



## 1 General Comments

The activities scheduled for this week are those planned for calendar week 10 of year 2015, from 02/03/2015 to 09/03/2015 (DOYs 061/2015 to 068/2015).

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

- X-band passes over ESAC and Svalbard.
- One PMS offset including three Short Calibrations on day 05/03/2015 (orbit 28053) at 16:41:43.000z, 16:42:17.800 and 16:42:52.600.
- Local oscillator calibration every 10 minutes.

## 2 Mission Planning Deviation

A CCU reset happened on day 03/03/2015 at 03:57z and due to that the foreseen planning of the week was interrupted and resumed again on the same day (See further details on the Onboard Anomalies section)



# Operations Notes

FOS Team @ ESAC

Reported by: J. Fauste

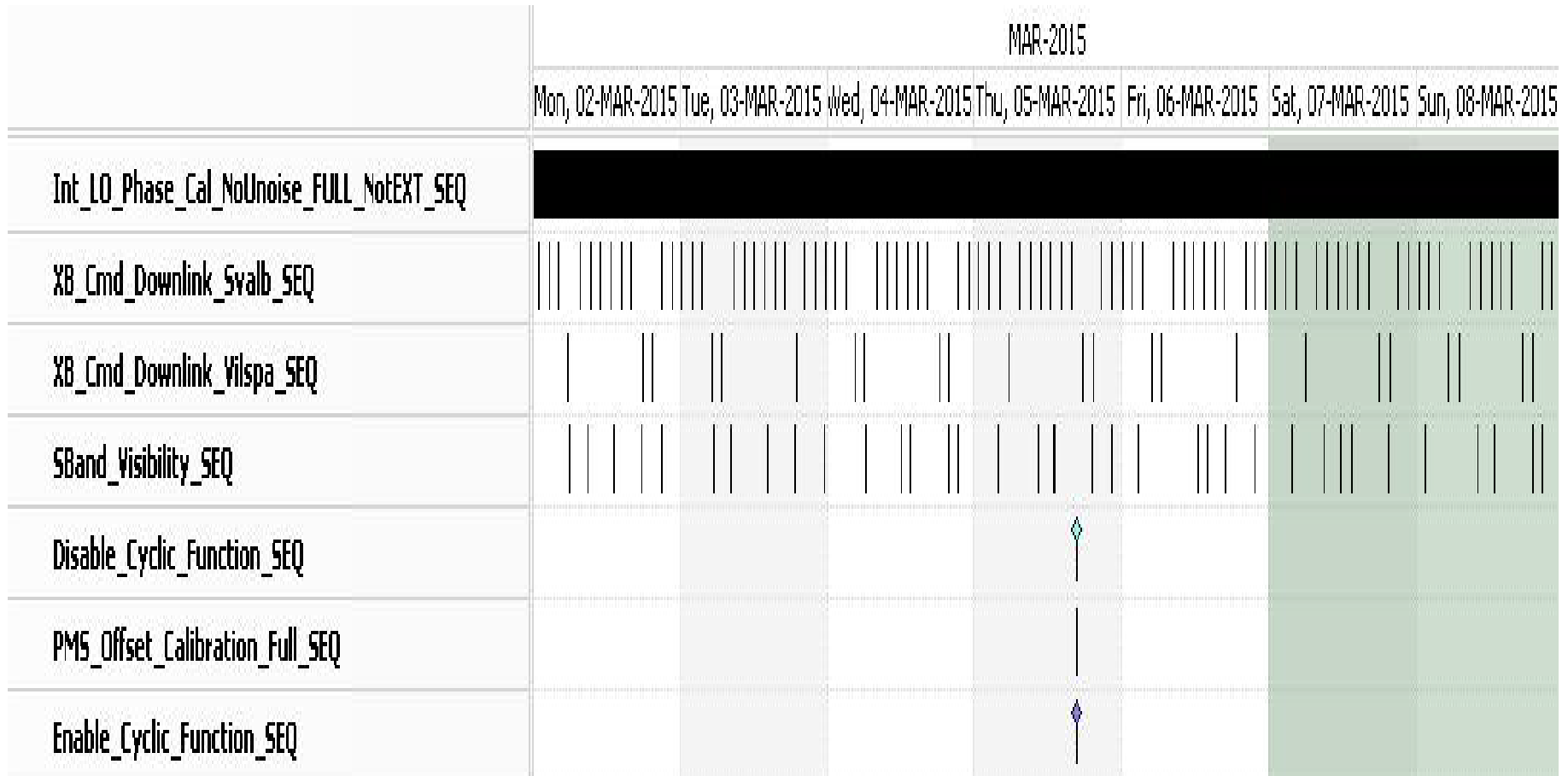
Topic:

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### 3 TC Failures

None.

### 4 Unforeseen Out of Limits (OOLs)

Several Out of limits were received on PLPC system at the time of the CCU reset and CMN unlock on day 08/03/2015 (see Appendix-A for further details)

### 5 On Board Anomalies

- A MIRAS CCU reset happened on day 03/03/2015 at 03:57:01z. The reset took place 11 minutes and 26 seconds after the end of the previous XBand pass over Svalbard station on that day at 03:40z. The anomaly took place over Alaska with the following geographical coordinates:

Latitude=60.310677

Longitude=225.753311

As specified in the instrument Boot Report packet, the reason for the reset seems to be, as in previous cases, a SLOT\_SCH\_TASK\_OVERRUN error alert. As consequence of that the following passes over Svalbard at 08:44z, 10:27z, 12:08z and 13:48z were not performed.

