

Operations Notes

FOS Team @ ESAC Reported by:

Date: Issue:

Topic:

FOS Report for week 42, year 2016 from 17 OCT 2016 to 24 OCT 2016

1.0

J. Fauste/J.M. Castro Cerón

1 General Comments

Activities scheduled for this week are those planned for the 42^{th} calendar week of 2016:

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17 OCT 2016 to 24 OCT 2016 (DOYs 291 to 298).
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The following routine activities were planned this week (see Gantt chart on next page and CRF 611):

• One Warm NIR Calibration on 19 OCT 2016 (DOY 293) with ETO 16:39:00z (orbit 36600) and with the following expected calibration values:

B.T. $= 3.8820^{\circ}$ R.M.S. = 0.6410Sun Elevation $= 9.9799^{\circ}$ Moon elevation $= 29.9962^{\circ}$ R.A. $= 121.45^{\circ}$ DEC. $= -19.84^{\circ}$

- One PMS Offset on 20 OCT 2016 (DoY 293), including three Short Calibrations at 15:37:30,0z, 15:38:04,8z, and 15:38:39,6z (orbit 36610).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.

SMOS

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	OCT-2016					
	Mon, 17-OCT-2016 Tue, 18-OCT-2016 Wed, 19-OCT-2016 Thu, 20-OCT-2016 Fri, 21-OCT-2016 Sat, 22-OCT-2016 Sun, 23-OCT-2016					
E- ∕ SMOS						
₽ ESAC_PASS						
₫ KSAT_PASS						
₽ LOCAL_OSCILATOR						
∦ NIR_CALIBRATION		nunun				
PMS_OFFSET		100000				
₽ SBAND_PASS						



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3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

Due to the two Mass Memory latch-ups that happened on the $19^{\rm th}$ and $21^{\rm st}$ of October 2016, several Out of Limits were issued on FOS PLPC system. Further details can be found in section 5 and Appendix-A of this report.

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5 On Board Anomalies

• Mass Memory partition P8, latched up on 2016-10-21T12:30:16,909z (DOY 295). This anomaly was geolocated off the northern coast of Alaska at the following geographical coordinates:

Latitude = +80°.336290 Longitude = 202°.289452

Science data losses did occur for this anomaly because partition P8 was being written when it latched up (1543 s, from 2016-10-21T12:04:36z to 2016-10-21T12:30:19z). Recovery took place on 24 OCT 2016, at 11:00:00z (CRF-615). At the time of the anomaly the position of the MM pointers were as follows:

READ = 3241515 (partition P7) WRITE = 3618186 (partition P8)

• Mass Memory partition P6, latched up on 2016-10-19T21:00:29.908z (DOY 293). This anomaly was geolocated over the South-East coast of Brazil at the following geographical coordinates:

Latitude = -20°.338334 Longitude = 311°.741054

No science data losses did occur for this anomaly. Recovery took place on 20 OCT 2016, at 16:00:00z (CRF-614). At the time of the anomaly the position of the MM pointers were as follows:

READ = 1507447 (partition P3) WRITE = 1590335 (partition P7)

Parameter NCMN3T03, thermistor temperature of LICEF A10, connected to CMN3, went Out of Soft limit on PLPC system at 2016-10-17T15:41:32 with value 26.044 degrees. This OOL is related with the thermal anomaly seen on that LICEF on the 9 of January 2016. Due to seasonal reasons the frequency of this OOL is expected to increase during the following weeks. This increase



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should last until the 31 of January 2017 when it is expected its yearly maximum.

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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	2016.297.22.09.04.887	2164990
RAM single Bit Error	WARN	2016.292.23.09.33.211	20477BC

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 PXMF

None, all S band passes successfully received and processed.

10 Exceptional Activities

None.

11 AOB

None.



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APPENDIX A: OOLs

The following Out of Limits were received at the time of the Mass Memory latch up on 21st of October

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2016.295.15.14.18.238	2016.295.12.30.16.909	DMASME04	LU Switch P8	ON	OFF
2016.295.15.14.18.237	2016.295.12.30.16.909	DMASME37	SDD LU Detected	FALSE	TRUE

And the following ones were received at the time of the Mass Memory latch up on 19th of October.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2016.294.04.49.58.805	2016.293.21.00.29.908	DMASME11	LU Switch P1	ON	OFF
2016.291.14.54.43.707	2016.293.21.00.29.908	DMASME37	SDD LU Detected	FALSE	TRUE