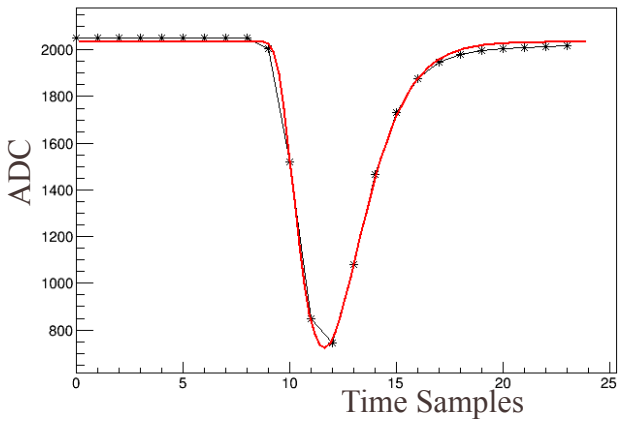
HCAL testbeam analysis update

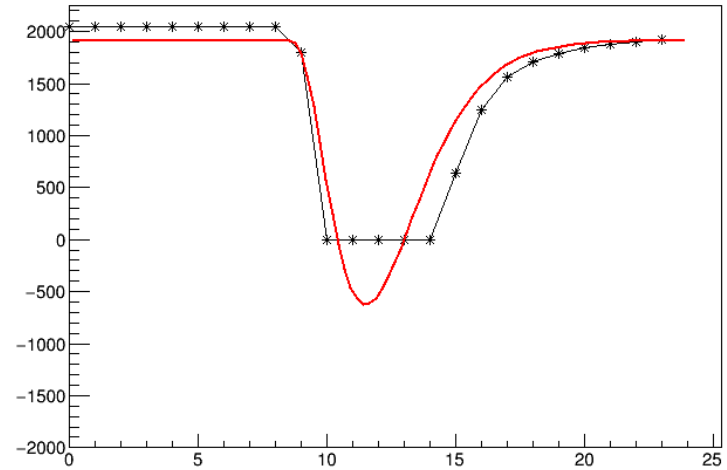
Abhisek Sen

HCAL Saturation issue

Good fit example



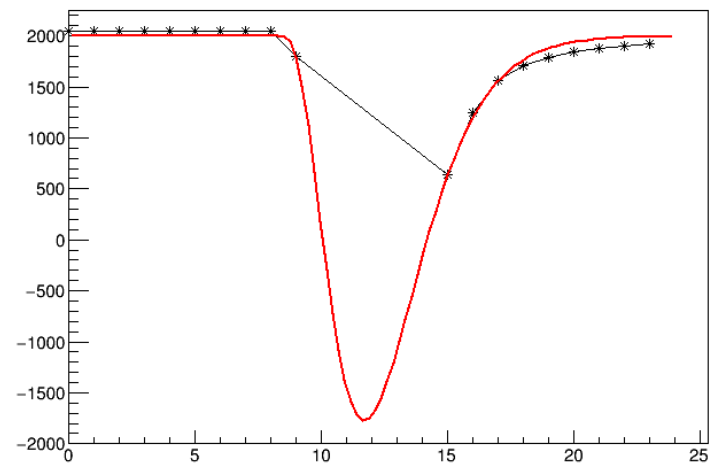
Saturation fit



12 bit ADC
Dynamic range 2048-0
(negative polarity)

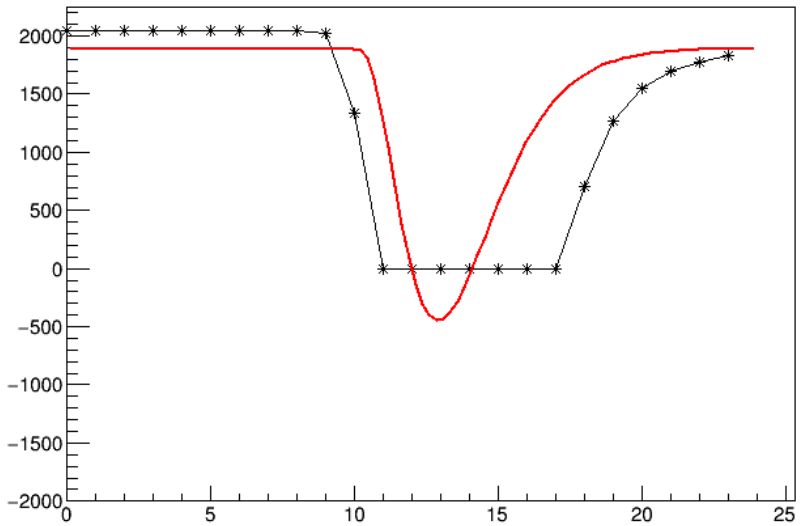
Exp+pol fit. 5 free parameters.

