



First Progress Report: LAT Gamma-Ray Burst – Solar Flare Science Team

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GRB-SF Team: Purposes

One of five designated LAT science working groups, the GRB-SF team also has representation from the GBM, SSC, and interested theorists —

Assembled to help study LAT-specific science questions, some requiring input from beyond the LAT.

- ✓ **Perform GRB simulations across GBM+LAT energy range.**
 - ✓ **Use simulations “to perfect” LAT on-board trigger, alerts.**
 - ✓ **Study GRB questions — how to constraint models — and ...**
 - ✓ **Advise on scope and design of LAT science analysis tools.**
- ☺ **Think about GRB multi-wavelength connections.**



GRB-SF Team: Work Plan Summary

- ✓ **Implement observation-based GRB simulation program:**
 - ✓ **Mimic BATSE bursts, but with observables' distributions extending across combined GBM and LAT energy range.**
 - ✓ **Include LAT background, detection by GLEAM.**
 - ✓ **Include GBM background, detection by GBM algorithm.**
- ✓ **Implement model-based GRB simulation program(s):**
 - **Especially, use to help develop science analysis tools.**
- **Use simulations for LAT trigger study:**
 - **Seek optimal LAT trigger implementable in flight SW; consider temporal, spatial, spectral information.**
- **Use simulations for alert studies:**
 - **Determine which GBM burst measurements may be useful for on-board LAT decisions concerning the GRB alert.**
 - **Formulate and optimize LAT alert contents.**



GRB-SF Team

Contributing GRB Workers – Triggers, Alerts:

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