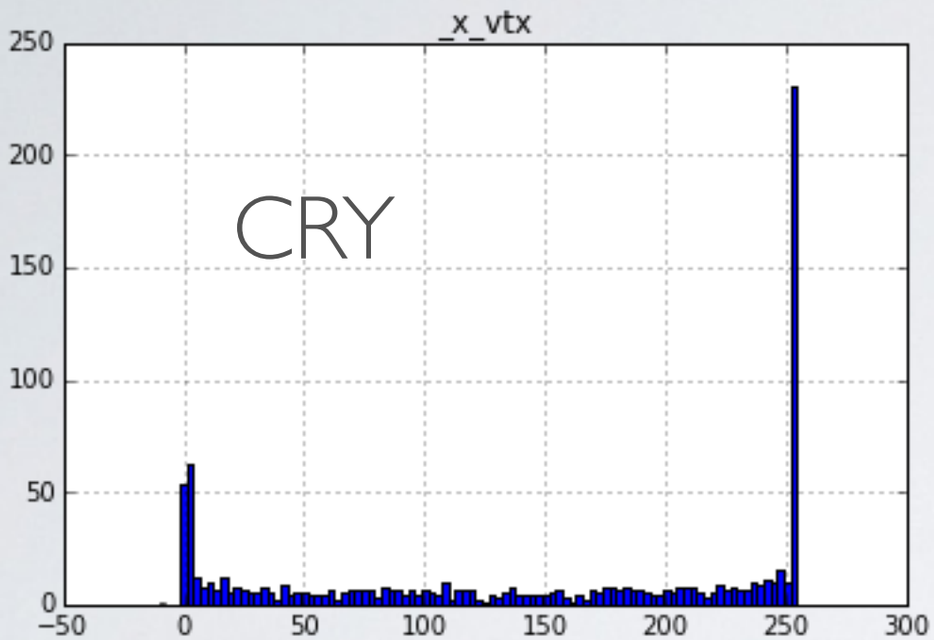
QUICK CORSIKA VS. CRY COSMICS

from high level ERTool nue search plots point-of-view

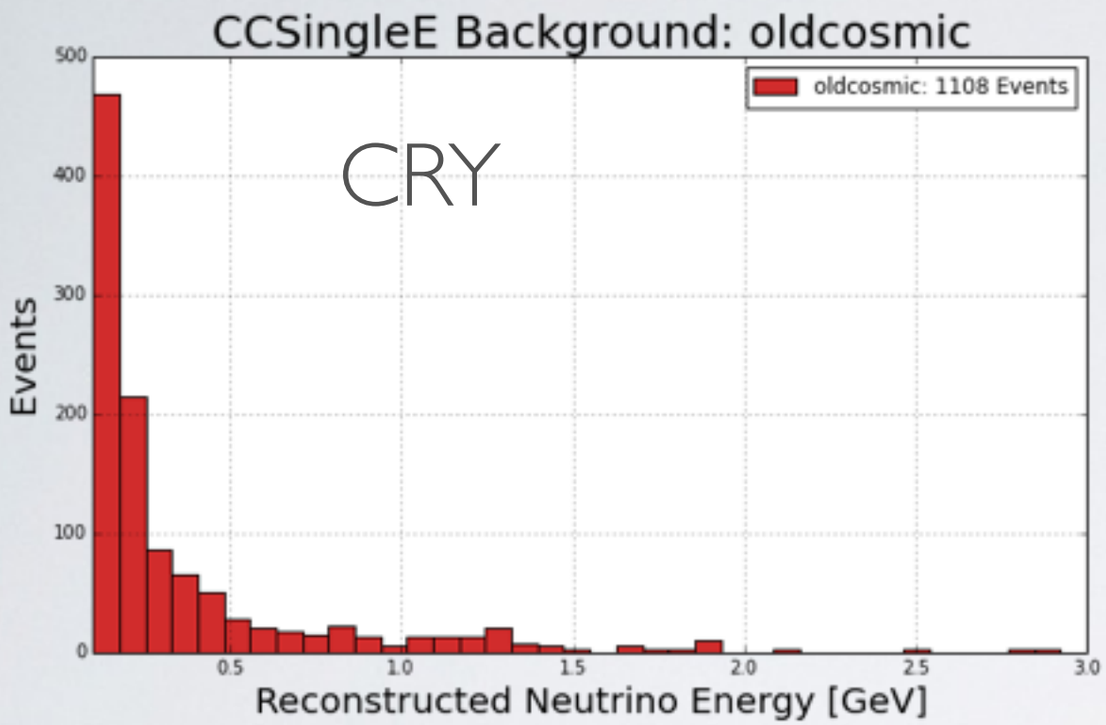
WHAT I'M DOING, WHAT DATA

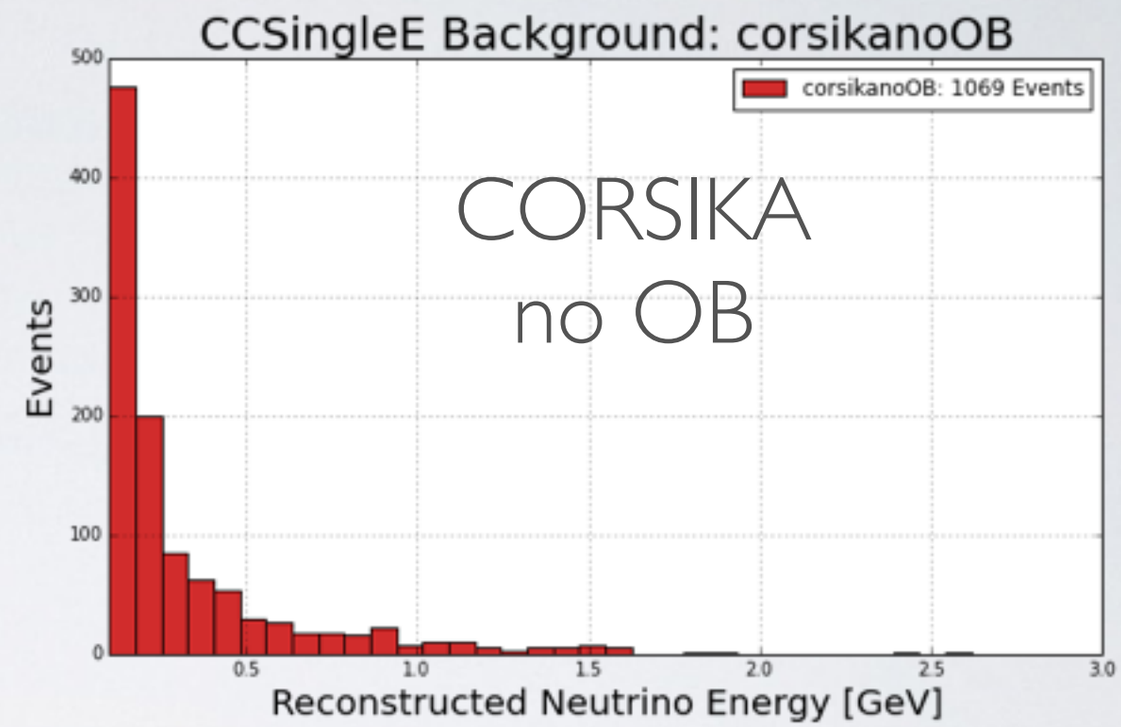
- "old" cosmics (cry) come from: /pnfs/uboone/persistent/users/oscillations_group/LowEExcess/70kV/osc_cosmics_70kv/osc_cosmics_70kv_all_mcinfo.root **[70kV]**
- "new" cosmics (cry) come from: /uboone/data/users/davidc1/Corsika*OB/data/ **[128kV]**
- using only MCTracks + MCShowers
- Hand these cosmics to my default configuration of CCSingleE (ERTool nue search code), look at cosmics MIDs that pop out
- CRY weight = 2.52
  - (211,000 ms total exposure)/(6.4ms * 13100 evts generated)
- CORSIKA weight = 1.65
  - (211,000 ms total exposure)/(6.4ms * 20000 evts generated)

