GLAST Large Area Telescope:  
Face to Face Subsystem Managers Meeting  
June 15, 2005  
AntiCoincidence Detector (ACD) Subsystem  
WBS: 4.1.6  

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ACD Completed Assembly
Accomplishments/Status

• Completed assembly of the ACD except for the Micrometeoroid Shield (MMS) and thermal blanket. All detectors are light-tight and signals have been verified as going to the correct electronics channels.

• Completed assembly of the MMS – see next page. MMS and thermal blanket materials just completed bakeout.

• Completed final EMI test (CS114) – no problems.

• Completed Pre-Environmental Review - 2 RFAs, 2 recommendations. PER presentation is available on the ACD Web site.

• Started functional and performance testing of full ACD.
ACD Micrometeoroid Shield Completed Assembly
Environmental Test Flow

6/7
ACD Integration Complete

6/8-6/13
Full Functional Test
- Primary
- Redundant
- Voltage and Freq

6/14-6/23
ACD Subsystem Efficiency Verification Test
- Aronson table
- CPT
- Light Yield measured
- Adjust Voltage
- Adjust Discriminator settings

6/24-6/29
Vibration
- Pre Vibe Functional
- Functional after each axis (or Z,X&Y)

6/30 - 7/2

6/7 6/8-6/13 6/14-6/23 6/24-6/29

7/5-7/14
Thermal Vacuum
- 225 or 290
- Pre and post test functional
- Pre test performance
- CPT at peaks
- Hot and cold start

7/15 – 7/16
Mass Properties

7/17-7/21
Ship To SLAC

7/22 – 7/26
Post Ship Acceptance Test
- Functional test
- CPT test

We are slipping day for day until this test can be run successfully.
Risks to this Schedule

• EGSE remains a concern. Some ACD scripts can only be tested on the full ACD. Functional tests that worked at the individual chassis level produced system crashes when run on the full ACD. ACD and LAT EGSE software groups have been working to resolve problems (Paul Kunz took a break from his vacation to come to Goddard to help). Crashing problem seems fixed, but other problems are still in work. We must have reliable functional tests before going into environmental testing.

• Schedule for the final testing is aggressive.

• Offline analysis may present difficulties. None of us on the ACD team are experts in the software packages being used for LAT analysis, and we have no dedicated software support.
Backup
ACD Problem /Failure Report Status

As of June 7, 2005 a total of 312 Problem Reports (PR’s) and 20 Problem Failure Reports (PFR’s) have been opened

- 303 PR’s have been closed
- 9 PR’s open
  - 8 for EGSE related problems
  - 1 for a broken fiber on Tile Detector Assembly 230
- 18 PFR’s have been closed
- 2 PFR’s are open
  - PMT signal wire connector - Yellow
  - TDA gaps - Yellow