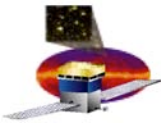


GLAST Large Area Telescope:

Status of the Instrument

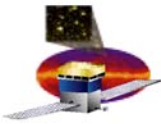
Lowell A. Klaisner
Stanford Linear Accelerator Center
Project Manager

Klaisner@slac.stanford.edu
650-926-2726



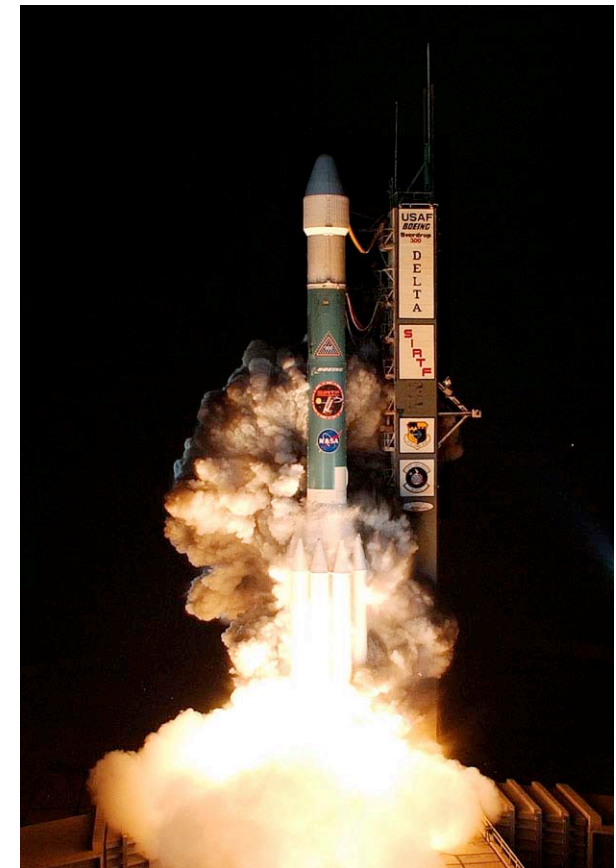
Instrument Status Overview

- **Seven Tracker modules at SLAC**
- **Ten Calorimeter are at SLAC**
 - **All 16 plus 2 spares are complete**
- **Anti-Coincidence Detector complete and ready for environmental test**
- **Four flight towers integrated into the Grid and taking data**
 - **Instrument Integration and Test is going well!**
- **Two additional towers integrated this week**

