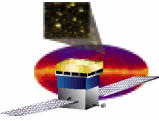


# Contents of the sky for Checkout 3

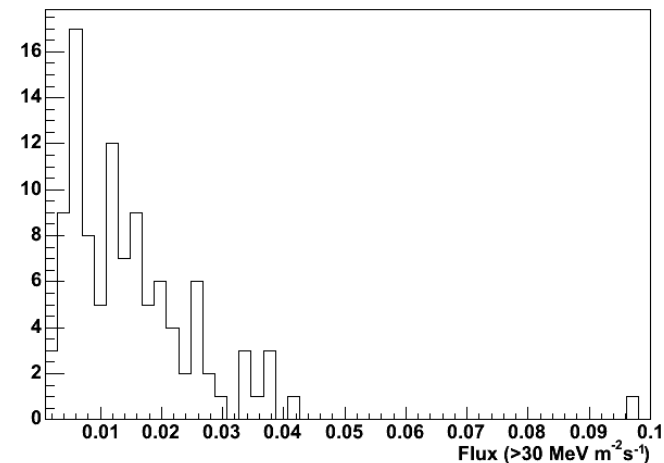
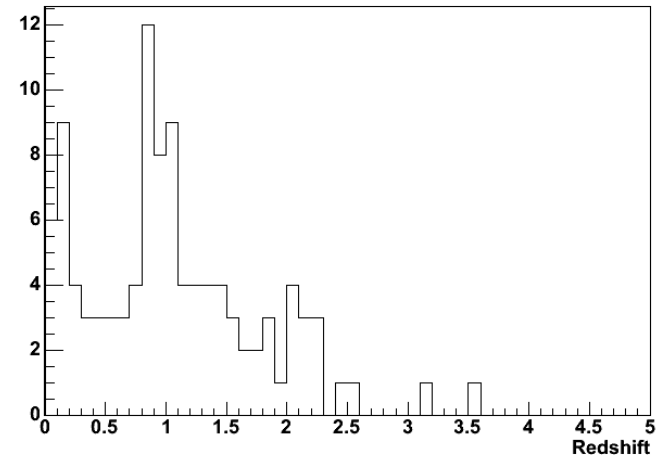
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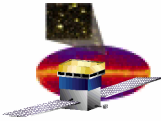
- There are 56 days of simulated LAT and GBM burst data.
- The components are as follows:
  - 47 GRBs (Omodei)
  - 105 variable AGN (Chiang, Tosti)
  - 17 Pulsars (Razzano)
  - Remaining 3EG sources not already included above (Digel)
  - 512 isotropically distributed blazars, fainter than the EGRET flux limit down to  $\sim 2-8 \text{ cm}^{-2}\text{s}^{-1}$  (Digel)
  - Isotropic emission ( $>100 \text{ MeV}$   $1.38-5 \text{ cm}^{-2}\text{s}^{-1}\text{sr}^{-1}$ ), compensated for the 512 blazars. (Digel)
  - Diffuse emission model from GALPROP. (Moskalenko, Digel)
  - Dark matter clump at (280, -50). (Wai, Wang)
- Tables will be provided of the locations and properties of the sources in the checkout 3 sky.



