

<b>SPIRE</b> (Cardiff)	<b>Monthly Report –May 2002</b>	<b>Date:</b> 08/08/02
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**Work Package**

**PCAL**

**SPIRE-UCF-REP-001345**

<b>1. Subsystem Progress Since Project Inception</b>		
Haller-Beeman source identified which meets SPIRE requirements PCAL enclosure design nearing completion		
<b>2. Subsystem Progress This Month</b>		
PCal internal structure re-modelled following recommendations from HFSS modelling. Final design nearing completion		
<b>3. Problem Areas</b>	<b>Remedial Action</b>	
<b>4. Subsystem Management Issues</b>		
<b>5. Engineering Activities</b>		
none		
<b>6. Design Changes</b>		
Internal design modifications only. No change to outer volume envelope.		
<b>7. PA/QA Activities</b>		
PA database now in use		
<b>8. Actions Requiring Immediate Attention</b>		
<b>9. Status of Previous Actions</b>		
<b>10. Activities Yet to be Achieved</b>		
<b>11. Budgets</b>		
<b>12. Milestones</b>		<b>Status</b>
5/12/00	QMW source review	Complete
21/09/01	Prototype source testing complete	Tests continuing – not driving schedule
19/09/01	Final interface definition from ATC	Complete
22/05/01	Calibrators design review (internal)	Complete
10/6/02*	STM (DM) PCAL delivery to ATC	Estimated del. 5/7/02
30/01/02	CQM PCAL design review (internal)	Complete
3/9/02*	CQM PCAL to ATC	Estimated del. 3/9/02
18/10/02	PFM calibrators design review	On schedule
26/5/03*	PFM PCAL to ATC	Estimated del. 21/5/03
7/1/04*	FS PCAL to ATC	Estimated del. 12/9/03
<b>13. Schedule Changes</b>		
Cardiff schedule completely updated – current version is Cardiff_spire_4_0.mpp Milestones listed in section 12 updated to reflect current schedule *PCAL delivery dates to ATC have changed as shown above, and have now been agreed with ATC		

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**Work Package SCAL**

<b>1. Subsystem Progress Since Project Inception</b>		
CQM design complete – passed DDR Components submitted for manufacture		
<b>2. Subsystem Progress This Month</b>		
Acceptance checks of SCAL CQM and STM components complete Cardiff “black” qualification in progress – see separate report Spare sources assembled ready for mechanical tests (test to failure) Vibration test mount complete		
<b>3. Problem Areas</b>	<b>Remedial Action</b>	
None		
<b>4. Subsystem Management Issues</b>		
CPP parts will not arrive in time for STM manufacture. We need these components within 12 weeks if CQM testing is not to be compromised.		
<b>5. Engineering Activities</b>		
<b>6. Design Changes</b>		
None		
<b>7. PA/QA Activities</b>		
PA database now in use		
<b>8. Actions Requiring Immediate Attention</b>		
<b>9. Status of Previous Actions</b>		
<b>10. Activities Yet to be Achieved</b>		
<b>11. Budgets</b>		
<b>12. Milestones</b>		<b>Status</b>
5/12/00	QMW source review	Complete
22/05/01	Calibrators design review (internal)	Complete
01/08/02	SCAL STM delivery to RAL	Est. del. 29/7/02
20/06/02	CQM SCAL design review	On schedule
13/01/03	CQM SCAL to RAL	Est. del. 25/11/02
18/10/02	PFM calibrators design review	On schedule
01/10/03	PFM SCAL to RAL	Late – due 09/12/03
03/01/05	FS SCAL to RAL	Due 03/08/04
<b>13. Schedule Changes</b>		
Milestones listed in section 12 updated to reflect current schedule Note – PFM SCAL late due to late CDR		

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## Work Package      Filters

<b>1. Subsystem Progress Since Project Inception</b>		
SPIRE filtering scheme finalised. Prototyping in progress. Filter SSSD updated for DDR. Slight change of MW band for commonality with HFI band.		
<b>2. Subsystem Progress This Month</b>		
SPIRE STM filters (CFIL1, PFIL2, SFIL2) in manufacture CQM 300mK filters in manufacture (SSW, SLW, PLW) Manufacturing order placed for 300mK filter clamps for all SPIRE models through to FS.		
<b>3. Problem Areas</b>	<b>Remedial Action</b>	
<b>4. Subsystem Management Issues</b>		
<b>5. Engineering Activities</b>		
300mK filter clamps in manufacture, including flight model & flight spare components.		
<b>6. Design Changes</b>		
<b>7. PA/QA Activities</b>		
PA database now in use		
<b>8. Actions Requiring Immediate Attention</b>		
<b>9. Status of Previous Actions</b>		
None		
<b>10. Activities Yet to be Achieved</b>		
<b>11. Budgets</b>		
<b>12. Milestones</b>		<b>Status</b>
18/09/01	Filters DDR	Complete
01/02/02	STM 300mK filters to JPL	Complete – delivered 25/03/02
01/07/02	STM input filters to RAL	Due 20/06/02
TBD	CQM 300mK filters to JPL	Due 18/06/02
13/01/03	CQM filters to RAL	Due 15/10/02
03/02/03	PFM 300mK filters to JPL	Due 15/01/03
01/08/03	PFM filters to RAL	Due 22/05/03
03/02/03	FS 300mK filters to JPL	Due 22/08/03
10/01/05	FS filters to RAL	Due 29/12/03
<b>13. Schedule Changes</b>		
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**Work Package      300mK straps**

