European Space Agency

XMM-Newton and INTEGRAL weekly Mission Operations Report

XMM-INT-WOPS-13_20

Issue 1

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Marcus Kirsch
HSO-OAX

Distribution List

ESOC	Thomas Reiter		Danielle Heinzer
	Tatiana Gabel-Ly	Frank Dreger	Phil Brabbin
	Andreas Rudolph	xmmintfd@esa.int	Federico Cordero
	XMMINTFCT	Alastair McDonald	Felicity Sheasby
	Marcus Kirsch		Gianluca Gaudenzi
	Jim Martin	Kenneth Scott	
	Marko Butkovic	Martin Unal	Klaudia Reich
	Frank Albrecht		
	EILSservices@esa.int		
	Juergen Fertig	Justin Howard	
	Richard Southworth	Erik Soerensen	
	Jutta Huebner		
	Paolo Ferri		
ESAC	Alvaro Gimenez	Ramón Muñoz	Peter Kretschmar
	Martin Kessler	Maria Santos Lleo	Erik Kuulkers
		Mauro Casale	isocsci@sciops.esa.int
		Pedro Calderon	
		Ricardo Perez	
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ESA Redu	Benoit Demelenne		
Astrium		Tommy Strandberg	
Alenia	Franco Ravera	Mario.Montagna	
Logica	COMCS_Helpdesk.de@logicacmg.com		
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1. Weekly report

	XMM	**Integral**
Main activities	▪ Nominal Operations ▪ MCS migration ▪ 4WD implementation PAR data pack delivered ▪ Tank replenishing review held 13th May ▪ Maspalomas validated for operations	▪ 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	▪ Nominal	▪ Ongoing occasional RFI at all stations, some sources identified; filter installed for testing
S/C Anomalies	▪ None	▪ INT-428: JEM-X2 DFEE CRC Anomaly following eclipse on 2013-05-18 ▪ INT-429: JEM-X2 DFEE CRC Anomaly following eclipse on 2013-05-21
G/S Anomalies	▪ X2KMCB disk failure. Refer to AR XMM-1158.	▪ INT-3370: PLM Operations interrupted following solar flare (only OMC) INT-3371: Low Signal Level Vil2
Future activities planned	▪ IMU calibration 23 May ▪ Flexible Perigee starts rev 26 May ▪ Eclipse season 2-21 June ▪ 4WD PAR 13-14 June ▪ Tank replenishing test June 24-26 ▪ 4WD dry run July 23-24	▪ Earth observation preparations on-going

2. Detailed weekly operational events

note: all times are Zulu

2.1. XMM

2013-05-14 12:50:00 (134)	Connectivity test to MSP backend 1&2 successfully carried out. Precursor to full test pass on DOY 136.
2013-05-14 23:17:50 (134)	Lost TM from KRU for 10 secs - ***hit on the line***, no impact
2013-05-15 17:45:00 (135)	ECC restarted TMTCS-2 during TRSP swap – no impact.
2013-05-16 01:02:00 (136)	TM glitch / drop from G/S DON, reason: unknown, duration: a few sec, impacts: none
2013-05-16 08:05:00 (136)	G/S: Lost TM from AGO. ***Problem with the line.***
2013-05-16 08:07:00 (136)	G/S: Lost TC from AGO
2013-05-16 08:10:00 (136)	ED: GE1602 'RGS1 QDUMP' failed release --> S/S # 7 in T/L DISABLED
2013-05-16 08:15:00 (136)	G/S: TM back from AGO
2013-05-16 08:24:00 (136)	G/S: TC back from AGO after re-sweep
2013-05-16 14:55:00 (136)	G/S handover from KRU to MSP
2013-05-16 15:00:00 (136)	AD Service established, D3831 Link Test CMD successful
2013-05-16 15:30:00 (136)	G/S handover from MSP to KRU. ***MSP operational validation complete.***
2013-05-20 11:14:30 (140)	Event logger outputs WARNING - Fetching remote file list form host <x2kmcb> failed: ls /home/xmcops/RAPID/process/x2kmca. ***X2KMCB disk failure. Refer to AR XMM-1158.***
2013-05-20 11:50:00 (140)	SpaCons attempted 3 times to stop and restart connection to x2kmcb server from SUN203, but the startup process always stuck after few seconds. Requested CCC to check the health of x2kmcb server.
2013-05-20 11:57:00 (140)	CCC informed SpaCons that is impossible at the moment to connect x2kmcb server. Requested clearance for a hardware reboot.
2013-05-20 11:59:00 (140)	Called SOE to assess situation with x2kmcb and receive instructions. SOE cleared the reboot of x2kmcb as suggested by CCC
2013-05-20 12:08:00 (140)	System / Hardware problem CCC informed that x2kmcb server is not booting, showing problems about file system health. No further interventions by CCC are possible until DOY 141 morning. Ticket opened.
2013-05-20 19:00:00 (140)	SYS: x2kmcb "BLUE" on MCCM --> server has disconnected
2013-05-20 23:44:00 (140)	XMM_SPA_0013 Run Rev Log Script --> not running, S/S-SOE to investigate message raised - "x2kmcb.esoc.ops.esa.int: Connection timed out" (3 attempts)

