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

INTEGRAL
Mission Report
INT-MOC-SYS-RP-1001-TOS-OF
No. 034
Week 20
19.05.03
Routine Phase

Prepared by: M. Walker (TOS-OFI)

LIST OF CONTENTS

1	General	3
2	Summary of Activities	3
3	Satellite Status.....	3
3.1	Platform	3
3.1.1	AOCS	3
3.1.2	Power	3
3.1.3	Thermal	3
3.1.4	OBDH.....	4
3.1.5	RF	4
3.2	Payload	4
3.2.1	SPI	4
3.2.2	IBIS	4
3.2.3	JEM-X.....	4
3.2.4	OMC.....	4
3.2.5	IREM	4
4	Ground Facilities	5
4.1	Mission Operations Centre	5
4.2	Ground Stations & Network	5
4.3	Science Ground Segment	5
4.3.1	ISOC	5
4.3.2	ISDC.....	5
5	Special Events.....	5
6	Anomalies	6
7	Future Milestones	6
8	Appendix	7
8.1	Overview of Revolutions	7
8.2	Consumables	7
8.2.1	Detailed Fuel Book-keeping.....	7
8.3	Detailed Satellite Information.....	8
8.3.1	AOCS Operations	8
8.3.2	SPI Operations	8
8.3.3	IBIS Operations	10
8.3.4	JEM-X Operations	11
8.3.5	OMC Operations	12
8.3.6	IREM Operations	12
8.4	List of Anomalies since Launch	15

DISTRIBUTION LIST

Addressees	Copy	Addressees	Copy
D/TOS		ESA HQ	
G. Winters D/TOS	1	D. Southwood D/SCI	1
W. Frank TOS-O	1		
A. Smith TOS-OF	1	ESTEC	
J. F. Kaufeler TOS-G	1	J. Louet SCI-P	1
N. Bobrinsky TOS-ON	1	J. Credland SCI-P	1
R. Münch TOS-GF	1	A. Gimenez-Canete SCI-S	1
		ESTEC / PG	
M. Schmidt	1	K. Clausen	1
J. Pineiro	1	P. Jensen	1
R. Southworth	1	P. Strada	1
F. Di Marco	1	G. Sarri	1
F. Cordero	1	R. Carli	
M. Walker	1		
M. Rezazad	1	ESTEC/RSSD	
J. Houser	1	M. Kessler SCI-SD	1
P. Lippi	1	C. Winkler	1
SPACONS	1	A. Parmar	1
S. Fahmy	1	R. Much	1
I. Bayliss	1	L. Hansson	1
G. Di Girolamo	1	R. Kuulkers	1
F. Dreger	1	Nicola Rando	1
G. Gienger	1		
S. Pallaschke	1	ISDC	
W. Hell	1	T. Courvoisier	1
K. Capelle	1	R. Walter	1
M. Butkovic	1	N. Mowlavi	1
D. Heinzer	1	ISDC Shift Team	1
A. Pena	1	D. Texier	1
Shift - Coord	1		
Scheduling Office	1	ALENIA	
T. Beck	1	C. Cassi	1
B. Smeds		F. Ravera	1
S. Scaglioni	1		
J. Wardill	1	PI / Instrument Teams	
		C. Larigauderie – SPI	1
		G. La Rosa – IBIS	1
		S. Brandt – JEM X	1
		E. De Miguel - OMC	1
		W. Hajdas – IREM	1
		JPL / Goldstone	
		D. Holmes	1
		T. Horton	1
		Redu	
		J. Mac Lauchlan	1

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 10.05.03 until 16.05.03 (both dates inclusive) and covers the revolutions 70, 71 and 72.

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.

This week's science activities consisted of GPS observations, a staring observation of Mrk 509 (RA 20:44:10.00; DEC -10:43:25.0), as well as raster dithering observations of SS 433 (RA 19:11:50.0; DEC +04:58:60.0), the Coma cluster (RA 12:59:48.70; DEC +27:58:50.0) and Mrk 273 (RA 13:44:42.11; DEC +55:53:12.7).

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

During this period, the AOCS operations were performed smoothly from the timeline.

The fuel consumption over the period between 07/05/2003 and 14/05/2003 was 0.249 Kg. The remaining propellant is in the order of 177.50 Kg on the 14th of May.

