

EVENT INVESTIGATOR

Event Investigator is an application for presentation and analysis of data from POLAR experiment. The application is written in C++ language, under Linux (Ubuntu distribution) using ROOT (CERN) library.

Software includes following functionality:

1. module numbering for QM1, QM2, QM3, FMS and FM models
2. search for available runs for selected module in directory provided by the user
3. drawing event 3D histogram (OpenGL)
4. drawing trigger pattern (2D histogram)
5. displaying histogram bar coordinates and value on mouse click in status bar
6. event filtering
7. linear regression analysis

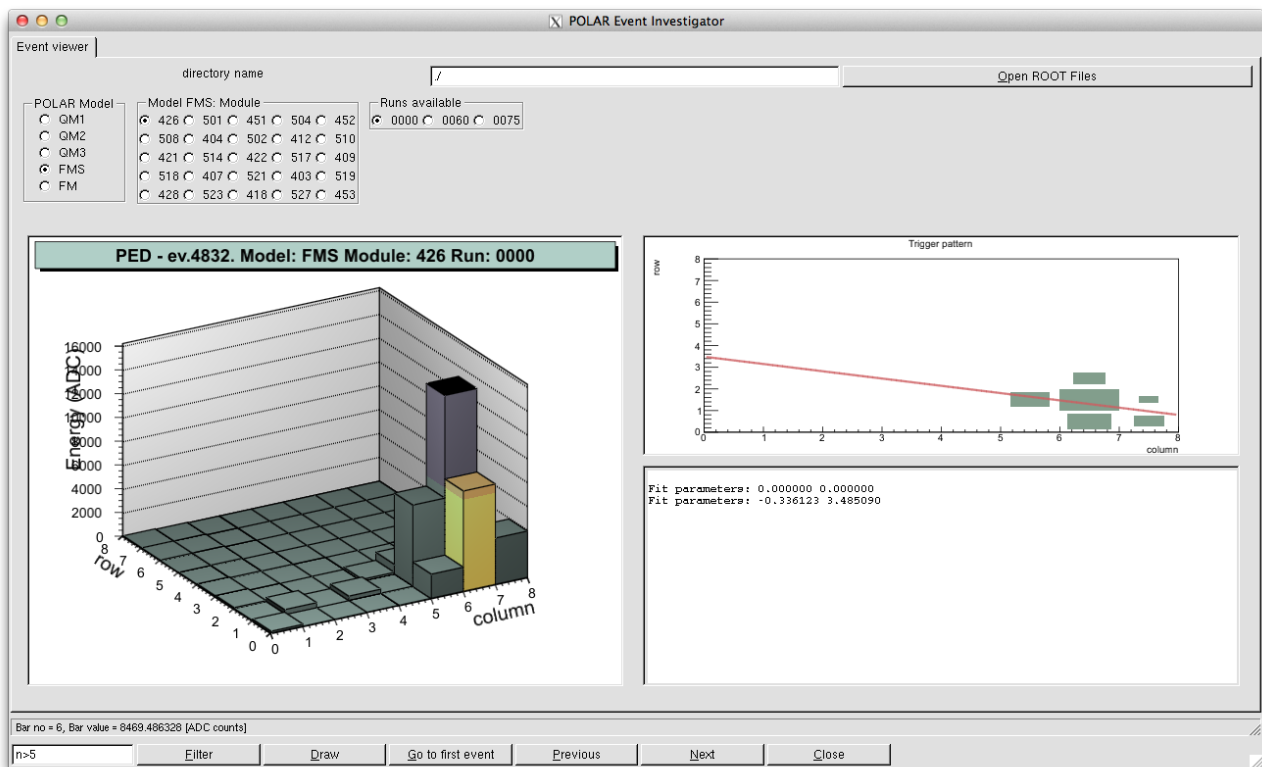


Illustration 1: Event Investigator main window

The linear regression analysis comprises initial step for cosmics analysis, to make a prediction about what would be a path for cosmics crossing the detector. Linear fit would provide initial parameters for further linear regression analysis. Functionality was tested on experimental data and proved good results. The next step would be further development of linear regression analysis.