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

INTEGRAL
Mission Report
INT-MOC-SYS-RP-1001-TOS-OF
No. 028
Week 14
04.04.03
Routine Phase

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1 General

The Flight Control Team at MOC has compiled this report considering a couple of inputs provided by the Flight Dynamics Team.

It addresses the activities from 29.03.03 until 04.04.03 (both dates inclusive) and covers the revolutions 55, 56 and 57.

2 Summary of Activities

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

The targets of the revolutions were XTE J1550-564 (RA 15:50:58.90; DEC -56:28:35.3), Aql X-1 (RA 19:11:16.00; DEC +00:35:06.0), GRS 1915+105 (RA 19:15:11.50; DEC +10:56:44.0), the Galactic centre and the Galactic plane. The activities consisted of 4 raster dithering observations, a GPS and several GCDE observations.

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 during this week were heavily affected by ground segment problems of all kind. A total of 17 slews (7%) were missed due to these problems.

The fuel consumption over the last 8 days was 0.18 Kg. The remaining propellant is in the order of 178.54 Kg on the 1st of April.

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 is in the order of 2380 W as since the beginning of the mission, i.e. no degradation has been identified so far.

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.

The instrument is operating in photon by photon mode with Spectra telemetry disabled. The TM bandwidth assigned to SPI was 69 pkts for all the period.

The Cryo-cooler is working nominally ensuring 85K temperature in the detector cold plate.

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

3.2.2 IBIS

Status Nominal, on-going routine phase.

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 performed nominally as planned in the timeline and JEM-X1 was dormant. In revolution 56, JEM-X2 went to SAFE mode by its onboard protection when the SW trigger ate reached the HV switch OFF threshold at an altitude of 122500 km.

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 different problems, which resulted in stopping of timeline and loss of slews.

On 31 March 2003, Day-of-Year 090, OMCAS crashed for the second time during an attempt to read an analogue line at the time of transition to STANDBY mode. The generated OEMs indicate exactly the same problem that had happened on DOY 083. To recover the instrument, a cold reset of the DPE was commanded and then the OMCAS was restarted.

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

3.2.5 IREM

The status of the unit is nominal.

4 Ground Facilities

The overall performance of the ground segment was not very good during this week. Unrelated problems caused the loss of 7% of the slews. The problems were in the area of stations, control system and communications.

4.1 Mission Operations Centre

On day 87 the MCS instance of the IFTS system crashed (see previous weekly report). This caused the loss of 4 slews as reported in section 8.3.1.

On day 090, at 16:28, TCs MU1321 & MU1322 failed release, due to a PTV failure, no impact.

4.2 Ground Stations & Network

During this week, there were a few problems related to the ground stations:

- On day 088 from 12:51 to 13:17, there was a link drop with Goldstone DSS-16, this was recovered using the back-up ISDN line. The impact was pointings 92 and 93 of revolution 55 were missed, with 94 being manually recovered.
- On day 090, VIL2 was used instead of Redu, to enable the FEC to be re-booted. At 01:56 to 02:17, there were TM gaps on VC7, and at 02:19, the TC link was lost. At 02:32 it was decided to switch back to Redu, the system coming up at 02:49. The impact was pointings 47, 48 and 49 of revolution 56 being missed, with pointing 50 being manually executed.
- On day 090 from 17:26 to 17:29 simulated data from the Portable Satellite Simulator was routed to the MOC from DSS-24 at Goldstone. This caused pointings 74 and 75 of revolution 56 to be lost. Subsequently, there were occasional bad frames till the end of the pass at 18:18.
- On day 092, from 12:45 to 12:48 there was a drop in the TC link to data. Between 14:34 and 14:35 there were several Reed-Solomon decoding alarms on the TM, and again at 15:27, 5 frames were missed. No pointings were missed, but some TM was lost.
- On day 093 from 09:37 to 09:41 the TM & TC links to Redu were lost. The impact was pointings 53 and 54 of revolution 57 were lost.

In addition the VC-7 Online Complete service has been tested E2E between DSS-16 and the control system. Further tests to be done include DSS-24 (scheduled for Monday the 7th). It has been discovered that there is an interface problem between the NCTRS and the MCS that prevents a connection in Online Complete mode with Goldstone and Online Timely with Redu. A first attempt to solve the problem will be to try to use Online Complete for VC-7 also from Redu.

4.3 Science Ground Segment

4.3.1 ISOC

No ISOC Input has been provided

4.3.2 ISDC

On one occasion last week: on Day 088 at 12:51, the ISDC link was briefly interrupted. The lost real time TM will be recovered in due course when the TM CD is supplied.

5 Special Events

6 Anomalies

The problems related to the ground segments are already mentioned in chapter 4. Work on the interface with Goldstone (VC-7 in Online Complete mode) is in progress.

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 - 002274	2003/03/28	IFTS MCS instance not working	Ground	IMCS	Pending
INT - 002275	2003/03/28	Constraint Error Exception in the OMCAS on DOY081	Space	OMC	Pending
INT - 002276	2003/03/28	Crash of OMCAS on DOY083	Space	OMC	Pending
INT - 002277	2003/03/28	Telemetry lost from DSS-16. DR N100888	Ground	NASA Sta.	Pending
INT - 002278	2003/03/28	FEC failure in REDU	Ground	ESA Sta.	Pending
INT - 002279	2003/03/29	Telemetry lost from DSS-16. DR N109197	Ground	NASA Sta.	Pending
INT - 002280	2003/03/30	Telemetry lost from REDU	Ground	ESA Sta.	Pending
INT - 002281	2003/03/31	TC outage via REDU	Ground	ESA Sta.	Pending
INT - 002282	2003/03/31	Bad data being received from DSS-16	Ground	NASA Sta.	Pending
INT - 002283	2003/04/01	ISDS-A and IDDA services stopped	Ground	IMCS	Pending
INT - 002284	2003/04/01	Reed Solomon alarms from REDU	Ground	ESA Sta.	Pending
INT - 002285	2003/04/02	Redu Antenna Uplink switch goes off bus	Ground	ESA Sta.	Pending
INT - 002286	2003/04/02	Reboot of ESOC Firewall	Ground	I/F to SGS	Pending
INT - 002287	2003/04/03	Event logger messages	Ground	IMCS	Pending
INT - 002288	2003/04/03	TM/TC lost via REDU	Ground	ESA Sta.	Pending
INT - 002289	2003/04/03	Delayed handover to DSS-16	Ground	NASA Sta.	Pending
INT - 002290	2003/04/03	Bad frames and TLM drop from DSS-16. Possible RFI	Ground	NASA Sta.	Pending

7 Future Milestones

8 Appendix

The appendix includes various detailed information.

