



Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 20, year 2018

from 14 MAY 2018 to 21 MAY 2018

1.0

1 General Comments

Activities scheduled for this week are those planned for the 20th calendar week of 2018:

14 MAY 2018 to 21 MAY 2018 (DOYs 134 to 141).

The following routine activities were planned this week (see Gantt chart on next page and CRF 738).

- One Warm NIR Calibration on 16 MAY 2018 (DOY 136) with ETO 17:50:14z (orbit 44861; ASCENDING: thermally UNSTABLE) and with the following expected calibration values:
 - B.T. = 4.31°
 - R.M.S. = 1.24
 - Sun elevation = 6.11°
 - Moon elevation = -10.55°
 - R.A. = 319.82°
 - DEC. = 28.46°
- One PMS Offset on 17 MAY 2018 (DOY 137), including three Short Calibrations at 08:15:30.0z, 08:16:04.8z, and 08:16:39.6z (orbit 44869).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

Due to the CCU reset that took place on the 16th of May 2018 the following X Band passes were not acquired on ground:

STATION	AOS	LOS	DURATION
Xband_SVAL	2018-05-16T09:43:39z	2018-05-16T09:47:52z	253
Xband_SVAL	2018-05-16T11:25:35z	2018-05-16T11:29:11z	215
Xband_SVAL	2018-05-16T13:06:13z	2018-05-16T13:11:37z	324
Xband_SVAL	2018-05-16T14:46:11z	2018-05-16T14:53:53z	462
Xband_SVAL	2018-05-16T16:25:50z	2018-05-16T16:35:14z	563



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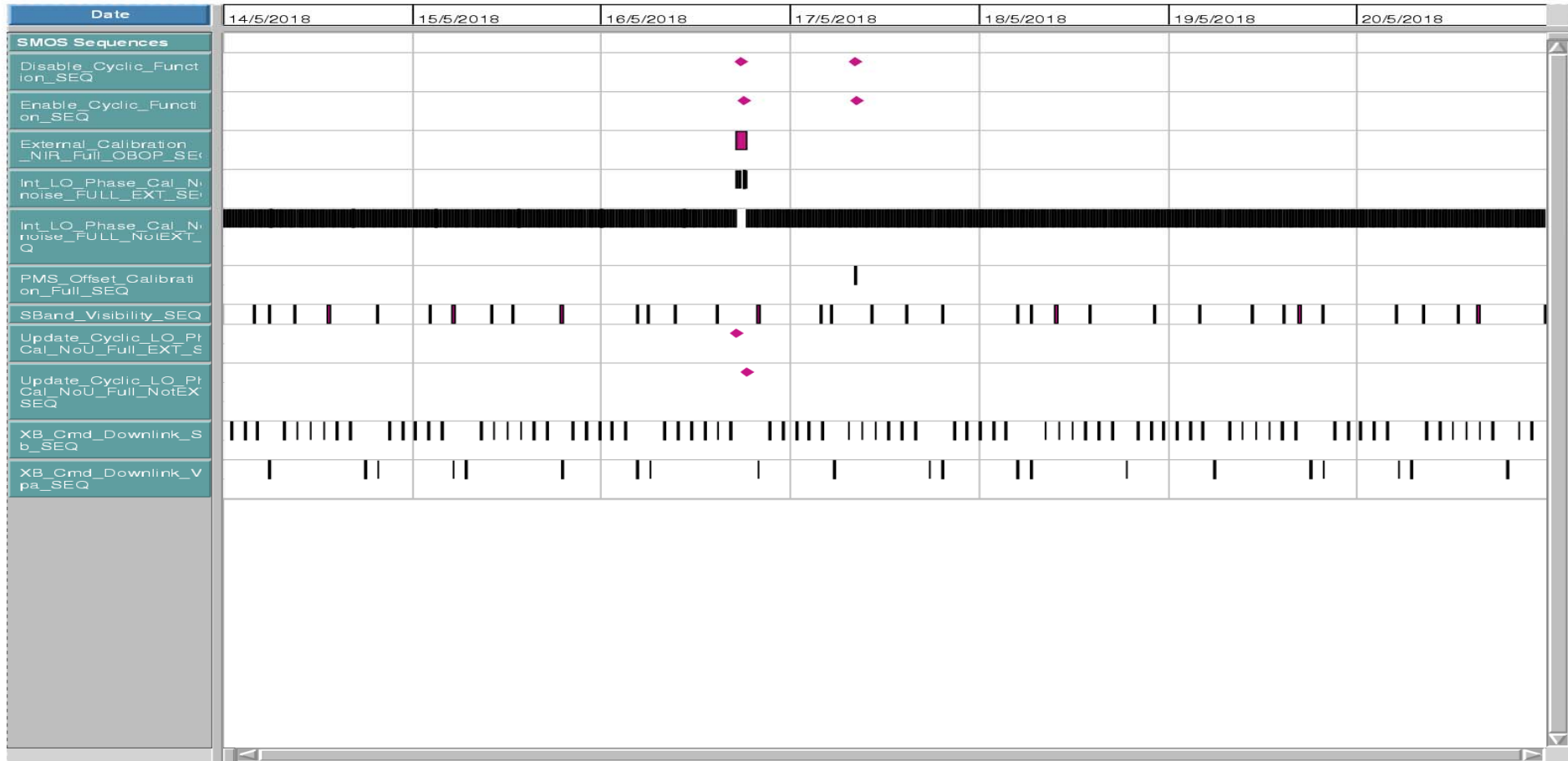
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Schedule Name: 2018_w20_cr ### Display start: 14-05-2018 00:00:00.000 ### Display end: 21-05-2018 00:00:00.000





