Immediate Information to LAT

- Purpose is to allow LAT mode changes.
- SRD Requirement of 2 s, goal of 1 s.
- SRD goal of 15 degree location accuracy (no requirement).
- GBM requirement of 20 degree accuracy, goal of 10 degrees.
- Information:
  - time
  - location in J2000, with error bar
  - classification (with reliability)
  - intensity in first 1 second
  - spectral hardness?
  - What else (trigger details, BGO rates)?
- Is there any value in an immediate notification of a trigger with no location or classification information?

Post-Burst Information to LAT

- Primary purpose is to provide information for repoint decision.
- No specific requirements or goals defined.
- Best time delay is ~1 minute after trigger.
- Information (periodic update):
  - Revised location and error bar (from ground?)
  - revised classification and reliability
  - peak flux
  - fluence
  - spectral information
  - what else?

Immediate Information to Ground

- Purpose is to allow real-time burst observations by robotic telescopes.
- SRD requirement of 2 s, goal of 1 s.
- SRD goal of 15 degree location accuracy (no requirement).
- GBM requirement of 5 degree location in 5 s (bright burst).
- Location computed on ground for best accuracy.
- GBM provides software, MOC processes & sends to GCN.
- Information:
  - time
  - location in J2000, with error bar
  - classification (with reliability)
  - intensity in first 1 second
  - geocenter angle
  - burst and background rates
  - spectral hardness?

Post-Burst Information to Ground

- Purpose is to provide best information for quick afterglow searches.
- No specific requirements or goals defined.
- Best time delay is ~1 minute after trigger.
- Location computed on ground for best accuracy.
- GBM provides software, MOC processes & sends to GCN.
- Information (periodic update):
  - Revised location and error bar (from ground?)
  - revised classification and probability
  - peak flux
  - fluence
  - spectral information
  - rates before and during burst

Telemetry Considerations

- Instrument with better location should get real-time priority.
- Information continually updated during burst.
- Time history, including pre-burst rates, transmitted for best ground location.
- Baseline plan uses 1800 bps for 90 seconds, then much lower.
- Burst rates transmitted for 500 seconds.

Final Locations

- Not an alert message.
- GBM requirement of 3 degree location within 1 day of data receipt.
- Computed at GBM IOC.
- GBM IOC sends to GCN.
- Provides best possible location.