European Space Agency

XMM-Newton and INTEGRAL weekly Mission Operations Report

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Issue 1

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1. Weekly report

	XMM	**Integral**
Main activities	▪ Nominal operations ▪ MCS migration: preparation of test revolution	▪ Nominal Science Operations
Status and performance of S/C	▪ Nominal for platform and all instruments	▪ Nominal for platform and payload
Status and performance of Ground segment	▪ Various issue with AGO and DON stations under investigation	▪ Ongoing occasional RFI at all stations, some sources identified ▪ Ongoing “Error sending data to isds”
S/C Anomalies	▪ None	▪ None
G/S Anomalies	▪ None	▪ INT-3435 TM Glitches Kiruna ▪ INT-3436 Track Stops at Vil2 ▪ INT-3437 TM Glitches Vil2 DOY 041&044
Future activities planned	▪ MCS SOL 10 test revolution 24-25 Feb ▪ OPS Automation development ▪ Redu check in 18+19 Feb ▪ CDMU patch activities kick off	▪ Virtualised Solaris environment MCS development ▪ LCTF test at REDU Delta MRB (KIR/MSP)

2. Detailed weekly operational events

note: all times are Zulu

2.1. XMM

- 2014-02-10 12:01:00 (41): G/S: Drops VC-0 & VC-7 from G/S: AGO
    - 2014-02-10 12:27:00 (41): G/S: Drops on VC-0 & VC-7 from G/S: AGO - continously for 10 minute and continued
- 2014-02-10 21:10:00 (41): Problem with H/O from PER -->DON. SPACON was not able to connect TM links. On ECC request stopped and restarted NCTRS application but to no avail. Contacted SOE on call.
    - 2014-02-10 21:40:00 (41): It was soon realized that wrong links were used to connect to DONGARA (DON instead USN). AOS TM/TC on DON.
- 2014-02-11 22:53:00 (42): G/S: data gap on VC-7 from G/S: AGO
    - 2014-02-11 23:57:00 (42): G/S: data gap on VC-7 from G/S: AGO
    - 2014-02-12 00:00:00 (43): G/S: data gap on VC-7 from G/S: AGO
- 2014-02-12 09:33:00 (43): TM glitch / drop from G/S KRU, reason: hit on the prime line to KRU, duration: twice for a few sec, impacts: TC failed for OM S/S 9 in T/L DISABLED CRP_OPM_1500 OM Rejoin Timeline
- 2014-02-13 12:02:00 (44): TM glitch / drop from G/S DON, reason: Unknown, duration: few sec, impacts: None
- 2014-02-13 12:54:00 (44): "Error with ERT connection, using system time", Execute procedure XMM_XMC_0007 step 11, Disconnect VC7 and reconnect 2min later (COMs issues on DON line)
- 2014-02-15 12:38:00 (46): RepEx: Error with ERT correction, using system time (multiple instances) (COMs issues on DON line)
- 2014-02-15 13:36:10 (46): XMM_XMC_0007 Step 11, Spacon disconnects TM Link VC-0 and VC-7,Packetiser restarted on X2KMCA, Spacon disconnects TM Link VC-0 and VC-7, Test TC D3831 uplinked to S/C
- 2014-02-15 20:45:00 (46): TM glitch / drop from G/S AGO, reason: Unknown, duration: 2 min, impacts: None
    - 2014-02-15 21:10:00 (46): TM glitch / drop from G/S AGO, reason: Unknown, duration: 10 min, impacts: None At 21:20 Spacon disconnected TC in order to switch to the 13m antenna in Santiago but TM appeared to be stable so no action was taken. Connecting TC again showed NO BITLOCK and after a minute TC was GREEN again. Test commands sent ok
- 2014-02-16 07:39:11 (47): OOL P1112 LCL STA IMU1 CLOSE + Repex: 140044 AUTO IMU ON
    - 2014-02-16 07:42:00 (47): CSL update failed. FDS error message: NO Good ATTD determination

