



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 35, year 2020

from 24 AUG 2020 to 31 AUG 2020

1.0

1 General Comments

Activities scheduled for this week are those planned for the 35th calendar week of 2020:

24 AUG 2020 to 31 AUG 2020 (DoYs 237 to 244).

The following routine activities were planned this week (see Gantt chart on next page and CRF 908).

- One PMS Offset on 27 AUG 2020 (DoY 240), including three Short Calibrations at 06:10:30.0z, 06:11:04.8z, and 06:11:39.6z (orbit 56854).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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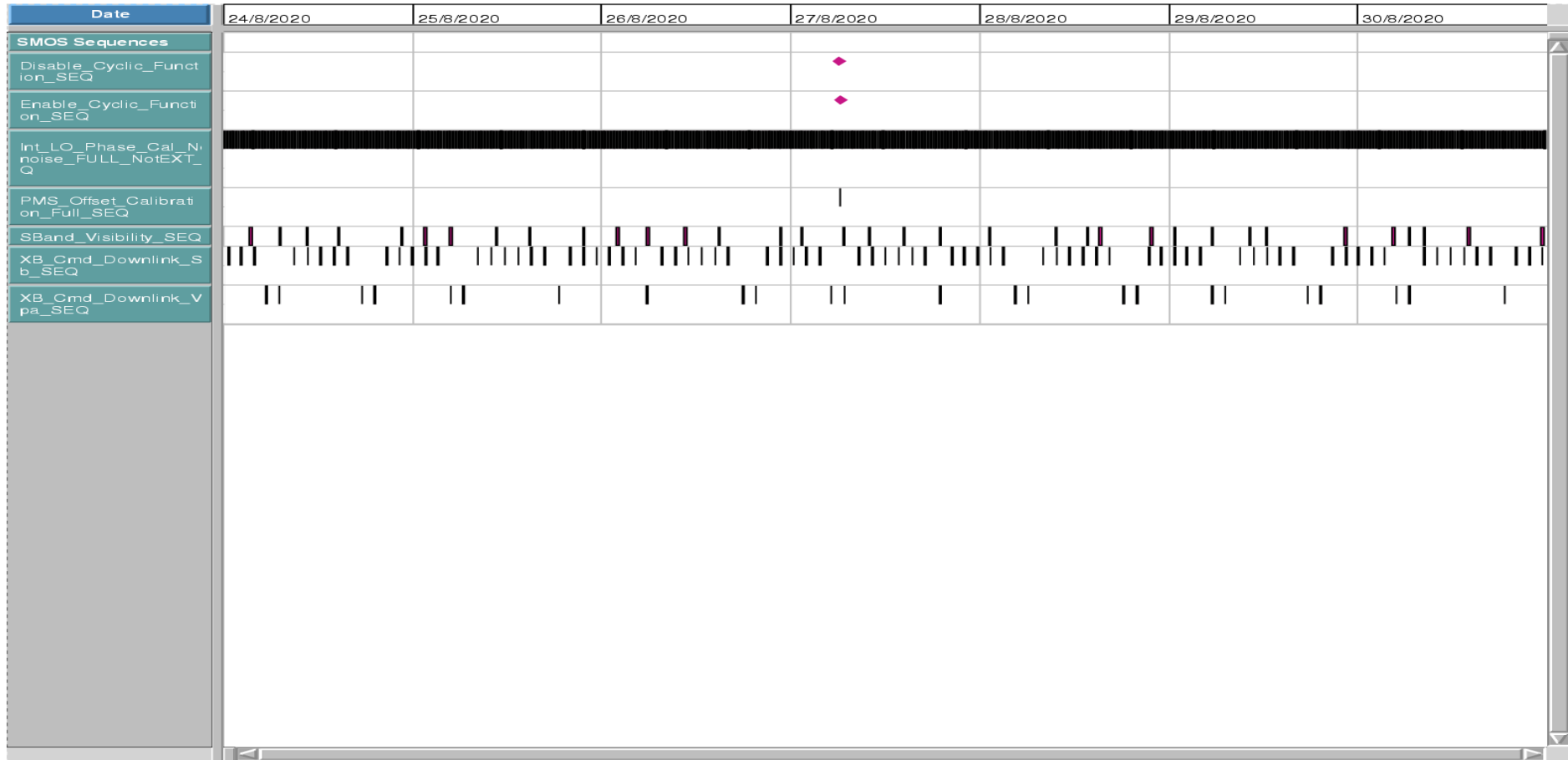
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Schedule Name: 2020_w35_cr ### Display start: 24-08-2020 00:00:00.000 ### Display end: 31-08-2020 00:00:00.000





