



GLAST Large Area Telescope:

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

May Status 06-02-04

Gunther Haller, JJ Russell

**haller@slac.stanford.edu
(650) 926-4257**



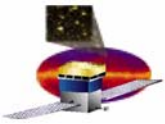
Power Distribution Unit (PDU)

- **Power Distribution Unit**
 - **Tested PDU tester-box**
 - Now need to make more copied, one for ISIS
 - **Assembled/tested another full PDU box**
 - **Test-Bed**
 - **Working on 3 more PDU boxes**
 - **ISIS**
 - **FSW**
 - **I&T**
 - **Working on flight drawings**
 - **Need to start working on PDU flight test-procedure**
 - **Plan:**
 - **Flight drawings release: July 15**
 - **Start of Qualification Unit fab Aug 15**



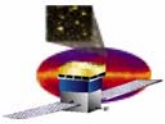
GASU

- **GASU**
 - Fabricated new boards (10)
 - Assembled/tested two more full-boxes
 - Supplied G3 #1 for ACD software development
 - Supplied G3 #2 for ACD BEA testing
 - Assembled/tested 3rd box to be supplied to ACD (G3 #3)
 - Removing FPGA sockets and just finished soldering of FPGA
 - Final acceptance test awaits modification of power-section
 - In process of assembly of 2 more board into 4th box for ISIS
 - Boards for 5th box loaded, needs assembly in box, for FSW
 - New batch of boards to be fabricated, awaits final (flight) design of ACD power section, use for
 - I&T
 - ACD
 - FSW
 - Working on flight drawings
 - Need to start working on ACD flight test-procedure (extension of G3 test-procedure)
 - Plan:
 - Flight drawings release: July 15
 - Start of Qualification Unit fab Aug 15



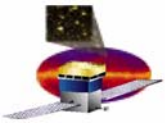
Tower Electronics Module

- **Flight Contracts**
 - Enclosures are in fabrication (full flight production)
 - PCB contract awarded, boards to be fabricated end of this month
 - Loading/assembly contract awarded (QA will visit next week)
 - Latest for parts is July 15 (Cap has improved from 18-weeks)
- **TEM ASIC's**
 - Marked/thermal cycled/ next step is dynamic burn-in
- **Issue**
 - Minor change in code of one TEM FPGA to improve data-flow to event-builder in high-rate environment
 - To be tested this month



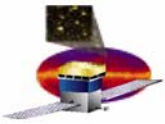
Tower Power Supply Module

- **Flight Contracts**
 - Enclosures contract still in purchasing (full flight production)
 - PCB contract awarded, boards to be fabricated end of this month
 - Loading/assembly contract awarded (QA will visit next week)
 - Latest for parts is July 15 (Cap has improved from 18-weeks).
 - Poly-switches at GSFC/NRL, to be screened
- **Issue**
 - Have two different Zener voltage diodes for CAL/TKR Bias voltage safe-guard.
 - Need official change in Bias-Voltage max test voltages in ICD's before boards go out for assembly



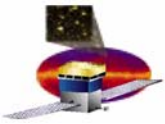
SIU/EPU & Harness

- **Crates**
 - Crates are being used by Testbed/FSW for FSW development/test
 - Assembling another crate, to be used for ISIS
 - BAE750 boards are limiting number of crates
 - Two boards expected 2nd week of June
 - Two others are delayed until end of July
 - August 15 is target date for qual fabrication
- **Harness**
 - Contract awarded
- **Thermal Control Box design to be changed**
 - Fast-blow fuses
 - Possibly other changes; depends on Lockheed



Testbed

- All Front-End Simulators (40) installed on testbed
 - In commissioning
- All 16 TEM & TEM-PS installed on test-bed
 - Being tested
- GASU/PDU/SIU installed on test-bed
- Harness
 - Harness installed for
 - FES -> TEM
 - TEM -> GASU
 - TEM -> PDU
 - PDU -> SC power
 - GASU -> SIU
 - SIU -> SC power
 - SIU -> SC MIL1553
 - SIU -> Science Interface



TEM-based EGSE

- **TKR**
 - One sent to Building 33
 - Two sent to Italy
 - 2 more ready to be sent (pending paper-work)
- **CAL**
 - One sent to NRL
 - 4 more ready to be sent (pending paper-work)
- **I&T**
 - Exchange 3 EM1's in the next two weeks
- 14 additional ones in test
- Testing to be started for
 - CAL TV use (albeit TEM/TEM-PS T range limited to 18C to 38C)
 - Same for TKR use



Schedule/Budget

- **Total budget: \$20,443**
- **Work Scheduled up to date: \$14,118**
- **Work Performed: \$13,153**
- **Actuals: \$13,719**
- **Schedule Variance \$-965k (7%)**
 - **Qual/Flight work should have been started, reflects current status**
- **Cost Variance: -\$566k (4%)**
 - **Past charges, change control was approved last week**
 - **Mainly last month**
 - **EGSE Labor over budget (26-00068)**
 - **Testbed M&S only 50 % earned of 50/50 300k/300k**