

# GLAST

The Gamma-ray Large Area Space Telescope

**Mission Status  
LAT IFC Meeting  
4 September 2006**

**S. Ritz  
GLAST Project Scientist**

**A. Vernacchio  
GLAST Deputy Project Manager**



# Topics

---

- Context**
  
- GBM (LAT covered in separate talks)**
- Spacecraft**
- Launch vehicle**
- Ground system/Flight Operations**
- Schedule**
  
- GLAST Science Support Center (GSSC)**
- Education/Public Outreach**
- GLAST Science Working Group (SWG) and Users Committee (GUC) activities**
- The First International GLAST Symposium**



## fastfood med kvalitet





## Context: GLAST Observatory

---



### Two GLAST instruments:

**LAT: 20 MeV – >300 GeV**

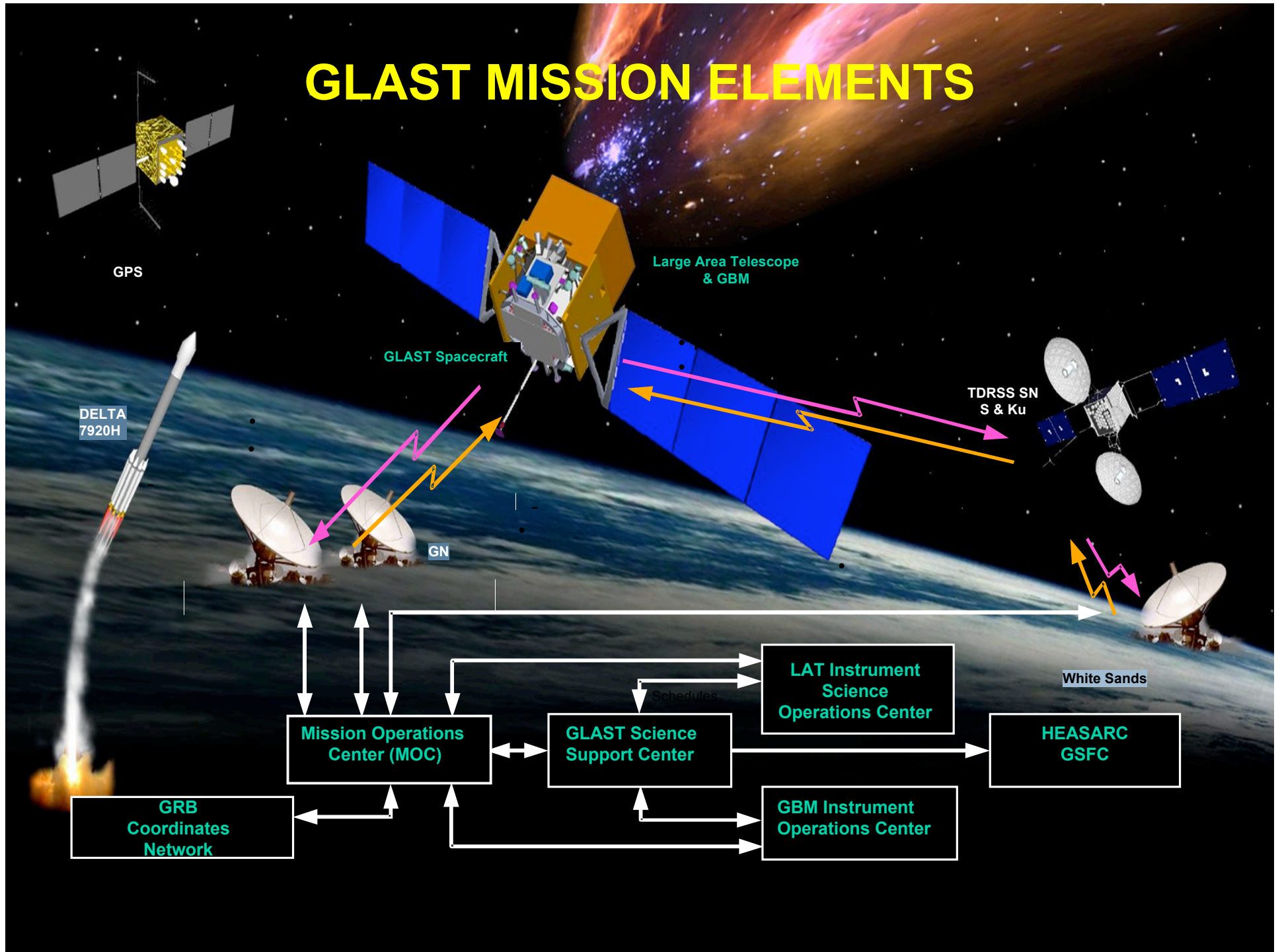
**GBM: 10 keV – 25 MeV**

### Spacecraft

**General Dynamics C4**

**Systems (Spectrum Astro)**

# GLAST MISSION ELEMENTS





# GBM

---

- **At GD/Spectrum Astro!**
- **Post-ship functional testing complete**
- **GBM power supply box and data processing unit (DPU) installed.**
- **Next: sensor installation (12 NaI plus 2 BGO)**



# Spacecraft

---

- **Structure tested; harness integrated and tested**
- **Flight power distribution unit, S-band components, reaction wheels, magnetometers, torque rods, and heaters integrated onto the observatory. Subsystem functional testing ongoing.**
- **Propulsion system delivered to Spectrum Astro.**
- **20/23 subcontract components delivered. Remaining:**
  - **Ku-band pointing mechanism, flight battery, solar array**
- **Power regulation unit (PRU) for LAT completed. Integration soon.**
- **Spacecraft data system (IEM) in environmental testing. Using engineering model IEM on the observatory to enable I&T to proceed in parallel.**
- **Solar array wiring and cell laydown in progress.**
- **LAT pathfinder work completed successfully.**
  - **use GRID2, loaded with mass models. use lifting fixture and install on spacecraft structure.**
- **Integration readiness review for LAT 18-19 September.**



# Launch Vehicle

---

- **Fabrication has started!**
  - **Kennedy Space Center (KSC)/Boeing ICD signed**
- **Starting work at KSC/Astrotech to support post-ship testing, propulsion system testing, and observatory integration onto the rocket.**
- **Delta II Heavy transonic issue resolution in work at KSC.**
  - **Slight increase in launch loads possible.**



