



<b>GLAST LAT ACD ELECTRONICS SUBSYSTEM TECHNICAL DOCUMENT</b>	Document # <b>ACD-PROC-000066</b>	Date Effective <b>12-30-02</b>
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Document Title <b>GLAST LAT ACD PMT Subassembly Test Procedure</b>		

# Gamma-ray Large Area Space Telescope (GLAST)

## Large Area Telescope (LAT) Anti-Coincidence Detector (ACD)

### PMT Subassembly Test Procedure



# DRAFT

Test Equipment Required

- Oscilloscope with the capabilities to store a picture to a 3.5" floppy disk
- High voltage power supply with the ability to monitor current and voltage to a resolution of 1 mA and 10 volts, and a 0 volt to 1500 volt range

Test Procedure

1. Turn the high voltage supply voltage to 0 volts.
2. Power-OFF the high voltage supply.
3. Power-ON the oscilloscope.
4. Set the oscilloscope Time/Div to 10 nanoseconds.
5. Set the oscilloscope, channel xx, Volt/Div to 10 millivolts.
6. Set the oscilloscope channel xx signal input termination to 1-megaohm.
7. Connect the fiber portion of a tile to the top of PMT subassembly's housing opening.
8. Tape the tile-to\_PMT interface and cover the tile with a dark cloth
9. Connect the PMT subassembly high voltage cable to the high voltage supply
10. Connect the PMT subassembly signal cable to channel xx
11. Power-ON the high voltage supply
12. Increase the voltage to 100 volts and monitor the current. The current should fall below 2 microamps within a few seconds. If it doesn't, STOP the test and determine the problem.
13. Increase the voltage to 200 volts and monitor the current. The current should fall below 2 microamps within a few seconds. If it doesn't, STOP the test and determine the problem.
14. Increase the voltage to 500 volts and monitor the current. The current should fall below 2 microamps within a few seconds. If it doesn't, STOP the test and determine the problem.
15. Increase the voltage to 800 volts and monitor the current. The current should fall below 2 microamps. If it doesn't, STOP the test and determine the problem.
16. Set the trigger level between -10 millivolts and -20 millivolts or until a negative going pulse is acquired on the oscilloscope.
17. Save a picture to the floppy disk and include it in the PMT subassembly certification log.
18. End of test.

