

	Monthly Report –October 2002	Date:	13/11/02
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Work Package PCAL

SPIRE-UCF-REP-001781

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 in manufacture (STM & CQM). DM, STM & CQM sources in manufacture (DM will be used for lifetests). DM source received.		
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		
12. Milestones		Status
5/12/00	QMW source review	Complete
21/09/01	Prototype source testing complete	Complete
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. 6/12/02 – delivery direct to RAL
30/01/02	CQM PCAL design review (internal)	Complete
3/9/02	CQM PCAL to ATC	Estimated del. 20/12/02 – To be agreed with ATC
18/10/02	PFM calibrators design review	Rescheduled for late January 2003
26/5/03*	PFM PCAL to ATC	Estimated del. 21/5/03
7/1/04*	FS PCAL to ATC	Estimated del. 12/9/03
13. Schedule Changes		

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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		
DM/STM model assembled and tested thermally. Agrees well with thermal model. Thermal model being modified to model & optimise warm-up sequence, rather than just constant applied power.		
3. Problem Areas None	Remedial Action	
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. 18/12/02
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 still in manufacture – delay due to non-availability of SANMAC tube stock. Problem now solved, and manufacture started. STM PFIL2 and SFIL2 material ready for cutting to shape. 300mK spectrometer lenses complete. Assembly of SLW CQM filter/lens stack in progress.		
3. Problem Areas New photolithographic masters have been seriously delayed due to a supplier going into liquidation. A new supplier has now been sourced, and quotations have just been received.	Remedial Action If this continues to be a problem, and it looks like the delivery of the STM CFIL1 may hold up the STM schedule, Cardiff will supply a filter for STM tests only which has slightly reduced “active” area (i.e. that of our existing grids).	
4. Subsystem Management Issues		
5. Engineering Activities STM PDIC1 and PDIC2 rings & shims manufacture resumed after sourcing tube stock.		
6. Design Changes Backup design of reduced active area CFIL1 complete		
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	Delayed - due 13/12/02
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. Schedule 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		
Electrical isolation joint concept thermal tests complete – report in progress. DM components re-assembled with higher Kevlar pre-load & sent to MSSSL for mechanical characterisation. Photometer support performed well at random vibration levels in significant excess of SPIRE design levels.		
3. Problem Areas	Remedial Action	
Evidence of wear on Kevlar in vicinity of radiused holes after vibration. (Light baffle only)	Polishing of all radiused holes is in progress to alleviate this problem. The polished light baffle will be sent to MSSSL for re-test 15/11/02	
4. Subsystem Management Issues		
Ian Walker at Cardiff has assumed responsibility for the management of the 300mK strap program		
5. Engineering Activities		
DM components re-assembled with higher pre-load for re-testing ay MSSSL to verify FEA model		
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		
None		
10. Activities Yet to be Achieved		
11. Budgets		
12. Milestones		Status
7/6/02	300mK strap DDR	Date fixed
20/11/02 TBD	STM 300mK straps to RAL	
13. Schedule Changes		
Schedule under revision by Cardiff (managing 300mK programme)		

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Work Package AIV participation

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 plates sourced (for filters), and order placed for quotation		
3. Problem Areas	Remedial Action	
Delay in obtaining large photolithographic plates.	Alternative supplier sourced – quotation finally received 13/11/02	
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 31/01/03
14. Schedule Changes		

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Work Package JPL BDA test support

1. Subsystem Performance Progress Since 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 complete – due for shipping mid-November	
3. Problem Areas	Remedial Action
4. Subsystem Management Issues	
5. Engineering Activities	
Filters in production.	
6. Design Changes	
7. PA/QA Activities	
None	
9. Actions Requiring Immediate Attention	
10. Status of Previous Actions	
None	
11. Activities Yet to be Achieved	
To be defined	
12. Budgets	
13. Milestones	Status
14. Schedule Changes	