

INTEGRAL
Mission Report
INT-MOC-SYS-RP-1001-TOS-OF
No. 017
Week 03
17.01.03
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 11.01.03 until 17.01.03 (both dates inclusive) and covers the revolutions TBD.

2 Summary of Activities

The operations were performed from the automatic Timeline. Manual commanding was mainly applied in contingency situations to recover the nominal Timeline. The Timelines of the various revolutions were based on the planning inputs provided by ISOC.

The targets of the revolutions were 3C 273, the Galactic Plane, SN1006 and Cassiopeia A. The observations included a staring, two raster dither patterns and two Galactic Plane Surveys.

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 overall performance of the AOCS subsystem was good, although the guide star was lost once during the reporting period due to SEU Filter triggering.

The AOCS operations were less affected by ground segment problems than in previous weeks, and only 2% of the pointings were "lost".

The attitude where the ACC picks up a diffuse nebula as guide star was visited again this week, and this caused frequent flickering of the OTF mainly for 2 pointings.

The fuel consumption over the last 10 days was 0.27 Kg. The remaining propellant is in the order of 179.75 Kg on the 14th of January.

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. The performance of the subsystem during the eclipse and recharge period is nominal.

Note: Some more information concerning the platform operations for the eclipse season is provided in the Appendix.

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.

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

The behaviour of the payload has been nominal.

3.2.1 SPI

Nominal operations performed according to the automatic timeline.

Cryocooler performance: The cold plate temperature slow positive drift is still present. During eclipse a drop of less 0.1K in the cold plate temperature is observed (see figure *Cryocooler Temperatures* in Appendix).

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

3.2.2 IBIS

The IBIS is working nominally. Nominal IBIS operations performed according to the automatic timeline.

There are been a number of OEMs, probably to be due to an on-board communications problem, some OOLs, which are not considered critical, and will be fixed in the next database update, and some ED failures, due to a problem within the dynamic PTV, which has been solved.

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

3.2.3 JEM-X

During the reporting period, JEM-X1 was always in SAFE mode and JEM-X2 operations were nominally driven by the automatic timeline.

A data base correction was required for 2 JEM-X1 and 2 JEM-X2 parameters to prevent four unnecessary OOL alarms during eclipse.

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

3.2.4 OMC

During the reporting period, OMC timeline-driven operations were interrupted two times after station handover. Each time the schedule recovery procedure was applied and the normal operations were resumed afterwards.

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

3.2.5 IREM

The status of the unit is nominal.

The IREM PI investigations are still on-going.

4 Ground Facilities

The overall performance of the ground segment was good. Despite of the problems that are to be expected in the early phase of the mission, the overall performance is mostly above the required 95 %. There were problems in the handover from Redu to Goldstone, on the 13th it was with DSS-24, and on the 16th DSS-16, on both occasions operations were delayed, and the schedule had to be recovered.

4.1 Mission Operations Centre

The overall performance of the MOC was good and the configuration was stable. Four times during the week, slew parameters were not updated in time by the FDS, on each occasion, the update was performed manually using recover schedule, and the problem had no impact.

4.2 Ground Stations & Network

The performance of the operational network was in general good.

4.3 Science Ground Segment

4.3.1 ISOC

No ISOC Input has been provided

4.3.2 ISDC

No ISDC Input has been provided

5 Special Events

Eclipses

11/01/2003 (DOY 011)

Eclipse passage:

Eclipse #5 of the current eclipse season.

Total Eclipse Duration: 52m 39s

Umbra Duration: 50m 35s

ECD measured DOD Battery 1 20.96% (5.03Ah)

ECD measured DOD Battery 2 20.75% (4.98Ah)

(Note DOD calculation assumes nominal battery capacity rating of 24Ah)

Recharge time battery 1 3h 00m

Recharge time battery 2 2h 58m

Both the eclipse passage and recharge executed nominally, a small increase in the battery internal temperatures towards the end of the recharge period indicates that both batteries were fully recharged.

Towards the end of the eclipse battery cell group voltages were OOL HL, ALENIA have been requested to approve an adjustment of the limits in the ODB.

14/01/2003 (DOY 014)

Eclipse passage:

Eclipse #6 of the current eclipse season.