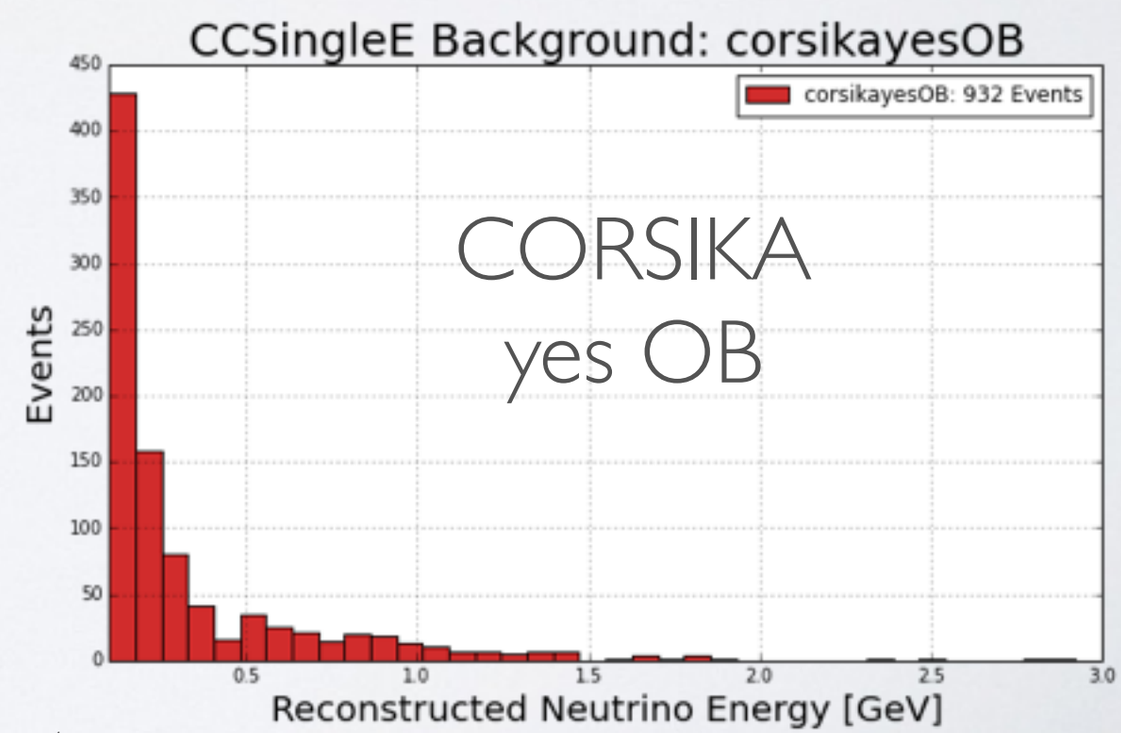
CROSS CHECKS



CCSINGLEE MID PLOTS

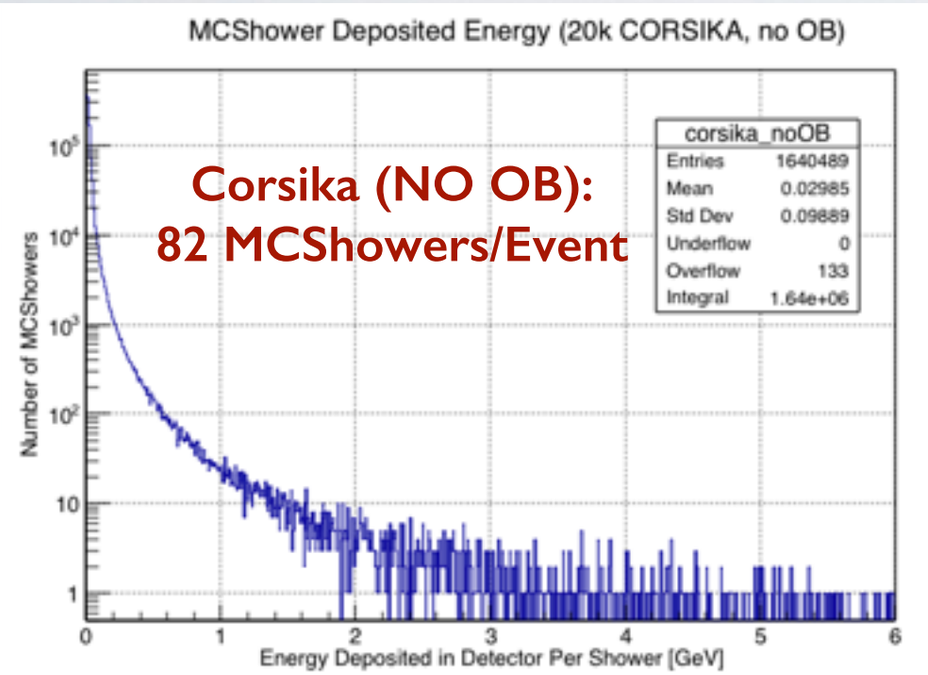


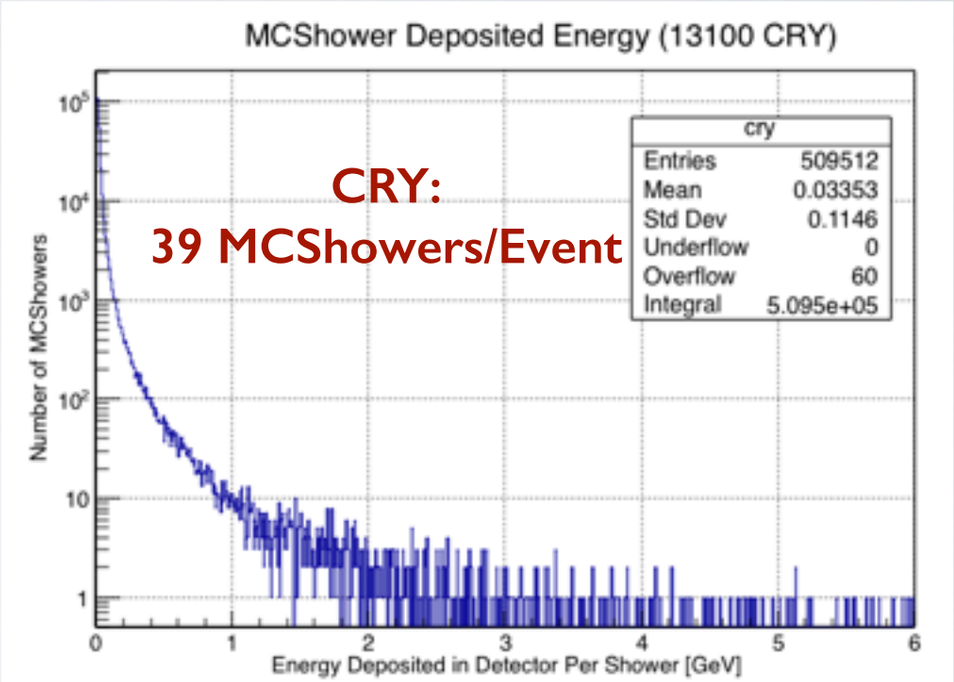


