



1 General Comments

The activities scheduled for this week are those planned for calendar week 34 of year 2013, from 19/08/2013 to 26/08/2013 (DOYs 231 to 238).

The following routine activities were planned during this week (see Gantt chart on next page):

- X-band passes over ESAC and Svalbard.
- One PMS offset, short calibration, on 22/08/2013 at 15:00:15z
- Local oscillator calibration every 10 minutes.

2 Mission Planning Deviation

The following planning deviations happened during this reporting period:

- One CCU reset on day 19/08/2013 at 07:45:01z. The full recovery of the instrument took place the same day at 13:19:00z the same day. As consequence of that and due to the fact that MIRAS instrument was in auto-downlink mode over ESAC, three X-band passes over Svalbard on that day at 09:23:13z, 11:05:23z and 12:46:14z were lost. First nominal pass was the one starting at 14:26:16z. Due to this reset, 3m 54s of data were lost during the last "nominal" Svalbard pass prior the CCU reset at 07:40:46z.
- One Mass Memory latch up on partition P4 happened on day 19/08/2013 at 03:17:00z. Latch-up recovery was successfully executed on the same day at 15:00:00z. Both MM pointers, write and read, were located at the time of the anomaly into a partition above P4. No science data loss was experienced for this anomaly.



Operations Notes

FOS Team @ ESAC

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1.0

	AUG-2013						
	Mon, 19-AUG-2013	Tue, 20-AUG-2013	Wed, 21-AUG-2013	Thu, 22-AUG-2013	Fri, 23-AUG-2013	Sat, 24-AUG-2013	Sun, 25-AUG-2013
Int_LO_Phase_Cal_NoUnoise_FULL_NotEXT_SEQ	[Solid black bar]						
XB_Cmd_Downlink_Svalb_SEQ	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]
SBand_Visibility_SEQ	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]
XB_Cmd_Downlink_Vilspa_SEQ	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]	[Vertical bars]
Disable_Cyclic_Function_SEQ				[Blue diamond]			
PMS_Offset_Calibration_Full_SEQ				[Vertical line]			
Enable_Cyclic_Function_SEQ				[Blue diamond]			



3 TC Failures

None.

4 Unforeseen Out Of Limits (OOLs)

Relevant out of limits appeared at the time of the CCU reset and Mass Memory latch up both on day 19/08/2013. Further details on this OOLs can be found in Appendix-A at the end of this report.

5 On Board Anomalies

The two main anomalies in this week were the CCU reset and the MM latch up in partition P4, both happening on the same day 19/08/2013. Both events coincide with high levels of radiation caused by an increase of the solar activity around those days.

The CCU reset was recovered on 19/08/2013 at 13:19:00z after successful execution of procedure PRO-CRP-100. This was the first CCU reset from 20/02/2013, in that sense this can be considered the longest period in the mission without this kind of anomaly.

6 Telemetry On Board Events in the period.

The following RAM single bit errors were detected during this period:

Event Description	Severity	Event Time	Parameters
RAM single Bit Error	Warn	2012.231.07.45.35	2009B94
RAM single Bit Error	Warn	2012.234.21.06.36	23D0930
RAM single Bit Error	Warn	2012.237.22.43.57	2378A84

7 FOS System Status

An interruption of the telemetry data ingestion service on the MUST-1 server occurred on 22/08/2013 around 14:00:00z. This interruption also affected the data ingestion on the MUST2 system and therefore some data gaps on the *WebMust* system also happened from than day onwards. The problem was only discovered on the 28/08/2013 after some notification from PLSO. The problem was traced down to a MySQL database server problem and a temporary disk failure affecting



the internal database connection. The problem was solved after a successful reboot of the MUST server. Data gap recovery on MUST1 machine started on 29/08/2013 and in parallel, midnight ingestion of TM data from MUST1 to MUST2, WebMust, is happening along every night. The whole data gap will be recovered in a few days.

8 Data Reception from CNES

S-Band telemetry file, SMO_PLTM1_P_2013_08_20_18_58_39, received from CNES on 20/08/2013 included some unexpected data gaps together with some data repetitions. CNES was notified on this problem during the OSG telecom happening on the 21/08/2013. The affected file was further reprocessed on the PLPC redundant chain confirming the same kind of errors inside the file. The file had some data gaps between 18:35:34z and 18:37:30z where the source sequence counter jumped from 858 to 1055. Also some TM packets were repeated between 18:32:00z to 18:32:17z (SSCs were duplicated during that period of time).