Total Eclipse Duration: 54m 42s

Umbra Duration: 52m 32s

ECD measured DOD Battery 1 21.54% (5.17Ah)

ECD measured DOD Battery 2 21.38% (5.13Ah)

(Note DOD calculation assumes nominal battery capacity rating of 24Ah)

Recharge time battery 1 3h 05m

Recharge time battery 2 3h 04m

Both the eclipse passage and recharge executed nominally, a small increase in the battery internal temperatures towards the end of the recharge period indicates that both batteries were fully recharged.

Towards the end of the eclipse battery cell group voltages were OOL HL, ALENIA have been requested to approve an adjustment of the limits in the ODB.

17/01/2003 (DOY 017)

Eclipse passage:

Eclipse #7 of the current eclipse season.

Total Eclipse Duration: 54m 32s

Umbra Duration: 52m 18s

ECD measured DOD Battery 1 21.50% (5.16Ah)

ECD measured DOD Battery 2 21.25% (5.10Ah)

(Note DOD calculation assumes nominal battery capacity rating of 24Ah)

Recharge time battery 1 3h 05m

Recharge time battery 2 3h 03m

Both the eclipse passage and recharge executed nominally, a small increase in the battery internal temperatures towards the end of the recharge period indicates that both batteries were fully recharged.

Towards the end of the eclipse battery cell group voltages were OOL HL, ALENIA have been requested to approve an adjustment of the limits in the ODB.

6 Anomalies

Though there were no significant anomalies this week the operations were impacted a few times by the loss of the guide star and the delayed hand-over from the Redu to the Goldstone station.

The problem of the frequent flickering of the OTF does not impact the execution of the operations but might have an impact at a later time when the science data will be analysed.

The main problem of the ground segment concerns still the data retrieval from the station, the archive consolidation and the generation of the CD ROMs for data processing. A significant backlog of several weeks has been built up again. A S/W solution is expected for early February and some manpower has been allocated to close the backlog in February.

Another issue, which is currently under investigation concerns the frequent data gaps. When analysing the data archive frequent small data gaps, sometimes only covering one TM frame, have been identified. An analysis is ongoing to identify the reasons for these data gaps.

New anomalies that have been introduced into the Anomaly Tracking System this week are:

INT - 002193	2003/01/13	Problems configuring DSS-24	Ground	NASA Stat	Pending
INT - 002194	2003/01/16	Wrong handling of the OTF after Open Loop Slew	Ground	Spacecraft	Pending
INT - 002195	2003/01/16	Could not establish uplink on DSS-16	Ground	NASA Stat	Pending
INT - 002196	2003/01/17	Automatic Stack Needed to be restarted.	Space	IMCS	Pending

A list of all the pending anomalies is presented in the Appendix.

7 Future Milestones

Nothing to report.

8 Appendix

The appendix includes various detailed information.

8.1 Overview of Revolutions

Summary of Activities Scheduled via Automatic Timeline for Revolutions 30 – 31

Rev30

Revolution 30 started with a staring observation on the target 3C 273 (RA 12:29:06.7; DEC +02:03:07.2) for about 3 hours, followed by a GPS consisting of 8 pointings. A raster dither pattern around the source SN1006 (RA 15:02:54.96; DEC -41:57:00.0) was then performed for the remainder of the revolution. The TM allocation was 59 SPI, 122 IBIS, 1 JEM-X1, 8 JEM-X2, 5 OMC for all science observations and all instruments except for JEM-X1 were in their nominal science modes.

Rev31

Revolution 31 began with a GPS of about 7 pointings. Following this a raster dither pattern was performed around Cassiopeia A (RA 23:51:42.96 ; DEC +62:03:54.0) for the rest of the revolution. The TM allocation was 59 SPI, 122 IBIS, 1 JEM-X1, 8 JEM-X2, 5 OMC throughout the science observations and all instruments except for JEM-X1 were in their nominal science modes.

8.2 Consumables

8.2.1 Detailed Fuel Book-keeping

2003-01-05T11:23:11.000Z	180.0224	F	Automatic TM processing.
2003-01-07T02:35:14.000Z	179.9983	F	Automatic TM processing.
2003-01-07T03:58:43.000Z	179.9604	F	Automatic TM processing.
2003-01-08T06:07:09.000Z	179.9398	F	Automatic TM processing.
2003-01-09T15:24:01.000Z	179.9150	F	Automatic TM processing.
2003-01-11T06:04:44.000Z	179.8468	F	Automatic TM processing.
2003-01-11T10:54:13.000Z	179.8117	F	Automatic TM processing.
2003-01-11T12:34:13.000Z	179.7900	F	Automatic TM processing.
2003-01-12T15:13:36.000Z	179.7768	F	Automatic TM processing.
2003-01-14T05:56:59.000Z	179.7513	F	Automatic TM processing.

