



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 34, year 2023

from 21 AUG 2023 to 28 AUG 2023

1.0

1 General Comments

Activities scheduled for this week are those planned for the 34th calendar week of 2023:

21 AUG 2023 to 28 AUG 2023 (DoYs 233 to 240).

The following routine activities were planned this week (see Gantt chart on next page and CRF n° 1140).

- One Warm NIR Calibration on 23 AUG 2023 (DoY 235) with ETO 06:10:09z (orbit 72553; DESCENDING: thermally UNSTABLE) and with the following expected calibration values:

B.T.	=	4.07°
R.M.S.	=	0.44
Sun elevation	=	1.93°
Moon elevation	=	35.49°
R.A.	=	245.80°
DEC.	=	30.62°
- Two LONG Calibrations on 24 AUG 2023 (DoY 236), which encompassed two ascending semi-orbital periods starting at 14:09:00z (orbit 72572) and 15:51:30z (orbit 72573).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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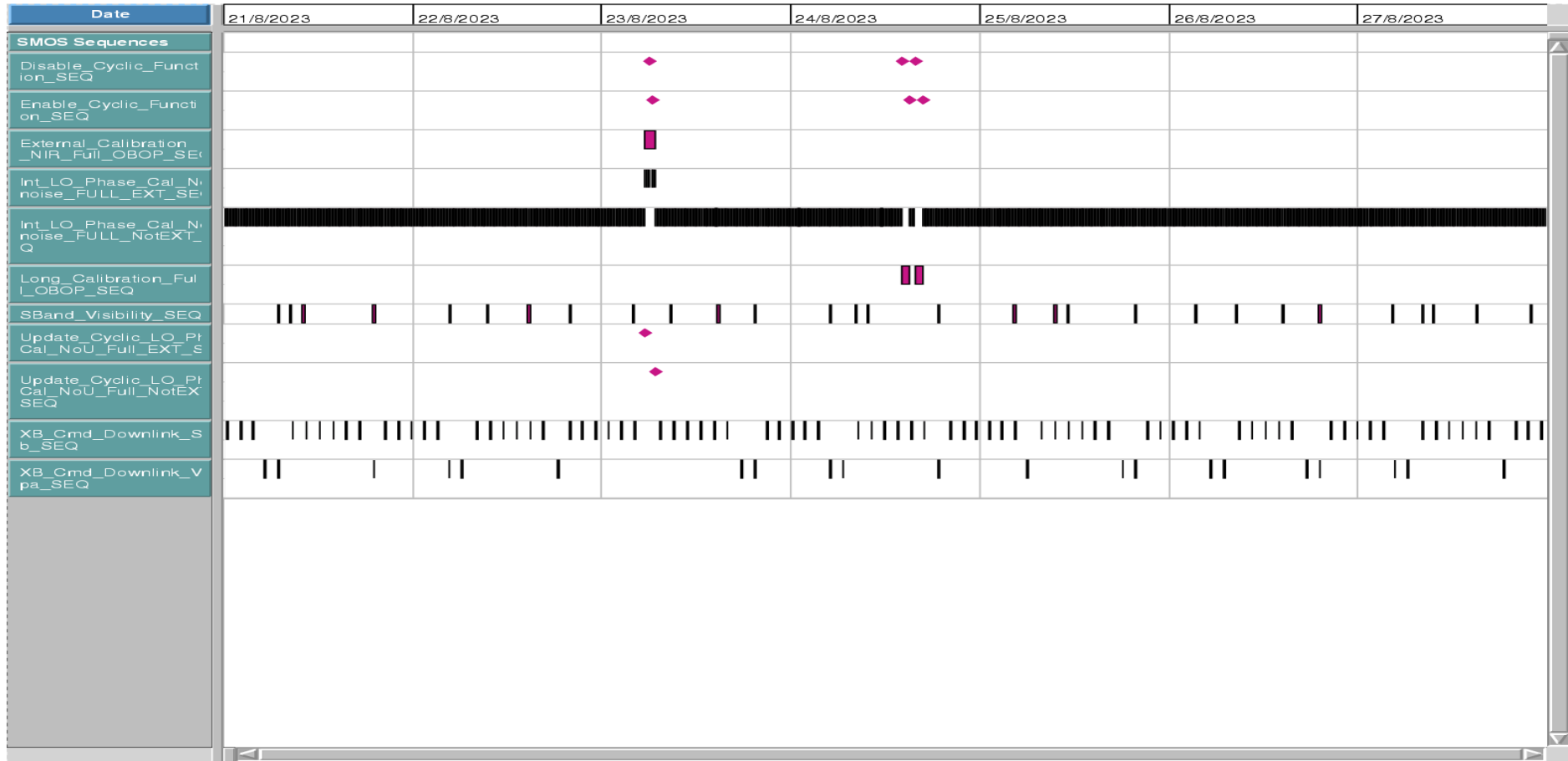
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Schedule Name: 2023_w34_cr ### Display start: 21-08-2023 00:00:00.000 ### Display end: 28-08-2023 00:00:00.000





