



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 26, year 2019

from 24 JUN 2019 to 01 JUL 2019

1.0

1 General Comments

Activities scheduled for this week are those planned for the 26th calendar week of 2019:

24 JUN 2019 to 01 JUL 2019 (DoYs 175 to 182).

The following routine activities were planned this week (see Gantt chart on next page and CRF 817).

- One PMS Offset on 27 JUN 2019 (DoY 178), including three Short Calibrations at 06:32:00.0z, 06:32:34.8z, and 06:33:09.6z (orbit 50710).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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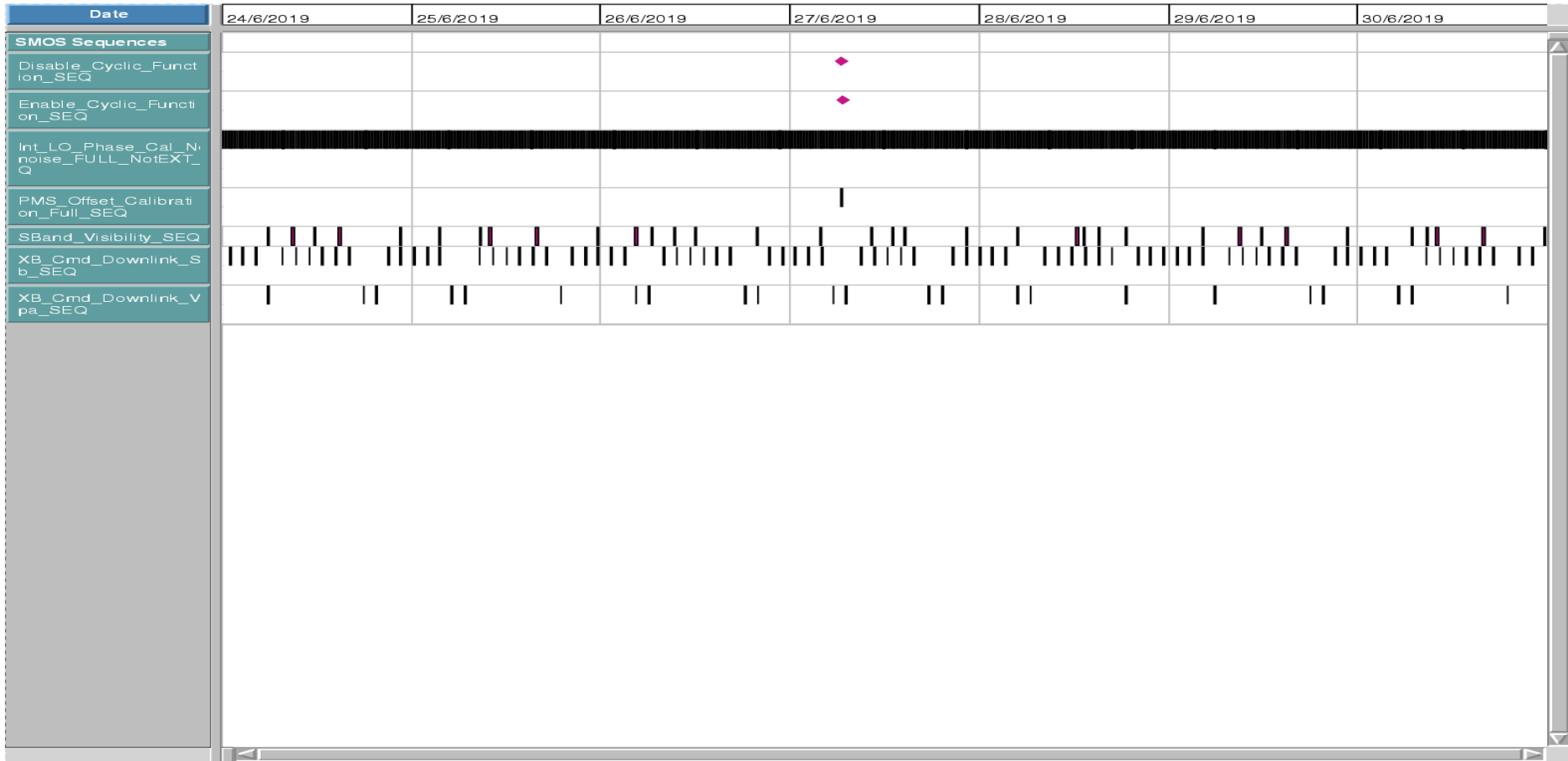
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Schedule Name: 2019_w26_cr ### Display start: 24-06-2019 00:00:00.000 ### Display end: 01-07-2019 00:00:00.000





3 TC Failures

None.

