

SPIRE/PACS (CEA-SBT)	Monthly Report – July 2003	Date: August 6 th , 2003
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Work Package: Cooler

SPIRE-SBT-REP-001771

1. Subsystem Progress Since Project Inception		
Detailed design of the coolers (CQM, STM, PFM & FS) done. Manufacturing of 2 CQM + 2 STM done. Manufacturing of new large test cryostat done (“standard” test cryostat available). Product Assurance plan implemented. STM units delivered. CQM units under qualification.		
2. Subsystem Progress This Month		
<ul style="list-style-type: none"> - CQM units : Both units fully assembled. CQM SPIRE is mounted with 0.29 mm and 0.5 mm Kevlar strings respectively on the evaporator and pump side. CQM PACS features 0.5 mm strings everywhere. - Test Plan : for both CQMs, the following set of tests have been performed : <ul style="list-style-type: none"> - HCR#1 : First set of thermal tests - bake out for 5 days at 80°C under vacuum - HCR#2 : Second set of thermal tests - Vibration tests (CSL – Belgium) - SPIRE only : HCR#3 : Third set of thermal tests including nominal 48h hold time test - 48h hold time test : 45 hours measured under 10 μW load and 1.7 K heat sink / 4K structure. Result not in accordance with model. Additional parasitic load of 6 to 8 microwatts spotted – under investigation. - HCR#3 with PACS to follow : should allow to discriminate between various possibilities (SPIRE results). - Following completion of CQM assembling, all procedures revisited (if necessary) according to as-run procedures - Kevlar characterisation campaign : On going (new set of tests with dummy suspension system) 		
3. Problem Areas		Remedial Action
Peculiar behaviour of Kevlar / additional thermal load on cooler		Under investigation
4. Engineering Activities		
5. Design Changes		
6. PA/QA Activities		
General QA management.		
7. Subsystem Management Issues		
None		
8. Actions Requiring Immediate Attention		
SBT documents approval by SPIRE and PACS projects		
9. Status of Previous Actions		
None		
10. Activities Yet to be Achieved		
11. Milestones		
		Status
Winter 00-01	Coolers Detailed Design	Completed
May 17 th 2001	Coolers DDR (PACS & SPIRE)	Completed
June 26 th 2001	Subcontractor selection for machining	Completed
October 2001	Parts Delivery	Completed
Spring 2003	CQM Coolers assembling	Completed
Nov/Dec 2001	STM Coolers Assembling and Vtest	Completed
Nov. 2002	STM Coolers delivery	Completed
Spring 2003	CQM Coolers Qualification	Completed for SPIRE
Autumn 2003	CQM Coolers Delivery	
12. Schedule Changes		