

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

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XMM-INT-WOPS-24_01-02

Issue 1

Date: 17 January 2024

Marcus Kirsch
OPS-OAX

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1. Weekly report

	XMM	Integral
Main activities	<ul style="list-style-type: none"> ▪ Nominal Operations ▪ Phase in of new service contract for SOEs (October-December) ▪ Lela final migration to MCS ▪ Manual spacecraft recovery without propellant procedures ▪ CDMU recovery automation ▪ NSM on board 	<ul style="list-style-type: none"> ▪ Routine science operations
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, apart from some issues with TOL and AGO currently red due to degraded performance of the SSPA 	<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-1551: Tolhuin/KSAT General Support Issues ▪ XMM-1553: EVFM failure after chain swap ▪ XMM-1555: Santiago SSPA Degraded Performance ▪ XMM-1558 MOIS system crash ▪ XMM-1559 Warning Beeps not working on ThinClients in the DCR (INT & XMM) 	<ul style="list-style-type: none"> ▪ XMM-1559 Warning Beeps not working on ThinClients in the DCR (INT & XMM)
Future activities planned	<ul style="list-style-type: none"> ▪ XMM d2.3 simulator release on Jan 19th ▪ DABYS D/B implementation kick off Feb. 7 ▪ NSM via MOIS ▪ Webserver and NRT Analysis/Monitoring migration 	<ul style="list-style-type: none"> ▪ Automation of Transponder swap operations ▪ Automation of ground station operations (EVFM) ▪ Battery Reconditioning

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2. Detailed weekly operational events

note: all times are Zulu (in brackets DOY)

2.1. XMM

- 28/12/2023 (362) 10:29:13 issues with **G/S handover to TOL**; Automated G/S handover failed due to bad configuration of TC uplink chain in TOL
 - o same on 29/12/2023 (363) 01:52:13
 - o same on 01/01/2024 (001) 21:52:09
 - o same on 03/01/2024 (003) 10:11:19
 - o same on 03/01/2024 (003) 20:09:28
 - o Furthermore: 30/12/2023 (364) 12:39:35 until 12:50 Continuous frames out of sequence and packet drops on TOL
 - o 03/01/2024 (003) 10:11:19 G/S handover from KOU **to TOL**: MOIS procedure failed to get the proper receiver locked.
 - o 03/01/2024 (003) 14:59:02 G/S handover from TOL **to NNO**: Both receivers locked after start uplink at NNO. Estrack restarted uplink with reduced sweep range. Locked on TRSP2 OK.
 - o 05/01/2024 (005) 22:35:41 G/S handover from NNO **to TOH**: Carrier up & TRSP lock OK, but **no bitlock** after TRSP lock +90s. Asked Estrack to check with TNOC that sweep completed & carrier modulation is ON.(see **AR XMM-1551 :: Tolhuin/KSAT General Support Issues**)
- 29/12/2023 (363) 11:05:31 Problems loading new FD wheel plots on terminal ocsb26. FD restarted everything. Problem cleared.
- 29/12/2023 (363) 22:15:35 **MOIS issues (crashes/freezing) during eclipse season**
 - o same on 31/12/2023 (365) 17:43:05 impact: MOIS failed to delete TT's for MOS1,2+PN at 17:54:18 which are now in Safe (should be Idle)
 - o same on 02/01/2024 (002) 15:53:05
 - o 03/01/2024 (003) 15:19:02 MOIS restarted by UW (to clear memory leak). In the last eclipse revolutions a memory intensive process has been detected that might be the cause of the crashes. This is now under investigation by MOIS support. **Ol# 4636 raised: Restart MOIS every revolution during the eclipse season** – which avoids further crashes/freezes during eclipse season (see **AR XMM-1558 :: MOIS system crash**)
- 07/01/2024 (007) 07:23:51 Constraint check error when **loading MOIS plan 4411_01** due to two procedures overlapping.
- 07/01/2024 (007) and 08/01/2024 (008) Warning Beep is not working for INT & XMM (see **AR XMM-1559 :: Warning Beeps not working on ThinClients in the DCR (INT & XMM)**)
- 11/01/2024 (011) 06:20:15 DSN reported to Estrack: DSS36 declared RED and unable to support upcoming pass.
 - o 07:05:26 Estrack report that either AGO or TOL would be available instead of DSS36. Note: AGO declared red before Xmas since both amplifiers failed (see **AR XMM-1555 :: Santiago SSPA Degraded Performance**)
 - o 09:41:52 Manual H/O from KRU to Tolhuin. 3 re sweeps required by TNOC to establish correct uplink configuration. (see **AR XMM-1551 :: Tolhuin/KSAT General Support Issues**)

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2.2. INTEGRAL

29/12/2023 (363)

03:58:38 FDS generated TPFs to update slew 27250048 arrived in the MCS but a failed validation, probably due to a previous short TM interruption.

30/12/2023 (364)

18:25:39 FDS: TPF update failed for SlewID #27260040
18:38:32 FDS: TPF 2726_0500_A.OSL applied on A/S to update slew 27260040
19:26:16 FDS: TPF update failed for SlewID #27260041.
19:39:16 FDS: TPF 2726_0501_A.OSL applied on A/S to update slew 27260041

31/12/2023 (365)

06:49:24 SlewID #272600451 failed from T/L. OOL D9020 "DCA F1 FRAM ANA" Value = ABOUND CLTU.

According to the printouts with the transponder swaps no transponder swap is sheduled now, but MOIS and T/L is indicating one transponder swap from TRSP2 -> TRSP1.

07:49:42 SlewID #272600452 failed from T/L
08:35:08 Manual slew 2726_0503_M.CSL from PID #2726000050 to #2726000051
08:55:00 Manual slew 2726_0504_M.CSL from PID #2726000051 to #2726000052
09:12:20 FDS: TPF 2726_0505_A.OSL applied on A/S to update slew 27260053

01/01/2024 (001)

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02/01/2024 (002)

23:29:50 FDS: failed to determine a good altitude, no IPF for SLEW 27270052
23:39:14 FDS: TPF 2727_0500_A.OSL applied on A/S to update slew 27270052

03/01/2024 (003)

-

04/01/2024 (004)

21:46:26 FDS: failed to determine a good altitude, no IPF for SLEW 27280022
22:01:35 FDS: TPF 2728_0500_A.OSL applied on A/S to update slew 27280022

05/01/2024 (005)

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06/01/2024 (006)

03:39:02 TPF update failed for Slew ID #27290066 OI 2443 permit slew to execute without update.

07/01/2024 (007)

-

08/01/2024 (008)

-

09/01/2024 (009)

-

10/01/2024 (010)

07:55:10 TM drop both chains KIR, 4 minutes, Estrack report lines are down.

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11/01/2024 (011)

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12/01/2024 (012)

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13/01/2024 (013)

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14/01/2024 (014)

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15/01/2024 (015)

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