Operations Notes
FOS Team @ ESAC
Reported by:
J. Fauste/J.M. Castro Cerón

Topic:	**FOS Report for week 09, year 2021**
Date:	from 01 MAR 2021 to 08 MAR 2021
Issue:	**1.0**

SMOS

1 General Comments

Activities scheduled for this week are those planned for the 09th calendar week of 2021:

    01 MAR 2021 to 08 MAR 2021 (DOYs 060 to 067).

The following routine activities were planned this week (see Gantt chart on next page and CRF 951).

- One Warm NIR Calibration on 03 MAR 2021 (DOY 062) with ETO 03:57:30z (orbit 59558; DESCENDING: thermally UNSTABLE) and with the following expected calibration values:

        B.T.   =   3.74°
        R.M.S.   =   0.12
        Sun elevation =   9.85°
        Moon elevation =   -39.92°
        R.A.   =   65.92°
        DEC.   =   -29.84°

- Two LONG Calibrations on 04 MAR 2021 (DOY 063), which encompassed two ascending semi-orbital periods starting at 15:01:00z (orbit 59579) and 16:41:30z (orbit 59580).
- Local Oscillator Calibrations every 10 minutes.
- *X* band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

Collision avoidance manoeuvre:
CNES notified the need to execute a new SMOS collision avoidance manoeuvre [estimated collision probability = 2.5e-02]. The time of closest approach was forecast for Thursday 04 MAR 2021 at 13:00:24z. The manoeuvre was scheduled on Thursday 04 MAR 221 at 12:10:17z.

The MIRAS on-board timeline was disabled and the instrument science data flagged with external APID during the whole duration of the manoeuvre, about 2 hours and 6 minutes, from 12:00:56z to 14:06:456z. During that time the MIRAS ITL was made disabled. The TCs for this special manoeuvre were uploaded Thursday 27 SEP 2018 during the following S band GS passes:

IVK-4 (AOS = 09:18:22; LOS = 09:31:12) <== nominal
KUX-1 (AOS = 10:35:29; LOS = 10:46:34) <== backup

Svalbard X band GS pass with AOS at AOS 2021-03-04T12:44:49z was cancelled because of this manoeuvre.

