

Pedestal subtraction as simulation killer

Simulated May data (40 GeV muons)
Saiva, Christian, Erik, Lan, Katja, ...



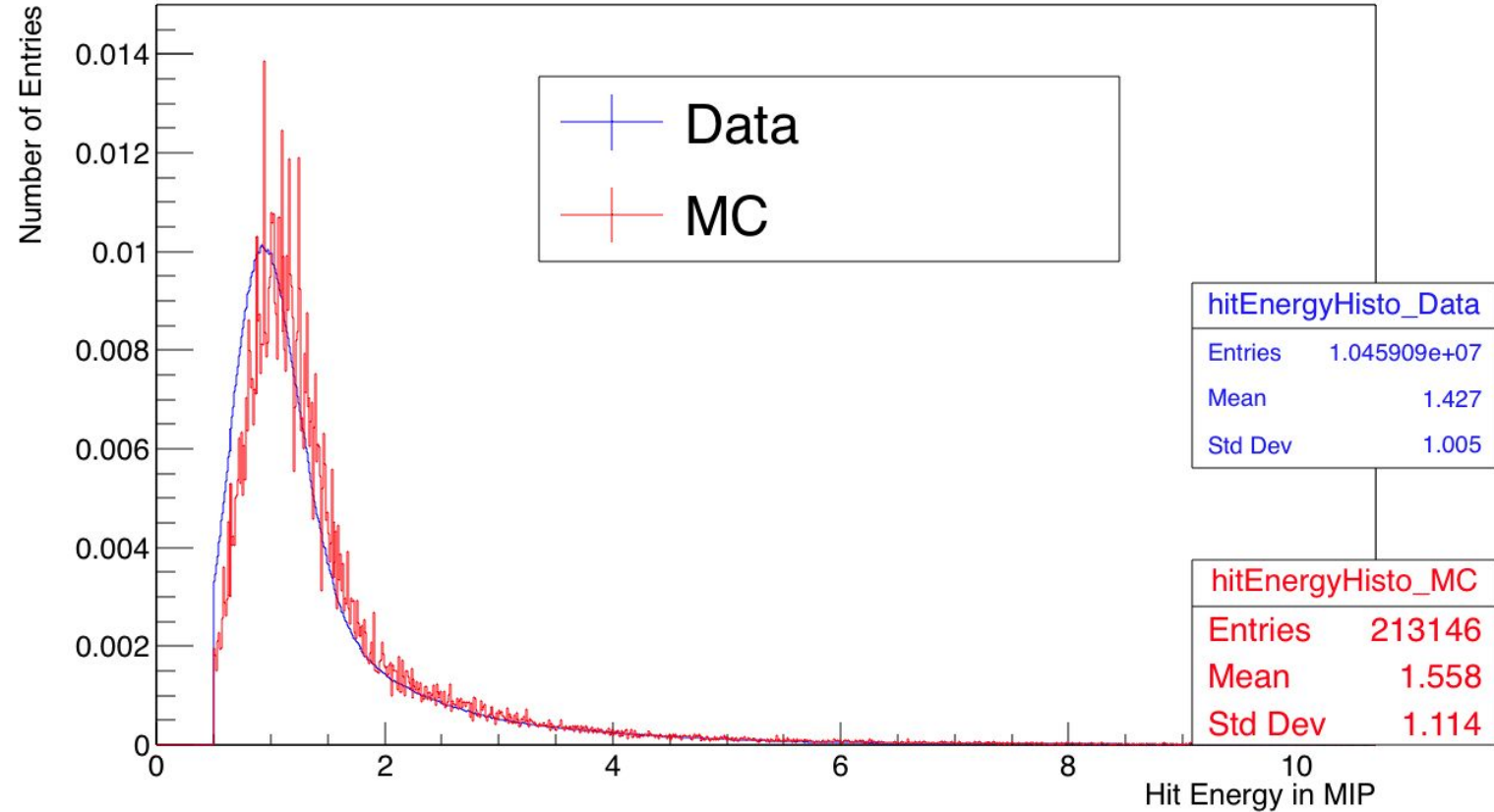
Universität Hamburg

DER FORSCHUNG | DER LEHRE | DER BILDUNG

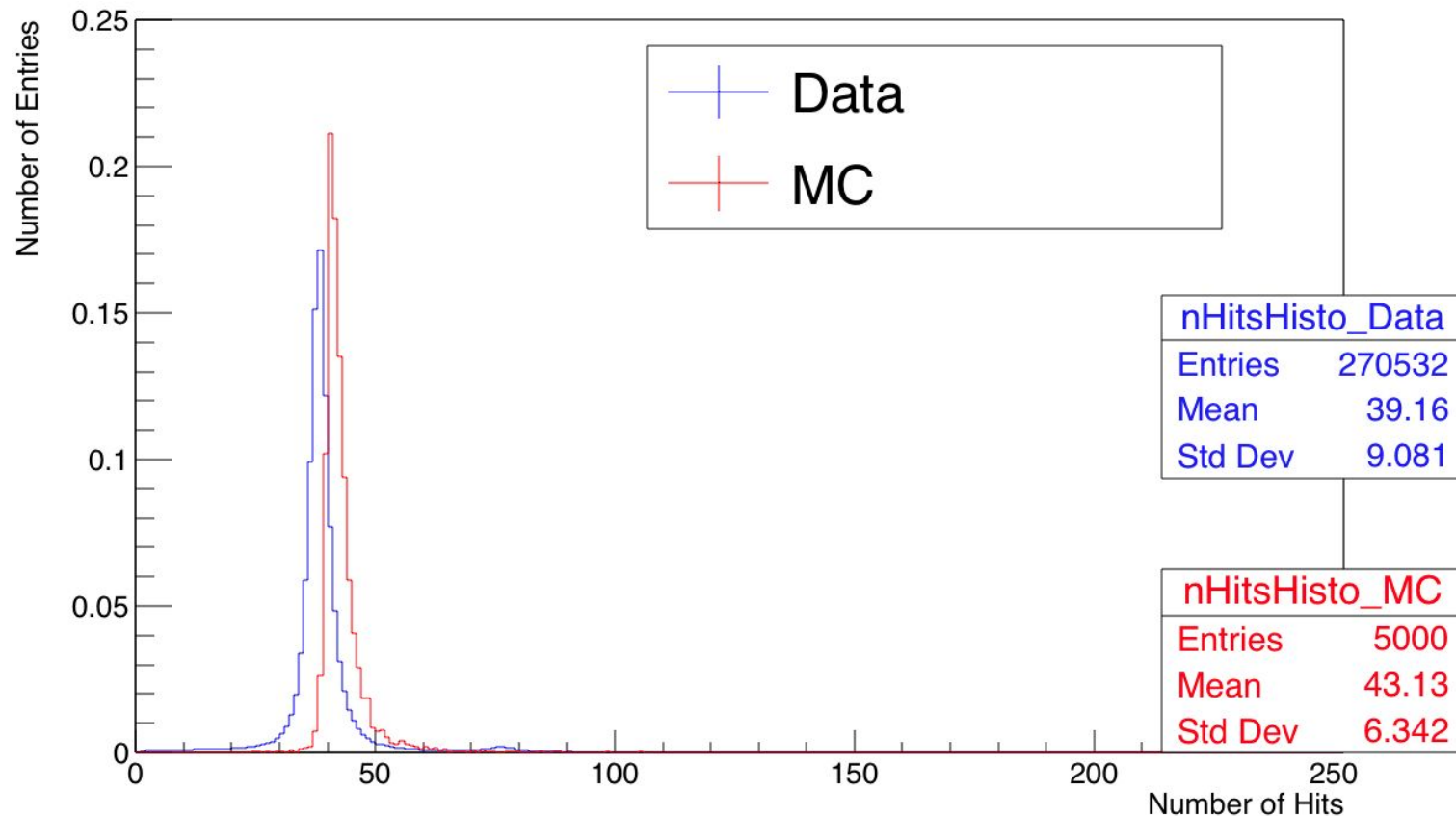


