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	Actions from Systems Team Meeting at ATC 5/6 November 1998 Author: B. Swinyard	<b>Issue: .10</b> <b>Date: 09/11/98</b> <b>Page: 1 of 4</b>

See vu-graphs for agenda and participants.

No specific actions were recorded from the plenary session items 1-5 on the 5/11/98.

## 6: Structure.

Notes: See vu-graph for summary of agreements made at the meeting on the outline concept to be used for further study. Appended to the minutes is an e-mail from Kjetil Dohlen on the alignment tolerances required for the mirrors.

Also note that a statement by Matt was not included in the vu-graphs. He wishes it noted that the SPIRE Project has promised to deliver to ESA a structure conceptual design based on thermal and structural analysis by the end of 1998.

- AI-ST-0052-1. Provide mass breakdown estimates to CRC: WGray; WTO :12/11/98
- AI-ST-0052-2. Provide mass budget including contingency to subsystem managers: CRC:  
19/11/98
- AI-ST-0052-3. Provide thermal load budget to MSSSL; CRC; 12/11/98
- AI-ST-0052-4. Evaluate space envelope for structure and circulate to systems team: MSSSL:  
12/11/98
- AI-ST-0052-5. Mirror interface drawing to MSSSL (copy to project office): DP: 12/11/98
- AI-ST-0052-6. Provide venting & thermal & wiring aperture sizes to RAL: MSSSL: 12/12/98
- AI-ST-0052-7. Provide vacuum requirements for internal boxes: RAL: 6/12/98
- AI-ST-0052-8. Recommend light tight aperture design: RAL: Jan 1999
- AI-ST-0052-9. Negotiate need for "15K" filter & support structure: BMS: 19/11/98
- AI-ST-0052-10. Provide size & position of thermal strap apertures: CRC: 12/11/98
- AI-ST-0052-11. Provide size & position wiring aperture or connectors: CRC: 12/11/98
- AI-ST-0052-12. Get Lionel to define envelope of cooler (or interface template): BMS:  
12/11/98
- AI-ST-0052-13. Provide draft interface control document for chopper: GFM: 12/11/98
- AI-ST-0052-14. Define responsibility for baffles: MJG: 12/12/98
- AI-ST-0052-15. Provide schedule for Structural & Thermal analysis consistent with PDR July  
99, IID freeze May 99: MSSSL: 1<sup>st</sup> Dec (SEE NOTE IN MINUTES)
- AI-ST-0052-16. Provide outline concept structural layout to be presented at consortium  
meeting: MSSSL: 1/12/98
- AI-ST-0052-17. Get spec from Peter Ade on black material: BMS: Jan 99
- AI-ST-0052-18. Bill Gray chase Terry Cafferty on JFET module document: WGray: 12/11/98
- AI-ST-0052-19. Feed back volume from 18 to MSSSL: CRC: 16/11/98
- AI-ST-0052-20. Define constraints on array volume: MCarter: 12/11/98
- AI-ST-0052-21. Chase the JPL & GSFC spec for wiring routes from arrays to FET box or  
15K connectors: WGray: 1/12/98
- AI-ST-0052-22. Provide info on qualified 37 way MDM connectors: DP: 12/12/98
- AI-ST-0052-23. Chase Matt re shutter spec & workpackage: CRC: 6/12/98
- AI-ST-0052-24. Provide FTS envelope & optical layout to MSSSL: BMS: 12/12/98
- AI-ST-0052-25. Document interface control system: CRC: 1/12/98

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## 7: Scientific requirements.

Notes: Walter Gear gave a verbal report. The overall contents for the Science Requirements Document have been agreed and a new version will be issued for internal review one week prior to the consortium meeting. This first draft will be presented at the consortium meeting.

AI-ST-0052-26. Issue outline draft of SRD for internal review: WKPG: 23/11/98

## 8: On-Board Software and Electronics:

Notes: See view graphs for summary of meeting. No formal actions are recorded for this meeting; there will be a further meeting of the electronics and OBS group at the consortium meeting in December and a dedicated meeting in February.