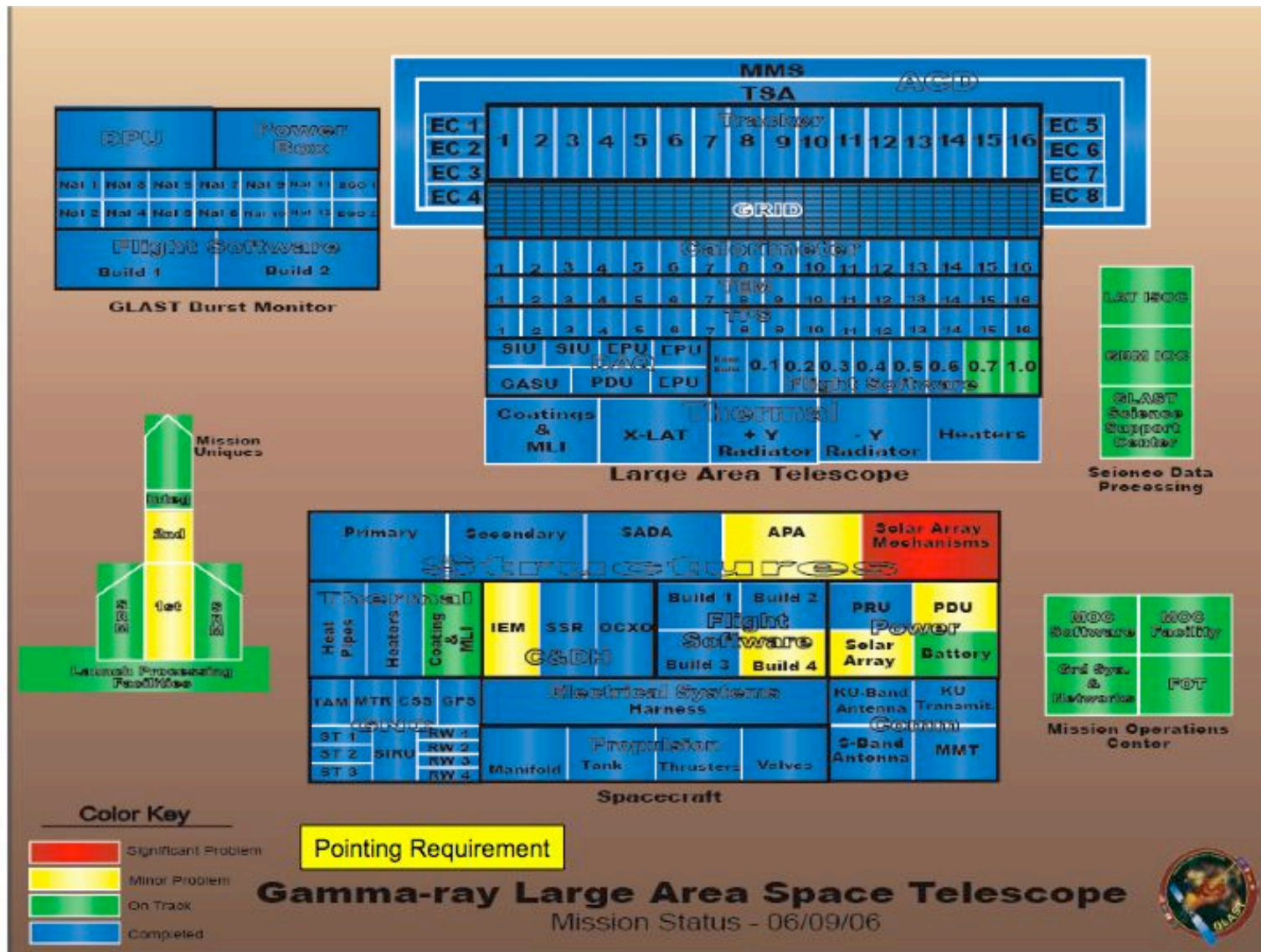
# Ground System/Fight Operations

---

- **Mission Operations Center (MOC) development largely completed.**
- **Next mission operations meeting (TIM) in September.**
- **Ground Readiness Test (GRT) #5 was successfully run on 24-25 August.**
  - **flowed 3 bursts through the system**
  - **exchanged products (TDRSS schedule, LAT SAA definition update, as-flown timeline, replays of data recorded at WSC).**



# Overall Status





# Schedule

---

- **Schedule to be rebaselined by NASA HQ and the GLAST project later this month. Primary drivers:**
  - **LAT handover date**
  - **completion of flight data (C&DH) system and solar arrays**
  - **completion of observatory I&T activities**
- **Expect launch in October-November 2007 timeframe**
- **Observatory I&T in progress:**
  - **GBM integration complete in September**
  - **LAT integration complete in October**
  - **Spacecraft testing complete in December**
- **Observatory pre-environmental review December**
- **Observatory-level testing complete September 2007**
- **Launch site operations Sept-Oct 2007**