Problem identified

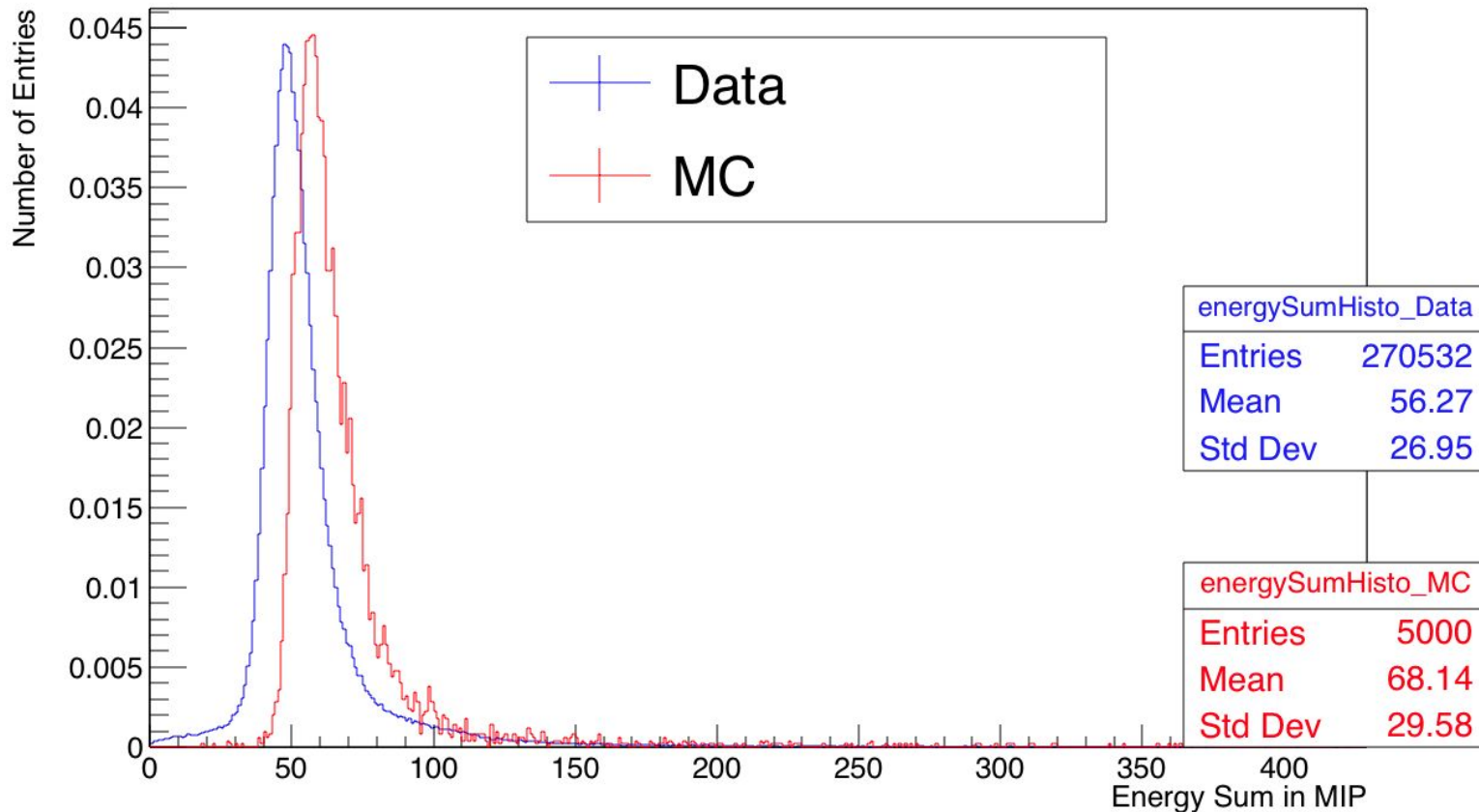
- Simulation killer: pedestal subtraction in reco steering file
 - usage of same reco steering for data and simulation
- Following plots: scaled to $1/\text{integral}$