## 10: Systems Documentation:

Notes: The document information flow diagram needs updating to include the IID-A and to incorporate "Calibration" under the Instrument Systems Design Document. A table of the most important development documents with brief descriptions is appended to the minutes for comment.

AI-ST-0052-27. Draw up a plan for document content; production and information flow:  
KJK: 25/11/98.

## 11: Interface Control

Notes: Colin will write up the interface control scheme (see AI-25). The ICD template was accepted for the time being and will be tested using the chopper to structure and cooler to structure interfaces as test cases (see AI-12 and AI-13). It was also agreed that, when the ICDs are formally constituted, they will be controlled through the formation of a Configuration Control Board.

AI-ST-0052-28. Set up test database for control of ICDs and requirements documents:  
BMS/CRC : 19/12/98

AI-ST-0052-29. Identify priority ICDs: CRC: 1/12/98

AI-ST-0052-30. Establish membership and terms of reference of CCB: MJG: 1/12/98

## 12: IID-B

Notes: The thermal and mass budgets in the IID-B are in urgent need of revision. This will be addressed for the meeting with ESA on the 17/11/98.

AI-ST-0052-31. Revise thermal budgets in IID-B with a view to establishing goals and maxima: CRC/BMS/MJG :12/11/98

AI-ST-0052-32. Revise mass budgets in IID-B with a view to establishing goals and maxima: CRC/BMS/MJG :12/11/98

AI-ST-0052-33. Obtain and circulate full ESA FIRST thermal model: WGray: 12/11/98

13: Document Management System:

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Notes: The ESA DMS system will be accessible through the SPIRE project office home page.

AI-ST-0052-34. Circulate details of how to contact the SPIRE homepage and DMS to institute managers: KJK: 19/11/98

### **15: Warm Electronics and Harness:**

Notes: There are several options for the bias modulation scheme for the JFET option. These need further study and a decision on which to use. It was agreed that the groups providing the sub-systems were responsible for the harness for that sub-systems. Some detailed negotiation will be needed, however, depending on how many connectors were required (several sub-systems may be wired through a single connector) and whether there will be any entirely separate internal harnessing.

There was some discussion on the types of connectors that are available – this was concluded with a request that a list of critical items is submitted via Ken to the ESA commonality working group on parts procurement.

AI-ST-0052-35. Ask sub-system managers to provide details of critical electronics parts that they wish to use that are not ESA approved and/or procured centrally. Provide results to KJK for consideration by ESA: CCara: 12/12/98

AI-ST-0052-36. Conduct study into bias modulation schemes (square-wave; sinusoidal; DC) for JFET option – report progress at consortium meeting splinter: LRodriguez: 1/12/98

AI-ST-0052-37. Ask JPL (Jamie Bock) whether CEA BAU design is suitable for use with JFET option: CCara : 19/11/98

### **16: Plan of Activities:**

Notes: No presentation – Ken will draw up a plan and circulate it for comment with a view to presenting it at the consortium meeting.

Some discussion on how to control action items. It was agreed that this should be done via the monthly reports from the institute project managers to Ken. It was also agreed to try to have regular (weekly?) teleconferences/video conferences between the system team members to review progress on the systems team actions. The first teleconference will be at 10:00 a.m. on the 16<sup>th</sup> November: the participants will be Colin; Louis; Bruce and Ken. The first attempt at a three way (RAL/ATC/SAP) video conference will be on 20<sup>th</sup> November. The latter will a) test the possibility and b) report on the meeting with ESA on the 17<sup>th</sup>.

AI-ST-0052-38. Draw up plan of activities leading up to CDR and circulate for comment: KJK: 23/11/98

### **18/19: Review of meeting/Priorities for Action.**

Notes: The frequency of systems team meetings was discussed. It was agreed that the next full meeting should be in late Feb/March 1999 with priorities and actions being addressed by more

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regular teleconference; videoconference or face to face meetings of the core team plus experts as needed. (Note Matt wasn't present and needs to agree this!)

The priorities for action were agreed as being: The conceptual design and analysis of the structure; the interface information for the US array options; detailing the product tree; WBS and systems documentation plan.

## **20: AOB**

Notes: The issue of single point failures and redundancy was raised. No action was recorded for this item although it is obviously an important issue.