European Space Agency

XMM-Newton and INTEGRAL weekly Mission Operations Report

XMM-INT-WOPS-13_35

Issue 1

Date: 09 September 2013

Marcus Kirsch
HSO-OAX

Distribution List

ESOC	Thomas Reiter		Danielle Heinzer
	Andrea Kerruish	Frank Dreger	Andrzej Olchawa
	Andreas Rudolph	xmmintfd@esa.int	Federico Cordero
	XMMINTFCT	Alastair McDonald	Felicity Sheasby
	Marcus Kirsch		Gianluca Gaudenzi
	Jim Martin	Kenneth Scott	P. Brabbin
	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	
ESA HQ			
ESTEC	Fred Jansen		Christoph Winkler
			Guiseppe Sarri
ESA Redu	Benoit Demelenne		
Astrium		Tommy Strandberg	
Alenia	Franco Ravera	Mario.Montagna	
Logica	COMCS_Helpdesk.de@logicacmg.com		
ISDC	Roland Walter		Carlo Ferrigno
INT-PI	Francois Lebrun	J.P. Roques	Giovanni Larosa
	Pietro Ubertini	Wojte Hajdas	Miguel Mas Hesse
	Søren Brandt		
	A. Bazzano		

1. Weekly report

	XMM	Integral
Main activities	▪ Nominal operations ▪ MCS migration ongoing ▪ 4WD implementation (final phase) ▪ Mission Control System Solaris 8: DB 6.19 and 10.6.4 operational on A and B system	▪ 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	▪ DOY 239 at 12:31, during Perth support, the Spacon reported missing transfer frames. This was not seen in the STC log or charts, so was possibly due to a comms hit. At 12:32, the Spacon reported that the VC 7 bind was in status BLOCKED. The Spacon disconnected and reconnected the bind, after which TM flowed again to the NCTRS as nominal. - ▪ DOY 240 at 09:54, during Kourou support, the Spacon reported a brief telemetry glitch. This was not seen in the STC log or charts, so was possibly due to a comms hit.	▪ Ongoing occasional RFI at all stations, some due to GLONAS identified ▪ Numerous TM problems with ISDC link
S/C Anomalies	▪ None	▪ none
G/S Anomalies	▪ None	▪ none
Future activities planned	▪ 4WD ESOC end to end test 04/09 ▪ 4WD FAR 12/09 ▪ 4WD ORR 20/09 ▪ 4WD upload 23-27/09	▪ Virtualised Solaris environment MCS development

2. Detailed weekly operational events

note: all times are Zulu

2.1. XMM

- 2013-08-26 18:20:00 (238): Slew can not be performed due to wheel speeds. Called FD-support.
    - 2013-08-26 18:51:00 (238): FCP_AOC_2002 Perform Open Loop Slew: 2512_50_M.OSL generated by FD-Support (M. R.)
    - 2013-08-26 19:38:00 (238): FCP_AOC_2002 Perform Open Loop Slew: 2512_51_M.OSL generated by FD-Support (M. R.)
    - 2013-08-26 21:02:00 (238): FCP_AOC_2006 Perform Close Loop Slew: 2512_52_M.CSL generated by FD-Support (M. R.)
    -
- 2013-08-27 12:31:00 (239): Missing Transfer Frames from G/S PER, reason: Unknown, duration: few secs, impacts: unknown
- 2013-08-27 12:32:00 (239): NO TM FLOW From VC 7 - PERTH !, PER1_VC7 went to "BLOCKED" ON NCTRA, Aborted PER1_VC7 Link and reconnected. PER1_VC7 back on TM Flow , no impact.
- 2013-08-28 09:54:47 (240): TM glitch / drop from G/S KRU on VC-0, reason: unknown, duration: 1 sec, impacts: none
- 2013-08-29 09:33:00 (241): Nominal Winter Duty Cycles for MTCU-A have been uplinked.
- 2013-09-01 12:01:00 (244): CDWchecker error: "The file has zero size: /home/xmcops/CDW/data/xmcs_2013_09_01T12_00_00Z__/xmcs_2013_09_01T12_00_00Z__.dat". CDWchecker error: "CDwriter output file not growing at expected rate - this may indicate a problem". CDWchecker warning: "File /home/xmcops/CDW/data/xmcs_2013_09_01T12_00_00Z__/xmcs_2013_09_01T12_00_00Z__.dat Growth Rate: -1029265 bytes/sec". After having checked the Xref for Event Logger messages with no results, called on-call SOE to assess the situation. On-call SOE requested accurate logging but no immediate action. Problem to be solved on Monday.
- 2013-09-01 22:11:40 (244): Received message in Event Logger "Wrong number of parameters in LELA line:" (Application: LRImain, Workstation:x2kmca Type: System). No information present in either x-ref or LELA user manual (XMM_USE_0001). SPACON checked LELA status, packet dumps are updating, LELA-MCS connection is working and S/C is well above radiation zone. Hence logging for later investigation.
-

