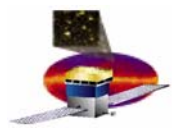


# Service Challenge – Planning Stage



Stefano, where are you??



# In a NutShell

## Mission Statement

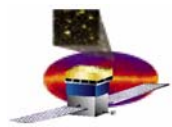
The Service Challenge(s) will be used to exercise as many functions and responsibilities as possible. As needed various "sub-Challenges" will be run to demonstrate functionality, as well as coordinating with GRTs as appropriate.

These functions have been identified:

- ◆ handle a significant amount of orbit data (55 days or greater)
- ◆ process L0 data realistically by downlink
- ◆ perform L1 processing, including livetime and pointing history tracking
- ◆ calibrate and align the LAT
- ◆ transfer L1 products to SSC
- ◆ populate LAT dataservers with L1 data
- ◆ Monitoring and trending of science data for instrument performance
- ◆ Exercise shift taking tools and procedures
- ◆ Perform L2, aka Automated Science Processing, aka QuickLook
- ◆ Demonstrate delivery of GCN notices and display of ASP web output
- ◆ Demonstrate data reprocessing
- ◆ Exercise Data Servers for analysis

To be demonstrated by ~Feb 2007

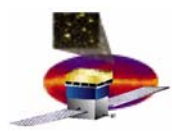
Integrate with Science Group efforts and GRTs



# Some Details

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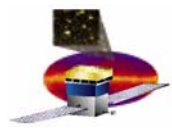
- **target 2 months of orbit data with DC2-like sky**
  - have different calibrations for MC and Recon
  - misalign the LAT relative to the satellite
    - perhaps include pointed observation a la activation plan to perform alignment to spacecraft
  - misalign towers relative to each other
  - we would be reconstructing data with old calibrations; and then have to reprocess
  - any actual faults? Break a something or two towards the end of the period?
  - more complete EbfWriter for higher fidelity playback of simulated raw data files? And/or a mechanism to get livetime/pointing history from current locations - that would be easily transfered to the final data format.
- **Generate LDF/CCSDS etc for input to the reconstruction pipeline**
  - break up the task into simulation/reconstruction pieces
  - finish L1 task design
  - Ties into GRT5
- **Dribble the data through recon etc as per 3 hr downlinks**
  - make runs span downlinks?
  - do some 'shifts', with run coordinator and shiftees, including overnight unattended operations?



# More Details

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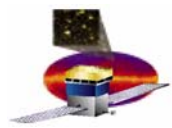
- Exercise "eLog" for tracking runs and shift output
- Extract/access/display livetime and pointing histories
- transfer of L1 products to SSC/LAT Data servers
  - approval process?
  - automated transfer and receipt
  - audit data trail
- Exercise LAT DataServers for Analysis
  - better handling of selection by time
  - interaction between the FITS astroserver and "instrument" merit files.
  - serving pointing and livetime histories
- Exercise Data Diagnostics
  - Exercise trending of Science Data
  - use celestial sources to monitor LAT performance
- Exercise ASP
  - See ASP desirements document from Seth et al
    - eg monitor flaring sources
    - Refine GRB positions
  - need list of standard sources to monitor
  - standard products to report on; web interface for export
  - Distribution/Display of L2 products



# Connection to Science Groups

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- There are moves afoot for several datasets to be created for the Science Groups:
  - 55 day obssim run: tools don't know how deal with pointing
    - ARR
    - New orbit
    - LAT/SC misalignment
    - Final DC2 IRFs
  - 55 day Gleam run – ibid
  - 1 year Gleam run
    - Potentially huge backgrounds run needed
    - Use of Lyon, Italian farms?
- Possible timescales are August, October and February for these 3 datasets
- There is much overlap in these goals and timing with the SC



# What Next?

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- **Advertise the goals around the collaboration and come to consensus**
- **Empanel a steering committee to coordinate the work and gather ideas for what to do/test (worked for DC2!)**
- **Flesh out all the work lists and make a more realistic schedule with milestones for intermediate tests of the big ticket items along the way**
- **Get on with it!**