

Science Tools Update, February 5, 2008

Science Tools Working Group

Our last meeting was January 16. With the workshop in Bari this week, and also the likelihood of a Catalog group meeting, most likely we will not meet again until next Wednesday.

Since Jan. 30, the current version of the Science Tools is **v9r4p1**. It has some important updates relative to v9r4 and will be the version made available by the GSSC to the GLAST Users Group for their 'beta test' in early March. The updates include standardizing on equatorial coordinates for the livetime cubes and fixes to some packages to make them work on Windows and/or Linux. Binary demodulation has been improved for pulsar simulations. If you are makeFT1 user, the new version will run *much* faster for large files with many columns. Toby has factor out HEALPix-related code from **pointlike** to a new package **skymaps** that will be used by Markus and Gulli, at least, in their work on analysis methods for diffuse emission. [Here](#) is the complete list of updates since v9r4.

Data products: Warren has generated and delivered examples of LS-001, LS-002, LS-003, and LS-005 files to the GSSC using TVAC test data. The ingest system there is unhappy with the formats to varying degrees. The issues appear to be minor and mostly relate LS-001 ('full' event information - basically an extended FT1 file with ~200 columns of variables from the Merit files) and LS-003 (the livetime cubes). Rev A of the recently-baselined File Format Document is on the horizon.

Databases and related utilities

No news

Likelihood analysis

No news

GRB tools

No news

Pulsar tools

Masa reported last week that he and James are working on implementing handling of ephemeris handling for alternate sets of timing parameters for binary pulsars.

Observation simulation

No news. The updates mentioned in the last report have made it into the **v9r4p1** release, as described above

User interface and infrastructure (& utilities)

No news

Source Catalog

Last met on January 23. Jean presented results from him and Gino on source detection and characterization in the L&EO data. These results were summarized in Jean's presentation last Friday at the [LEO 55-day closeout meeting](#). The pointed-mode data proved challenging for the catalog analysis. Jim's prescription for tuning GTIs based on the angular distance of an ROI from the horizon was used to effectively filter against albedo gamma rays. The residual background, whether from albedo gamma rays or charged particles, was unmodeled, however, and led to poor determinations of the fluxes and spectra of the point sources.