meeting date / *date de la réunion*	11th September 2003	ref./*réf.*	page/*page* 1 / 9

meeting place	VILSPA	chairman	D. Texier
minute's date	12th September 2003	participants	M. Schmidt, L. Hansson, R. Walter, D. Texier, G. la Rosa, E. de Miguel, N. Lund, A. Domingo, M. Mass-Hesse (p.t)
subject/*objet*	Co-ordination meeting # 6	copy/*copie*	All participants + PIs + M. Kessler + S. Scaglioni

description

1. Approval of agenda

The agenda sent before the meeting was approved.

2. Review of actions

All the actions from the previous meetings are closed.
Status of the actions of the last co-ordination meeting (13/05/2003) :

CO/05_01, *M. Schmidt to distribute the result of the analysis performed by S. Fahmy (To look at the executed revolutions to compute the time used in slews that was not needed, due to the operational slew accuracy better than the predicted one)* : Closed, done.

CO/05_02 : *M. Schmidt to distribute details on the change made in Goldstone DSS-16 in the second half of Feb 2003 (offset with Redu reduced from 140 μs to 40 μs)* : Closed, done.

CO/05_03 : *R. Walter to provide a warning for the timing offset in the Data User Manuals or in the ISDC-Newsletter* : Closed, information included in the ISDC Newsletter.

CO/05_04 : *M. Schmidt to provide the algorithm to re-process the data at ISDC to correct for the timing offsets* : Superseded. See details in point # 11 of the meeting.

CO/05_05 : *G. la Rosa to provide the IBIS constraints for the PST* : Closed, done.

CO/05_06 : *L. Hansson to provide a description of the changes made for the OMC delta catalogue to ISDC* : Closed, done.

CO/05_07 : *OMC to look at the ISDC web page (IAU circulars) to see if they can update the OMC catalogue with it* : Closed, see details in point 15.3 of the meeting.

3. Status of operations

3.1. MOC H/W & S/W upgrade after TM bandwith increase

The H/W purchased after the increase of the TM bandwith has been installed. But there is still a problem : every day between 20:00 and 22:00 the archiving stops. These 2 h of science data lost are replayed manually from the station.
The problem is under investigation and in the meantime a backlog for the playback is piling up (22 h in the past 1.5 weeks).
Up to now no science data are lost, the impact is only an increased delay for MOC to send the CD-ROMs.

The request for an engineering window to switch from the high bit rate to the low bit rate and back will be submitted soon (1-2 h below the belts). The tests performed by ALENIA indicate that this could cure the problem with the VC7 telecommanding chain.

Many gaps in the line between MOC and ISDC have occurred in the last days. This is believed to be because of a problem with the link to one of the PI workstations.

Action CO/06_01 : M. Schmidt to send a note describing the reason for these gaps (Due date 19/09/2003).

3.2. Status of the SPI mis-alignment after the update

A new SPI mis-alignment matrix was provided by ISDC to ISOC before the SPI annealing.
The Crab calibration observation of revolution 102 (dithering observation) was analysed, giving a Crab position only 0.6 arcmin away from its nominal position.

The selection of the data used to derive the matrix can be improved, and a new matrix will be regenerated soon.

3.3. OMC parameter out of range

The OMC rejected commands were due to a failure of the pointing software, combined with the absence of a check for the validity of a parameter.

The OMC pointing software has been updated and is being tested. It is planned to be in the ISOC system v9.8.5 of next week.

3.4. Monitoring of the electron belts

The monitoring of the belts entry & exit done by ISDC (up to rev 110) indicates currently an entry in the belts around 60000 km and an exit of the belts between 35000 and 40000 km since rev 90 while it was 30000 before.

3.5. Hand-overs during staring observations : open points ?

With the SCREW 363 implemented in ISOC v9.8, all known IBIS problems with H/O have been fixed.

3.6. Pointing duration in the context of CCCFs : open points ?

Following the implementation there are no remaining open points.

3.7. AO2 status

The submission process of the AO2 was very smooth.
After cleaning, 145 proposals have been submitted.
Details will be available in an ISOC newsletter to be issued this week.

4. Handling of Pointing ID in case of slew introduced by MOC to avoid false GRB alerts

The ISDC software has been corrected : IBAS is now more robust by using, when needed, the snapshot attitude file. These false GRB alerts should not happen anymore.

5. Telemetry consolidation at ISDC

Because of the difficulties at MOC to consolidate the archive (after the TM increase and before the H/W & S/W upgrade) several consolidated data CD-ROMs sent to ISDC have gaps.
This is particularly the case of revolutions 81 & 84 where the CD-ROMs contain ~ 7 % less data than the real-time data. It is therefore needed for these two revolutions to merge the 2 streams of data (real-time & consolidated) before doing the data processing.