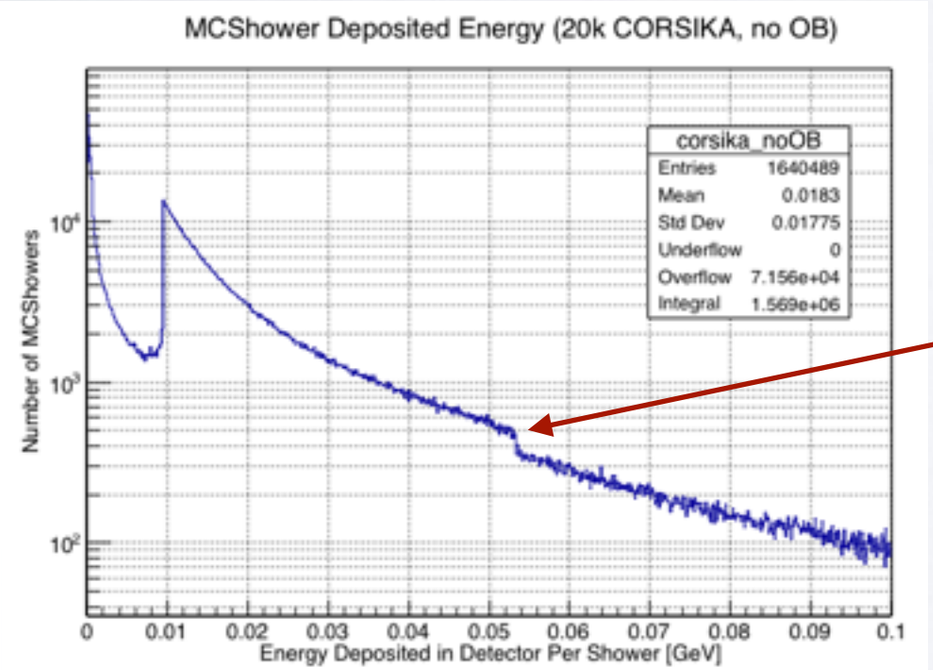


OK HOW ABOUT LOWER LEVEL PLOTS

- Take the input files, count the # of mcshowers that deposit energy in the detector per event