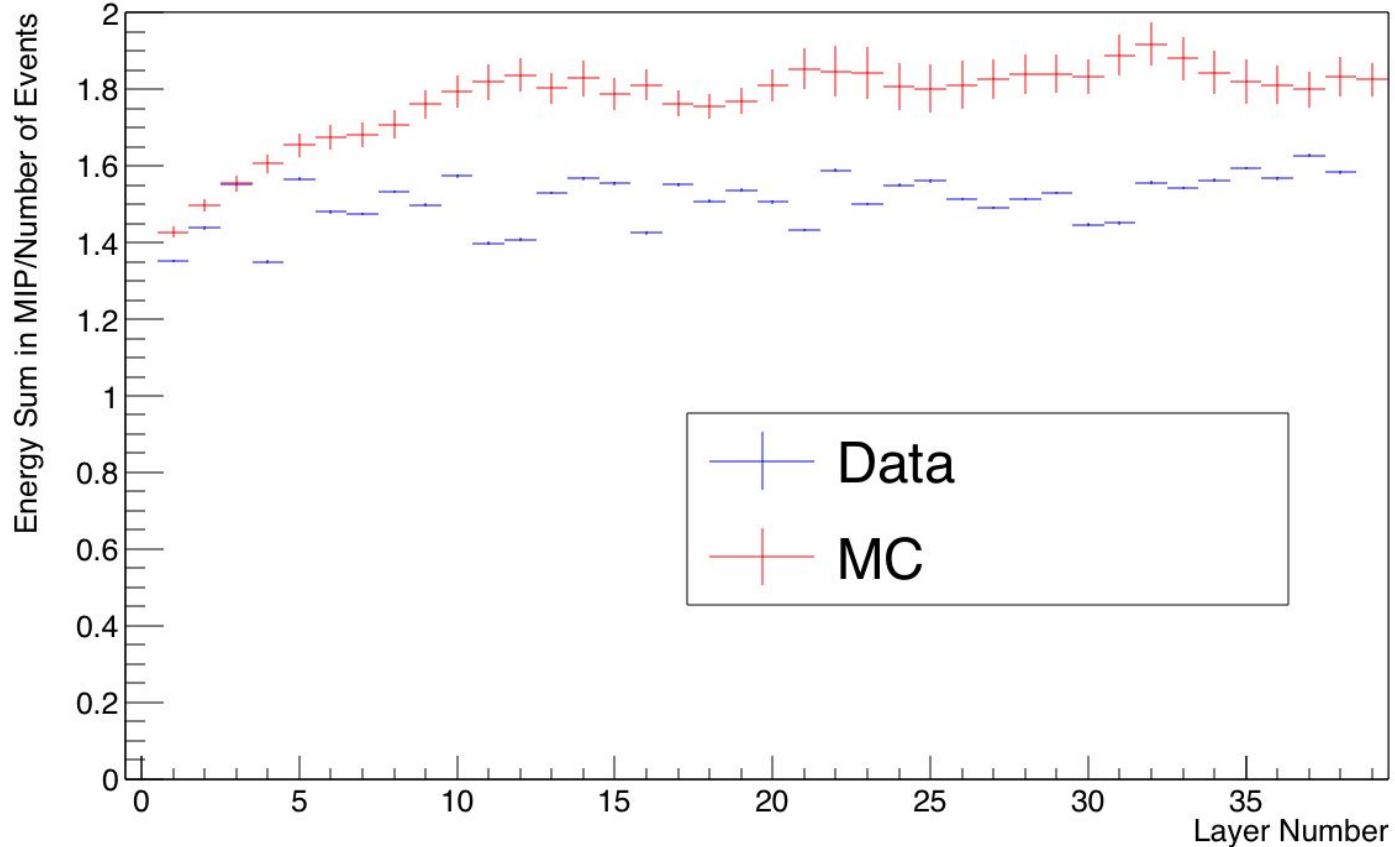
nHits



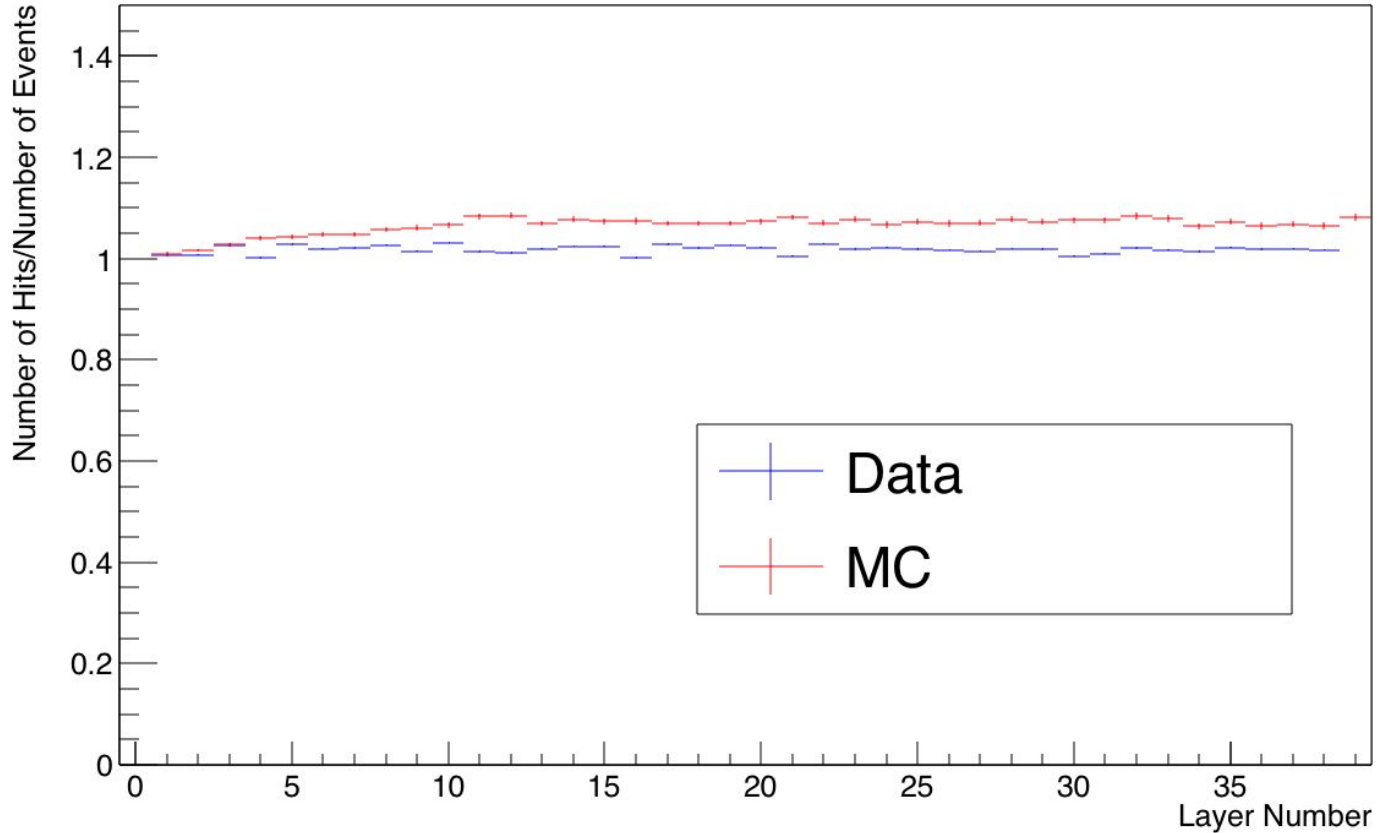
energySum



shower profile



number of hits profile

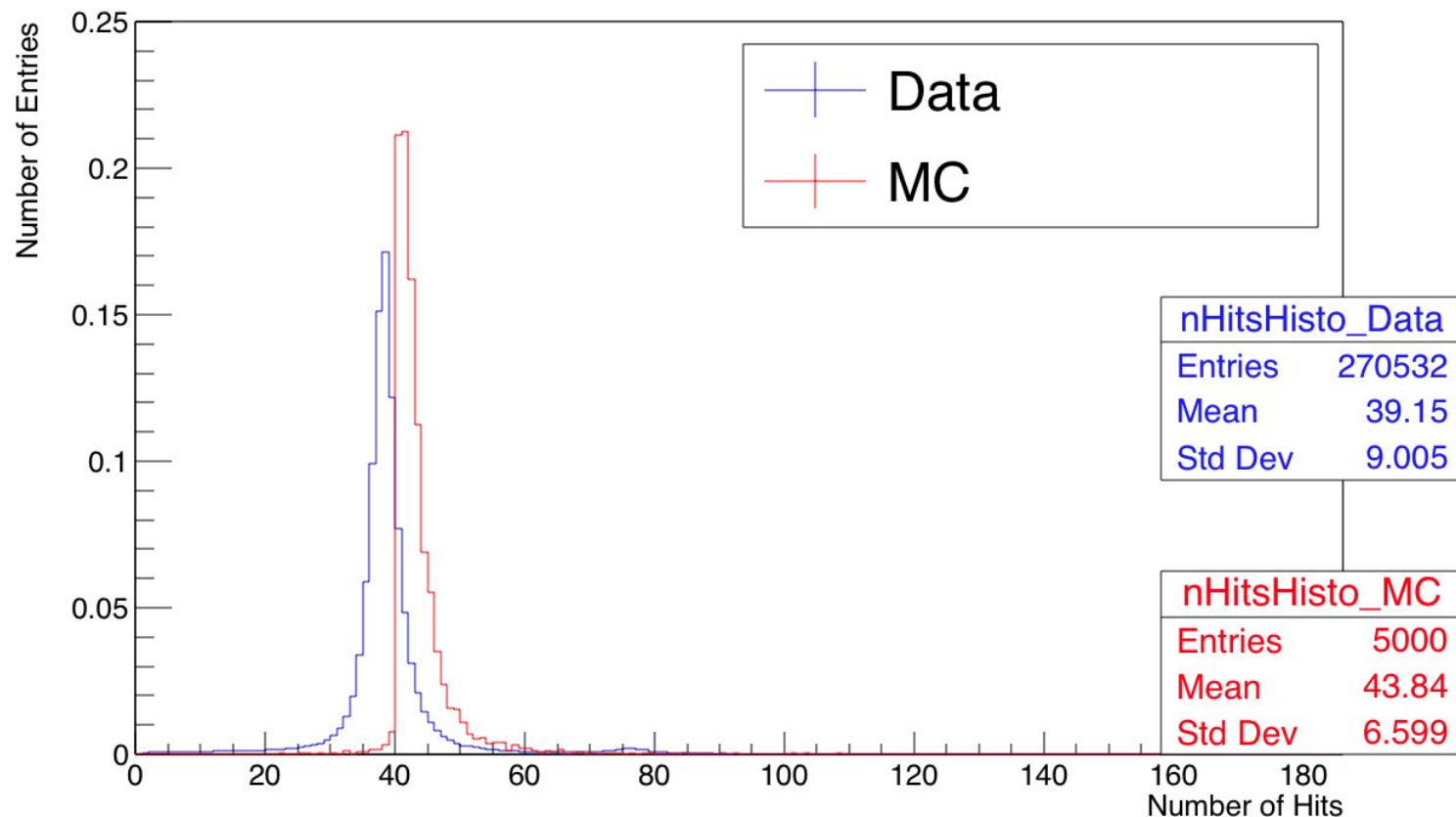


Problem identified (and solved)

