



## Operations Notes

FOS Team @ ESAC

Reported by:

*J. Fauste/J.M. Castro Cerón*

Topic:

Date:

Issue:

**FOS Report for week 03, year 2024**

from 15 JAN 2024 to 22 JAN 2024

**1.0**

## 1 General Comments

Activities scheduled for this week are those planned for the 03<sup>rd</sup> calendar week of 2024:

15 JAN 2024 to 22 JAN 2024 (DoYs 015 to 022).

The following routine activities were planned this week (see Gantt chart on next page and CRF N° 1172).

- One Warm NIR Calibration on 17 JAN 2024 (DoY 017) with ETO 04:20:50z (orbit 74667; DESCENDING: thermally UNSTABLE) and with the following expected calibration values:

|                |   |         |
|----------------|---|---------|
| B.T.           | = | 3.64°   |
| R.M.S.         | = | 0.06    |
| Sun elevation  | = | 9.75°   |
| Moon elevation | = | 66.06°  |
| R.A.           | = | 23.02°  |
| DEC.           | = | -16.09° |
- One PMS Offset on 18 JAN 2024 (DoY 018), including three Short Calibrations at 07:20:40.0z, 07:21:14.8z, and 07:21:49.6z (orbit 74683).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

## 2 Mission Planning Deviations

None.



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Schedule Name: 2024\_w03\_cr ### Display start: 15-01-2024 00:00:00.000 ### Display end: 22-01-2024 00:00:00.000

| Date   | 15/1/2024 | 16/1/2024 | 17/1/2024 | 18/1/2024 | 19/1/2024 | 20/1/2024 | 21/1/2024 |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>SMOS Sequences</b>                            |           |           |           |           |           |           |           |
| Disable_Cyclic_Funct<br>ion_SEQ                  |           |           | ◆         | ◆         |           |           |           |
| Enable_Cyclic_Funct<br>on_SEQ                    |           |           | ◆         | ◆         |           |           |           |
| External_Calibration<br>_NIR_Full_OBOP_SEQ       |           |           | ■         |           |           |           |           |
| Int_LO_Phase_Cal_N.<br>noise_FULL_EXT_SEQ        |           |           | ■         |           |           |           |           |
| Int_LO_Phase_Cal_N.<br>noise_FULL_NotEXT_<br>Q   |           |           |           |           |           |           |           |
| PMS_Offset_Calibrati<br>on_Full_SEQ              |           |           |           |           |           |           |           |
| SBand_Visibility_SEQ                             |           |           |           |           |           |           |           |
| Update_Cyclic_LO_Ph<br>Cal_NoU_Full_EXT_S        |           |           | ◆         |           |           |           |           |
| Update_Cyclic_LO_Ph<br>Cal_NoU_Full_NotEX<br>SEQ |           |           | ◆         |           |           |           |           |
| XB_Cmd_Downlink_S<br>b_SEQ                       |           |           |           |           |           |           |           |
| XB_Cmd_Downlink_V<br>pa_SEQ                      |           |           |           |           |           |           |           |
|  |           |           |           |           |           |           |           |



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### 3 TC Failures

None.

### 4 On Board Anomalies

- MIRAS instrument MM, partition P10, latched up 2024-01-20T21:51:02,210z (DoY 020). The following parameters went out of limits in the PLPC system:

|                        |          |                 |
|------------------------|----------|-----------------|
| 2024.020.21.51.02,210z | DMASME02 | LU Switch P10   |
| 2024.020.21.51.02,210z | DMASME37 | SDD LU Detected |

This anomaly was geolocated over the northern part of the Krasnoyarsk Krai (Russia):

LAT. = 72.19°

LONG. = 95.12°

There were no science data losses associated with this anomaly because it affected partition P10 (i.e. a spare partition), while the Read and Write pointers were in partitions P7 and P8, respectively. Recovery took place Monday 22 JAN 2024, at 20:00:00z (CRF n° 1175).

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

READ = 3492895 (partition P7)

WRITE = 3743059 (partition P8)

### 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  | 2024.015.10.21.23,806 | 238EC90    |
| RAM Single Bit Error | 730       | WARNING  | 2024.021.21.47.49,440 | 212D008    |
| RAM Single Bit Error | 730       | WARNING  | 2024.021.23.15.35,112 | 22C3C74    |

### 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.



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### 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 P10, latched up 2024-01-20T21:51:02,210z (DoY 020):

| GS_TIME               | OB_TIME               | PARAMETER | DESCRIPTION     | OOL Value | Check Value |
|-----------------------|-----------------------|-----------|-----------------|-----------|-------------|
| 2024.021.04.41.41,866 | 2024.020.21.51.02,210 | DMASME02  | LU Switch P10   | OFF       | ON          |
| 2024.021.04.41.41,865 | 2024.020.21.51.02,210 | DMASME37  | SDD LU Detected | FALSE     | TRUE        |