



## Operations Notes

FOS Team @ ESAC

Reported by:

*J. Fauste/J.M. Castro Cerón*

Topic:

Date:

Issue:

**FOS Report for week 48, year 2020**

from 23 NOV 2020 to 30 NOV 2020

**1.0**

### 1 General Comments

Activities scheduled for this week are those planned for the 48<sup>th</sup> calendar week of 2020:

23 NOV 2020 to 30 NOV 2020 (DOYs 328 to 335).

The following routine activities were planned this week (see Gantt chart on next page and CRF 929).

- One Warm NIR Calibration on 25 NOV 2020 (DOY 330) with ETO 16:30:44z (orbit 58155; ASCENDING: thermally STABLE) and with the following expected calibration values:

B.T.	=	3.75°
R.M.S.	=	0.39
Sun elevation	=	9.94°
Moon elevation	=	-52.59°
R.A.	=	156.60°
DEC.	=	-13.30°
- One PMS Offset on 26 NOV 2020 (DOY 331), including three Short Calibrations at 05:28:00.0z, 05:28:34.8z, and 05:29:09.6z (orbit 58163).
- 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 On Board Anomalies

- The MIRAS CMN, unit C3, unlocked 2020-11-28T15:44:58.466z (DOY 333). This anomaly was geolocated over the intersection of the Pacific/Indian Oceans, midway between Antarctica and South Africa:

*Latitude = -61.22°*

*Longitude = 18.48°*

Only locking status parameter SPM22167, went out of limits in the FOS PLPC system. The anomaly recovered by itself in few seconds.

- The MIRAS CMN, unit H1, unlocked 2020-11-28T09:31:24.618z (DOY 333). This anomaly was geolocated over the Estado de Sao Paulo (Brazil):

*Latitude = -21.65°*

*Longitude = 310.83°*

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

- MIRAS instrument MM, partition P11, latched up 2020-11-26T20:11:19.468z (DOY 331). The following parameters went out of limits in the PLPC system:

*2020.331.20.11.19.468z DMASME01 LU Switch P11*

*2020.331.20.11.19.468z DMASME37 SDD LU Detected*

This anomaly was geolocated over the south Atlantic Ocean:

*Latitude = -18.76°*

*Longitude = 324.71°*

There were no data losses because the anomaly affected spare partition P11. Recovery took place on Wednesday 27 NOV 2020, at 13:30:00z (CRF 932).

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

*READ = 1478111 (partition P3)*

*WRITE = 1529838 (partition P3)*



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- The MIRAS CMN, unit H1, unlocked 2020-11-24T09:17:38.587z (DOY 329). This anomaly was geolocated over the Arctic Ocean:  
*Latitude = 81.08°*  
*Longitude = 240.84°*

Both parameters, output power SPM11162 and locking status SPM11167, went out of limits in the FOS PLPC system. The anomaly recovered in 4 epochs.

### 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	2020-11-26T11:03:36	20C8DC4
RAM single Bit Error	730	WARN	2020-11-28T00:14:07	215CBE8

### 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.

### 8 X Band Data Reception in PXMF

None, all S band passes successfully received and processed.

### 9 Exceptional Activities

None.

### 10 AOB

None.



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### APPENDIX A: OOLs

On the 28<sup>th</sup> of November the CMN unlock of C3 unit generated the following temporary out of limit on PLPC system:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-11-28T17:30:04	2020-11-28T15:44:58	SPM22167	C3 LO_Locking	UNLOCK	LOCK

On the same day, the CMN unlock of H1 unit generated the following two temporary out of limits:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-11-28T10:08:48	2020-11-28T09:31:24	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2020-11-28T10:08:48	2020-11-28T09:31:30	SPM11167	H1 LO_Locking	UNLOCK	LOCK

The Mass Memory Latch-up of partition P11, generated the two following PLPC out of limits:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-11-27T05:25:38	2020-11-26T20:11:19	DMASME37	SDD LU Detected	FALSE	TRUE
2020-11-27T05:25:38	2020-11-26T20:11:19	DMASME01	LU Switch P11	OFF	ON

The CMN unlock of H1 unit on the 24<sup>th</sup> of November generated the two following out of limits:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-11-24T11:54:58	2020-11-24T09:17:38	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2020-11-24T11:54:58	2020-11-24T09:17:39	SPM11167	H1 LO_Locking	UNLOCK	LOCK