This report was generated at Wed Jan 15 08:00:08 GMT 2003

Note: The 4.24kg pressurant has now been removed from the fuel-book - the above list shows ONLY the remaining propellant

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 10/01/2003-16/01/2003

AOCS operations were executed from the Automatic Timeline.

At the start of the week the AMD Thresholds for the eclipse season onboard have been relaxed, following the analysis performed by Astrium/Alenia on the real mission worst eclipse case.

The guide star was lost once, due to the SEU Filter triggering.

During this period, 48 Open Loop Slews, 173 Closed Loop Slews and 6 Momentum Bias were executed. 4 pointings were missed due to non-AOCS problems, and one pointing had the OTF low during most of it due to the guide star loss. This is about 2% of losses with respect to the total number of scheduled pointings.

The OTF as reported by the AOCS has flickered in 74 occasions. 12 of them were due to roll error at the end of the slew. The vast majority of the rest occurred in two pointings of the SN 1987A observation, with attitude:

```
05:35:28.26      /* RA of X axis
-69:16:13.0      /* Declination of X axis
```

There is a known problem that in this attitude the ACC picks up as a guide star a diffuse nebula.

10/01/2003 (Day of Year 010, Revolution 29)

AMD Thresholds were updated at 13:03. The new thresholds set are:

Thresholds in eclipse season (wheel set 2-3-4 is in use):

	Subset 1	Subset 2
Wsmax	39.5 Nms	35.9 Nms
Wsmin	1.2 Nms	4.8 Nms

Taking into account the inertia of the wheels, the modified thresholds for subset 2 that have been loaded are:

Wheel	MOI	Threshold S2 Max	Threshold S2 Min
1	0.09600 Kg ^m **2	373.96 r/s	50.00 r/s
2	0.09768 Kg ^m **2	367.53 r/s	49.14 r/s
3	0.09729 Kg ^m **2	369.00 r/s	49.34 r/s
4	0.09763 Kg ^m **2	367.71 r/s	49.17 r/s

This is equivalent in to:

1	3571.1 rpm	477.5 rpm
2	3509.7 rpm	469.3 rpm
3	3523.7 rpm	471.2 rpm
4	3511.4 rpm	469.5 rpm

11/01/2003 (Day of Year 011, Revolution 30)

Slew parameters not updated by the FDS: The TPF for the realtime update of slew 00300008 was not produced by the FDS. The update was performed manually using recover schedule, and the problem had no impact.

Star released by SEU Filter: At 18:38:27 the SEU Filter was triggered. The event happened during the execution of a STR mapping. Due to this a new mapping was not commanded immediately, and it was possible to observe that the False Event status stayed during 23 cycles in a row. In fact the SEU Filter exceeded OEM was generated 3 times. The magnitude of the loss star was 8.0, and the coordinates (17922, -12120). The attitude did not change, and the AOCS operations were not interrupted. The only consequence of this problem was that the OTF stayed low for the remaining of this pointing (00300016).

12/01/2003 (Day of Year 012, Revolution 30)

Slew parameters not updated by the FDS: The TPF for the realtime update of slew 00300057 was not produced by the FDS. The update was performed manually using recover schedule, and the problem had no impact.

13/01/2003 (Day of Year 013, Revolution 30)

Slew parameters not updated by the FDS: The TPF for the realtime update of slew 00300075 was not produced by the FDS. The update was performed manually using recover schedule, and the problem had no impact.

AOCS Operations missed due to ground station problems (DSS-24): At the time of the station handover from Redu to Goldstone (DSS-24), there were problems establishing the TC, due to the station using wrong uplink sweep parameters. The first slew after the H/O could not be performed on time, and the schedule had to be recovered. Slews 00300086 and 00300087 were not executed nominally, nominal operations were rejoined before 00300088.

14/01/2003 (Day of Year 014, Revolution 31)

Nothing to report.

