

### 1 General Comments

The activities scheduled for this week are those planned for calendar week 14 of year 2014, from 31/03/2014 to 07/04/2014 (DOYs 090 to 97).

The following routine activities were planned during this week (see Gantt chart on next page):

The following routine activities were planned during this week (see Gantt chart on next page):

- X-band passes over ESAC and Svalbard.
- One PMS offset including three Short Calibrations on day 03/04/2014 (orbit 23217) at 14:39:00.000z, 14:39:34.800z and 14:40:09.600z
- Local oscillator calibration every 10 minutes.

#### 2 Mission Planning Deviation

Due to a MIRAS onboard SW CCU reset that happened on 06/04/2014 at 15:17:27z, the following X-band passes over Svalbard station on day 06/04/2014 at 16:52:44z, 20:11:17z 21:50:11z 23:28:53z were lost.



|   |      |         | APR-2014 |     |          |     |            |        |      |           |    |             |       |        |          |      |           |       |
|---|------|---------|----------|-----|----------|-----|------------|--------|------|-----------|----|-------------|-------|--------|----------|------|-----------|-------|
|   | Mon, | 31-MAR- | 2014     | Tue | 01-APR-2 | 014 | Wed, 02-AF | R-2014 | Thu, | 03-APR-20 | 14 | Fri, 04-APR | -2014 | Sat, O | 5-APR-20 | 14 S | un, 06-AP | R-201 |
| Int_LO_Phase_Cal_NoUnoise_FULL_NotEXT_SEQ |      |         |          |     |          |     |            |        |      |           |    |             |       |        |          |      |           |       |
| XB_Cmd_Downlink_Svalb_SEQ                 |      |         |          |     |          |     |            |        |      |           |    |             |       |        |          |      |           |       |
| SBand_Yisibility_SEQ                      |      |         |          |     |          |     |            |        |      |           |    |             |       |        |          |      |           |       |
| XB_Cmd_Downlink_Vilspa_SEQ                |      |         | Π        |     |          |     |            |        | [    |           |    |             |       |        | 1        |      |           |       |
| Disable_Cyclic_Function_SEQ               |      |         |          |     |          |     |            |        |      | Ŷ         |    |             |       |        |          |      |           |       |
| PMS_Offset_Calibration_Full_SEQ           |      |         |          |     |          |     |            |        |      |           |    |             |       |        |          |      |           |       |
| Enable_Cyclic_Function_SEQ                |      |         |          |     |          |     |            |        |      | <b>^</b>  |    |             |       |        |          |      |           |       |

FOS Report for week 14

1.0



#### 3 TC Failures

None.

## 4 Unforeseen Out Of Limits (OOLs)

Due to the on-board SW CCU Reset that happened on day 06/04/2014 at 15:17:27z several Out of Limits were received at the time of this reset. (see Appendix-A for further details)

## 5 On Board Anomalies

• A new MIRAS on-board SW CCU reset happened on Sunday 06/04/2014 at 15:17:27z. As in previous occasions the reset took place at the end of an XBand pass that started at 15:13z over Svalbard. After the reset, the instrument downlink mode was autonomously changed into auto downlink mode and only XBand passes over ESAC automatically commanded. The problem was initially suspected by the DPGS operator on shift since the data for the following pass over Svalbard station was not received on ground. Finally, the problem was spotted by the CNES operational team during the next SBand pass, Aussaguel-7 at 18:40z that triggered a final call to the FOS hot line phone at 19:20z. As per the current agreement between ESA and CNES, and since the reset itself happened on Sunday outside nominal working hours, the full instrument recovery, execution of procedure PRO-CRP-100 and upload of the instrument planning for the week, was agreed to be executed during the first morning pass of the following day 07/04/2014. A special CRF instructing such recovery was executed during the first Sband morning pass KER 15 at 11:48z.

