



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 36, year 2017

from 04 SEP 2017 to 11 SEP 2017

1.0

1 General Comments

Activities scheduled for this week are those planned for the 36th calendar week of 2017:

04 SEP 2017 to 11 SEP 2017 (DOYs 247 to 254).

The following routine activities were planned this week (see Gantt chart on next page and CRF 682):

- One PMS Offset on 07 SEP 2017 (DOY 250), including three Short Calibrations at 08:25:00.0z, 08:25:34.8z, and 08:26:09.6z (orbit 41243).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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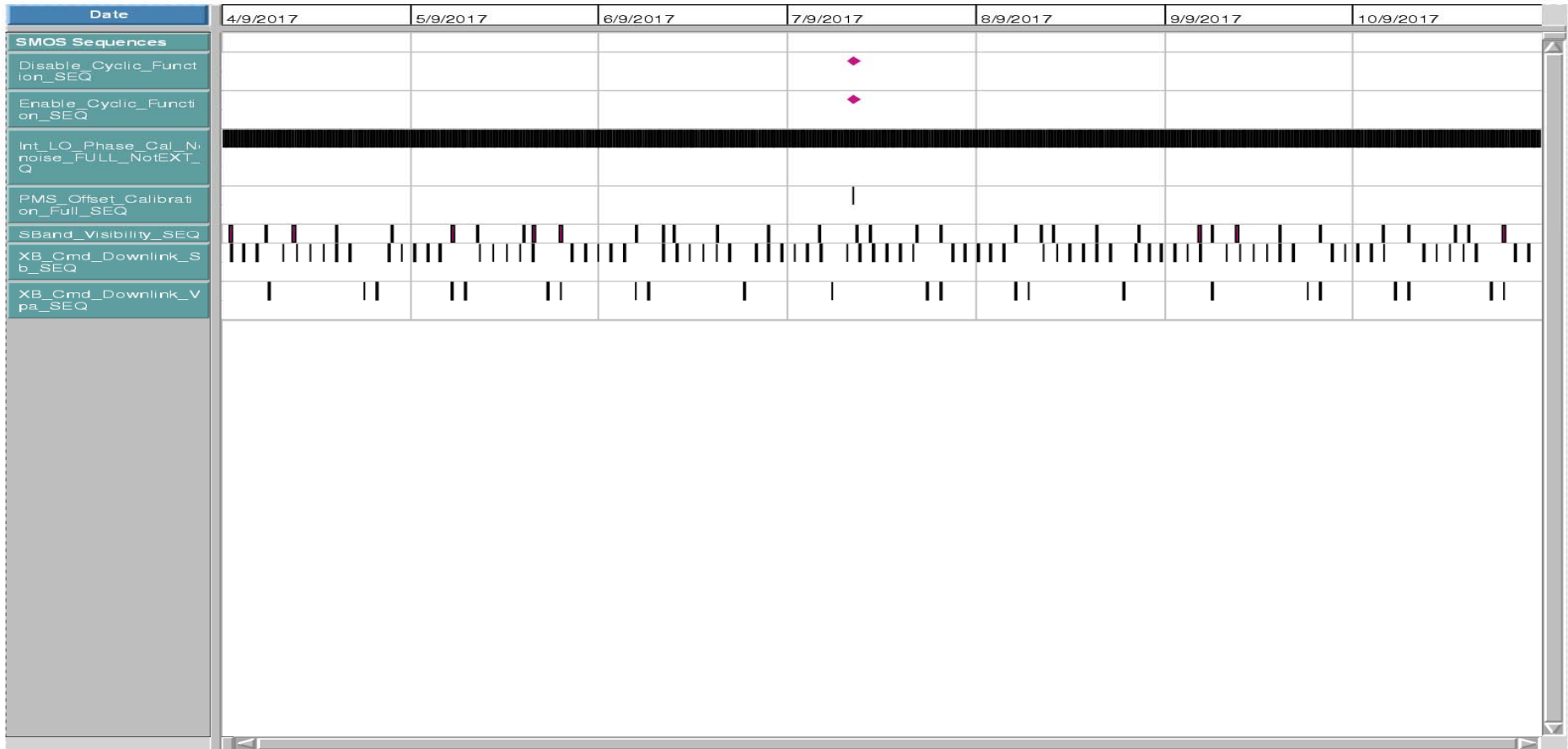
Date:

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Schedule Name: 2017_w36_cr ### Display start: 04-09-2017 00:00:00.000 ### Display end: 11-09-2017 00:00:00.000





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3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

Several Out of Limits were received this operational week corresponding to the two Mass Memory Latch-ups on the 8th and 10th of September and the CMN Unlock on the 6th of September. Further details of these anomalies can be found in section 5 and their OOL details in Appendix-A of this document.