# Bright AGN

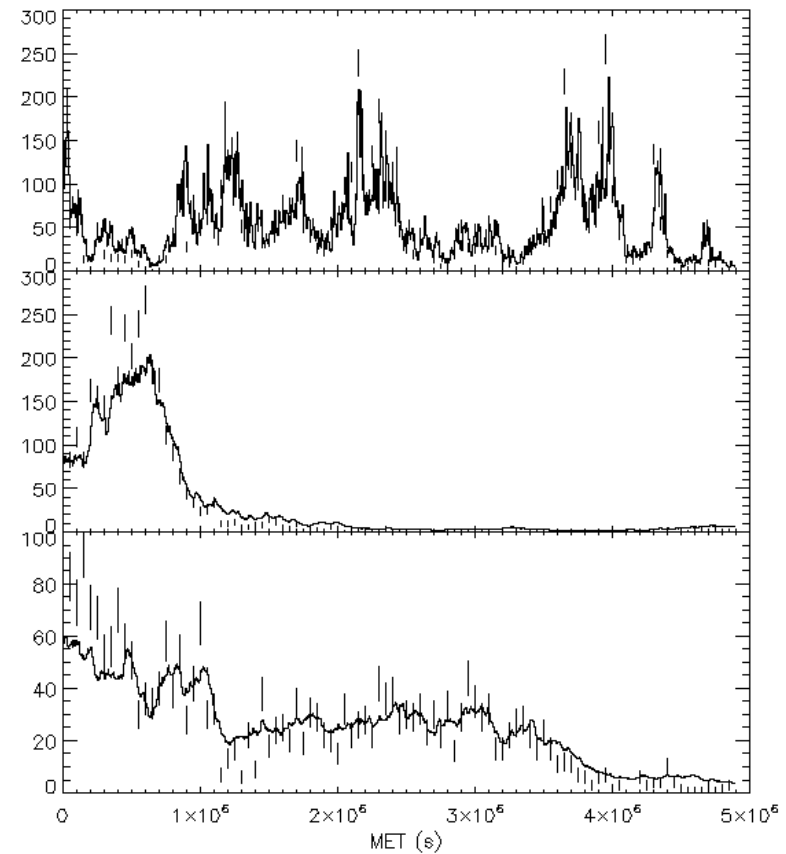
- **105 blazars from high-confidence blazar ids of 3EG sources from Sowards-Emmerd, Romani et al 2003, 2004) + high confidence 3EG blazars.**
- **EBL attenuation using Kneiske model.**
- **Highly variable flux and spectra**

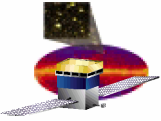




# Bright AGN - Variability

- The 105 bright blazars are modeled with a broken power-law spectrum.
- Highly variable flux and spectral slopes.
- The values of the flux and spectral indices as a function of time will be provided.

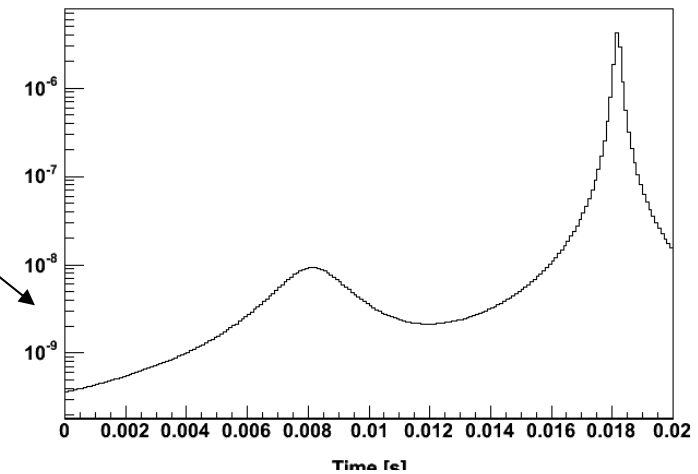
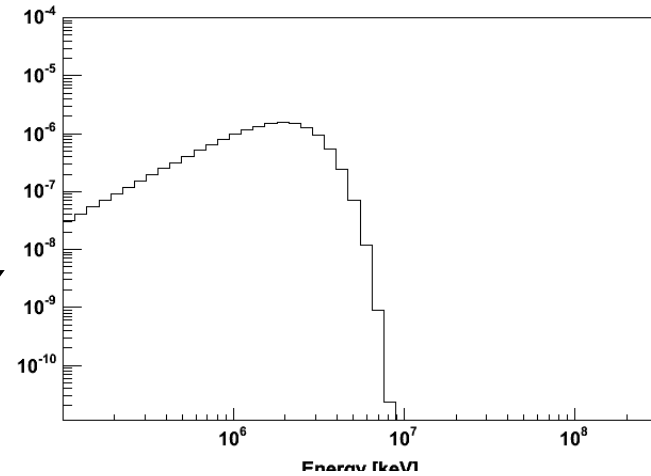
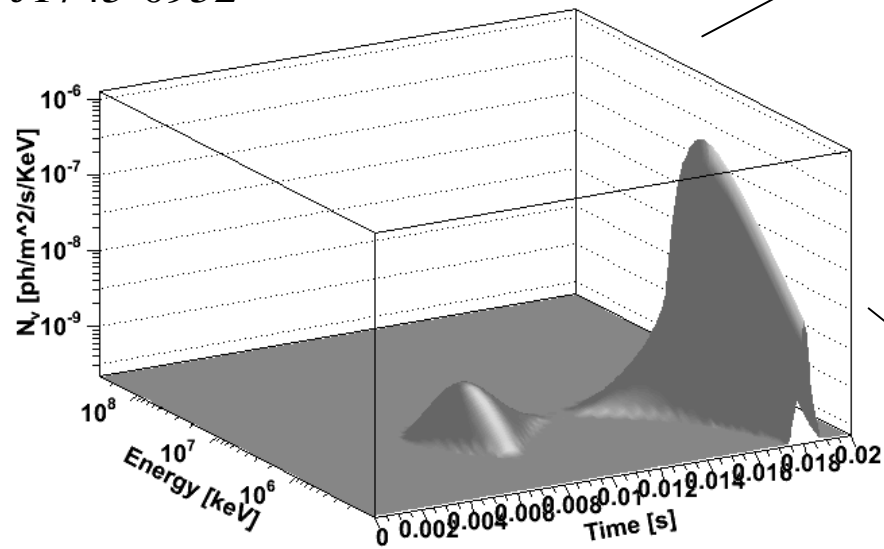


