HCAL DQM

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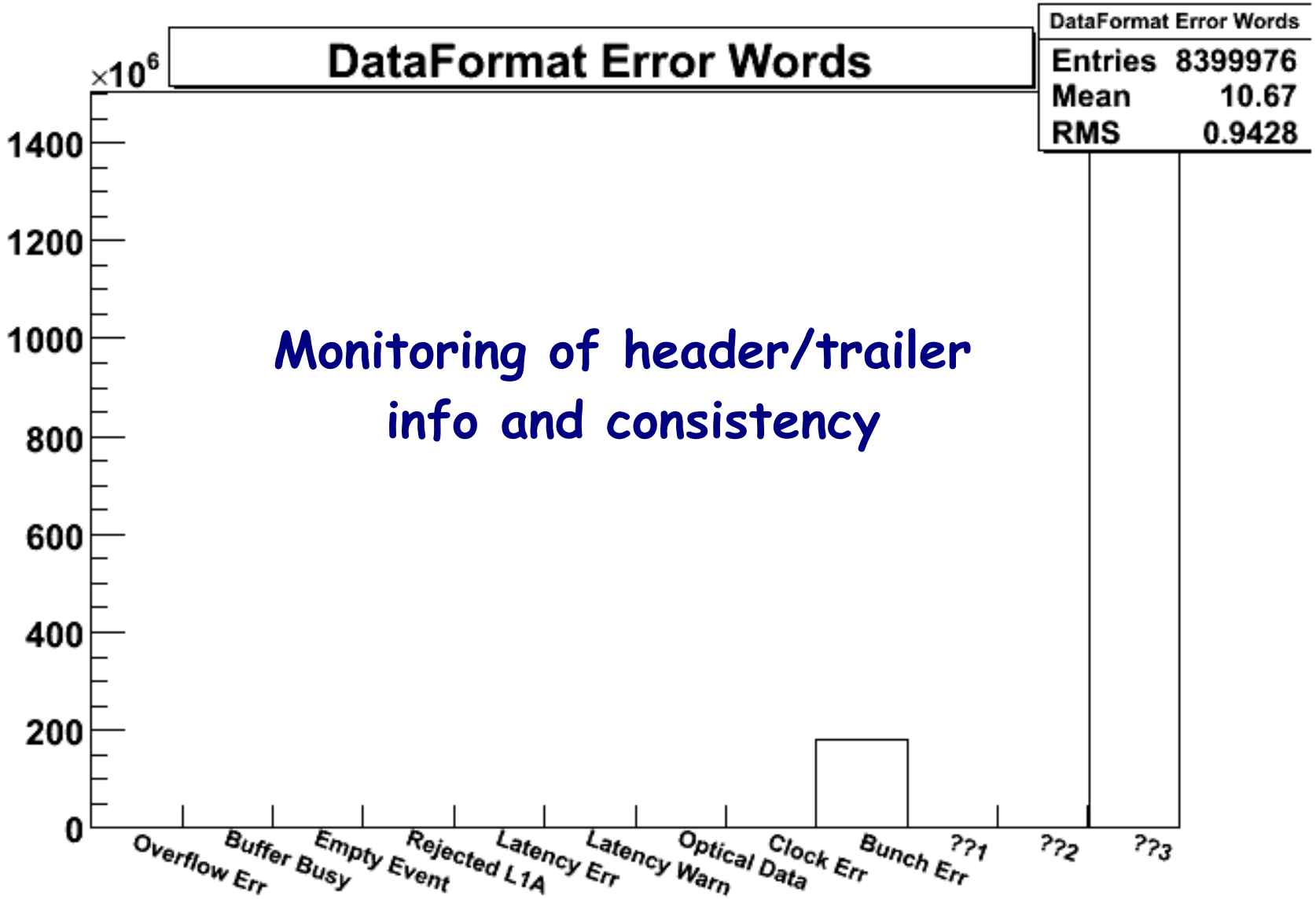
Current Software Status

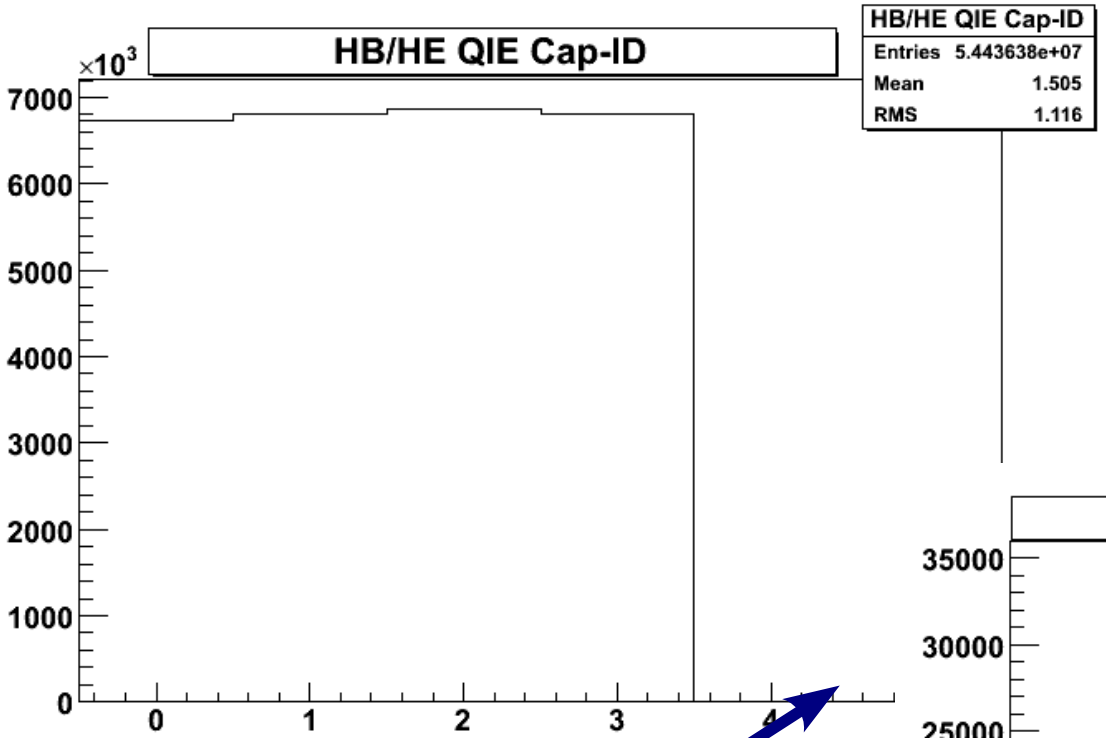
- Developed against CMSSW_0_2_0_pre4
  - Soon to be tested in CMSSW_0_3_0_preX
- Package consists of one module which drives several classes
  - DQM/HcalMonitorModule
  - DQM/HcalMonitorTasks
    - HcalDataFormatMonitor, HcalDigiMonitor, HcalRecHitMonitor
- Current release compatible with DQMServices software
  - Extensive testing completed