After removing saturation points

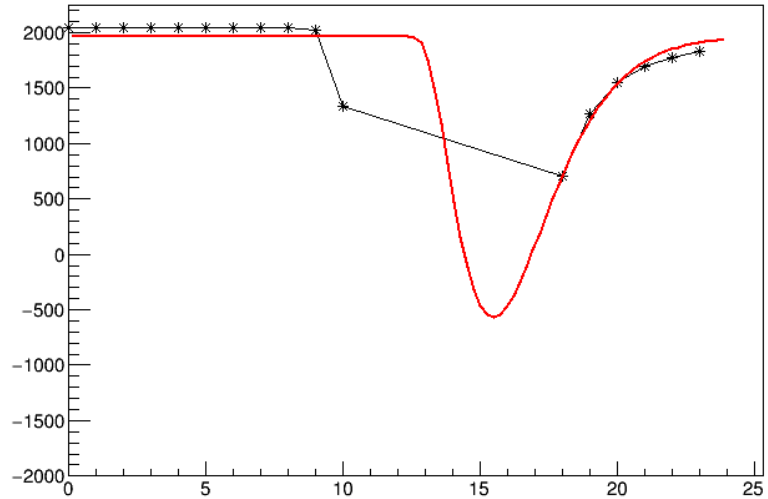


7 point saturation

Saturation fit

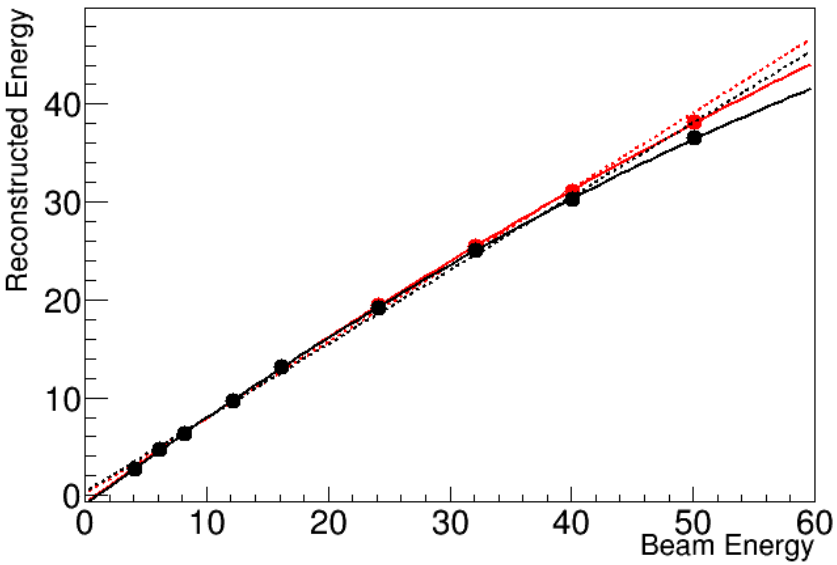


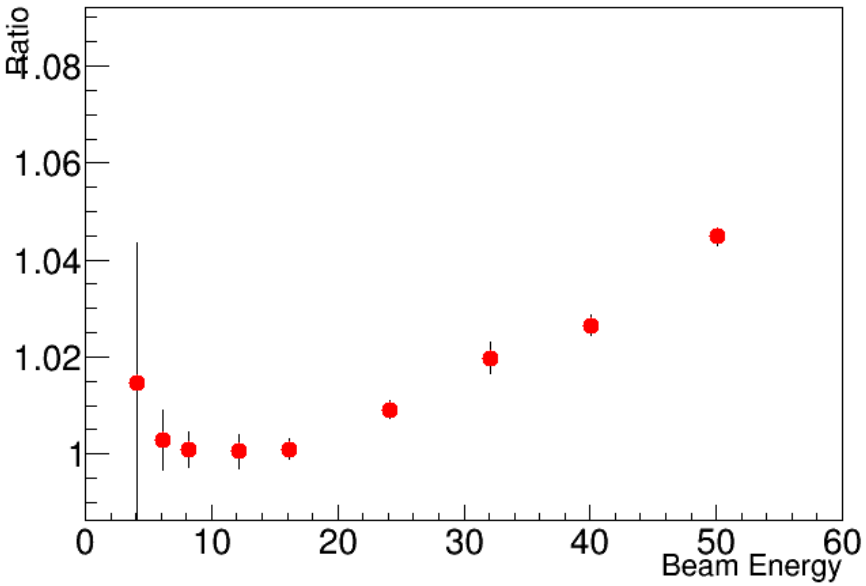
After removing saturation points



