

FOS Team @ ESAC Reported by:

Date:

Topic:

FOS Report for week 45, year 2016 from 07 NOV 2016 to 14 NOV 2016

1.0

J. Fauste/J.M. Castro Cerón

1 General Comments

Activities scheduled for this week are those planned for the 45^{th} calendar week of 2016:

07 NOV 2016 to 14 NOV 2016 (DOYs 312 to 319).

The following routine activities were planned this week (see Gantt chart on next page and CRF 619):

- One PMS Offset on 10 NOV 2016 (DOY 315), including three Short Calibrations at 07:00:00,0z, 07:00:34,8z, and 07:01:09,6z (orbit 36911).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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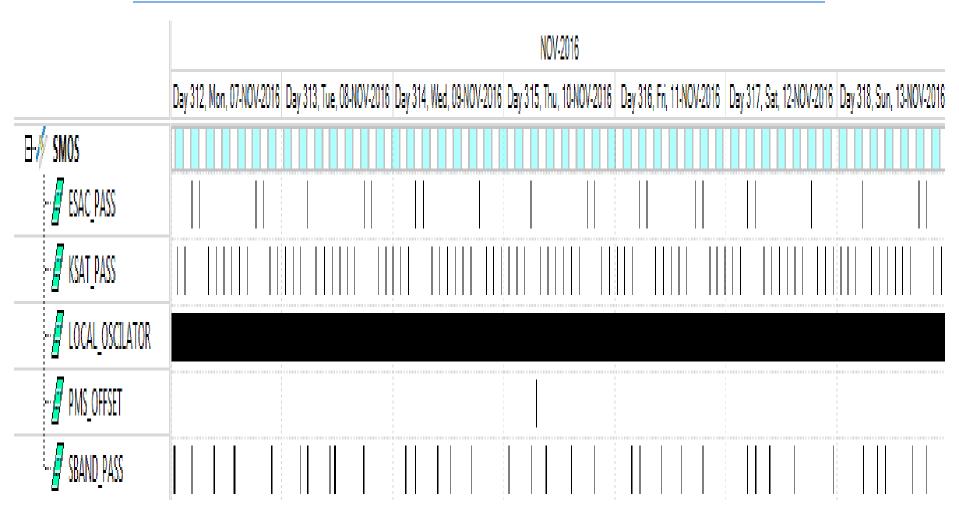
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3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

The only relevant Out of Limits issued by FOS PLPC system were the ones triggered by the Mass Memory Latch up that happen on partition P7 on the 7th of November. (see section 5 and Appendix-A for further details)

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5 On Board Anomalies

 MIRAS Mass Memory, partition P7, latched up on 2016-11-07T05:31:51,318z (DOY 312). This anomaly was geolocated half way between Antarctica and New Zealand at the following geographical coordinates:

> Latitude= -61,305760 Longitude= 171,386771

Science data losses did occur for this anomaly because partition P7 was being written when it latched up (3350 s, from 2016-11-07T04:36:00z to 2016-11-07T05:31:50z). Recovery took place on 08 NOV 2016, at 15:00:00z (CRF 621). At the time of the anomaly the position of the MM pointers were as follows:

READ = 3284859 (partition P7) WRITE = 3426608 (partition P7)

6 On Board Events Telemetry

The following RAM Single Bit errors befell this week:

Event Description	Severity	Event Time	Parameters
RAM single Bit Error	WARN	2016.316.10.12.24.303	22F914C
RAM single Bit Error	WARN	2016.317.12.01.16.840	2026138

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, with the following exception:

• S band GS pass AUS-1 (AOS = 2016-11-03T19:11:49z; LOS = 2016-11-03T19:25:37z) contained 12 PUS TM gaps as follows:



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```
from\ 2016-11-03T14:36:14,683z\ to\ 2016-11-03T14:55:54,165z from\ 2016-11-03T14:59:31,357z\ to\ 2016-11-03T15:12:00,164z from\ 2016-11-03T15:16:28,977z\ to\ 2016-11-03T15:17:15,768z from\ 2016-11-03T15:18:08,568z\ to\ 2016-11-03T15:26:33,773z from\ 2016-11-03T15:26:52,973z\ to\ 2016-11-03T15:27:43,374z from\ 2016-11-03T15:31:27,776z\ to\ 2016-11-03T15:37:40,980z from\ 2016-11-03T15:39:04,981z\ to\ 2016-11-03T15:47:51,786z from\ 2016-11-03T15:48:30,186z\ to\ 2016-11-03T15:48:46,987z from\ 2016-11-03T15:48:48,187z\ to\ 2016-11-03T15:49:37,387z from\ 2016-11-03T15:49:38,587z\ to\ 2016-11-03T15:50:30,188z from\ 2016-11-03T15:51:00,188z\ to\ 2016-11-03T15:52:12,189z from\ 2016-11-03T15:52:03,789z\ to\ 2016-11-03T15:52:12,189z
```

The corresponding E_HKTM here below was lost at PLPC and MUST-SMTA level:

```
from 2016-11-03T14:35:49 to 2016-11-03T14:58:45 from 2016-11-03T15:01:57 to 2016-11-03T15:16:21 from 2016-11-03T15:20:37 to 2016-11-03T15:22:13 from 2016-11-03T15:22:45 to 2016-11-03T15:32:21 from 2016-11-03T15:32:21 to 2016-11-03T15:33:57 from 2016-11-03T15:37:41 to 2016-11-03T15:45:09 from 2016-11-03T15:56:21 to 2016-11-03T15:59:33
```

9 X Band Data Reception in PXMF

Due to the SBand problems reported in previous section, MIRAS PUS TM was recovered from the X band PXMF system and ingested into the MUST-SMTA system on 07 NOV 2016.

10 Exceptional Activities

None.

11 AOB

None.





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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 on the 7th of November.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2016.312.09.54.45.596	2016.312.05.31.51.318	DMASME37	SDD LU Detected	FALSE	TRUE
2016.312.09.54.45.597	2016.312.05.31.51.318	DMASME05	LU Switch P7	OFF	ON