8.1 Overview of Revolutions

Revolution 55

Revolution 55 began with a raster dithering observation of XTE J1550-564 (RA 15:50:58.90; DEC -56:28:35.3) lasting ~31 hours. This was followed by a GCDE lasting 9 hours, after which a GPS was performed for the remaining ~21 hours of observation time.

Throughout these observations, the TM allocation was 69 SPI; 112 IBIS; 1 JEM-X1; 8 JEM-X2; 5 OMC and all instruments were in their nominal science modes, except for JEM-X1 which remained in Safe mode for the entire revolution.

Revolution 56

Revolution 56 began with a raster dithering observation of Aql X-1 (RA 19:11:16.00; DEC +00:35:06.0) which lasted ~16 hours. GCDE observations were then performed for the remaining ~45 hours of observation time.

Throughout these observations, the TM allocation was 69 SPI; 112 IBIS; 1 JEM-X1; 8 JEM-X2; 5 OMC and all instruments were in their nominal science modes, except for JEM-X1 which remained in Safe mode for the entire revolution.

Revolution 57

Revolution 57 consisted of a raster dithering observation centred on GRS 1915+105 (RA 19:15:11.50; DEC +10:56:44.0) lasting about 30 hours followed by 5 pointings of a GCDE, lasting ~3 hours, and finally a raster dithering observation of XTE J1550-564 (RA 15:50:58.90; DEC -56:28:35.3) for the remaining ~27 hours of observation time.

Throughout these observations, the TM allocation was 69 SPI; 112 IBIS; 1 JEM-X1; 8 JEM-X2; 5 OMC and all instruments were in their nominal science modes, except for JEM-X1, which remained in Safe mode for the entire revolution.

8.2 Consumables

8.2.1 Detailed Fuel Book-keeping

2003-03-19T07:48:58.000Z	178.9569	F	Automatic TM processing.
2003-03-19T10:18:43.000Z	178.9387	F	Automatic TM processing.
2003-03-20T23:54:06.000Z	178.9193	F	Automatic TM processing.
2003-03-22T10:14:18.000Z	178.9020	F	Automatic TM processing.
2003-03-23T16:09:49.000Z	178.8376	F	Automatic TM processing.
2003-03-23T23:39:58.000Z	178.8169	F	Automatic TM processing.
2003-03-24T08:46:39.000Z	178.8011	F	Automatic TM processing.
2003-03-24T15:54:07.000Z	178.7846	F	Automatic TM processing.
2003-03-24T22:24:00.000Z	178.7354	F	Automatic TM processing.
2003-03-25T10:05:29.000Z	178.7233	F	Automatic TM processing.

This report was generated at Wed Mar 26 08:00:10 GMT 2003

Note: An increment of +0.6360kg has been added to the fuelbook following the final recalibration of the LEOP orbit manoeuvres. Details to be found in the ADC volume of the Flight Dynamics LEOP report (INT-FDOS-ADC-FDR-0001-TOS-GFO ... in preparation)

8.3 Detailed Satellite Information

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

8.3.1 AOCS SUMMARY OPERATIONS REPORT 28/03/2003-04/04/2003

AOCS operations were executed from the Automatic Timeline.
During this period, 85 Open Loop Slews, 155 Closed Loop Slews and 10 Momentum Bias were executed. 17 slews were missed. This is around 7% of the total.

28/03/03 (Day of Year 087, Revolution 55)

Slews missed due to IMCS problem (IFTS): At 01:27 the slew update for 00550039 was produced by the FDS, but did not reach the autostack. The reason was a crash in the MCS instance of the IFTS (Integral File Transfer System). The slew (a close loop slew) was executed with the default parameters. This is OK for a close loop slew, provided the new guide star is found and it is not the same as the current one. On the next slew, the command to swap the guide star failed static PTV incorrectly (the condition was in reality GO). This is an open control system problem that occurs occasionally. The PTV failure stopped the AOCS commanding from the timeline. Since in order to recover, the transfer of files from the FDS is needed, the recovery could not be started until the IFTS problem was fixed. As a result the slews 00550040 to 00550043 were missed. The slew to 00550044 was executed manually, but due to the configuration of the instruments being the right one, it is expected that the pointing is nominal for science.

Slew missed due to Ground Station problem (Redu): At 23:16 the onboard receivers lost the RF lock, due to a problem at Redu. Due to this the uplink of 00550073 failed. The recovery was performed, and the attitude of 00550074 acquired manually (configuration for this pointing not nominal for science, OTF low).

29/03/03 (Day of Year 088, Revolution 55-56)

Slew missed due to communications problem with Goldstone: Around 13:00 there were very frequent drops of TM from Goldstone. The reason seemed to be in the communications line between JPL and ESOC. Due to this problem the slew 00550092 failed the uplink, slew 00550093 was also missed, and the attitude for 00550094 was acquired manually (OTF stayed low for this pointing).

30/03/03 (Day of Year 089, Revolution 56)

Nothing to report.

