

Ref: PT-MM-04495

FSODG #9

24 June 1997

SPIRE-ESA-MOM-000109 FIRST/ESA/M/0022-1
MINUTES OF THE NINTH FSODG MEETING

The ninth meeting of the FIRST Science Operations Definition Group (FSODG) was held in ESTEC on 24th June, 1997.

A. Robson (sickness) and P. Roelfsema (science symposium) could not attend. J. Tauber (PLANCK Project Scientist), and A. Schuetz (ESOC/GSED) who will take over as of October 1997 Robson's FSODG activities, attended as full new members. K. Bennett represented SA and will from now on be involved in the FINDAS-related activities of the FSODG.

AGENDA

The agenda (attachment # 1) was adopted. Points 5 and 6 were moved at the end of the Agenda. No comments were received on the minutes of FSODG meeting # 8 held on March 11-12, 1997.

1. COMBINED FIRST/PLANCK MISSION - STATUS-

Introduced by Pilbratt and Tauber. The following was noted:

- The two parallel industrial studies to study the merger will be kicked-off end-August 1997. Expected completion: mid- March 1998.
- An internal ESA study will explore the feasibility (within the budgetary constraints) of a PLANCK alone mission. Expected completion Feb 1998.
- Tauber stated that a small Lissajous orbit was a requirement for PLANCK. He also stated that PLANCK have asked for an increase of the data rate by a factor of 2 (i.e. 60 Kbs versus 30 kbs)
- The SAG will discuss FIRST/PLANCK operations (high level) in August. Further discussions within the Tiger Team are also foreseen.

2. REVIEW OF ACTION ITEMS FROM PREVIOUS MEETING

Action items AI 8/2, AI 8/3 and AI 8/4 have been closed. AI 8/1 and 8/5 are still open.

Ref: PT-MM-04495

FSODG #9

24 June 1997

3. FIRST SCIENCE MANAGEMENT PLANS

The FIRST Science Management Plan (Pilbratt) has been preliminarily endorsed by the SPC at its June meeting. Delegations to provide comments by 15th July and Pilbratt to update accordingly.

The PLANCK Science Management Plan (Tauber) had been approved by the SPC in February.

The combined FIRST/PLANCK Science Management Plan (consisting of the two plans and an additional cover letter) will be presented, after internal review in August, to the SPC special meeting (Oxford) early-September.

4. AO, IID-A, IID-B -STATUS-

Presented by Schaap. The AO will be written as a single FIRST/PLANCK Document (with dedicated FIRST and PLANCK sections where required), FIRST/PLANCK IID-A (with dedicated sections when required) as well as the FIRST IID-Bs (3 documents), and the PLANCK IID-Bs (1 or 2 documents -TBD-) will be attached as Annexes. In addition the FIRST/PLANCK Operations Interface Requirements Document (produced by ESOC - see AI # 9/1), the FIRST/PLANCK SIRD, and the Ground Segment Interface Document (GSID) produced by the Project will be issued as Applicable or Reference Documents.

All these documents will be made available during July/August for internal review and further distribution. The FSODG will be invited to provide comments to the documents (or document parts) having a bearing on operations.

Commonality requirements (on micro-processors) and compatibility requirements (between AIV and operations) will be included in the IID-A. King and Bauer pointed out that in order for the PI teams to provide, in the response to the AO, a reasonable testing scenario for the scientific instruments, sufficient information on how to interface the Instruments with the EGSE (hardware, software, test approach, etc.) must be made available. Detailed interface specification is only possible when the EGSE contractor has been selected. Since most of the interfacing will be done via FINDAS, file definition may be sufficient in the first phase.

Schaap indicated that, due to the FIRST/PLANCK schedule constraints, the micro-processor MA31750 (whose production will be discontinued) seem to be the only possible candidate for on-board processors. ESA intends, in coordination with industry, to carry out bulk ordering of a number of processors - see AI # 9/2

5. GROUND SEGMENT INTERFACE DOCUMENT

Estaria presented a first Draft of a "Ground Segment Interface Document" for review

Ref: PT-MM-04495

FSODG #9

24 June 1997

and discussion. The document which describes the interfaces between the various elements of the Ground Segment i.e. ICCs, DPCs, FSC and MOC (but *not* the interfaces between the MOC and the Ground Stations -covered by a specific ICD) will be included after the (minor) updates agreed upon at the meeting (see AI # 9/3) as a reference document in the AO. 4 specific points were raised:

(1) security issues: In order to ensure the security of the overall Ground Segment should specific security requirements (e.g. installation of firewalls within -or outside- the ICCs) be imposed on the ICCs ?

