1 General Comments

Activities scheduled for this week are those planned for the 45th calendar week of 2019:

04 NOV 2019 to 11 NOV 2019 (DOYs 308 to 315).

The following routine activities were planned this week (see Gantt chart on next page and CRF 844).

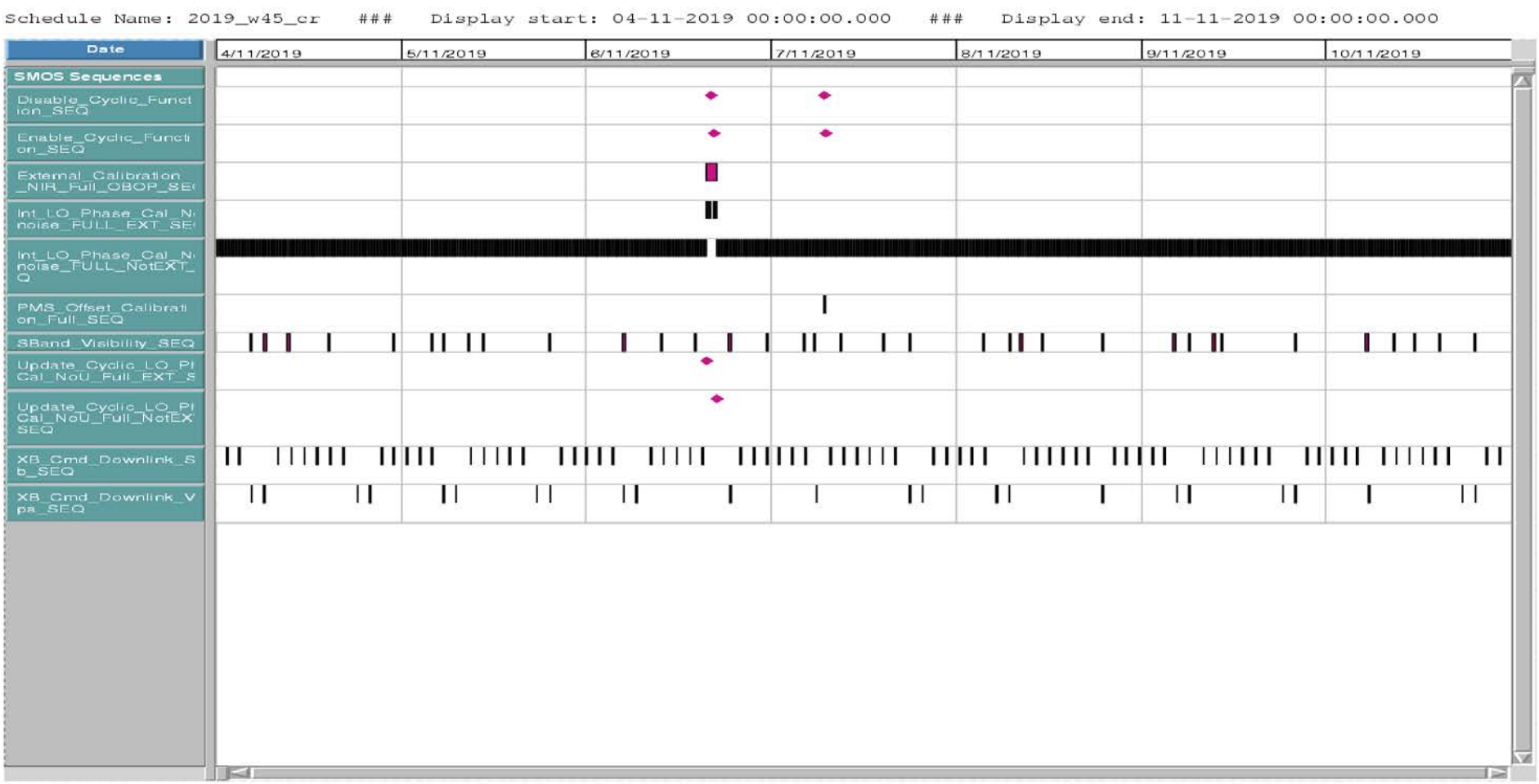
- One Warm NIR Calibration on 06 NOV 2019 (DOY 310) with ETO 16:17:42z (orbit 52615; ASCENDING: thermally STABLE) and with the following expected calibration values:

```
B.T.            =     3.78º
R.M.S.          =     0.62
Sun elevation   =     9.34º
Moon elevation  =   -56.18º
R.A.            =   136.97º
DEC.            =   -12.14º
```

- One PMS Offset on 07 NOV 2019 (DOY 311), including three Short Calibrations at 06:55:00.0z, 06:55:34.8z, and 06:56:09.6z (orbit 52624).
- Local Oscillator Calibrations every 10 minutes.
- *X* band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.