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 74 pkts for all the period.

The Cryo-cooler is working nominally maintaining 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.

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 as planned in the timeline and JEM-X1 was dormant.

After a review of the newly set JEM-X Radiation Monitoring Thresholds and Delays against the actual IREM counters, It was decided to make another modification to these parameters to prevent unnecessary switch OFF of the instrument.

In the early stages of revolution 71, JEM-X2 went to SAFE mode by its onboard protection system due to high S/W trigger rates.

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 performed smoothly from the timeline. All of the 178 planned OMC image acquisitions were executed.

3.2.5 IREM

The status of the unit after the patch is NOT Nominal.

A problem has been reported from IREM PI regarding delay in the generation of the Science files. The problem only affects the accumulated files and not the TDB distributed via the BCP. A corrective action is foreseen in the next revolutions in order to reset the buffer of these files and synchronise the unit.

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

4 Ground Facilities

The overall performance of the ground segment was very good this week, no slews at all were missed.

4.1 Mission Operations Centre

The performance of the MOC was good during this week

4.2 Ground Stations & Network

During this week, there were only 3 minor problems related to the ground stations:

- On DoY 130 at 10:09 there was a TM drop from Goldstone DSS-16, followed at 10:11 by the TC, the links were recovered at 10:20 after the TCPs were rebooted. The impact was only some lost Telemetry, as at that time no commands were scheduled.
- On DoY 134 at 18:35 until 18:43, the VC0 TM dropped out, this was triggered during a planned TMP swap when problems were encountered, there was no impact.
- On DoY 135 from 11:26 to 11:27, the TC dropped, no commands had been scheduled at this time, and therefore 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 only one very brief problem this week concerning the TM connection to ISDC.

- On DoY 136 at 08:23 there was a 2 second interruption of the link.

The data missing from this interval will be recovered by ISDC from the CDs produced by ESOC.

The link between the MOC and the ISDC was upgraded on 16th May to cope with the increased bit-rate due to be implemented on 21st May.

5 Special Events

The date currently set for the swap to the higher TM bit rate is 21st May. The work concerning the upgrade of the Operational Ground Segment regarding the envisaged increase of the TM data rate is ongoing.:

- The upgrade of the link to ISDC is complete.
- The Redu Ground station upgrade is complete.
- The Goldstone ground station upgrade is outstanding, but will be done before the 21st May.

6 Anomalies

The problems related to the ground segments 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 - 002313	2003/05/09	FDE IMU Selection Spurious Change	Space		Pending
INT - 002315	2003/05/09	Late handover to DSS-16, DR G102733	Ground	NASA Sta.	Pending
INT - 002316	2003/05/09	Loss of TM and TC link via DSS-16. DR G102735	Ground	NASA Sta.	Pending
INT - 002317	2003/05/09	Late handover to REDU	Ground	ESA Sta.	Pending
INT - 002318	2003/05/09	SUN worstation 128 rebooted itself.	Ground	IMCS	Pending
INT - 002319	2003/05/10	TM drop via DSS-16 DR number: G102736	Ground	NASA Sta.	Pending
INT - 002314	2003/05/12	Wrong file displayed for Timeline Summary File	Ground	IMCS	Pending
INT - 002320	2003/05/15	Lost TC link to Goldstone. DR G102748	Ground	NASA Sta.	Pending

7 Future Milestones

The patch to increase the TM data rate is still planned for the 21st of May.

8 Appendix

The appendix includes various detailed information.

8.1 Overview of Revolutions

Revolution 70

The science observations performed in revolution 70 began with 14 pointings of a GPS, lasting ~10 hours. Following this, a staring observation of the Seyfert 1 galaxy Mrk 509 (RA 20:44:10.00; DEC -10:43:25.0) was performed for ~10 hours. This was followed by a raster dithering observation of SS 433 (RA 19:11:50.00, DEC +04:58:60.0) for ~ 31 hours, after which the staring observation of Mrk 509 was continued for the remaining ~9hrs30mins of observation time.

Revolution 71

The science observations performed in revolution 71 consisted of 12 pointings of a GPS, lasting ~8 hours followed by a raster dithering observation of the Coma cluster of galaxies (RA 12:59:48.70; DEC +27:58:50.0) for the remaining ~52 hours of observation time.