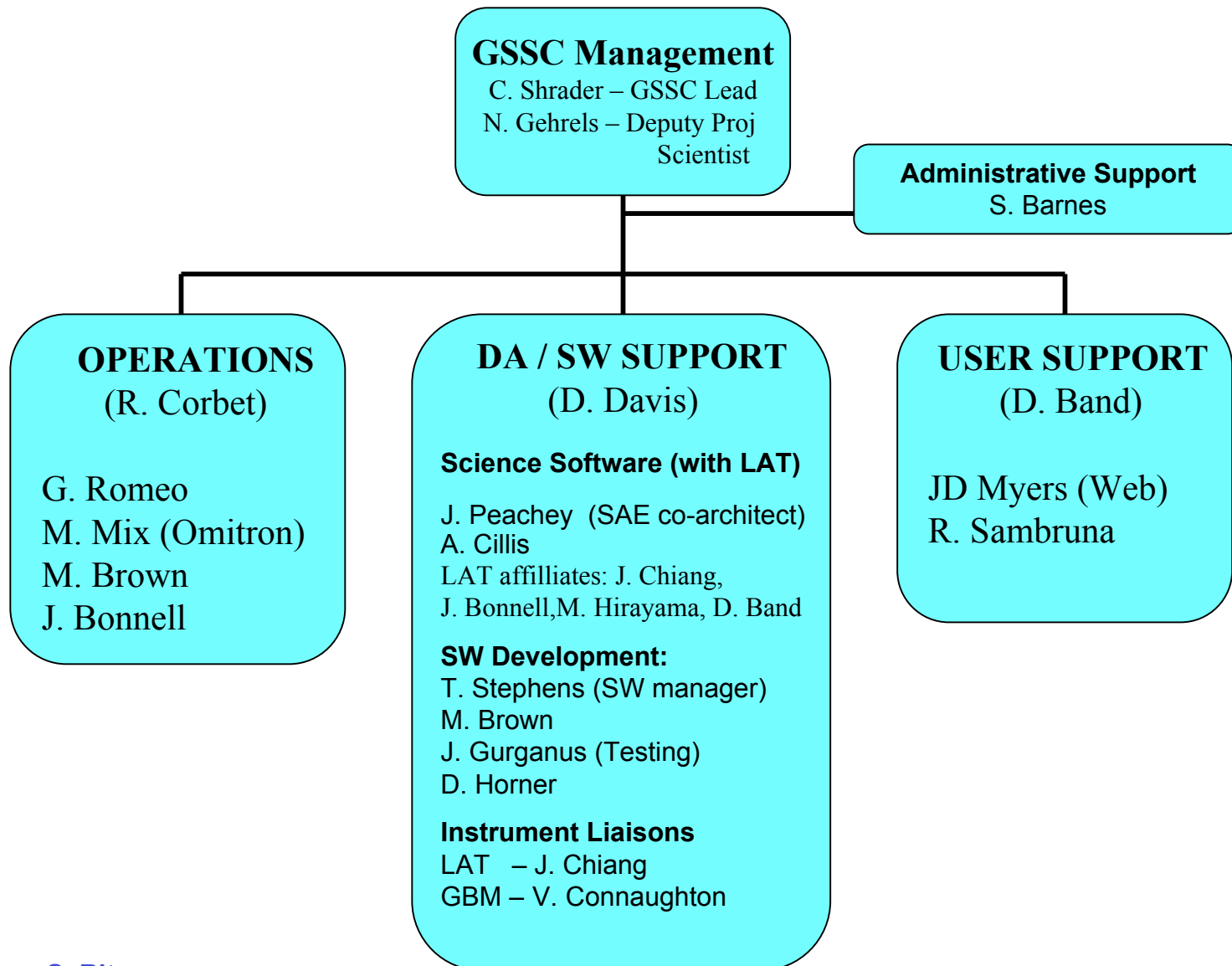
# GSSC Recent Activities

---

- **Data Archive & Software Support**
  - **GRT5 completed successfully at GSSC end**
  - **Science Analysis Environment (SAE) development**
  - **Enhancements for Users Committee beta test (November)**
- **Operations Support**
  - **Paging Tool (completed, tested)**
  - **Scheduling Tool (TAKO v3) & Planning Tool**
    - » **Supports GSSC Release 5, GRT5**
  - **Timeline Comparator & Time Conversion Tool**
    - » **Checks flown timeline against TAKO version**
- **User Support**
  - **Proposal Submission (RPS) system designed**
  - **Documentation: Draft SAE “ABC” guide, draft GLAST Technical Handbook (NRA appendix)**



# GSSC Organization





## E/PO Activities (from Lynn)

---

- **“Black Holes: The Other Side of Infinity”** is now playing in Denver, Baton Rouge, and Oakland. A special screening for NASA and NSF personnel was held on August 14 at the National Air and Space Museum.
- **Monster of the Milky Way** PBS NOVA show is scheduled to premiere in October on PBS.
- **Active Galaxies** pop-up book has now been printed and will be available soon and for launch.
- **LAT Simulator** web site is at SLAC awaiting installation on their Virtual Visitor Center website.
- **Educator Ambassador** training was held in July at SSU. This year, we focused on pedagogy and standardizing presentations for workshops.
- **GLAST Optical Robotic Telescope (GORT)** is now on SkyNet and part of the PROMPT network (which includes many small telescopes, mostly in the Southern Hemisphere).
- **Supernova Educator's Guide** is undergoing external review.
- **Space Mystery "Solar Supernova"** is undergoing internal review.
- **All three TOPS Modules** are now complete and in print. They can be downloaded free of charge or ordered from our website for use in the classroom.