2.2. INTEGRAL

- 2013-08-26 (238)
    - 00:11:00 SYS: Error sending data to isds(a)
    - 00:48:00 SYS: Error sending data to isds(a)
    - 00:50:00 SYS: Performed restart of ISDS + IFRD (isdsa)
    - 01:33:00 SYS: Error sending data to isds(a)
    - 02:06:00 SYS: Error sending data to isds(a)

- 03:28:00 SYS: Error sending data to isds(a)
- 03:49:00 SYS: Error sending data to isds(a)
- 04:31:00 SYS: Error sending data to isds on a-chain, duration: few sec stop & start ISDSA
- 09:52:00 SYS: removed old HFAdiscardedPackets file on IDDB and created new one (SWS)
- 11:24:00 G/S: Drop VC-7 from G/S:REDU, duration: few seconds, reason: RFI
- 13:11:00 bad frames at Redu

- 2013-08-27 (239)
  - 08:15:00 FD: SPACON noticed two rings (2 instances of Ding dong sound) for each successful update of slew. SPACON suspected that job scheduler is running twice for each job. In apprehension of a clash for next updates, asked FD support present in DCR (J.P) to look into this. No report from FD but the problem is gone.
  - 10:52:00 Execution of OCR#869 (INTEGRAL Ranging Transponder tests) FCP_RFS_1030 (Swich off/on ranging using TX-1) After the test an increase of 1dB in signal strength for the period with ranging off was measured.During the test VIL2 had aprox. 359 deg. AZI and 7 deg. EL.
  - 22:21:00 FDS: TPF update failed for SlewID #13270087.
  - 22:22:00 SYS: S/S AOCS disabled in timeline
  - 22:24:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 22:30:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 22:38:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 22:53:00 Attitude determination failed 3 times. Called FD but no answer. Called A.M. and will come in instead of on call.
  - 22:53:00 OSL #13270087 missed from timeline
  - 23:26:00 Manual slew 1327_0501_M.OSL from PID #13270086 to #13270088
  - 23:38:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 23:46:00 FDS: TPF 1327_0502_A.OSL applied on A/S to update slew 13270089
-
- 2013-08-28 (240)
  - 05:06:00 OEM: "ACC ROLL ERROR OOL" first occurrence on the logged time and then ~6 minutes after every slew in the shift.
  - 06:51:00 SYS: Error sending data to isds on b-chain, duration: unknown SYS: Performed restart of ISDS-B
  - 11:45:00 Timeline: TL__1328_03_20130813150108.INT loaded
  - 14:39:00 OEM: "IBIS1 PICSIT NOISY SEMIMODULE ..." Multiple Occurrences !
  - 18:50:00 SYS: Performed restart of ISDS + IFRD (isdsa)
  - 19:25:28 OEM: "ACC AIMU ON"
  - 19:35:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 19:41:00 FDS: TPF 1328_0500_A.OSL applied on A/S to update slew 13280007
-
- 2013-08-29 (241)
  - 05:35:55 G/S: Bad Frames from: RED, duration: ~10 sec, reason: unknown No impact on commanding.
  - 10:15:00 G/S: Bad Frames from: RED, duration: ~20 sec, reason: unknown No impact on commanding.
  - 11:57:00 FDS: TPF update failed for SlewID #13280034.
  - 12:00:00 SYS: S/S AOCS disabled in timeline
  - 12:01:00 SEQ: AESAM_00 uplinked & recovery tool started
  - 12:04:00 Ran recovery tool twice but giving FATAL ATTD determination error, called FD. (reported by FD later that sparse star field being the reason)
  - 12:25:59 OSL #13280034 missed from timeline
  - 12:31:17 PID #13280034 lost
  - 12:46:00 SEQ: AESAM_00 uplinked on FD request
  - 12:55:00 Manual slew 1328_0501_M.OSL from PID #13280033 to #13280035
  - 13:08:00 SEQ: AESAM_00 uplinked & recovery tool started to update slew ID 13280036 on A/S
  - 13:16:51 FDS: TPF 1328_0502_A.OSL applied on A/S to update slew 13280036
  - 16:15:00 OOL TM A5702(MOD 4096 COUNTER) OOL High/High with value 541

