

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

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XMM-INT-WOPS-20_02_03

Issue 1

Date: 29 January 2021

Marcus Kirsch
OPS-OAX

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1. Weekly report

	XMM	Integral
Main activities	<ul style="list-style-type: none"> ▪ Nominal Operations ▪ Eclipse Season: 11.01.-07.02. ▪ G/S operations automation ▪ MUST to ARES migration ▪ Webserver migration ▪ DABYS D/B prototype ▪ Tolhuin station validation ▪ 	<ul style="list-style-type: none"> ▪ Routine science operations, 1 To) (rev, 2320 Cen X-4) ▪ Eclipse season
Status and performance of S/C	<ul style="list-style-type: none"> ▪ Nominal for platform and all instruments 	<ul style="list-style-type: none"> ▪ Since 17/07/2020: operations using Z-flip, without wheel biasing
Status and performance of Ground segment	<ul style="list-style-type: none"> ▪ Nominal apart from a hardware failure at New Norcia 	<ul style="list-style-type: none"> ▪ Nominal ▪ Operations from MCS B-chain due to TM flow problem on A-chain
S/C Anomalies	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ INT_SC-672 Delay in receiving TM while refreshing the ACS services TM parameters. ▪ INT_SC-615 Summary report for all JEMX1/2 DFEE CRC anomalies: last event 26/12/2020 ▪ INT_SC-577 Summary report for all IREM CSCI S/W resets: last event #240
G/S Anomalies	<ul style="list-style-type: none"> ▪ XMM-1441: Last Command Of Reaction Wheel Bias sequence not verified ▪ XMM-1442: New Norcia Stops Tracking ▪ XMM-1443: Automated SAS reset procedure fails during eclipse ▪ XMM-1444: MOIS problem during the eclipse on 24.01.2021 	<ul style="list-style-type: none"> ▪ None
Future activities planned	<ul style="list-style-type: none"> ▪ Migration of DCR screens to 50" systems ▪ Migration of voice loop system ▪ MCS migration ▪ Lela final migration to MCS, pending mini SOC at ESOC ▪ Battery re-evaluation 	<ul style="list-style-type: none"> ▪ Design of ACC software patch to allow large slews under closed loop control with Gyroscopes. ▪ Automation of some repetitive tasks and CRPs ▪ Further investigation into CDMU anomaly

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2. Detailed weekly operational events

note: all times are Zulu (in brackets DOY)

2.1. XMM

- 13/01/2021 (013) 00:01:09: X_FCP_AOC_0215: "End of procedure with error". SAS window is not active. FDE/FCE not in Sunlight. (MOIS planning issue, MOIS scheduler change request raised (→ AR raised)
- 15/01/2021 (015) 01:57:42: A3629 failed! CEV Check failure S/S 1 sent to disable. Called SOE on-call. He'll call back once he has access to TM (timing issue in command sending, change request raised for D/B) (→ AR raised)
 - o 15/01/2021 (015) 02:06:41: A3629(DISABLE PP FILTER) failed verification(CEV) due to the automatic transition to IPS4W commanded one second before(see XMM-1441). TM parameter A5264(PP FILTER FLAG) still ENABLED
 - o 15/01/2021 (015) 02:06:41: All SVM cmds failing as S/S 1 is disabled due previous failed cmd
- 19/01/2021 (019) 06:17:54: OOL A5108 ERROR STATUS. Tracking 3/5 received at 03:42, CRP_AOC_4018 step 4. STR direct Search/Track 3867_03_M.SST to 3867_04_M.SST uplinked. Now tracking 5 stars. STAR 4 status is Blemish
- 25/01/2021 (025) 00:27:09: Began receiving numerous messages that MOIS procedure (X_ECL_PREP_INS) steps were failing. Steps 17,18,19,27.1, 31 all failed. I called SOE on-call who restarted MOIS. It was determined that MOIS was not receiving TM. The failure messages generated were untrue. Once MOIS was re-started all procedures are executing as planned (connection issue → AR raised)

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2.2. INTEGRAL

10/01/2021 (010)

12:08:52 OEM: "ACC AIMU ON" PID # 23180093 interrupted, OSL # 23180095 updated correctly.