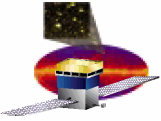


# Pulsars

- 17 Pulsars:
  - 6 known EGRET pulsars with parameters as described in Fierro 1999.
  - 11 pulsars coincident with known EGRET sources.

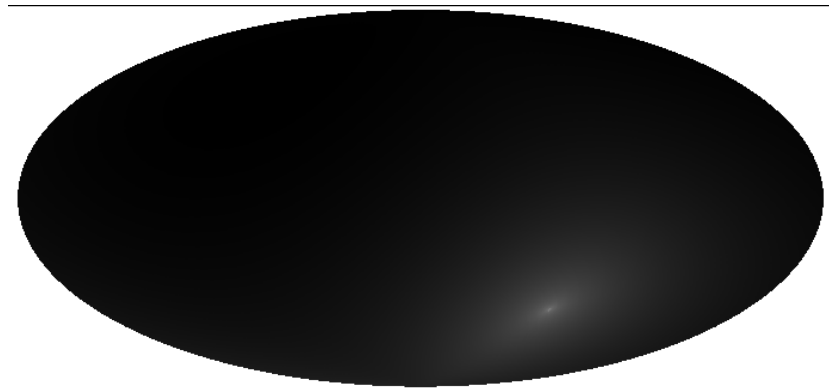
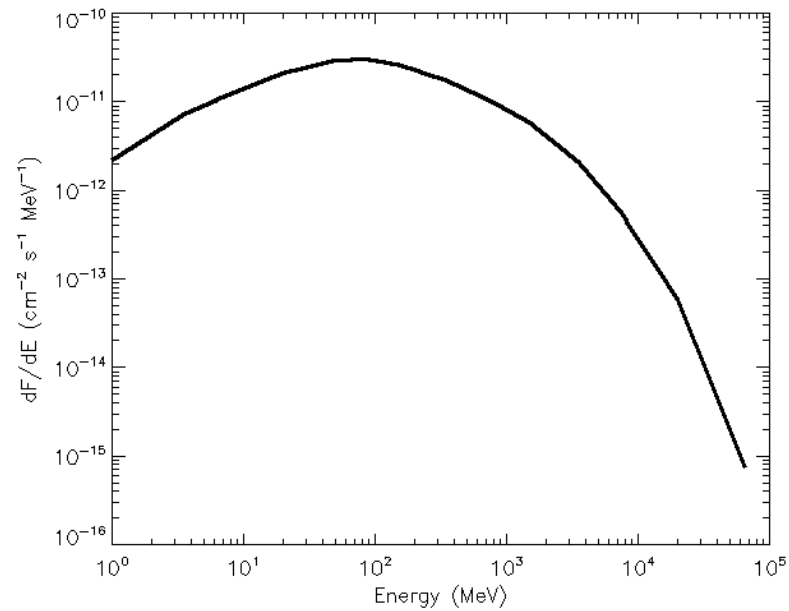
J1745-0952

