



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste

Topic:

Date:

Issue:

FOS Report for week 40, year 2021

from 04 OCT 2021 to 11 OCT 2021

1.0

1 General Comments

Activities scheduled for this week are those planned for the 40th calendar week of 2021:

04 OCT 2021 to 11 OCT 2021 (DOYs 277 to 284).

The following routine activities were planned this week (see Gantt chart on next page and CRF 998).

- One PMS Offset on 07 OCT 2021 (DOY 280), including three Short Calibrations at 06:08:00.0z, 06:08:34.8z, and 06:09:09.6z (orbit 62696).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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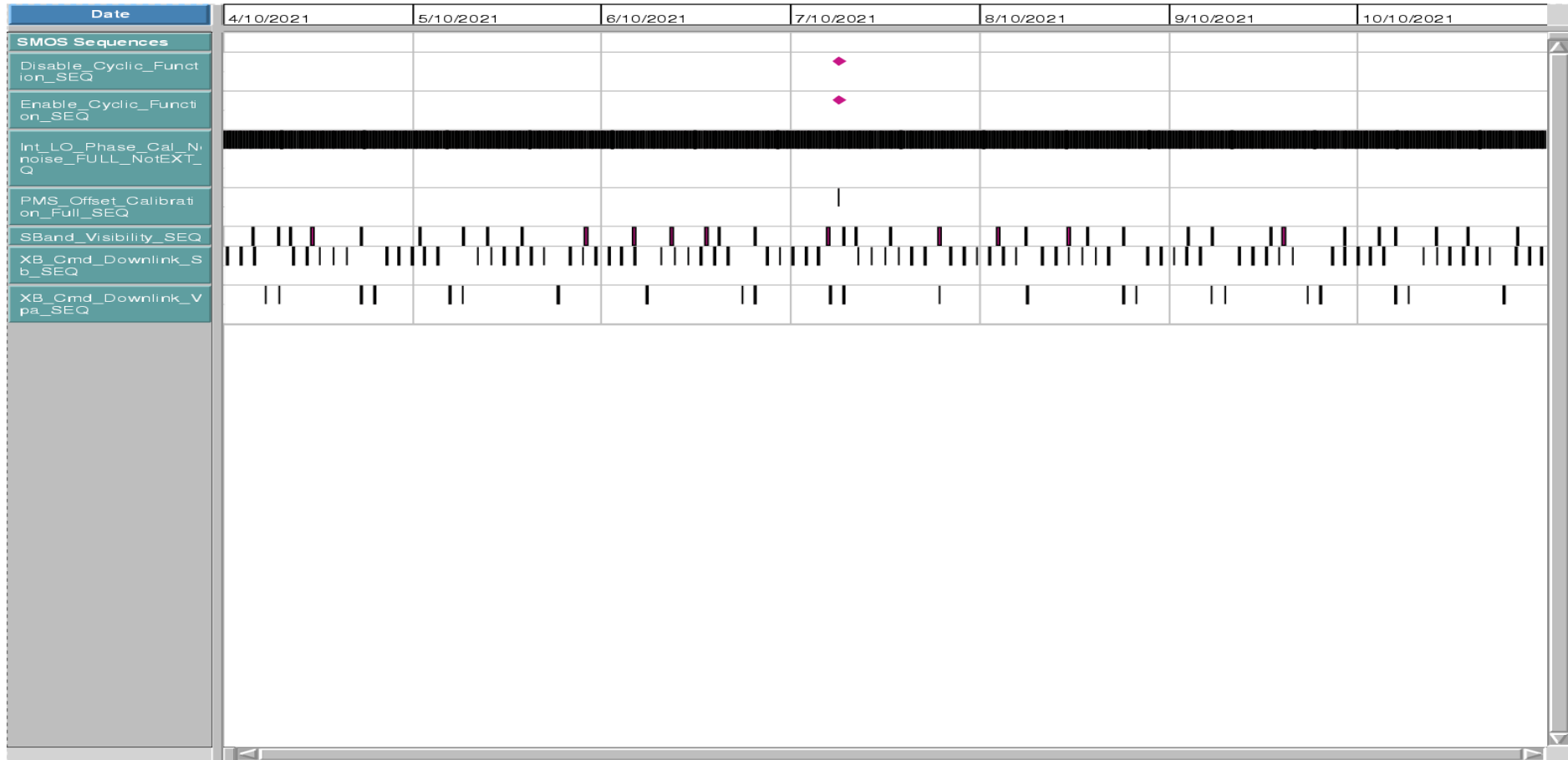
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Schedule Name: 2021_w40_cr ### Display start: 04-10-2021 00:00:00.000 ### Display end: 11-10-2021 00:00:00.000





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3 TC Failures

None.

4 On Board Anomalies

- The MIRAS instrument MM, partition P0, latched up 2021-10-07T10:08:14.868z (DOY 280). The following parameters went out of limits in the PLPC system:

2021.280.10:08:14.868z DMASME12 LU Switch P0

2021.280.10:08:14.868z DMASME37 SDD LU Detected

This anomaly was geolocated at the east of Canada:

Latitude = +52.15°

Longitude = 287.30°

Science data losses associated with this anomaly are not expected because the affected partition is P0 whereas Read pointer was in partition P7 and Write pointers in partitions P8.

Recovery took place on 08 OCT 2021 at 16:22:54z (CRF 1001). Data lost during recovery from 2020-10-08T16:19:31z to 2020-10-08T16:23:05z (duration 00:03:34).

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

READ = 3412859(partition P7)

WRITE = 3651165(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	WARN	2021-10-06T17:26:36	20853E8
RAM single Bit Error	730	WARN	2021-10-10T11:18:40	21A3DB8

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:



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- Because an issue with the receiving station, S band GS pass HBX-5 (AOS 2021-10-07T04:39:04z) contained 20 HKTM gaps:

Between 2021-10-07T04:32:02.607z and 2021-10-07T04:32.14.607z (20 packets were lost)

MIRAS PUS TM data was filled with PXMF system.

- Because of an issue with the receiving station, S band GS pass KER-5 (AOS = 2021-10-04T11:09:49z; LOS = 2021-10-04T11:22:53z) could not be acquired. The gap went:

from 2021-10-04T08:28:38z to 2021-10-04T11:19:59z.

To achieve completion MIRAS PUS HKTM was recovered from the X band PXMF system and ingested into the MUST-SMTA system on 04 OCT 2021. The corresponding E HKTM was lost:

from 2021-10-04T08:28:38z to 2021-10-04T11:19:59z.

8 X Band Data Reception in PXMF

FOS PXMF system was used to fill PUS TM gaps for the two S-Band pass failures above reported.

9 Exceptional Activities

None.

10 AOB

None.



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APPENDIX A: OOLs

At the time of the Mass Memory latch-up on the 7th of October, the two following out of limits were received on the FOS PLPC system:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2021-10-07T13:01:28	2021-10-07T10:08:14	DMASME37	SDD LU Detected	FALSE	TRUE
2021-10-07T13:01:28	2021-10-07T10:08:14	DMASME12	LU Switch P0	OFF	ON