SPIRE (ATC)	Monthly Report – June 2002	Date:	24.Jun.02

Work Package: BSM **SPIRE-ATC-REP-001350**

1. Subsystem Progress Since Project Inception

Baseline design accepted at Delta-PDR, including digital electronics control by MCU. CPP parts requested. Single axis prototyping complete. DDR held. 2 axis prototype tests complete. IBDR complete. Development Model testing

2. Subsystem Progress This Month

Commenced re-work DM-1 as the STM/OGSE. DM-2 progressed in workshop, components out for plating (alochromed parts now back in, gold plated parts due in next 2 weeks). Life test philosophy and test routines reviewed and tested (warm) on 2 axis prototype. Flexi-tape design complete order placed . Negotiations with Zeiss/MPIA on motor coil order commenced.

3. Problem Areas	Remedial Action
• Full checks on repeatability/linearity in dewar not possible due to problem with multiple reflections on cryostat window	• high efficiency anti-reflection coating window received and tested warm. Will test further in conjunction with DM-2.
• Launch Latch relocated on design and problem noted with DM-2 motor wiring.	• Change to proposed ATC mounting in hand - will need to tie up with LAM.
• Manufacture delays on DM-2 are delaying test programme: now impacts CQM	• Attempt expedite mirror fly-cut and assembly. Ensure elec. harness for DM-2 is not allowed to relax pending mechanical components

4. Engineering Activities

Sensor test jig designed to aid characterisation and up-screen. Work on sensor gain tests with DM-2 type cores and flight type electronics started. Sub-con FEA final report received. Predicted max accelerations on jiggle flex pivots are 55g rms, confirming that the 160g load used for design of pivots is a sensible one.

5. Design Changes

Design for refurbishment of DM-1 as STM outlined as sketches - but not yet as configured drawings.
Design of chop axis changed to aid manufacture and improve balance around rotation axis

6. PA/QA Activities

Problem on manufacture of DM-2 Chop axis (excessive light weighting resulting in problems on tolerance and chatter when machining). Design change :webs stiffened and deepened. This causes a slight mass increase but give much better balance.
NCR review held to take overview of lessons to date. CTD & ECR review only partially complete and require attention.
First batch of 10 Infineon sensors thermally cycled and started testing.
General Lab cleanliness now reaching targets and being monitored daily to track down excursions.

7. Subsystem Management Issues

IBDR report received - no BSM issues. Although STM could be delivered week 1 July, the decision has been made to hold this back a few weeks : the need date from SPIRE has been relaxed and we can exploit this to allow better configuration control and a test of cold wiring & resistors.

8. Actions Requiring Immediate Attention

IP/D.Griffin : ATC Need MSSL definition of harness run and back-shells to procure harness via RAL.
IP Configured Items Data List is required
SW11MAR02.02 (IP) Place contract for Zeiss motors

9. Status of Previous Actions

No change

10. Activities Yet to be Achieved

STM specific ICD is required.

11. Milestones

	Status			
Milestone	Baseline	Scheduled	Actual	Change
20K test dewar available	N/A	May.02		
Integrate Prototype (in place of DM 2) to LAM	30 Mar 01	Apr.02		
DM release for manufacture	Oct.01	Nov.01	Dec.01	
DM-2 release for manufacture	N/A	Apr.02	Apr.02	
2 axis prototyping at ATC complete	N/A	Mar.02	Apr.02	
SPIRE IBDR	N/A	Mar.02	Mar.02	
DM-2 tests complete	30.Apr 02	04.Sep.02		+1 month
BSM STM del'y to RAL	01 Feb 00	01 Aug 02		+1 month

BSM CQM delivery to LAM	Jul.02	16.Oct.02		+1 month
BSM CQM del'y to RAL	13 Mar 02	Jan.03		
BSM QM tests complete (flight design valid)	25.Apr.03	10.Jun.03		
BSM PFM delivery to LAM	03.Jun 03	25.Aug.03		