LAT Planning Meeting

Mechanical Systems
May 2004
Marc Campell
## Cash Flow

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
<th>Approval</th>
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<tr>
<td>LAT4</td>
<td>LAT Project</td>
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<td>Run Date</td>
<td>Status Date</td>
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<th>JUL04</th>
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Mechanical Systems Critical Path

- **Flight Hardware for TCS**
  - 6/30/04 / 0

- **GBA Assembly fixtures/ MGSE**
  - 6/30/04 / 0

- **Grid Box Base Assembly #1**
  - Operations 9/23/04 /

- **Flight Grid RFI #1**
  - 9/23/04 /

- **GBA #1 Fit Check Operations**

- **Fabricate Flight Grid (4X4) #1**
  - 8/31/04 / -54

- **Inspect Flight Grid, EMI skirt, details #1**
  - 09/1/04 /

- **Inspect Flight Grid, EMI skirt, details #2**
  - 10/29/04 /

- **Fabricate Flight Grid (4X4) #2**
  - 10/28/04 /

- **Grid Box Assembly #2**
  - Operations 12/14/04 /

- **Static Load Test Complete**
  - 2/25/04 / -43

- **Completion Dates/Variance to Baseline**
Top 3 Schedule Risks

• Tapemation’s execution of the plan
  – Machining error
  – Equipment failure
  – Inspection plan
• Timely completion of Grid plating requirements
  – Performed by 2\textsuperscript{nd} tier subcontractor
• Efficient operations in B33 for Mech Systems work
  – First piece of flight hardware
  – I&T + Mech Systems working together effectively
Open Flight Design Issues

• TCS – Grid thermostat qualification
  – Grid thermostats are rated to 30V & 2A for 200,000 cycles
  – Planned operation at 35V & 1A; 42V failure mode
  – Telecon with GSFC (PCB), SLAC & TI held
  – Qualification testing of parts will be performed ($15K)

• TCS validation vs. LM modified Radiator Thermal Vacuum & Balance plans
  – TCS test requirements are in work
  – TCS risk assessment and Qual test plan requested by GSFC

• X-LAT plate needs 0.5” radius in some locations that may violate 00040 drawing stay clears near S/C interface

• LAT MLI in this area may also be a problem

• X-LAT MLI blanket billowing may violate stay clear

• Radiator MLI blanket & wiring violates stay clear

• LM proposed -6dB pre & post acoustic tests to verify Radiator instead of low level sine sweep (spec rev, cost & schedule reduction)
  – Low level sine sweep to 150 Hz required to address Delta II concern