DataFormat Monitoring

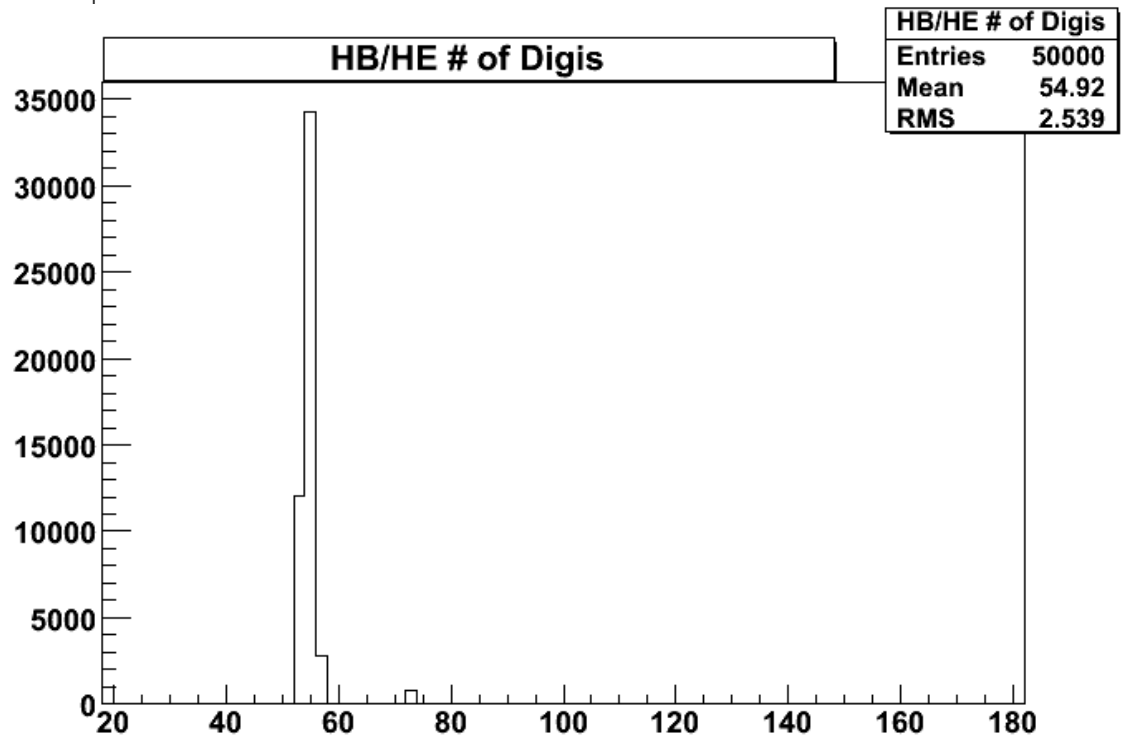


Monitoring of header/trailer info and consistency

HCAL Digi Monitoring

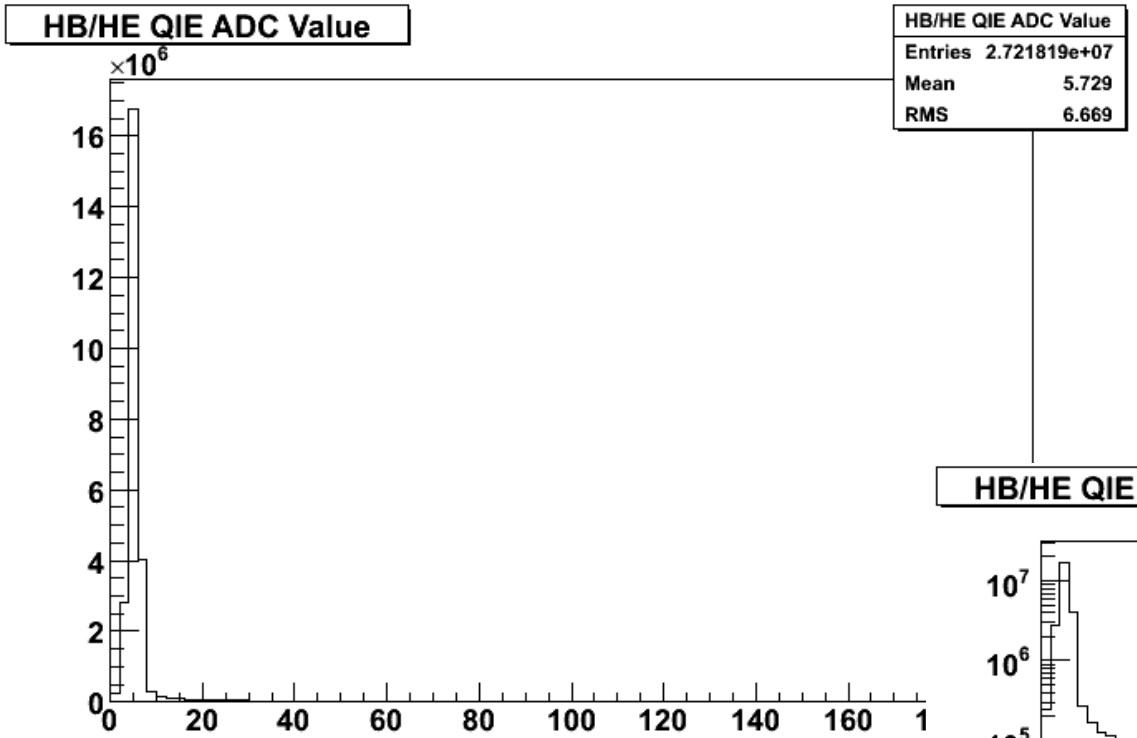


