GLAST Large Area Telescope:

Electronics, Data Acquisition & Flight Software W.B.S 4.1.7

Face-to-Face Feb 05

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TEM/TPS Status & Schedule

• Status
  – Three Flight Tower-Electronics Modules/Tower Power Supplies received
    • Fully assembled
    • Thermal-cycled
    • Vibration tested (one of them to qualification levels)
    • First unit finished thermal-vacuum testing
    • Second unit in thermal-vacuum testing
    • Both units finished EMI/EMC testing
    • No issues/problems
    • Qual unit to go into qual EMI next week
  – Balance of 19 TEM/TPS in surface-mount assembly at vendor

• Schedule
  – 2/17/05 First TEM/TPS to I&T
  – 2/25/05 Second TEM/TPS to I&T
  – 4/22/05 Third TEM/TPS to I&T
    • One week lag between delivery of consecutive assemblies
  – 7/26/05 Last TEM/TPS to I&T

• TV testing of 19 units
  – With 1C/min ramp rate and 10-4 Torr vacuum, might be able to cycle in 48h
  – If we upgrade chamber to be able to hold 2 TEM’s, best case is 1 TEM/day
    • Thermal fixture needed for inside chamber
PDU Status and Schedule

• Status
  – Design/documentation complete
  – Enclosures fabricated
  – All parts received (except recalled International Rectifier regulator, due end of February)
  – Assembly contract awarded
  – All parts kitted and audited by assembly vendor
  – Assembly started

• Schedule for proto-flight
  – Mid March: unit assembled, pre-coat, ready for test
  – Early April: unit fully assembled, ready for environmental test

• Schedule for Flight Unit
  – 5/15/05 Precoat PDU assembly ready for electrical test
  – 5/30/05 Complete assembly ready for environmental test
  – 7/1/05 Flight PDU to I&T

• Tester
  – Designing analog mux card for TV test
GASU Status and Schedule

• Status
  – Design/documentation complete
  – Enclosures fabricated
  – All components/parts received
  – Assembly contract awarded
  – Parts being kitted
  – Flight assembly to start 3/10/05

• Schedule for proto-flight
  – End of March: unit assembled, pre-coat, ready for test
  – Mid April: unit fully assembled, ready for environmental test

• Schedule for Flight Unit
  – 5/20/05 Precoat GASU assembly ready for electrical test
  – 6/10/05 Complete assembly ready for environmental test
  – 7/13/05 Flight GASU to I&T

• Tester
  – Tester in design/debug
  – Designing analog mux card for TV test
    • Lots of harness assembly to be done for these cards
  – Ordered 450-pin feed-thru for chamber
SIU/EPU Status and Schedule

- **Status**
  - Design/documentation complete
  - Enclosures fabricated
  - All components/parts received except BAE RAD750 CPU
    - Uses recalled International Rectifier regulator
    - Boards to be sent back to BAE
    - Reworked boards expected 3 weeks after they receive components; June 05
  - Assembly contract out for RFP

- **Schedule**
  - In next 3 weeks: assembly of cCPI connectors onto sample flight boards
    - Three different assembly methods
    - Analysis at GSFC
    - Decision which method to use for flight assembly
  - 6/1/05 Precoat cCPI boards ready for electrical test
  - 7/28/05 Complete assembly ready for environmental test
  - 8/19/05 First Flight SIU/EPU to I&T
  - 8/24/05 Second flight SIU/EPU to I&T
  - 8/27/05 Third flight SIU/EPU to I&T
  - 8/30/05 Fourth flight SIU/EPU to I&T
  - 9/2/05 Last flight SIU/EPU to I&T

- **Tester**
  - In design
Issues

• Details of TV testing of GASU & PDU
• AUSTIN EEPROM DPA problems
• Delivery of Omnirel linear regulator for RAD750, PDU
• Qualification of cCPI press-fit connector assembly using solder process
• Delivery issue with GASU PS Zener protection diode for ACD voltage (April delivery, might eliminate the part)