5 On Board Anomalies

- The MIRAS instrument MM, partition P4, latched up on 2017-09-10T20:46:44.519z (DOY 253).

The following parameters went out of limits in the PLPC system:

2017.253.20.46.44,519z DMASME08 LU Switch P4
2017.253.20.46.44,519z DMASME37 SDD LU Detected

This anomaly was geolocated over Iceland:

Latitude = 67.72°
Longitude = 339.71°

There were no science data losses associated with this anomaly (thanks to the overlap) because it affected partition P4, while the Read and Write pointers were on partitions P5.

Recovery took place on 12 SEP 2017, at 10:00:00z (CRF 684) together with the latch-up of partition P1 that took place on the 8 of September

At the time of the anomaly the position of the MM pointers were as follows:

READ = 2471718 (partition P5)
WRITE = 2493837 (partition P5)

- The MIRAS instrument MM, partition P1, latched up on 2017-09-08T09:43:58,043z (DOY 251).

The following parameters went out of limits in the PLPC system:

2017.251.09.43.58,043z DMASME11 LU Switch P1
2017.251.09.43.58,043z DMASME37 SDD LU Detected

This anomaly was geolocated over Uruguay (South Atlantic Anomaly):



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Latitude = -33.52°
Longitude = 309.89°

There were no science data losses associated with this anomaly (thanks to the overlap) because it affected partition P1, while the Read and Write pointers were on partitions P2 and P3 respectively. Recovery took place on 12 SEP 2017, at 10:00:00z (CRF 684). At the time of the anomaly the position of the MM pointers were as follows:

READ = 1318189 (*partition P2*)
WRITE = 1496354 (*partition P3*)

- The MIRAS instrument CMN, unit H1, unlocked on 2017-09-06T09:30:25.173z (DOY 249).

This anomaly was geolocated over the mouth of the Amazon River, Brazil:

Latitude = -2.78°
Longitude = 308.07°

Both parameters, output power SPM11162 and locking status SPM11167, went out of limits in the FOS PLPC system. The anomaly recovered by itself in 6 Epochs.

6 On Board Events Telemetry

The following RAM Single Bit errors befell this week:

Event Description	Packet ID	Severity	Event Time	Parameters
RAM single Bit Error	730	WARN	2017-09-10T22:28:03	202E1E0
RAM single Bit Error	730	WARN	2017-09-05T21:48:03	239DE14
RAM single Bit Error	730	WARN	2017-09-04T00:23:14	2025188

7 FOS Systems Status

All FOS systems nominal.

8 Data Reception from CNES

All S band passes were correctly received from CNES and successfully processed by the FOS PLPC system.

9 X Band Data Reception in PXM

None, all S band passes successfully received and processed.



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10 Exceptional Activities

None.

11 AOB

None.



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APPENDIX A: OOLs

At the time of the Mass Memory Latch up that took place on the 10th of September, the following two OOLs were issued by the FOS PLPC system.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2017-09-10T20:46:44	2017-09-10T06:53:43	DMASME37	SDD LU Detected	FALSE	TRUE
2017-09-10T20:46:44	2017-09-10T06:53:43	DMASME08	LU Switch P4	OFF	ON

The Mass Memory Latch up of partition P1 on the 8th of September generated the following two OOLs in the FOS PLPC system.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2017-09-08T10:21:33	2017-09-08T09:43:58	DMASME37	SDD LU Detected	FALSE	TRUE
2017-09-08T10:21:33	2017-09-08T09:43:58	DMASME11	LU Switch P1	OFF	ON

The H1 CMN Unlock anomaly on the 6th of September generated the following two temporal OOLs on the FOS PLPC system

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2017-09-06T15:23:53	2017-09-06T09:30:25	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2017-09-06T15:23:53	2017-09-06T09:30:31	SPM11167	H1 LO_Locking	UNLOCK	LOCK