

Science Tools Update, March 22, 2007

Science Tools Working Group

Did not meet this week. We won't meet until after the collaboration meeting.

The current version of ScienceTools is **v8**.

Data products: No news

Databases and related utilities

No news

Likelihood analysis

- Handling of comparisons with DSS keyword values and values in binary tables of FITS files has been fixed; see [LK-31](#). (Likelihood v11r14p2)
- Added Damien Parent's [PowerLawSuperExpCutoff](#) as a spectral model available in **gtlikelihood** and pyLikelihood. This spectral model is needed for modeling pulsar spectra (in the Polar cap scenario). (Likelihood v11r15; pyLikelihood v0r6)

GRB tools

- **gtrspgen**: problems with integrals of energy dispersion over large energy ranges for handoff_response and dc2Response have been addressed in irflInterface::lEdisp. (irfs/irflInterface v2r1; irfs/dc2Response v3r1)

Pulsar tools

- Masa and James have finished coding the blind search tool **gtspec**. Testing on DC2 data is underway.

Observation simulation

- From Max Razzano:
 - "EGRET phase-dependent sources, fixes and extended down to 10 MeV. The lightcurve have been smoothed for the 3 faintest (no phase-dependence) and for Vela, Crab and Geminga we have phase dependent spetcrum and also some very narrow features that we can use for testing timing resolution;
 - "Timing noise on 5 pulsars, based on Cordes algorithm of Random Walk(in phase) and of Arzoumanian (f2 based on Delta8 parameter);
 - "3 MSP in binary orbits, we have this last problem but I solved and it is ok;"

User interface and infrastructure (& utilities)

- Pat and Jim added a new C++ implementation of dgaus8 (translated from Java, which was translated from the original spaghetti Fortran) to replace the f2c'd version. (st_facilities v0r10p1)

Source Catalog

Did not meet this week.