31/03/03 (Day of Year 090, Revolution 56)

Slews missed due to Ground Station problem (Redu/Vilspa): At 01:55 a H/O from Redu to Vil2 was executed, in order to allow the Front End Controller to be rebooted at Redu. At 02:19 the TC link was lost from Vilspa. At 02:49 a H/O back to Redu was completed, and Recover Schedule could be executed. The impact of this problem was that slews 00560047, 00560048 and 00560049 were missed, and a slew to attitude 00560050 was executed manually.

Slews missed due to Ground Station problem (Goldstone/JPL): At 17:26 PSS (Portable Satellite Simulator) data were put in the TM line from Goldstone, instead of S/C TM. The

AOCS had to be disabled from the timeline until the problem was fixed. The impact of this problem was that pointings 00560074 and 00560075 were missed.

01/04/03 (Day of Year 091, Revolution 56-57)

Nothing to report.

02/04/03 (Day of Year 092, Revolution 57)

Nothing to report.

03/04/03 (Day of Year 093, Revolution 57)

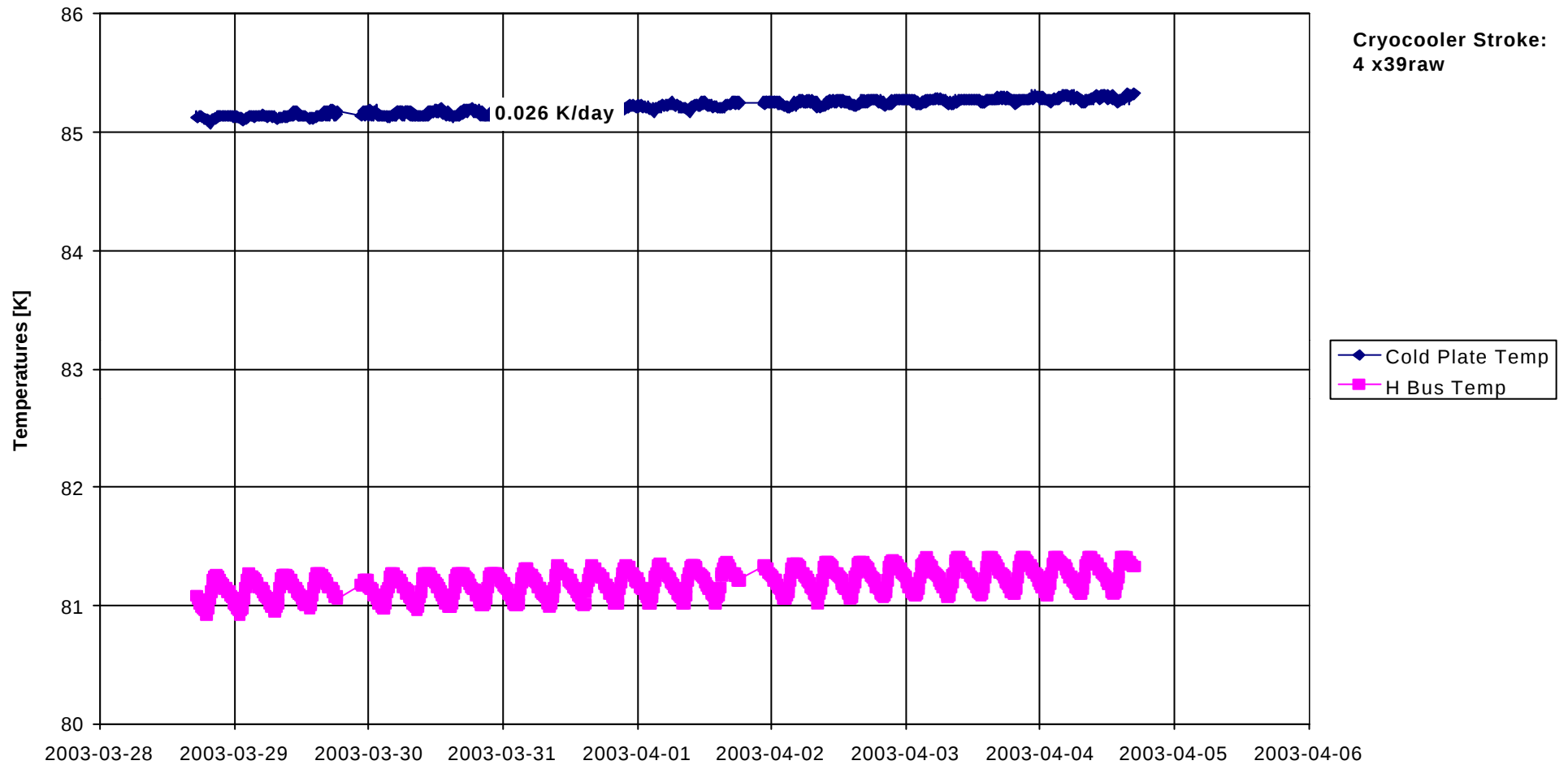
Slew missed due to communications problem with Redu: Around 09:37 the links with Redu were lost (both TM and TC), due to a hit in the communications line. Due to this problem the slew 00570053 was missed, and the attitude of 00570054 was acquired manually.

8.3.2 SPI Operations

No special events occurred in the last week. The problem of 3 unused TM slots is still present.

The drift of the cold plate temperature still continues at a slightly reduced rate, at about 0.026K/day. See attached plot.