15/01/2003 (Day of Year 015, Revolution 31)

Pointing executed with wrong alpha (<1 arcminute): The pointing 00310060 was performed with the SSL parameters corresponding to the previous pointing. The reason was a combination of a command failure due to a TM drop, and finger trouble with the Autostack. Since the parameters were very close to the right ones, the problem had no impact.

16/01/2003 (Day of Year 016, Revolution 31)

Slew parameters not updated by the FDS: The TPF for the realtime update of slew 00310068 was not produced by the FDS. The non-updated slew was a close loop one, and the Spacon checked that the default parameters in the timeline were still OK. The problem had no impact.

AOCS Operations missed due to ground station problems (DSS-16): At the time of the station handover from Redu to Goldstone (DSS-16), the H/O could not be completed on time due to late AOS at DSS-16, and the first slew after the H/O could not be performed. Due to this the schedule had to be recovered. Slews 00310088 and 00310089 were not executed nominally, nominal operations were rejoined before 00300090.

8.3.2 OBDH Operations

Nothing to report.

8.3.3 IBIS Operations

The status is nominal, the routine phase is on-going.

Reported the OEM ID 131 and 133 Class 2 <<IBIS IASW HSL/LSL TRANSFER FAIL REPORT>> with an average rate of 2/day, due to communications problems affecting the DPE/HEPI and the peripherals through the high speed line and low speed line. The problem is known to IBIS team and investigation are on-going in order to fix it.

On DOY 2003.011.05.31z the sequence GECLEX02 for the reconfiguration after Eclipse was stopped due to a static PTV failure for a late update of the status. The sequence has been re-uplinked manually: no impact on the instrument configuration.

On DOY 2003.012.09.24z the following PICsIT real time counters were OOLs to 0:

TM parameters G5002-3-7-8-12-13-17-18-22-23-27-28-32-33-37-38

have been noticed in coincidence with an increasing of the dead time counters read by the PDMs. The anomalous counting lasted until 9:28z, when all the TM parameters went back in limits. Coincidentally OEM APID 1280 ID 132 was received flagging a HEPI resynch. The status of the peripheral under this anomaly condition was nominal (except for the counters) and investigations are on-going at MOC and Instrument team side.

On DOY 2003.013.20.57z and 2003.016.20.47z the following PICsIT veto strobe counters were OOLs to 25454, this due to an anticipate Radiation Belt Entry :

TM parameters G5004-09-14-19-24-29-34-39 (all PDMs)

are considered safe until they reach the value 60000. As requested by IBIS Team the new limit will be used at the next foreseen database import.

On DOY 2003.014.05.42z the EDs GEDHON01 and GEBENT02 were failing due to problem with the status of the dynamic PTV. the two ED were re-uplinked at 11:04 after the problem with dynamic PTV was solved: deleted the expired TT-TC from the OBQM

On DOY 2003.016.20.47z the following PICsIT veto counter strobe were OOLs to 25454 due to an anticipate Radiation Belt Entry :

TM parameters G5004-09-14-24-29-34-39 (all PDMs except number 4)

are considered safe until they reach the value 60000. As requested by IBIS Team the new limit will be used at the next foreseen database import.

8.3.4 SPI Operations

Status Nominal. SPI in Photon/Photon.

Cryocooler performance: The cold plate temperature slow positive drift is still present. During eclipse a drop of less 0.1K in the cold plate temperature is observed (see figure).

Cryocooler Temperatures



Some manual commanding was requested to set the SPI configuration for the eclipse passages:

- Rev 31 set the configuration for the 3rd revolution of the Eclipse season (Operational Request OR 14);
- Rev 32 set the configuration for the 3rd revolution of the Eclipse season (OR 14);

The ED EEORTM01 scheduled by the automatic timeline in the AOS_CHK window occurring just after the eclipse, prior to the Instrument peripheral switch on (Subassembly switch on by EECLEX02) has been removed manually from the POS.

8.3.5 JEM-X Operations

During eclipse, when the JEM-X DFEEs are OFF, OOL alarms are generated on parameters K5379, K5380, L5379 and L5380 (HV power supply temperatures). This OOL check when the DFEEs are OFF is invalid because the actual values of these temperatures are not acquired at this time. The IODB was modified to put a validity condition of the mentioned parameters and flag them as invalid (therefore no OOL check) when the DFEEs are OFF. The changes will be on the system with the next database propagation.