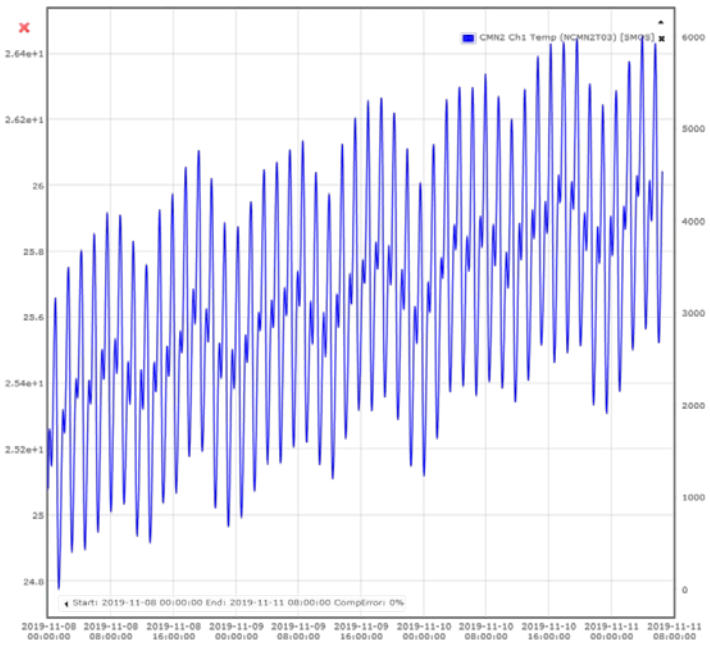

Schedule Name: 2019_w45_cr ### Display start: 04-11-2019 00:00:00.000 ### Display end: 11-11-2019 00:00:00.000
Date
4/11/2019
5/11/2019
6/11/2019
7/11/2019
8/11/2019
9/11/2019
10/11/2019
SMOS Sequences
Disable_Cyclic_Function_SEQ
Enable_Cyclic_Function_SEQ
External_Calibration_NIR_Full_OBOP_SE
Int_LO_Phase_Cal_Noise_FULL_EXT_SE
Int_LO_Phase_Cal_Noise_FULL_NotEXT_Q
PMS_Offset_Calibration_Full_SEQ
SBand_Visibility_SEQ
Update_Cyclic_LO_PhCal_NoU_Full_EXT_S
Update_Cyclic_LO_PhCal_NoU_Full_NotEXSEQ
XB_Cmd_Downlink_Sb_SEQ
XB_Cmd_Downlink_Vpa_SEQ

3 TC Failures

None.

4 On Board Anomalies

- Due to the continuous thermal degradation of MIRAS A1 segment and because of the progressive and seasonal increase of the Sun elevation over the MIRAS antenna plane at this time of the year, the thermal duty cycle for CMN A1 is not anymore activated from the 4th of November 2019 at 22:11:07z. CMN2 temperatures slowly started to increase during the next following days and in fact TM parameter NCMN2T03, went Out of Soft limit on FOS PLPC system on the 8th of November at 17:31:04 with value 26.01 degrees. From that point, and in a cyclic manner every orbit, the parameter goes out/in soft limit with a general increasing trend (see attached graphic). Soft high limit for that parameter is 26 degrees while high limits is currently set at 30 degrees. The temperature should start to decrease from the start of the next eclipse season foreseen on the 13th of November 2019. From that point onwards, temperatures should decrease until next winter solstice and from that point to raise again until next yearly maximum foreseen at the end of the eclipse (end January 2020).



- MIRAS instrument MM, partition P4, latched up 2019-11-06T18:54:47,829z (DOY 310). The following parameters went out of limits in the PLPC system:

2019.310.18.54.47.829z DMASME08 LU Switch P4
2019.310.18.54.47.829z DMASME37 SDD LU Detected

This anomaly was geolocated over the South Atlantic Ocean, half way between the islands of Georgetown and Saint Helena:

Latitude = -12.82°
Longitude= 344.71°

There were no science data losses associated with this anomaly because it affected partition P4, while the Read and Write pointers were both on partition P0. Recovery took place the following day, Friday 08 NOV 2019, at 01:00:00z (CRF 846).

At the time of the anomaly the position of the MM pointers were as follows:

READ = 153637 (partition P0)
WRITE = 200237 (partition P0)

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	2019-11-07T22:31:13	20CEB3C
RAM single Bit Error	730	WARN	2019-11-05T20:21:37	217B7FC

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.

APPENDIX A: OOLs

The following Out of Limits were receive don the FOS PLPC system at the time of the MM Latch-up reported in section 4 of this report.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2019-11-06T23:48:00	2019-11-06T18:54:47	DMASME37	SDD LU Detected	FALSE	TRUE
2019-11-06T23:48:00	2019-11-06T18:54:47	DMASME08	LU Switch P4	OFF	ON