Week 14 - SPI Cold Plate Temperatures



8.3.3 IBIS Operations

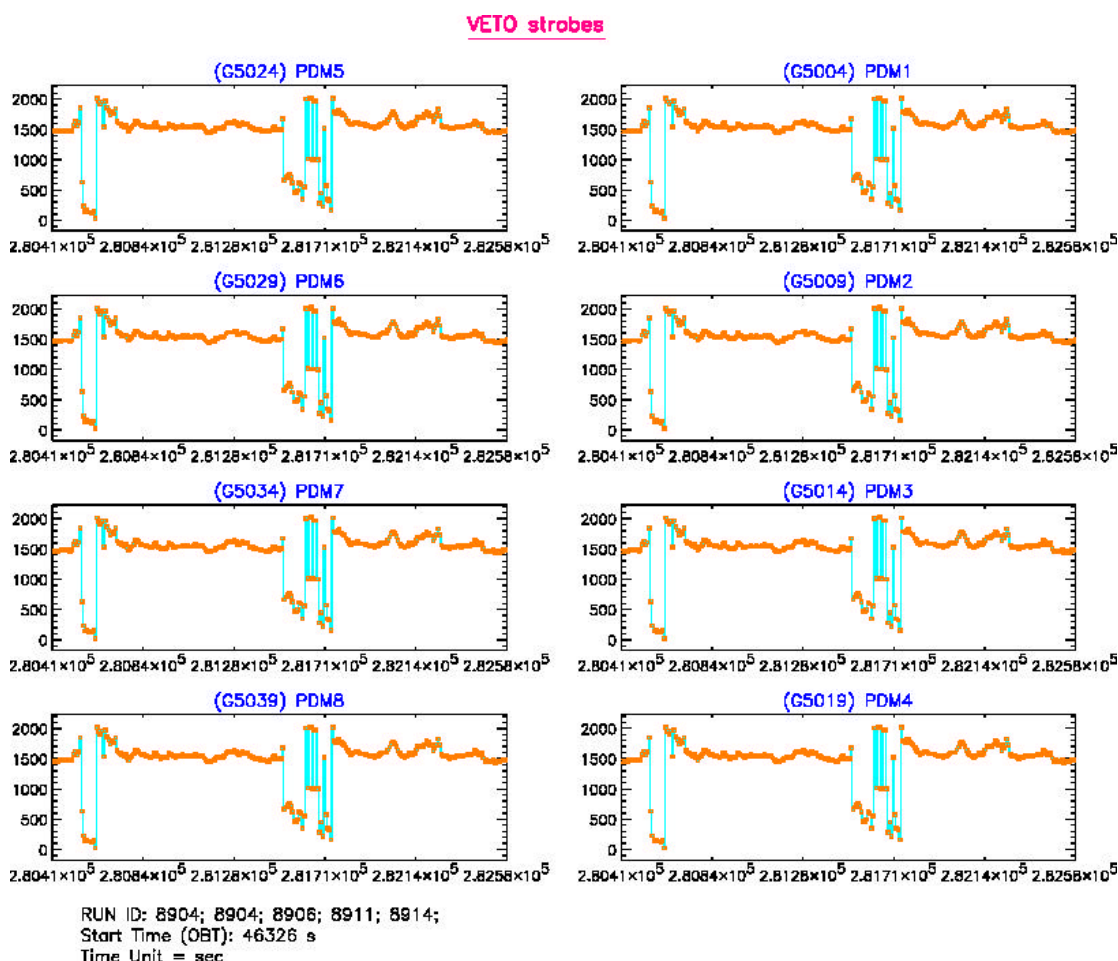
There were a few reports during the Belt passage the OEM ID 167 Class 2<<IBIS1 PICsIT NOISY SEMIMODULE>> due to the PICsIT detectors being ON without the VETO anticoincidence system, as required by the PIs.

On DOY 2003.089.01.22 the following OEM was received:
 APID 1280 ID 132 Class 0 << HEPI RESYNCHRONISED>>
 due to a synch problem between the event preprocessor and the peripherals. No action was taken as suggested by the IBIS UM.

On DOY 2003.090.15.53
 the OEM ID 184 Class 2 <<IBIS1 VETO +28V VDM/CDM VOLTAGE OUT OF RANGE>> was reported. The relevant TM_para G6062 showed values inside limits and therefore the problem was ignored, as suggested by the nominal reaction to this OEM.

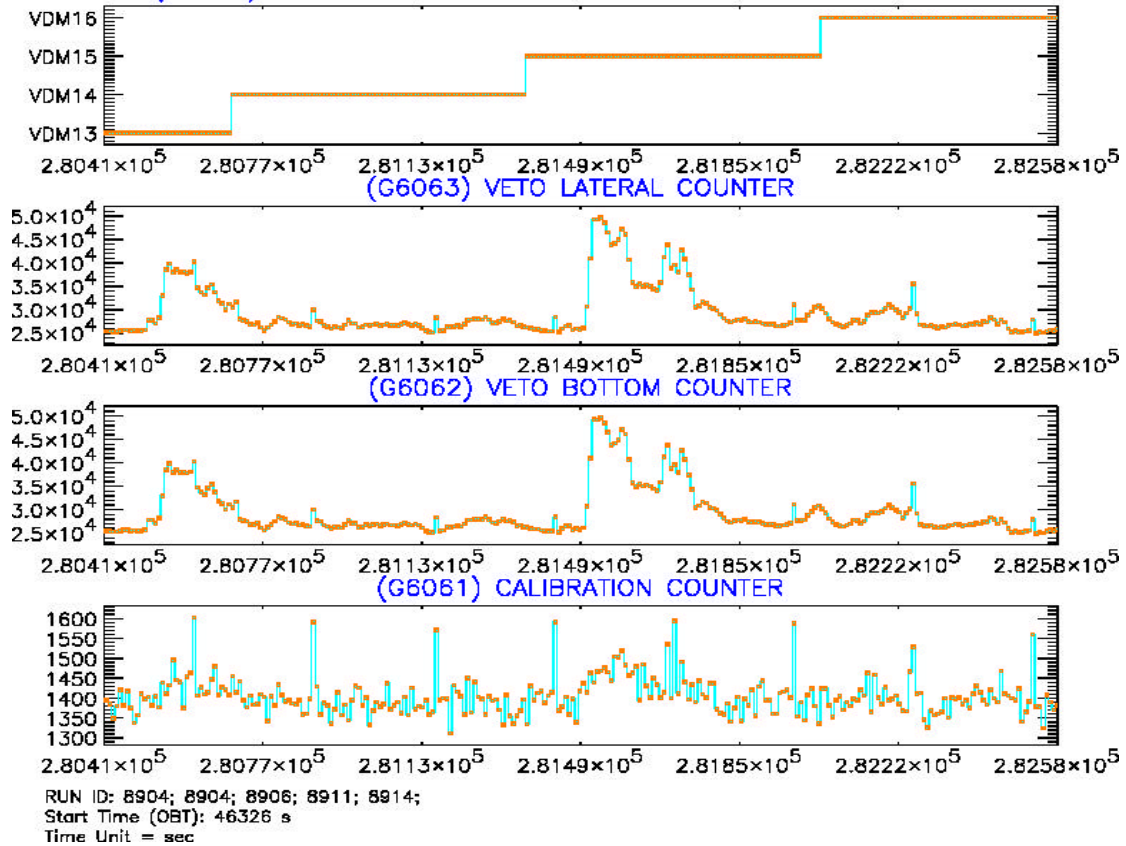
On DOY 2003.091.04.14Z an anomalous high count rates on VDMs, PDMs and MDUs was reported. This high count rate caused the transition to safe mode for the JEM-X2 unit. The VETO counters were OOL for a few TM cycles. No action was taken. It is likely that the event was a solar flare. Predictions from NOAA were reporting probability of a class M solar flare for the time window indicated above. Some activity was noticed at that time on the X-ray Flux plot in the NOAA web page.