A new correct file was again sent by CNES on the 22/08/2013 confirming that the problem was related with the data generation at ground station level. Anyway this problem did not cause any big impact on the SMOS FOS side.

9 X-Band Data Reception in PXMF

No events on board in the period were causing loss of sensed data.

10 Exceptional Activities

The main exceptional activity during this period was the CCU reset on 19/08/2013 and its corresponding recovery (see section 5)

11 AOB

None.



APPENDIX A: OOL's

2013.231.06.17.52.207	WARNING	2013.231.01.17.28.511	NMASME08	VAL:	l	LOW	:0	HIGH	:0	SOFT	limit is out of nominal range
2013.231.06.20.09.858	ERROR	2013.231.02.36.21.351	DMASME37	VAL:	F	alse	ST	ATE:	Tru	e STA	TUS limit is out of nominal range
2013.231.06.20.09.863	ERROR	2013.231.02.36.21.351	DMASME01	VAL:	O	FF S	TAT	E: ON	ST	ATUS	limit is out of nominal range
2013.231.09.27.35.317	ERROR	2013.231.07.45.35.377	SPM22167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.318	ERROR	2013.231.07.45.35.377	SPM21167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.318	ERROR	2013.231.07.45.35.377	SPM20167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.318	ERROR	2013.231.07.45.35.377	SPM19167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.319	ERROR	2013.231.07.45.35.377	SPM18167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.319	ERROR	2013.231.07.45.35.377	SPM17167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.319	ERROR	2013.231.07.45.35.377	SPM16167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.320	ERROR	2013.231.07.45.35.377	SPM15167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.321	ERROR	2013.231.07.45.35.377	SPM14167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.322	ERROR	2013.231.07.45.35.377	SPM13167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.322	ERROR	2013.231.07.45.35.377	SPM12172	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.322	ERROR	2013.231.07.45.35.377	SPM11167	VAL:	U	NLOC	K S	TATE:	LO	CK ST	ATUS limit is out of nominal range
2013.231.09.27.35.323	ERROR	2013.231.07.45.35.377	SPC02106	VAL:	I	nst	Ini	t STA	TE:	Dual	Pol, Full Pol, Calibration, Test STATUS limit is out of nominal range
2013.231.09.27.35.336	ERROR	2013.231.07.45.35.377	XNIRABST	VAL:	N	OT-O	K S	TATE:	OK	STAT	US limit is out of nominal range
2013.231.09.27.35.336	ERROR	2013.231.07.45.35.377	XNIRBCST	VAL:	N	OT-O	K S	TATE:	OK	STAT	US limit is out of nominal range
2013.231.09.27.35.344	ERROR	2013.231.07.45.35.377	XNIRCASST	VAL:	N	OT-O	K S	TATE:	OK	STAT	US limit is out of nominal range
2013.231.13.55.18.562	ERROR	2013.231.13.21.05.551	NTLHK022	VAL:	D	isab	led	STAT	E:	Enabl	ed STATUS limit is out of nominal range
2013.231.15.04.17.167	ERROR	2013.231.13.21.18.751	NTLHK022	VAL:	D	isab	led	STAT	E:	Enabl	ed STATUS limit is out of nominal range
2013.231.15.04.17.295	ERROR	Can't obtain a referen	ce to TCO	Serv	er	. Ne	xt	TCO f	unc	tion	invocation will retry connection



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2013.231.19.51.17.44 8	ERROR	2013.231.13.23.10.351	DMASME3 7	VAL:	F	alse	ST	ATE:	Tru	e STA	TUS limit is out of nominal range
2013.231.19.51.17.45 6	ERROR	2013.231.13.23.10.351	DMASME0 2	VAL:	O	FF S	TAT	E: ON	ST	ATUS	limit is out of nominal range
2013.231.19.51.17.59 3	ERROR	2013.231.13.23.16.351	DMASME3 7	VAL:	F	alse	ST	ATE:	Tru	e STA	TUS limit is out of nominal range
2013.231.19.51.17.59 5	ERROR	2013.231.13.23.16.351	DMASME0 1	VAL:	O	FF S	TAT	E: ON	ST	ATUS	limit is out of nominal range
2013.233.06.42.45.57 1	ERROR	2013.233.03.17.43.979	DMASME3 7	VAL:	F	alse	ST	ATE:	Tru	e STA	TUS limit is out of nominal range
2013.233.06.42.45.57 3	ERROR	2013.233.03.17.43.979	DMASME0 8	VAL:	O	FF S	TAT	E: ON	ST	ATUS	limit is out of nominal range