Revolution 72

The science observations in revolution 72 consisted of a continuation of the raster dithering observation of the Coma cluster (RA 12:59:48.70; DEC +27:58:50.0), which was performed during revolution 71. This lasted for ~47 hours and was followed by a raster dithering observation of the galaxy Mrk 273 (RA 13:44:42.11; DEC +55:53:12.7) lasting ~14 hours.

Throughout these observations, the total TM allocation was 74 SPI; 107 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 period.

8.2 Consumables

8.2.1 Detailed Fuel Book-keeping

2003-04-29T06:01:44.000Z	177.9051	F	Automatic TM processing.
2003-04-29T10:31:45.000Z	177.8556	F	Automatic TM processing.
2003-05-01T20:41:27.000Z	177.8195	F	Automatic TM processing.
2003-05-03T10:54:50.000Z	177.7981	F	Automatic TM processing.
2003-05-04T20:35:26.000Z	177.7735	F	Automatic TM processing.
2003-05-07T11:26:52.000Z	177.7509	F	Automatic TM processing.
2003-05-07T20:21:49.000Z	177.7366	F	Automatic TM processing.
2003-05-10T12:55:00.000Z	177.7122	F	Automatic TM processing.
2003-05-10T20:06:28.000Z	177.6890	F	Automatic TM processing.
2003-05-11T05:15:17.000Z	177.6630	F	Automatic TM processing.
2003-05-12T06:22:00.000Z	177.6465	F	Automatic TM processing.
2003-05-13T12:37:32.000Z	177.6005	F	Automatic TM processing.
2003-05-13T19:53:33.000Z	177.5590	F	Automatic TM processing.
2003-05-14T04:59:58.000Z	177.5331	F	Automatic TM processing.
2003-05-14T06:47:34.000Z	177.5019	F	Automatic TM processing.

This report was generated Wed May 14 08:00:17 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, 86 Open Loop Slews, 114 Closed Loop Slews and 10 Momentum Bias were executed. No slews were missed.

10/05/03 (Day of Year 130, Revolution 69-70)

Nothing to Report.

11/05/03 (Day of Year 131, Revolution 70)

Nothing to Report.

12/05/03 (Day of Year 132, Revolution 70)

Nothing to Report.

13/05/03 (Day of Year 133, Revolution 70-71)

Guide Star Lost during the Perigee Passage (SEU Filter): At AOS it was seen in the OEM Buffer dump that the SEU Filter had been exceeded at 19:04:17.428. The lost star had characteristics: mg. 7.00, coordinates (888, 11915). The altitude in the orbit was around 14200 Km. The problem had no impact, since the new star found was adequate for the RWB scheduled after AOS.

14/05/03 (Day of Year 134, Revolution 71)

Nothing to Report.

15/05/03 (Day of Year 135, Revolution 71)

Nothing to Report.

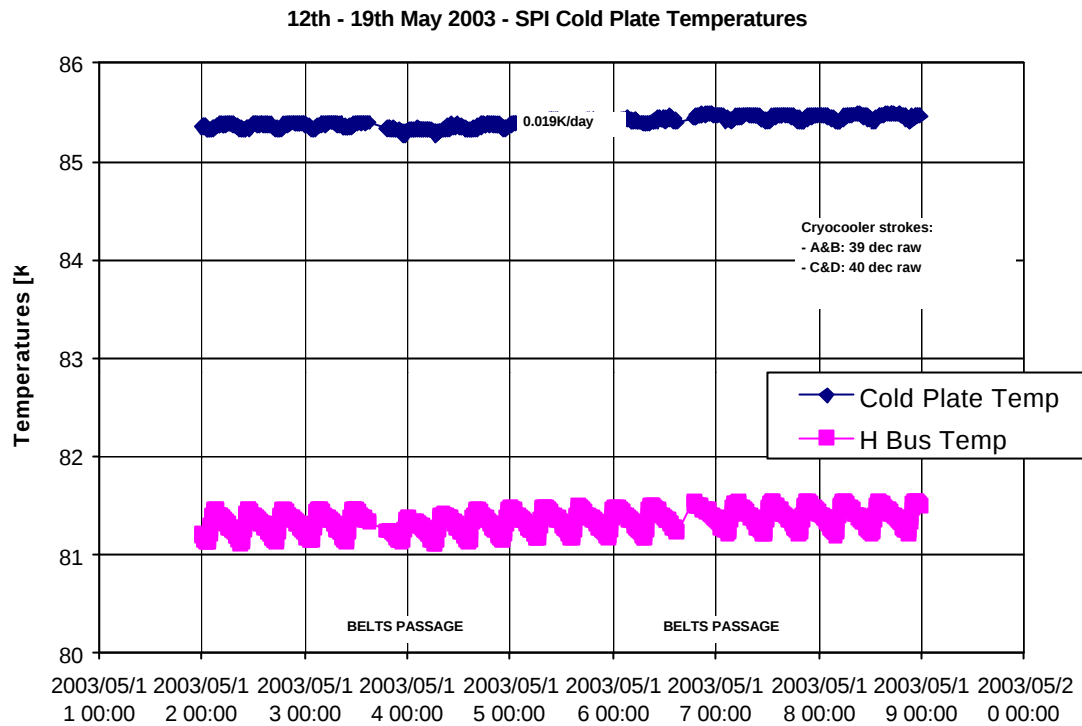
16/05/03 (Day of Year 136, Revolution 71-72)

