



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 02, year 2018

from 08 JAN 2018 to 15 JAN 2018

1.0

1 General Comments

Activities scheduled for this week are those planned for the 2nd calendar week of 2018:

08 JAN 2018 to 15 JAN 2018 (DOYs 008 to 015).

The following routine activities were planned this week (see Gantt chart on next page and CRF 708).

- One Warm NIR Calibration on 10 JAN 2018 (DOY 010) with ETO 02:00:30z (orbit 43038) and with the following expected calibration values:

B.T.	=	3.65°
R.M.S.	=	0.07
Sun elevation	=	9.23°
Moon elevation	=	-62.90°
R.A.	=	17.24°
DEC.	=	-15.47°
- One PMS Offset on 11 JAN 2018 (DOY 011), including three Short Calibrations at 08:20:00.0z, 08:20:34.8z, and 08:21:09.6z (orbit 43056).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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Schedule Name: 2018_w02_cr ### Display start: 08-01-2018 00:00:00.000 ### Display end: 15-01-2018 00:00:00.000





3 TC Failures

None.

4 On Board Anomalies

- The MIRAS instrument CMN, unit B3, unlocked on 2018-01-14T21:10:05:31z (DOT 14)

This anomaly was geolocated over Uruguay, South Atlantic Anomaly:

$$\begin{aligned} \text{Latitude} &= -16.56^\circ \\ \text{Longitude} &= 330.59^\circ \end{aligned}$$

Both parameters locking status SPM19167 and output power SPM19162 went out of limits in the FOS PLPC system. The anomaly recovered by itself after a few seconds.

- The MIRAS instrument MM, partition P9, latched up on 2018-01-13T21:39:36.870z (DOY 013). The following parameters went out of limits in the PLPC system:

$$\begin{aligned} 2018.013.21.39.36.870z & \text{ DMASME03 LU Switch P9} \\ 2018.013.21.38.36.870z & \text{ DMASME37 SDD LU Detected} \end{aligned}$$

This anomaly was geolocated over French Guyana:

$$\begin{aligned} \text{Latitude} &= 2.34^\circ \\ \text{Longitude} &= 305.73^\circ \end{aligned}$$

There were no science data losses associated with this anomaly because it affected partition P9, while the Read and Write pointers were both on partition 16. Recovery was planned to take place on 15 JAN 2018, at 14:30:00z (CRF 710). At the time of the anomaly the position of the MM pointers were as follows:

$$\begin{aligned} \text{READ} &= 732600 \text{ (partition P1)} \\ \text{WRITE} &= 662275 \text{ (partition P1)} \end{aligned}$$

5 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	2018-01-11T09:54:47	22D2E9C
RAM single Bit Error	730	WARN	2018-01-08T21:53:36	2330484



6 FOS Systems Status

All FOS systems nominal.

7 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:

- For S band GS pass KRX-15 (AOS = 22:10:42z; LOS = 22:23:21z) the following PUS TM gaps were detected in the PLPC system:

from 2018-01-14T17:59:26.807z to 2018-01-14T17:59:30.407z

from 2018-01-14T17:59:30.407z to 2018-01-14T17:59:40.007z

from 2018-01-14T17:59:40.007z to 2018-01-14T18:03:47.201z

from 2018-01-14T21:17:22.124z to 2018-01-14T21:25:11.331z

To achieve completion MIRAS PUS TM was recovered from the X band PXMF system and ingested into the MUST-SMTA system on 15 JAN 2018. The corresponding E_HKTM was lost:

from 2018-01-14T18:15:23 to 2018-01-14T18:20:43

8 X Band Data Reception in PXMF

Due to the Telemetry gaps detected in S-Band pass KRX-15, the PXMF system was used to retrieve telemetry and fill the two following PUS TM gaps:

from 2018-01-14T17:59:26.807z to 2018-01-14T18:03:47.201z

from 2018-01-14T21:17:22.124z to 2018-01-14T21:25:11.331z

9 Exceptional Activities

None.

10 AOB

None.



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APPENDIX A: OOLs

At the time of the CMN unlock on B3 unit the following two OOLs were issued by the FOS PLPC system

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2018-01-14T22:54:33	2018-01-14T21:10:05	SPM19162	B3 LO_Out_Power	NOT-OK	OK
2018-01-14T22:54:34	2018-01-14T21:10:10	SPM19167	B3 LO_Locking	UNLOCK	LOCK

The Mass Memory Latch up on partition P9 generated the two following OOLs on FOS PLPC system

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2018-01-14T04:12:47	2018-01-13T21:39:36	DMASME37	SDD LU Detected	FALSE	TRUE
2018-01-14T04:12:47	2018-01-13T21:39:36	DMASME03	LU Switch P9	OFF	ON