Not recoverable

Linearity improves



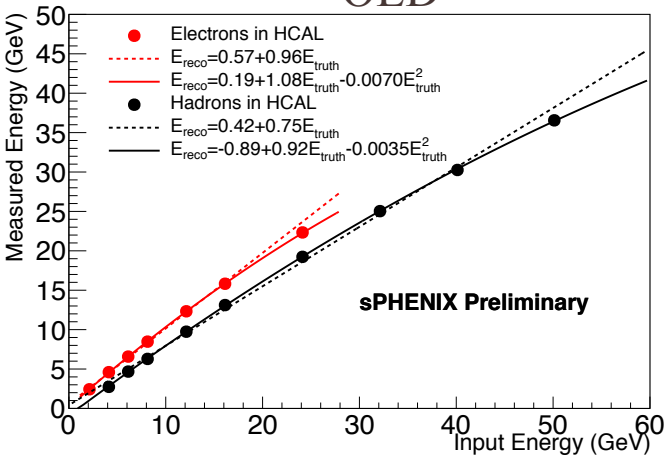


Improves linearity at highest energies.

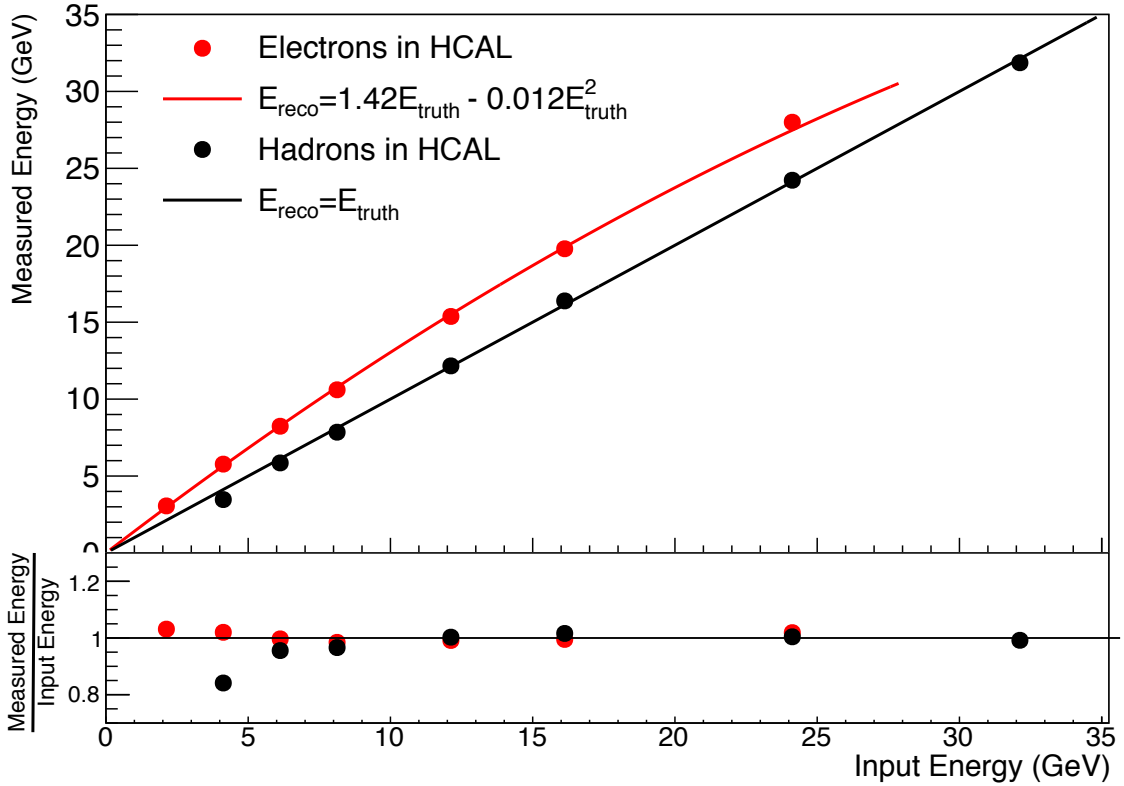
In new production Jin also modified peak calculations using peak parameters.

