



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 24, year 2020

from 08 JUN 2020 to 15 JUN 2020

1.0

1 General Comments

Activities scheduled for this week are those planned for the 24th calendar week of 2020:

08 JUN 2020 to 15 JUN 2020 (DOYs 160 to 167).

The following routine activities were planned this week (see Gantt chart on next page and CRF 888).

- One Warm NIR Calibration on 10 JUN 2020 (DOY 162) with ETO 04:34:14z (orbit 55731; DESCENDING: thermally STABLE) and with the following expected calibration values:

B.T.	=	3.48°
R.M.S.	=	0.10
Sun elevation	=	7.74°
Moon elevation	=	-55.51°
R.A.	=	174.10°
DEC.	=	34.03°
- One PMS Offset on 11 JUN 2020 (DOY 163), including three Short Calibrations at 06:08:00.0z, 06:08:34.8z, and 06:09:09.6z (orbit 55746).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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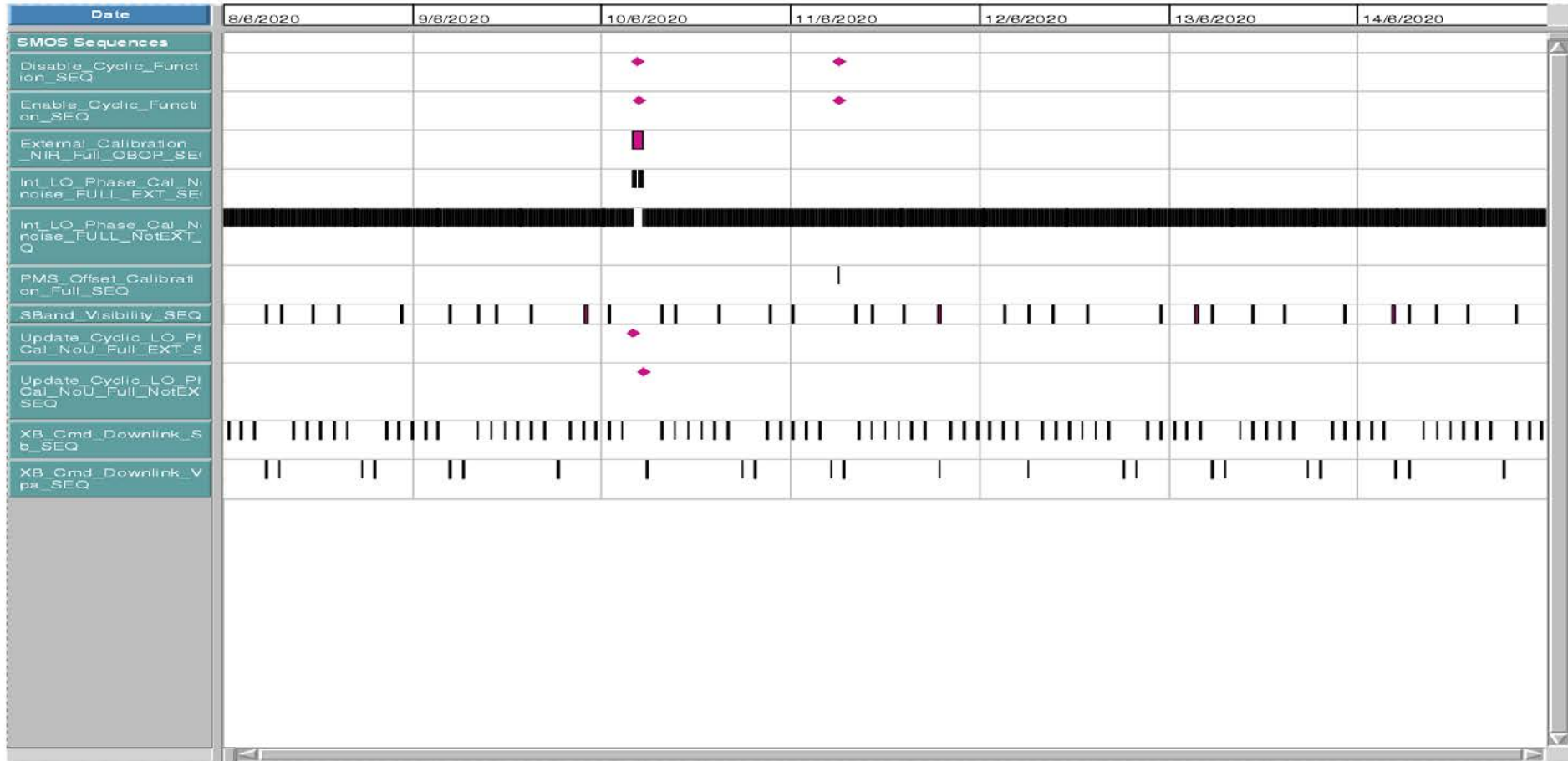
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Schedule Name: 2020_w24_cr ### Display start: 08-06-2020 00:00:00.000 ### Display end: 15-06-2020 00:00:00.000





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3 TC Failures

None.

