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# ***European Space Agency***

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

**XMM-INT-WOPS-14\_34**

**Issue 1**

**Date: 27 August 2014**

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HSO-OAX

**XMM-Newton and INTEGRAL weekly  
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Document No :XMM-INT-WOPS-14\_34  
Issue/Rev. No : 1  
Date 27/08/2014  
Page : 2

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

Document No :XMM-INT-WOPS-14\_34  
 Issue/Rev. No : 1  
 Date :27/08/2014  
 Page : 3

## **1. Weekly report**

	<b>XMM</b>	<b>Integral</b>
Main activities	<ul style="list-style-type: none"> <li>▪ Nominal operations</li> <li>▪ CDMU patch activities</li> <li>▪ Galileo launched 22/08 (back-up stations scheduled as required for XMM – no interruption of science)</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>▪ Numerous TM glitches, missing frames during AGO support (back-up station during Galileo LEOP)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ongoing occasional RFI at all stations, some sources identified</li> <li>▪</li> </ul>
S/C Anomalies	<ul style="list-style-type: none"> <li>▪ None</li> </ul>	<ul style="list-style-type: none"> <li>▪ None</li> </ul>
G/S Anomalies	<ul style="list-style-type: none"> <li>▪ None</li> </ul>	<ul style="list-style-type: none"> <li>▪ None</li> </ul>
Future activities planned	<ul style="list-style-type: none"> <li>▪ CDMU patch FAR 25/09</li> <li>▪ Cebreros (LCTF) final acceptance 15-17/10</li> </ul>	<ul style="list-style-type: none"> <li>▪ DB release</li> <li>▪ SPI annealing #23 (28.8.-12.09.)</li> <li>▪ Kiruna station upgrade (8.-27.9.)</li> <li>▪ Battery reconditioning (Sep. 8th)</li> <li>▪ Test delta-v (Sep. 9th)</li> <li>▪ 4WD study kick-off (Sep. 10th)</li> <li>▪ External torque model calibration (Sep. 10th)</li> <li>▪ Cebreros final acceptance (15.-17.10.)</li> <li>▪ CLCW adjustment &amp; antenna ED change (21.10.)</li> <li>▪ Autumn Eclipse Season (24/10 - 17/11/14)</li> </ul>

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

Document No :XMM-INT-WOPS-14\_34  
Issue/Rev. No : 1  
Date 27/08/2014  
Page : 4

---

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

note: all times are Zulu

### **2.1. XMM**

- 2014-08-19 13:04:00 (231) SYS: XMCA: Data Gap on TM Link VC0 Frame Out of Sequence (AGO)
- 2014-08-19 13:46:00 (231) SYS: XMCA: Frame out of Sequence (AGO)
- 2014-08-19 13:57:00 (231) S/S: RF Lost RX LOCK at AGO Informed ECC and requested to re-sweep
- 2014-08-19 14:06:00 (231) BACK again at AGO AD Service established, D3831 Link Test CMD successful
- 2014-08-19 15:21:00 (231) SYS:XMCA: Data Gap on TM Link VC7 Frame Out of Sequence (DON)
- 2014-08-19 20:30:00 (231) It seems that AGO cannot bring up the carrier at BOT 20:57z as this falls outside of the limitations of the 12m ant. The 13 m ant is also not available. New carrier up time is now 21:22z. Ago said that they had informed of this limitation but neither the SPACON or ESTRACK were aware of this.
- 2014-08-19 21:26:00 (231) AGO do not see the spacecraft, no TM at this time. ESTRACK will configure PER for support.
- 2014-08-19 21:27:00 (231) AOS G/S PER
- 2014-08-19 21:36:00 (231) ESTRACK inform that we have PER until 03:33z EOT unless they want the pass stopped early. SPACON will review G/S coverage and any action needed if AGO is not working at this time.
- 2014-08-19 21:44:00 (231) AOS G/S AGO Problem has been fixed
- 2014-08-19 21:50:00 (231) PER will shadow track for the next 10 mins to ensure that all is well at AGO
- 2014-08-19 22:33:00 (231) missing frames AGO. Again at 23:09:00, 23:49:00, 00:41:00
- 2014-08-20 03:28:00 (232) No carrier at AGO, re-sweep needed
- 2014-08-20 05:08:00 (232) TM glitch from G/S AGO, reason: unknown, duration: few sec., impacts: none. Again at 05:11:00, 06:45:00
- 2014-08-20 11:12:00 (232) Lost TM from AGO, asked ECC to investigate. CMD DU399 PST2 MODE (S/S 6) failed release.
- 2014-08-20 11:16:00 (232) TM from AGO back for about one min. then lost again.
- 2014-08-20 11:20:00 (232) TM from AGO back online. G/S reports problem with a faulty cable.
- 2014-08-20 23:37:00 (232) TM glitch / drop from G/S KRU, reason: Unknown, duration: few sec, impacts: none
- 2014-08-22 22:50:00 (234) ECC requested early H/O to AGO due to Galileo LEOP. SPACON agreed to a H/O at 23:10z.

