

Monthly Report –September 2002

Date: 07/11/02

Work Package PCAL

SPIRE-UCF-REP-001442

1. Subsystem Progress Since Project Inception

Haller-Beeman source identified which meets SPIRE requirements

PCAL design complete

2. Subsystem Progress This Month

PCAL design complete.

Enclosure drawings submitted for manufacture (STM & CQM).

DM, STM & CQM sources in manufacture (DM will be used for lifetests).

3. Problem Areas **Remedial Action**

4. Subsystem Management Issues

5. Engineering Activities

STM & CQM enclosures in manufacture.

DM, STM & CQM sources in manufacture.

6. Design Changes

Design completed.

7. PA/QA Activities

PA database now in use.

DML & DPL in preparation.

8. Actions Requiring Immediate Attention

9. Status of Previous Actions

10. Activities Yet to be Achieved

11. Budgets

nes	Status
QMW source review	Complete
Prototype source testing complete	Complete
Final interface definition from ATC	Complete
Calibrators design review (internal)	Complete
STM (DM) PCAL delivery to ATC	Estimated del. 15/11/02 – delivery direct to RAL
CQM PCAL design review (internal)	Complete
CQM PCAL to ATC	Estimated del. 20/12/02 – To be agreed with ATC
PFM calibrators design review	Rescheduled for late January 2003
PFM PCAL to ATC	Estimated del. 21/5/03
FS PCAL to ATC	Estimated del. 12/9/03
	Prototype source testing complete Final interface definition from ATC Calibrators design review (internal) STM (DM) PCAL delivery to ATC CQM PCAL design review (internal) CQM PCAL to ATC PFM calibrators design review PFM PCAL to ATC



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Work Package SCAL

1. Subsystem Progress Since Project Inception

CQM design complete - passed DDR

All STM and CQM components complete.

2. Subsystem Progress This Month

Mechanical test of spare source assembly - checked integrity of source attachment to Torlon strut. Terminated test at equivalent acceleration of 64000G!

3. Problem Areas

Remedial Action

None

4. Subsystem Management Issues

CPP parts will not arrive in time for STM manufacture.

5. Engineering Activities

Assembly of STM SCAL components

6. Design Changes

None

7. PA/QA Activities

PA database now in use

8. Actions Requiring Immediate Attention

9. Status of Previous Actions

10. Activities Yet to be Achieved

11. Budgets

12. Milestones		Status	
5/12/00	QMW source review	Complete	
22/05/01	Calibrators design review (internal)	Complete	
18/12/02	SCAL STM delivery to RAL	Est. del. 29/11/02	
20/06/02	CQM SCAL design review	Complete	
13/01/03	CQM SCAL to RAL	Est. del. 13/01/03	
18/10/02	PFM calibrators design review	Rescheduled for late January 2003	
01/10/03	PFM SCAL to RAL	Late – due 09/12/03	
03/01/05	FS SCAL to RAL	Due 03/08/04	

13. Schedule Changes



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Work Package Filters

1. Subsystem Progress Since Project Inception

SPIRE filtering scheme finalised. Prototyping in progress.

Filter SSSD updated for DDR. Slight change of MW band for commonality with HFI band.

2. Subsystem Progress This Month

SPIRE STM CFIL1 still in manufacture – delay due to long lead-time obtaining new photolithographic masters for CFIL1.

STM PDIC1 and PDIC2 rings & shims submitted for manufacture.

STM PFIL2 and SFIL2 material ready for cutting to shape.

300mK filter clamps for all SPIRE models complete. Alignment marks added after request from RAL/LAM, and updated ICD accordingly.

CQM 300mK PLW filters shipped to JPL.

3. Problem Areas

Remedial Action

4. Subsystem Management Issues

5. Engineering Activities

STM PDIC1 and PDIC2 rings & shims submitted for manufacture.

300mK filter clamps for all SPIRE models complete. Alignment marks added after request from RAL/LAM, and updated ICD accordingly.

6. Design Changes

Alignment marks added to 300mK filter clamps.