<b>1. Subsystem Progress Since Project Inception</b>		
Thermal test dewar ready Thermal interface tests in progress MK2 device selected as baseline support design concept		
<b>2. Subsystem Progress This Month</b>		
Interface thermal tests in progress Mk3 support components drawings complete – submitted for manufacture 29/5/02 Mk3 light baffle component drawings in progress DDR documentation in progress Integration plan in progress All interfaces with structure frozen		
<b>3. Problem Areas</b>	<b>Remedial Action</b>	
<b>4. Subsystem Management Issues</b>		
<b>5. Engineering Activities</b>		
<b>6. Design Changes</b>		
Design modifications to improve robustness & reliability		
<b>7. PA/QA Activities</b>		
None		
<b>8. Actions Requiring Immediate Attention</b>		
Resolution of interfaces with structure		
<b>9. Status of Previous Actions</b>		
None		
<b>10. Activities Yet to be Achieved</b>		
<b>11. Budgets</b>		
<b>12. Milestones</b>		<b>Status</b>
7/6/02	300mK strap DDR	Date fixed
01/07/02	STM 300mK straps to RAL	Due 08/07/02
<b>13. Schedule Changes</b>		
Cardiff schedule completely updated – current version is Cardiff_spire_4_0.mpp Milestones listed in section 12 updated to reflect current schedule DDR date now fixed		

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**Work Package      AIV participation**

<b>1. Subsystem Progress Since Project Inception</b>		
Cryogenic black body & flip mirror/shutter concept produced – approved at AIV review Conceptual design presented at AIV DDR.		
<b>2. Subsystem Progress This Month</b>		
Cryo-modification of stepper motors successful. Cryogenic testing in progress AIV filters submitted for manufacture 3D CAD model of test cryostat in vicinity of CBB received from RAL Alternative supplier of large area photolithographic plates sourced (for filters), and order placed		
<b>3. Problem Areas</b>	<b>Remedial Action</b>	
<b>4. Subsystem Management Issues</b>		
<b>5. Engineering Activities</b>		
none		
<b>6. Design Changes</b>		
<b>7. PA/QA Activities</b>		
PA database now in use		
<b>9. Actions Requiring Immediate Attention</b>		
<b>10. Status of Previous Actions</b>		
None		
<b>11. Activities Yet to be Achieved</b>		
Production of CBB & flip mirror module. Provision of reference detector Provision of FTS		
<b>12. Budgets</b>		
<b>13. Milestones</b>		<b>Status</b>
31/5/02	CBB to RAL	Due 28/8/02
31/5/02	AIV Filters to RAL	Due 18/7/02
TBD	FTS to RAL	Due 14/10/02
TBD	Reference detector to RAL	Due 12/8/02
<b>14. Schedule Changes</b>		
Cardiff schedule completely updated – current version is Cardiff_spire_4_0.mpp Milestones listed in section 12 updated to reflect current schedule		

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**Work Package            JPL BDA test support**

<b>1. Subsystem Performance Progress Since Project Inception</b>	
Optics modules designed manufactured Test cryostats at JPL Fridge #1 at JPL Fridge #2 at JPL Optics modules shipped	
<b>2. Subsystem Progress This Month</b>	
Cryostat filters nearing completion – queue for FTS testing	
<b>3. Problem Areas</b>	<b>Remedial Action</b>
<b>4. Subsystem Management Issues</b>	
<b>5. Engineering Activities</b>	
Filters in production.	
<b>6. Design Changes</b>	
<b>7. PA/QA Activities</b>	
None	
<b>9. Actions Requiring Immediate Attention</b>	
<b>10. Status of Previous Actions</b>	
None	
<b>11. Activities Yet to be Achieved</b>	
To be defined	
<b>12. Budgets</b>	
<b>13. Milestones</b>	<b>Status</b>
<b>14. Schedule Changes</b>	
Cardiff schedule completely updated – current version is Cardiff_spire_4_0.mpp Milestones listed in section 12 updated to reflect current schedule	