2.2. Integral

- 13/05/2013 (133)
  - 00:03:00 ED T5555 uplinked ED P4017 uplinked
  - 00:05:00 S/S JEM-X1 enabled on the A/S
  - 01:36:20 TM: G2069 'IOS-EVTCNT-MCE4' H/L-OOL (value= 0) No action as per Xref.
  - 16:59:00 G/S: Bad Frames from: KIR, duration: 10 sec, reason: unknown
  - 23:55:00 RMU CAL Task terminated unsuccessfully FCP_AOC_0550

- 14/05/2013 (134)
  - 00:20:00 RMU CAL TPF generation failed: Called FD in
  - 01:33:00 FD ran Spacon tool to generate RMU CAL TPF: failed
  - 13:31:00 G/S: Bad Frames from: VIL2, duration: a few sec., reason: unknown
  - 13:52:00 G/S: Bad Frames from: VIL2, duration: 3 minutes, reason: unknown
  - 17:59:00 G/S: Bad Frames from: VIL2, duration: 10 sec, reason: unknown
  - 18:14:00 G/S: Bad Frames from: VIL2, duration: 2 minutes, reason: unknown
  - 18:41:00 G/S: Bad Frames from: VIL2, duration: every minute for 10- 20 seconds, reason: Estrack reports very weak signal from satellite and also low elevation on the antenna(8 deg)

- 15/05/2013 (135)
  - 14:22:00 OMC to safe mode due to high radiation, S/S is disabled.
  - 17:09:00 FCP_OMC_0041 - OMC from Safe
  - 17:10:00 S/S OMC enabled on the A/S
  - 20:01:15 OEM: "ACC AIMU ON" - stored event
  - 20:43:11 OEM: "ACC ECLIPSE START" - stored event
  - 21:41:28 OEM: "ACC AIMU OFF" - stored OEM OEM: "ACC ECLIPSE END" - stored OEM

- 16/05/2013 (136)
  - 01:20:00 TM: K/L5317 'RAD MONITOR 3' H/H-OOL (value= 91)
  - 01:35:00 TM: E3500 'P_DF_CNVT-BW_L,1' H/H-OOL (value= 128950)
  - 01:36:00 OMC to safe mode due to a spike of high radiation, S/S OMC is disabled.
  - 03:27:00 FCP_OMC_0041 - OMC recovery from Safe
  - 06:08:00 Execution of Operational Instruction: INT_OPS_830 FCP_EPS_1260 - MRU EOC Timer set to B947 (hex)
  - 06:24:00 FCP_EPS_1260 - MRU EOC Timer step # 7 --> TC: P2431 'HW EOC AUTOMAT A' sent
  - 16:57:00 OMC to SAFE: due to Radiation Spike, S/S disabled on the A/S.
  - 17:55:00 FCP_OMC_0041 - OMC from Safe S/S enabled on the A/S
  - 20:07:00 G/S: Bad Frames from: Redu, duration: one minute, reason: unknown

- 17/05/2013 (137)
  - 03:38:00 G/S: Drop VC-0 & VC-7 from G/S: Redu, duration: 10 sec, reason: unknown
  - 06:37:08 TM: M5024 'CCD OFF' STATUS OOL (value= 1)