Widely varying # of digis gives a measure of noise

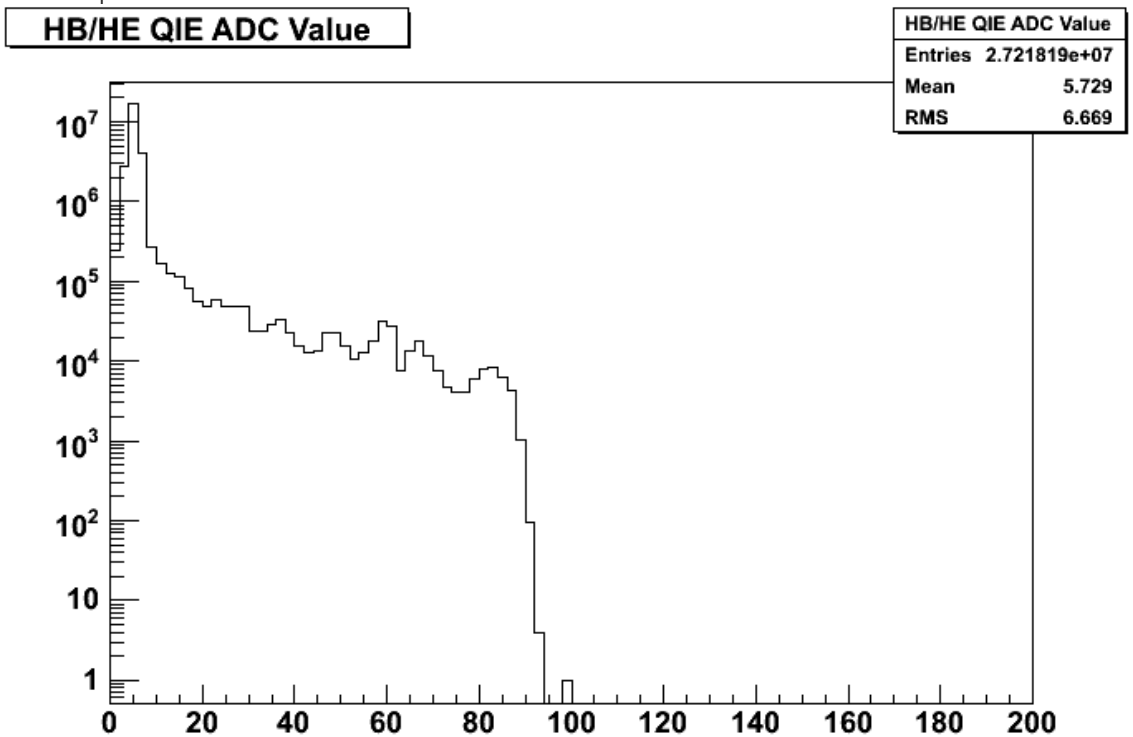


Cap-ID bit upsets reported here

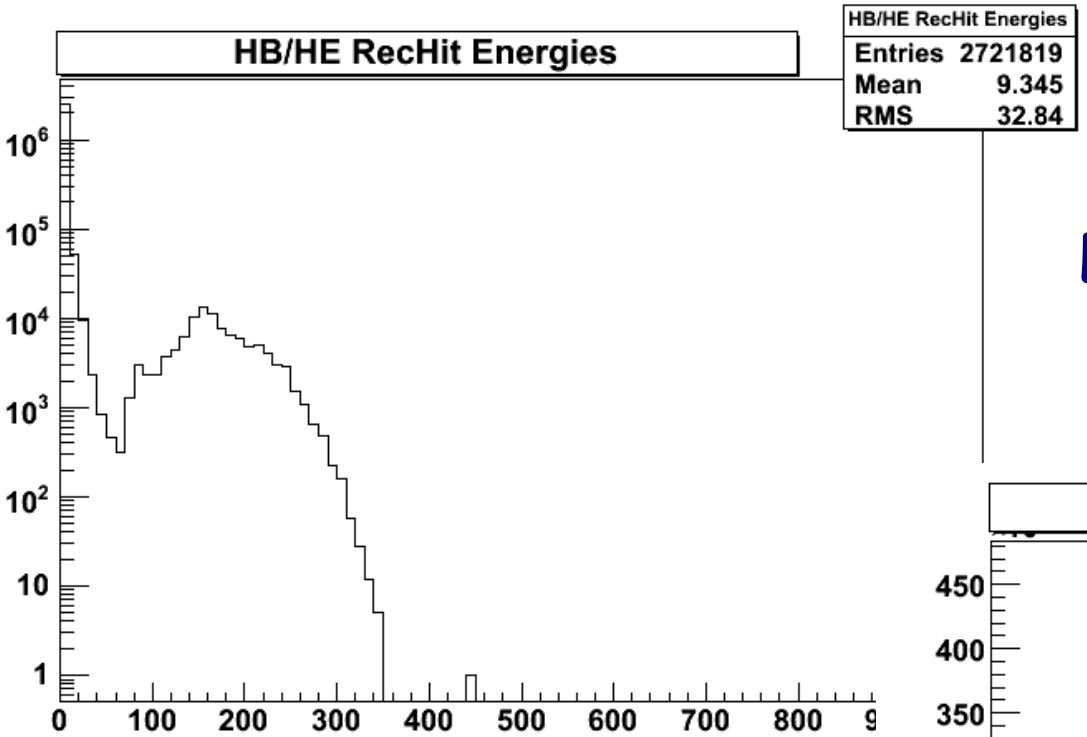
HCAL Digi Monitoring (II)



