

Solar-B EIS

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Issues log for Solar-B EIS

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Change Record

ISSUE	DATE	PAGES CHANGED	COMMENTS
01	24 Jan 2002	All New	
02	9 Oct 2002		Added: 15. Light proofing lid 2. j. Final insertion of filters 3. c. Final insertion of SEF 5. e. Handling procedures with baffle extension
03	18 Oct 2002		2 k. Are FM acoustic test needed
04	22 Oct 2002	many	Suggested routes to closure and put actions on people as part of this.

Scope

This document covers **all** project issues related to the Solar-B EIS project up to the end of the operational life of the instrument. This includes all technical, scientific, operations and management issues. An issue is anything that is not covered by other project processes such as the risk management process, open action items process, NCRs, RIDs etc. (although overlapping and repetition are acceptable, rather an issue is covered twice than missed completely).

Applicable Documents

[1] MSSSL/PA/PS/Q001.02 Change Control System

Discussion

Anything can be a project issue. This list simply provides a method of keeping track of all these issues and reminding the team of them at regular intervals. Some of these issues will be major 'to do' items, others will be small reminders, for example, a change that may have to occur in a later version of a document. Whatever it is, it should be in the issues log and therefore tracked.

So what's in this document? The document is split into 2 main sections, the first part is just a list of the issues within the document. In the second part each issue is detailed with updates occurring on a regular basis. For each issue the following information will be recorded:

Project Issue number

Project Issue type (Issue, ECR, NCR, etc.)

List of Issues

No.	Type	Issue	Raised	Last Update
1		Locking of fixtures	Jun 01	Jun 01
2		Clamshell	Oct 01	18 Oct 02
3		Doghouse design	Oct 01	9 Oct 02
4		Mirror bulkhead	Oct 01	Oct 01
5		Baffle tube	Oct 01	9 Oct 02
6		Alignment cubes	Oct 01	Oct 01
7		Witness plates	Oct 01	Oct 01
8		Zero order light trap	Oct 01	Oct 01
9		Venting design	Oct 01	Oct 01
10		Stray light issue	Oct 01	Apr 02
11		Interface Validation Exercise	Oct 01	Oct 01
12		Alignment hardware (periscope)	Oct 01	Oct 01
13		Red Tag items	Apr 02	Apr 02
14		Flight CCD	Apr 02	Apr 02
15		Light proofing lid	9 Oct 02	

Details of Issues

Suggested route to closure in italics after each issue.

1. Locking of fixtures

~~Do we insist on this. What are the ESA, NASA recommendations for doing this.~~

~~Vacuum/Space grease — should we be using this as part of the construction, what does this do to our contamination?~~

2. Clamshell

- ~~a. Develop dovetail o-ring groove shape for doors~~
- ~~b. Specify surface finish for o-ring surfaces to eliminate leaks~~
- ~~c. Produce thermal model for CLM door~~
- ~~d. Specify thermal finish for door~~
- ~~e. Specify thermal finish for filter frames (or specify a shade for filter frames)~~
- ~~f. Modify design of sensor manifold~~
- ~~g. Select harness connectors and mounting for CLM~~
- ~~h. Verify design of flight flexures of 7075 Al~~
- i. 24 Jan 02, Door sensors need to be defined and set-up, Charlie thought that this was best achieved at BU as they will have the flight door etc. [*Door sensors are no longer required, this issue to be removed*]
- j. 9 Oct 02, Final flight filter insertion – when does this happen [*The baseline plan is to have this happen as late as possible without jeopardising the rest of the instrument. The front baffle and MLI is designed to be fully removable and the clamshell can be taken out without removal of the top panels. We need to look carefully at the s/c schedule and see if there is a suitable opportunity. ACTION: NRL to propose change out date for comment*] **A785**
- k. 18 Oct 02, Does FM acoustic verification through similarity to EM still apply, have there been any design changes? [*BU need to provide evidence to support this case to the QA manager at MSSL. If this is acceptable then the clamshell will receive a waiver. This issue covers all sub-systems in relation to acoustic test. ACTION: MSSL to comment on acoustic test requirements for FM sub-systems*] **A786**

3. Doghouse design

- a. ~~SEF mounting~~
- b. ~~Bulkhead movement to carry SEF?~~
- c. 9 Oct 02, Final SEF insertion – when does this happen [*This will have to happen prior to delivery to Japan if the cleanliness requirements are to be guaranteed. ACTION: NRL to confirm that this is acceptable*] **A787**

4. Mirror bulkhead

- a. ~~Specify mirror center point so the focal length can be fixed.~~
- b. ~~Select angled rear bulkhead or wedge spacer.~~

5. Baffle tube

- a. ~~Thermal assessment~~
- b. ~~Mass~~
- c. ~~Envelope negotiation with Japan~~
- d. Protective cover cover [*Awaiting design finalisation from BU which is dependent on the purge gas restrictions been defined. ACTION: Barry to define purge gas restrictions in all red-tag covers where required; already actioned as number 731*]
- e. 9 Oct 02, Interference during handling [*This is a concern of the J-side. ACTION: BU to demonstrate in FM handling procedures how this is to be avoided or to propose a schedule and procedure for the final fitting of the baffle extension see ACTION 780*]

6. Alignment cubes

- a. ~~on STR~~
- b. ~~on Template~~

7. Witness plates

- a. Change out schedule [*ACTION: already actioned as number 660*]

8. Zero order light trap

- a. Design and implementation [*ACTION: NRL to comment on position and design of this light trap*] **A788**

9. Venting design

- a. ~~vent size and position definition~~

10. Stray light issue

- a. Clarence has had preliminary discussions with Tony Richards at RAL and feels that he would be the right person to carry out the analysis of stray light within EIS. This has to be investigated with Jim. ~~Brian Probyn has been actioned to look into making the witness plate blank covers more light tight for the FM program.~~ [*Due to lack of funding in the UK this issue is stalled with no expertise available to comment on the provisions made. There will be no analysis of stray light in EIS*]

11. Interface validation exercise

- a. Definition [*ACTION: MSSSL, Interface validation will be included in the FM AIV plan*] **A789**

12. Alignment hardware (periscope)

- a. Design [*ACTION: NRL to provide periscope to their own specifications*] **A790**
- b. ~~position and mounting definition~~

13. Red tag items

- a. Definition and design [*ACTION: BU to provide designs for red-tag items*]
- b. For alignment mirror covers (and all red tag items if possible) the fixing screws should be captive so that during removal they cannot be dropped. During MTM/TTM program an alignment cube screw fell inside the outer bag and had to be cut out. [*Red tag items should be designed with this in mind. ACTION: BU to provide designs for red-tag items for comment*]
A791

14. Flight CCD

- a. When and how do we put in the flight CCDs. [*ACTION: already actioned as part of 657*]

15. Light proofing

- a. How do we prove the effectiveness of the solutions adopted [*ACTION: anyone to comment on available options*]
- b. How do we light proof lid? [*ACTION:BU to distribute preliminary designs for light proofing*]
A792

16. FM bagging

- a. Do we need to protect against contamination during s/c thermal vacuum tests? How do we do this? [*ACTION: NRL to provide a plan for comment*]
A793