## 6 Telemetry On Board Events in the period.

The following RAM Single bit errors and alarm event messages were received during this week. The alarm messages here displayed are fully related to the CCU reset on 06/04/2014.

| Event Time Severity   |       | Event Description                             | Parameter |  |  |
|-----------------------|-------|---|-----------|--|--|
| 2014.094.00.31.37.339 | WARN  | RAM single Bit Error                          | 2175934   |  |  |
| 2014.094.11.58.13.724 | WARN  | RAM single Bit Error                          | 2108444   |  |  |
| 2014.096.15.17.26.062 | ALARM | MM_Partition_Configuration_Acquistion_Failure |           |  |  |
| 2014.096.15.17.26.082 | ALARM | MM_Error_Counters_Acquisition_Failure         |           |  |  |
| 2014.096.15.17.26.102 | ALARM | MM_Scrub_Frequency_Acquisition_Failure        |           |  |  |



Topic: Date: Issue:

| 2014.096.15.17.26.142 | ALARM | MM_Address_Acquistion_Failure |         |
|-----------------------|-------|-------------------------------|---------|
| 2014.096.15.17.26.172 | ALARM | MM_Science_Write_Failure      |         |
| 2014.096.15.17.26.272 | ALARM | MM_Science_Write_Failure      |         |
| 2014.096.15.17.26.372 | ALARM | MM_Science_Write_Failure      |         |
| 2014.096.15.18.00.496 | WARN  | RAM single Bit Error          | 2108444 |

# 7 FOS System Status

• On 03/04/2014 MUSTPC2 machined reported a faulty disk where two filesystems /data2 and /data3 became affected. The affected disk was replaced by a new spare disk and data backups recovered from the MUSTPC1 system instead of the external USB disk used as nominal backup system. The data on that disk was not possible to use since data become lost during the wrong mounting of the filesystem after the machine reboot.

## 8 Data Reception from CNES

All SBand passes have been nominally acquired and processed by FOS.

# 9 X-Band Data Reception in PXMF

Not used during the present reporting period.

# **10 Exceptional Activities**

An exceptional CRF number 413, was issued by the FOS on day 07/04/2014 in order to recover the CCU reset anomaly on 06/04/2014.

## 11 AOB

None.



Topic: Date: Issue:

#### **APPENDIX A: OOL's**

The following list of Out of Limits were received at the time of the onboard SW CCU reset.

| OBT Time              | TM ID    | Description     | <b>OOL</b> Value | OOL Checked |
|-----------------------|----------|-----------------|------------------|-------------|
| 2014.096.19.10.45.688 | NNO60057 | EEPROM A Result | LOW              | 40062       |
| 2014.096.19.10.45.688 | NNO60058 | EEPROM A Master | LOW              | 40062       |
| 2014.096.15.17.59.996 | XNIRCAST | NIR CA VALID ST | STATUS           | NOT-OK      |
| 2014.096.15.17.59.996 | XNIRBCST | NIR BC VALID ST | STATUS           | NOT-OK      |
| 2014.096.15.17.59.996 | XNIRABST | NIR AB VALID ST | STATUS           | NOT-OK      |
| 2014.096.15.17.59.996 | SPC02106 | Instrument_Mode | STATUS           | Inst Init   |
| 2014.096.15.17.59.996 | SPM11167 | H1 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM12172 | H2 LO_locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM13167 | H3 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM14167 | A1 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM15167 | A2 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM16167 | A3 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM17167 | B1 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM18167 | B2 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM19167 | B3 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM20167 | C1 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM21167 | C2 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM22167 | C3 LO_Locking   | STATUS           | UNLOCK      |
| 2014.096.15.17.59.996 | SPM13202 | CMN H3 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10212 | CMN C3 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10211 | CMN C2 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10210 | CMN C1 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10209 | CMN B3 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10208 | CMN B2 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10207 | CMN B1 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10206 | CMN A3 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10205 | CMN A2 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10204 | CMN A1 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10200 | CMN H2 ERR FLAG | HIGH             | 128         |
| 2014.096.15.17.59.996 | SPM10108 | CMN H1 ERR FLAG | HIGH             | 128         |