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meeting place	Teleconference ESOC/ESTEC/ISDC	chairman	D. Texier
minute's date	21 November 2002	participants	M. Schmidt, P. Maldari, R. Much, L. Hansson, D. Texier, R. Walter, P. Strada, F. Dreger, G. la Rosa (p.t.)
subject/*objet*	Co-ordination meeting # 3	copy/*copie*	All participants + PIs + M. Kessler

description

1. Approval of agenda

The agenda distributed before the meeting was approved with an A.O.B. : PID inconsistency in case of change of pointing sequence (point # 13.1).

2. Review of actions

The status of the open actions after the last meeting is the following :

CO_01_05 : *G. di Girolamo to issue the v1 of the ISOC-MOC Planning Messages ICD*. Still open.

CO_01_14 : *G. di Girolamo to investigate the capability of TDRS to handle the access/retrieving from ISOC, ISDC, ALENIA & ITs*. Closed. The current TDRS system has difficulties to cope with MOC/ALENIA/PG retrievals.

CO_02_01 : *L. Hansson to provide the list of MOUTs generated by ISOC*. Closed. List provided on 21/08/2002.

CO_02_02 : *L. Hansson to give a timeline for the implementation and test of the new requirement (RMU calibration not anymore in SOPS windows)*. Closed. This ISOC SCREW # 293 has been implemented in v7.

CO_02_03 : *F. Dreger to check if the intermediate pointing provided by the FD software for the "dog-leg" slew already cater for the inaccuracy of the 1st Open Loop Slew*. Closed. The answer is no.

3. Status of operations

The most important points mentioned are :

- Several Guide Star losses have occurred, and not only during the perigee passage.
- Some oscillations of the guide star have been seen (~2.5 arcsec [TBC]) could be due to thermal oscillations when the guide star is at the edge of a pixel.
- A toggle of the OTF (On-Target Flag) for 1 sec in rev 9. This was not sent to the instruments via the BCP (Broadcast Packet).

- JEM-X new voltages : requires a number of updates (discussed during the GS-CCB). The switch-off 90 mn before the 60000 km is currently handled via manual commanding, but will need to be part of the normal ISOC scheduling.
- PICsIT continues to be switch-off while inside the radiation belts. This is also done manually - for the time - being by MOC.

POSes until revolution 25 have been generated by ISOC and submitted to MOC.

A discussion on the telemetry bandwidth allocation among the instruments is planned before the end of the week.

4. Operational interfaces

Using the list of all activities & interfaces identified by the ITT (Integration & Test Team) the status of the Integral Ground Segment can be summarized by the following table :

ID	Activity/Interface	Origin	Status
1.	**Mission Planning Cycle**		
1.1	Generation of PSF	IFDS	OK
1.1.1	Transfer of PSF via IFTS to ISOC	IFDS	OK
1.2	Generation of POS/ICP	ISOC	OK
1.2.1	Transfer of POS/ICP via IFTS to MOC/IFDS	ISOC	OK
1.3	Generation of RPOS/ICP	ISOC	Not exercised yet
1.3.1	Transfer of RPOS/ICP via IFTS to MOC/IFDS	ISOC	Not exercised yet
1.4	Generation of EPOS/APF	IFDS	OK
1.4.1	Transfer of EPOS/APF via IFTS to IMCS	IFDS	OK
1.5	Generation of ESM	IFDS	OK
1.5.1	Transfer of ESM via IFTS to IMCS	IFDS	OK
1.6	Generation of timeline	MOC	OK
1.6.1	Creation of TSF	MOC	OK
1.6.2	Transfer of TSF via IFTS to ISOC	MOC	OK
1.6.3	Transfer of TSF via IFTS to ISDC	MOC	OK
2.	**Auxiliary Data Files**		
2.1	Generation of orbita file	IFDS	OK
2.1.1	Transfer of orbita file via IFTS to ISDC	IFDS	OK
2.2	Generation of revno file	IFDS	OK
2.2.1	Transfer of revno file via IFTS to ISDC	IFDS	OK
2.3	Generation of PAF	IFDS	OK
2.3.1	Transfer of PAF via IFTS to ISDC	IFDS	OK