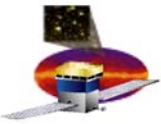


Master Schedule

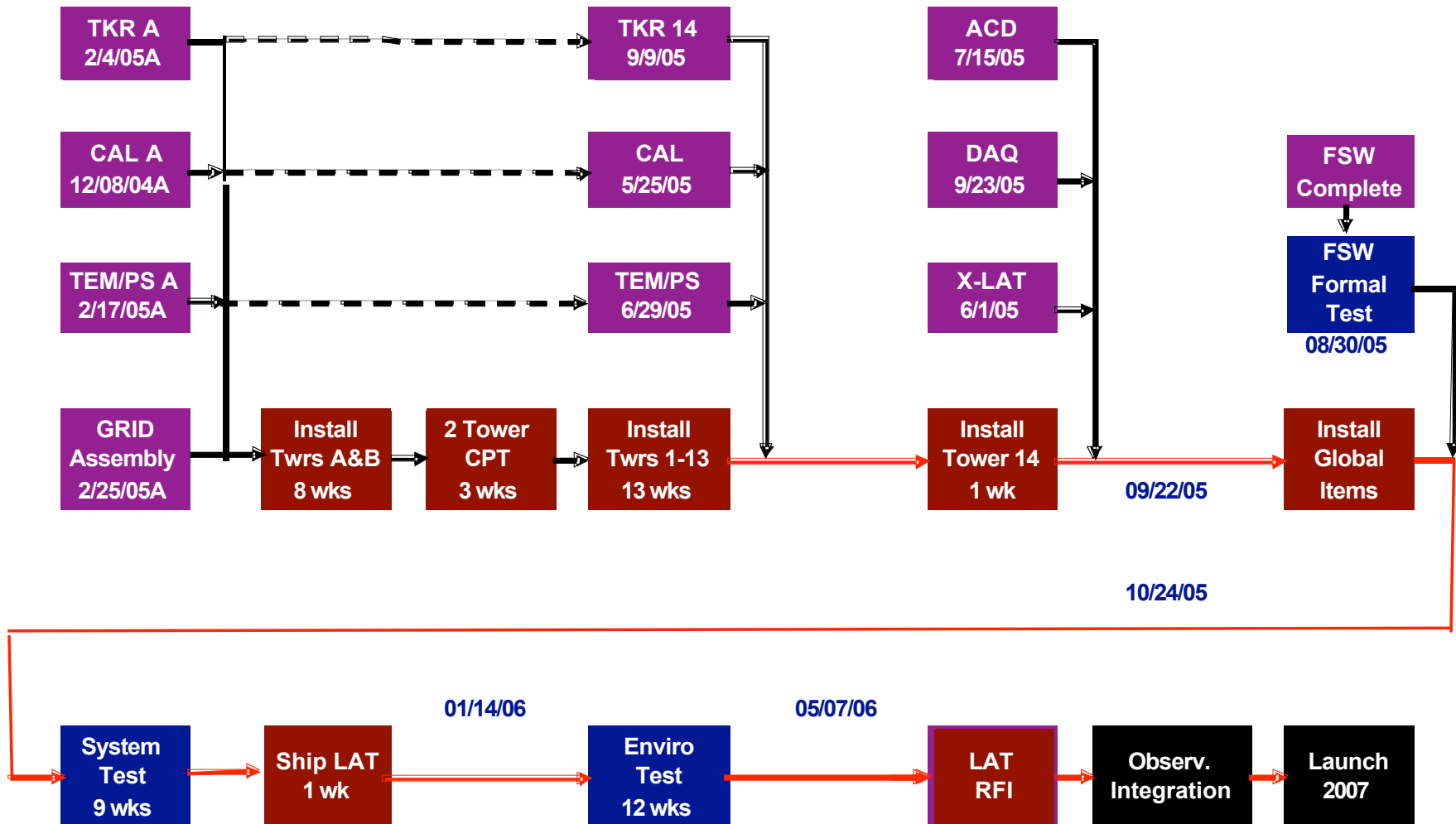
- **LAT complete and tested** **January 9, 2006**
 - **To NRL for environmental testing**
- **Delivery to Observatory Integration** **June 1, 2006**
 - **Mate with spacecraft and GBM and test**
- **Launch** **August 31, 2007**
 - **Kennedy Space Flight Center**

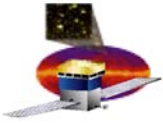


**Spitzer Telescope
Launch on a Delta II
Heavy**



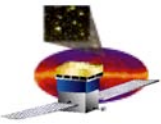
LAT Schedule





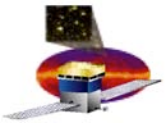
Threats to Schedule

- **Ribbon Cables for the Tracker modules**
 - **Vendor yield problems**
 - **INFN building modules and storing waiting for cables**
 - **Developing second vendor**
- **Data Acquisition module production**
 - **Component issues**
 - **Process issues**
 - **Complexity of the equipment**
 - **Incremental testing as units become available**
- **Anomalies at high level of integration**
 - **Difficult to deintegrate the instrument**
 - **Thorough testing at the each step**



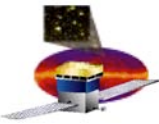
Four Tracker modules in the Grid





Anti-Coincidence Detector





Calorimeter Assembly and Test

Module S/N	PEM Assembly	AFEE Installation	TEM/TPS Safe-to-Mate	TEM/TPS Installation	Conformal Coat	Initial CPT	EMI/EMC	Vibration	TVAC	Mass Properties	Final CPT Calibration	Data Review	Ship	Post Ship Test
101	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
102	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
103	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
104	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
105	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
106	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
107	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
108	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
109	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
110	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
111	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
112	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
113	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
114	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
115	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
116	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
117	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Completion