8.3.6 OMC Operations

13-Jan-2003, DOY 013, Revolution 30

- 16:00:00, Due to TM/TC loss after station handover to Goldstone, the timeline was stopped and slews 00300085 to 00300087 were missed. The schedule was recovered for slew 00300088 and at pointing 00300088 OMC resumed normal operations as per timeline.

16-Jan-2003, DOY 016, Revolution 31

- 15:34:00, Loss of TM/TC after station handover to Goldstone caused the timeline to stop. Slews 00310088 and 00310089 were missed. The schedule was recovered for slew 00310090 and at pointing 00310090 OMC operations resumed.

8.3.7 IREM Operations

The status of the unit is nominal.

The IREM PI investigations are still on-going.

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 (Status: 04.12.02). 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. The ARs have just not yet been formally closed.

ARid	Date Occurrence	Subject	Segment	Element	Status
INT - 002003	2002/10/19	Command failure from TCE2 at Redu1.	Ground	ESA Sta.	Pending
INT - 002007	2002/10/22	Command sequence TENPE_00 is incorrect.	Space	Procedures	Pending
INT - 002010	2002/10/22	Time correlation not applied correctly to time parameters in TM type 8 reports.	Ground	IMCS	Pending
INT - 002018	2002/10/22	Loss of TM and TC with Goldstone.	Ground	NASA Sta.	Pending
INT - 002024	2002/10/28	OEM: SPI1 Fixed print overflow	Space	SPI	Pending
INT - 002058	2002/11/06	Telemetry Play Back Failed	Ground	NASA Sta.	Pending
INT - 002048	2002/11/08	TM Data Retrieval Jobs not executed	Ground	IMCS	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 - 002062	2002/11/13	Static PTV wrongly handled by IMCS when commands are copied	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 - 002078	2002/11/14	Antenna Tracking Problems	Ground	ESA Sta.	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 - 002091	2002/11/18	A-Chain Frozen	Ground	IMCS	Pending
INT - 002092	2002/11/19	Load-Dump comparison uses also non-released load commands	Ground	IMCS	Pending
INT - 002093	2002/11/19	Incorrect MOUT in POS/EPOS/TSF	Ground	ISOC	Pending
INT - 002094	2002/11/19	TDRS does not work with super-commutated parameters	Ground	IMCS	Pending
INT - 002095	2002/11/19	TDRS incomplete retrievals.	Ground	IMCS	Pending
INT - 002096	2002/11/19	Retrieval from the stations	Ground	IMCS	Pending
INT - 002097	2002/11/19	Unexpected dithering process when SPI spectra accumulation = 0	Space	SPI	Pending
INT - 002098	2002/11/19	FEE 3 has 2 occurrences of 3 status parameters OOL	Space	SPI	Pending
INT - 002099	2002/11/20	SPI1 periodic task over-run	Space	SPI	Pending
INT - 002107	2002/11/21	TDRS produces gaps in the retrieval, that don't correspond to gaps in the archive	Ground	IMCS	Pending
INT - 002118	2002/11/25	Autostack crashed	Ground	IMCS	Pending
INT - 002121	2002/11/26	ISGRI count rates increase up to 8000 counts/sec in one module	Space	IBIS	Pending
INT - 002116	2002/11/27	SPI Spectra process / cycle stopped	Ground	ISOC	Pending
INT - 002117	2002/11/27	Command releaser failed	Ground	IMCS	Pending
INT - 002124	2002/11/29	Telemetry Drops from Goldstone	Ground	NASA Stat	Pending
INT - 002125	2002/11/29	Data loss between IMCS and ISDC	Ground	I/F to SGS	Pending
INT - 002128	2002/12/01	Wheel Speed monitor crashed	Ground	FDS	Pending
INT - 002122	2002/12/02	IBIS VDM4 HV broke down	Space	IBIS	Pending