Nothing to Report.

8.3.2 SPI Operations

Cryo-cooler:

The performance of the 4 compressors is nominal and the cold plate temperature is maintained at around 85.5K with a positive drift of about 0.019K/day average in 1 week. From the following plot one can also notice that at around the belts passage time, the temperature drift inverts its trend and becomes negative, going again positive soon after. The conditions leading to this peculiar behavior need to be understood (possible reasons : ACS PMTs switch off inside belts or particular S/C attitude).

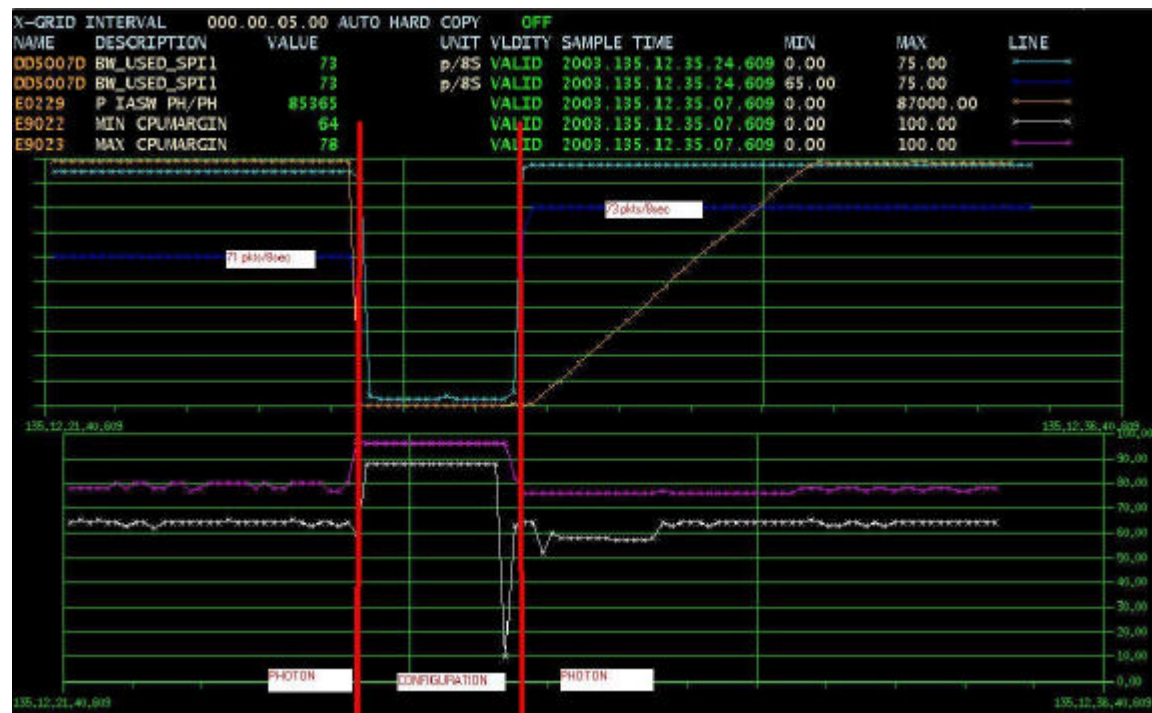


IASW/DPE:

During the reporting period the Change Request FCT-OPS-080 - Investigation on SPI TM drop: effects of mode transitions & DFEE spectra en/dis - has been implemented.

