GLAST Large Area Telescope:

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

Face-To-Face March Meeting

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TEM/TPS Status & Schedule

- Status
  - Qual Module: on CAL FM at NRL
  - Flight Tower-Electronics Modules/Tower Power Supplies
  - A & B on towers
  - 1 & 2 in vibration today. Start of Thermal vacuum tomorrow, ready on Monday late morning
    - However one failed, investigated and found bad Cystek connector
    - Failure is that the temp senosr from one AFEE board can’t be read
    - Going ahead with vib/TV: possibly use TPS to replace TWR A TPS
    - Will send to assembler on Monday to possibly replace connector and send connector for analysis
    - Connector was ok when pre-coat TPS was tested. Failure developed during shipping/coating/assembly-in-box/shipping. Is a concern.
  - 3 & 4: arrive today at SLAC: need testing, hope to vibrate this afternoon, not sure if possible
    - If one of 3 & 4 is ok, won’t TV bad Tem/TSP unit above
  - 5 & 6: expected mid next week
  - After that:
    - Assembler has sufficient TEM’s tested at SLAC, pre-coat, to be assembled
    - Presently assembler does not have any more TPS, pre-coat tested
    - SLAC has 2 in test, received last Friday, to be snet back tomorrow for conformal coating
    - Schedule is to get 2/week (i.e. 7 & 8 a week after 5 & 6)
  - Did run test with 2 EM TEM/TPS’s to check new 2-TEM/TPS TV
PDU Status and Schedule

• Status
  – Yesterday, SLAC received PDU box, pre-conformal coat-stage for testing
  – Dead-bug cap on DC/DC converter (see TPS circuit) added
  – Testing starts tomorrow morning (includes safe-to-mate, CPT, over T testing)
  – Schedule is to send back to AF next Tuesday,
  – Back to SLAC for proto-flight environmental testing 5/31
  – TV one week
  – EMI depends on whether 2-week testing (qual program) or just conductive flight acceptance testing
  – Second box will be released as soon as first box has been tested over T, next Tuesday
  – Second box lags first by about 6 weeks.
  – Might have to use first box for flight

• Tester
  – Thermal vacuum cables almost ready
  – Need to do TV test, need to coordinate with TEM/TPS testing
GASU Status and Schedule

• Status
  – 4 GASU Power-supplies thru SMT, manual assembly almost complete (had shortage of wire, shipped last week to assembler)
  – 4 DAQ boards: finish today SMT, start manual assembly
    • (had several part issues which were ironed out last week)

• Present Schedule for proto-flight (is being worked on)
  – June 17: get pre-coat assembly to SLAC for testing
  – Jul 28: Proto-flight unit ready to deliver
  – Flight lags proto-flight by about 6 weeks

• Tester
  – Almost done, needs some attention from Jana
SIU/EPU Status and Schedule

• Status
  – cCPI board assembly test
    • New (reduced copper) back-plane was assembled, telecon this afternoon. If ok, they will assemble another board for GSFC analysis, ready by Friday
    • SIB (plug-in board)
      – Vendor need to design/order wave-solder tool to prevent plastic melting and to eliminate solder balls
      – Received tool on Monday, is working on test assembly, ready by Friday
  – SIB/LCB/CPS/CBP
    – Went thru parts and started to ship kits
      • SIB kit was shipped
      • LCB/CBP/LCB parts will be shipped today
    – Finally got LCB/CBP/SIB boards which passed coupon testing
    – New batch of CPS boards expected tomorrow
• Schedule
  – Add 2 weeks delay to dates below
  – 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
Harness

- Harness on order, priority list with dates on web-page below

• First VSC should be ready next week
  – (some delay because of Lockheed thermal test effort and ISIS delivery)
Issues

- AUSTIN EEPROM DPA problems
  - Have parts for 5 boards (5 fly)
  - New lot ready for CSI, but was told today that only 20 parts are in that lot (need to see why that is, since they started 150 parts)
- Delivery of RAD750
- Qualification of cCPI press-fit connector assembly using solder process
- Delivery issue with GASU PS Zener protection diode for ACD voltage (now end of May delivery, might eliminate the part (was ordered 1.5 years ago)
- Need to work on closing open FPGA review items