

meeting date	6 <sup>th</sup> February 2003	ref./réf.	page/page	1
date de la réunion				6
meeting place	ESOC	chairman	D. Texier	
minute's date	7 <sup>th</sup> February 2003	participants	A. Parmar, M. Schmidt, L. Hansson, R. Walter, D. Texier, E. de Miguel, C. Larigauderie (p.t.),	
subject/objet	Co-ordination meeting # 4	copy/copie	All participants + PIs + M. Kessler	

### description

## 1. Approval of agenda

The agenda sent before the meeting was approved.

## 2. Review of actions

There was only one open action :

Action CO\_03\_01 : Project Scientist to define how to resume instruments operations after a solar flare (e.g. a criteria on the IREM counts). Action still open : inputs have been provided by JEM-X. They are now being looked at. Inputs are needed from the other instruments.

*Action CO\_04\_01 on OMC, SPI & IBIS Operations Managers to provide to R. Much the criteria how to resume science operations for their instrument after a solar flare. Due date : 15/03/2003.*

## 3. Status of operations

### 3.1. Mission Planning

POSeS have been generated and exported by ISOC until revolution 41.

PSFs until revolution 48 have been sent by MOC. New EDs were defined for the JEM-X switch-off at 70000 km. There are some problems with the usage of the Goldstone DSS-24 antenna (backup antenna to the DSS-16), because it has a 10 deg elevation limit while the DSS-16 has a 6 deg elevation (this ~ 15 min difference can have a huge impact on the timeline of commands).

More and more coordinated observations with Integral are received. For ground based telescope people want to know 2-3 months in advance the Integral schedule. So we should go as much as possible into the nominal turn around time of producing POSeS 4-6 weeks in advance.

Note that very soon the information on the short term (from the generated POSeS) will be available from the web.

**description**

### 3.2. Real-Time telemetry

ISDC shown the statistics of the TM reception since the beginning of the mission. It shows that after having fixed several problems that affected operations during the end of the year, the situation has generally improved (from the perspective of the total amount of data lost). Although there is still a huge number of small telemetry gaps of 1-2 frames.

### 3.3. TM consolidation

The archive consolidation can now be done in parallel with the real-time stream. This improved substantially the situation.

Most of the data lost from Goldstone are lost between the Ground Station and the AMMUS node at JPL (where archival/retrieval is done) and therefore cannot be recovered during the data consolidation process. The usage of the RNS (Reliable Network Service) would ensure the availability of all the science data, but the latency observed on this line would give problems with the command verifications and would stop the timeline.

It is worth noting that special operations like calibration observations, On-Board SW updates ... should as much as possible be scheduled under Redu coverage.

### 3.4. OLF problems

The problems with the OLF delivered by MOC to ISDC have been solved.

### 3.5. Consolidated processing

ISDC has started the consolidated processing at the end of last week. The data from revolutions 1 to 11 should be put in the archive tomorrow. Processing will now proceed with revolution 12 onward. ISDC expects to have cleared the backlog in 1-2 months.

The archive data will be copied to ISOC soon (when the data are backed-up at ISDC).

### 3.6. ODB

The last ODB was installed for operations on 03/02/2003.

It is expected to update the Instrument ODB following the change of the IREM BCP scaling factor in order to adjust the thresholds for all the instruments.

### 3.7. ECS/OCS interface between ISDC & ISOC

ISDC generated the ECSs for revolutions 26 & 27. They are not complete since they were generated using the real-time processing. They are about to be sent to ISOC. Note that they will be re-delivered (with the same name) after the consolidated processing.

In these ECSs have been added a) a measure of the PICsIT histogram received efficiency and b) a measure of the background (these updates are compliant with the current ICD).

ISDC will look at the possibility to provide also a measure of the SPI spectra downlinked.

**description**

The ECSs from the consolidated processing are expected to start to be delivered next week.

ISOC will start generating the OCSs only from the ECSs of the consolidated processing.

#### 4. AOCS changes (increase of OTF threshold)

The OTF thresholds were increased to 2 arcmin in roll, 36 arcsec in pitch and 36 arcsec in yaw on Monday 27 January 2003 (revolution 35). No OTF flickering has been seen after that change.

There are no results yet of the ASTRIUM study on the slew performance. If confirmed, the excellent slew accuracy could lead to the suppression of the corrective slews.

Several constraints relaxations are being studied by ALENIA (e.g. the number of RWB).

#### 5. Data availability to Instrument Teams

The interface to request private data is via the ISDC (see the page “change control” of the ISDC web). No formal request have been received so far from the PIs following the proposal to give to the Instrument Teams the access to 6 months of private data for the purpose of instrument calibration and monitoring. Note that all proposal PI concerned will be contacted to get their approval.

#### 6. Plans for the analysis of the Crab observation

SPI is at the maximum of the telemetry available and even start to loose some data. It will therefore request a small increase (by one packet) of the telemetry allocation for the Crab observations.

