

Science Tools Update, February 26, 2008

Science Tools Working Group

Our last meeting was February 13. Owing to travel and Ops Sim 2 and the Collaboration meeting, we will not meet again until mid March.

The current version of the Science Tools is **v9r4p2**. This is the version that the Glast Users Group will use for the Beta Test next month. The most important changes from v9r4p1 are bug fixes to **gtsrcmaps** and **gtltcube**. [Here](#) are all of the differences from v9r4p1.

Updated Pass 5 IRFs (corresponding to the data being processed for Ops Sim 2) are now available in Science Tools versions LATEST1.2248 and later (i.e., not yet in a release). Riccardo and Luigi generated the FITS files and Jim inserted them into CALDB. They are P5_v13_0_diff (and _source and _trans). See [Jim's note](#).

Jim and Toby will lead a splinter session at the collaboration meeting on 'Extending Science Tools', for people with ideas and motivation (and skill) who would like to add new tools or new functionality to the Science Tools. The session is currently scheduled during the long lunch break on Wednesday, March 12.

Data products: No news.

Databases and related utilities

No news

Likelihood analysis

From Jim:

- bug-fix for gtsrcmaps in reading in scData files (v13r11p5)
- bug-fix for PowerLawSuperExpCutoff (submitted by Damien Parent, v13r11p4)
- made Gaussian quadrature integration of diffuse responses the default (v13r12)

GRB tools

No news.

Pulsar tools

Masa and James are continuing to work on implementing handling of ephemeris handling for alternate sets of timing parameters for binary pulsars.

Observation simulation

Jim fixed a bug in the FileSpectrum source (that also affects FileSpectrumMap and RadialSource) regarding how the energies of generated photons are assigned. The bug had gone unnoticed since v7 of the Science Tools; the effect was fairly subtle but these sources have not been widely used in the sky models.

User interface and infrastructure (& utilities)

No development news

For the Beta Test the GLAST Users Group members will be working from their home institutions, i.e., without direct hand holding from the GSSC. As reported last week, Analia Cillis at the GSSC has updated and extended the reference pages for the Science Tools. These will be made available in the User Workbook. She is also working on updating the tutorials.

Source Catalog

Met last week. Ludovic reported on improving the sensitivity of MR_filter for source detection. Jean reported further results on catalog analysis of time intervals containing pointed observations using the 55-day LEO data set and on the effects of bright, non-power-law sources on results for their surroundings. The former is an example of a strategy for analysis when the residual background cannot be considered negligible. Tyrel gave an update on his work to study the use of covariance information from Recon for improving the accuracy of source position assignments.