FOS Team @ ESAC

Reported by:

J. Fauste

Topic: FOS Report for week 38, year 2015 Date:

from 14 SEP 2015 to 21 SEP 2015

1.0

#### **General Comments**

Activities scheduled for this week are those planned for the 38th calendar week of 2015; 2015-09-14 to 2015-09-21 (DoYs 257 to 264).

Issue:

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

One Warm NIR Calibration on 16 SEP 2015 (DoY 259) with ETO 18:36:30z (orbit 30860) and with the following expected calibration values

> B.T. = 4.091500R.M.S. = 0.930300

Sun Elevation = 5.999939 degrees = 108.517 degreesR.A. = -37.8757 degrees DEC.

- One PMS Offset on 17 SEP 2015 (DoY 260), including three Short Calibrations at 16:11:00.0z, 16:11:34.8z, and 16:12:10.6z (orbit 30873).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

# 2 Mission Planning Deviations

None.



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SEP-2015						
Mon, 14-SEP-2015	Tue, 15-SEP-2015	Wed, 16-SEP-2015	Thu, 17-SEP-2015	Fri, 18-SEP-2015	Sat, 19-SEP-2015	Sun, 20-SEP-2015
	Mon, 14-SEP-2015	Mon, 14-SEP-2015	Mon, 14-SEP-2015 Tue, 15-SEP-2015 Wed, 16-SEP-2015			



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# 3 TC Failures

None.

# 4 Unforeseen Out of Limits (OOLs)

None.

#### 5 On Board Anomalies

• A new Mass Memory Latch up of partition P9 happened on 2015-09-15T21:04:35z. The geolocation of the event was over South Australia at the following geographical coordinates:

> Longitude=140.59 Latitude= -38.445

The anomaly was recovered via CRF-525 on 16-SEP 2015 at 14:00z. No data losses are expected due to this event.

A new CMN unlock happened on day 2015-09-18T04:53:15 in CMN unit H3. The geolocation of the event was over south coast of Alaska with the following coordinates:

Longitude=207.477833 Latitude=51.727206

Both parameters Lock status and output power flag triggered an out of limit on PLPC system. The anomaly recovered in 3 Epochs.

Another CMN unlock happened day 2015-09on 19T10:11:29.573z in CMN unit H3. The geolocation of the event was over south America with the following coordinates:

Longitude=301.528170 Latitude=-27.439812

Both parameters locking status, SPM18167, and output power SPM18162, went Out of limits in FOS PLPC system. The anomaly recovered in 8 Epochs.

# 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	2015.263.08.59.41.660	21480F8
RAM single Bit Error	WARN	2015.256.12.40.55.212	22CF7D8

# 7 FOS Systems Status

All FOS Systems nominal.



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# 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:

- As part of the PUS Telemetry files delivered for GS pass KRX-10 on 2015-09-18T01:12:00z, a wrong file for date 16-SEP-2015, filename SMO\_PLTM1\_P\_2015\_09\_16\_04\_08\_42, was also delivered. This creates lots of "Time couple OBET lower than expected" alarm messages in FOS PLPC system. All the rest of telemetry files for that pass were correct and the anomaly did not create any telemetry gap in either PLPC or SMTA-MUST system.
- No telemetry data from Ground Station pass KUX-17 at 09:13z was received at ESAC. Since it was public holiday at CNES, the CNES oncall support was contacted from FOS side. CNES called back to FOS confirming that the pass was definitely lost. This created a data gap on PLPC system from 2015-09-18T04:27:09z to 2015-09-18T09:15:35z. E\_HKTM telemetry is definitely lost at SMTA-MUST level, but PUS telemetry was recovered from the XBand and PXMF system using Svalbard pass at 09:39:43z.
- As part of the PUS Telemetry files delivered for GS pass KRX-11 on 2015-09-19T19:02:00z, two files for date 18-SEP-2015, filenames SMO\_PLTM1\_P\_2015\_09\_18\_18\_11\_59 and SMO\_PLTM1\_P\_2015\_09\_18\_18\_14\_10, were also delivered. This creates lots of "Time couple OBET lower than expected" alarm messages in FOS PLPC system. All the rest of telemetry files for that pass were correct and the anomaly did not create any telemetry gap in either PLPC or SMTA-MUST system.

# 9 X Band Data Reception in PXMF

• Due to the data gap created on PLPC by the loss of GS pass KUX-17 on day 18/09/2015, PUS telemetry from 2015-09-18T04:27:09z to 2015-09-18T09:20:00z, was recovered from the XBand and PXMF system using Svalbard pass at 09:39:43z.

# 10 Exceptional Activities

None.

#### **11 AOB**

None.



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# **APPENDIX A: OOLs**

The following Out of of Limits were received during this reporting week.

GS_TIME	OBTIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2015.262.10.45.36.072	2015.262.10.11.29.573	SPM13167	H3 LO_Locking	UNLOCK	LOCK
2015.262.10.45.35.940	2015.262.10.11.24.773	SPM13162	H3 LO_Out_Power	NOT-OK	OK
2015.261.04.53.15.370	2015.261.04.53.15.370	SPM13167	H3 LO_Locking	UNLOCK	LOCK
2015.261.04.53.15.370	2015.261.04.53.15.370	SPM13162	H3 LO_Out_Power	NOT-OK	OK
2015.258.22.42.12.759	2015.258.21.04.35.049	DMASME03	LU Switch P9	OFF	ON
2015.258.22.42.12.726	2015.258.21.04.35.049	DMASME37	SDD LU Detected	FALSE	TRUE