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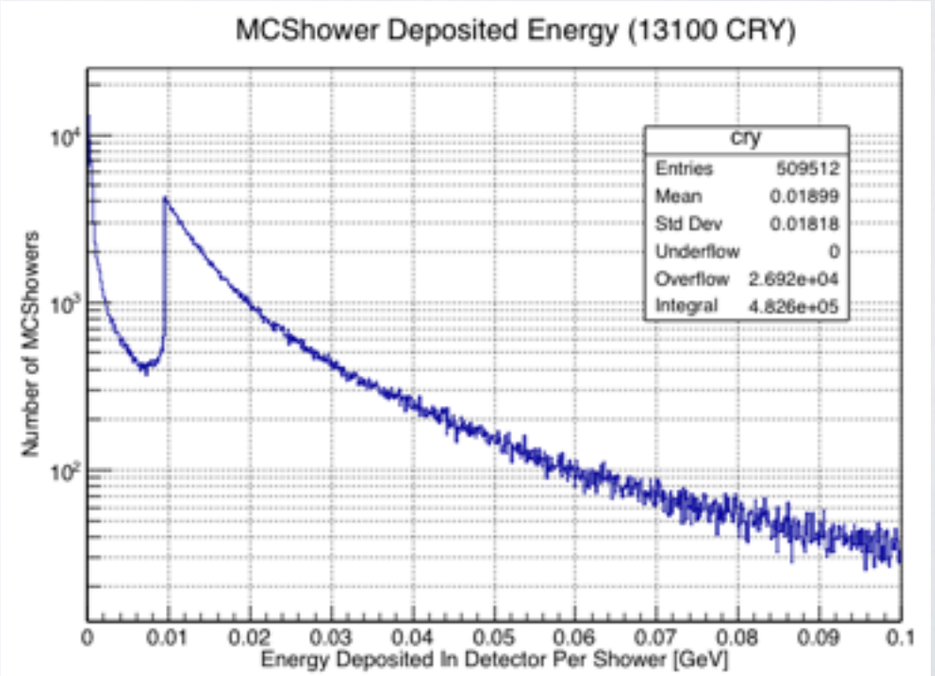
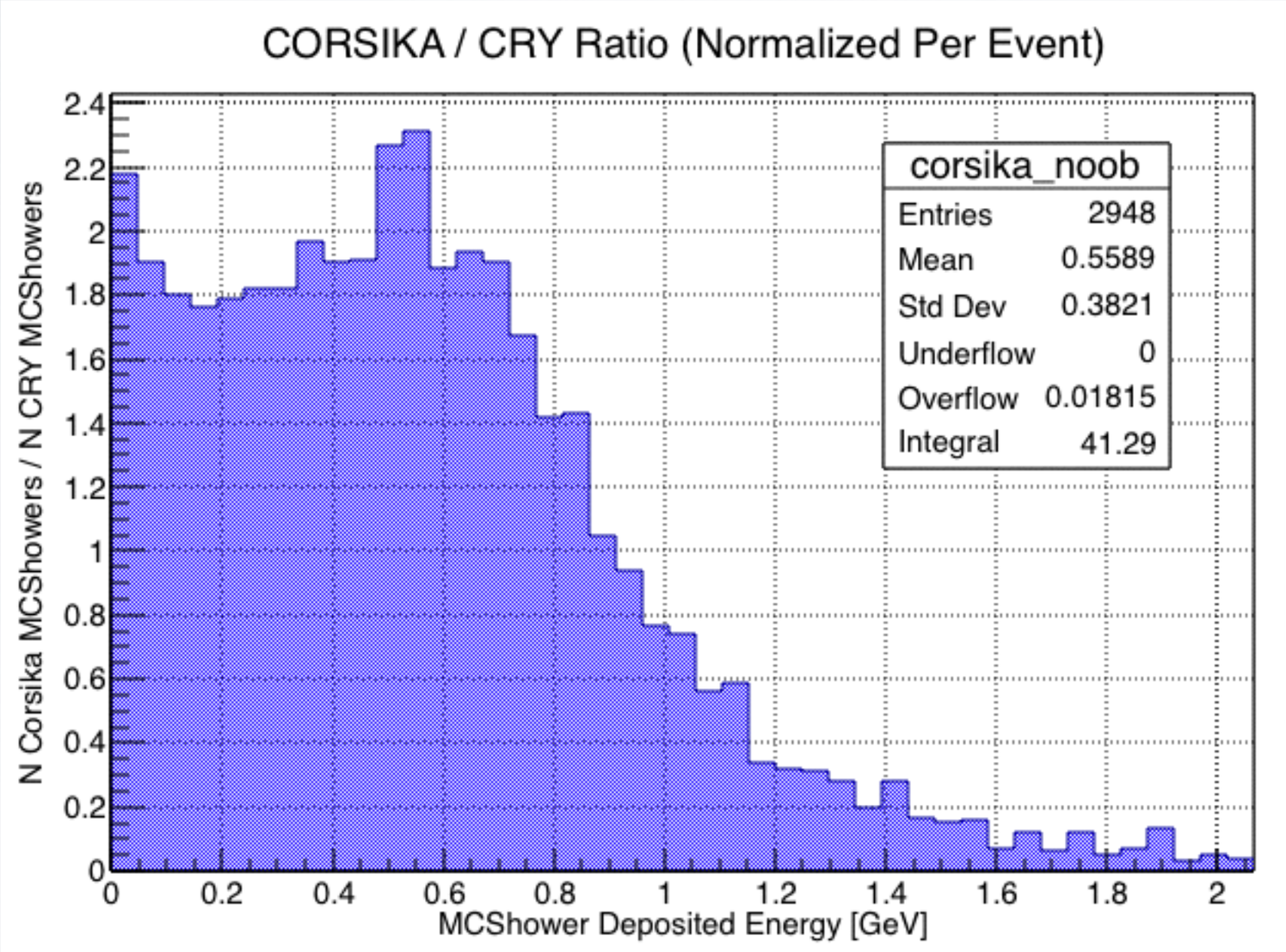