The CR consisted in sending at a convenient time in order not to disturb the science acquisitions the TC E0502 (transition to Configuration Mode) and E0501(transition to PPM). The purpose was the verification of the influence of the mode transitions on the current TM downlink rate for SPI1:

A first execution of the CR was performed on 15th May on rev.72 and the surprising result was that after the simple mode transition photon → configuration → photon, the TM rate increased by 2 pkts (from 71 to 73 out of 74 allocated). See the following plot:



The test was repeated in the two subsequent revolutions 73 and 74, during the first slew occurring the science window after the JX_HVON2 window (EPOS planning windows), leading to the same results

ACS, DFEE, PSD AFEE : Nothing to report

8.3.3 IBIS Operations

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

On DoY 2003. 130 at 05.36Z the OEM ID 184 Class 2 <<IBIS1 VETO +28V VDM/CDM VOLTAGE OUT OF RANGE>> was reported. The relevant TM_para G6107 showed values inside limits and therefore the problem has been disregarded, as suggested by the nominal reaction to this OEM.

On the same day at 21:27Z during the GEISCL03 (IBIS calibration) the TC G0110 (Restore of MDU7 CTX) failed the CEV (status unknown) probably due to a problem with the update of the TM in the verification window. The proper status of the unit was verified by TM para G8050 and no action has been taken.

On DoY 2003. 133 at 08.08Z 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. 135 at 22.40Z the OEM ID 184 Class 2 <<IBIS1 VETO +28V VDM/CDM VOLTAGE OUT OF RANGE>> was reported. The relevant TM_para G6107 reported values inside limits and therefore the problem has been disregarded, as suggested by the nominal reaction to this OEM.

On DoY 2003. 136 at 11.07Z 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.

8.3.4 JEM-X Operations

10/05/2003, DOY 130, Revolution 69-70

Nothing to report

11/05/2003, DOY 131, Revolution 70

Nothing to report

12/05/2003, DOY 132, Revolution 70

Nothing to report

13/05/2003, DOY 133, Revolution 70-71

- **Change of JEM-X1 & 2 Radiation Monitoring Thresholds and Delays:** After monitoring the behavior of IREM Radiation Monitoring counters, it was decided to modify the newly set JEM-X Rad Mon thresholds (See Integral Mission Report No. 033 Week 19, section 8.3.4). Change Request PI-OPS-246 was implemented to increase the lower threshold of RAD#3 and to reduce the "Rad Mon Exit Delay". The current settings of the thresholds and delays are:

RAD1 TH Enter = 20
RAD1 TH Exit = 10
RAD2 TH Enter = 60
RAD2 TH Exit = 50
RAD3 TH Enter = 64
RAD3 TH Exit = 50

RAD Delay Enter = 16 seconds
RAD Delay Exit = 600 seconds

The procedures to set the new values were executed near the end of revolution 70 and after the execution of JEM-X2 SAFE TC from the timeline, hence no impact on JEM-X science operations.

14/05/2003, DOY 134, Revolution 71

- **JEM-X2 went to SAFE mode because of high S/W Trigger rate:** At 03:26:19z, JEM-X2 went to SAFE mode when the S/W Trigger rate reached the HV switch OFF threshold of 20000. This happened at an ascending altitude of 87000 km. IREM was indicating a little bit higher than normal electron counts. JEM-X2 High Voltage was manually activated and at 07:33:50z the instrument was commanded in Data Taking with the same configuration as required by the timeline (Full Imaging, Restricted, 10, 25).