3 TC Failures

None.

4 On Board Anomalies

- The MIRAS instrument MM, partition P1, latched up 2020-08-29T00:38:19,816z (DoY 242). The following parameters went out of limits in the PLPC system:

2020.242.00.38.19,816z	DMASME11	LU Switch P1
2020.242.00.38.19,816z	DMASME37	SDD LU Detected

This anomaly was geolocated over the Nenets Autonomous Okrug (Russia):

LAT. = 67.03°
LONG. = 60.35°

There were no science data losses associated with this anomaly because it affected partition P1, while the Read and Write pointers were on partitions P8 and P0 respectively.

Recovery took place 31 AUG 2020, at 12:49:58z (CRF 911).

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

READ	= 3827895	(partition P8)
WRITE	= 75745	(partition P0)

- The MIRAS instrument CMN, unit H1, unlocked 2020-08-29T08:07:00,934z (DoY 242). This anomaly was geolocated just off the coast of Antarctica, due south of Australia:

LAT. = -61.57°
LONG. = 132.74°

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.

- The MIRAS instrument MM, partition P0, latched up 2020-08-30T22:18:13,306z (DoY 243). The following parameters went out of limits in the PLPC system:

2020.243.22.18.13,306z	DMASME12	LU Switch P0
2020.243.22.18.13,306z	DMASME37	SDD LU Detected

This anomaly was geolocated over the Provincia de Salta (Argentina):

LAT. = -24.69°
LONG. = 291.87°

There was a marginal loss of science data because of this anomaly, since it affected P0. At the time of the anomaly, the Read and Write pointers were on partition P6. Such unavoidable loss was been



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minimised by applying FOS new X Band Data Dump modelling capabilities.

Recovery took place 31 AUG 2020, at 12:49:58z (CRF 911).

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

READ = 2958684 (partition P6)

WRITE = 3049378 (partition P6)

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	2020.242.11.06.36,345	23AA28C
RAM Single Bit Error	730	WARNING	2020.242.23.04.20,043	204E3B8
RAM Single Bit Error	730	WARNING	2020.243.20.55.29,342	2151FB8

6 FOS Systems Status

- New *WebMUST* v1.4.15 installed on SMTA server 27 AUG 2020.

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 following OOLs befell at the time the MIRAS instrument MM, partition P1, latched up 2020-08-29T00:38:19,816z (DoY 242):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020.242.05.55.10,552	2020.242.00.38.19,816	DMASME11	LU Switch P1	OFF	ON
2020.242.05.55.38,016	2020.242.00.47.45,024	DMASME37	SDD LU Detected	FALSE	TRUE

The following OOL befell at the time the MIRAS instrument CMN, unit H1, unlocked 2020-08-29T08:07:00,934z (DoY 242):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020.242.10.48.13,529	2020.242.08.07.00,934	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2020.242.10.48.13,664	2020.242.08.07.02,134	SPM11167	H1 LO_Locking	UNLOCK	LOCK

The following OOLs befell at the time the MIRAS instrument MM, partition P0, latched up 2020-08-30T22:18:13,306z (DoY 243):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020.244.00.06.53,370	2020.243.22.18.13,306	DMASME12	LU Switch P0	OFF	ON
2020.244.00.06.53,369	2020.243.22.18.13,306	DMASME37	SDD LU Detected	FALSE	TRUE