

### **Monthly Report – October 2002**

**Date:** 31/10/02

Work Package: Structure

### SPIRE-MSS-REP-001782

### 1. Subsystem Progress Since Project Inception

Several concepts evaluated for the structure. Base line design decided upon in June 2000. Working on the system implications and implementation since first half of 2001. Continuing to close interfaces with the various subsystems. Started with production drawings in February 2001. The concept of the suspension has been analysed and decided on implementation. Hardware produced and tested, meets specifications. Detailed design continuing and manufacture is continuing.

#### 2. Subsystem Progress This Month

Thermal busbar development is continuing. A new schedule has been drawn up between Cardiff and MSSL. Production drawings of the busbar have been completed. Have tested MKIII units and light baffle from Cardiff and have started the FEA. The HOB simulator has arrived and the MGSE has been assembled. Production of the photometer 2K box spine has been completed but one of the batch was scrapped. The redesign of SCAL box has been confirmed and it has gone into production.\* Spectrometer 2K Detector box has been scrapped at final inspection due to misalignment problems. Replacements have been started.\* The manufacture of the Optical Bench was continuing.\* Continuing to have integration team meetings with RAL, to address planning and integration issues.

Released Issue 17 of the interface drawing.

(\* On Monday 28 October Thrust Engineering went into Liquidation. MSSL are currently working on a rescue plan to ensure that they have the remaining 3 parts for STM as soon as possible. The implications on the schedule are as yet

known.)	
3. Problem Areas	Remedial Action
Also other subsystems have problems with them.     Thermal busbar suspension has strong nonlinear responses     Level 1 thermal strap interface with spacecraft still has been confirmed	<ul> <li>Development team redefined the schedule for the project. Delivery date is mid-February</li> <li>Have produced design for the thermal bus bar itself. Received MKIII units from Cardiff. Finished mechanical characterisation tests and started FEA.</li> <li>Production design has been completed.</li> </ul>
Problems within the SCAL baffle box, forseen by the Optical team (LAM and RAL), have led to some redesign of the SCAL BOX	The SCAL box design has been confirmed and is now in production.
Delivery date now 3 months late – due to additional work on thermal busbar and the scrapping of one	Constant monitoring of manufacturing progress and preplanning of follow on activities with RAL to minimise

impact on whole project.

### 4. Engineering Activities

FEA on thermal busbar.

set of optical benches.

### 5. Design Changes

## 6. PA/QA Activities

Preparation of End Item Data Package

#### 7. Subsystem Management Issues

### 8. Actions Requiring Immediate Attention

9. Status of Previous Actions

### 10. Activities Yet to be Achieved

11. Milestones		Status
February 2002	Interfaces defined and reported	Completed
13-08-2002	STM delivery to RAL	now 3 months late-15-11-02*
01-02-2002	CQM FTB enclosure to RAL	On schedule
10-06-2003	PFM delivery to RAL	On schedule
01-10-2002	PFM FTB enclosure to RAL	On schedule
6-01-2004	FS delivery to RAL	
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## 13. Schedule Changes

Due to the thermal busbar design, manufacturing problems, and optical bench checking we are lagging 3 months behind on original schedule.