

SPIRE (ATC)	Monthly Report –May 2001	Date: 12/06/01
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Work Package: BSM

SPIRE-ATC-REP-000721

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. Progress to DDR and IBDR underway.				
2. Subsystem Progress This Month				
Manufacture of test dewar parts has started. The specification for a 20K closed cycle test dewar has concluded and RFQ's will be issued. The jiggle frame manufacture for the 2 axis prototype is complete and all other components are into the workshop. Work on drift in the CDL laser measurement device has been performed. The drift remains just outside the BSM specification - though indications are that the BSM sensor stability is adequate it cannot be proved conclusively at this stage. Options are being considered. A quotation on flex pivots has been received, and has proved significantly outside budget. MPIA/Zeiss have confirmed availability of space qualified cryo-motors, albeit at a high price. Cross-talk tests indicate no influence of stray motor fields on sensor readings. Collaboration meetings with LAM have been set up for mid-June.				
3. Problem Areas		Remedial Action		
Flex pivot prices over budget		Alternatives manufacturing strategies and suppliers being sought		
4. Engineering Activities				
FEA analysis of the structure for stress/deflection and resonant modes has completed though software problems have prevented extension of this analysis to give a PSD. Detailing of all items is now largely complete, bar a few tweaks. However this has delayed the ICD drawings first issue.				
5. Design Changes				
Details of LAM's candidate launch latch have been obtained and a proposed change to the PCAL interface circulated.				
6. PA/QA Activities				
A product assurance plan for the BSM has been released at ATC for comment. Feedback is now due, and the PA plan will then be released externally. A programme risk assessment for the BSM project is underway, with useful strategies already emerging.				
7. Subsystem Management Issues				
Flex pivot cost over-run (94k compared to 13k allocated) is a potential show-stopper and options are being explored urgently. A slip to the DDR date to 24-31 July has been achieved. An internal-to-ATC DDR is scheduled for 3 rd July. Solid progress is being made to DDR, but pressure must be kept on, especially for key resources.				
8. Actions Requiring Immediate Attention				
ATC-83 Provide Tony Richards with BSMs/BSMm geometry (IGES file)				
ATC-various (10,11,14,15,17,25,29,144) close up various issues with LAM on BSMe				
ATC-159 Issue PCAL ICD input to P.Hargraves. ATC-160 Issue structure ICD to MMSL.				
9. Status of Previous Actions				
RAL-010509-05 IP to confirm the date of the BSM DDR. Complete pending consortium choice (24-31 July).				
RAL-010514-01 Ian/Dominique to set up a SMEC/BSM electrical interface meeting - complete (scheduled 21 June)				
RAL-010509-17 (ATC-60) Ian to confirm the use by ATC of the RAL cold vibration facility - open				
10. Activities Yet to be Achieved				
ICD release. PA plan release. Conclusive long term sensor stability demonstration				
11. Milestones		Status		
Milestone	Baseline	Scheduled	Actual	Change
Report on sensor stability to LAM	07 Jul 00	21 Jun 01		+1 month
<i>Prototype Detail design release</i>	<i>24 Jan 01</i>	<i>30 May 01</i>	<i>30May01</i>	
Update ICD structure	24 Oct 00	13 Jun 01		+1 month
20K test dewar available	N/A	27 Aug 01		
Deliver draft Analog Brd Design Doc to LAM	14 Aug 00	25 Dec 00	Jan.01	
Select motors	30 Jan 01	22 Feb 01	22 Feb 01	
<i>Deliver ICD WE to LAM</i>	<i>11 Aug 00</i>	<i>12 May 01</i>		<i>superceded</i>
Receive ICD info for WE from LAM	N/A	21 Jun 01		
Analog Brd Detailed design to LAM	26 Sep 00	23 Mar 01	23.Mar.01	
Deliver refined Simulink Model to LAM	14 Aug 00	May 01		+1 month
Deliver d-space controller to LAM	31 Jan 01	May 01		+1 month
SMEC/BSM programme review.	31 Jan 01	31 Jan 01	27 Jan 01	
SPIRE Intermediate Instrument Design Review (IIDR)	TBD	23-24Apr.01	23-24Apr.01	
<i>Deliver Prototype (in place of DM 2) to LAM</i>	<i>30 Mar 01</i>	<i>Tbd</i>		<i>Pending</i>
<i>Internal ATC review</i>	<i>new</i>	<i>3 Jul 01</i>		<i>new</i>

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<i>Detailed Design Review</i>	30 Jan 01	24 Jul 01		+ 3 weeks
DM tests complete	N/A	22 Mar 02		
BSM STM del'y to RAL	01 Feb 00	01 Jul 02		
BSM CQM del'y to RAL	13 Mar 02	Under review		