4 On Board Anomalies

- The MIRAS instrument CMN, unit H1, unlocked 2019-06-25T08:08:33,210z (DoY 176). This anomaly was geolocated over the South Atlantic:

LAT. = -29.72°

LONG. = 333.02°

Both parameters, output power SPM11162 and locking status SPM11167, went out of limits in the FOS PLPC system. The anomaly recovered in 5 epochs.

- The MIRAS instrument MM, partition P5, latched up 2019-06-30T20:33:10,852 (DoY 181).

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

2019.181.20.33.10,852z DMASME07 LU Switch P5

2019.181.20.33.10,852z DMASME37 SDD LU Detected

This anomaly was geolocated over northern Yakutia (Russia):

LAT. = 68.38°

LONG. = 122.90°

There were no science data losses associated with this anomaly because it affected partition P5, while the Read and Write pointers were both on partition P6 (overlap accounted for the one partition logical-to-physical mapping «push-up»).

Recovery took place 01 JUL 2019, at 15:15:00z (CRF 819).

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

READ = 3068195 (*partition P6*)

WRITE = 3089035 (*partition P6*)

- The MIRAS instrument MM, partition P9, latched up 2019-06-30T22:38:00,125 (DoY 181).

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

2019.181.22.38.00,125z DMASME03 LU Switch P9

2019.181.22.38.00,125z DMASME37 SDD LU Detected

This anomaly was geolocated off the coast of southern Perú:

LAT. = -18.56°

LONG. = 287.98°

There were no science data losses associated with this anomaly because it affected partition P9 (not a spare in this case as there had



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been a one partition logical-to-physical mapping "push-up" from the previous latch-up), while the Read and Write pointers were both on partition P7.

Recovery took place 01 JUL 2019, at 15:15:00z (CRF 819).

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

READ = 3068195 (partition P6)
WRITE = 3089035 (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	2019.181.21.14.32,966	21A7EC4

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:

- The following S band GS passes:

STATION	PASS	AoS	LoS
HBX	24	2019.175.14.48.00	2019.175.15.00.53
KUX	31	2019.177.09.12.20	2019.177.09.26.56

could not be acquired because of an issue with the receiving station.

The PUS TM gaps went:

from 2019-06-24T11:35:33,615z to 2019-06-24T14:49:48,180z.
from 2019-06-26T06:21:14,892z to 2019-06-26T09:13:57,005z.

To achieve completion MIRAS PUS TM was recovered from the X band PXMF system and ingested into the MUST-SMTA system on 24 and 26 JUN 2019 respectively.

8 X Band Data Reception in PXMF

- On 24 JUN 2019 the PXMF server was used to fill the following MIRAS PUS TM gap:

from 2019-06-24T11:35:33,615z to 2019-06-24T14:49:48,180z.

The corresponding E_HKTM was lost:

from 2019-06-24T11:35:15z to 2019-06-24T14:49:56z.

- On 26 JUN 2019 the PXMF server was used to fill the following MIRAS PUS TM gap:



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from 2019-06-26T06:21:14,892z to 2019-06-26T09:13:57,005z.

The corresponding E_HKTM was lost:

from 2019-06-26T06:21:10z to 2019-06-26T09:13:58z.

9 Exceptional Activities

None.

10 AOB

None.



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APPENDIX A: OOLs

The following OOL befell at the time the MIRAS instrument CMN, unit H1, unlocked 2019-06-25T08:08:33,210z (DoY 176):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019.176.09.18.12,412	2019.176.08:08:33,210	SPM11162	H1 LO_Out_Power	NOT-OK	OK
2019.176.09.18.12,412	2019.176.08:08:33,210	SPM11167	H1 LO_Locking	UNLOCK	LOCK

The following OOLs befell at the time the MIRAS instrument MM, partition P5, latched up 2019-06-30T20:33:10,852z (DoY 181):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019.182.00.21.29,453	2019.181.20.33.10,852	DMASME07	LU Switch P5	OFF	ON
2019.182.00.21.29,453	2019.181.20.33.10,852	DMASME37	SDD LU Detected	FALSE	TRUE

The following OOLs befell at the time the MIRAS instrument MM, partition P9, latched up 2019-06-30T22:38:00,125z (DoY 181):

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019.182.00.27.32,829	2019.181.22.38.00,125	DMASME03	LU Switch P9	OFF	ON
2019.182.00.27.32,829	2019.181.22.38.00,125	DMASME37	SDD LU Detected	FALSE	TRUE