

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

Document No :XMM-INT-WOPS-21\_48-49  
Issue/Rev. No : 1  
Date 16/12/2021  
Page : 1

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**XMM-INT-WOPS-21\_48-49**

**Issue 1**

**Date: 16 December 2021**

Marcus Kirsch  
OPS-OAX

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Document No :XMM-INT-WOPS-21\_48-49  
Issue/Rev. No : 1  
Date 16/12/2021  
Page : 2

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Document No :XMM-INT-WOPS-21\_48-49  
 Issue/Rev. No : 1  
 Date 16/12/2021  
 Page : 3

## **1. Weekly report**

	<b>XMM</b>	<b>Integral</b>
<b>Main activities</b>	<ul style="list-style-type: none"> <li>▪ Nominal Operations</li> <li>▪ MEOR</li> <li>▪ MUST to ARES migration</li> <li>▪ MCS migration</li> <li>▪ DABYS D/B prototype</li> <li>▪ Tolhuin station validation and contracts negotiation</li> <li>▪ Webserver migration</li> <li>▪ Cebreros NIS system re-installation</li> <li>▪ MOIS automation migration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Routine science operations</li> <li>▪ Eclipse season until 5/1/2022</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>▪ Since 17/07/2020: operations using Z-flip, without wheel biasing</li> <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, apart from increased rate of TM drops – under investigation</li> <li>▪</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-695 SPI PSD Channel Rate Malfunction</li> <li>▪ INT_SC-694 IBISVETO Anomaly.</li> <li>▪ Summary report for all IREM CSCI S/W resets (3x)</li> <li>▪ INT_SC-592 Summary report for all JEMX1/2 DFEE CRC anomalies (3x)</li> </ul>
<b>G/S Anomalies</b>	<ul style="list-style-type: none"> <li>▪ none</li> </ul>	<ul style="list-style-type: none"> <li>▪ INT-3816 Loss of TM from Kiruna</li> </ul>
<b>Future activities planned</b>	<ul style="list-style-type: none"> <li>▪ G/S ops automation (part2/ NIS)</li> <li>▪ Lela final migration to MCS, pending mini SOC at ESOC</li> <li>▪ DCR reconfiguration to welcome Euclid after its launch</li> <li>▪ Migration of voice loop system and monitors in DCR</li> </ul>	<ul style="list-style-type: none"> <li>▪ Design and deployment of an alternative wheel based safe mode</li> </ul>

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Document No :XMM-INT-WOPS-21\_48-49  
Issue/Rev. No : 1  
Date 16/12/2021  
Page : 4

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

note: all times are Zulu (in brackets DOY)

### **2.1. XMM**

- 10/12/2021 (344) 14:10:42: Due to s/c pointing attitude, some MSP temperatures have been toggling OOL soft high. Additionally, there is a discrepancy between the OOL value and the TM value as displayed in AND T002. → On instruction from UW, MSP Heater loops duty cycles reduced by 2%

### **2.2. INTEGRAL**

28/11/2021 (332)

15:49:14 [CRIT\_INST\_ALT\_DESC] Critical Instrument Altitude Descending (59000 km)  
21:36:26 Post Eclipse OOL L5583 "CPU MODE". = 8MHZ. I\_CRP\_JEM2\_5011 started.

29/11/2021 (333)

00:33:40 [CRIT\_INST\_ALT\_ASC] Critical Instrument Altitude Ascending (50000 km)  
06:38:42 TM Drop KR11 VC0+7. RF Lock lost (visible dip in on-board AGC)  
07:10:20 TM Drop KR11 VC0+7, 7sec. Visible dip in onboard AGC, RF lock maintained  
09:44:10 TM Drop KR11 VC0, 1 sec, no impact  
16:40:30 Slew #24400018 lost, TRSP swap performed to early – human error.  
16:58:10 Manual slew 2440\_0500\_M.OSL from PID #24400017 to #24400018  
17:14:59 FDS: TPF 2440\_0501\_A.OSL applied on A/S to update slew 24400019

30/11/2021 (334)

07:44:09 Missing packets, KR11, 6 secs, no impact

01/12/2021 (335)