*Action CO\_04\_02 on C. Larigauderie to contact R. Much to discuss the details of the TM bandwidth needed for the Crab observations. Due date : 06/02/2003.*

Some tuning of the IBIS configuration will be done for the Crab observation (ISGRI upper threshold, Compton selection). The OCRs will be submitted asap.

Note that a meeting of the Payload Calibration Working Group is planned on 19 March at ISDC to look at the detailed plans for the analysis of the Crab observations.

#### 7. Following of instruments configuration

Before the start of the Crab calibration exercise, it is important to be sure that the configuration of the instruments is the correct one. This is particularly true after the on-board software patches of IBIS, SPI and JEM-X.

*Action CO\_04\_03 on all the Instruments Operations Managers to confirm that the configuration of their instruments during the Crab calibration observations is the correct one. Due date : 15/02/2003.*

It is noted that for SPI, all the “FM configuration” TPF files use by MOC are up-to-date. And that all their contents are in the telemetry.

**description**

For IBIS, the Operational Change Request to always make a dump of a context table after it has been changed has been submitted. There is still a problem that not all the dumps of the context tables are currently decoded at ISDC. IBIS confirmed that they currently do not have the resources to deliver to ISDC these “context-decoding routines”.

OMC confirmed that the used configuration is the nominal one.

## 8. Electron belts

### 8.1. Plot of the electron belts monitoring

ISDC now provides the information on the electron belts entry/exit on their web page (see Instrument → IREM → Perigee to perigee monitoring → data location or rev. 1-35).

The values of the belts crossing times & heights are updated every revolution while the plot of the belts heights since the beginning of the mission is updated weekly.

Currently all instrument start science operations above 40000 km at the start of the revolution and SPI, IBIS & OMC stop at 60000 km at the perigee entry while JEM-X stops at 70000km.

### 8.2. Instruments inputs to adjust start/stop of science operations during/after a solar flare

Inputs have been received from JEM-X and are currently being looked at. See action CO\_04\_01 in point 2 of the agenda for IBIS, SPI & OMC.

## 9. Maintenance of the operational system : system outages (MOC)

A number of maintenance activities on the MOC system have to be performed (e.g. CPU enhancement on the operational machine in chain A). Since it is not possible to perform them during the perigee passage (night time) the only solution is to swap operations to the chain B. The consequences are : no OLF and no snapshot attitude sent to ISDC, no GRB monitoring at ISDC and no OMC re-commanding.

It was decided that performing these activities during daytime was acceptable, and MOC will try to minimise the impact.

## 10. Documentation

Following the experience of the PV phase, a number of documents need to be updated.

ICDs :

- PSF ICD : *Action CO\_04\_04 on M. Schmidt to check if the PSF ICD needs to be updated as if so to have it issued by 15/03/2003.*
- POS-ICP ICD : Updated issue planned for 20/03/2003.
- ISOC-ISDC ICD : Updated issue planned for 28/02/2003.
- IFTS ICD : Updated issue planned for 28/02/2003
- MOUT Appendix L ICD : Updated issue planned for 28/02/2003.

The FOP v2 will be released end of February.

**description**

## Instrument User Manuals :

- The SPI UM needs to be updated (default parameter values, IASW update ...) before the end of the CNES involvement. Planned date : end of March.
- The IBIS UM also needs to be updated (Change of instrument configuration, ISGRI patch, several corrections ...). Planned date : 10/04/2003
- Several items of the OMC UM could be updated (new contingency procedures, incorrect description of a TM header, update of the window selection S/W ...).
- The JEM-X UM has also a number of updates pending. It is expected to update it after the Crab observations at the end of March.

## Instrument Teams to Ground Segment Interface Document :

*Action CO\_04\_05 on all the Operations Managers to review the document and to provide updates to D. Texier. Due date : 20/02/2003.*

*Action CO\_04\_06 on D. Texier to re-issue the document including all the received updates. Due date : 28/02/2003.*

## 11. Anomaly reports

### 11.1. MOC anomaly reports

9 Anomaly Reports are opened on the instruments in the MOC database. They are under investigation. And there are no open Anomaly Reports on ISOC nor ISDC.

### 11.2. ISDC anomaly reports

Among the 8 Anomaly Reports still open in the ISDC database, 5 are under investigation. The 3 others are understood and are waiting for an update of their respective Instrument User Manuals to be closed.

## 12. A.O.B.

### 12.1. SPI cold plate temperature at 85 K

It is the SPI intention to decrease the cold plate operating temperature to 85 K. This would reduce the frequency for annealing.

A Change Request is about to be submitted.

### 12.2. Next teleconference between MOC, ISOC & ISDC

The date has been changed from 13/02/2003 to Thursday 20/02/2003 at 10:00

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**description****12.3. Next Coordination meeting**

It is recommended to have the next co-ordination meeting before the MPVR (Mission Performance Verification Review), i.e. beginning of April 2003. At ISDC.

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