Below are reported the plots of the count rates for ISGRI, VETO and the PICsIT strobes, as produced by IBIS ECOE at MOC (with permission of IBIS TEAM):

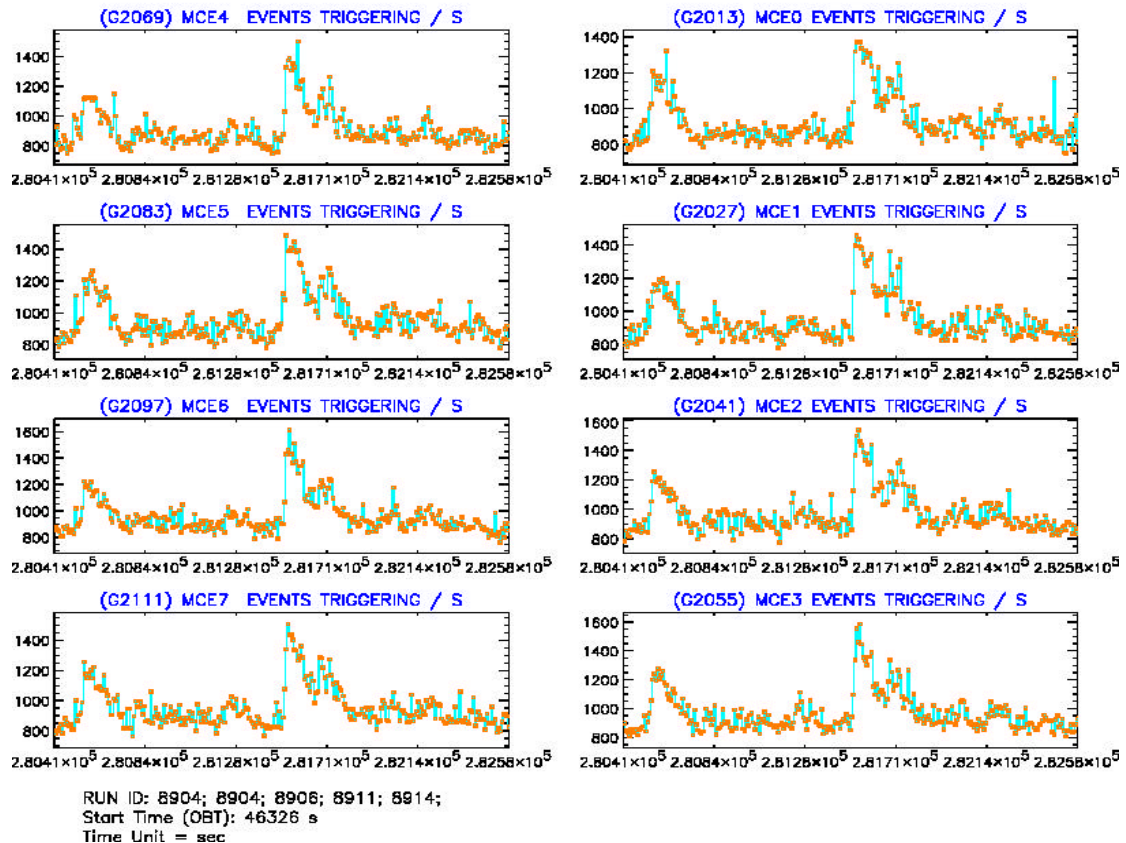


VETO Counters

(G6230) MODULE CURRENTLY UNDER SAMPLING FOR H4 SPECTRA



ISGR1 Counters



On DOY 2003. 091.14.01-14.09-15.10Z and 092.11.14-16.35Z the OEM ID 179 Class 2 <<IBIS1 VETO COUNTER BOTTOM EXCEEDS ALERT VALUE>> was reported. The relevant TM_para G6062 showed a value inside limits within a few TM cycles and therefore the problem was ignored, as suggested by the nominal reaction to this OEM.

On DOY 2003. 088.08.28Z and 091.06.05Z the OEM ID 180 Class 2 <<IBIS1 VETO COUNTER LATERAL EXCEEDS ALERT VALUE>> was reported. The relevant TM_para G6063 showed a value inside limits and therefore the problem was ignored, as suggested by the nominal reaction to this OEM.

On DOY 2003. 091.15.44-15.52Z and 093.04.45Z the VETO Lateral and Bottom Counter (TM_para G6062-63) was OOL for few TM cycles. No action was taken.

