	Operations Notes	Topic:	**FOS Report for week 10, year 2016**
	FOS Team @ ESAC	Date:	from 07 MAR 2016 to 14 MAR 2016
	Reported by:	Issue:	**1.0**
	J. Fauste/J.M. Castro Cerón		

1   General Comments

Activities scheduled for this week are those planned for the 10th calendar week of 2016:

07 MAR 2016 to 14 MAR 2016 (DoYs 067 to 074).

The following routine activities were planned this week (see Gantt chart on next page and CRF 555):

- One PMS Offset on 10 MAR 2016 (DoY 070), including three Short Calibrations at 07:38:00.0z, 07:38:34.8z, and 07:39:09.6z (orbit 33386).
- Local Oscillator Calibrations every 10 minutes.
- *X* band Passes over ESAC and Svalbard.

2   Mission Planning Deviations

None.

Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón
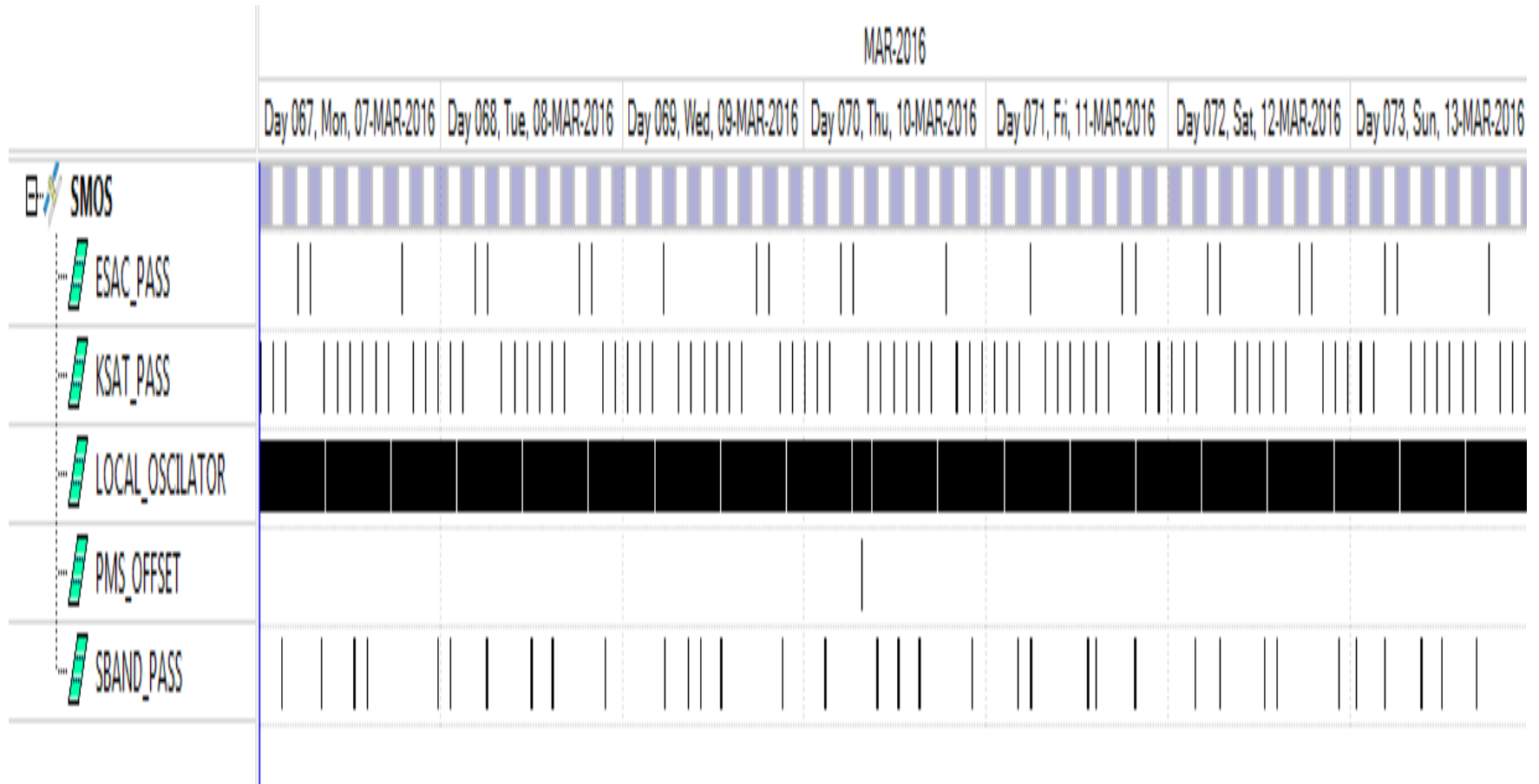
Topic: **FOS Report for week 10, year 2016**
Date: from 07 MAR 2016 to 14 MAR 2016
Issue: **1.0**

Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic: **FOS Report for week 10, year 2016**

Date: from 07 MAR 2016 to 14 MAR 2016

Issue: **1.0**

3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

Due to the MIRAS Standby mode test performed on the 9th of March several expected Out of Limits were received at the time of the instrument transition from Operational to Standby mode (see section 10.1 and Appendix-A)

5 On Board Anomalies

Due to the MIRAS Standby mode test performed on the 9th of March several Error packets were periodically received from 08:43:48z to 10:25:00z (see section 6 and 10.1)

6 On Board Events Telemetry

As result of the MIRAS Standby mode test performed on the 9th of March the following Error packets were received periodically on that day from 08:43:48z to 10:25:00z:

Time_Correlator_Mode_Timeout EVID 651 TM(5,3)
Time_Correlator_Unexpected_PPS EVID 653 TM(5,3)
Watchdog_No_Milbus_Activity_Warning EVID 622 TM(5,2)

The following RAM Single Bit Errors befell this week:

Event Description	Severity	Event Time	Parameters
RAM single Bit Error	WARN	2016.071.10.44.03.411	20E4E54
RAM single Bit Error	WARN	2016.073.18.49.57.014	2073884

7 FOS Systems Status

All FOS Systems nominal.

8 Data Reception from CNES

All *S* Band Passes were correctly received from CNES and successfully processed by the FOS PLPC System, with the following exception:

- Due a planned electrical outage at CNES on the 10th of March from 13:00z to 16:30z telemetry data from KRX pass at 15h10UT was delivered with some delay.

	Operations Notes	Topic:	**FOS Report for week 10, year 2016**
	FOS Team @ ESAC	Date:	from 07 MAR 2016 to 14 MAR 2016
	Reported by:	Issue:	**1.0**
	J. Fauste/J.M. Castro Cerón		

9 *X* Band Data Reception in PXMF

PXMF system was used as prime FOS processing system during the Standby mode test performed on the 9th of March 2016. PUS Telemetry data from PXMF and for that period was ingested on SMTA-MUST system.

10 Exceptional Activities

10.1 MIRAS Standby mode test

- A MIRAS/PROTEUS Stand-by mode was performed on 2016-03-09 from 08:43:48z to 10:25:00z. This test was a prerequisite for the final PROTEUS OBSW upload that will be performed on week 11.

  In this Standby mode the Milbus communications between PROTEUS and MIRAS instrument are interrupted. In practical terms this means that MIRAS is not able to receive commands from the platform but also to transfer housekeeping TM packets to PROTEUS. In that situation SBand passes will only contain PROTEUS telemetry and it will not be possible to monitor directly the instrument using PUS telemetry. Also in Standby mode neither PPS nor UTC information is received on MIRAS which implies that the instrument has to run with its own clock. As consequence of that the only way to monitor the instrument housekeeping telemetry will be through the XBand passes. As expected and predicted by the Engineering Model tests and advised by the OBSW experts, we got during the test several error packets and Out of Limit alarms on the FOS system.

  As soon as the onboard MilBus communications were interrupted at 08:43:48z, the following error messages were displayed on the FOS PXMFRM system:

  Time_Correlator_Mode_Timeout EVID 651, received once per second
  Time_Correlator_Unexpected_PPS EVID 653, received once per second
  Watchdog_No_Milbus_Activity_Warning EVID 622, received once every five seconds
  RT_Buffer_Overflow EVID 481, received only once at 08:44:05z, i.e. 17 seconds after setup in Standby mode.

  Also at that time the following two Out of Limit alarms were received on PXMFPRM:

  SPC10107 "PPS_ERROR_FLAG" with value "UTC Ste Tmout"
  TCO_FLAG "TCO Restart Flag" with value "NOT-OK"

Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 10, year 2016

from 07 MAR 2016 to 14 MAR 2016

1.0

These two alarms were also seen during some MIRASIM simulations. The first alarm was a MIRAS alarm indicating that not UTC time is received any more from the platform while the second one is a FOS ground alarm due to the fact that ground time correlation cannot be performed in those conditions.

Just at the end of the test when the instrument went back into Operational state at 10:25:00z , another error packet

Time Correlator unexpected UTC EVID 652

was issued by the instrument. This can be considered nominal since as soon as the instrument tries to correlate again its time with the one from PROTEUS detects a jump from the last UTC received.

From that point onwards the instrument went back to nominal and no more error messages were again generated. The test can be considered successful and there are no showstoppers from FOS side to perform the PROTEUS SW upload on week-11.

Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic: **FOS Report for week 10, year 2016**

Date: from 07 MAR 2016 to 14 MAR 2016

Issue: **1.0**

APPENDIX A: OOLs

At the time of the transition from Operational to Standby mode the following Out of Limit were received on PLPCPRM system

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2016.069.13.35.37.624	2016.069.08.43.47.922	SPC10107	PPS_ERROR_FLAG	UTC Ste Tmout	Valid