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3 TC Failures

None.

4 On Board Anomalies

- A Mass Memory Double Bit memory Error took place for partition P8 on 2018-05-18T00:21:38.331z. No impact on science data since at the time of the anomaly both pointers Read and Write were in partition P4.
- The MIRAS instrument CCU unit, reset on 2018-05-16T08:05:11.659z (DOY 136). The CCU reset was first noticed by the CNES Operations team and communicated by phone to FOS after reception of the S Band pass KUX-18 with AOS at 09:15:53z. The anomaly happened during the Svalbard X Band pass, AOS 08:01:08z, that was executed just immediately before that S Band pass. The reset took place 257 seconds after the start of the pass and the last TM packet received before the reset was time stamped at 2018-05-16T08:04:37.392z. As detailed on the instrument boot report packet, issued immediately after the reset, the cause of the anomaly was, as in all previous cases, a Task Overrun error. MIRAS re-planning was prepared by FOS in the morning of the 16 of May and included as part of CRF No. 740. That replanning together with the CCU recovery procedure, was uploaded by CNES during S Band pass IVK-6 (AOS=14:33:35). As per this re-planning, nominal MIRAS X band GS dumps were resumed on 2018-05-16, at 19:57:15z (ESAC XBand pass). The list of MIRAS Out of limits received at the time of the reset can be seen in Appendix-A of this report.

The values of the READ and WRITE pointers at the time of the reset were:

Write= 3216180, MM Partition P7

Read= 2921825, MM Partition P6

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	2018-05-17T19:40:13	214CC40
RAM single Bit Error	730	WARN	2018-05-16T08:05:12	237D6D8



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6 FOS Systems Status

All FOS systems nominal.

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

The Mass Memory Double Bit memory error on the 18th of May generated the temporal PLPC OOL:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOl Value	Check Value
2018-05-18T05:33:02	2018-05-18T00:21:38	DMASME47	DB Err In P8	FALSE	TRUE

At the time of the CCU recovery procedure, the following expected OOL appeared on the PLPC at the time the MIRAS ITL was made disabled:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOl Value	Check Value
2018-05-16T20:20:23	2018-05-16T14:35:44	NTLHK022	ITL Ena State	Disabled	Enabled

The MIRAS CCU reset on the 16th of May produced the following list of temporal PLPC Out of Limits:

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOl Value	Check Value
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM22167	C3 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM21167	C2 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM20167	C1 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM19167	B3 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM18167	B2 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM17167	B1 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM16167	A3 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM15167	A2 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM14167	A1 LO_Locking	UNLOCK	LOCK



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2018-05-16T09:51:43	2018-05-16T08:05:11	SPM13167	H3 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM12172	H2 LO_locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPM11167	H1 LO_Locking	UNLOCK	LOCK
2018-05-16T09:51:43	2018-05-16T08:05:11	SPC02106	Instrument_Mode	Inst Init	Any other
2018-05-16T09:51:43	2018-05-16T08:05:11	XNIRABST	NIR AB VALID ST	NOT-OK	OK
2018-05-16T09:51:43	2018-05-16T08:05:11	XNIRBCST	NIR BC VALID ST	NOT-OK	OK
2018-05-16T09:51:43	2018-05-16T08:05:11	XNIRCAST	NIR CA VALID ST	NOT-OK	OK