15/05/2003, DOY 135, Revolution 71

Nothing to report

16/05/2003, DOY 136, Revolution 71-72

Nothing to report

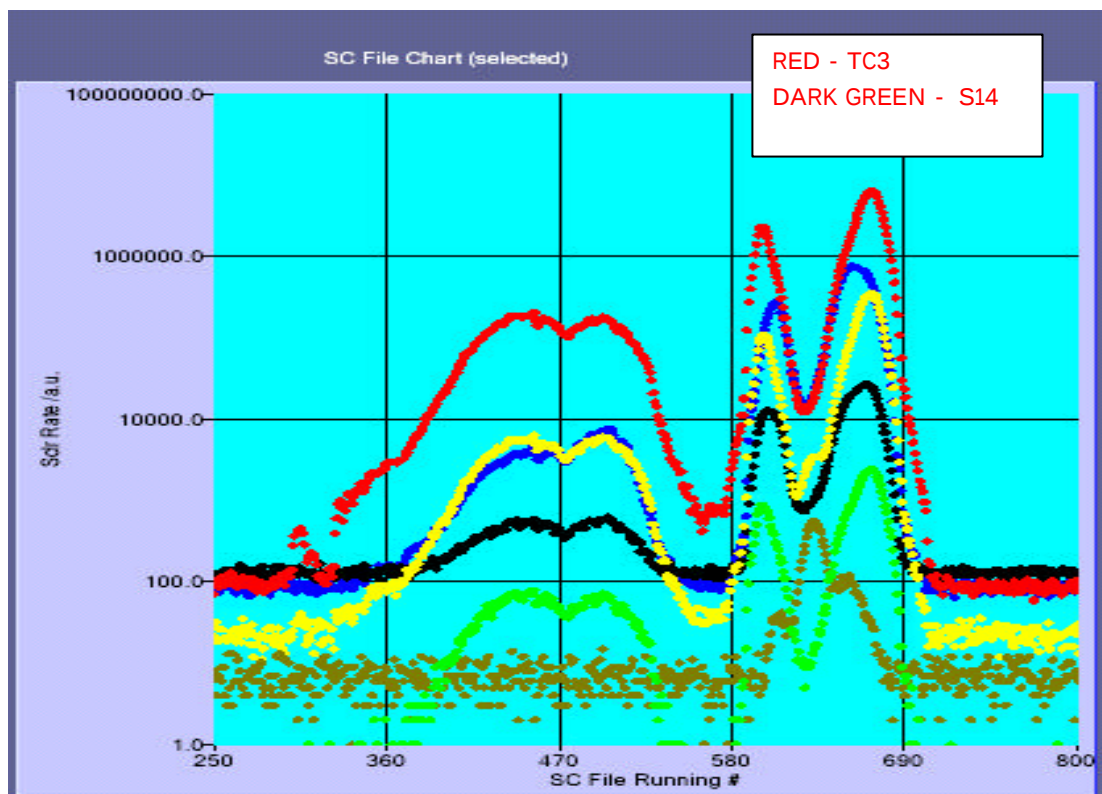
8.3.5 OMC Operations

Nothing to report

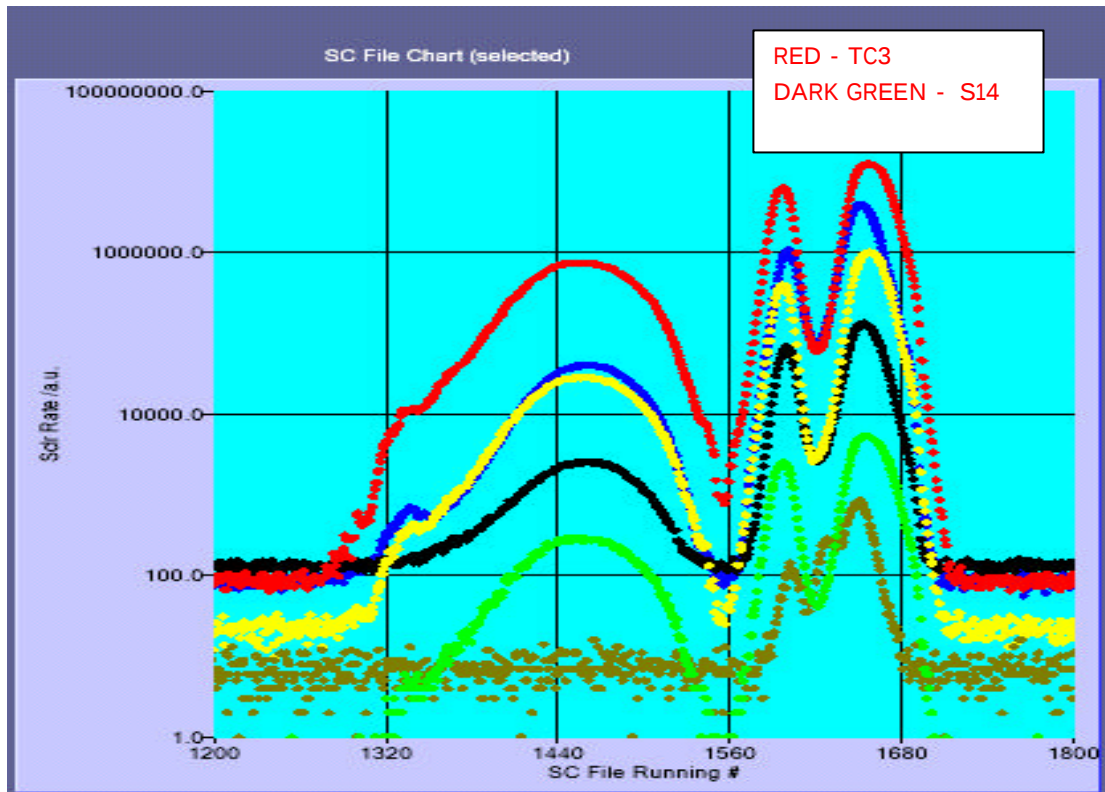
8.3.6 IREM Operations

A comparison of Radiation Belt passages pre-patch and post-patch can be found below (with the permission of IREM PIs).

