



GLAST ROOT User's Group

Meeting #1
What are we doing here?



What is ROOT?

- **ROOT is both a floor wax....and a dessert topping.... ROOT has two distinct aspects: it is an I/O package and it is an analysis framework, like PAW or IDL.**
- **GLAST is using ROOT in both respects. Data is stored in ROOT format, and some analysis is performed using ROOT's analysis framework.**
- **The GRUG's purpose is to provide information about:**
 - **How to access GLAST's ROOT data.**
 - **How to use ROOT to find personal fulfillment.**
 - How do you plot the ACD PHA values anyway?
 - **Ask questions, provide tips, and complain**
 - **An arena to provide suggestions how to make things better.**



Features of ROOT I/O

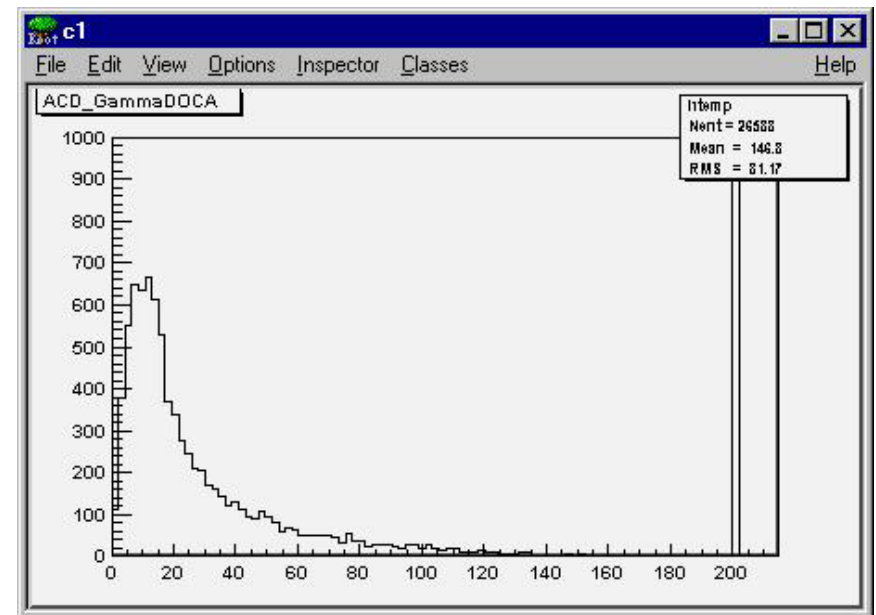
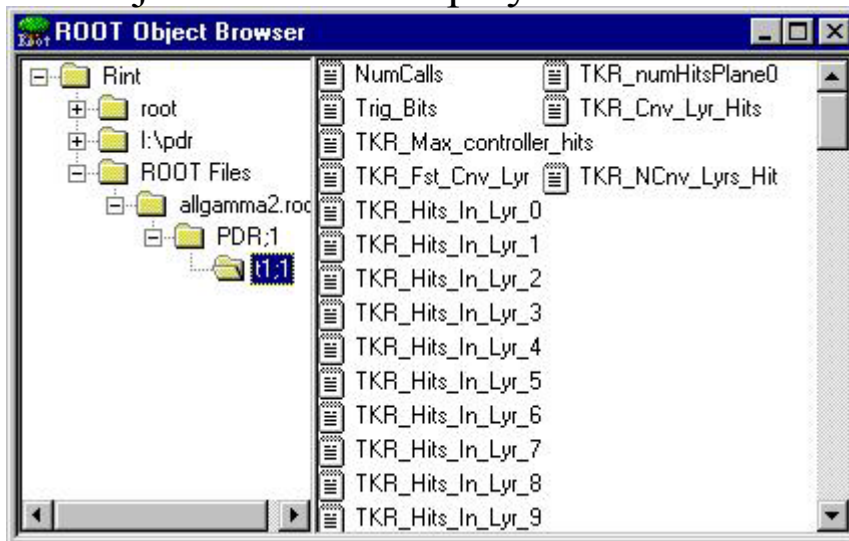
- **Machine independence**
 - ROOT is freely available on all of our supported platforms.
- **Self-describing**
 - Files created today will be readable years from now.
- **Support for Object I/O**
 - The detailed structure of our data is preserved for analysis.
- **Schema evolution**
 - Changes in our internal data structures will be tracked.
- **On the fly compression**
 - ROOT uses an algorithm based on gzip.
- **Widespread use in the HEP community.**



ROOT for Event Analysis

- Supports both interactive and batch processing.
- Free and available on all supported platforms.
- Strong and growing user base.
- Histogramming, function fitting, and GUI widgets.

Object Browser displays file contents.



Histograms produced at the click of a button.



Problems

- **ROOT GUIs under Windows are not well-behaved.**
 - GLAST supports ROOT 3.00.06, this version has a known bug, which is fixed in later versions of ROOT.
 - ROOT GUIs under UNIX are much, much better..
 - Work is underway to provide common GUIs for both Windows and UNIX - hopefully by late Fall.
- **While making rough plots is easy..
making pretty plots is a bit more involved.**



Information Resources

- **Main ROOT home page**
<http://root.cern.ch>
- **GLAST ROOT home page**
<http://www-glast.slac.stanford.edu/software/root/howto>
- **Documentation**
 - **ROOT User's Guide**
 - <http://root.cern.ch/root/RootDoc.html>
 - **ROOT The Movie**
 - 6 hours of ROOT instruction
 - Available via FTP
<ftp-glast.slac.stanford.edu/glast.u04/rootmovie>



Suggested format

- **Have one or 2 items for presentation**
- **Leaving the last 1/2 hour for random ROOT questions**
- **Monday at 8:30 AM PST will not work in the future - as it conflicts with other meetings.**
- **10:00 AM PST Mondays? Other times?**
- **How often should we meet?**