The tool to merge the two streams is not available at ISDC. It would require one week for the ISDC expert (but he has unfortunately left ISDC this summer).

Action CO/06_02 : PS/PM to decide if ISDC should go ahead with the processing of rev 81 & 84 using the available consolidated data (Due date 19/09/2003).

The requirement on MOC is to provide to ISDC 100 % of the data received at the Ground Stations. Unfortunately, this requirement is too optimistic and cannot be fulfilled.

Action CO/06_03 : PS/PM to propose a new value for this requirement (Due date 19/09/2003).

Action CO/06_04 : Following the value given by the previous action, ISDC & MOC to devise how to make statistics on the received telemetry at an accuracy compatible with the new requirement (Due date 26/090/2003).

6. IREM crashes : What can be done to limit the impact on the instruments ?

MOC has written a Technical Note describing the occurrences of the IREM crashes and some analysis performed at MOC. There have been 7 crashes in total, and 5 in the last 3 months. While the same unit in another S/C has ~ 1 per year.
Action CO/06_05 : M. Schmidt to distribute this TN (Due date 12/09/02003).

With the current set-up it takes 2 to 3 h to re-activate the instruments (all except SPI) and requires support from MOC operations engineers.
Action CO/06_06 : M. Schmidt to give the time required to re-activate IREM (Due date 12/09/2003).

Some alternative schemes were discussed :

- To disable completely the on-board automatism.
- To make a patch to the CDMU to disregard the IREM data when it contains FFFF and to pass to the instruments the last value before the crash.
- To make an instrument On-Board update to handle the situation.

Action CO/06_07 : All the Operations Managers to provide their recommendations on the above alternatives (… or others). (Due date 30/09/2003).

7. Belts exit and entry operations

An optimisation of the belt exit operations was discussed and agreed during the last coordination meeting. The agreed update is now documented in the current POS-ICP ICD (v1.7).

ISOC will control a number of JEM-X parameters. Then MOC is not anymore responsible for the commanded values.
JEM-X has no problem with this approach. The JEM-X PI confirmed that whatever the value of the HV uplinked, there is no danger for the instrument.
The PTV (to check that the first step executed before the second step is done) will be removed, but the checks for min & max values will remain.

It is noted that the usage of a standard configuration between steps 1 & 2 is a decision of the proposal scientist.

Action CO/06_08 : N. Lund to confirm that it is OK to Switch on JEM-X in data taking at the start of a revolution and to leave it in data taking until the exposure when it will be used (Due date 02/10/2003).

8. Statistics to monitor the mission performance

MOC has produced a report for the TOS management on the performance of the Integral mission, but there is no regular reporting of this kind from the scientific aspects.

ISDC is making internal statistics on the scheduling, giving for each revolution : the length of the radiation belts, the overheads, the slews between the observations, the dithering slews, the scheduled time. As well as statistics on the pointings performed.

These statistics (with another one indicating how long after the observation the data are available to the proposal PIs) will be put on the ISDC web page regularly, e.g. every 3-4 months.

9. Implementation of an alarm at MOC regarding the initialisation of the histograms in the database

Since the PICsIT histograms stops from time to time, MOC proposed to implement an alert to the SPACON when that occurs.
The algorithm to be implemented at MOC has been provided to the IBIS Operations Manager.
Action CO/06_09 : G. la Rosa to review the algorithm of the alert (due date 19/09/2003).

10. Near Real-Time ECSs

The near real-time ECSs sent by ISDC to ISOC have been very useful, but since the consolidated ECSs are now coming regularly (with a ~ 2 week delay) ISOC does not need anymore these near real-time ECSs.

11. Time synchronisation correction

In order to avoid having to re-process all the archive data, ISDC will implement a new file describing all the corrections to be applied since the beginning of the mission.
It is expected to have it implemented at ISDC around the end of the year.

12. Following of instruments configuration

For the last coordination meeting (13/05/03), Laurent Lerusse (ISDC) generated a table (w/o the context info). He will now very soon add the VETO information in it.

13. Instruments On-Board Software updates

13.1. SPI updates

No inputs.

13.2. IBIS updates

The patch to suppress erroneous On-Event Messages was discussed during the GS-CCB meeting (See minutes of meeting GS-CCB # 5) : The patch is available and will be tested soon at Rome.

13.3. OMC updates

A new version of the on-board software is finished. The two main improvements are :

- Fix for mission anomaly INT-002276 “OM unexpected crashes”
- Fix for mission anomaly INT 002123 “reaction wheel bias”

It has been validated on ground and the validation test report is being written.