2.2. INTEGRAL

- 10/02/2014 (041)
  - 03:58:46 PID #0034 lost due to TM param D5217 "OTF" was eventually NOT REACHED & multiple OEMs: "ACC YAW ERROR OOL"
    - 04:00:00 TPF update failed for SlewID #0035.
    - 04:05:22 Recovery tool started
    - 04:10:00 FDS: FATAL ATTD VERIFICATION ERROR
    - 04:15:00 As a 2nd try Recovery tool started
    - 04:25:00 Again received FATAL ATTD VERIFICATION ERROR, Called FD on call.
    - 04:50:58 OSL #0035 failed from T/L
    - 04:56:32 PID #0035 lost
    - 05:19:41 AESAM_00 uplinked on FD support request
    - 05:42:45 Manual slew 1383_0500_M.OSL from PID #0034 to #0036
    - 06:10:00 S/S AOCS enabled on the A/S
  - 08:14:00 OEM: "ACC AIMU ON" PID #0038 interrupted due to IMU on
    - 08:24:00 OEM: "ACC AIMU OFF"
    - 08:26:00 Recovery tool started
    - 08:32:00 TPF 1383_0501_A.OSL applied on A/S to update slew #0039
    - 08:48:00 S/S AOCS enabled on the A/S
  - 09:16:00 Drop VC-7 from VIL2 for entire pointing, reason: weak signal from S/C (possibly related to current attitude)
  - From 13:26Z (DOY 41) onwards until end of DOY 43: multiple OEM: "ACC ROLL ERROR OOL"
  - 13:57:00 Data gaps on VC-0 & VC-7 bad Frames from VIL2
  - 14:20:00 Data gaps on VC-7 & BF from VIl2
  - 18:00:00 TM: X7500 'IBIS HIST DWN LD' status-OOL (value= FALSE)
    - 18:36:00 FCP_IBIS1_0312 - Download all remaining Histograms
    - 18:40:00 TC: G0129 sent - IBIS to Science
  - 20:00:00 SPACON noticed that there is a wheel profile difference of ~100rpm on RW3. Informed FD on call. FD support checked wheel profile and assured that it is good till the next RWB.

- 2014-02-11 (042)
  - 21:00:00 >100 rpm discrepancy on wheel # 3 - probably cleared with next RWB @ 043.03.24.37z

- 12/02/2014 (043)
  - 00:59:09 ---------- REVOLUTION 1384 ----------
  - 04:38:00 Data gap on VC-7 from KIR (comms glitch)
  - 04:46:00 OEM: "MS EVE SECL OEM1" (heater loop 39)
  - 22:02:00 until next day ~06:00Z: Ongoing instances of “Error sending data to isds(a)”. These occurrences are not listed in the following.
  - 22:02:01 Data gaps on VC-0 & VC-7 from KIR + missing packets (RFI, both D/L chains)

- 13/02/2014 (044)

- 00:17:00 until about 01:00Z: Intermittent telemetry drops seen on IFMS-1 during KIR-1 support. IFMS-2 more stable. Possible reason: due to the use of an RFI filter on IFMS-1, IFMS-1 is less affected by out-of-band RFI, but more sensitive to in-band RFI.
- 12:31:00 Drop VC-0 & VC-7 from VIL2 for 19 min, Reason: Antenna at the G/S stopped tracking due to SERVO hang-up (recurrence of a known software bug). The problem cleared itself at 12:50Z.
- 13:30:00 Bad Frames from VIL2 for 26 min. The signal level was marginal (signal to noise ratio: -1.4dB. Both TMTCS affected). ECC configured Maspalomas for support. As the signal level at Maspalomas was better than at VIL-2, Maspalomas was made prime at 14:12Z (TC remained at VIL2). The scheduled KIR-1 support started at 16:45.

- 14/02/2014 (045)
  - 19:22:00 PDM semi module 1 & 2 FIFO error ("SCC FAIL" on G5180, G5164, G5148, G5120, G5116, G5104, G5068 followed by OOL H/L on G5002, G5007, G5012, G5013, G G5017, G5018, G5023, G5027, G5028, G5032, G5033, G6037, G5038, G5003, G5008, G5022
    - 19:25:00 OEM: "IBIS1 HEPI RESYNCHRONIZED"

- 15/02/2014 (046)
  - 05:53:00 TC: A3085 'RC SUN STEER INI' CEV unverified --> IPS 1/6
  - 06:00:00 TM: E0392 'T CR COLDPLT L2' S/H-OOL (value= 80.92 degK) - starts toggling
    - 10:26:00 FCP_SPI1_2504 - STROKE INCREASE of all compressors by 1 LSB to value 38 TM: EC9960= EC9980= EC9961= EC9981= 38

- 16/02/2014 (047)
  - 11:15:00 TM: S/H OOL T0050 'TCS TH RMU1'=25.50 DegC parameter OOL for a few seconds only but is logged as x-ref regards it as a performance related parameter for RMU1 (Added info: AU5204 Beta F degress= 34.8469 deg).
  - 17:03:00 Drop VC-0 from KIR for ~10 sec (comms glitch)
  - 18:19:00 Bad Frames from KIR for ~30 sec (RFI on both D/L chains)
  - 20:02:00 For the next 5 hours: Intermittent data gaps on VC7 from KIR for ~5 h. Possible reason: weather conditions at G/S
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