

Operations Notes

FOS Team @ ESAC Reported by:

Topic: Date: Issue: FOS Report for week 49, year 2022 from 05 DEC 2022 to 12 DEC 2022

1.0

J. Fauste/J.M. Castro Cerón

1 General Comments

Activities scheduled for this week are those planned for the 49th calendar week of 2022:

```
05 DEC 2022 to 12 DEC 2022 (DOYs 339 to 346).
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The following routine activities were planned this week (see Gantt chart on next page and CRF 1089).

• One Warm NIR Calibration on 07 DEC 2022 (DOY 341) with ETO 16:47:10z (orbit 68832; ASCENDING: thermally STABLE) and with the following expected calibration values:

```
B.T. = 3.78^{\circ}

R.M.S. = 0.23

Sun elevation = 9.64^{\circ}

Moon elevation = -16.40^{\circ}

R.A. = 167.92^{\circ}

DEC. = -13.66^{\circ}
```

- One PMS Offset on 08 DEC 2022 (DoY 342), including three Short Calibrations at 05:45:00.0z, 05:45:34.8z, and 05:46:09.6z (orbit 68840).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.
- A routine Orbit Correction Manoeuvre (OCM) was scheduled for 08 DEC 2022 at 23:14:13z. With an SMA change aimed for 189.56 m, achieved 188.99 m (efficiency 99.7%). The affected time period went from 2022-12-08T23:04:21,959z to 2022-12-08T23:24:05,363z. 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.

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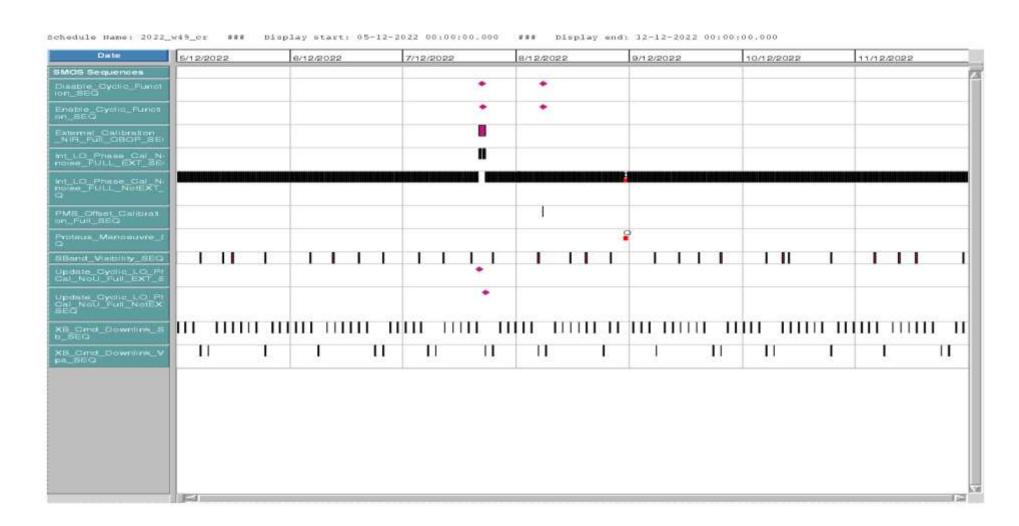
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3 TC Failures

None.

4 On Board Anomalies

 The MIRAS CMN, unit C3, unlocked 2022-12-10T22:11:57.207z (DOY 344). This anomaly was geolocated over the coast of Terranova (Canada):

Topic:

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Latitude = 45.16° Longitude = 305.84°

Only locking status parameter SPM22167 went out of limits in the FOS PLPC system. The anomaly recovered in 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	WARN	2022-12-05T22:36:15	21A8580
RAM single Bit Error	730	WARN	2022-12-06T09:43:09	208DDA0
RAM single Bit Error	730	WARN	2022-12-07T23:36:24	22993EC

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

The CMN unlock of unit C3 generated the following temporary out of limits on the FOS PLPC system,

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2022-12-11T04:35:39	2022-12-10T22:11:57	SPM22167	C3 LO_Locking	UNLOCK	LOCK

During the OCM execution on the 8th of December, the following parameter went out of limits on the FOS PLPC system indicating that MIRAS ITL got disable during the whole manoeuvre execution.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2022-12-09T05:46:14	2022-12-08T23:04:14	NTLHK022	ITL Ena State	Disabled	Enabled