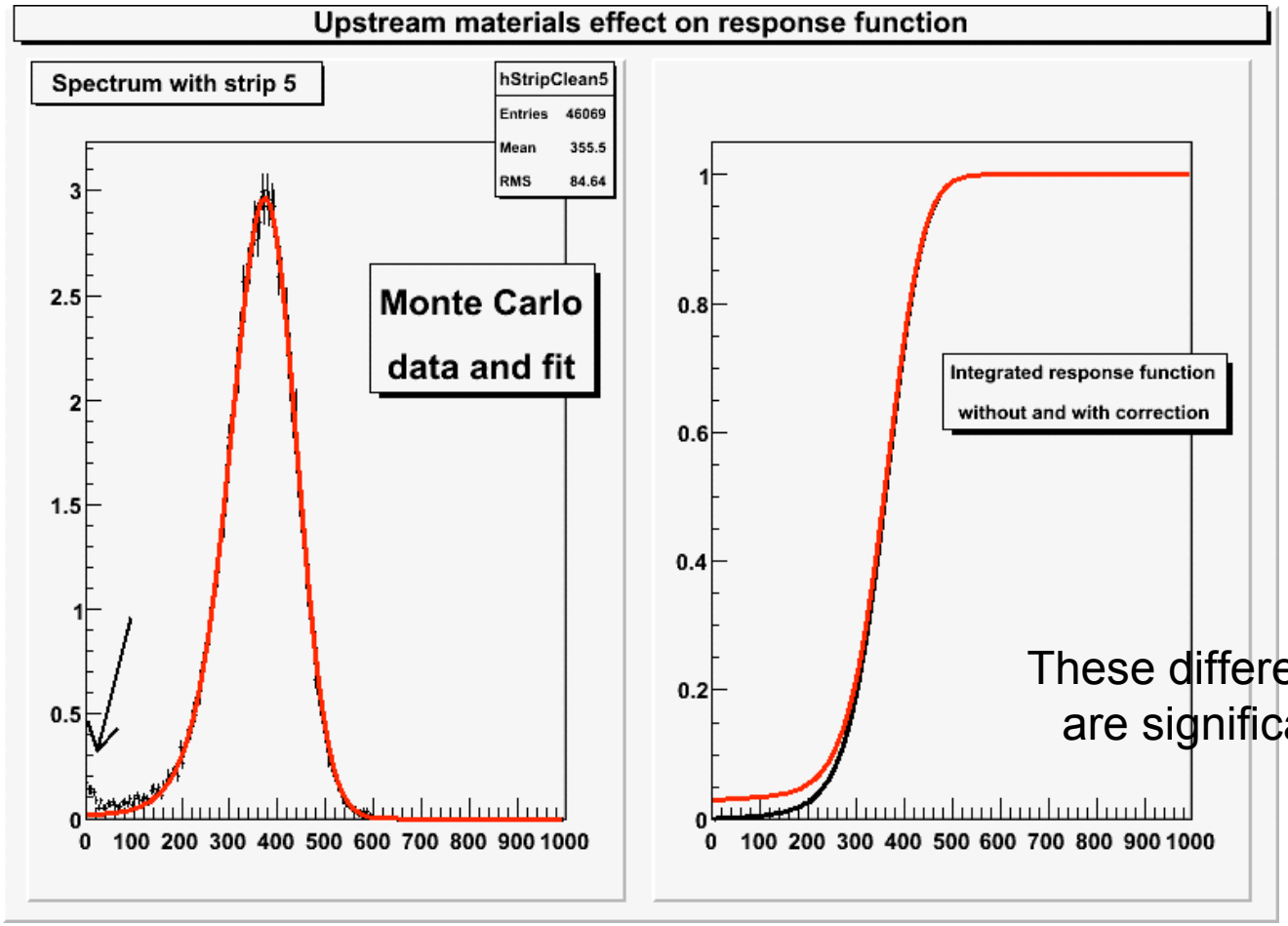
Compton Analysis

Status

GEANT Spectra with Data-style Fits