- 06:37:49 TM: MD0033D 'OMC_SAFEOUTBELT' STATUS OOL (value= 1)
- 06:50:00 S/S OMC disabled on the A/S Executed CRP_OMC_5120
- 08:35:00 FCP_OMC_0041 OMC exit from safe mode
- 08:36:00 S/S OMC enabled on the A/S
- 09:35:58 TM: E3500 'P_DF_CNVT-BW_L,1' H/H-OOL (value= 126339) Radiation level high due to recent Solar flare.
- 10:07:00 TM: E3500 back within limits
- 10:12:00 TM: E3500 'P_DF_CNVT-BW_L,1' H/H-OOL (value= 127317) Radiation level high due to recent Solar flare (toggling).
- 15:49:00 TM: A5702 'MOD 4096 COUNTER' H/H-OOL
- 16:19:00 TM: M5024 'CCD OFF' status-OOL (value= 1) - OMC to SAFE
- 16:20:00 TM: MD0033D 'OMC_SAFEOUTBELT' status-OOL (value= 1)
- 16:48:00 TC REJECTED --> OMC commanding failed due to SAFE mode --> SPACON missed to disable S/S in time SYS: S/S OMC disabled in TL
- 19:00:00 FCP_OMC_0041 - OMC from Safe
- 19:01:00 S/S OMC enabled on the A/S

- 18/05/2013 (138)
  - 15:19:00 TM: A5702 'MOD 4096 COUNTER' H/H-OOL
  - 17:10:00 TM: P3114 'SA WING 1 CUR 1' H/L-OOL (value= 8.20 A)
  - 17:12:00 TM: P3117 'SA WING 2 CUR 1' H/L-OOL (value= 8.20 A) - toggles
  - 19:49:00 The following stored OEM was observed at AOS TM. ACC AIMU ON
  - 20:31:00 The following stored OEM was observed at AOS TM. ACC ECLIPSE START
  - 21:33:00 The following stored OEM was observed at AOS TM. ACC ECLIPSE END
  - 21:33:00 The following stored OEM was observed at AOS TM. ACC AIMU OFF
  - 21:51:30 TM: L5583 'CPU MODE' STATUS OOL (value=8 MHZ WAIT)
    - 22:04:00 Executing CRP_JEM2_5011 - "JEMX2 DFEE Recovery after eclipse anomaly" as per Xref
    - 22:06:00 CRP_JEM1_5011 - Recovery after eclipse anomaly - Value of TM param. L5019 at step 2.1 = 61875 - Value of TM param. L5019 at step 2.2 = 61556 - Value of TM param. L5019 at step 2.3 = 53151
    - 22:10:00 FCP_JEM2_9010 - JEMX2 DFEE SWITCH OFF Executed as required in CRP_JEM2_5011
    - 22:38:00 FCP_JEM2_0021
    - 22:49:00 FCP_JEM2_0120
    - 23:00:00 Performed FCP_JEM2_0120 again as Step 6 in FCP_JEM2_0021 to reset the changed BCP override flag (L5477) to enabled again.
  - 23:21:01 MS EV ECD REACHED for BAT2
  - 23:41:49 MS EV ECD REACHED for BAT1

- 19/05/2013 (139)
  - 01:48:00 Post ECLIPSE SCC resets on A & B chains
  - 08:27:00 Alarm on IDDA: PSRV fastchild
  - 08:28:00 SYS: Performed stop & restart of PSRV on idda
  - 09:42:00 Alarm on IDDA: PSRV fastchild SYS: Performed stop & restart of PSRV on idda

- 17:03:00 TM: A5702 'MOD 4096 COUNTER' H/H-OOL (value= 541) Executed FCP_AOC_0615 - ACC OEM Buffer dump
- 17:09:00 G/S: Bad Frames from: RED, duration: ~2 min, reason: RFI

- 20/05/2013 (140)
  - 00:54:00 G/S: Drop VC-0 & VC-7 from G/S: KIR + missing packets
  - 12:05:00 G/S: Bad Frames from: RED, duration: ~2 mins, reason: RFI