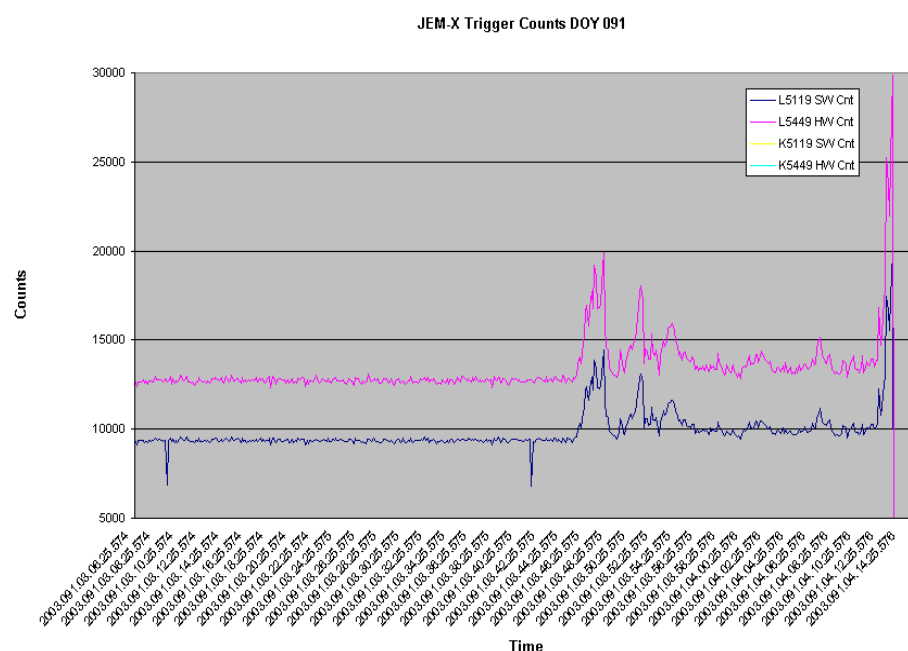
On DOY 2003. 088.06.23Z and 093.12.49Z the OEM ID 183 Class 2 <<IBIS1 VETO +5V VECU VOLTAGE OUT OF RANGE>> was reported. The relevant TM_para G6106 showed a value inside limits and the occurrence of the OEM was < 1 OEM/30 sec therefore no action was taken, as suggested by the nominal reaction to this OEM.

8.3.4 JEM-X Operations

01-Apr-2003, DOY 091, Revolution 56

- JEM-X2 transition to SAFE mode

At 04:14, JEM-X2 went to SAFE mode after the SW Trigger Rate reached the HV switch OFF threshold of 20000. This happened at an altitude of 122500 km. At the same time, high count rates were observed also on IBIS. After the situation was stabilized, JEM-X2 HVs were switched ON and the instrument was put back in DATA TAKING at 06:35:00 with the correct parameters as the timeline.



8.3.5 OMC Operations

During this period, 18 out of the 232 originally planned OMC pointings were missed due to different problems with the control system or at ground stations, which resulted in missing of slews.

28-Mar-2003, DOY 087, Revolution 55

- **Missing of pointings 00550040 to 00550044**
At 02:09, commanding to AOCS and OMC was disabled due to problems in the IMCS (Crash of IFTS task). Pointings 00550040 to 00550044 were missed. After recovery from the failure, manual slew to the attitude of pointing 00550044 was done and from pointing 00550045 OMC normal operations resumed.
- **Rejection of science windows due to Reaction Wheel Bias**
At 17:09:04, OMC started generating OEMs 177 "SCIENCE WINDOW REJECTED". This was because of the reaction-wheel bias operation that was going on at the time. These OEMs continued until transition to STANDBY at 17:23:31.
- **Missing of pointings 00550073 and 00550074**
Problems with the Front End Controller in Redu station and the subsequent loss of onboard lock caused failing of AOCS commands and stopping of the AOCS commanding. Slew 00550073 was missed. Operations were handed over to Vilspa (VIL-2) and slew to the attitude of pointing 00550074 was performed manually. Because this manual slew was larger than the threshold for enabling the SSL, the OTF remained low after the slew end. OMC normal operations resumed from pointing 00550075.

29-Mar-2003, DOY 088, Revolution 55

- **Missing of pointings 00550092 to 00550094**
At 13:05, after station handover to Goldstone (DSS-16), AOCS commanding was disabled due to losses in TM. Slews 00550092 and 00550093 were missed. Manual slew to the attitude of pointing 00550094 was performed, but the slew was larger than the threshold for enabling the SSL and the OTF remained low after the slew end. OMC normal operations resumed from pointing 00550095.

31-Mar-2003, DOY 090, Revolution 56

- **Missing of pointings 00560047 to 00560050**
Due to loss of TC link from Vilspa (VIL-2) at 02:19, AOCS and OMC commanding was disabled. The TC link could not be established until operations were handed over back to Redu G/S and slews 00560047 to 00560049 were missed. Manual slew was done to the attitude of pointing 00560050 and OMC resumed its normal operations from pointing 00560051.
- **Crash of OMCAS at transition to STANDBY mode**
At 16:27:52 the OMCAS crashed again at transition to STANDBY mode and while reading an analogue line. The class 2, ID 5 and 6 OEMs that were generated indicate exactly the same problem as the one occurred on DOY 083. The generated OEMs are:

2003.090.16.27.52.285 2003.090.16.27.39.101 1792 Real Time Exception 5 OMC EXC IACS INT
FIX6=0 M9079=1 M9080=5 M9065=51,START AN ACQ M9066=1,IASW TASK 1 M9067=5078

2003.090.16.27.52.348 2003.090.16.27.39.101 1792 Real Time Exception 6 OMC EXC IACS INT
FIX6=0 M9079=1 M9080=6 M9065=51,START AN ACQ M9066=1,IASW TASK 1 M9067=14537