It was agreed that this issue will be addressed in the course of FINDAS implementation.

(2) Interface to SPEVAL: The ESOC-provided SPEVAL is extremely useful to the scientists (in the case of ISO), but it is stand-alone, and clumsy to use. It was agreed that the situation could be much improved (at no extra cost) for FIRST/PLANCK. This will be addressed during the implementation phase.

(3) Bauer and King are investigating teleconferencing (video and phone). They will report their findings to the FSODG. This is clearly of interest due to the de-centralised nature of the FIRST/PLANCK Ground Segment.

(4) It is more efficient to have two different standard Table of Contents (TOCs) for ICDs covering software transfer and ICDs covering file transfers. Schuetz will make a proposal (AI # 9/4)

6. OPERATIONS SCENARIOS FOR THE COMBINED FIRST/PLANCK MISSION

Estarla introduced the topic through various viewgraphs. The following points were agreed (subject to more detailed investigations when the mission baseline will be established):

- One single MOC will cover both modes of operations (FIRST and PLANCK) regardless of the final scenario adopted e.g. inclusion of parallel and serendipity modes of observations.
- There will be a single operations shift per day (SPACONS only)
- Science Data compression will *not* be provided centrally.
- In PLANCK mode the Data Processing Centres (DPCs) will be connected to the MOC via FINDAS (as the ICCs)
- FINDAS will serve both the FIRST and PLANCK external community.
- Maximum re-use of heritage software is the baseline for MOC implementation i.e.

Ref: PT-MM-04495

FSODG #9

24 June 1997

- re-use of XMM, ROSETTA, etc. MOC and SOC software
- re-use of generic infrastructure software (Future Control Systems - extension of SCOS II-) and ORATOS (Flight Dynamics)

It was also noted that:

- Science Mission Planning is a very simple task in PLANCK mode. No dedicated facilities are required (TBC)
- Data synchronisation is critical for PLANCK.
- When HET and LFI are operating there is a potential for EMC interferences with the S/C transponder. Preliminary EMC requirements have been included in the HET and LFI IID-Bs.
- Bauer and King would like that the possibility of using variable TM data rate depending on AOT mode (and scheduling FIRST instrument observations accordingly) be investigated (AI # 9/5).

7. FINDAS PROTOTYPE ITT ACTIVITIES - STATUS-

Estaria reported on the status:

The first TEB meeting prior to ITT release took place on June 2nd. SOW, evaluation criteria and weighting factors have been agreed. The ITT is scheduled for release by end-June. Closing date for acceptance of offers is 8th September 1997. The 2nd (and last -TBC-) TEB meeting is scheduled for the 18th September.

8. DATA MODEL FOR FINDAS PROTOTYPE

A preliminary DRAFT has been produced by Mathieu and was reviewed by the FSODG. It was agreed that substantial modifications were required. A splinter meeting (Bauer, Estaria, Hjortnaes, Mathieu) took place on the 25th June. The updating job will be shared by Bauer, Estaria and Mathieu. The updated draft will be available for review by the FSODG (plus Bennett) on the 3rd July. Comments by the 7th. Final issue is due on the 11th. The document will be put on the WWW (ESTEC external server) under the FIRST Home Page (FIRST Project related information)

It is planned to produce an updated version (in time for FINDAS prototype Kick-Off) incorporating the updated ISO Data Model. It is also planned to use ISO data for the demonstration of the FINDAS Prototype (phase 2 in the SOW). J. A. Steinz and B. Taylor agree in principle. It must be understood that this should not imply any additional load on the ISO team.

Ref: PT-MM-04495

FSODG #9

24 June 1997

It was agreed that the SOW for the FINDAS ITT will be made available (Estaria) to the FSODG members after release of the ITT.

9. PLANNING OF NEXT FSODG ACTIVITIES

Most of the FIRST/PLANCK activity during the summer will be geared to the issue of the AO by end-September 1997. The FSODG will be involved as mentioned in chapter 4. The appointment as "experts" of the external members of the FSODG (Bauer, King, Roelfsema) formally ends on 31 August 1997. The next FSODG meeting (still to be confirmed) is planned for the 2-3 September 1997. Estaria to resolve.

