

FOS Team @ ESAC Reported by:

Date:

Topic:

FOS Report for week 14, year 2019

from 01 APR 2019 to 08 APR 2019

1.0

J. Fauste/J.M. Castro Cerón

1 General Comments

Activities scheduled for this week are those planned for the 14th calendar week of 2019:

01 APR 2019 to 08 APR 2019 (DOYs 091 to 098).

The following routine activities were planned this week (see Gantt chart on next page and CRF 802).

- One PMS Offset on 04 APR 2019 (DOY 094), including three Short Calibrations at 07:41:30.0z, 07:42:04.8z, and 07:42:39.6z (orbit 49502).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

Due to the PROTEUS Gyro Calibration on 03 APR 2019, starting 01:25:35z, ending 03:06:37z, MIRAS ITL was disabled between these two times. As consequence of that, the following Svalbard GS X band pass:

AOS=02:24:34z, LOS=02:35:01z

was not executed as scheduled because it fell in the middle of this platform calibration.



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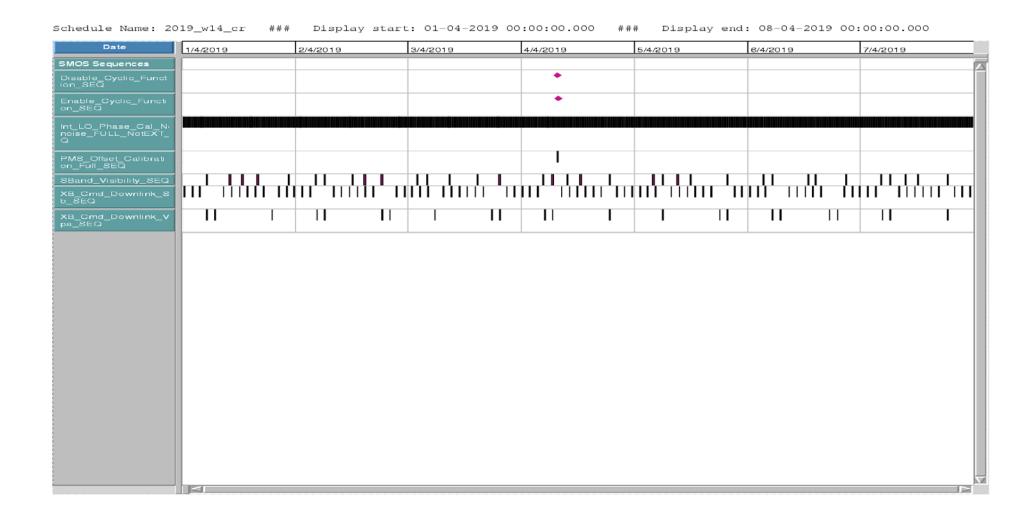
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3 TC Failures

None.

4 On Board Anomalies

• The MIRAS instrument CMN, unit B3, unlocked on 2019-04-02T11:28:52,128z (DOY 0926). This anomaly was geolocated over Prince Patrick Island (Canada):

Latitude = 76.70° Longitude = 239.44°

both parameters, output power SPM19162 and locking status SPM19167, went out of limits in the FOS PLPC system. The anomaly recovered after few seconds.

• MIRAS instrument MM, partition P11, latched up 2019-04-02T11:00:08z (DOY 092). The following parameters went out of limits in the PLPC system:

2019.092.11.00.08,935z DMASME01 LU Switch P11 2019.092.11.00.08,935z DMASME37 SDD LU Detected

This anomaly was geolocated just off the coast of Antofagasta (Chile):

Latitude = -23.68° *Longitude*= 288.99°

There were no science data losses associated with this anomaly because it affected partition P11 (i.e. a spare partition), while the Read and Write pointers were both on partition P1. Recovery took place the following day, 03 APR 2019, at 15:00:00z (CRF 803). At the time of the anomaly the position of the MM pointers were as follows:

READ = 482490 (partition P1) WRITE = 736340 (partition P1)

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	2019-04-05T00:04:27	217E930
RAM single Bit Error	730	WARN	2019-04-03T11:07:47	2164690
RAM single Bit Error	730	WARN	2019-04-01T10:15:14	20B6568

6 FOS Systems Status

All FOS systems nominal.



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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

As part of the PROTEUS Gyro calibration, the MIRAS on board timeline, ITL, was made disabled during the unavailability period and as consequence of that the following parameter went OOL on the FOS PLPC system.

GS_TIM E	OB_TIM E	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019-04-03T02:45:24	2019-04-03T01:25:27	NTLHK022	ITL Ena State	Disabled	Enabled

At the time of the CMN Unlock on B3 unit, the following two temporary out of limits were issued by the FOS PLPC system

GS_TIM E	OB_TIM E	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019-04-02T12:58:33	2019-04-02T11:28:52	SPM19162	B3 LO_Out_Power	NOT-OK	OK
2019-04-02T12:58:33	2019-04-02T11:28:58	SPM19167	B3 LO_Locking	UNLOCK	LOCK

The Mass Memory Latch-up of partition P11, generated the following two temporary out of limits:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019-04-02T12:57:10	2019-04-02T11:00:08	DMASME37	SDD LU Detected	FALSE	TRUE
2019-04-02T12:57:10	2019-04-02T11:00:08	DMASME01	LU Switch P11	OFF	ON