XMM-Newton and INTEGRAL weekly Mission Operations Report

XMM-INT-WOPS-24_11-12

Issue 1

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1. Weekly report

	XMM	Integral
Main activities	▪ Nominal Operations ▪ F/D automation for PSF and EPOS in place ▪ Blemish Pixel update on S/C ▪ Lela tests on S7 ▪ Manual spacecraft recovery without propellant procedures ▪ CDMU recovery automation ▪ Automation of Replenishment	▪ Routine science operations
Status and performance of S/C	▪ Nominal for platform and all instruments	▪ Manual transponder swaps following RF switch anomaly
Status and performance of Ground segment	▪ Nominal apart from some issues with Tolhuin/KSAT general support.	▪ Nominal
S/C Anomalies	▪ XMM_SC-157 Heater switch CBH-B goes unexpectedly to CLOSED	▪ None
G/S Anomalies	▪ XMM-1551 Tolhuin/KSAT General Support Issues	▪ INT-3939 SPI shortly before belt entry: "not real" OOLs only on OOL display due to generation time of a packet being before and reception time of packet after belt entry
Future activities planned	▪ Validation test passes on TOH ▪ NSM via MOIS ▪ Cebreros migration ▪ Webserver and NRT Analysis/Monitoring migration	▪ Deployment of ODB 3.1_0091 ▪ FOP Release 5.0 ▪ Automation of Transponder swap operations ▪ Automation of ground station operations (EVFM) ▪ Eclipse season 31st March to 8th May (16 eclipses). Including moon eclipse 8th April.

2. Detailed weekly operational events

note: all times are Zulu (in brackets DOY)

2.1. XMM

- All groundstation issues experienced during this reporting period are tracked in **AR XMM-1551 Tolhuin/KSAT General Support Issues**
- 11/03/2024 (071) 05:47:56 ESTRACK informed that TOH stn is unable to support XMM due to an outage. Requested to check the availability of AGO.
  - o 06:53:44 Carrier still up at TOH. Therefore, no TC capability.
  - o 08:38:35 TNOC confirmed uplink stopped at TOH. Carrier up at AGO.
  - o Until 10:09:21 recovered for missed NSO 4442_04 and _05 and instruments rejoin
- 11/03/2024 (071) 19:30:28 Spacon noted that warning alarms is not working on XCLAS1. Working on XCLAS2 but with a completely different alarm tone
- 11/03/2024 (071) 23:41:39 YAT-1 TM/TC links frozen. Closed Links. Rebind TC, but no bitlock. SSC started Idle pattern multiple times but no bit-lock. Request full resweep --> OK. Full TM/TC back by 23:53:45 (reason: major network outage in Argentina).
- 15/03/2024 (075) 15:42:41 G/S handover from TOH to YTH. MOIS failed since YTH not configured correctly. It was configured manually at 15:59Z.
- 16/03/2024 (076) 15:10:14 DSS36 path skipped completely due to hardware problems (only downlink only pass possible). Started YTH coverage earlier.
- 17/03/2024 (077) 00:55:28 Restarted MOIS due to MOIS performance issues (time marker gradually lagging since 1st NSO and indicated MOIS chart time of ~23:15Z).
- 17/03/2024 (077) 10:35:55 At G/S handover from TOH to YAT, no TM from YAT. Very poor TM received after switching ranging off. Very low signal level.
  - o 11:20:56 complete loss of TM. TOH is configuring and will be ready at 11:45Z until 17:30Zz.
  - o 11:49:18 AOS G/S TOH
  - o 13:00:58 AOCS and instrument recovery completed
- 18/03/2024 (078) 08:52:46 Heater switch Cat-bed heater B goes unexpectedly to CLOSED (LCL tripped closed) - no impact: TM P1134 "HLCL STA CBH-B". CRP_AOC_4057: LCL STATUS CBH-B OOL. Send Seq: AS0203 - Power down B-Branch (see **XMM_SC-157** Heater switch CBH-B goes unexpectedly to CLOSED).
- 18/03/2024 (078) 11:21:09 MOIS / Autocommanding / Autostack conflict when warning flag went active (reason: design/config issue). For unknown reason KU116 (WD counter) remained at 0 after Autocommanding action. OOL: KU114 "TC WD LIMIT". X_CRP_EM2_5101 failed. MOS 1/2 remained in FF/CAL_CLOSED until sent to IDLE/CLOSE by timeline at 11:34Z.
  - o 12:39:59 MOIS ixauto H restarted
- 19/03/2024 (079) 05:08:13 Complete loss of TM from TOH. NOC informed
  - o 05:17:04 TNOC reported LOS at TOH, since they've misconfigured the station and LOS there is now 24hrs early.
  - o 05:34:22 We are receiving TM again but we have no carrier as yet.
  - o 07:39:57 Recovery finished
- 19/03/2024 (079) 10:21:00 STR Blemish Pixel Table upload

2.2. INTEGRAL

13/03/2024 (073) 02:31:07 Load Mois rev 2754_01. MOIS Error: "Failed to initialise Run Mode. Check that the Sun Application Server is Running and that at least 1 MOIS Executor instance has been started". Restart MOIS --> OK.

  07:26:24 As per OI#2470 We have TM/TC Started I_FCP_IBIS1_401

14/03/2024 (074) 04:13:25 Manually triggered in MOIS; I_REP_RES_OBM
04:21:29 Manually triggered in MOIS; I_FCP_AOC_0540
08:28:08 MOIS IXAUTOD was not executing the procedures automatically. It was suggested we switch to IXAUTO H. When attempting to do so I was neither succesfull using the icons nor from the terminal window. On-call is investigating.
08:34:57 IXAUTO H is now running

15/03/2024 (075) 14:40:01 Numerous (105!) SPI OOLs. SOE on-call informed. **See AR-INT-3939** SPI shortly before belt entry: "not real" OOLs only on OOL display due to generation time of a packet being before and reception time of packet after belt entry