4 On Board Anomalies

- The MIRAS CMN, unit C3, unlocked 2020-06-12T20:39:21 (DOY 164). This anomaly was geolocated over Antarctic Ocean:

Latitude = -60.76°

Longitude= 155.79°

Only locking status SPM22167, went out of limits in the FOS PLPC system. The anomaly recovered in few seconds.

- The MIRAS CMN, unit C3, unlocked 2020-06-11T11:07:59.651 (DOY 163). This anomaly was geolocated over Antarctica

Latitude = -78.42°

Longitude= 57.23°

Only locking status SPM22167, went out of limits in the FOS PLPC system. The anomaly recovered in 10 epochs.

- MIRAS instrument MM, partition P4, latched up 2020-06-09T22:11:24,534z (DOY 161). The following parameters went out of limits in the PLPC system:

2020.161.22.11.24,534z DMASME08 LU Switch P4

2020.161.22.11.24,534z DMASME37 SDD LU Detected

This anomaly was geolocated over north-western Argentina:

Latitude = -28.16°

Longitude= 293.0°

There were no science data losses associated with this anomaly because it affected partition P4, while the Read and Write pointers were on partition P6 and P7, respectively.

Recovery took place Monday 11 JUN 2020, at 14:00:00z (CRF 892).

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

READ = 3018180 (partition P6)

WRITE = 3109988 (partition P7)

5 On Board Events Telemetry

The following RAM Single Bit errors befell this week:



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Event Description	Packet ID	Severity	Event Time	Parameters
RAM single Bit Error	730	WARN	2020-06-12T09:55:41	2021D68
RAM single Bit Error	730	WARN	2020-06-11T21:35:58	22BC558
RAM single Bit Error	730	WARN	2020-06-11T19:15:43	21EBBFC
RAM single Bit Error	730	WARN	2020-06-10T11:47:50	211B4F8
RAM single Bit Error	730	WARN	2020-06-08T21:31:33	2245610

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

As part of the preparations for the future upload of the new OBSW version 2.8.5.1 on the 23rd of June, the memory addresses that will be patched for both banks, were dumped on the 8th of June 2020. Such operations were detailed in CRF-889 and uploaded on 2020-06-08T11:13:33z. The CRF contained 2 plans, with 6 TCs inside each plan. First TC plan was executed as follows:

TC time-tagged at 11:21:00z

TC time-tagged at 11:21:02z

TC time-tagged at 11:21:04z

TC time-tagged at 11:21:06z

TC time-tagged at 11:21:08z

TC time-tagged at 11:21:10z

Wait of 5 seconds.

Second TC plan:

TC time-tagged at 11:21:15z

TC time-tagged at 11:21:17z

TC time-tagged at 11:21:19z

TC time-tagged at 11:21:21z

TC time-tagged at 11:21:23z

TC time-tagged at 11:21:25z



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The result of these two TC dumps were the expected ones and fully in line with the current version on-board 2.8.5.

10 AOB

None.



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APPENDIX A: OOLs

The CMN unlock of unit C3 on the 12th of June triggered the following temporary out of limits on the FOS PLPC system.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-06-12T23:38:35	2020-06-12T20:39:21	SPM22167	C3 LO_Locking	UNLOCK	LOCK

Similar to previous anomaly, the same parameter went temporary out of limit on the FOS PLPC system.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-06-11T14:42:27	2020-06-11T11:07:59	SPM22167	C3 LO_Locking	UNLOCK	LOCK

The Mass Memory latch-up of partition P4 generated the two following out of limits on the FOS PLPC system.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-06-10T01:14:35	2020-06-09T22:11:24	DMASME37	SDD LU Detected	FALSE	TRUE
2020-06-10T01:14:35	2020-06-09T22:11:24	DMASME08	LU Switch P4	OFF	ON