



## Operations Notes

FOS Team @ ESAC

Reported by:

*J. Fauste/J.M. Castro Cerón*

Topic:

Date:

Issue:

**FOS Report for week 27, year 2019**

from 01 JUL 2019 to 08 JUL 2019

**1.0**

## 1 General Comments

Activities scheduled for this week are those planned for the 27<sup>th</sup> calendar week of 2019:

01 JUL 2019 to 08 JUL 2019 (DOYs 182 to 189).

The following routine activities were planned this week (see Gantt chart on next page and CRF 818).

- One Warm NIR Calibration on 03 JUL 2019 (DOY 184) with ETO 05:25:18z (orbit 50796; DESCENDING: thermally STABLE) and with the following expected calibration values:

B.T.	=	3.53°
R.M.S.	=	0.14
Sun elevation	=	9.00°
Moon elevation	=	12.22°
R.A.	=	196.55°
DEC.	=	35.84°

- Two LONG Calibrations on 04 JUL 2019 (DOY 185), which encompassed two ascending semi-orbital periods starting at 13:20:00z (orbit 50815) and 15:07:30z (orbit 50816).
- One FTR Calibration on 05 JUL 2019 (DOY 186) with ETO 14:59:16z (orbit 50830; ASCENDING: thermally UNSTABLE) and with the following expected calibration values:

B.T.	=	3.64°
R.M.S.	=	0.05
Sun elevation	=	-8.01°
Moon elevation	=	-40.50°
R.A.	=	17.9°
DEC.	=	-31.13°

- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

## 2 Mission Planning Deviations

None.



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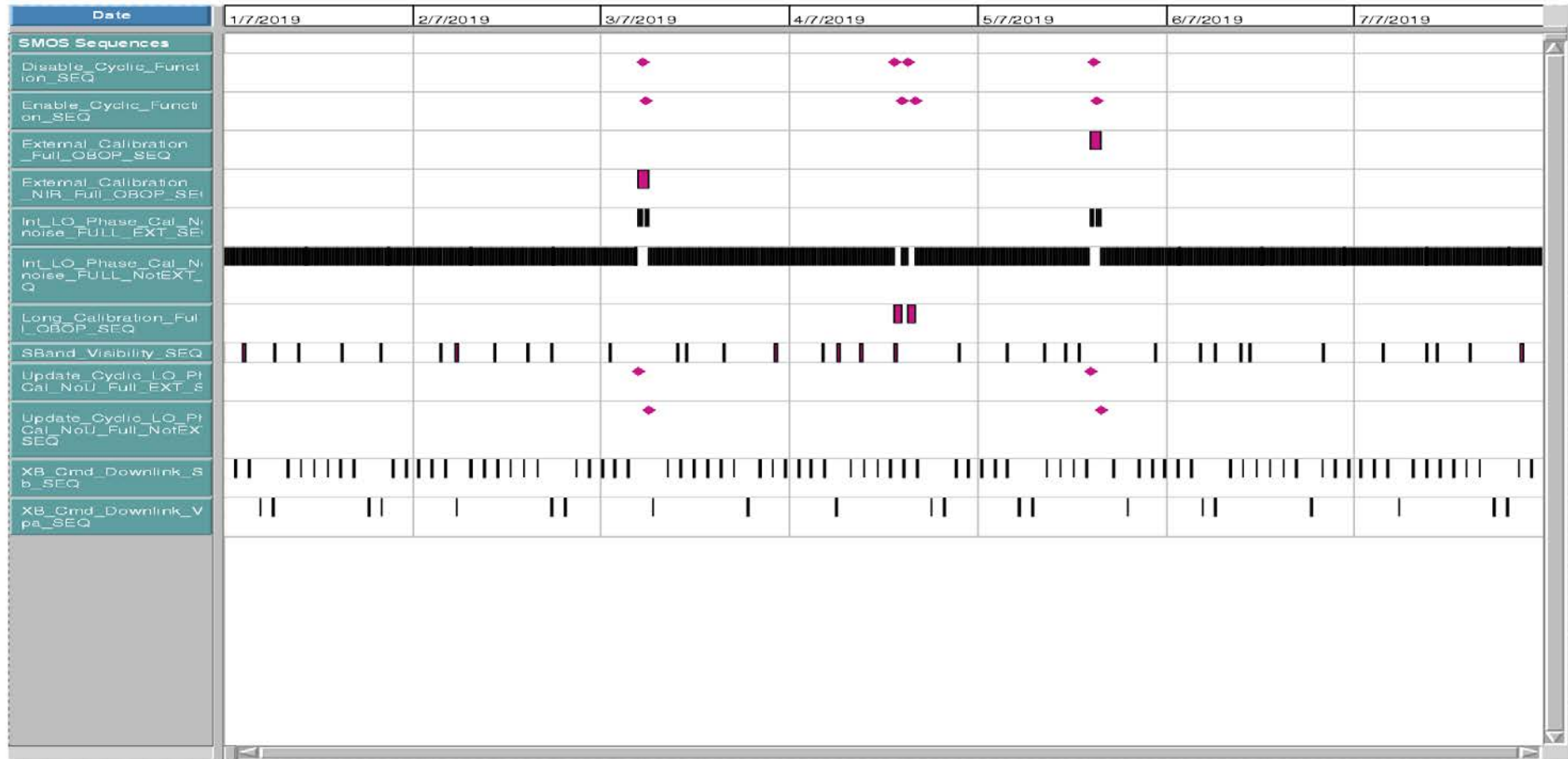
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Schedule Name: 2019\_w27\_cr ### Display start: 01-07-2019 00:00:00.000 ### Display end: 08-07-2019 00:00:00.000





