



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 48, year 2021

from 29 NOV 2021 to 06 DEC 2021

1.0

1 General Comments

Activities scheduled for this week are those planned for the 48th calendar week of 2021:

29 NOV 2021 to 06 DEC 2021 (DoYs 333 to 340).

The following routine activities were planned this week (see Gantt chart on next page and CRF 1014).

- One PMS Offset on 02 DEC 2021 (DoY 336), including three Short Calibrations at 06:26:30.0z, 06:27:04.8z, and 06:27:39.6z (orbit 63502).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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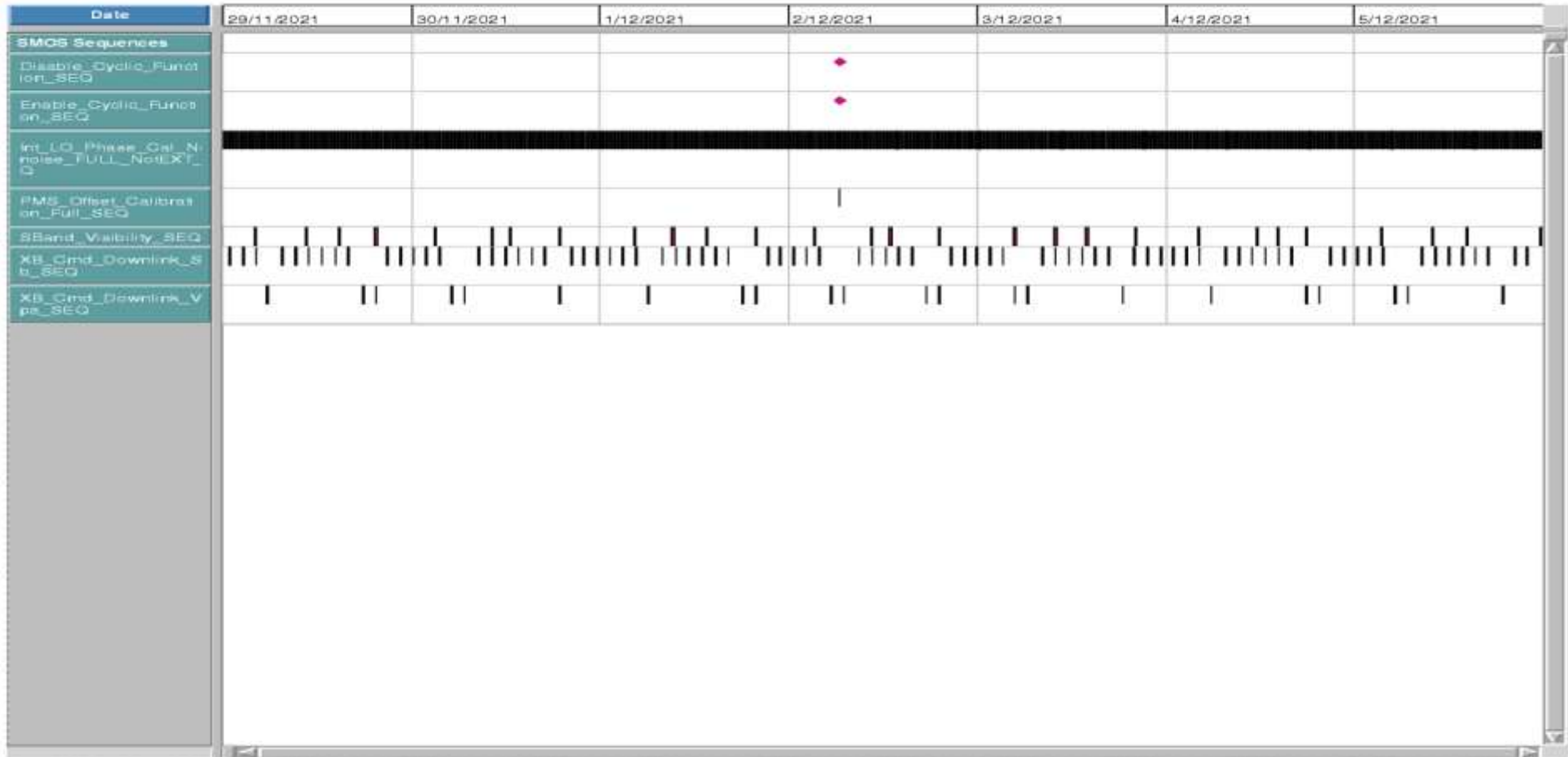
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Schedule Name: 2021_w48_or ### Display start: 29-11-2021 00:00:00.000 ### Display end: 06-12-2021 00:00:00.000