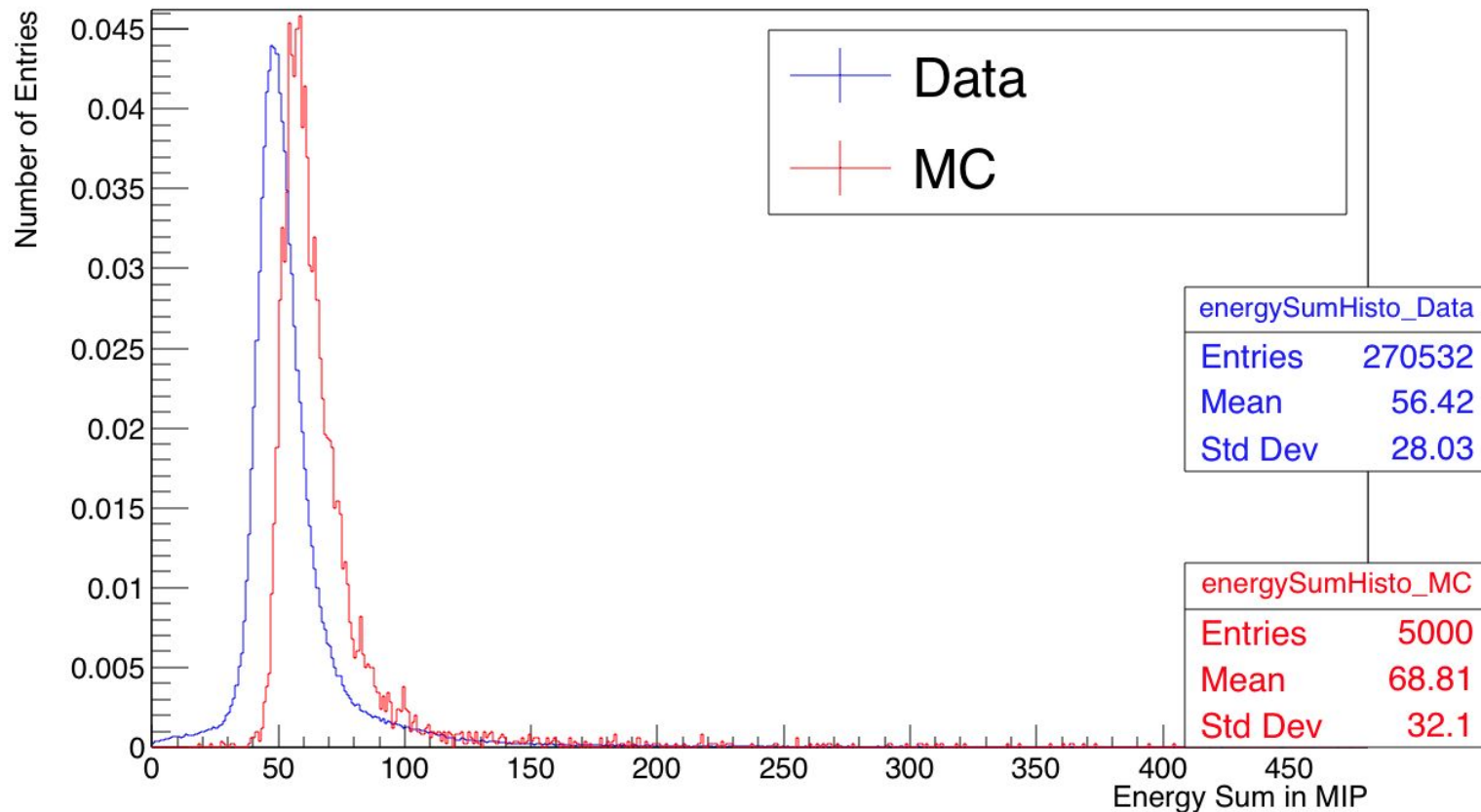
- Simulation killer: pedestal subtraction in reco steering file
 - usage of same reco steering for data and simulation
 - Temporary solution: switch off pedestal subtraction in simulation reco
 - Final solution: changed SiPM reco code to only do pedestal subtraction for data
 - Waiting for addition to common software
- **Simulations look much more like we expect them to**

