

**Work Package: Structure**

**SPIRE-MSS-REP-001215**

**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 has started.

**2. Subsystem Progress This Month**

Subsystem interfaces still open are thermal busbar, thermistors, RF filters and SMEC. Detailed design for MGSE nearly completed. Minor changes to documentation have been implemented. Delivery of STM now possible in Early August with current manufacturing deadlines. Harness routing continuing. Production of second optical bench, mirror and dichroic mounts continues. Order placed with Thrust engineering for covers, optical bench and Photometer 2K box. Covers now designed to be in 2 pieces rather than 6. Detail drawings of first photometer 2K box has been completed. Stainless steel was found to have a better thermal performance for the A-frames than Titanium.

**3. Problem Areas**

-Difficult to close interface definitions.  
 Also other subsystems have problems with them.  
 - Thermal busbar suspension has strong non-linear responses  
 STM delivery scheduled for delivery early August 2002.  
 Bend radii of proposed cabling is making the harness routing a longer task than originally anticipated

**Remedial Action**

-Most interfaces are closed. The outstanding ones include the RF filters, JFETS and the SMEC.  
 - Development team has been set up to redefine design. Waiting results from Cardiff and RAL tests on their designs. Final design will be chosen on 25 February 2002  
 Evaluating Integration procedures with new cover designs.  
 Continuing design work and closer co-operation with RAL.

**4. Engineering Activities**

Analysis and alignment reports

**5. Design Changes**

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**6. PA/QA Activities**

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**7. Subsystem Management Issues**

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**8. Actions Requiring Immediate Attention**

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**9. Status of Previous Actions**

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**10. Activities Yet to be Achieved**

Close the I/F with JPL for the RF filters only. Close out interface with SMEC. Finish harness routing. Detail design drawings for covers and spectrometer 2K box.

**11. Milestones**

February 2002  
 13-08-2002  
 01-02-2002  
 10-06-2003  
 01-10-2002  
 6-01-2004

Interfaces defined and reported  
 STM delivery to RAL  
 CQM FTB enclosure to RAL  
 PFM delivery to RAL  
 PFM FTB enclosure to RAL  
 FS delivery to RAL

**Status**

On going  
 On schedule  
 On schedule  
 On schedule  
 On schedule

**13. Schedule Changes**

Due to the proposed design and improved manufacturing deadlines, we are lagging 0.5 months behind on original schedule.