

Operations Notes

FOS Team @ ESAC Reported by:

Topic: Date: Issue:

FOS Report for week 21, year 2018 from 21 MAY 2018 to 28 MAY 2018

1.0

J. Fauste/J.M. Castro Cerón

1 General Comments

Activities scheduled for this week are those planned for the 21st calendar week of 2018:

21 MAY 2018 to 28 MAY 2018 (Doys 141 to 148).

The following routine activities were planned this week (see Gantt chart on next page and CRF 739).

- One PMS Offset on 24 MAY 2018 (DoY 144), including three Short Calibrations at 08:43:30.0z, 08:44:04.8z, and 08:44:39.6z (orbit 44970).
- Local Oscillator Calibrations every 10 minutes.
- X band Passes over ESAC and Svalbard.

2 Mission Planning Deviations

None.



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Schedule Name: 2018_w21_cr Display start: 21-05-2018 00:00:00.000 Display end: 28-05-2018 00:00:00.000 Date 21/5/2018 22/5/2018 23/5/2018 24/5/2018 25/5/2018 26/5/2018 27/5/2018 SMOS Sequences • Disable_Cyclic_Function_SEQ Enable_Cyclic_Function_SEQ SBand_Visibility_SEQ XB_Cmd_Downlink_S b_SEQ Ш XB_Cmd_Downlink_V pa_SEQ

SMOS

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3 TC Failures

None.

4 On Board Anomalies

• The MIRAS instrument MM, partition P9, latched up on 2018-05-21T12:13:06,588z (OBT; DoY 141).

The following parameters went out of limits in the PLPC system:

2018.141.12.13.06,588z DMASME03 LU Switch P9 2018.141.12.13.06,588z DMASME37 SDD LU Detected

This anomaly was geolocated over the southern Indian Ocean:

 $LAT. = 55.89^{\circ}$ $LONG. = 74.43^{\circ}$

There were no science data losses associated with this anomaly because it affected spare partition P9.

Recovery took place on 22 MAY 2018, at 15:30:00z (CRF 741).

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

READ = 2686302 (partition P6) WRITE = 2868487 (partition P6)

• The MIRAS instrument MM, partition P5, latched up on 2018-05-25T10:01:18,410z (OBT; DoY 145).

The following parameters went out of limits in the PLPC system:

2018.145.10.01.18,410z DMASME07 LU Switch P5 2018.145.10.01.18,410z DMASME37 SDD LU Detected

This anomaly was geolocated over the mouth of Río de la Plata (Argentina; South Atlantic Anomaly):

 $LAT. = -36.79^{\circ}$ $LONG. = 306.31^{\circ}$

There were no science data losses associated with this anomaly because it affected partition P5, while the Read and Write pointers were both on partition P2.

Recovery took place on 28 MAY 2018, at 12:30:00z (CRF 743).

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

READ = 980229 (partition P2) WRITE = 1155571 (partition P2)

5 On Board Events Telemetry

None.

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6 FOS Systems Status

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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, with the following exceptions:

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• The following *S* band passes were not received by FOS as expected:

IVK-07 AoS=2018-05-20T15:18:15z KRX-09 AoS=2018-05-20T23:43:18z ASX-07 AoS=2018-05-21T04:32:47z

Contacted by FOS on-call in the morning of 21 MAY 2018 (public holiday in France), CNES hotline reported an unknown network anomaly on their side. ESRIN Network Team reported no issues on ESA's side.

Missing passes started to arrive at FOS around 11:00z. TM files came with incorrect chronological order, some of them were repeated, what forced FOS to stop TM processing. The PLPC system was cleaned up via PDS Admin task and the following S band passes reingested:

```
IVK-07 AoS=2018-05-20T15:18:15z KRX-09 AoS=2018-05-20T23:43:18z ASX-07 AoS=2018-05-21T04:32:47z KUX-24 AoS=2018-05-21T09:21:14z
```

In the morning of 22 MAY 2018 FOS further received the following missing *S* band passes:

```
IVK-08 2018-05-21T12:59z

HBX-18 2018-05-21T15:17z

STC-27 2018-05-21T18:17z

KRX-10 2018-05-22T00:42z

ASX-08 2018-05-22T03:55z
```

The link was re-established from that point onward; S band pass reception at FOS became nominal afterwards. The problem was reported to be faulty equipment from ISP RENATER in Paris. A reboot of that equipment on 22 MAY 2018 closed the incident.

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

GS_TIME	OB_TIME	PARAMETER	DESCRIPTION	OOL Value	Check Value