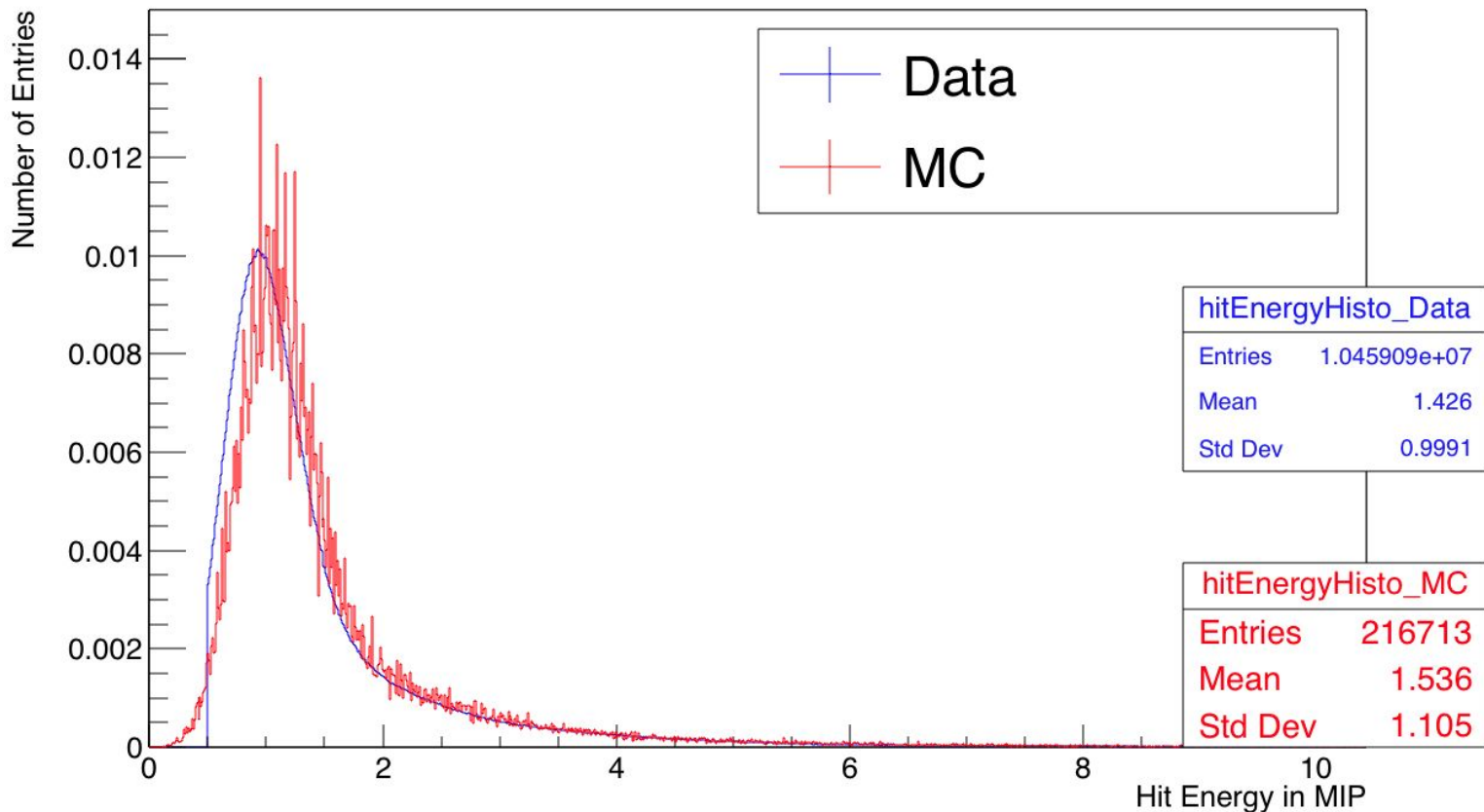
Backup

nHits

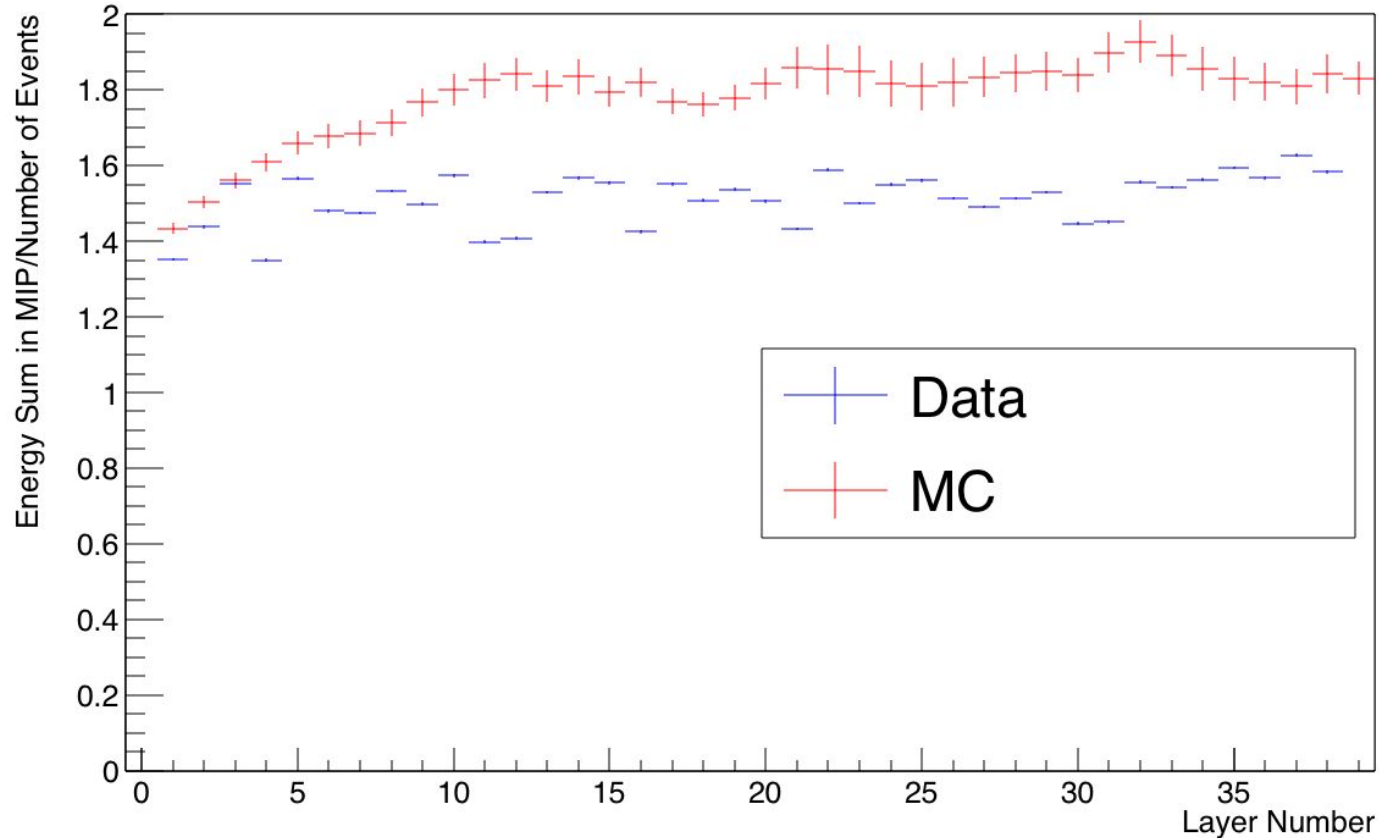