INT - 002127	2002/12/02	Telemetry loss from REDU	Ground	ESA Stat	Pending
INT - 002129	2002/12/03	VC-7 data loss	Ground	ESA Stat	Pending
INT - 002130	2002/12/04	Reaction Wheel Task Stopped	Ground	FDS	Pending
INT - 002131	2002/12/04	Lost TC capability via Goldstone(Dss-16)	Ground	NASA Stat	Pending
INT - 002132	2002/12/05	TM/TC loss via REDU	Ground	ESA Stat	Pending
INT - 002135	2002/12/06	Inconsistency in Pointing ID vs Slew ID found in POS for revolutions 17 and 18	Ground	ISOC	Pending
INT - 002136	2002/12/06	Invalid PST of SPI in Oper Mode	Ground	ISOC	Pending
INT - 002137	2002/12/08	Handover to DSS-16 delayed due to hardware problems	Ground	NASA Stat	Pending
INT - 002138	2002/12/09	Command failure	Ground	IMCS	Pending
INT - 002139	2002/12/09	Attitude determination Failed	Ground	FDS	Pending
INT - 002142	2002/12/11	TDRS Time Interval Setting	Ground	IMCS	Pending
INT - 002144	2002/12/15	Command verifier failed	Ground	IMCS	Pending
INT - 002145	2002/12/15	Commands failing PTV for no reason	Ground	IMCS	Pending
INT - 002146	2002/12/17	Late telemetry from REDU	Ground	ESA Stat	Pending
INT - 002149	2002/12/17	OBQD giving wrong results	Ground	IMCS	Pending
INT - 002150	2002/12/17	TM drop via REDU	Ground	ESA Stat	Pending
INT - 002151	2002/12/17	ISDS-ISDC Disconnected	Ground	I/F to SGS	Pending
INT - 002152	2002/12/18	NCTRS-A required resetting	Ground	NCTRS	Pending
INT - 002153	2002/12/19	RWS Plot Stopped	Ground	FDS	Pending
INT - 002154	2002/12/19	Drops in link to ISDC	Ground	I/F to SGS	Pending
INT - 002155	2002/12/19	Star Tracker false events	Ground	Spacecraft	Pending

INT - 002157	2002/12/20	Lost VC-7 from NCTRS	Space	NCTRS	Pending
INT - 002158	2002/12/20	Telemetry drop for both Redu and Goldstone	Ground	Spacecraft	Pending
INT - 002162	2002/12/22	Late AOS via Goldstone	Ground	NASA St.	Pending
INT - 002164	2002/12/27	ED DEBWLO00 has incorrect Interlock conditions	Ground	ODB	Pending
INT - 002165	2002/12/27	ED EEHTF_02 has incorrect IL	Ground	ODB	Pending
INT - 002166	2002/12/27	TC P2431 and P2931 have incorrect CEV.	Ground	ODB	Pending
INT - 002174	2002/12/29	Wrong Guide Star selected.	Space	Spacecraft	Pending
INT - 002175	2002/12/29	Telemetry retrieval problem	Ground	IMCS	Pending
INT - 002181	2002/12/31	NCTRS-A went down	Ground	NCTRS	Pending
INT - 002183	2003/01/01	Dyn PTV failure	Ground	IMCS	Pending
INT - 002167	2003/01/02	MRU Resumes Battery full Charge Mode when EOC Timer Automatic Mode is Selected.	Ground	Spacecraft	Pending
INT - 002168	2003/01/03	PSTREQs no longer included in the CCCF	Ground	ISOC	Pending
INT - 002169	2003/01/03	IREM sw local resets due to SEU (twice)	Space	IREM	Pending
INT - 002170	2003/01/03	IBIS: VETO VDM 4 & 12 HVs break down	Space	IBIS	Pending
INT - 002185	2003/01/03	Telemetry Drops from Goldstone	Ground	NASA Stat	Pending
INT - 002190	2003/01/10	Telemetry lost from DSS-16	Ground	NASA Stat	Pending
INT - 002191	2003/01/11	FDS not able to update slew parameters	Ground	FDS	Pending
INT - 002192	2003/01/12	FDS failed to create IPF	Ground	FDS	Pending
INT - 002193	2003/01/13	Problems configuring DSS-24	Ground	NASA Stat	Pending
INT - 002194	2003/01/16	Wrong handling of the OTF after Open Loop Slew	Ground	Spacecraft	Pending
INT - 002195	2003/01/16	Could not establish uplink on DSS-16	Ground	NASA Stat	Pending

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INT - 002196	2003/01/17	Automatic Stack Needed to be restarted.	Space	IMCS	Pending
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