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2.3.1	Transfer of PAF via IFTS to ISDC	IFDS	OK
2.4	Generation of ASF	IFDS	OK
2.4.1	Transfer of ASF via IFTS to ISDC	IFDS	OK
2.5	Generation of AHF	IFDS	OK
2.5.1	Transfer f AHF via IFTS to ISDC	IFDS	OK
2.6	Generation of TCH	IMCS	OK
2.6.1	Transfer of TCH via IFTS to ISDC	IMCS	OK
2.7	Generation of OLF	IMCS	OK
2.7.1	Transfer of OLF via IFTS to ISDC	IMCS	OK
2.8	Generation of PAD	ISOC	OK
2.8.1	Transfer of PAD via IFTS to ISDC	ISOC	OK
2.9	Generation of IOP	ISOC	OK
2.9.1	Transfer of IOP via IFTS to ISDC	ISOC	OK
2.10	Generation of POD	ISOC	OK
2.10.1	Transfer of POD via IFTS to ISDC	ISOC	OK
2.11	Generation of OPP	ISOC	OK
2.11.1	Transfer of OPP via IFTS to ISDC	ISOC	OK
2.12	Generation of OCS	ISOC	Not exercised yet
2.12.1	Transfer of OCS via IFTS to ISDC	ISOC	Not exercised yet
2.13	Generation of ECS	ISDC	Not exercised yet
2.13.1	Transfer of ECS via IFTS to ISOC	ISDC	Not exercised yet
2.14	Generation of IMD	ISDC	Not exercised yet
2.14.1	Transfer of IMD via IFTS to ISOC	ISDC	Not exercised yet
2.15	Generation of ISGRI context in OBSMS format	ISDC	OK
2.15.1	Transfer of ISGRI context via IFTS to MOC	ISDC	OK
2.16	Generation of IGRB	ISDC	Not exercised yet
2.16.1	Transfer of IGRB via IFTS to MOC in TPF	ISDC	Not exercised yet
2.16.2	Uplink of TC's to re-command OMC for GRB	IMCS	Not exercised yet
2.17	Generation of TPF	IFDS	OK
2.17.1	Transfer of TPF via IFTS to IMCS	IFDS	OK
2.18	Generation of IIMG	OBSMS	OK
2.18.1	Transfer of IIMG via IFTS to IMCS	OBSMS	OK
2.19	Generation of SIMG	OBSMS	OK
2.19.1	Transfer of SIMG via IFTS to IMCS	OBSMS	OK
2.20	Generation of MPMF	IFDS	OK
2.20.1	Transfer of MPMF via IFTS to ISOC & ISDC	IFDS	Not exercised yet
2.21	Generation of MPMF	IMCS	OK
2.21.1	Transfer of MPMF via IFTS to ISOC	IMCS	OK
2.22	Generation of CSSW	OBSMS	Not exercised yet
2.22.1	Transfer of CSSW via IFTS to ISOC	OBSMS	Not exercised yet
3.	**TM Data reception/processing/filling at MOC**	MOC	OK (1)
4.	**TM Distribution from MOC to ISDC**	IMCS	OK
5.	**ISDC near R/T Data reception & processing**	ISDC	OK
6.	**ISDC Interactive Operations Status Monitoring**	ISDC	OK

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7.	**ISDC Science Window processing**	ISDC	OK
8.	**Automated spacecraft and instruments operations per timeline**		
8.1	Eclipse exit operations	TSF	OK
8.2	Perigee exit operations	TSF	OK
8.3	Instruments activation	TSF	OK
8.3.1	Instruments calibration	TSF	OK
8.4	Slews		
8.4.1	Open loop slew	TSF	OK
8.4.2	Closed loop slew	TSF	OK
8.4.3	Dither pattern observation	TSF	OK
8.4.5	Galactic Plane Scan (GPS) observation	TSF	Not exercised yet
8.4.6	Galactic Centre Deep Exposure (GCDE)	TSF	Not exercised yet
8.4.7	Inertial pointing/Slew mode (IPS) observation	TSF	OK
8.5	Reaction Wheel Biasing (RWB) operations	TSF	OK
8.6	On-Board S-Band Antenna Switching operations	TSF	OK
8.7	Ranging operations	TSF	OK
8.8	Change Polling Sequence Table (PST) operation	TSF	OK
8.9	Exercise CCCF	TSF	Not exercised yet
8.10	PSD calibration observation	TSF	OK
8.11	Ground Station Handover	TSF	OK
8.12	Time Tagged operations	TSF	OK
8.13	Eclipse Entry Operations	TSF	Not exercised yet
8.14	Perigee Entry Operations	TSF	OK
9	**Manual commanding of S/C and instruments interleaved with timeline operations**	IMCS/ Manual Stack	OK
9.1	IBIS Context table uplink	Manual	OK
9.2	IBIS Context table dump	Manual	OK
11	**Re-planning exercise for ToO**	ISOC/ MPS	Not exercised yet
12	**Target of Opportunity observation**	TSF	Not exercised yet
13	**TM playback from ESA Ground Station**	G/S	Not exercised yet
14	**TM playback from NASA Ground Station**	G/S	Not exercised yet
16	**CD-ROM production for ISDC consolidated data processing**	TM	OK
17	**MOC access to TDRS**	TM	OK
17.1	ISOC access to TDRS	TM	NOT OK (2)
17.2	ISDC access to TDRS	TM	Not exercised yet

Notes :

(1) : In spite of the problems with the Goldstone G/S the requirements of 95 % of the data shipped to ISDC is fulfilled.