energySum

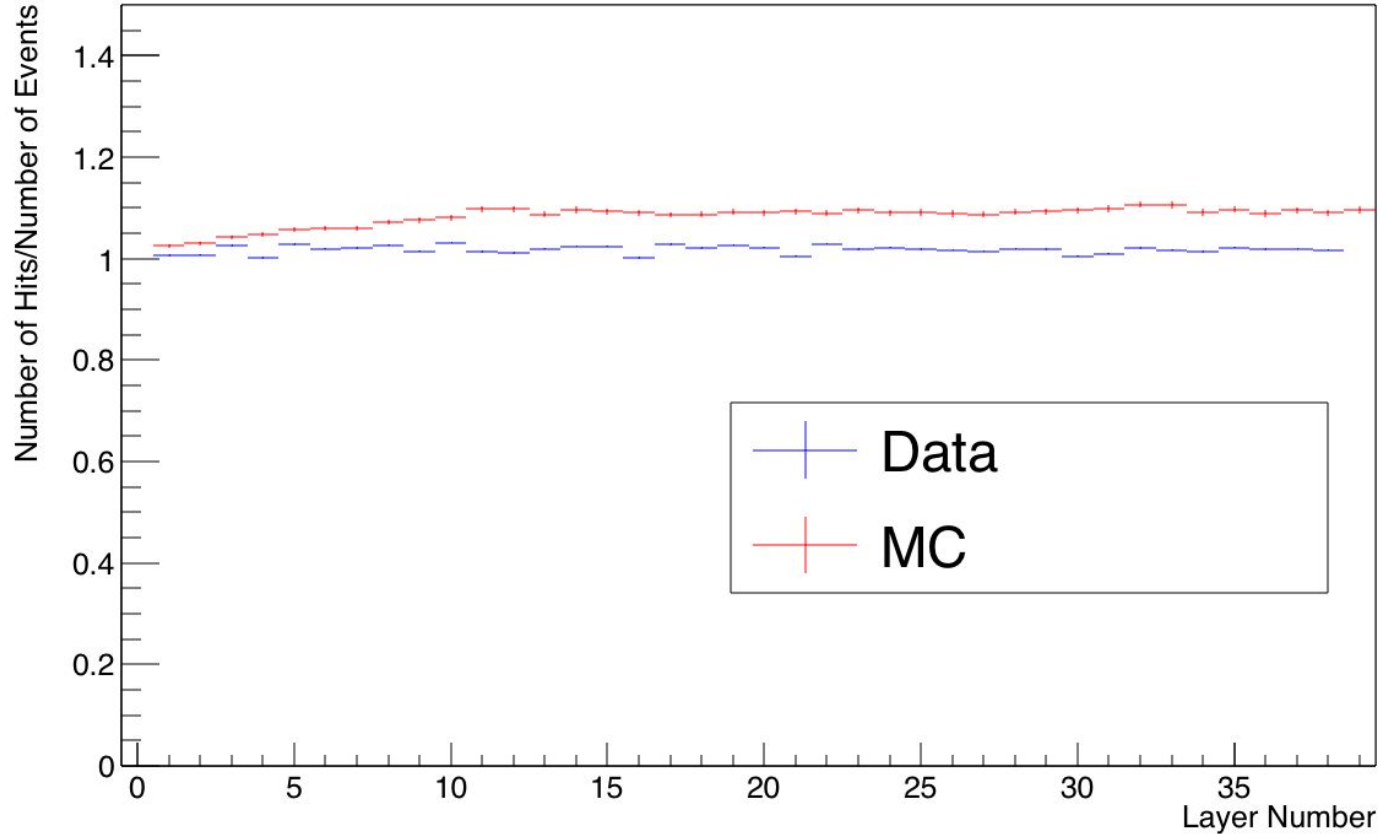