2003.090.16.27.52.363 2003.090.16.27.39.101 1792 Real Time Exception 5 OMC EXC IACS INT
FIX6=0 M9079=1 M9080=5 M9065=52,READ LAST AN M9066=1,IASW TASK 1 M9067=5024

2003.090.16.27.52.441 2003.090.16.27.39.101 1792 Real Time Exception 6 OMC EXC IACS INT
FIX6=0 M9079=1 M9080=6 M9065=52,READ LAST AN M9066=1,IASW TASK 1 M9067=14578

2003.090.16.27.52.459 2003.090.16.27.39.296 1792 Real Time Event 232 TO STDBY
FIX2=0 M5010=1,STAND BY M9079=0 M9080=232 M5800=350,OTF M5899=0

The problem occurs when a random error in reading an analogue line cannot be correctly handled by the OMCAS and leads to its crash. The OMC team at INTA is working on a corrective patch, which enables the OMCAS correctly manage this error without crashing.

The instrument was recovered by performing a cold reset (full boot) of the OMC DPE and then restarting the OMCAS. At 17:17:00 OMC was fully recovered and in STANDBY mode.

- **Missing of pointings 00560074 and 00560075**

At 17:26:00 Goldstone routed test data from the PSS to the IMCS instead of real telemetry. At 17:29:00 commanding to the AOCS subsystem was disabled and because of link instability, recovery was not started until station handover to Redu. This caused the missing of slews 00560074 and 00560075. Manual slew was done to the attitude of pointing 00560075 and from pointing 00560076 OMC resumed its nominal activities.

03-Apr-2003, DOY 093, Revolution 57

- **Missing of pointings 00570053 and 00570054**

Because of TM/TC loss from the Redu G/S, commanding to AOCS was disabled at 09:38. This caused the missing of slews 00570053 and 00570054. After re-establishment of the link, manual slew was performed to the attitude of pointing 00570054 and OMC operations resumed from pointing 00570055.

8.3.6 IREM Operations

The status of the unit is nominal.

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 - 002003	2002/10/19	Command failure from TCE2 at Redu1.	Ground	ESA Sta.	Pending
INT - 002010	2002/10/22	Time correlation not applied correctly to time parameters in TM type 8 reports.	Ground	IMCS	Pending
INT - 002024	2002/10/28	OEM: SPI1 Fixed print overflow	Space	SPI	Pending
INT - 002055	2002/11/09	IBIS VETO anomalous count rates.	Space	IBIS	Pending
INT - 002061	2002/11/12	TM Desktop performance collapses when de-selecting super-commutated processing.	Ground	IMCS	Pending
INT - 002066	2002/11/13	Data routing to ISDS	Ground	I/F to SGS	Pending
INT - 002082	2002/11/13	TM packet production lower than allocation.	Space	SPI	Pending
INT - 002070	2002/11/14	TDRS: data Retrievals cancelled	Ground	IMCS	Pending
INT - 002079	2002/11/14	Timing Problem with Tele-commands	Ground	ESA Sta.	Pending
INT - 002083	2002/11/16	SPI DPE Crash	Space	SPI	Pending
INT - 002092	2002/11/19	Load-Dump comparison uses also non-released load commands	Ground	IMCS	Pending
INT - 002094	2002/11/19	TDRS does not work with super-commutated parameters	Ground	IMCS	Pending
INT - 002121	2002/11/26	ISGRI count-rates increase up to 8000 counts/sec in one module	Space	IBIS	Pending
INT - 002125	2002/11/29	Data loss between IMCS and ISDC	Ground	I/F to SGS	Pending
INT - 002122	2002/12/02	IBIS VDM4 HV broke down	Space	IBIS	Pending
INT - 002142	2002/12/11	TDRS Time Interval Setting	Ground	IMCS	Pending
INT - 002145	2002/12/15	Commands failing PTV for no reason	Ground	IMCS	Pending
INT - 002174	2002/12/29	Wrong Guide Star selected.	Space	Spacecraft	Pending
INT - 002169	2003/01/03	IREM S/W local resets due to SEU (twice)	Space	IREM	Pending

INT - 002191	2003/01/11	FDS not able to update slew parameters	Ground	FDS	Pending
INT - 002194	2003/01/16	Wrong handling of the OTF after Open Loop Slew	Space	Spacecraft	Pending
INT - 002199	2003/01/17	Incorrect handling of CLCW wrap-around in CLTU mode	Ground	ESA Sta.	Pending
INT - 002197	2003/01/20	Lost Tele-commanding via REDU	Ground	IMCS	Pending
INT - 002202	2003/01/22	NCTRS log file writing takes all the CPU making the application fail.	Ground	NCTRS	Pending
INT - 002206	2003/01/25	Link lost to ISDC.	Ground	I/F to SGS	Pending
INT - 002207	2003/01/27	TM and TC lost due to COMMS problems	Ground	COMMS	Pending
INT - 002208	2003/01/27	Autostack: Commands that fail release do not apply any further interlock.	Ground	IMCS	Pending
INT - 002212	2003/01/29	TDRS Interval-by-Interval TM Retrieval Problem	Ground	IMCS	Pending
INT - 002213	2003/01/29	SCOS 2000 Interval-by-Interval TM Retrieval Problem	Ground	IMCS	Pending
INT - 002214	2003/01/29	Drop in telemetry from REDU	Ground	ESA Sta.	Pending
INT - 002216	2003/01/31	TPF generation failed	Ground	FDS	Pending
INT - 002217	2003/02/06	TC link drop	Ground	NASA Sta.	Pending
INT - 002219	2003/02/10	IBIS: PICsIT PDMs counters SET to 0 (twice) during nominal operation	Space	IBIS	Pending
INT - 002220	2003/02/10	Wrong Scrolling Display definitions on IMCS following Import	Ground	IMCS	Pending
INT - 002221	2003/02/10	IBIS: SCI sub-mode table loaded only if forcing the sub-mode	Space	IBIS	Pending
INT - 002227	2003/02/16	IDDA/IDDB crash	Ground	IMCS	Pending
INT - 002228	2003/02/21	STR 1750 Processor Fault in the presence of Saturn in the FoV	Space	Spacecraft	Pending
INT - 002233	2003/02/24	Time Calibration not Coherent among Ground Stations	Ground		Pending
INT - 002234	2003/02/24	S2K unable to access READ ONLY disk in IDDA.	Ground	IMCS	Pending
INT - 002235	2003/02/25	Too narrow window for RMU cal in PSF of rev 49	Ground	I/F to SGS	Pending
INT - 002239	2003/02/26	Attitude Determination Failed	Ground	FDS	Pending
INT - 002240	2003/02/27	Update of slew failed on FDS	Ground	FDS	Pending
INT - 002242	2003/03/02	TM &TC Drop on DSS 16	Ground	NASA Sta.	Pending
INT - 002243	2003/03/04	CDS Failed to Lock at Redu - H/O Postponed	Ground	ESA Sta.	Pending
INT - 002244	2003/03/05	Loss of guide star immediately prior to slew	Space	Spacecraft	Pending
INT - 002246	2003/03/05	Loss of Telemetry from DSS16	Ground	NASA Sta.	Pending
INT - 002245	2003/03/06	TDRS: Retrieval of packet 60602 or contained parameters does not work	Ground	IMCS	Pending