7. PA/QA Activities

PA database now in use

8. Actions Requiring Immediate Attention

9. Status of Previous Actions

None

10. Activities Yet to be Achieved

11. Budgets

12. Milestones		Status	
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 18/10/02	
TBD	CQM 300mK filters to JPL	Complete – delivered 12/09/02	
13/01/03	CQM filters to RAL	Due 13/01/03	
03/02/03	PFM 300mK filters to JPL	Due 03/02/03	
01/08/03	PFM filters to RAL	Due 01/08/03	
03/02/03	FS 300mK filters to JPL	Due 22/08/03	
10/01/05	FS filters to RAL	Due 29/12/03	
13. Schedu	ıle Changes		

Delivery dates currently under negotiation with RAL and JPL



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Work Package 300mK straps

1. Subsystem Progress Since Project Inception

STM & CQM devices complete

2. Subsystem Progress This Month

Interface thermal tests continuing, including electrical isolation joint.

MK3 (DM, STM & CQM) components complete.

DM components assembled & sent to MSSL for mechanical characterisation. Light baffle passed SPIRE vibration load requirements - failed at higher level - full report in preparation by MSSL.

3. Problem Areas	Remedial Action	
Evidence of wear on Kevlar in vicinity of radiused	All components will have the radiused holes polished to	
holes after vibration.	remove any machining marks, which are the suspected cause	
	of the wear.	

4. Subsystem Management Issues

MSSL seem to have misread the ICD for the photometer box supports. They have drilled mounting holes for these components for 4-40 UNC bolts. The ICD, which they approved, shows that these bolts are 2-56 UNC. Therefore their clearance holes are the wrong diameter. MSSL are working on a resolution.

5. Engineering Activities

DM, STM & CQM components complete & DM components assembled

6. Design Changes

None

7. PA/QA Activities

None

8. Actions Requiring Immediate Attention

Resolution of interface problem with structure.

9. Status of Previous Actions

10. Activities Yet to be Achieved

11. Budgets

12. Milestone:	S	Status
7/6/02	300mK strap DDR	Date fixed
20/11/02 TBD	STM 300mK straps to RAL	Due 20/11/02 TBD

13. Schedule Changes

Schedule under revision by RAL (managing 300mK programme)



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Work Package **AIV** participation

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1. Subsystem Progress Since Project Inception			
Cryogenic black body & flip mirror/shutter concept produced – approved at AIV review			
Conceptual design presented at AIV DDR.			
2. Subsystem Progress This Month			
AIV filters submitted for manufacture			
Alternative supplier of large area photolithographic p	lates sourced (for filters), and order placed.		
3. Problem Areas	Remedial Action		
Delay in obtaining large photolithographic plates.			
4. Subsystem Management Issues			
Cardiff is no longer providing the AIV FTS			
5. Engineering Activities			
none			
6. Design Changes			
7. PA/QA Activities			
PA database now in use			
9. Actions Requiring Immediate Attention			
10. Status of Previous Actions			
None			
11. Activities Yet to be Achieved			
Production of CBB & flip mirror module.			
Provision of reference detector			
Provision of FTS			

12. Budgets

13. Milestones		Status	
31/5/02	CBB to RAL	Due 31/01/03	
31/5/02	AIV Filters to RAL	Due 29/11/02	
TBD	Reference detector to RAL	Due 12/8/02	
14. Schedule Changes			



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Work Package JPL BDA test support

1. Subsystem Performance Progress Sinc	ce Project Inception		
Optics modules designed manufactured			
Test cryostats at JPL			
Fridge #1 at JPL			
Fridge #2 at JPL			
Optics modules shipped			
2. Subsystem Progress This Month			
Cryostat filters nearing completion - queue for F	TS testing		
3. Problem Areas	Remedial Action	on	
4. Subsystem Management Issues	·		
5. Engineering Activities			
Filters in production.			
6. Design Changes			
7. PA/QA Activities			
None			
9. Actions Requiring Immediate Attention	1		
10. Status of Previous Actions			
None			
11. Activities Yet to be Achieved			
To be defined			
12. Budgets			
13. Milestones		Status	
14. Schedule Changes			
Cardiff schedule completely updated – current ve		_0.mpp	
Milestones listed in section 12 updated to reflect	t current schedule		