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

Document No :XMM-INT-WOPS-14\_34  
Issue/Rev. No : 1  
Date 27/08/2014  
Page : 5

---

- 2014-08-22 23:08:00 (234) G/S handover from KRU to AGO
- 2014-08-22 23:34:00 (234) Lost TM from AGO
- 2014-08-22 23:42:00 (234) TM re-acquired from AGO. G/S reports problem with downlink converter.
  
- 2014-08-23 23:39:00 (235) Lost TM from PER. Also links dropped out. TC from S/S 1 and 5 failed. ECC reports hit on trunk
- 2014-08-23 23:42:00 (235) TM and TC back. S/S 1, 5 and 9 in T/L DISABLED
- 2014-08-23 23:47:00 (235) XMM\_SPA\_0010 XMM-Newton SPACON recover-schedule tool
- 2014-08-24 00:05:43 (236) S/C on target
  
- 2014-08-24 06:02:00 (236) missing frames (AGO). Again 06:40:00, 06:52:00
- 2014-08-24 20:22:11 (236) Missing Transfer Frames from AGO; reason: unknown
- 2014-08-24 21:40:00 (236) TM glitch from G/S AGO, reason: unknown, duration: few sec., impacts: none. Again 23:07:00, 23:20:00, 23:32:00, 23:35:00, 00:08:00, 02:34:00

## **2.2. INTEGRAL**

- 18/08/2014 (230)
  - o 15:49:00 SYS: IMCB: iclb3 : All 4 screens are are frozen , only mouse is working. Informed CCC and requested to power cycle DTU-E41-10/B first before proceeding for re-boot.
    - 16:15:00 SYS:iclb3 back to normal after power cycling
  
- 19/08/2014 (231)
  - o Nothing to report
  
- 20/08/2014 (232)
  - o Nothing to report
  
- 21/08/2014 (233)
  - o 00:28:00 Drop VC-0 from KIR for a few sec (RFI?)
  - o 06:13:00 Data gaps on VC-0 & VC-7 from KIR + missing source packets for ~3 min (RFI?)
  - o 22:31:00 TPF update failed for SlewID #0068
    - 22:32:00 S/S AOCS disabled in T/L & recovery tool started
    - 22:35:00 FD Spacon Tool Failed to update the slew #0068 FATAL ERROR: Different reference time..... Informed FD Oncall and was instructed to run the tool again with fresh mapping.
    - 22:45:00 Recovery tool started but same result. FD oncall on his way. (reason: sparse star field)
    - 22:53:00 OSL #0068 missed from T/L
    - 23:21:00 Manual slew 1447\_0502\_M.OSL from PID #0067 to #0069
    - 23:32:00 TPF 1447\_0503\_A.OSL applied on A/S to update slew #0070

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

Document No :XMM-INT-WOPS-14\_34  
Issue/Rev. No : 1  
Date 27/08/2014  
Page : 6

---

- 22/08/2014 (234)
  - o 13:00:00 CCC informed SPACON that there is an ERROR message ('File System Full') on machine ISDS-A. Informed SOE on Call (JM) who informed SW support. They deleted old files.
  - o 15:35:00 TC: A3085 'RC SUN STEER INI' CEV unverified --> IPS 1/6
  - o 21:08:00 OEM: "ACC AIMU ON" & PID #0012 interrupted due to IMU on
    - 21:09:00 AOCS disabled in T/L
    - 21:11:00 OSL #0013 missed from T/L
    - 21:18:00 OEM: "ACC AIMU OFF"
    - 21:19:00 recovery tool started
    - 21:26:00 Manual slew 1448\_0500\_M.OSL from PID #0012 to #0014
    - 21:38:00 Recovery tool started
    - 21:43:00 OSL #0014 missed from T/L
    - 21:44:00 TPF 1448\_0501\_A.OSL applied on A/S to update slew #0015
    - 21:46:00 S/S AOCS enabled on A/S
  
- 23/08/2014 (235)
  - o 07:19:00 SYS: OMCH crashed on imcb --> restarted by SPACON
  - o 14:36:00 OOL T6055 'TCH TH RCS 5-Y' H/H (value= 63.33 degC) - back within limit in a minute.
  
- 24/08/2014 (236)
  - o 00:16:00 TPF update failed for SlewID #0060
    - 00:17:00 S/S AOCS disabled in T/L & recovery tool started
    - 00:28:00 FDS: Recoverschedule failed to produce OSL TPF. Message reads 'Slew can not be done with current wheel speeds'. Called FD-support (reason: corrupt fuel bookkeeping history file)
    - 00:43:00 FD support on site
    - 00:47:00 OSL #0060 missed from T/L
    - 01:06:00 Manual slew 1448\_0504\_M.OSL from PID #0059 to #0060
    - 01:16:00 TPF 1448\_0505\_A.OSL applied on A/S to update slew #0061
    - 01:17:00 S/S AOCS enabled on the A/S
  - o 06:03:00 Missing frames & drops in TM for about 2 mins (RFI?)
  - o 13:01:00 Drop VC-0 & data gaps on VC-0 & VC-7 from KIR + missing packets
  - o 13:02:00 Drop VC-0 & data gaps on VC-0 & VC-7 from KIR + missing packets
  
- 25/08/2014 (237)
  - o Nothing to report