Science Tools Update

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31 Jan 2002

- Level 1 Data Simulator
Orbit simulation + step-rocking + SAA + static gamma-ray sky + uniform spectral model + GLAST25 PSF and effective area

Now running at about 45 minutes execution time per simulated day, in IDL on a Linux PC. May use SLAC batch farm to generate a year's worth of files.

Output is photon number, arrival time, Galactic coordinates, inclination angle with respect to LAT z-axis, and energy.

Quick example plots:

All gamma rays in 1 day (~142,000; color coded by energy)

All gamma rays with energies > 1 GeV (~10,000)
Distribution of photon rates in 1-s intervals

Distribution of photon inclination angles (cut off at 70°)
• With Pat and Bob (SSC), expect to start figuring out implementations of the Level 1 database to test.

• With Traudl & Richard, starting to discuss what it means to have a mirror high-level analysis site in France. This is not unrelated to considerations of the high-level databases, but also includes data transfer tools and possible applications for 'GRID' projects.

• No news about scheduling of the Science Tools workshop.