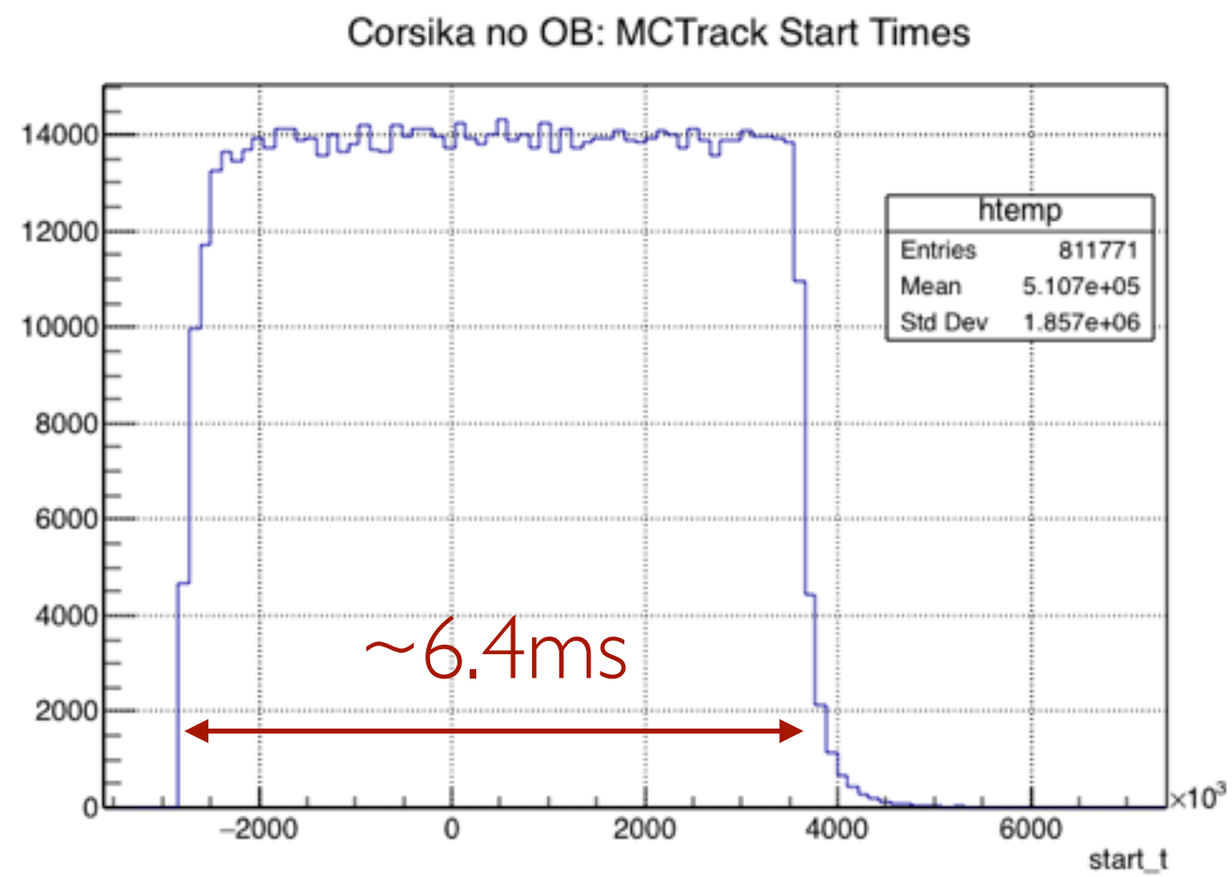