- 16:19:00 FCP_AOC_0615: OEM BUFFER DUMP
- 18:48:00 G/S: Bad Frames from: REDU, duration: 1 min , reason: RFI

-
- 2013-08-30 (242)
  - 05:54:45 G/S: Bad Frames from: RED, duration: ~20 sec, reason: unknown No impact on commanding.
  - 07:08:34 G/S: Bad Frames from: RED, duration: ~30 sec, reason: unknown No impact on commanding.
  - 17:59:54 OOL TM A5702(MOD 4096 COUNTER) OOL High/High with value 543 FCP_AOC_0615: ACC OEM BUFFER DUMP

-
- 2013-08-31 (243)
  - 09:35:00 OEM: "ACC ROLL ERROR OOL"
  - 14:18:47 OEM: "IBIS1 PICSIT NOISY SEMIMODULE ...", multiple repetitions. No action as S/C still inside Radiation Belts.
  - 20:51:31 SYS: Error sending data to isds on a-chain, duration: ~45 sec
  - 20:52:31 SYS: Error sending data to isds on a-chain, duration: 16 sec
  - 21:30:33 SYS: Error sending data to isds on a-chain, duration: 21 sec
  - 21:36:37 SYS: Performed restart of ISDS (isdsa)
  - 22:56:55 SYS: Lost connection to NCTRS, VC-7 data is not delivered to MCS from G/S. Duration: ~6 sec Impact: none
  - 23:12:03 OSL #13290015 failed midway from timeline (Last successful TC was A2549 (AUTHORISE STR TC)), slew recovery imminent as per x-reff as soon as TC capability is back.
  - 23:14:06 G/S: Drop TC/TM VC-0 & VC-7 from G/S: RED, reason: Main line from RED went down, Impact: Slew 13290015 failed midway
  - 23:15:47 SYS: S/S AOCS disabled in TL
  - 23:17:21 PID #13290015 lost (due to slew failure)
  - 23:20:55 G/S: TM/TC capability back from: RED
  - 23:29:00 Test Command sent OK
  - 23:31:34 SEQ: AESAM_00 uplinked & recovery tool started
  - 23:43:59 OSL #13290016 missed from timeline
  - 23:49:16 PID #13290016 lost (due to delayed TM/TC recovery and hence slew recovery)
  - 23:56:00 Manual slew 1329_0501_M.OSL from PID #13290014 to #13290016

-
- 2013-09-01 (244)
  - 00:08:16 SEQ: AESAM_00 uplinked & recovery tool started to update slew ID 13290017 on A/S
  - 00:13:45 FDS: TPF 1329_0502_A.OSL applied on A/S to update slew 13290017
  - 00:14:28 SYS: S/S AOCS enabled in TL + Reset IL
  - 00:49:00 FCP_AOC_0540 - AOCS Daily Maintenance (delayed ~40 min due to slew recovery and then back to back (15 min apart slews from A/S))
  - 01:47:23 SYS: Error sending data to isds on a-chain, duration: 10 sec
  - 02:23:30 TM: SCC FAIL G2056 = >1NP DETECT (just logged as per x-ref)
  - 03:16:21 SYS: Error sending data to isds on a-chain, duration: ~20 sec
  - 03:17:00 SYS: Error sending data to isds on b-chain, duration: unknown SYS: Performed restart of ISDS (isdsb)
  - 03:21:35 SYS: Error sending data to isds on a-chain, duration: ~20 sec
  - 03:23:31 SYS: Performed restart of ISDS (isdsa)
  - 04:46:00 SYS: Error sending data to isds(b)
  - 04:47:00 SYS: Performed restart of ISDS + IFRD (isdsb)
  - 04:56:00 SYS: Error sending data to isds(b) - continuously
  - 05:13:00 SYS: Performed restart of ISDS + IFRD (isdsb)
  - 05:42:00 G/S: data gaps on VC-0 & VC-7 from G/S: Redu
  - 05:43:00 G/S: Bad Frames from: Redu (DUs 76) + missing packets
  - 07:32:00 SYS: stop 'n' start TM-Desktop(SPI) on sun121 due to high cpu usage
  - 10:01:00 G/S: data gaps on VC-0, VC-7 & BF from G/S: Redu - 2 min.
  - 10:03:00 G/S: Bad Frames from: Redu (DUs 250