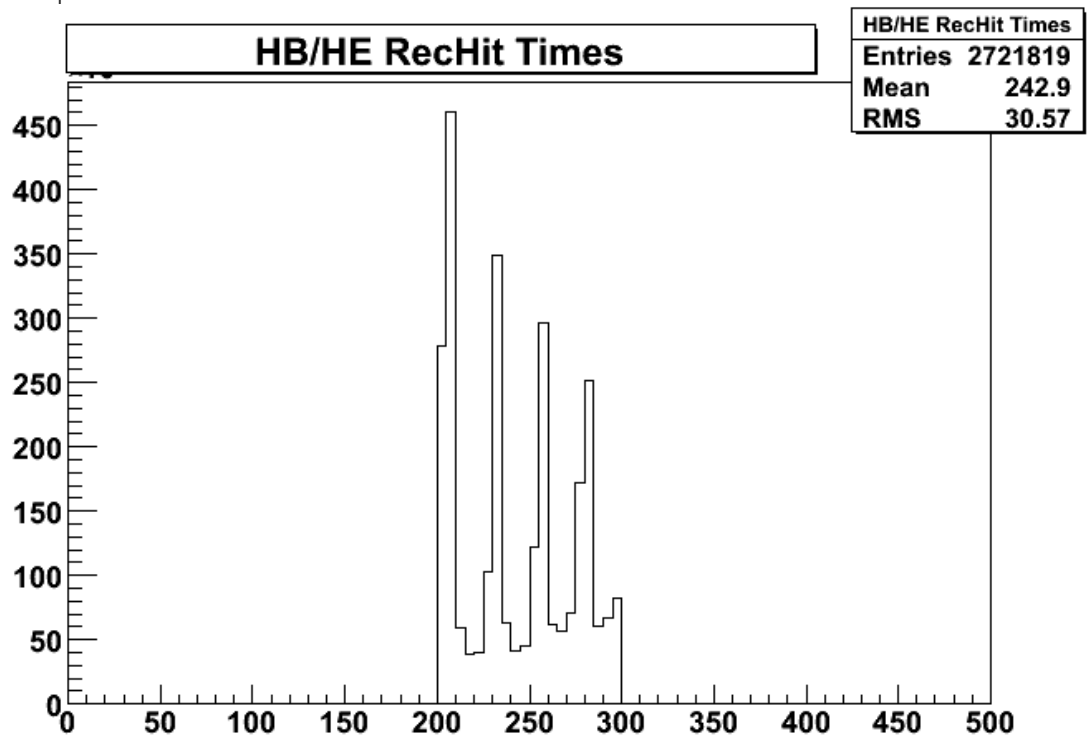
Looking for noise in QIE ADC readings



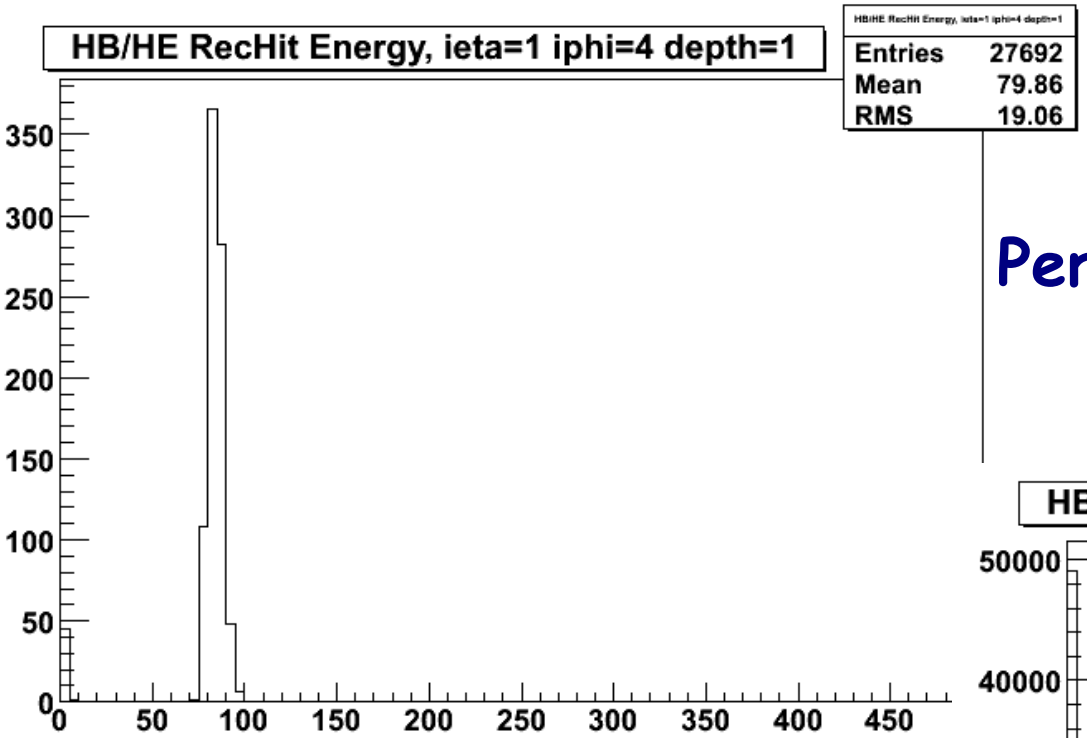
HCAL RecHit Monitoring