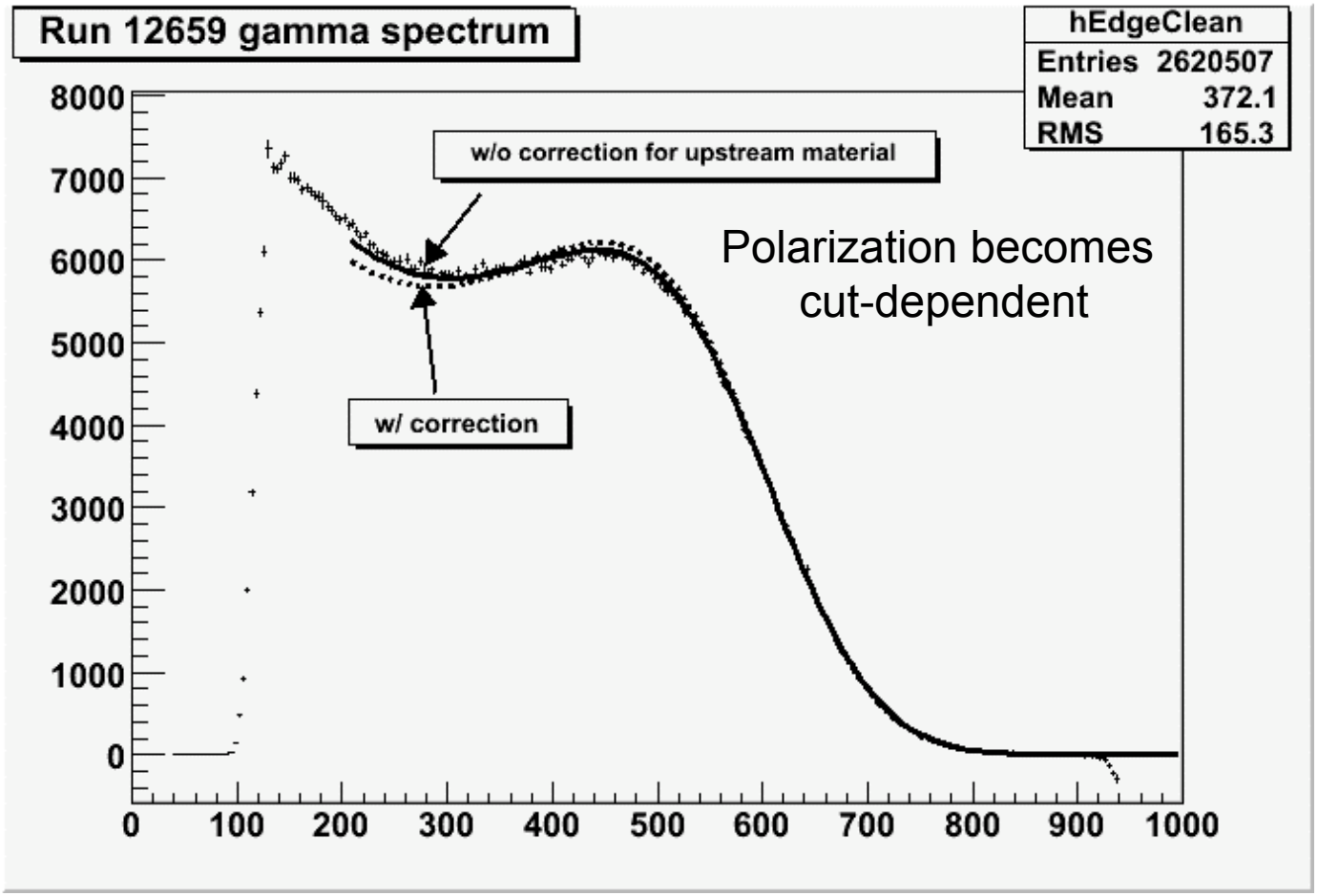


These differences are significant.

