

**Gamma-ray Large  
Area Space  
Telescope**



# **GLAST Large Area Telescope**

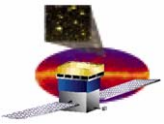
## **LAT Flight Software**

**Test Readiness Review  
March 30, 2006**

**Dick Horn  
FSW Manager**

**Sergio Maldonado  
FSW Test Team Lead**

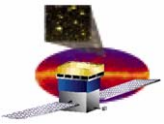
**Stanford Linear Accelerator Center**



# Agenda

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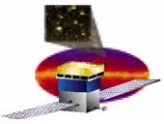
- **Intro - Dick**
  - **Comments/Recommendations**
  - **Review Team**
  - **Current Status w/ Known Liens**
  - **Scope & Objectives**
  - **Schedule**
- **Systems Engineering - Mike**
- **FSW Overview - Sergio**
- **Test Process - Sergio**
- **Test Environment - Sergio**
- **Current Status - Sergio**
- **SQA - Kelly**
- **Safety - Dick**
- **Wrap-up – Dick**



# Comments/Recommendations

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- Forms available for recommendations
- Indicate recommended closure milestone
  - FQT
  - Post-Test Review
- Will review at end of TRR



# Review Team

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- **Co-Chairs**

**Lowell Klaisner**

**Al Vernacchio**

- **Members**

**Erik Andrews**

**Tom Venator**

**Bernie Graf**

**Randy Worden**

**Jack Leibee**

**Shirley Savarino**

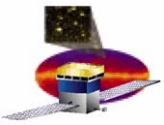
**David Dymm**



# Summary of Current Status for FQT Readiness

## FSW Development

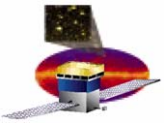
Current Status	Liens	Impact/Risk
<ul style="list-style-type: none"> <li>• <b>Core Software Complete</b> Core functionality to complete all calibration and system test requirements</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Minor Bugs/Fixes via Commissioning Effort</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Complete bug fixes as minimum entrance criteria</b> ECD : 4/7/06</li> </ul>
<ul style="list-style-type: none"> <li>• <b>GRB Interface Functionality</b></li> <li>• <b>CNO/Alignment Filters</b> Initial functionality complete</li> </ul>	<ul style="list-style-type: none"> <li>• <b>VSC Support for LAT GRB commands</b></li> <li>• <b>Complete Unit Testing</b></li> <li>• <b>Test-bed Environment For Filter Tests</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Commissioning effort given higher priority, low risk to defer to <math>\Delta</math>-FQT</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>GRB Detection Algorithm</b></li> <li>• <b>Software Standards</b> Deferred to post shipment to NRL</li> </ul>	<ul style="list-style-type: none"> <li>• <b>GRB Detection Algorithm Requirements ECD 1 May 06</b></li> <li>• <b>Verification of Software standards awaiting final code base</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>No risk to LAT functionality or schedule</b></li> <li>• <b>Current code base meets software standards</b></li> <li>• <b>Target <math>\Delta</math>-FQT complete prior to TVAC (June 06)</b></li> </ul>



# Scope and Objectives

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- **FQT Goal**
  - **Formal verification of core FSW**
    - **45 tests addressing 149/183 total requirements**
- **$\Delta$ -FQT Goal**
  - **GRB detection and response, diagnostic functions associated with new filters, and software standards**
    - **Additional 12 tests address remaining 34 requirements**
- **TRR Goals**
  - **Demonstrate thoroughness and completeness of test program**
  - **Show clear mapping of requirements to procedures**
  - **Describe test environment**
  - **Identify open issues**
  - **Communicate action plan to address open issues, identifying clear entrance/exit criteria for FQT**



# Schedule

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- **30 March :**           **Test Readiness Review (TRR)**
- **10 April :**           **Close all required action items**
- **7 April :**           **Build V0-6-7 target for FQT**
- **1-10 April :**       **Script Dry Runs/Closure**
- **11-14 April :**      **FQT**
- **17 April :**         **Post Test Review (PTR) –**
- **1 May :**           **GRB Detection Algorithm Requirements**
- **1 June :**           **Build V1-0-0 for  $\Delta$ -FQT**
- **8 - 9 June :**       **$\Delta$ -FQT**