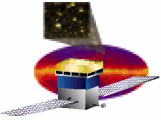




# Dark Matter

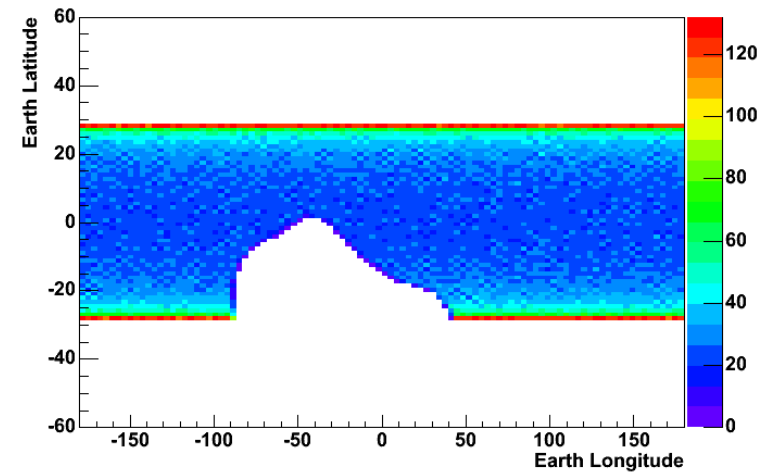
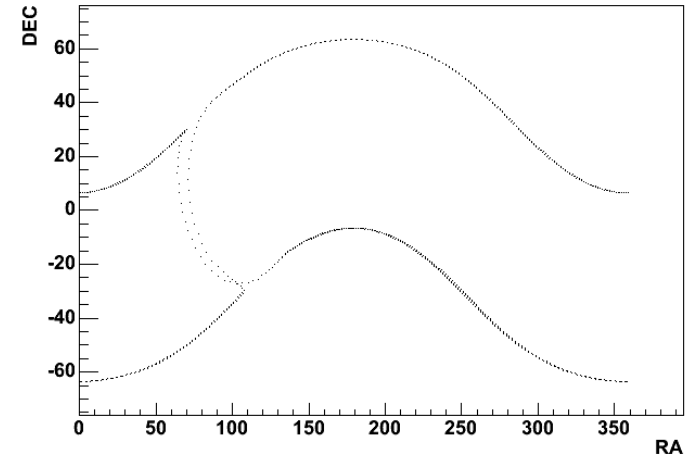
- 100 GeV Neutralino annihilation, NFW halo profile at  $l=280$ ,  $b=-50$ . Flux  $3 \times 10^{-8} \text{ cm}^{-2} \text{ s}^{-1}$ .

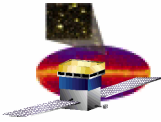




# Orbit and attitude profile

- Use the draft DC2 orbit/attitude profile.
- T=0 is May 1, 2007.
- 90% livetime assumed for all intervals.
- Updated LAT definition of the SAA





