Operations Notes

FOS Team @ ESAC

SMOS

Reported by:

J. Fauste/J.M. Castro Cerón

Topic:

Date:

Issue:

FOS Report for week 04, year 2020

from 20 JAN 2020 to 27 JAN 2020

1.0

1 General Comments

Activities scheduled for this week are those planned for the 04th calendar week of 2020:

        20 JAN 2020 to 27 JAN 2020 (DOYs 020 to 027).

The following routine activities were planned this week (see Gantt chart on next page and CRF 862).

- One Warm NIR Calibration on 22 JAN 2020 (DOY 022) with ETO 03:57:45z (orbit 53716; DESCENDING: thermally UNSTABLE) and with the following expected calibration values:

        B.T.   =   3.65°
        R.M.S.   =   0.07
        Sun elevation   =   9.82°
        Moon elevation =   -20.35°
        R.A.   =   28.05°
        DEC.   =   -16.27°

- One PMS Offset on 23 JAN 2020 (DoY 023), including three Short Calibrations at 06:57:30.0z, 06:58:04.8z, and 06:58:39.6z (orbit 53732).
- Local Oscillator Calibrations every 10 minutes.
- *X* band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.

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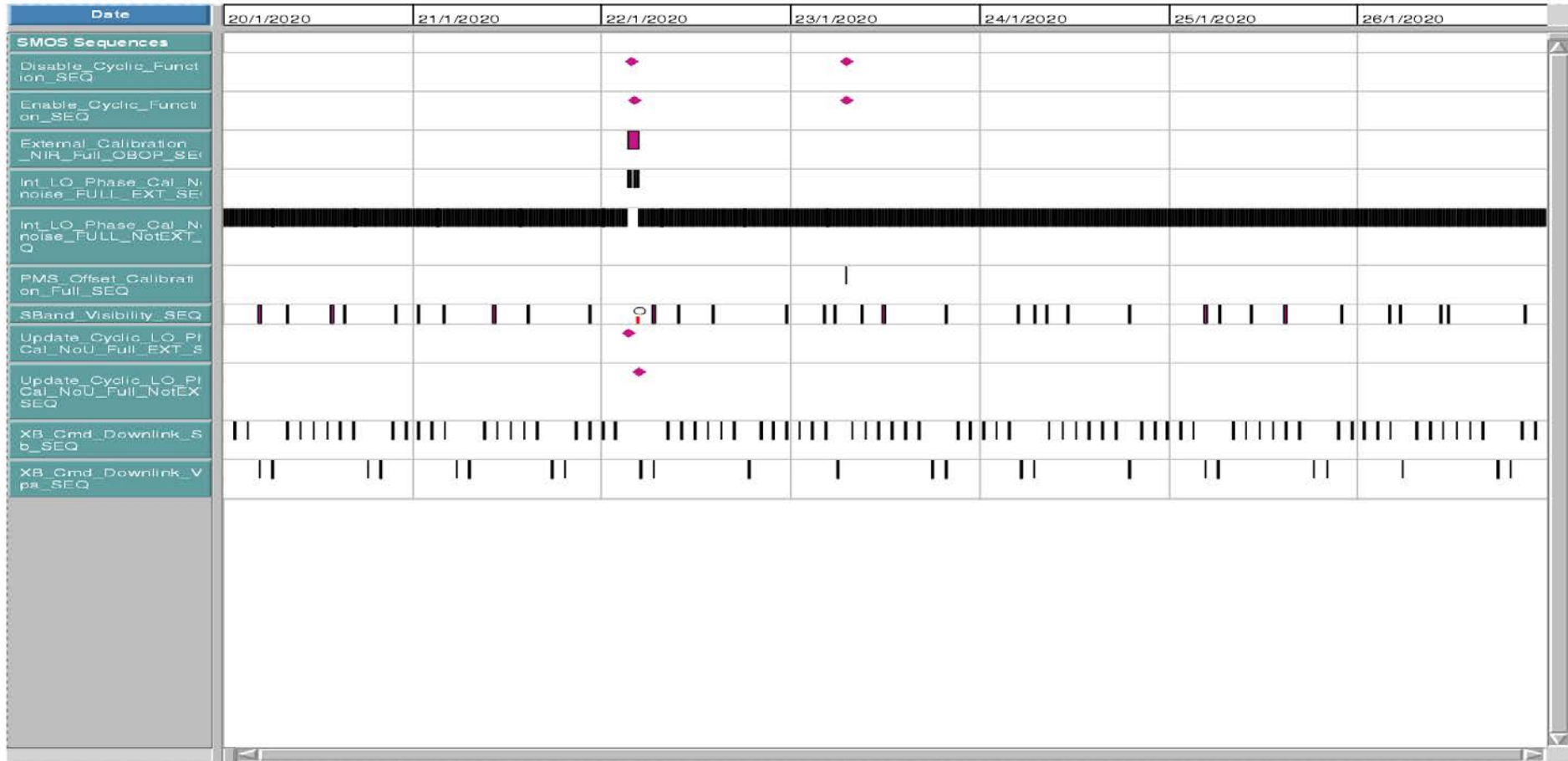
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3 TC Failures

None.

4 On Board Anomalies

- Due to the continuous thermal degradation of MIRAS A1 segment and because of the duration of the eclipses is getting shorter, the thermal duty cycle for CMN A1 is not anymore activated from 24 of January 2020 at 21:14:52z.

  CMN2 temperatures still remain in limits although it is foreseen to slowly increase during the next few days reaching their maximum around the 31 of January. From that point on-wards, temperatures should again decrease.

- A MM double bit error impacted partition P2 on 2020-01-24T17:18:54.691z. The following parameter went out of limits in the PLPC system:

  2020.024.17.18.54.691z.DMASME41   DB Err In P2

  This anomaly was geolocated over Vuolenkoski area (Finland):
  Latitude = 61.09°
  Longitude= 26.16°

  At the time of the anomaly, the position of the MM pointers were as follows:
  READ   = 3633582   (partition P8)
  WRITE   = 3655864   (partition P8)

  This error did not affect any science data since at the time of the anomaly the Write pointer was in partition P8.

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	2020-01-20T12:30:04	2012040

6 FOS Systems Status

All FOS systems nominal.

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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 following parameter went temporary out of limits on FOS PLPC system indicating the Mass Memory double bit memory error that happened for partition P2 on the 24th of January 2020.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2020-01-24T19:42:29	2020-01-24T17:18:54	DMASME41	DB Err In P2	FALSE	TRUE