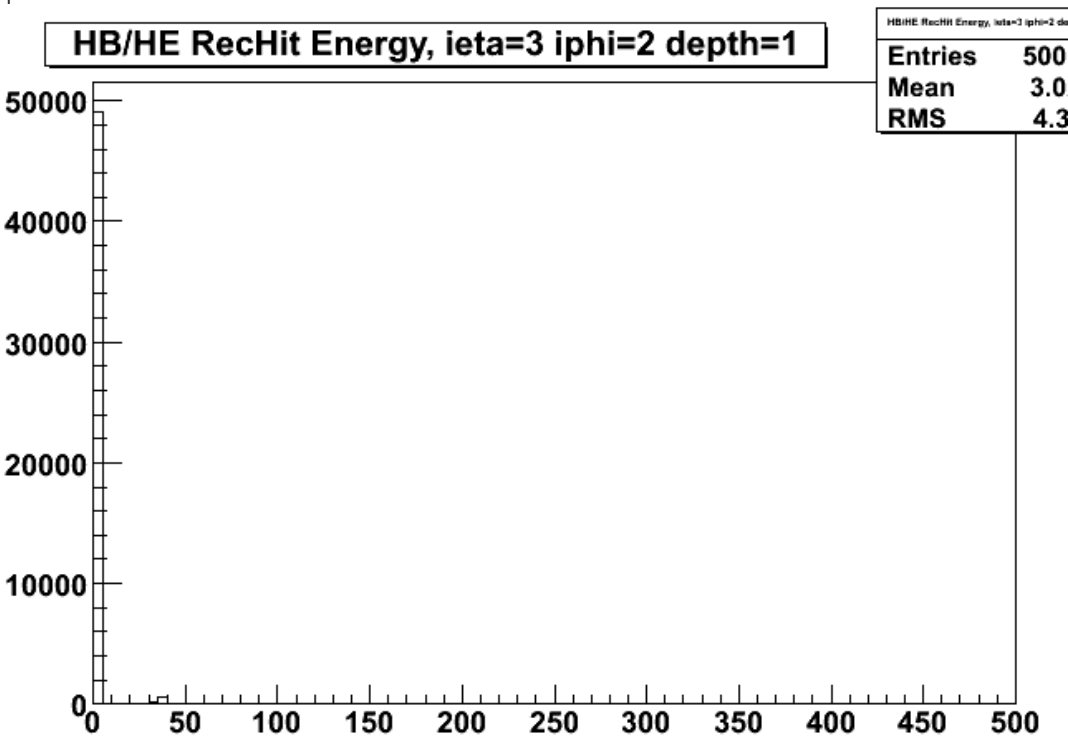
Look for consistent timing and energy distributions



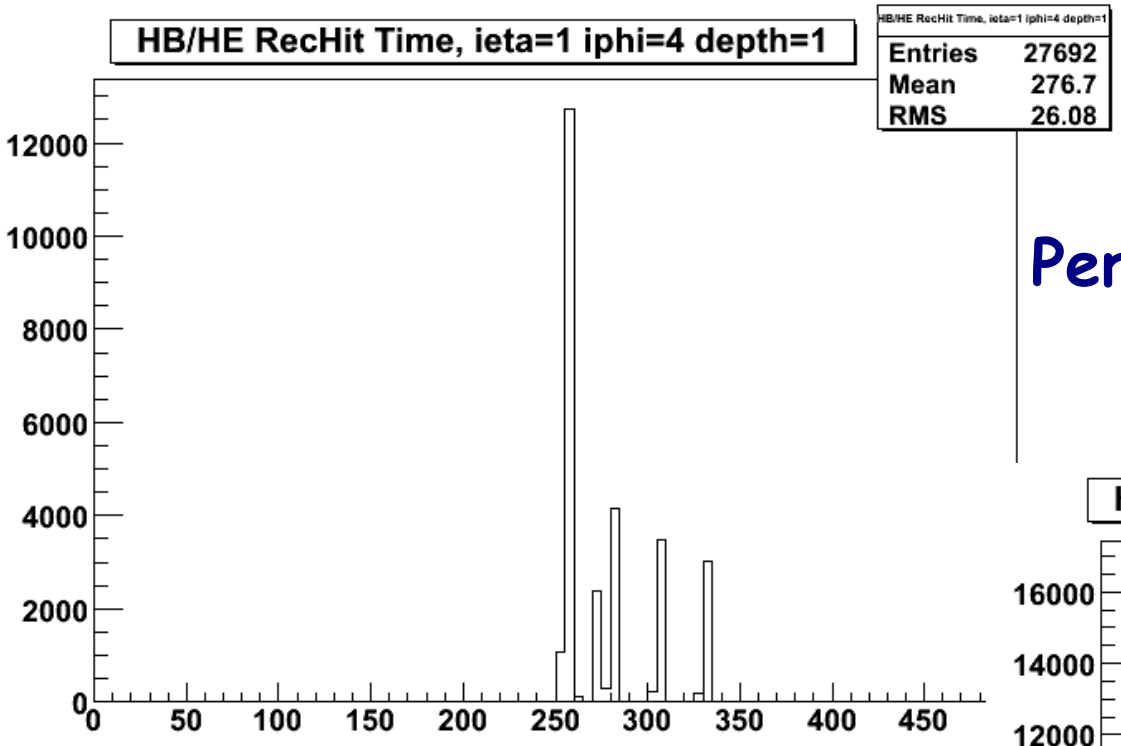
HCAL RecHit Monitoring (II)