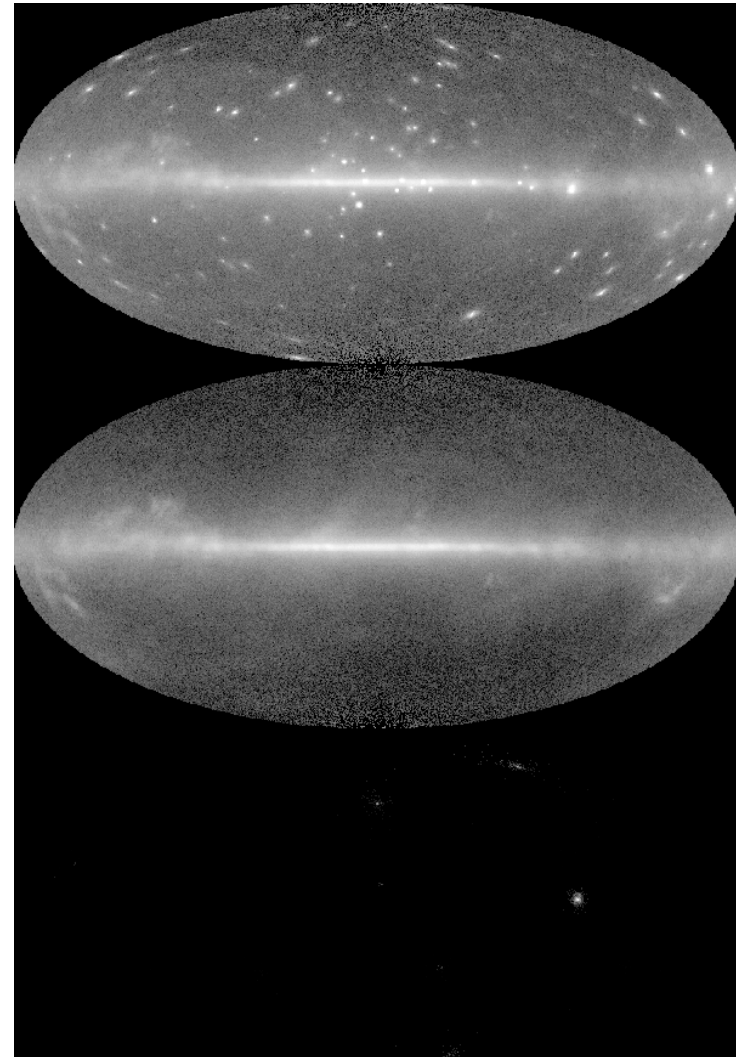
# Pulling it all together

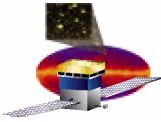
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The simulated sky

Diffuse emission

GRB

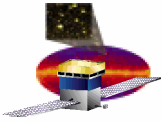




# Accessing the Data

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- The data will consist of :
  - LAT photon data (FT1)
  - pointing and livetime history (FT2)
  - GBM data for each burst
  - Pulsar Ephemerides
  - MC truth
    - Tables of source locations and properties
    - AGN lightcurves
    - Pulsar lightcurves and spectra
- The following website <http://glast.gsfc.nasa.gov/ssc/dev/databases/STC3> will provide links to the GSSC dataserver, bundled GBM data for each burst and the pulsar ephemerides.

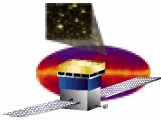


# Data Access

The screenshot shows a Mozilla browser window with the address bar containing <http://glast.gsfc.nasa.gov/ssc/dev/databases/STC3/>. The page header includes the NASA logo and "GODDARD SPACE FLIGHT CENTER". A search bar is present with the text "SEARCH NASA:" and a "+ GO" button. Below the header is a large banner for the "GLAST SCIENCE SUPPORT CENTER". A navigation menu includes "MISSION HOME", "RESOURCES", "PROPOSALS", "DATA" (highlighted), "HEASARC", and "HELP". The main content area is titled "Science Tools Checkout 3 Data Access" and contains the following text: "This page provides access to the data to be used for the LAT Science Tools Checkout 3. The links below provide access to the data specified." followed by a bulleted list:

- [LAT Photon data](#) - link to Photon database search engine.
- [LAT Pointing History and Livetime data file](#) - (??? MB) - Right click and select "Save Link Target as ..." to download.
- [GBM Burst data](#) - Information on the bursts and links to download the data files.
- [STC3 Pulsar Ephemeris](#) - (??? MB) - Right click and select "Save Link Target as ..." to download.

At the bottom of the page, there are links for "Privacy, Security, Notices" and "Get Plugins (Acrobat, etc.)", and contact information for "Contact NASA" and "Contact the GLAST SSC". Curators listed are J.D. Myers, Phil Newman, and Jay Norris. The page was last modified on Wed, Aug 31, 2005.



# Accessing the data

- **GSSC datasever: works very similarly to the one used during DC1. User (optionally) specifies a sky location and radius, time interval and energy interval.**
- **If you enter no time range or cuts, you will be directed to a file containing the entire dataset.**

The screenshot shows a Mozilla browser window titled "GLAST SSC - LAT Event and Spacecraft Data - Mozilla". The address bar shows the URL: `http://glast.gsfc.nasa.gov/cgi-bin/ssc/LAT/STCDataQuery.cgi`. The page content includes a navigation menu with "Data" selected, a "Science Tools Checkout 2 Data Query" header, and a status message: "The Photon database currently holds 3978589 photons collected between 01-01-2007 00:00:00 and 31-01-2007 00:00:00." Below this is a "Start Search" button and a "Reset" button. A section titled "1. Do you want to search around a position ... ?" contains a text input field for "Object Name Or Coordinates:" with examples like "12 00 00, 4 12 6" or "12, 15", a "Coordinate System:" dropdown menu set to "J2000", and an "Area to Search:" input field set to "15" with a "Circle" dropdown. A red warning message states: "Box and Ellipse searches are temporarily disabled." A section titled "... and/or search by date?" includes an "Observations Dates:" input field and a dropdown menu set to "MJD". A detailed instruction block explains the date formats: "For Gregorian dates, please enter in the format DD-MM-YYYY HH:MM:SS, with the start and (optional) end time separated by commas. Enter the start and (optional) end MJD in the form MYYYY.mmmmm,MMMMM.mmmm For MET (Mission Elapsed Time), enter any integer values >=0, separated by commas."