

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

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Issue 1

Date: 19 July 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 ▪ 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 	<ul style="list-style-type: none"> ▪ Routine science operations ▪ Eclipse season finished
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 but see anomalies reported below
S/C Anomalies	<ul style="list-style-type: none"> ▪ XMM_SC-126 STR blemish pixel anomalies prior next BP survey in 2023 	<ul style="list-style-type: none"> ▪ none
G/S Anomalies	<ul style="list-style-type: none"> ▪ XMM-1531 Editors/Viewers do not open from any MPSclient ▪ XMM-1533 MOSES not re-joined at revolution start ▪ XMM-1534 Kouoru Comms Lines Unreliable 	<ul style="list-style-type: none"> ▪ INT-3759 Increased frequency of NIS / TMDS / Consolidator issues ▪ INT-3908 Kiruna Stops Track
Future activities planned	<ul style="list-style-type: none"> ▪ Manual spacecraft recovery without propellant procedures ▪ CDMU recovery automation ▪ Webserver migration 	<ul style="list-style-type: none"> ▪ Automation of Transponder swap operations ▪ Automation of ground station operations (EVFM) ▪ Disposal optimisation manoeuvre preparation

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2. Detailed weekly operational events

note: all times are Zulu (in brackets DOY)

2.1. XMM

- 12/06/2023 (DoY163)
 - o 12:48 Scheduling error caused end of pass from AGO; back at 13:01Z
 - o 15:06 Star not found; Close to blemish pixel #21(see **AR XMM_SC-126** STR blemish pixel anomalies prior next BP survey in 2023)

- 14/06/2023 (DoY 165)
 - o 10:05 Successful YAT Test Pass (OI#4565)
 - o 12:50 Upload new calibration data for ACC after Thruster Torque Calibration (OI#4566)

- 19/06/2023 (DoY 170)
 - o 07:22 Star not found (see **AR XMM_SC-126** STR blemish pixel anomalies)
 - o 21:43 MOSes not re-joined at revolution start but with a delay of about 4 hours (see **AR XMM-1533**)

- 20/06/2023 (DoY 171)
 - o 06:51 IMU Drift Calibration (OI#4563)

- 21/06/2023 (DoY 172)
 - o 20:18 XMM Timeline upload stopped autonomously
 - o 20:47 until 22:56: Combination of comms issues together with MOIS procedure and autostack froze resulting also in human error

- 22/06/2023 (DoY 173)
 - o 09:11 Update of IMU drift parameters (OI#4572)

- 23/06/2023 (DoY 174)
 - o 01:39 RM crash
 - o 04:59 to 14:52 Kouoru Comms Lines unreliable (see AR XMM-1534)
 - o 14:52 G/S handover from KRU to AGO due to multiple drops of TM over KRU
 - o 21:22 X_CRP_SYS_5203 did set MCOOL1=2, however MOS2 is observing, hence a deadlock is reached. Situation is known and will be fixed with next release. Manual intervention and resolution. (see XMM_CCR-2267 Correction of MOIS procedures X_CRP_SYS_5202 to 5204)

- 24/06/2023 (DoY 175)
 - o 15:19 station problem at AGO. Estrack ask SSC to configure Yatharaga.

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2.2 INTEGRAL

12/06/2023 (163)

19:23:37 TM backlog & packet storage warning events. TM desktops lost sync, ICLB1 was unresponsive. MCS Anomaly see AR INT-3759.

13/06/2023 (164)

05:55:09 FCP_IBIS1_0401 - ISGRI CTX Tables uplink - No CTX tables for previous revolution. 2649 Tables uplinked. (Current 2651). Correct CTX tables arrived later (09:13).

12:21:39 GFTS1+2 restarted. MCCM IFTS1+2 still show yellow, push queue

21:07:54 KIR station stopped tracking, cause unknown. Move to VIL1. AR INT-3908.

14/06/2023 (165)

00:33:23 KIR station available and tracking again.

17:35:39 FDS: TPF update failed for SleWID #26510051.

17:43:08 FDS: TPF 2651_0500_A.OSL applied on A/S to update slew 26510051

17:49:52 EvL messages: "TM Backlog..", "Store of packet failed.." MCS/NIS is slow. Problem recovered itself. MCS Anomaly see AR INT-3759.

18:57:47 EvL messages "TM Backlog..", "Store of packet failed.." etc... MCS/NIS is slow. Problem recovered itself. MCS Anomaly see AR INT-3759.

15/06/2023 (166)

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16/06/2023 (167)

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17/06/2023 (168)

18:37:08 EvL messages "TM Backlog..", "Store of packet failed.." MCCM: MCB yellow "Number of open sockets" Problem recovered itself. MCS Anomaly see AR INT-3759.

19:12:59 EvL messages: "TM Backlog..", "Store of packet failed.." MCCM: MCB yellow "Number of open sockets" Problem recovered itself. Impact: OSL #26520056 missed. MCS Anomaly see AR INT-3759.

19:16:09 OMC Sequence(s) also failed. Recovery per ED recovery guidelines.

19:29:05 Manual slew 2652_0500_M.CSL from PID #26520055 to #26520056

19:41:44 FDS: TPF 2652_0501_A.OSL applied on A/S to update slew 26520057

18/06/2023 (169)

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19/06/2023 (170)

01:46:26 SPI Compressor Stroke increase to 39

20/06/2023 (171)

19:44:08 Repeated TM drops on VC7 causing TM backlogs. Loss of TM on VC7 reported to ESTRACK. MCS Anomaly see AR INT-3759.

21/06/2023 (172)

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17:52:08 OSL #26540012 failed. Commands failed due to PTV failure. Multiple TM drop / TM backlog events seen in event log. MCS Anomaly see AR INT-3759.
18:05:44 Manual slew 2564_0500_M.OSL from PID #25640011 to #26540012. Uplink failed. MCS became sluggish/unresponsive. . MCS Anomaly see AR INT-3759.
18:18:15 Manual slew 2564_0501_M.OSL from PID #25640011 to #26540012
18:32:27 FDS: TPF 2654_0502_A.OSL applied on A/S to update slew 25640013

22/06/2023 (173)

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23/06/2023 (174)

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24/06/2023 (175)

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25/06/2023 (176)

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26/06/2023 (177)

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