



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 16, year 2016

from 18 APR 2016 to 25 APR 2016

1.0

1 General Comments

Activities scheduled for this week are those planned for the 16th calendar week of 2016:

18 APR 2016 to 25 APR 2016 (DoYs 109 to 116).

The following routine activities were planned this week (see Gantt chart on next page and CRF 563):

- One Warm NIR Calibration on 20 APR 2016 (DoY 111) with ETO 05:27:14z (orbit 33975) and with the following expected calibration values:

B.T.	= 3.6923°
R.M.S.	= 0.3971
Sun Elevation	= 01.9162°
Moon elevation	= 17.9052°
R.A.	= 125.81°
DEC.	= 40.88°
- One PMS Offset on 21 APR 2016 (DoY 112), including three Short Calibrations at 10:23:00.0z, 10:23:34.8z, and 10:24:09.6z (orbit 33992).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

An extra XBand pass over XBand CNES station in South Africa, HBK, was scheduled on the 20th of April from 15:43:00z to 15:52:00z. This pass was manually added in the PLPC Manual Stack. The purpose of said pass was to test the X band receiver at the HBK GS. No impact on MIRAS Science Telemetry processing.



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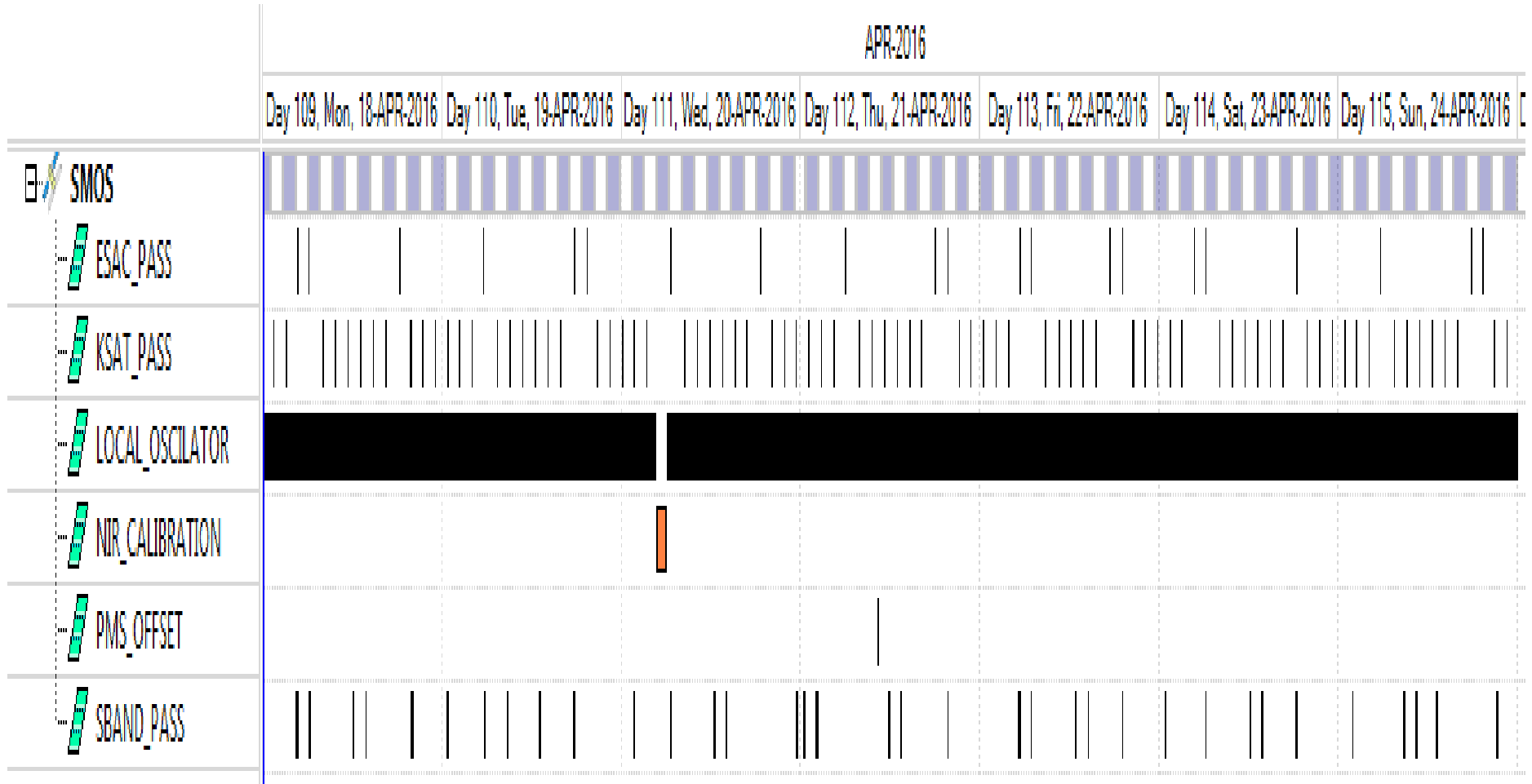
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3 TC Failures

None.

4 Unforeseen Out of Limits (OOLs)

Two out of limits were received at the time of the B2 CMN unlock on the 20th of March (see further details in section 5 and Appendix-A of this report)

5 On Board Anomalies

- A new CMN unlock on B2 unit happened on 2016-04-20T15:20:21, at that time both parameters SPM18167 "B3 LO_Locking" and SPM18162 "B2 LO_Out_Power" went out of limits. The anomaly recovery itself after 4 Epochs and produced 10 minutes of degraded data. The geolocation of the event was over Siberia at the following geographical coordinates:

Longitude= 59.606478

Latitude= 66.331927

6 On Board Events Telemetry

The following RAM Single Bit errors befell this week:

Event Description	Severity	Event Time	Parameters
RAM single Bit Error	WARN	2016.108.11.38.27.308	2188010
RAM single Bit Error	WARN	2016.110.15.19.41.082	20008AC
RAM single Bit Error	WARN	2016.112.12.23.15.027	20D215C

7 FOS Systems Status

All FOS systems behaved nominal with the following exceptions:

- On 2016-04-21 around 14:00:00z, the FOS PXMFP RM machine did not restart properly anymore. The problem seems to be related with the configuration of NVRAM and drives mismatch in PERC 4 RAID controller. Since similar errors were recently seen on the backup machine PLPCBKP, as emergency measure, a copy of the PLPCKBP machine is quickly performed in case of further failure of that machine too. DELL support is contacted but since the machine is out of warranty period no direct support is provided by the company.

The problem was anyway fixed the following day by the DPGS Analyst running the RAID BIOS Configuration Utility, removing the SCSI cabinet and recreating the RAID1 for logical disk unit 1.



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Since similar problems were also seen on PXMFBKP machine and because both machines share the old SCSI cabinet, that device is considered the common source of the problem. As result of this the SCSI device is switched off and permanently disconnected from the two systems.

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 exceptions:

9 X Band Data Reception in PXMF

None, all S band passes successfully received and processed.

10 Exceptional Activities

None.

11 AOB

None.



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APPENDIX A: OOLs

The following two OOLs were received at the time of the CMN Unlock anomaly on the 20th of April.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2016.112.00.01.26.236	2016.111.15.20.21.022	SPM18167	B2 LO_Locking	UNLOCK	LOCK
2016.112.00.01.26.039	2016.111.15.20.19.822	SPM18162	B2 LO_Out_Power	NOT-OK	OK