### 3 TC Failures

None.

### 4 On Board Anomalies

- MIRAS Mass Memory, partition P10, latched up 2019-07-01T15:15:07.969z (DOY 182). It occurred in the middle of PRO-CRP-800 execution to recover previously latched up P5 and P9. The sequence of events was as follows:

- P5+P9 latched up, back to back, 30 JUN 2019
- 2019.182.15.15.00.000z: PRO-CRP-800 started
- 2019.182.15.15.07.969z: P10 latched up
- 2019.182.15.15.21.170z: P05 cleared
- 2019.182.15.15.29.570z: P09 cleared
- 2019.182.15.15.31.970z: P10 cleared

The following parameters went out of limits in the PLPC system:

- 2019.182.15.15.07.969z DMASME02 LU Switch P10
- 2019.182.15.15.07.969z DMASME37 SDD LU Detected

MM scrubbing had been disabled during recovery (NMASME47). An elevated number of SB errors afterwards suggested a real occurrence. Similar ones took place twice during the mission so far: 08 JAN 2013 and 30 APR 2014. As in those occasions, no clear conclusions could be drawn as to the causes of this anomaly.

There were no science data losses associated with this anomaly because it affected partition P10 (spare), while the Read and Write pointers were both on partition P4.

Recovery took place within the already on-going PRO-CRP-800 [CRF 819, started 01 JUL 2019, 15:15:00z].

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

- READ = 1868334 (partition P4)
- WRITE = 1936800 (partition P4)

### 5 On Board Events Telemetry

The following RAM Single Bit errors befell this week:

Event Description	Packet ID	Severity	Event Time	Parameters
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RAM single Bit Error	730	WARN	2019-07-06T21:44:35	2350A5C
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### 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

At the time of the MM Latch up of partition P10, the following two Out of Limits were received on the PLPC system.

<b>GS_TIME</b>	<b>OB_TIME</b>	<b>PARAMETER</b>	<b>DESCRIPTION</b>	<b>OOL Value</b>	<b>Check Value</b>
2019-07-01T20:20:08	2019-07-01T15:15:07	DMASME37	SDD LU Detected	FALSE	TRUE
2019-07-01T20:20:08	2019-07-01T15:15:07	DMASME02	LU Switch P10	OFF	ON