# Science Tools Update, September 13, 2007

## Science Tools Working Group

We met this week.

The current version of ScienceTools is still **v9r1p1**. HEAD1.581 (built on September 7) is the current release candidate. It differs from HEAD1.580 only in the GRBobs package, which now records more information about the bursts it generates. The next release, tentatively **v9r2**, will include versions of the Pass 5 IRFs that are designed to be used for analyzing the forthcoming Interleave dataset.

The plan at the GSSC is still for the next beta test by the GLAST Users Committee to take place in early December. Chris will be presenting the plan to the GUC next Monday, who either will or won't have other ideas about what should be done. The plan for the GSSC is to refer the GUC users to the User Workbook for documentation - and to work on cleaning up and updating documentation between now and December.

**Data products:** No new news.

### Databases and related utilities

No development news.

### Likelihood analysis

A couple of weeks ago, Toby added the package **diffuse** to the Science Tools. This looks like it can make allsky images, and write FITS files of them. It doesn't build any applications but is used by Toby's **pointlike** package, which does build an application called **pointfind**. The latter is not an FTOOL and does not have documentation in an obvious (to me, as I write this) location, and I didn't see it coming, but it is certainly related to the work Toby has been doing on source detection and characterization; the Catalog pipeline is using **pointlike** for refining the positions of candidate sources before they are run through standard likelihood analysis.

### GRB tools

No development news.

### Pulsar tools

James reports that he and Masa "continued to work on adding barycentering on-the-fly to the pulsar tools. Specifically, this week they began work to make the C code by Arnold Rots available through the new interfaces used by the pulsar tools libraries."

### Observation simulation

See note above about **GRBbos**

### User interface and infrastructure (& utilities)

**gtgraph** is now being built with the LATEST builds. According to James' documentation, "Gtgraph is a rudimentary package for plotting arbitrary combinations of fits columns in 2 and 3 dimensional plots. This was originally a test application for st_graph. It is not under active development." I haven't tried it myself and didn't know it was coming, although a plotting utility that would make people less likely to hate FITS files would be welcome. [**gtgraph** has actually been included in the ST LATEST builds since January 2005 - JC]

James and Eric W. have started working on automating porting the Science Tools from CMT to the HEASARC's hmake build system. They want to have this working in advance of the next GUC beta test.

Eric asked whether we have plans to make native 64-bit builds of the Science Tools. Not that I'm aware of, but I do want to ask.

## Source Catalog

Did not meet this week.