The new image should be delivered to MOC in the last week of September, for an implementation expected ~ 2 weeks after.

Note that no ground test at ESOC will be required but some FOP procedures will have to be updated as well as the User Manual.

Action CO/06_10 : OMC to raise a GS-CR for these updates (Due date 12/09/2003).

13.4. JEM-X updates

The foreseen updates are :

- To improve the on board event selection criteria
- To update some parameters in the ODB.
- To have an on-board automatism to select High Voltage switch-off limit depending on the source.

14. Documentation

14.1. Status of the Instrument User Manuals

The planned updates of the Instruments User Manuals are :

- OMC : For the end of September
- JEM-X : For mid-October
- IBIS : For the end of October
- SPI : No inputs

14.2. Status of the ICD updates

A number of ICDs have been updated recently :

- OMC-ISOC ICD : current version is v.2.2 and there is nothing pending.
- POS-ICP ICD : current version is v1.7. Only SCREW 364 is pending.
- PSF ICD is now is phase with the POS-ICP ICD.

Other ICDs to be updated :

- OLF ICD
- ISOC-ISDC ICD : only a few small updates pending.

15. Anomaly reports

15.1. MOC anomaly reports

INT_SC-21 (TM packets production lower than allocation) : To be closed, no impact now.

INT_SC-52 (IBIS anomaly: Histogram production stopped) : To be closed, procedure available to recover when it happens.

INT_SC-55 (SPI Spikes in GeD count rates after HV switch on) : Still open, under investigation.

INT_SC-58 (PICsIT PDMs counters set to 0 during nominal). To be closed

INT_SC-60 (OMC IASW crashed) : Still open, S/W updated, patch to be uplinked soon.

INT_SC-61 (SPI-ACS anomaly on FEE57) : Still open, waiting for a report from the SPI on the last activities.
Action CO/06_11 : SPI to indicate if it has to be switched-off (Due date 30/09/2003).

INT_SC-62 (IREM anomaly SEU # 6) : To be closed, superseded by INT_SC-64.

INT_SC-63 (SPI DPE SW exceptions during spectra compression) : Still open, under investigation by SPI.

INT_SC-64 (IREM anomaly SEU # 7) : Still open, see details in point # 6 of the meeting.

INT_SC-65 (IBIS PICSIT PDM counters set to 0 during nominal operations) : To be closed, same as # 58.

INT_SC-66 (IBIS Histogram production stopped) : To be closed, same as # 52.

15.2. ISDC anomaly reports

IA-006 (IBIS UM context description for PICsIT) : Still open, the IBIS UM will be updated soon.

IA-008 (Occasional time shift of 250ms in SPI ACS_RATE data) : Still open, under investigation.

IA-009 (ACS_RATE out of order) : Still open, under investigation.

IA-014 (Corrupted packet when IBIS reSync) : Still open. Known HEPI deficiencies.
Action CO/06_12 : G. la Rosa to confirm that what is done at ISDC to recover the data is OK (Due date 26/09/2003)

IA-015 (PICsIT SPTI packets don't correspond to documentation) : Still open, the IBIS UM will be updated soon.

IA-016 (Count rate burst in SPI camera – instrumental effect or real ?) : Still open, under investigation.

IA-017 (Time of first event (s1) not increasing) : Still open.
Action CO/06_13 : G. la Rosa to get some feedback from Tuebingen (Due date 30/09/2003).

IA-018 (Stop accumulation of PICsIT histograms) : To be closed, procedure to recover at MOC available.

IA-019 (Drop of the PICsIT count rate during one pointing) : Problem known before launch.

IA-020 (Problem with the PICsIT histogram and OBS duration) : To be closed, cured by the implemented ISOC SCREW 363.

15. A.O.B.

15.1. JEM-X diagnostic dumps during slews

JEM-X would like to use the long slews to have JEM-X in diagnostic mode data.

Action CO/06_14 : N. Lund to send a technical note describing the details of what JEM-X would like (Due date 19/09/2003).

15.2. OMC baking

The contamination on the CCD surface is monitored by Flat Field images taken every 12 revolutions. It is now stable and has an impact of up to 8 % on the flux.
The considerations for the baking of the OMC have been on hold since the MPVR.

15.3. New I/F ISDC-OMC to get the information required for the OMC delta catalogue.

The information required for the OMC delta catalogue can come from three directions :

- The ISDC Survey scientist.
  R. Walter will provide the list available end of November.

- The new sources found by JEM-X.
  JEM-X will provide now the format of the list, and the list itself end of November.

- The screening of the circulars.

An update of the catalogue is then foreseen for the start of the AO2 proposals.

15.4. Next meeting

The next meeting is planned for Thursday 15/01/2004 at ISDC.