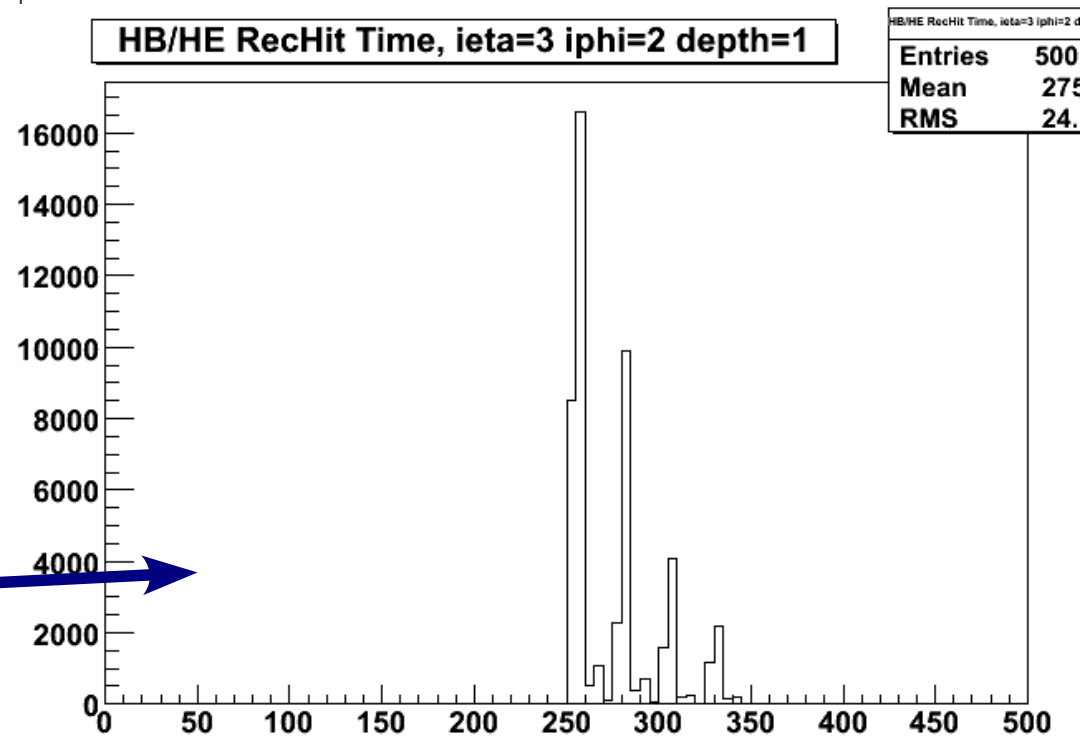
Per Channel Energy distributions



HCAL RecHit Monitoring (III)

