1. INTRODUCTION

This note is an update to the email on Detailed Design Review planning that was circulated in March.

We are now at the stage where the SPIRE subsystems designs are maturing rapidly and it will soon be necessary to start manufacturing of the first deliverable models in order to meet the project schedule milestones.

In order to go ahead each subsystem is required to undergo a Detailed Design Review in order to get approval from the Project Team to enter the manufacturing phase. A summary of the results of these reviews will be presented to ESA at the Instrument Baseline Design Review (IBDR), which will be held in Oct/Nov (TBC) this year.

2. REVIEW OBJECTIVES

The purpose of the review is to:

1. Freeze the subsystem requirements specification.
2. Freeze the subsystem (Baseline) design and release for manufacture of subsystem Structural Thermal Model (STM), Avionics Model (AVM) and Cryogenic Qualification Model (CQM)
3. Freeze any subsystem MGSE, OGSE and EGSE design and release for manufacture of these items
4. Freeze any subsystem software requirements and design

Following the review, it is expected that the 'Baseline design' of the subsystem will be put under configuration control by the responsible institute, and the Project.

3. REVIEW ORGANISATION

Each subsystem will be reviewed individually (though more than one may be reviewed at the same time, if appropriate) at a time appropriate to their own development schedule. In the event that a single institute is not fully responsible for the subsystem, individual parts may be reviewed, but a subsystem Review is also necessary - the mechanism for this is still TBD.

The review will take the form of a detailed discussion of points raised by the review board based on the subsystem documentation. This documentation shall be available at least 2 weeks before the start of each review and should have been agreed by other subsystems, as appropriate, before this time. A meeting may be held during the review period to present the documentation and clarify any major problem areas. This meeting is NOT the review, but one part of the process.

At the end of the review, the Board will prepare a report summarising the status of the subsystem design, giving approval of the design, subject to the resolution of any open areas. In addition the Board will provide a set of document change requests for minor problems, which will be handled in the usual way.

The review will take place at the subsystem responsible institute (or RAL if you prefer), before a review board composed of Project Team members and invited outside experts. The size of the review board will be limited (to typically 6 members).

4. DOCUMENTS REQUIRED FOR THE DDR

The following documentation, where appropriate, shall be available at the start of each review:

1. Subsystem Specification Document
2. Relevant Interface Control Documents
3. Detailed 'as designed' deliverable documentation , including:
   - Configuration Item Data List
   - Configuration Status List
   - Interface Drawings
   - Drawings, including drawing tree
   - Electrical circuit diagrams
   - Components List
   - Materials List
   - Parts List
   - Processes List
   - Critical Items List
   - Detailed Design description
4. Subsystem Development Plan & Schedule
5. Subsystem AIV Plan and preliminary Test Plan
6. Subsystem PA plan - or agreement to conform to the Project PA Plan
7. A Failure Modes analysis - a further document will be circulated describing the level to which this analysis should be carried
8. A grounding Diagram, as described in the IID Part A (section 5.14.2.20)
9. Test reports on development tests already performed

5. DATES FOR THE DDR

The following dates are proposed for the subsystem DDRs, based on the subsystem development plans:

Structure & Thermal Straps:	TBD	
Filters & Calibrators:	6-7th August 2001	
Mirrors :	After June 8th 2001	
^{3}He Cooler	May 17th 2001	Completed
BSM:	24-31 July 2001	To include MCU?
FTS:	July 2001	To include MCU?
BDAs , FTB & RF Filters:	TBD	
Shutter:	July 17th 2001	This is the PDR date
DRCU & WIH & FPU Simulator:	July 2001 (TBD)	
DPU & OBS:	TBD	
AIV Facility & EGSE:	TBD	Review of Cryostat June 8th
DRCU Simulator:	TBD	