(2) : ISOC will try to access the HK telemetry via ISDC.

5. Instruments mis-alignment matrix

ISOC uses (since revolution 11) a mis-alignment matrix generated by OMC. It is OK : the targets are centered in the OMC windows. There is no SPI misalignment information yet.

ISDC will generate a matrix (in a few days) that will be sent to ISOC. It will have to be tested before deciding on its operational usage.

6. IBIS/ISGRI context update at each revolution

An ISGRI context table was generated by ISDC in revolution 10 and sent to MOC. The one for rev 11 was not sent to MOC (not enough good data to generate the new context table).

An update of the routines running at ISDC is expected from IBIS, but the generation of the context table at ISDC and its transfer to MOC has been demonstrated to work.

7. Generation of the FITS version of the IBIS context table

The PICsIT context in FITS format can now be generated at ISDC, thanks to IBIS (M. Quadrini) and ISDC (A. Sauvageon).

The program to generate the FITS version of the other contexts (HEPI & VETO) will be done in the future, but there is no urgency.

8. Status of ECS/OCS interface between ISDC & ISOC

All the requested changed have been implemented and will be operational in ISOC v8, planned for mid-December.

9. Altitude for radiation belts entry & exit

From the monitoring performed at ISDC (P. Favre), in revolutions 5 to 11 the height of the electron belts (IREM counter TC3) exit was between 27000 and 32000 km while the electron belts entry was between 62000 and 70000 km.

The current start of science operations at 40000 km used in all the PV revolutions seems therefore adequate. But the stop of science operations at 60000 km seems to be already within the electron belts.

Note that these values of 40000 & 60000 km used in the PSF are likely to be adjusted in the future. These adjustments will go to MOC via the Project Scientist.

In case of a solar flare the instruments will automatically be put into safe configuration. For the re-start of science operations MOC has the procedures but is expecting someone to give the go-ahead for resumption.

Action CO_03_01 : Project Scientist to define how the resumption will be triggered (e.g. a criteria on the IREM counts).

10. IFTS operations

Point covered during the GS-CCB meeting held before the co-ordination meeting.

11. Commissioning phase

11.1. POSes & Timelines processing

ISOC has generated POSes until revolution 25 included.
MOC has generated the timelines for revolutions 11 & 12.
Note that the POSes will have to be re-generated if :

- The telemetry allocation to the instruments changes, or
- More time is to be given for the commanding at the exit of perigee.

The start of the scheduling of the Routine Phase is planned for December 10th. PSFs for revolutions 26 onward will be needed by that time.

11.2. Observation Templates for the PV phase

The Observation Template database will be filled by the PV schedule generated by ISOC and sent out on Monday.

12. Anomaly reports

12.1. MOC anomaly reports

There are today 55 anomaly reports open at MOC (2 on NCTRS, 11 on Instruments (IBIS: 2, JEMX : 4 & SPI : 5), 1 on Procedures, 2 on the SDB, 2 on the S/C, 2 on ISOC, 17 on IMCS, 4 on NASA G/S, 6 on ESA G/S, 5 on FDS, 2 on I/F to SGS and 1 on COMMS).

12.2. ISDC anomaly reports

8 anomaly reports are open at ISDC (PICsIT : 2, ISGRI : 1,OMC : 1, SPI : 2, JEM-X : 2)

13. A.O.B.

13.1. PID inconsistency in case of change of pointing sequence

In the case of a timeline stop, a sequence of Open loop, Close loop & Reaction Wheel Bias will be executed. With the current scheme all the Pointing IDs will get the PID of the pointing when the timeline is re-joined. It was agreed that FD will in the future number these “unscheduled PIDs” sequentially starting from 9200.

13.2. Enabling IGRB at MOC

It was decided to enable the IGRB function at MOC starting from revolution 14.
Note that the automatic triggering of GRB at ISDC is still disabled. And it will not be exercised during the PV phase unless authorised by the Project Scientist.

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14. Next meeting

The next meeting is planned for the 2nd half of January at ISDC.