

***XMM-Newton and INTEGRAL weekly
Mission Operations Report***

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Issue 1

Date: 24 April 2023

Marcus Kirsch
OPS-OAX

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1. Weekly report

	XMM	Integral
Main activities	<ul style="list-style-type: none"> ▪ Nominal Operations ▪ Full end to end instrument radiation protection and rejoin ▪ MCS 12.7.0 testing ▪ OA OPS tools servers S/W and H/W migration ▪ MCS migration ▪ DABYS D/B prototype ▪ Tolhuin station consolidation ▪ G/S ops automation (part2/ NIS) ▪ Lela final migration to MCS ▪ Replenishment automation 	<ul style="list-style-type: none"> ▪ Routine science operations ▪ SPI Annealing #40 ▪ CORTEX Validation on KIR
Status and performance of S/C	<ul style="list-style-type: none"> ▪ Nominal for platform and all instruments 	<ul style="list-style-type: none"> ▪ Manual transponder swaps following RF switch anomaly
Status and performance of Ground segment	<ul style="list-style-type: none"> ▪ Nominal 	<ul style="list-style-type: none"> ▪ Nominal
S/C Anomalies	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ None
G/S Anomalies	<ul style="list-style-type: none"> ▪ XMM-1523 NIS Connectivity Issues 	<ul style="list-style-type: none"> ▪ INT-3893 NIS Manager Connectivity Issues
Future activities planned	<ul style="list-style-type: none"> ▪ Manual spacecraft recovery without propellant procedures ▪ CDMU recovery automation ▪ Webserver migration ▪ MCS 12.7.0 week 24-28 April ▪ ODB 7.17 weeks 1-12 May ▪ 3rd Tank Replenishing 22-26 May 	<ul style="list-style-type: none"> ▪ Automation of Transponder swap operations ▪ Science Mission extension until 2024 ▪ Start of eclipse season on April 18th

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2. Detailed weekly operational events

note: all times are Zulu (in brackets DOY)

2.1. XMM

- 05/04/2023 (095) 02:04:49 P3217 received value = 3.994 As per OCR#4528 this OOL is expected
- 06/04/2023 (096) 17:53:00 Battery 2 reconditioning - discharge stopped by TCL according to step 5 of FCP_EPS_0090
 - o 18:58:10 battery 2 reconditioning - start of charge according to FCP_EPS_0090 steps 8 and 9
- 07/04/2023 (097) 07:18:46 D0068 FLTR8 Bus Time Error (DOY086 last DB update) PD023 DNEL Status, Not All Ena (DOY086 OI 4528 Batt2 reconditioning)
 - o Batteries charging. All nominal
-
- 12/04/2023 (102) 19:05:29 Alarm & Message on FD terminal; validate osl: the performance of OSL no. 427500001 is not safe with teh current wheel speeds. Disable TL-ss 1 and call FD.
 - o Wheel speeds not safe for OSL
 - o 19:06:30 Disabled s/s1 in a/s. Called FD on-call.
 - o 19:31:20 FCP_AOC_2002 Perform Open Loop Slew: 4275_50_M.OSL (generated using by FD on-call using recover schedule tool, after FD diagnosed the original alarm condition).
 - o 21:14:40 Attempted using FD recovery tool (XMM_SPA_0010) to apply delayed NSO. Tried twice but both attempts failed with Error 1 in the recovery tool console. Applying manual procedure.
 - o **Procedure update pending XMM_CCR-2817**
-
- 14/04/2023 (104) 07:11:57 TM icon on autostack went to TM drop for 34 secs. Estrack see no problems on KRU
 - o 08:11:28 TM icon on autostack went to TM drop for 38 secs, but link does not show red on NIS.
 - o 08:13:13 Try putting in second TM link KO12 VC0 in dataflow but NIS HCI is not responding
 - o 08:22:05 close NIS-A HCI and reopen - still not responding Call oncall SOE
 - o 08:30:42 Restart NIS-A with GDM
 - o 19:19:45 to 22:44:15 TM Drop (MCS TC stacks show state "No TM Flow") from 19:18:39 to 19:19:08 (39s). NIS link states appear nominal (the link stat data quality showed GOOD, not DROP, however the data unit count was not increasing). Estrack checked with INTA who reported no non nominal events seen at the station. Commanding was unaffected.
 - o **See AR XMM-1523 NIS Connectivity Issues**
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2.2. INTEGRAL

