

# Science Tools Update, December 20, 2007

## Science Tools Working Group

We did not meet this week and won't meet until 2008.

The current version of the Science Tools remains **v9r3p4**.

From Chris: "One item of possible interest to the group: beta-test 2 is still planned for late Feb/early March 08, but the GUG has requested to review the documentation as an agenda item in the February (25?) F2F meeting. Thus we'll need to release it (or at least a mature draft) about 1 week prior to that."

**Data products:** Some discussion of FT2 (LS-005) took place this week. The attitude quaternions to be added would be the same as GBM is including in their equivalent of a pointing history data product (GS-006).

## Databases and related utilities

No news

## Likelihood analysis

No news. Jim and Jean have been evaluating the effects on TS values from the improvement to the diffuse response calculations that Jim made and were described in last week's report; see [Unbinned vs Binned TS in the Likelihood Tools](#).

## GRB tools

No news.

## Pulsar tools

Masa reports that he and James have finished the first version of **gtpptest**, the tool that runs a variety of periodicity tests for a given set of timing parameters. They have started to add support for additional binary orbit models; this will also involve extending the definition of the pulsar ephemeris database file.

## Observation simulation

No news. In the LATEST build (v6r1p2 of **observationsSim**), Jim has shifted PHI and EARTH\_AZIMUTH\_ANGLE to be in the range 0-360.

## User interface and infrastructure (& utilities)

Not sure where this belongs. As described in more detail in [his note to scisoftlist](#), Toby has added the **pointlike** package to the Science Tools. It is both a floor wax and a dessert topping (as Heather and SNL would say). He and his students are developing it for source localization and source finding. It also sees use in their LAT-spacecraft alignment analyses and via HEALPix can make all-sky convolutions, among other capabilities.

As probably mentioned in the core report, Toby has converted the **astro** package to a shareable library and moved the HEALPix code to its own package (**healpix**).

## Source Catalog

Did not meet this week.