Contribution ID: **247** Type: **poster**

HepMC Visual - an interactive HepMC event browser

Monday, 23 March 2009 08:00 (20 minutes)

Within the last years, the HepMC data format has established itself as the standard data format for simulation of high-energy physics interactions and is commonly used by all four LHC experiments. At the energies of the proton-proton collisisions at the LHC, a full description of the generation of these events and the subsequent interactions with the detector typically involves several thousand particles and several hundred vertices. Currently, the HepMC libraries only provide a text-based representation of these events.

HepMCVisual is a visualization package for HepMC events, allowing to interactively browse through the event. Intuitive user guiding and the possibility of expanding/collapsing specific branches of the interaction tree allow quick navigation and visualization of the specific parts of the event of interest to the user. Thus, it may be usefull not only for physics users trying to understand the structure of single events, but may also be a valuable tool for debugging MonteCarlo event generators.

Being based on the ROOT graphics libraries, HepMC Visual can be used as a standalone library, as well as interactively from the ROOT console or in combination with the HepMCBrowser interface within the ATLAS software framework. A short description of the user interface and the API will be presented.

Summary

HepMC Visual is a library allowing to visually display and interactively browse through the complex and comprehensive HepMC event records commonly used at all LHC experiments. It may be used in standalone applications, as well as interactively within the ROOT data analysis package or through the HepMC Browser interface integrated in the ATLAS software framework.

Primary author: Dr BÖSER, Sebastian (University College London)

Presenter: Dr BÖSER, Sebastian (University College London)

Session Classification: Poster session

Track Classification: Software Components, Tools and Databases