✓ Started

] This month

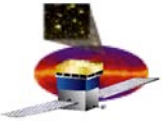
] Previously

} Arrive SLAC Monday Night

Naval Research Lab Washington DC

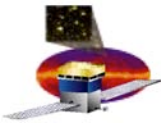
} Spares



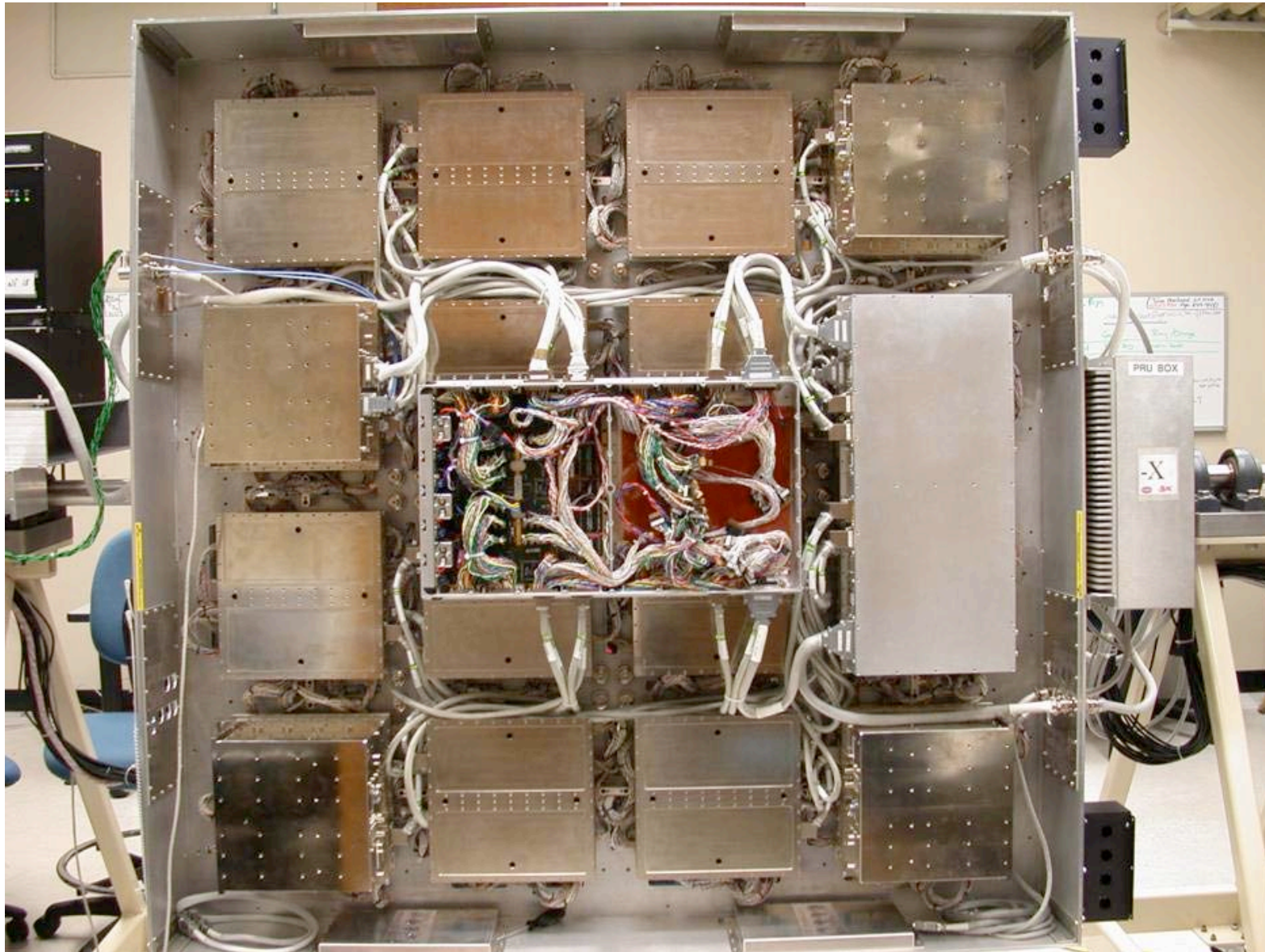


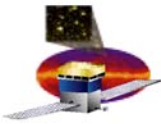
Installing a Calorimeter with TEM/PS



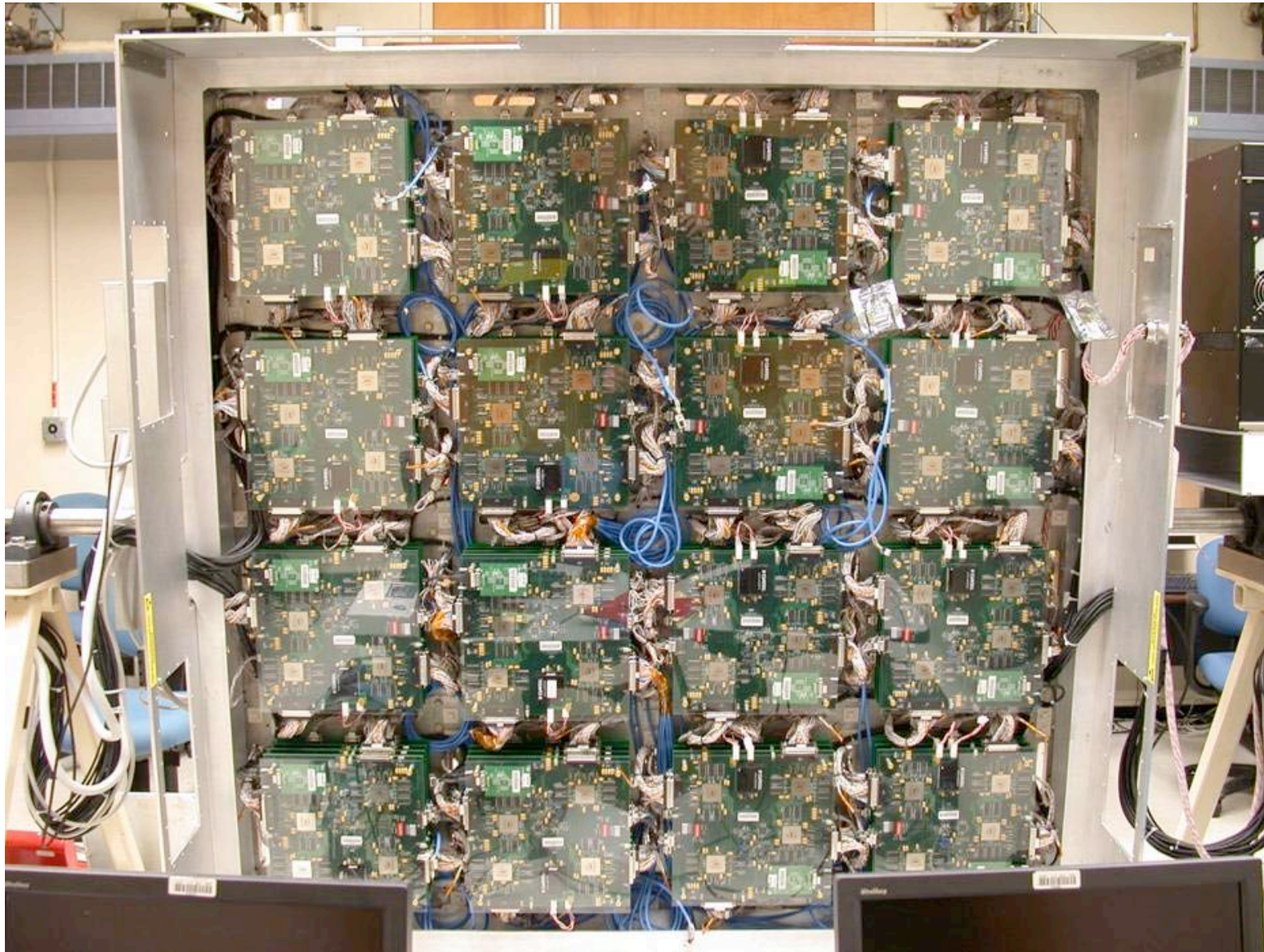


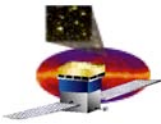
Data Acquisition System Test Bed





Test Bed -- Simulator





Summary

- **Instrument Design is complete**
- **All subsystems are producing flight hardware**
- **Instrument Integration and Test is going well**
- **Ground system implementation is ramping up**
- **Significant threats to schedule**