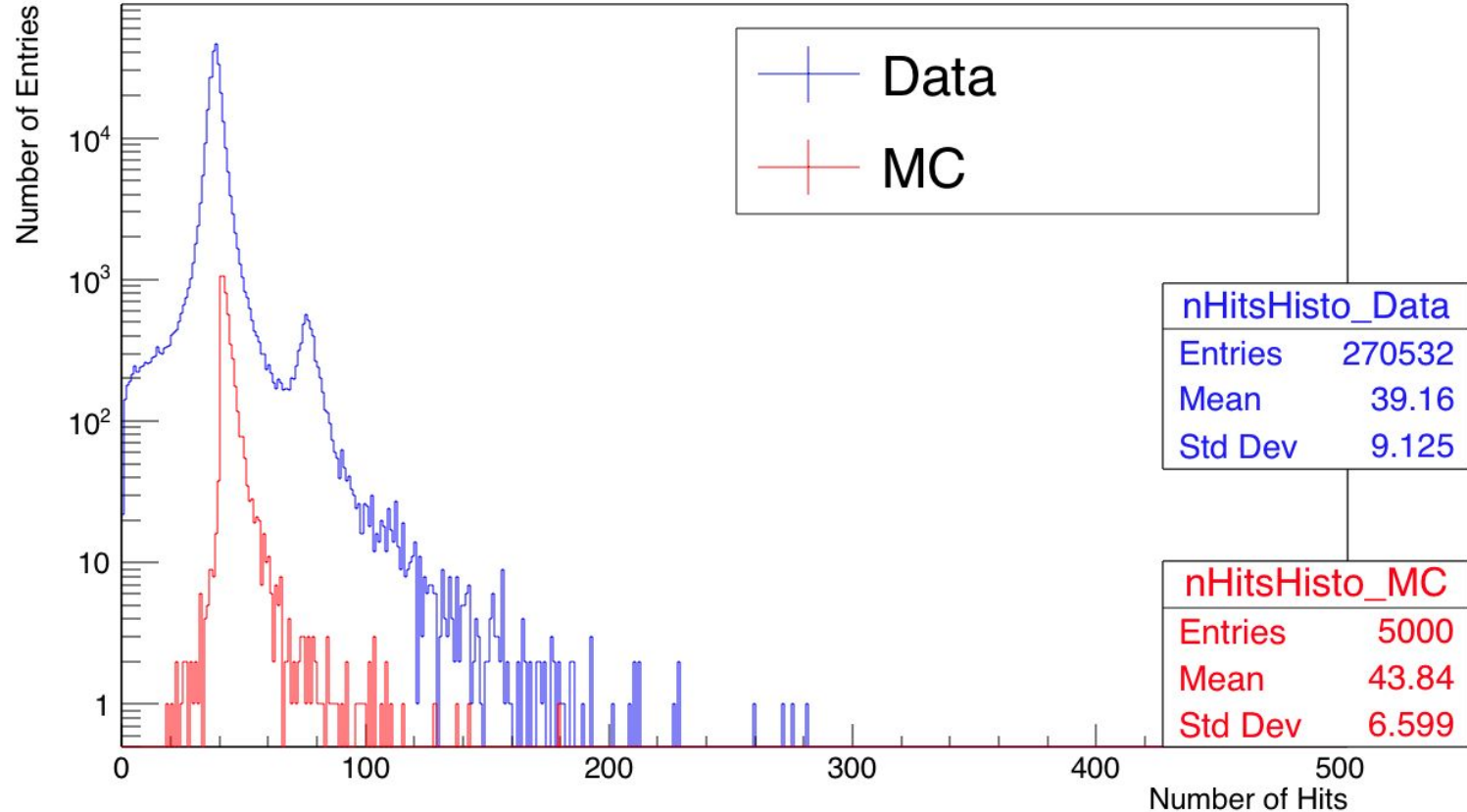
shower profile



number of hits profile



nHits



energySum