- 08/04/2023 (098)
 - o 13:32:37 FDS: TPF update failed for SlewID #262600034 (FDS: Failed to determine a good attitude)
 - o 13:35:56 SEQ: AESAM_00 uplinked & recovery tool started
 - o 13:45:04 FDS: TPF 2626_0500_A.OSL applied on A/S to update slew 262600034
- 11/04/2023 (101) 07:10:35 OCR#2345: IMU1+3 calibration prior to the eclipse season
- 12/04/2023 (102) 11:28:00 OCR #2345: Uplink of TPF 2627_0001_M.DRA.
 - o 13:41:33 OCR#2345: Uplink of TPF 2627_0001_M.DRD with change of FDE criteria before and after under SOE (TG) guidance.
- 13/04/2023 (103) 05:35:06 GMMS: NIS-B red - memory space
 - o 20:49:39 TM drop VC0. KIR. INISB. From 20:47:39 to 20:48:43. Commanding was unaffected. Note: During this event, NISB HCI (on ICLB1) was unresponsive (seemed frozen and the display did not fully re-draw when brought to the foreground). As such it was not possible to see the link state, although the TC stacks indicated "No TM Flow". It should also be noted that the NISB HCI instance on ICLA2 showed VC0 & 7 links as nominal. Update from Estrack. They investigated and found no corresponding events or anomalies at the station.
 - o 21:49:42 TM drop. VC0, NISA, KIR. Caused TC failure for OSL 26280022
 - o 21:49:45 OSL #26280022 failed
 - o 21:52:40 Restarting NISB
 - o 22:01:43 SEQ: AESAM_00 uplinked & recovery tool started
 - o 22:08:39 Manual slew 2628_0500_M.CSL from PID #26280021 to #26280022
 - o 22:26:50 SYS: S/S AOCS enabled in TL
 - o **INT-3893 NIS Manager Connectivity Issues**
-
- 15/04/2023 (105) 17:20:45 Automatic slew update for slew 262900001 didn't work. Neither the update nor the failure message was not generated. Will update the slew 262900001 manually.
 - o 17:24:55 SEQ: AESAM_00 uplinked & recovery tool started
 - o 17:33:11 FDS: TPF 2629_0500_A.OSK applied on A/S to update slew 262900001
 - o 19:24:00 FDS: TPF update was not generated for SlewID #26290002. No alarms either. When running recoverschedule no future jobs were offered for disabling. Called FD on-call support (MR)
 - o 19:25:00 SEQ: AESAM_00 uplinked & recovery tool started
 - o 19:25:52 FDS: TPF 2629_0501_A.OSL applied on A/S to update slew 26290002
 - o **Job scheduler was not running**
-
- 16/04/2023 (106) 01:30:00 SYS; INISA unresponsive when attempting to disconnect TM links in preparation for TRSP swap. Stopped and re-started INSA
 - o 13:02:40 Random disconnect of NISA from IMCA. No connections seen on NIS-A. No TM on IMCA. Toggle NIS connection on TM Spacon --> TM returns. However only "S2K Admin link" is shown green on NIS-A and only one client connection (CH_ADM_MSG) is shown on the NIS. VC0/7 TM links have also disappeared from

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thr NIS HCI. Good TM still being shown on ManStack/TM Desktops. Restart NISA
--> OK. No impact.

- 19:36:00 Not able to open or close links on INISA, restarted HCI to no avail -> stop and re-start of INISA
- ***INT-3893 NIS Manager Connectivity Issues***
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