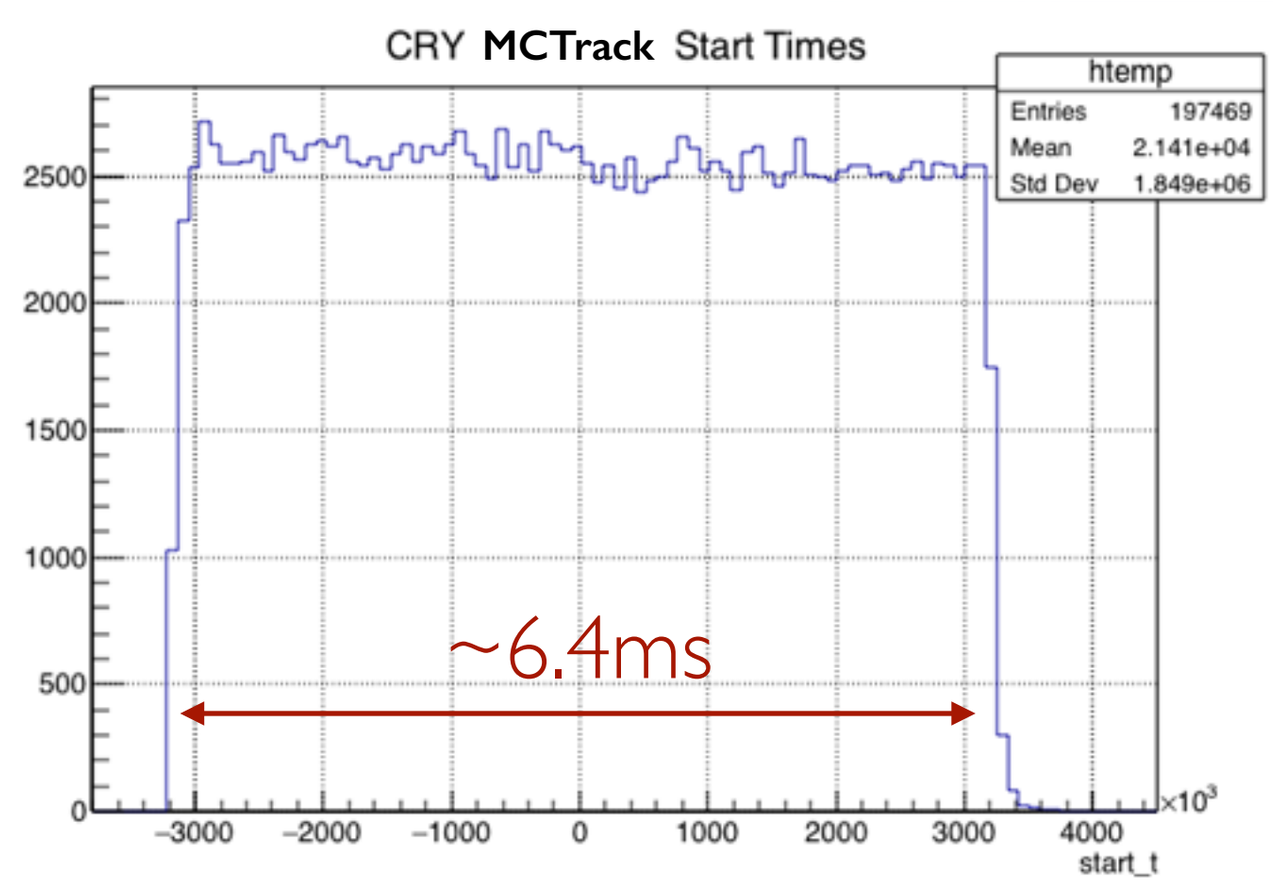
DIVIDING THESE TWO SPECTRA



For MCShower deposited energy from 0 to 0.7 GeV, Corsika has roughly twice as many MCShowers per event. Above 0.7 GeV, the ratio of Corsika/CRY drops to zero.

WHAT ABOUT MCTRACKS (THAT DEPOSIT ENERGY IN THE DETECTOR)





Same exposure time between CRY and CORSIKA, for the most part,
CRY has an average of 15 MCTracks/event, Corsika 41