Operations Notes

FOS Team @ ESAC

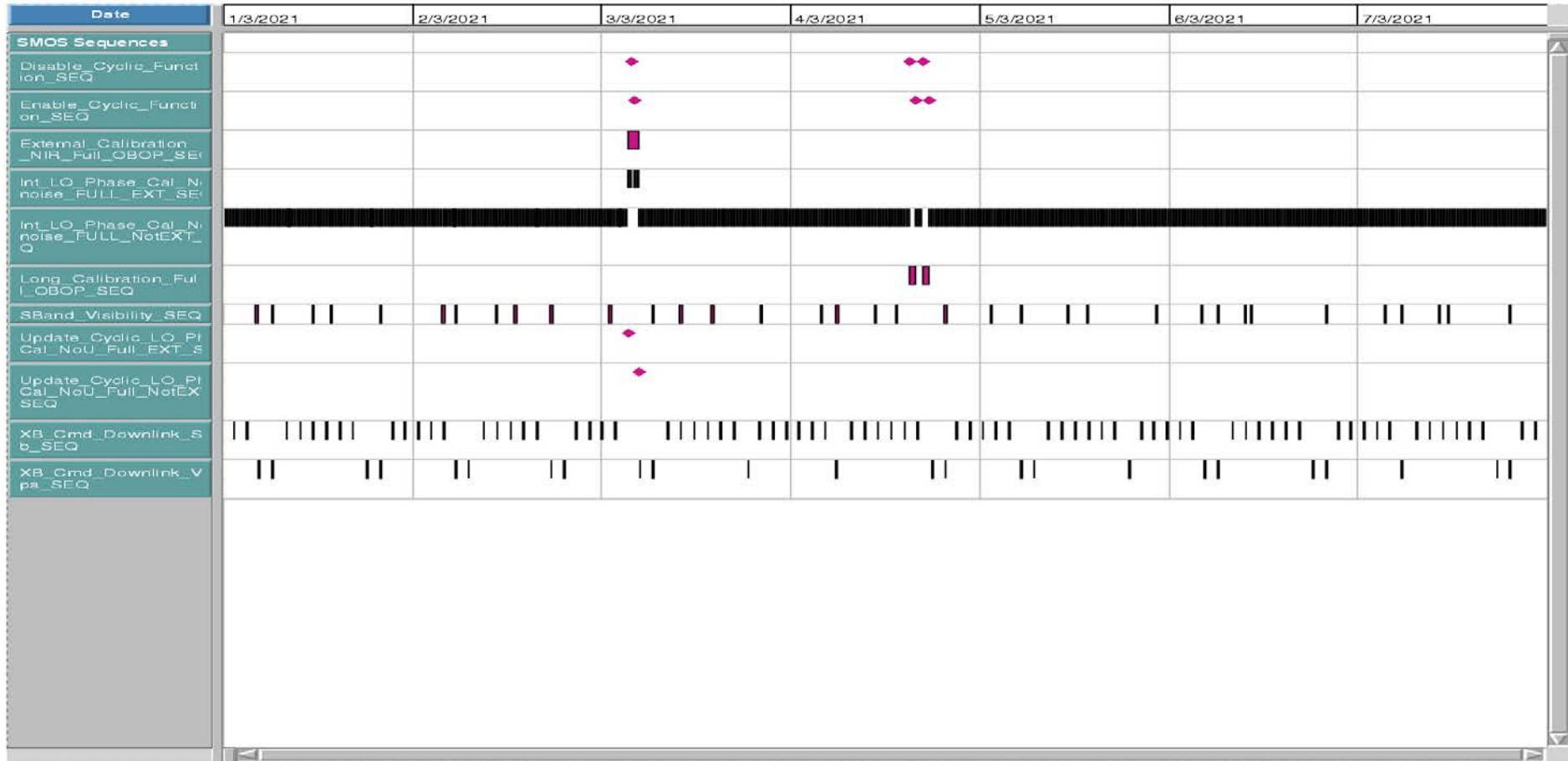*Reported by:*

J. Fauste/J.M. Castro Cerón

Topic: **FOS Report for week 09, year 2021**

Date: from 01 MAR 2021 to 08 MAR 2021

Issue: **1.0**

Schedule Name: 2021_w09_cr   ###   Display start: 01-03-2021 00:00:00.000   ###   Display end: 08-03-2021 00:00:00.000

Operations Notes
FOS Team @ ESAC
Reported by:
J. Fauste/J.M. Castro Cerón

Topic: **FOS Report for week 09, year 2021**
Date: from 01 MAR 2021 to 08 MAR 2021
Issue: **1.0**

3 TC Failures

None.

4 On Board Anomalies

- The MIRAS CMN, unit C3, unlocked 2021-03-01T04:35:38.249z (DOY 060). This anomaly was geolocated over the Norwegian sea:
  Latitude   = 64.14°
  Longitude   = 3.77°

  Only locking status SPM22167 went out of limits in the FOS PLPC system. The anomaly recovered in 10 Epochs.

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	2021-03-02T09:04:16	2315E0C
RAM single Bit Error	730	WARN	2021-03-02T11:03:38	232F160
RAM single Bit Error	730	WARN	2021-03-02T22:34:21	22E5BB0
RAM single Bit Error	730	WARN	2021-03-04T08:53:46	2199D90
RAM single Bit Error	730	WARN	2021-03-05T10:04:26	2176E98

6 FOS Systems Status

New FOS servers FOSVIRT02 and FOSVIRT04, hosting virtual instances of PLPCPRM-PXMFPRM and PLPCBKP-PXMFBKP were racked/networked on Friday 26 FEB 2021. Both Virtual machines of server FOSVIRT02 were brought online operationally by FOS on Thursday 04 MAR 2021.

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.

	Operations Notes	Topic:	**FOS Report for week 09, year 2021**
	FOS Team @ ESAC	Date:	from 01 MAR 2021 to 08 MAR 2021
	Reported by:	Issue:	**1.0**
	J. Fauste/J.M. Castro Cerón		

10 AOB

None.

Operations Notes

FOS Team @ ESAC

Reported by:

J. Fauste/J.M. Castro Cerón

Topic: **FOS Report for week 09, year 2021**

Date: from 01 MAR 2021 to 08 MAR 2021

Issue: **1.0**

APPENDIX A: OOLs

The following temporary out of limit was raised on the FOS PLPC system at the time of the collision avoidance manoeuvre indicating that MIRAS ITL was made disabled.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2021-03-04T13:44:34	2021-03-04T12:00:47	NTLHK022	ITL Ena State	Disabled	Enabled

The CMN unlock of C3 unit generated the following temporary out of limits on the FOS PLPC system.

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value
2021-03-01T06:25:59	2021-03-01T04:35:38	SPM22167	C3 LO_Locking	UNLOCK	LOCK