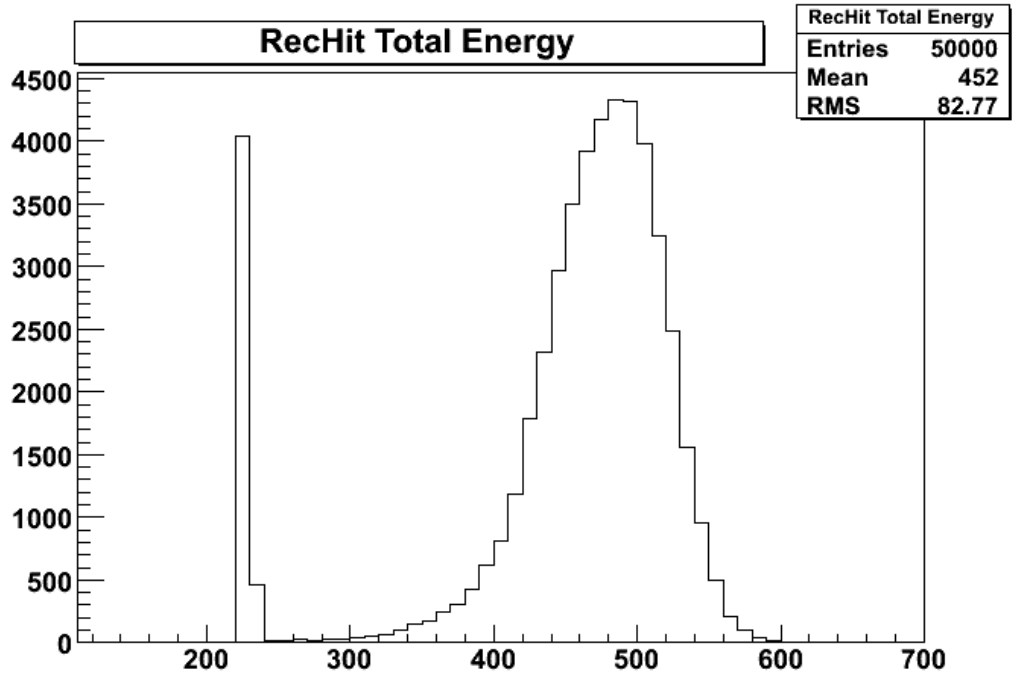


Per Channel Time distributions

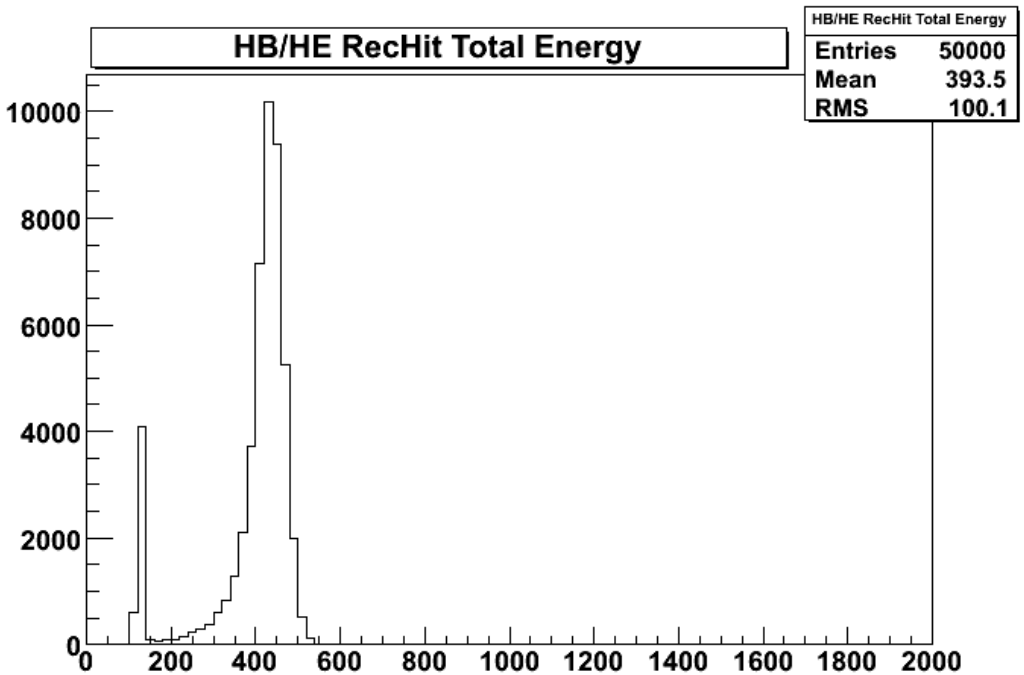


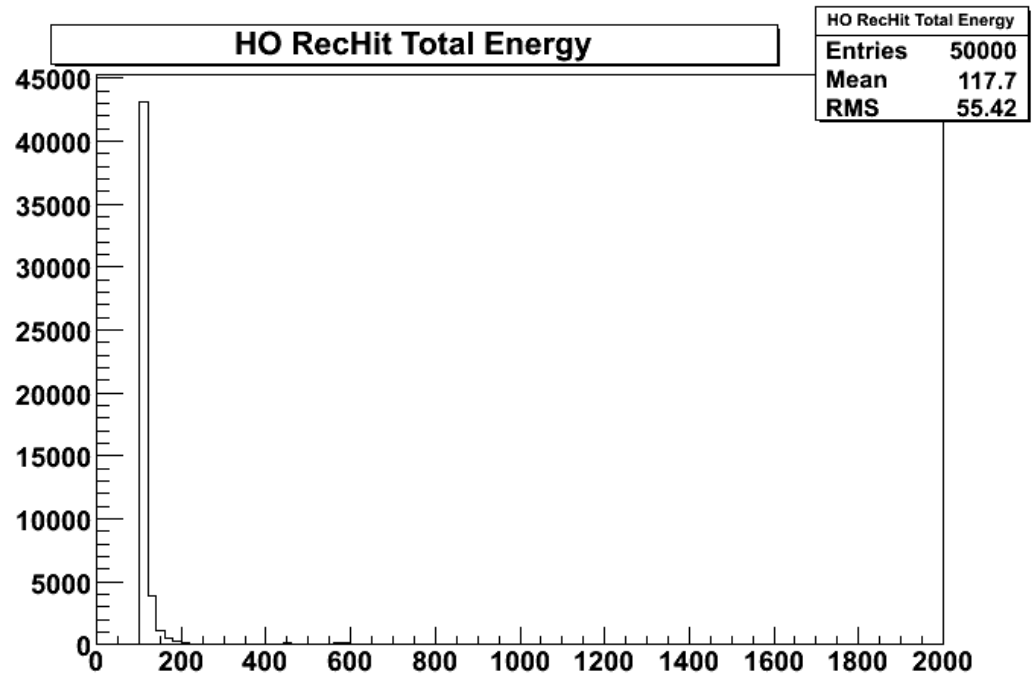
"Pedestal only" channel shows different timing structure

HCAL RecHit Monitoring (IV)

