

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic: Date:

Issue:

FOS Report for week 10, year 2017

from 06 MAR 2017 to 13 MAR 2017

1.0

1 General Comments

Activities scheduled for this week are those planned for the 10th calendar week of 2017:

06 MAR 2017 to 13 MAR 2017 (DOYs 065 to 072).

The following routine activities were planned this week (see Gantt chart on next page and CRF 645):

- One PMS Offset on 09 MAR 2017 (DOY 068), including three Short Calibrations at 06:28:00.0z, 06:28:34.8z, and 06:29:09.6z (orbit 38623).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.

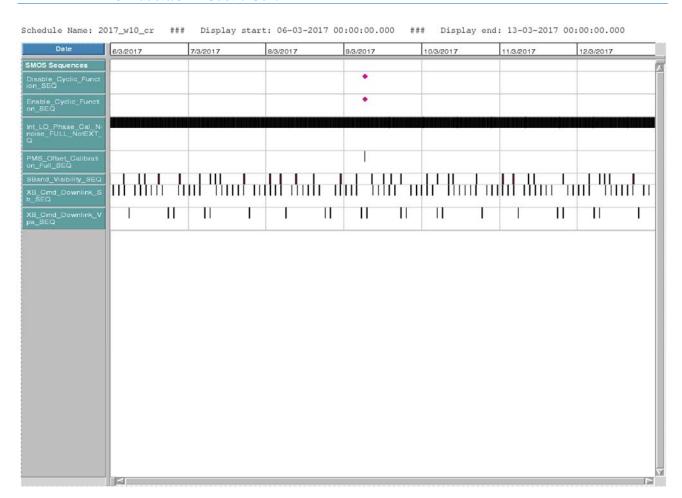


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3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

The only relevant Out of Limits issued by the FOS PLPC system during this week, were the ones related with the Mass Memory Latch up that took place on the 6th of March (see further details in section five and Appendix-A of this document)

On Board Anomalies

The MIRAS instrument MM, partition P0, latched up on 2017-03-06T08:48:05.255z (DOY 065). The following parameters went out of limits in the PLPC system:

2017.065.08.48.05.255z DMASME12 LU Switch PO 2017.065.08.48.05.255z DMASME37 SDD LU Detected

This anomaly was geolocated over the east coast of Brazil (South Atlantic Anomaly):

> Latitude $= -15.906^{\circ}$ $Longitude = 320.394^{\circ}$

There were science data losses associated with this anomaly because it affected partition P0. Recovery took place on 7th of March 2017, at 15:27:00z (CRF 646). The recovery produced 441 seconds of data lost from 2017-03-07T15:19:48z to 2017-03-07T15:27:09z. At the time of the anomaly the position of the MM pointers were as follows:

> READ= 380141 (partition P0) **WRITE** = 570856 (partition P1)

6 On Board Events Telemetry

The following RAM Single Bit errors befell this week:

Event Description	ID	Severity	Event Time	Parameter
RAM single Bit Error	730	WARN	2017-03-06T10:55:11	215F920
RAM single Bit Error	730	WARN	2017-03-06T20:09:31	2067938
RAM single Bit Error	730	WARN	2017-03-09T22:43:43	2203308

7 FOS Systems Status

All FOS systems nominal.

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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 PXMF

None, all S band passes successfully received and processed.

10 Exceptional Activities

None.

11 AOB

None.

SMOS

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APPENDIX A: OOLs

The following Out of Limits were issued by FOS PLPC system at the time of the Mass Memory Latch-up in partition P0 on the 6^{th} of March 2017.

Topic:

Date:

Issue:

GS Time	Onboard Time	Parameter	Description	OOL Value	Check value
2017-03-06T09:34:03	2017-03-06T08:48:05	DMASME37	SDD LU Detected	FALSE	TRUE
2017-03-06T09:34:03	2017-03-06T08:48:05	DMASME12	LU Switch P0	OFF	ON