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3 TC Failures

None.

4 On Board Anomalies

- The MIRAS instrument CMN, unit H3, unlocked 2021-11-29T10:29:01,569z (DoY 333). This anomaly was geolocated over the Estado do Amazonas (Brazil):

LAT. = -5.37°

LONG. = 293.86°

Both parameters, output power SPM13162 and locking status SPM13167, went out of limits in the FOS PLPC system. The anomaly recovered by itself in 3 epochs.

- MIRAS instrument MM, partition P7, latched up 2021-12-05T16:09:02,088z (DoY 339).

The following parameters went out of limits in the PLPC system:

2021.339.16.09.02,088z DMASME05 LU Switch P7

2021.339.17.09.02,088z DMASME37 SDD LU Detected

This anomaly was geolocated over the coast of Antarctica, about to enter the South Atlantic Ocean:

LAT. = -75.99°

LONG. = 351.77°

There were no science data losses associated with this anomaly because it affected partition P7, while the Read and Write pointers were both in partition P5.

Recovery took place 07 DEC 2021, at 15:30:00z (CRF 1016).

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

READ = 2297284 (*partition P5*)

WRITE = 2417649 (*partition P5*)

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	WARNING	2021.334.09.49.25,888	20820C0
RAM Single Bit Error	730	WARNING	2021.335.20.09.34,581	2018120
RAM Single Bit Error	730	WARNING	2021.338.22.44.37,819	22DF940



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6 FOS Systems Status

- ESAC facilities management installed 03 DEC 2021 a thermal probe at the bottom of the FOS rack (SMOS server room). Aim is to monitor continuously the temperature of the server room and configure thermal alerts.

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 exceptions:

- | <i>STATION</i> | <i>PASS</i> | <i>AoS</i> | <i>LoS</i> |
|----------------|-------------|--------------------|--------------------|
| IVK | 12 | 2021.334.10.08.09z | 2021.334.10.21.17z |

could not be acquired because of an issue with the receiving station.

Gaps went:

PUS HKTM

from 2021-11-30T03:01:43z to 2021-11-30T10:09:55z.

E HKTM

from 2021-11-30T03:01:40z to 2021-11-30T10:09:57z.

8 X Band Data Reception in PXMF

- To achieve completion MIRAS PUS TM was recovered from the X band PXMF system and ingested into the MUST-SMTA system 30 NOV 2021. The corresponding E HKTM was lost.

9 Exceptional Activities

None.

10 AOB

None.



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APPENDIX A: OOLs

The following OOL befell at the time the MIRAS instrument CMN, unit H3, unlocked 2021-11-29T10:29:01,569z (DoY 333):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2021.333.11.28.21,928	2021.333.10.29.01,569	SPM13162	H3 LO_Out_Power	NOT-OK	OK
2021.333.11.28.21,928	2021.333.10.29.01,569	SPM13167	H3 LO_Locking	UNLOCK	LOCK

The following OOLs befell at the time the MIRAS instrument MM, partition P7, latched up 2021-12-05T16:09:02,088z (DoY 339):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2021.340.00.07.06,432	2021.339.16.09.02,088	DMASME05	LU Switch P7	OFF	ON
2021.340.00.07.06,363	2021.339.16.09.02,088	DMASME37	SDD LU Detected	FALSE	TRUE