20:25:15 TM: E3840-E3858 OOL Low. Sequence EEORTM01 sent (AR INT\_SC-695)  
20:44:08 Initiating procedure FCP\_SPI1\_0160, FCP\_SPI1\_0130, CRP\_SPI1\_3030.  
21:10:15 SPI: Recovery complete

02/12/2021 (336)

09:16:16 TM drop VC0 KR11, no impact  
21:47:57 IREM Crash: CRP\_SYS\_2570  
22:16:07 OMC re-enabled on the A/S  
22:38:26 IBIS re-enabled on the A/S  
23:44:01 TM Drop KR11 VC0, 1 sec, no impact  
23:50:44 IREM re-enabled on the A/S

03/12/2021 (337)

00:14:01 TM Drop KR11 VC0, 1 sec, no impact  
03:10:56 TM Drop KR11 VC0, 1 sec, no impact  
04:44:01 TM Drop KR11 VC0, 1 sec, no impact  
05:14:01 TM Drop KR11 VC0, 1 sec, no impact

04/12/2021 (338)

19:38:05 IREM Crash: CRP\_SYS\_2570  
20:02:04 S/S OMC enabled on the A/S  
20:17:30 S/S IBIS enabled on the A/S

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

Document No :XMM-INT-WOPS-21\_48-49  
Issue/Rev. No : 1  
Date : 16/12/2021  
Page : 5

---

21:13:27 S/S RM enabled on the A/S

05/12/2021 (339)

06/12/2021 (340)

06:10:15 A short TM drop on VC 0 (G/S KIR) No impact. Reason unknown.  
08:10:50 A short TM drop on VC 0 (G/S KIR) No impact. Reason unknown.  
11:10:55 A short TM drop on VC 0 (G/S KIR) No impact. Reason unknown.  
15:16:13 IBIS VETO alarms at belts entry. – AR INT\_SC-694  
16:49:15 FCP\_IBIS1\_0355: "IBIS VETO Deactivation".  
20:57:49 IREM Crash: CRP\_SYS\_2570  
21:05:17 TM: L5583 "CPU MODE" OOL (8 MHZ WAIT)  
21:08:23 I\_CRP\_JEM2\_5011: Start of procedure  
21:21:19 I\_CRP\_JEM2\_5011: End of procedure  
22:25:16 S/S RM enabled on the A/S

07/12/2021 (341)

06:02:57 TM drop and carrier dropped lose lock, (visible dip in on-board AGC)  
06:37:40 TM Drop KR11, 10 sec no impact (visible dip in on-board AGC) but no loss of lock

08/12/2021 (342)

10:46:43 TM Drop KR11 VC0, 1 sec no impact

09/12/2021 (343)

09:16:17 Event Logger: TPKT, Missing packets 38 secs, KR11, no impact  
12:11:04 Eclipse START  
13:53:50 OOL K5583. CPU Mode 8MHz wait. I\_CRP\_JEM1\_5011  
18:43:53 1s TM glitch. No impact.

10/12/2021 (344)

06:46:48 TRSP swap performed to early – human error. OSL #244400016 missed from timeline  
07:23:52 Manual slew 2444\_0500\_M.CSL from PID #24440015 to #24440016  
07:38:40 FDS: TPF 2444\_0501\_A.OSL applied on A/S to update slew 24440501

11/12/2021 (345)

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12/12/2021 (346)

00:15:32 No TM from DSS36. Seq DEBPG200 failed release from T/L Station reports low signal.  
13:16:33 2s TM glitch on VC0. No impact.  
19:40:00 CSL 94450020 failed. Recover schedule also failed. Called FD on-call.  
20:19:40 OSL #42250021 missed from timeline  
20:21:38 Manual slew 2445\_0502\_M.OSL from PID #24450019 to #24450021  
20:38:37 IREM Crash: CRP\_SYS\_2570 - IREM SEU Recovery  
20:50:03 S/S OMC enabled on the A/S  
21:05:00 S/S IBIS enabled on the A/S  
22:03:25 S/S RM enabled on the A/S

13/12/2021 (347)

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