	Pending
INT - 002329	24/05/2003	Late handover to DSS-16. DR: G102803	Ground	NASA Sta.	Pending
INT - 002330	27/05/2003	NCTRS CPU goes to 85% for a problem related with tracking data	Ground	NCTRS	Pending
INT - 002331	27/05/2003	Monitoring Task ASCII Printout, not in ASCII format	Ground	IMCS	Pending
INT - 002334	30/05/2003	Bad telemetry from Goldstone - DSS-16	Ground	NASA Sta.	Pending
INT - 002336	02/06/2003	VC-0 telemetry not being received from Goldstone	Ground	NASA Sta.	Pending

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002337	03/06/2003	Late handover to DSS-16 due to uplink bind problem	Ground	NCTRS	Pending
INT - 002338	03/06/2003	Error sending data to consolidator (VC-7)	Ground	IMCS	Pending
INT - 002339	05/06/2003	IREM anomaly: SEU (#3)	Space	IREM	Pending
INT - 002340	05/06/2003	IBIS anomaly: Histogram production stopped due to coincidence of GSHF=1 with the start of S5 process	Space	IBIS	Pending
INT - 002341	05/06/2003	IBIS anomaly: Histogram production stopped due to the combination of PDUR setting with IASW observation duration calculation during long staring	Space	IBIS	Pending
INT - 002342	05/06/2003	Telemetry Drops from Goldstone DR: AR109393	Ground	NASA Sta.	Pending
INT - 002343	07/06/2003	Error sending data to ISDC	Ground	IMCS	Pending
INT - 002344	08/06/2003	Telemetry drops from REDU	Ground	ESA Sta.	Pending
INT - 002345	09/06/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002350	12/06/2003	Telemetry Drop from Goldstone DR: G102867	Ground	NASA Sta.	Pending
INT - 002351	12/06/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002352	14/06/2003	Late handover to DSS-16, DR G102878 and G102879	Ground	NASA Sta.	Pending
INT - 002353	14/06/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002355	17/06/2003	VC7 Frames received with a wrong order by ISDC	Ground	ESA Sta.	Pending
INT - 002356	19/06/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002357	20/06/2003	Error sending data to ISDS	Ground	IMCS	Pending
INT - 002358	22/06/2003	Error sending data to ISDC	Ground	IMCS	Pending
INT - 002359	22/06/2003	NCTRSA application restart	Ground	NCTRS	Pending
INT - 002360	22/06/2003	Loss of telemetry due to NCTRSA and IMCSA errors	Ground	NCTRS	Pending
INT - 002361	23/06/2003	Late handover to DSS-16, DR pending	Ground	NASA Sta.	Pending
INT - 002362	23/06/2003	NCTRSA application restart	Ground	NCTRS	Pending
INT - 002363	23/06/2003	Error sending data to ISDC	Ground	IMCS	Pending
INT - 002364	24/06/2003	NCTRSA application restart	Ground	NCTRS	Pending
INT - 002365	24/06/2003	Telemetry Drops from Goldstone. DR GI02942	Ground	NASA Sta.	Pending
INT - 002367	25/06/2003	SPI: Spikes in GeD count rates after HV switch on following 1st annealing	Space	SPI	Pending
INT - 002368	25/06/2003	IFTS Transfer on IMCS-A Failed	Ground	IMCS	Pending
INT - 002369	26/06/2003	Problems to establish VC0 and VC7 links on NCTRS-A	Ground	NCTRS	Pending

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002370	01/07/2003	Static PTV conditions handled incorrectly.	Ground	IMCS	Pending
INT - 002371	02/07/2003	PSS data mixed with S/C telemetry on DOY 2003.090.17.26.01	Ground	Procedure	Pending
INT - 002373	01/07/2003	IFMS Hung up at REDU	Ground	ESA Sta.	Pending
INT - 002374	01/07/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002375	02/07/2003	Error sending data to ISDS	Ground	IMCS	Pending
INT - 002376	03/07/2003	Unexpected behaviour of IMCA	Ground	IMCS	Pending
INT - 002377	03/07/2003	Telemetry drop from Redu	Ground	ESA Sta.	Pending
INT - 002378	03/07/2003	VC0 drop when adding bad-frames on NCTRS-A	Ground	NCTRS	Pending
INT - 002379	03/07/2003	ISDS to ISDC link drop messages	Ground	IMCS	Pending
INT - 002381	04/07/2003	All TLM links on NCTRS-A dropped out	Ground	NCTRS	Pending
INT - 002382	05/07/2003	Telemetry Drops from Goldstone DR:G102997	Ground	NASA Sta.	Pending
INT - 002383	09/07/2003	Antenna stopped at REDU	Ground	ESA Sta.	Pending
INT - 002384	10/07/2003	AD terminated on TC link	Ground	ESA Sta.	Pending
INT - 002385	12/07/2003	Telemetry lost from DSS-16 due to RFI	Ground	NASA Sta.	Pending
INT - 002386	14/07/2003	Telemetry Drop from Goldstone DR: G103032	Ground	NASA Sta.	Pending
INT - 002387	16/07/2003	IREM anomaly: SEU (#4)	Space	IREM	Pending
INT - 002388	16/07/2003	FDS failed to create TPF	Ground	FDS	Pending
INT - 002389	16/07/2003	IBIS: PICsIT PDMs counters SET to 0 during nominal operation (#3-4)	Space	IBIS	Pending
INT - 002390	17/07/2003	Goldstone station: re-play of previous pass VC7 TM at the beginning of a new pass	Ground	NASA Sta.	Pending
INT - 002391	18/07/2003	TC problems following the TMP swap on DOY 197	Ground	ESA Sta.	Pending
INT - 002392	18/07/2003	Broadcast Packet Eclipse Entry/Exit Times Incorrect	Ground	FDS	Pending
INT - 002393	23/07/2003	Auto-stack crash on sun128	Ground	IMCS	Pending
INT - 002399	25/07/2003	IFRD: the CSM-IFRD task crashed on isdsa after new IMCS SW release (8.8).	Ground	IMCS	Pending
INT - 002400	31/07/2003	Loss of TM & TC links	Ground	NASA Sta.	Pending
INT - 002401	31/07/2003	Link MADDS - ISDS toggled between connected and TM flow.	Ground	IMCS	Pending
INT - 002402	31/07/2003	IREM Failure	Space	IREM	Pending
INT - 002403	31/07/2003	TM drop from DSS-16	Ground	NASA Sta.	Pending
INT - 002404	31/07/2003	NCTRS-A Application restart to clear Ghost link	Ground	NCTRS	Pending

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002405	31/07/2003	ISDC not Receiving Auxiliary Files	Ground	I/F to SGS	Pending
INT - 002406	31/07/2003	Link MADDS/ISDS Disconnected	Ground	IMCS	Pending
INT - 002407	31/07/2003	TM drop from DSS-16	Ground	NASA Sta.	Pending
INT - 002408	31/07/2003	Late TC Link from DSS-16	Ground	NASA Sta.	Pending
INT - 002409	31/07/2003	Drop of VC0 & VC7 Telemetry.	Ground	NCTRS	Pending
INT - 002410	31/07/2003	Strange Disconnection Messages.	Ground	NCTRS	Pending
INT - 002411	31/07/2003	DSS-16 Transmitter Failure	Ground	NASA Sta.	Pending
INT - 002412	31/07/2003	OMC (OMCAS) IASW Crashed	Space	OMC	Pending
INT - 002413	01/08/2003	CMD failure caused slew to be missed.	Ground	FDS	Pending