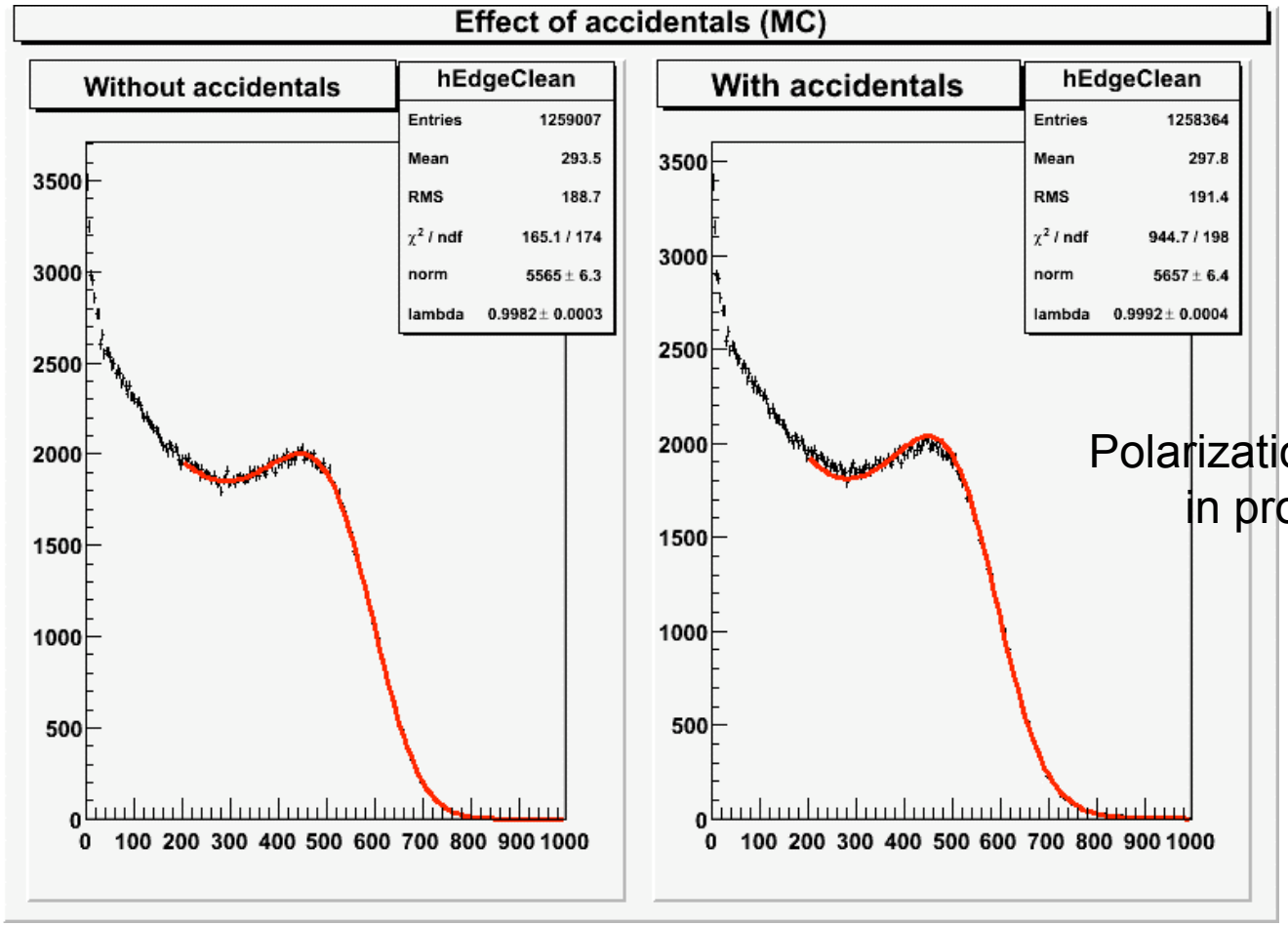
Activity

- Rewrote code, using C++ data structures
- Studied fitting function, which is at the heart of the precision photon analysis.
- Wrote Monte-Carlo for spectra, added synchrotron shield.
- Wrote Monte-Carlo with accidentals.
- We are now trying to put it all together.

Correction for Low E Gamma's



Analyze Monte-Carlo with Analysis Code



Polarization analysis in progress

Maybe these two effects cancel??

Plans

- Finish polarization analysis, etc.
- Tune Monte-Carlo's
- Reassess systematics: Does Monte-Carlo have same cut-dependence as data?
- Study recently-discovered cut-dependences of fitting function.
- Still light at the end of the tunnel.

Physics Summary

- Accidentals are important. Hardware studies are needed as input to the Monte-Carlo. Tail of response is important.
- Synchrotron filter is important. All material in front of the calorimeter must be documented.
- Never let anyone else analyze your data.