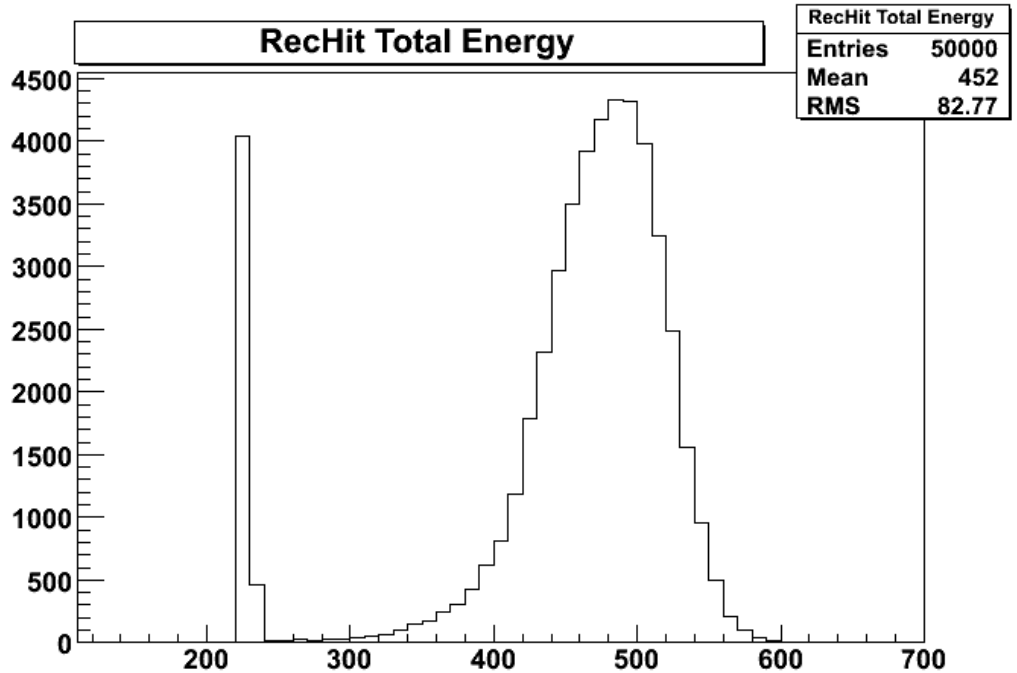


Total energy plots

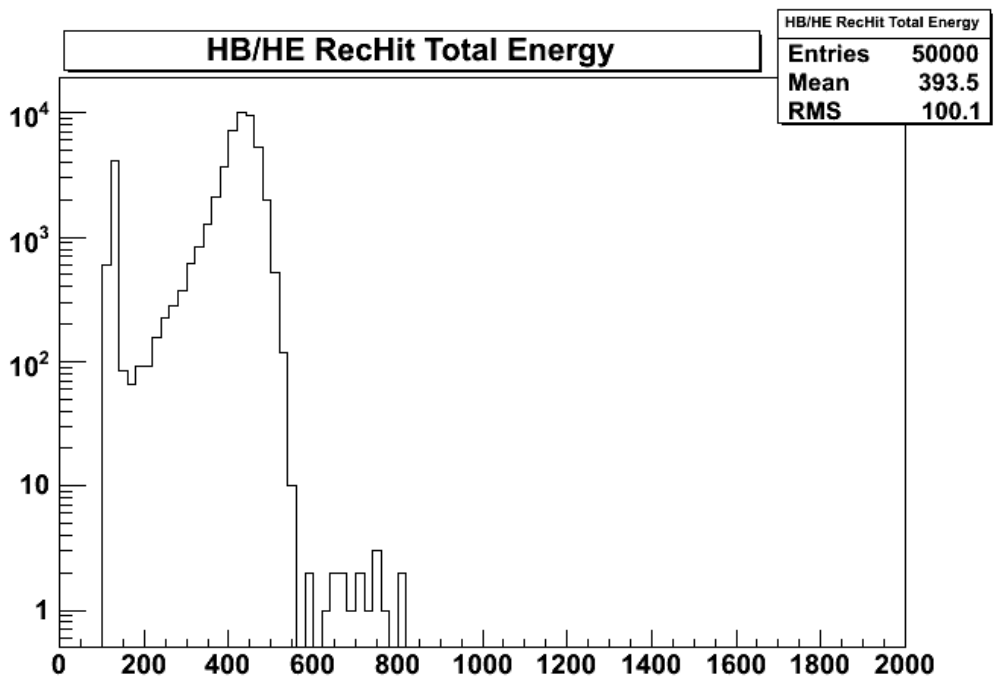


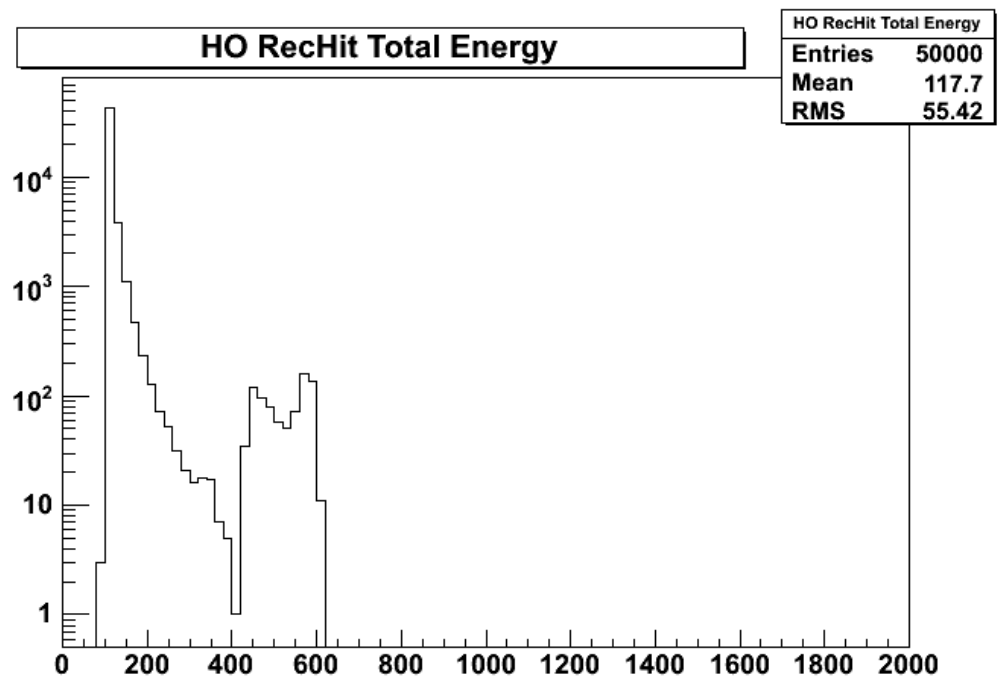


HCAL RecHit Monitoring (V)



Log scale useful to search for noise/miscalibrations





Conclusions

- HCAL DQM has reached a robust release point
  - Current versions being tried out "online"
- Feedback from DQM group has been very productive and we expect good progress towards the Cosmic Challenge