

Operations Notes

FOS Team @ ESAC

Date: Reported by: Issue: FOS Report for week 23, year 2023

from 05 JUN 2023 to 12 JUN 2023

1.0

J. Fauste/J.M. Castro Cerón

General Comments

Activities scheduled for this week are those planned for the 23rd calendar week of 2023:

Topic:

```
05 JUN 2023 to 12 JUN 2023 (DoYs 156 to 163).
```

The following routine activities were planned this week (see Gantt chart on next page and CRF nº 1026).

• One Warm NIR Calibration on 07 JUN 2023 (DoY 158) with ETO 04:26:26z (orbit 71444; DESCENDING: thermally STABLE) and with the following expected calibration values:

```
B.T.
                       3.48°
R.M.S.
                       0.10
                =
                       7.55°
Sun elevation
Moon elevation =
                     -46.43°
                     170.30°
                      34.33°
DEC.
```

- One PMS Offset on 08 JUN 2023 (DoY 159), including three Short Calibrations at 06:00:00.0z, 06:00:34.8z, and 06:01:09.6z (orbit 71459).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.
- A routine Orbit Correction Manoeuvre (OCM) was scheduled for 05 JUN 2023 at 22:53:32z. With an SMA change aimed for 182.29 m, achieved 178.16 m (efficiency 97.74%). The affected time period went from 2023-06-05T22:43:14,997z to 2023-06-05T23:02:50,950z. Science data for that period was flagged with an external APID. No X band GS passes conflicted with this OCM.

2 Mission Planning Deviations

None.

FO

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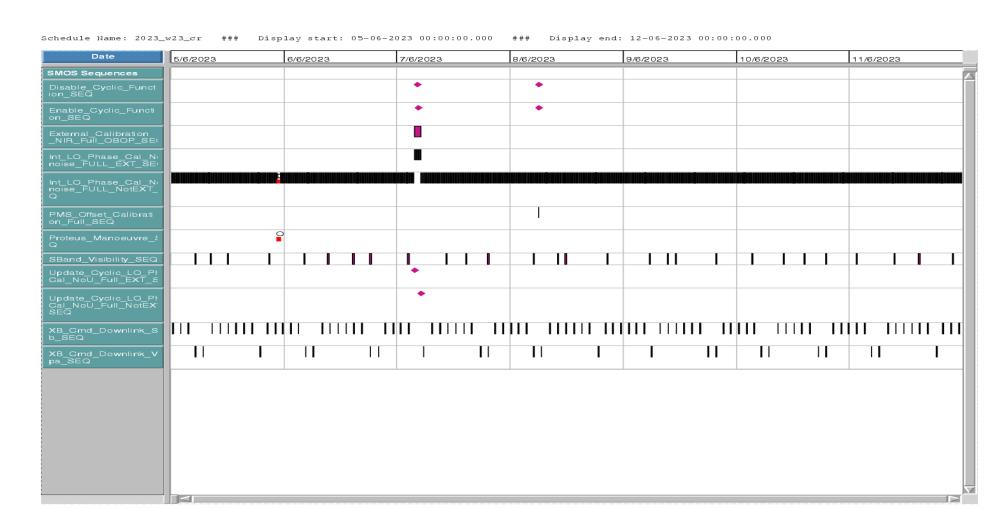
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3 TC Failures

None.

4 On Board Anomalies

• MIRAS instrument MM, partition P11, latched up 2023-06-05T08:20:11,709z (DoY 156). The following parameters went out of limits in the PLPC system:

```
2023.156.08:20:11,709z DMASME01 LU Switch P11 2023.156.08:20:11,709z DMASME37 SDD LU Detected
```

This anomaly was geolocated just off the coast of the Estado da Bahia (Brazil):

```
LAT. = -13.74^{\circ}

LONG. = 327.29^{\circ}
```

There were no science data losses associated with this anomaly because it affected partition P11 (i.e. a spare partition), while the Read and Write pointers were both in partition P4. Recovery took place Tuesday 06 JUN 2023, at 15:30:00z (CRF No. 1127).

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

```
READ = 1791434 (partition P4)
WRITE = 2015715 (partition P4)
```

5 On Board Events Telemetry

None.

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 exceptions:

• S band GS passes:

STATION	PASS	AoS	LoS		
KUX	10	2023.159.20.30.40			
KUX	12	2023.162.09.24.25			

contained a TM gap because of an issue with the receiving station.

Gaps went:

PUS HKTM



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KUX-10

2023-06-08T18:47:18z to 2023-06-08T19:19:40z; 3522 packets lost

Topic:

Date:

Issue:

KUX-12

2023-06-11T06:56:01z to 2023-06-11T07:00:27z; 449 packets lost

E HKTM

KUX-10

2023-06-08T19:36:26z to 2023-06-08T20:12:42z

KUX-12

2023-06-11T06:38:53z to 2023-06-11T06:44:13z

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 09 (KUX-10) and 12 (KUX-12) JUN 2023. The corresponding E HKTM was lost.

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 P11, latched up 2023-06-05T08:20:11,709z (DoY 156):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2023.156.08.45.03,973	2023.156.08.20.11,709	DMASME01	LU Switch P11	OFF	ON
2023.156.08.45.03,973	2023.156.08.20.11,709	DMASME37	SDD LU Detected	FALSE	TRUE