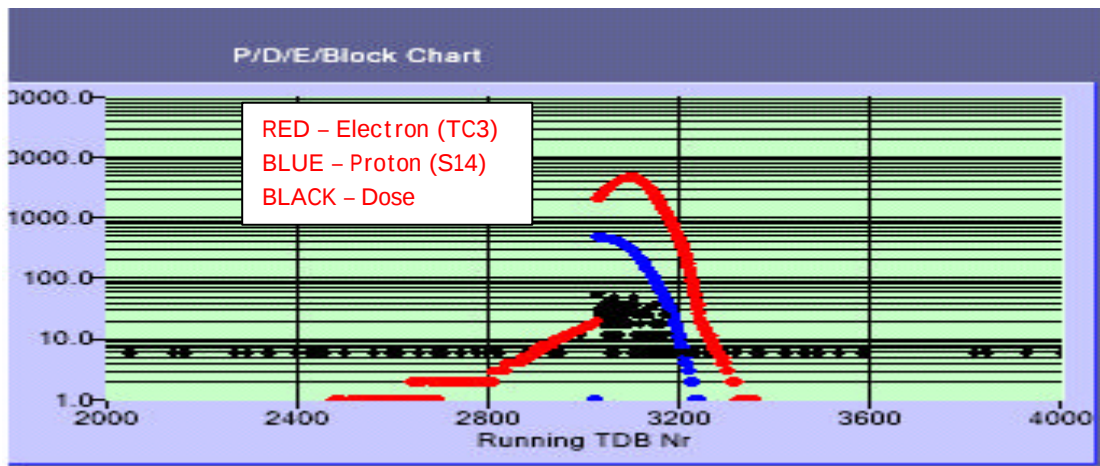
The RED and DARK GREEN curves are referring to the new selected scalers; the TC3 (RED) is mainly sensitive to protons + electrons while the S14 (DARK GREEN) is mainly sensitive to protons. The two passages are from the 22/04/03 and 15/05/03.



