GLAST Large Area Telescope:

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

Face-to-Face Oct 04

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Test-Stand Summary

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calorimeter</td>
<td>5</td>
</tr>
<tr>
<td>Tracker (conformal)</td>
<td>2</td>
</tr>
<tr>
<td>Tracker</td>
<td>9</td>
</tr>
<tr>
<td>ACD</td>
<td>4</td>
</tr>
<tr>
<td>I &amp; T* (next slide)</td>
<td>5</td>
</tr>
<tr>
<td>DAQ/FSW</td>
<td>12</td>
</tr>
<tr>
<td>Trigger</td>
<td>1</td>
</tr>
<tr>
<td>Electronics Support</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

- Finished TKR/CAL/ACD/I&T test-stands
- I&T got PDU, but was taken back temporarily to check out harness lengths
- Looking into making 3 or 4 more TEM’s only for CAL, so that there is no time-pressure returning TEM’s from towers shipped to SLAC
- ACD LCB/software: supposed to be ready end of week, to be shipped Wed next week, need to schedule trip (Jana)
TEM/TPS Production Status

• TEM/TPS
  – Vendor started assembly (1 qual plus TWR A&B)
    • Issue with NUSIL under FPGA/ASIC’s when reflowing. Being addressed
  – Conservative schedule: only back at SLAC in first week of December, 3 weeks for acceptance testing at SLAC thereafter.
    • Needs to be accelerated
    • Parts kit shipped to General Technology, being audited
• Tasks left to be completed
  – Delivery/review of detailed vibration/TC procedure from GT
  – Delivery of test-stands including engineers to GT (in two weeks)
• Brigitte is working on getting very detailed production schedule entered (like for TEM/TPS). Have first version of PDU
• Driver is getting all fabrication documentation approved and contract put in place
  – SIU/EPU, PDU, GASU mechanical drawings released
    • Out for RFP for full flight fabrication
  – All PDU electrical & assembly submitted for review
  – SOW written for SIU/EPU internal cable assembly
    • PDU & GASU in draft form
  – GASU electrical drawings to be finished this week
  – SIU/EPU electrical in work (LCB, SIB, CPS, CBP)
  – Parts being audited
  – All LAT harness drawings submitted for review
• FSW
  • Not clear whether Oct demo needs to be delayed since Boot group did not yet receive LCB/FSW update
Forecast/Descope

- Left to be spend as of 8/31: $3 Mill
  - Commitments show $3M but needs to be checked (e.g. RAD750)
  - Various liens on the book (e.g. EGSE, FSW)
  - Contracts to be placed
    - PDU/GASU/SIU crates
    - PDU/GASU/SIU board fab
    - PDU/GASU/SIU assembly
  - Need to provide estimate for above items
- Descope:
  - Presently assemble
    - GASU: 1 qual, 1 flight, 1 spare
    - PDU: 1 qual, 1 flight, 1 spare
    - SIU: 1 qual, 2 flight, 1 spare
    - EPU: 1 qual, 3 flight, 1 spare
    - Could use qual as spare, or make qual proto-flight
      - Risk since do use FPGA’s which are slower than EM’s