INT - 002250	2003/03/09	FD System Crashed	Ground	IMCS	Pending
INT - 002251	2003/03/10	Loss of Guide Star	Space	Spacecraft	Pending
INT - 002252	2003/03/10	CDS out of Lock at Redu - TM&TC Loss	Ground	ESA Sta.	Pending
INT - 002253	2003/03/10	RX1 and RX2 Locked at the same time	Ground	NASA Sta.	Pending
INT - 002255	2003/03/10	Late AOS at DSS-24	Ground	NASA Sta.	Pending
INT - 002256	2003/03/14	Late AOS at DSS-16	Ground	NASA Sta.	Pending
INT - 002257	2003/03/17	Late AOS at DSS-24	Ground	NASA Sta.	Pending
INT - 002258	2003/03/20	IBIS: stop downloading HIST during GCDE	Space	IBIS	Pending
INT - 002259	2003/03/21	TDRS: Retrieval log is Meaningless.	Ground	IMCS	Pending
INT - 002260	2003/03/21	Monitoring task Printout, sample time	Ground	IMCS	Pending
INT - 002262	2003/03/21	TDRS: FEN Retrievals containing status parameters always fail.	Ground	IMCS	Pending
INT - 002263	2003/03/22	Data flow interruptions to ISDC	Ground	I/F to SGS	Pending
INT - 002264	2003/03/23	Loss of bitlock + TLM problems on DSS-16	Ground	NASA Sta.	Pending
INT - 002265	2003/03/24	Loss of TC & TM Link	Ground	ESA Sta.	Pending
INT - 002266	2003/03/24	Drop in link from ISDS to ISDC	Ground	I/F to SGS	Pending
INT - 002267	2003/03/25	Drop in link from ISDS to ISDC	Ground	I/F to SGS	Pending
INT - 002268	2003/03/25	No bit lock via DSS-16	Ground	NASA Sta.	Pending
INT - 002269	2003/03/25	Telemetry lost from DSS-16	Ground	NASA Sta.	Pending
INT - 002270	2003/03/26	Late uplink via DSS-16	Ground	NASA Sta.	Pending
INT - 002271	2003/03/26	Drops in telemetry from DSS-16	Ground	NASA Sta.	Pending
INT - 002272	2003/03/26	TC link via DSS-16 lost	Ground	NASA Sta.	Pending
INT - 002273	2003/03/27	Drop in VC7 via REDU	Ground	ESA Sta.	Pending
INT - 002274	2003/03/28	IFTS MCS instance not working	Ground	IMCS	Pending
INT - 002275	2003/03/28	Constraint Error Exception in the OMCAS on DOY081	Space	OMC	Pending
INT - 002276	2003/03/28	Crash of OMCAS on DOY083	Space	OMC	Pending
INT - 002277	2003/03/28	Telemetry lost from DSS-16. DR N100888	Ground	NASA Sta.	Pending
INT - 002278	2003/03/28	FEC failure in REDU	Ground	ESA Sta.	Pending
INT - 002279	2003/03/29	Telemetry lost from DSS-16. DR N109197	Ground	NASA Sta.	Pending
INT - 002280	2003/03/30	Telemetry lost from REDU	Ground	ESA Sta.	Pending
INT - 002281	2003/03/31	TC outage via REDU	Ground	ESA Sta.	Pending

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INT - 002282	2003/03/31	Bad data being received from DSS-16	Ground	NASA Sta.	Pending
INT - 002283	2003/04/01	ISDS -A and IDDA services stopped	Ground	IMCS	Pending
INT - 002284	2003/04/01	Reed Solomon alarms from REDU	Ground	ESA Sta.	Pending
INT - 002285	2003/04/02	Redu Antenna Uplink switch goes off bus	Ground	ESA Sta.	Pending
INT - 002286	2003/04/02	Reboot of ESOC Firewall	Ground	I/F to SGS	Pending
INT - 002287	2003/04/03	Event logger messages	Ground	IMCS	Pending
INT - 002288	2003/04/03	TM/TC lost via REDU	Ground	ESA Sta.	Pending
INT - 002289	2003/04/03	Delayed handover to DSS-16	Ground	NASA Sta.	Pending
INT - 002290	2003/04/03	Bad frames and TLM drop from DSS-16. Possible RFI	Ground	NASA Sta.	Pending