

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

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**XMM-INT-WOPS-18\_51-52**

**Issue 1**

**Date: 31 December 2018**

Marcus Kirsch  
OPS-OAX

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**1. Weekly report**

	<b>XMM</b>	<b>Integral</b>
Main activities	<ul style="list-style-type: none"> <li>▪ Nominal operations</li> <li>▪ 17/12 MCS patch 12.4.1 installed</li> <li>▪ CDMU table patch preparation for Migration 1-B</li> <li>▪ Lela migration to MCS on-going</li> <li>▪ Instrument science loss mitigation activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nominal Science Operations</li> </ul>
Status and performance of S/C	<ul style="list-style-type: none"> <li>▪ Nominal for platform and all instruments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nominal for platform and payload</li> </ul>
Status and performance of Ground segment	<ul style="list-style-type: none"> <li>▪ Nominal</li> </ul>	<ul style="list-style-type: none"> <li>▪ Nominal</li> </ul>
S/C Anomalies	<ul style="list-style-type: none"> <li>▪ XMM_SC-123 LCL SEU on P2117 HLCL 4.1 STAT</li> </ul>	<ul style="list-style-type: none"> <li>▪ INT_SC-591 IREM Anomaly – updated for Crash # 210</li> </ul>
G/S Anomalies	<ul style="list-style-type: none"> <li>▪ XMM-1372 FDS failed to update slew on DOY 359</li> </ul>	<ul style="list-style-type: none"> <li>▪ INT-3705 GFTS problem on DOY 351</li> </ul>
Future activities planned	<ul style="list-style-type: none"> <li>▪ 06/01 Lunar Eclipse</li> <li>▪ Instrument science loss mitigation activities</li> <li>▪ G/S and antennae automation</li> <li>▪ Battery re-evaluation</li> <li>▪ ESAM avoidance via automated LCL recoveries</li> <li>▪ Webserver migration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Routine Science</li> <li>▪ Automation of some repetitive tasks</li> </ul>

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

note: all times are Zulu (in brackets DOY)

### **2.1. XMM**

- 2018-12-17 10:30:00 (351) Swap from A to B chain with MCS Release 12.4.1
- 2018-12-19 01:06:00 (353) OCR 4064 - Switch from B-Chain to A-Chain (SW 12.4.1)
- 2018-12-20 02:05:00 (354) MOIS procedure failed! Event log entry at 02.01.55 'failed to reset the selected DSP. Procedure will be aborted at step 5.
- 2018-12-20 02:05:00 (354) As per X-Ref applying procedure SCP\_OPM\_0002
- 2018-12-20 02:15:00 (354) As per procedure 5 parameters are to be checked. If any of these parameters are not in the state put forth in the procedure we are to 'call for support'. Parameter H5450 was to be in DPUOS but was in BOOT. I called SOE On-Call. Was instructed to re-run the MOIS procedure and to set the timer to enable OM again after the MOIS procedure has finished at the next possible opportunity. We agreed that time would be 2018.334.04.04.39
- 2018-12-21 11:48:00 (355) MOIS re-join PN Test. TG. UW. MK
- 2018-12-24 03:39:00 (358) CSL update failed. FDS error message: Failed to determine a good attitude
- 2018-12-24 03:41:00 (358) XMM\_SPA\_0010 XMM-Newton SPACON recover-schedule tool. But recover schedule tool fails to be launched. The terminal opens as usual and instantaneously it gets closed. FD on-call (A.M.) informed and coming onsite
- 2018-12-24 04:28:00 (358) CSL manually generated by FD on-call (A.M.)
- 2018-12-24 05:54:00 (358) T\_CRP\_EPN\_1500 start by OPS-A (successful!)
- 2018-12-25 05:19:00 (359) CSL update failed. FDS error message: failed to determine a good attitude. See **AR XMM-1372 FDS failed to update slew on DOY 359**
- 2018-12-25 05:22:00 (359) SPACON repeated the process again and failed a second time. FD on-call (A.M.) informed and coming onsite
- 2018-12-25 06:06:00 (359) FCP\_AOC\_0106 STR-A Mapping
- 2018-12-25 06:53:00 (359) FCP\_AOC\_2002 Perform Open Loop Slew: 3488\_50\_M.OSL at request of FD on-Call
- 2018-12-25 06:53:00 (359) Open Loop Slew: 3488\_50\_M.OSL performed as per FD instructions was 1 deg in pitch and yaw to move the STR FoV so that a new mapping can acquire more stars
- 2018-12-25 07:01:00 (359) Called SOE as per FD on-call instructions. Suspected (FD) FDS problem on-board.
- 2018-12-25 08:33:00 (359) FCP\_AOC\_2006 Perform Close Loop Slew: 3488\_vv\_M.CSL
- 2018-12-25 08:44:46 (359) S/C on target (DCA/RGA 1/6)
- 2018-12-25 09:11:50 (359) T\_CRP\_EPN\_1500 start by SOE (successful!)

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- 2018-12-26 17:52:00 (360) OOL P2117 - "HLCL 4.1A STAT" Value = Open. **See AR XMM\_SC-123 LCL SEU on P2117 HLCL 4.1 STAT**
- 2018-12-31 00:35:00 (365) Multiplexer crashed and was restarted
- 2018-12-31 03:17:00 (365) At AOS we received OOLs M5023, M5020, and M50120. The X-Ref instructs us to begin MOIS procedure X\_CRP\_ERM\_0027. This was done and failed. I called the OPS-Analyst and was instructed to start the procedure again and again it failed. The OPS\_Analyst is on his way to check personally

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### **2.2. INTEGRAL**

2018-12-17 19:50:00 (351) INT alarm tone not working on ICLA. OI 1592 unclear on IMCA.  
2018-12-17 22:27:00 (351) OSL #20350002 missed from timeline due to Static PTV failure on TC A3089. PTV failure reason unknown. SOE called. Super Alarm triggered.  
2018-12-17 22:27:00 (351) SpaCon later noticed that no update for OSL 20350001 and 20350002 had arrived at MCS despite FDS generating IPFs.  
2018-12-17 23:01:00 (351) CRP\_MCS\_1007 - No TPF transfer from FDS. IFTS1/2 restarted. Backlog of IPFs/TPFs received at MCS. **See AR INT-3705 GFTS problem on DOY 351**  
2018-12-17 23:14:00 (351) S/C on target (1/6)

2018-12-26 17:00:00 (360) ISDC reports they've had to TM since DoY 360 12:23. All tasks on IMCA appear nominal. No MCS events/logs at that time indicate any issues.  
2018-12-26 17:00:00 (360) TM SPACON indicates ISDC/IFRD are "connected". Links recycled but still no report of TM at ISDC.  
2018-12-26 18:27:00 (360) SOE on-call phoned regarding ISDC link issue. ISDS stopped and restarted. ISDC reports TM.

2018-12-28 10:20:00 (362) IREM Crash: U9913,U9912,U9910,U9909,U9904 OOL. **See AR INT\_SC-591 IREM Anomaly – updated for Crash # 210**  
2018-12-28 11:50:00 (362) IREM recovering finished

2018-12-31 05:56:00 (365) OEM Evid 189 Type 0 'JEM-X1 PROB DFEE9'  
2018-12-31 05:58:00 (365) OOL - KD5020D 'EQ DFEE STATE' = FALSE due to high radiation  
2018-12-31 05:58:00 (365) Ops-Analyst to perform CRP\_JEM1 \_5060