The sequence of on board events was as follows:

03:41:36.421 Switch on of XBand antenna

03:45:34.012 Switch off of XBand antenna (Data download finish at this time)

03:51:31.381 Reception of MM dump aborted event (This event packet is nominal and it is issued by MIRAS went the command to switch off the transponder is received after the antenna went off because the dump was aborted before at 03:45:34)

03:56:26.481 this is the time for the last Housekeeping packet before the reset, the reset takes place just after that.

03:57:00.752 this is the first Housekeeping packet received after the reset, around that time the Instrument Boot report was also generated.

03:57:01.000 A RAM Single bit error message was issued by the instrument (This message seems to appear in several previous resets but not always). From that point onwards the instrument is recovered except for the final execution of PRO-CRP-100)

The recovery of the anomaly was specified in CRF-480 in order to be uplinked during SBand Ground station passes either over Kourou at 09:58z or Kerguelen at 14:22z on day 03/03/2015.



The first of these passes was an extra pass requested by FOS and the second one was already scheduled by CNES. Unfortunately the TC link with Kourou station was not working properly and the instrument recovery, execution of procedure PRO-CRP-100, was partially executed. Due to that a new Ground Station pass was booked over Kerguelen at 12:41z. The execution of CRF-480 finally rejoined nominal XBand passes schedule from 15:28z on 03/03/2015 onwards.

- A new CMN unlock for CMN unit H1 happened on day 08/03/2015 at 21.07.42z. Both parameters lock status and output power, triggered out of limit in PLPC system. The geolocation of the event was over South America with the following geographical coordinates:

Longitude=308.790839

Latitude=-26.851882

## 6 Telemetry On Board Events in the period.

The following RAM single bit errors happened during the present reporting period:

Event Description	Severity	Event Time	Parameters
RAM Single Bit Error	WARN	2015.062.03.57.01.257	22FB4C0
RAM Single Bit Error	WARN	2015.062.23.34.48.745	206FA58

## 7 FOS System Status

All FOS systems behaved nominal during this period.

- On 05/03/15 A Hardware alert was raised by Zabbix agent on SMTA server. A physical disk failed, disk ID 3 on SMTA RAID 5 array and the hotspare disk automatically replaced the faulty disk. In order to rebuild again the array and come back to nominal configuration, the failed disk was manually unplugged and plugged again. A new spare disk was requested on 05/03/2015 to the FOS hardware provider in order to replace the faulty one. The new disk was finally installed on 06/03/2015 and the array nominally reconstructed after that.

## 8 Data Reception from CNES

All SBand passes of the week were correctly received from CNES and successfully processed by the FOS PLPC system

## 9 X-Band Data Reception in PXM

Not used during the present reporting period.



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### **10 Exceptional Activities**

All the ones related with the handling of the CCU reset: replanning of week 10, execution of CCU recovery procedure PRO-CRP-100 and issue of CRF-480.

### **11 AOB**

None.



### APPENDIX A: OOL's

The following Out of Limit was received on FOS PLPC system. The first two OOLs in his table came associated to the H1 CMN unlock on day 08/03/2015. The third OOL in parameter NTLK022 was triggered at the time of the CCU recovery procedure and when the onboard time line was temporary stopped.

The remaining OOLs were all generated at the time of the CCU reset.

OBT	Severity	TM Parameter	Alarm Value	Check Value	TM Description
2015.067.21.07.43.940	STATUS CHECK	SPM11167	UNLOCK	LOCK	H1 LO_Locking
2015.067.21.07.42.740	STATUS CHECK	SPM11162	NOT-OK	OK	H1 LO_Out_power
2015.062.08.27.17.716	STATUS CHECK	NTLHK022	Disabled	Enabled	ITL Ena State
2015.062.03.57.00.757	STATUS CHECK	XNIRCAST	NOT-OK	O.K	NIR CA VALID ST
2015.062.03.57.00.757	STATUS CHECK	XNIRBCST	NOT-OK	O.K	NIR BC VALID ST
2015.062.03.57.00.757	STATUS CHECK	XNIRABST	NOT-OK	O.K	NIR AB VALID ST
2015.062.03.57.00.757	STATUS CHECK	SPC02106	Inst Init	Any other value	Instrument_Mode
2015.062.03.57.00.757	STATUS CHECK	SPM11167	UNLOCK	LOCK	H1 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM12172	UNLOCK	LOCK	H2 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM13167	UNLOCK	LOCK	H3 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM16167	UNLOCK	LOCK	A3 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM15167	UNLOCK	LOCK	A2 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM14167	UNLOCK	LOCK	A1 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM19167	UNLOCK	LOCK	B3 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM18167	UNLOCK	LOCK	B2 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM17167	UNLOCK	LOCK	B1 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM22167	UNLOCK	LOCK	C3 LO_Locking
2015.062.03.57.00.757	STATUS CHECK	SPM21167	UNLOCK	LOCK	C2 LO_Locking



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2015.062.03.57.00.757	STATUS CHECK	SPM20167	UNLOCK	LOCK	C1 LO_Locking
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