Between issue of the AO and Scientific Instrument selection (planned for June 98) no specific FSODG activity is foreseen. The group will be put into non-active status. Estaria will continue to inform the FSODG members of the major FIRST/PLANK events via Electronic mail.

It is anticipated that some members of the FSODG will be involved in the monitoring of the FINDAS prototyping activities. This will be addressed on a case by case basis.

10. A.O.B.

There was no A.O.B

11. LIST OF ACTIONS

The following actions from FSODG meeting # 8 remain:

- **AI 8/1: Estaria: Due date: 30 Apr. '1997**
Write Summary Report on the COLUMBUS presentation at DASA Bremen.
(due date moved to 31 Aug. 1997)
- **AI 8/5: Estaria: Due date: 15 May. '1997**
Write Summary Report on the ESO VLT presentation at ESO (Garching)
(due date moved to 31 Aug. 1997)

The following actions have been allocated as a result of this meeting:

- **AI 9/1: Estaria: Due date: 15 Aug. '1997**
Review with ESOC the FIRST/PLANCK Operations Interface Requirements Document and make available to the FSODG.
- **AI 9/2: PWGs: Due date: 30 Aug. '1997**
FIRST and PLANCK PWGs to make an assessment of their needs for micro-processors and provide a preliminary estimate to Schaap.

Ref: PT-MM-04495

FSODG #9

24 June 1997

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- **AI 9/3: Estaria: Due date: 15 Aug. '1997**
Update draft "Ground Segment Interface Document" and make available to the FSODG.
 - **AI 9/4: Schuetz: Due date: 1 Aug. '1997**
Make a proposal for ICDs standard Table of Contents (software exchange ICD and File Exchange ICD) based on Appendix A of the "Ground Segment Interface Document". Forward to Estaria
 - **AI 9/5: Schaap/Estaria: Due date: 30 Aug. '1997**
Investigate possibility for the scientific instrument of generating variable data rates. Produce a technical note.

12. NEXT FSODG MEETING

The next FSODG meeting is tentatively scheduled for the 2-3 September 1997 in ESTEC. Needs to be confirmed.

P. Estaria

P. Estaria

Attachments: #1

Attachment # 1



Pierre Estaria
13-06-97 10:48 AM

To: Harm Schaap/estec/ESA, Andy Robson/esoc/ESA, Goeran Pilbratt, Jan Tauber/estec/ESA, bauer @ mpe-garching.mpg.de, k.j.kj@rl.ac.uk, pjotr @ sron.rug.nl
cc: Francis Vandenbussche/estec/ESA, Jean-Jacques Mathieu, Johan Steinz/estec/ESA
Subject: FSODG meeting # 9

Dear FSODG members,

Please find attached the proposed agenda for FSODG meeting # 9. The agenda is practically identical to the draft submitted to you end-April.

We have now reached a point in our activities, from which we cannot sensibly progress to a lower level of definition until the mission baseline is more firmly established. The purpose of this meeting is then essentially to take stock of the current situation and plan our next activities. Since none of the points on the agenda should lead to lengthy discussions, I propose to limit the meeting to one day only - 24th June- rather than the day-and-a half originally foreseen. The meeting will take place, as previously agreed, in ESTEC Room Fb022 (ISO barracks) and start at 9:00. (expected end 17:30)

Agenda:

1. Combined FIRST/PLANCK mission - status- (Pilbratt/Tauber)
2. Review of FSODG pending Action Items (all)
3. FIRST Science Management Plan -status- (Pilbratt)
4. AO , IID-A, IID-B -status- (Schaap)
5. FINDAS prototype ITT activities -status- (Estaria)
6. FIRST/PLANCK data model for FINDAS prototype -status- (Estaria/Mathieu)
7. Review first draft of "Ground Segment Interface Document" (Estaria/all)
8. First discussions on (possible) operations scenarii for the combined FIRST/PLANCK mission (Estaria/all)
9. Planning of FSODG next activities
10. AOB

Note on point 7: I will send a preliminary high level Draft to the FSODG members prior to the meeting.

Note on point 8: I will introduce the discussion by a couple of viewgraphs (can only be very high level!)

Regards