

<b>SPIRE</b> (ATC)	<b>Monthly Report – Apr 2003</b>	<b>Date:</b> 9 <sup>th</sup> May 03
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**Work Package: BSM**

**SPIRE-ATC-REP-001792**

<b>1. Subsystem Progress Since Project Inception</b>				
DDR and IBDR held. Successful cryo-vibration shake. <b>Development Model testing / debug in progress.</b>				
<b>2. Subsystem Progress This Month</b>				
Tests made to understand problems with angular range and power consumption. Discussions re spec and current supply with LAM and RAL in progress. Test method for linearity and stability under way. Review of readiness for manufacturing held.				
<b>3. Problem Areas</b>		<b>Remedial Action</b>		
<input type="checkbox"/> Angular range not met due to higher spring stiffness (believed caused by magnetic cross coupling) <input type="checkbox"/> Method of testing linearity and stability not proved <input type="checkbox"/> SSSD and ICD are not formally agreed.		<input type="checkbox"/> Additional current to be agreed. ECR raised (with LAM/RAL). Tests to verify this in progress. <input type="checkbox"/> A revised method is being tested. <input type="checkbox"/> SSSD updated and out for comments. ICD to be updated following confirmation of optical interface with MSSL.		
<b>4. Engineering Activities</b>				
Detailed tests and a basic magnetic circuit analysis appears to confirm the theory that magnetic coupling is the most likely cause of the spring stiffness being higher than expected. Increase of current limit from 40mA to 50mA should get around this problem. This will be tested early May. Work on problem with measurement of chop linearity: A new test set up has been established and will be verified early May. Progress was made on the optical interface with MSSL. Warm alignment tests at RAL, early May, will confirm the dimensions and enable release of ICD. Cross referencing SSSD to test plan being carried out. Write up of tests made to date in progress.				
<b>5. Design Changes</b>				
Position for larger thermistors established and agreed. Design change made. Several minor CTD's in progress as a result of PA investigations in progress. Launch latch to be deleted once ECR closed out.				
<b>6. PA/QA Activities</b>				
PA plan being updated following review. Review of assembly process was carried out to establish cleanliness control to meet the specification. Assembly log will be augmented to include notes on location of each operation.				
<b>7. Subsystem Management Issues</b>				
Project Management handed over to Phil Parr-Burman following resignation of Ian Pain The proposal that ESA (via Alcatel) procure the BSM is being negotiated by PPARC/ATC. The probable change to system level model philosophy, which for the BSM programme would remove the requirement for a CQM, is being viewed as an opportunity to optimise the verification and reduce costs. Confirmation of the new model philosophy is now one of the necessary actions before manufacturing release of PFM. Discussions are needed with LAM to confirm details of integration with the MCU.				
<b>8. Actions Requiring Immediate Attention</b>				
These are now being addressed by weekly telecons with RAL (Doug Griffin) <b>MSSL (CBB)</b> to advise screw torques for PFTE loaded apeizon grease CBB .... Ongoing but apeizon may be decided against.				
<b>9. Status of Previous Actions</b>				
<b>ATC (TAP)</b> to close out ICD with MSSL. Final verification of interface early May. <b>RAL (DG/BMS)</b> advise tolerance requirement on PCAL hole and jiggle axis. Closed: 100 microns.				
<b>10. Activities Yet to be Achieved</b>				
ATC documents: Sign off of SSSD, in progress. Issue and sign off of PA plan, ICD. Issue imminent. Finalisation of drawing package before PFM manufacturing go ahead. Remaining development tests on unit DM-2 (in particular, cold life test).				
<b>11. Milestones</b>		<b>Status</b>		
<b>Milestone</b>	<b>Baseline</b>	<b>Scheduled</b>	<b>Actual</b>	<b>Change</b>
20K test dewar available	N/A	Nov.02	Dec02	+1 month
Integrate DM 2 at LAM	30 Mar 01	May03		
DM release for manufacture	Oct.01	Nov.01	Dec.01	
SPIRE IBDR	N/A	Mar.02	Mar.02	
DM-2 tests complete	30.Apr 02	15.Jul.03		+1 month

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BSM STM del'y to RAL	01 Feb 00	5.Nov 02	5.Nov 02	
BSM CQM delivery to LAM	Jul.02	Jul.03		+ 2 months
BSM CQM del'y to RAL	13 Mar 02	Jul.03		+1month
BSM QM tests complete (flight design valid)	25.Apr.03	Jul.03		
BSM PFM delivery to LAM	03.Jun 03	Nov.03		