## GLAST Users Committee (GUC)

---

- **Growing community eagerly anticipating GLAST data!**
- **Advises GLAST Project and NASA on NASA-funded Guest Investigator Program and Policies**
  - **First GI proposal cycle Spring 2007**
- **Most recent F2F meeting at Goddard, 8-9 May; next F2F meeting in November, featuring a beta-test of the science tools (not a full-out data challenge).**
- **First-year source list vetting.**
- **See *<http://glast.gsfc.nasa.gov/ssc/resources/guc/>***



# GLAST Users Committee Members

---

- **Josh Grindlay (Chair)**
- **Roger Brissenden**
- **Jim Buckley**
- **Wim Hermsen**
- **Don Kniffen**
- **Jim Ling**
- **Alan Marscher**
- **Reshmi Mukherjee**
- **Rene Ong**
- **Luigi Piro**
- **Greg Stacy**
- **Mark Strickman**
- **Ann Wehrle**

## *Ex officio*

- **David Band**
- **Neil Gehrels**
- **Rick Harnden**
- **Julie McEnery**
- **Chip Meegan**
- **Peter Michelson**
- **Steve Ritz**
- **Rita Sambruna**
- **Chris Shrader**
- **Kathy Turner**



## SWG Activities

---

- **Membership includes international representatives from LAT and GBM, along with four Interdisciplinary Scientists (IDS)**
  - **Chuck Dermer, Brenda Dingus, Martin Pohl, Steve Thorsett**
- **Advises mission and NASA, primarily now on Science Requirements**
- **SWG will hold a scientific review of the expected performance (LAT, GBM, Observatory) relative to the Science Requirements Document in late Fall.**



# First International GLAST Symposium

- To be held at Stanford 5-8 February
- Web page is live, see:
  - <http://glast.gsfc.nasa.gov/science/symposium/2007/>
- finishing compiling email distribution list for Bulletin
- next IOC telecon in September, lots of work done on planning.

Sunday	Monday	Tuesday	Wednesday	Thursday
	8-9 Registration, coffee, posters	8-9 coffee, posters	8-9 coffee	8-9 coffee
	9-12 plenary	9-12 plenary with one break	9-12 plenary with one break	9-12 plenary with one break, summary talk(s)
	12-13:30 lunch	12-13:30 lunch	12-13:30 lunch	12:00 End of Meeting
	13:30-16:30 plenary with one break	13:30-14:30 posters	13:30-15:30 parallel sessions I	Afternoon open for satellite meetings
15:30-17:30 Registration, poster setup	16:30-17:30 posters	14:30-17:30 plenary with one break	15:30 break	
	17:30-19:00 reception		16:00-18:00 parallel sessions II	
	evening free	18:00 end of posters	19:00 Public Lecture TBD	
		19:00 BANQUET at Stanford Faculty Club		



# Symposium Pages

Also starting  
monthly GLAST  
news email

The First GLAST Symposium

5-8 February 2007  
Stanford University

**GLAST**  
http://glast.gsfc.nasa.gov

Exploring the High Energy Universe

- [Information for Registrants](#)
- [Conference Announcements](#)
- [Agenda](#)
- [Registration](#)
- [Hotel Information](#)
- [Meeting Banquet: Tuesday, February 6th](#)
- [Poster Papers: Abstract Deadline Date](#)
- [Proceedings for Authors](#)
- [Organization](#)
- [Contact](#)
- [Signup for Announcements and Information](#)

Last Modified: Wed, Aug 02, 2006

Done 2.926s