

SPIRE (ATC)	Monthly Report – Nov 2001	Date: 05.Dec.01
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Work Package: BSM

SPIRE-ATC-REP-001202

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 in progress. Prep for IBDR underway.				
2. Subsystem Progress This Month				
Detailed 2 axis prototype testing continues. Mechanical design changes to DM completed & released for manufacture. Flex pivot discussions held with Ray Carvell and UK industry : technically feasible but probably costly. Infineon position sensors re-ordered. Responses to RFQ for sub-con of random response FEA received: at £25K these are ~£20K over funds available for this. Magnetic modelling underway at MPIA. Options identified for cryo-harness connectors; pursuing details..				
3. Problem Areas		Remedial Action		
<ul style="list-style-type: none"> • development model has been released for manufacture 6 weeks late. Prototype tests are running one month late. • Cryo-harness connectors found to have been omitted from CPPA request • Cost of FEA vibration analysis 		<ul style="list-style-type: none"> • Effort surge will be required in new year to recoup slippage. • Looking at alternate procurement, discussing options for late insertion of request with RAL. • Planning to re-cost budget and look for alternates before mid-Jan.02 		
4. Engineering Activities				
Electronics work concentrated on sensors and flexitape for Jiggle frame (possible solution - Tayco. BS has worked on motor torque tests, Sensor tests, sensor calibration against optical reference.). Doug Griffin at RAL is taking on an overview on harness standards to ensure commonality between subsystems, and help reduce potential duplicate work by the BSM team. Test rig for cryo/warm screening of pivots designed, but needs to be detailed.				
5. Design Changes				
Launch latch re-positioned on DM. PCAL space envelope rotated 180degrees and ICD change required. Numerous DM mods incorporated, especially to jiggle axis sensor positions and addition of thermal shrouds and revised wiring pins on motors.				
6. PA/QA Activities				
Material and fastener suppliers obtained. Monthly dedicated PA meetings organised. Move to new lab provides opportunity to enhance cleanliness and reduce access (secure lab).				
7. Subsystem Management Issues				
Some time loss due to prep for move of lab, & Pro E setup problems. Ken Wilson (project technician) has been off sick for 3 weeks, and this will continue until new year. Tom Baillie (another experienced technician) is available to stand in but learning curve applies.				
8. Actions Requiring Immediate Attention				
ATC-116 - M.Griffin/R.Carvell - Talk to Mike Sandford about costs of use of RAL cold vibration facility				
ATC SX_23AUG01.12 -MJG/BMS - Revise micro-vibration susceptibility number (at next Alcatel meeting)				
9. Status of Previous Actions				
ATC -187 - BG to order additional position sensors - complete				
ATC-159 - BG characterise the flux of the BSM magnets/motors. - Write up pending				
ATC SX_23AUG01.03 - BMS - Provide a traceable document with the optical scaling factor. -complete				
ATC SX_23AUG01.05 - BMS - Check spec. on FoV requirements. issue as formal change request to the IRD -ongoing				
ATC SX_23AUG01.07 - BMS - Check specification on FoV of 126 arc secs. -ongoing				
10. Activities Yet to be Achieved				
PA plan up-issue delayed by effort shortfall : impacts DPL/DML/FMECA provision . Going to try to roll these out before Xmas				
11. Milestones		Status		
Milestone	Baseline	Scheduled	Actual	Change
Report on sensor stability to LAM	07 Jul 00	21 Jun 01	30.Jul.01	
Prototype Detail design release	24 Jan 01	30 May 01	30May01	
Update ICD structure	24 Oct 00	13 Jun 01	13 Jun 01	
20K test dewar available	N/A	Mar.02		+5 months
SPIRE Intermediate Instrument Design Review (IIDR)	TBD	23-24Apr.01	23-24Apr.01	
Integrate Prototype (in place of DM 2) to LAM	30 Mar 01	Jan.01		+1 month
Internal ATC review	new	3 Jul 01	2.Jul.01	
Detailed Design Review	30 Jan 01	31 Jul 01	30.Jul.01	
DM release for manufacture	Oct.01	Nov.01	Dec.01	+ 6 weeks
2 axis prototyping at ATC complete	N/A	Jan.01		+1 month

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SPIRE IBDR	N/A	Mar.02		
DM tests complete	N/A	22 Mar 02		
BSM STM del'y to RAL	01 Feb 00	01 Jul 02		
BSM CQM delivery to LAM	N/A	Jul.02		
BSM CQM del'y to RAL	13 Mar 02	Under review		