

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

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**XMM-INT-WOPS-23\_32-33**

**Issue 1**

**Date: 24 August 2023**

Marcus Kirsch  
OPS-OAX

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## **1. Weekly report**

	<b>XMM</b>	<b>Integral</b>
<b>Main activities</b>	<ul style="list-style-type: none"> <li>▪ Nominal Operations</li> <li>▪ MUST recovery</li> <li>▪ G/S ops automation (part2/ NIS) finished</li> <li>▪ OA OPS tools servers S/W and H/W migration</li> <li>▪ DABYS D/B prototype</li> <li>▪ Tolhuin station consolidation</li> <li>▪ Lela final migration to MCS</li> <li>▪ Manual spacecraft recovery without propellant procedures</li> <li>▪ CDMU recovery automation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Routine science operations</li> </ul>
<b>Status and performance of S/C</b>	<ul style="list-style-type: none"> <li>▪ Nominal for platform and all instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manual transponder swaps following RF switch anomaly</li> </ul>
<b>Status and performance of Ground segment</b>	<ul style="list-style-type: none"> <li>▪ Nominal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nominal</li> </ul>
<b>S/C Anomalies</b>	<ul style="list-style-type: none"> <li>▪ none</li> </ul>	<ul style="list-style-type: none"> <li>▪ INT_SC-738 SPI PSD malfunction</li> </ul>
<b>G/S Anomalies</b>	<ul style="list-style-type: none"> <li>▪ XMM-1541: NO backup G/S available</li> <li>▪ XMM-1542: X_GS_HANDOVER fails at TM check when TM was invalid</li> <li>▪ XMM-1543: X_GS_HANDOVER fails to open NIS Throw Events Session towards XNISA</li> </ul>	<ul style="list-style-type: none"> <li>▪ INT-3916 Solar flare (X1 class) affecting Integral science operations of OMC</li> <li>▪ INT-3917 Multiple slew updates failed at high roll and pitch angles</li> <li>▪ INT-3918 Impact on operations after planned test that clashed with AOCS daily housekeeping</li> </ul>
<b>Future activities planned</b>	<ul style="list-style-type: none"> <li>▪ Phase in of new service contract for SOEs (October-December)</li> <li>▪ NSM via MOIS</li> <li>▪ NSM on board</li> <li>▪ Webserver and NRT Analysis/Monitoring migration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Automation of Transponder swap operations</li> <li>▪ Automation of ground station operations (EVFM)</li> <li>▪ Disposal optimisation manoeuvre preparation</li> <li>▪ SPI annealing #41 (13.-30.09.2023)</li> </ul>

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## **2. Detailed weekly operational events**

note: all times are Zulu (in brackets DOY)

### **2.1. XMM**

- 18/08/2023 (230) 19:23:46: MOIS: G/S handover from KRU to AGO, END of X\_GS\_HANDOVER with ERROR on step 65 !, \*TM from AGO was delayed, It seems that the procedure has timed out at step 65 due to late TM flow from AGO. G/S H/O was Completed manually as per Case 1 of XMM\_ROP\_0006. However, Global Variable (FDE\_GS\_IN\_USE) was set to A08 by MOIS. Therefore, Path 1 (XMM\_MOI\_0009) was not required to follow.
- 19/08/2023 (231) 21:30:00: Lost TC from AGO, Lost TM from AGO, Seems SCC dropped the carrier with no warning!, ESTRACK informed and they are configuring KOU (to be crosschecked with SPACON)

### **2.2. INTEGRAL**

- 08/08/2023 (DoY 220)
  - o 05:19:55 High radiation at start of revolution: OMC in safe config. (see **AR INT-3916**)
    - 06:14:55 Recovered of OMC using FCP\_OMC\_0041
    - 06:17:15 OMC to SAFE again due to high radiation
  - o 05:44:43 SPI PSD Reset. SPI recovered and in Photon at 8:50:03Z (see **AR INT\_SC-738**)
- 10/08/2023 (DoY 222)
  - o 07:24:51 End of high radiation: FCP\_OMC\_0041:: OMC EXIT FROM SAFE MODE
  - o 19:12:47 Successful test of ISGRI CTX table upload via MOIS (Ops instruction # 2388)
- 14/08/2023 (DoY 226)
  - o 22:51:43 Multiple slew update failures for SlewIDs #26740057 to #61, #64, #66, #68 at extreme roll & pitch angles (see **AR INT-3917**)
- 17/08/2023 (DoY 229)
  - o 09:32:01 Successful DSN SLE Connectivity Test (Ops instruction #2389). Impact of this on operations: on 2023-08-18T06:25:41Z AOCS daily housekeeping was not executed by MOIS since ECH for AOCS s/s has been disabled during the connectivity test that clashed with AOCS daily housekeeping (see **AR INT-3918**)
- 20/08/2023 (DoY 232)
  - o 19:56:50 OOL on TM E0392 T CR COLPLT L2
    - 21:06:39 FCP\_SPI1\_2504 CDE1&2: SPICO STROKE INCREASE from 39 to 40