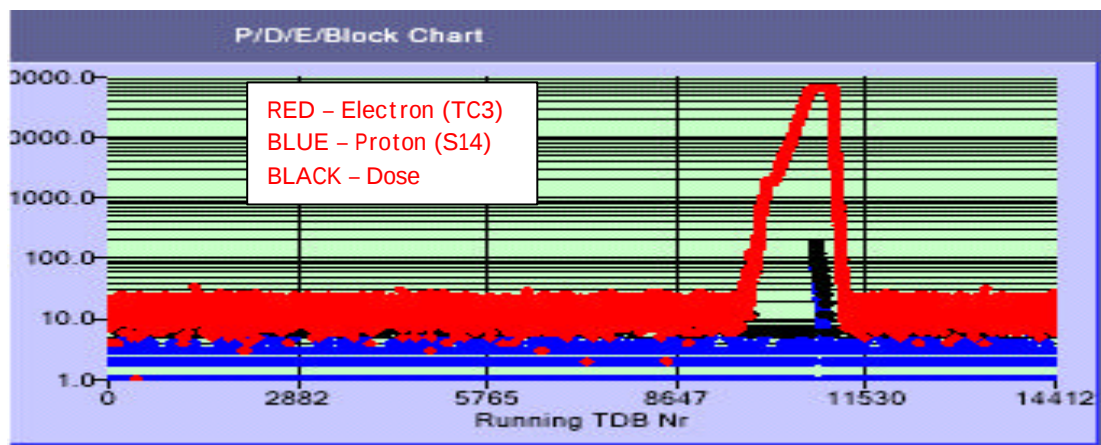
Rev 63-64



Rev 71-72



Rev 63-64 (part of the revolution)



Rev 71-72 (complete revolution)

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 - 002061	2002/11/12	TM Desktop performance collapses when de-selecting supercommutated 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 Telecommands	Ground	ESA Sta.	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 - 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 - 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 - 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 - 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 - 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 - 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 - 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 - 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 - 002264	2003/03/23	Loss of bit-lock + TLM problems on DSS-16	Ground	NASA Sta.	Pending
INT - 002265	2003/03/24	Loss of TC & TM Link	Ground	ESA Sta.	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 - 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 - 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
INT - 002291	2003/04/08	Archiving lost on A chain	Ground	IMCS	Pending
INT - 002292	2003/04/09	Telemetry Drops from Goldstone (DR 6102621)	Ground	NASA Sta.	Pending
INT - 002293	2003/04/13	Science data CDs produced with no TM inside.	Ground	IMCS	Pending
INT - 002294	2003/04/15	DSS-16 missed coverage period	Ground	NASA Sta.	Pending
INT - 002295	2003/04/15	Telemetry Drops from Goldstone	Ground	NASA Sta.	Pending
INT - 002298	2003/04/20	ISDS - ISDC link outage	Ground	I/F to SGS	Pending
INT - 002299	2003/04/21	Telemetry loss from DSS-24	Ground	NASA Sta.	Pending
INT - 002297	2003/04/23	Star Tracker 1750 Processor Fault on 21/04/2003 (DoY 111)	Space	Spacecraft	Pending
INT - 002300	2003/04/23	ISDC not receiving ASF files.	Ground	IMCS	Pending
INT - 002301	2003/04/23	Link between NCTRS-A and IMCS-A down for 10 seconds	Ground	NCTRS	Pending
INT - 002302	2003/04/24	Telemetry loss via DSS-16 due to RFI	Ground	NASA Sta.	Pending
INT - 002304	2003/04/26	IFTS MCS instance not working	Ground	IMCS	Pending
INT - 002305	2003/05/04	Telemetry Drops from Goldstone. DR GI02720	Ground	NASA Sta.	Pending
INT - 002308	2003/05/05	Loss of TM/TC link due to hit on line	Ground	COMMS	Pending

INT - 002307	2003/05/06	Wrong sign applied in the S/C delay in the correlator.	Ground	IMCS	Pending
INT - 002309	2003/05/06	Command release delayed	Ground	ESA Sta.	Pending
INT - 002310	2003/05/06	TC-1 dropped off line at REDU	Ground	ESA Sta.	Pending
INT - 002311	2003/05/06	Drop in TM on MADDS-ISDSA link	Ground	ESA Sta.	Pending
INT - 002312	2003/05/06	Static PTV in "No Go" State for command A3189	Ground	IMCS	Pending
INT - 002313	2003/05/09	FDE IMU Selection Spurious Change	Space		Pending
INT - 002315	2003/05/09	Late handover to DSS-16, DR G102733	Ground	NASA Sta.	Pending
INT - 002316	2003/05/09	Loss of TM and TC link via DSS-16. DR G102735	Ground	NASA Sta.	Pending
INT - 002317	2003/05/09	Late handover to REDU	Ground	ESA Sta.	Pending
INT - 002318	2003/05/09	SUN workstation 128 rebooted itself.	Ground	IMCS	Pending
INT - 002319	2003/05/10	TM drop via DSS-16 DR number: G102736	Ground	NASA Sta.	Pending
INT - 002314	2003/05/12	Wrong file displayed for Timeline Summary File	Ground	IMCS	Pending
INT - 002320	2003/05/15	Lost TC link to Goldstone. DR G102748	Ground	NASA Sta.	Pending