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3 TC Failures

None.

4 On Board Anomalies

- MIRAS instrument MM, partition P9, latched up 2023-08-21T21:06:07,235z (DoY 233). The following parameters went out of limits in the PLPC system:

```
2023.233.21.06.07,235z    DMASME03    LU Switch P9
2023.233.21.06.07,235z    DMASME37    SDD LU Detected
```

This anomaly was geolocated over the coast of the Estado do Rio Grande do Sul (Brazil):

LAT. = -31.91°

LONG. = 308.46°

There were no science data losses associated with this anomaly because it affected partition P9 (i.e. a spare partition), while the Read and Write pointers were in partition P3 and P4, respectively. Recovery took place Tuesday 22 AUG 2023, at 17:30:00z (CRF n° 1142).

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

READ = 1700465 (partition P3)

WRITE = 1793557 (partition P4)

- The MIRAS CMN, unit H1, unlocked 2023-08-24T12:41:03,194z (DoY 236). This anomaly was geolocated over the coast of Antarctica, due south of Madagascar:

LAT. = -73.42°

LONG. = 50.25°

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

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	2023.236.21.57.10,151	20E2C98
RAM Single Bit Error	730	WARNING	2023.236.22.37.36,504	2246228
RAM Single Bit Error	730	WARNING	2023.239.23.29.51,027	20619E4

6 FOS Systems Status

All FOS systems nominal.



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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:

- S band GS pass:

<i>STATION</i>	<i>PASS</i>	<i>AoS</i>	<i>LoS</i>
-----	-----	-----	-----
<i>STC</i>	<i>39</i>	<i>2023.237.19.41.36</i>	<i>2023.237.19.54.10</i>

contained a TM gap.

Gap went:

PUS HKTM

2023-08-25T15:18:05,731z to 2023-08-25T15:18:11,731z;

9 packets lost

8 X Band Data Reception in PXMF

- Given the small size of this gap no TM was recovered from the X band PXMF system and ingested into the MUST-SMTA system.

9 Exceptional Activities

None.

10 AOB

None.



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APPENDIX A: OOLs

The following OOLs befell at the time the MIRAS instrument MM, partition P9, latched up 2023-08-21T21:06:07,235z (DoY 233):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2023.234.04.59.52,740	2023.233.21.06.07,235	DMASME03	LU Switch P9	OFF	ON
2023.234.04.59.52,739	2023.233.21.06.07,235	DMASME37	SDD LU Detected	FALSE	TRUE

The following OOLs befell at the time the MIRAS instrument CMN, unit H1, unlocked 2023-08-24T12:41:03,194z (DoY 236):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2023.236.19.09.06,616	2023.236.12.41.03,194	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2023.236.19.09.06,666	2023.236.12.41.09,194	SPM11167	H1 LO_Locking	UNLOCK	LOCK