11/01/2021 (011)

18:05:00 3 short drops on VC7 from KIR. ESTRACK report a possible RFI.

22:07:52 OEM: "ACC AIMU ON" at end of OSL #23190038 (Bright object) PID # 23190038 interrupted

12/01/2021 (012)

00:17:53 OTF Toggle: PID #23190042 / 43/ 44. interrupted

04:21:21 TM glitch / drop from G/S KIR, reason: RFI, duration: 40s, impact: OSL #23190050 missed from timeline. Not enough time to manually execute then update the next few OSLs. Corrective OSLs #23190050 & #23190052 can be skipped. OSL #23190053 will be executed manually.

04:49:42 OSL #23190051 missed from timeline

04:57:32 Manual slew 2319_0501_M.OSL from PID #23190049 to #23190051

05:43:02 Manual slew 2319_0503_M.OSL from PID #23190051 to #23190053 failed.

06:08:08 Manual slew 2319_0504_M.OSL from PID #23190051 to #23190053

06:16:46 OSL #23190054 missed from timeline

06:48:02 Manual slew 2319_0505_M.CSL from PID #23190053 to #23190054

07:06:27 FDS: TPF 2319_0506_A.OSL applied on A/S to update slew 23190055

13/01/2021 (013)

03:18:53 OEM: "ACC AIMU ON" PID # 23190074 interrupted. (PP Filter is currently disabled)

03:52:32 CRP_AOC_1602 - "IMU-1 un-planned switch ON".

14/01/2021 (014)

18:34:47 G/S: KIR: TM DROP ON VC0/7 (Only on TMTCS 1) OSL #232000026 missed

18:53:07 After investigation, restart of NIS-B. Good TM/TC on both links seen after the INISB re-start.

19:07:59 Manual slew 2320_0500_M.OSL from PID #232000025 to #232000026

19:24:16 FDS: TPF 2320_0501_A.OSL applied on A/S to update slew 232000027

15/01/2021 (015)

09:16:44 ISDC have informed us that they have not received any data since DOY 14 @ 18:31:20z. After restarting ISDSB, they were asked to carry out a restart on their side.

11:28:00 Investigation showed that the TMDS applications are no longer working since the TM drops seen in the NIS on DOY 014 at 18:31. TMDS_RT, TMDS_PB, ISDS and IFRD restarted on IMCS B-chain. After restart, data is correctly archived again and ISDC confirm that they are receiving TM.

16/01/2021 (016)

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17/01/2021 (017)

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18/01/2021 (018)

17:44:10 ED EENTRY03 failed (interlock). X-ref, SPI disabled, waited for radiation belts exit and uplinked TPF ES_1700_IASW-PAR_fmconfig_0017 with E8946 = disable. Last two commands were unverified, OEMs "SPI1 CSSW INT ER BUF OVER" and "SPI1 TC REP TC SBFULL" were received. Reexecuted recovery successfully.

19/01/2021 (019)

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20/01/2021 (020)

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21/01/2021 (021)

15:44:42 IREM crash. CRP_SYS_2570.

17:41:54 IREM recovered

22/01/2021 (022)

14:04:00 Short TM drop on VC0 from KIR No impact, ESTRACK report a suspected RFI

23:18:05 TM drop from G/S KIR, ECC see no reason, Duration: <1s, impacts: TC A3619 "ENABLE PP FILTER" timeout at acceptance. (PP is currently ENABLED)

23/01/2021 (023)

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24/01/2021 (024)

07:12:23 TM: K5583 'CPU MODE' = 8 MHZ WAIT OOL, I_CRP_JEM1_5011

25/01/2021 (025)

07:15:04 TM glitch @VIL2. OSL #23240041 missed from timeline

07:29:27 Manual slew 2324_0500_M.osl from PID #23240040 to #23240041

07:41:37 FDS: TPF 2324_0501_A.osl applied on A/S to update slew 23240042

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