New linearity plot

OLD



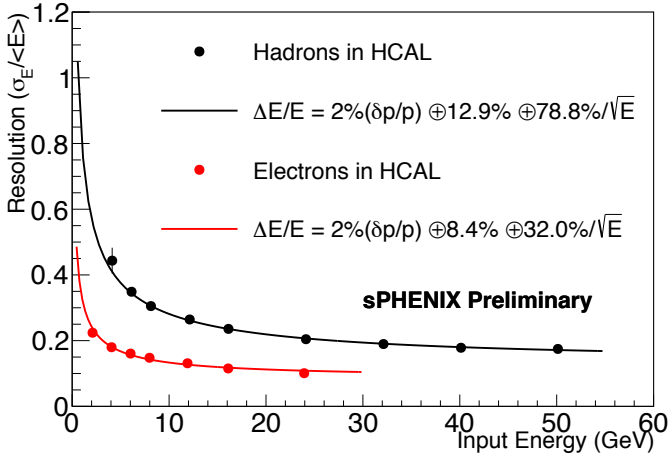
NEW



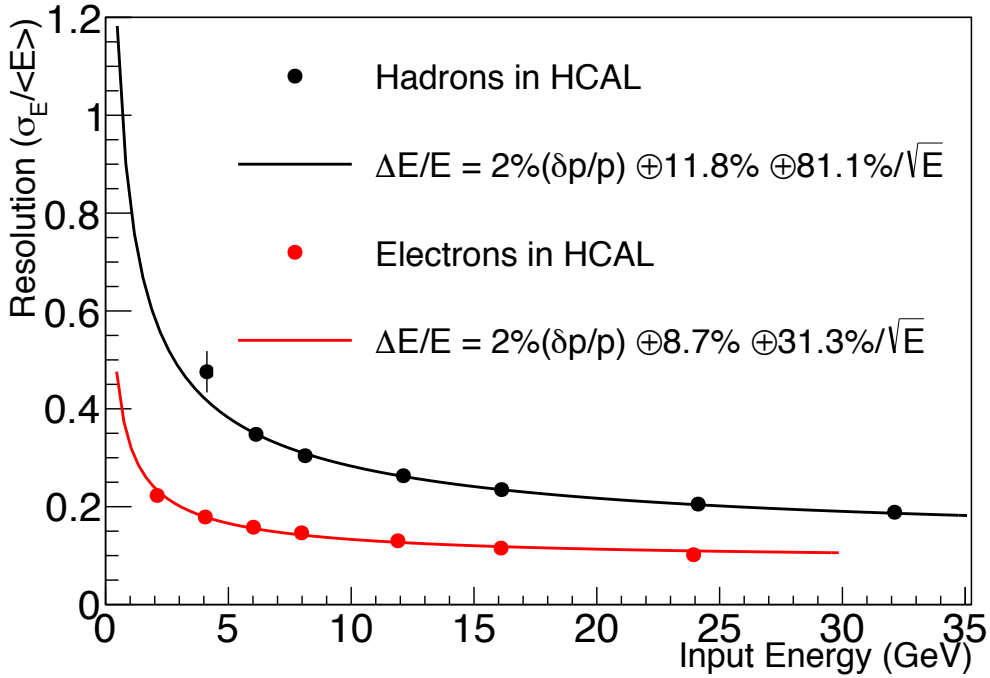
Above 40 GeV the beam is positive. So removed higher energy points.

New Resolution plot

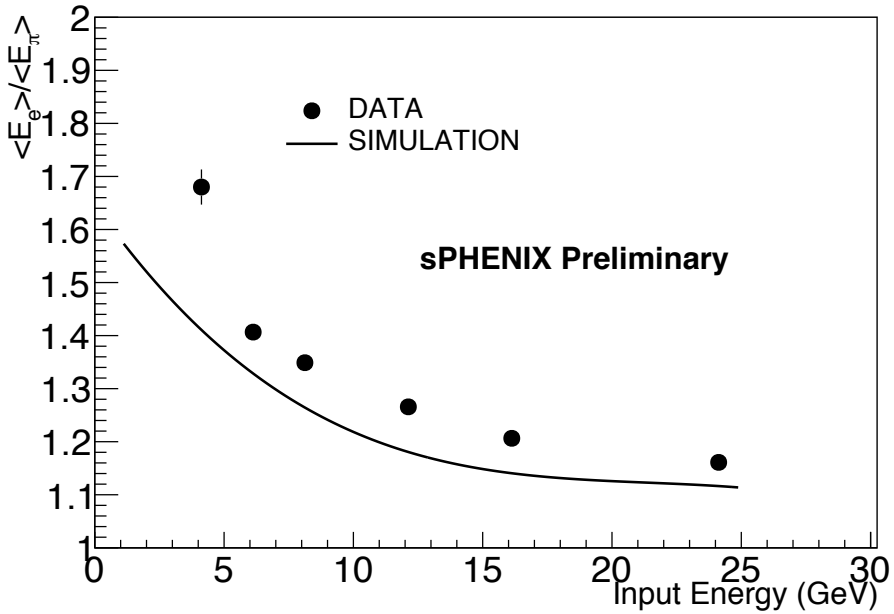
OLD

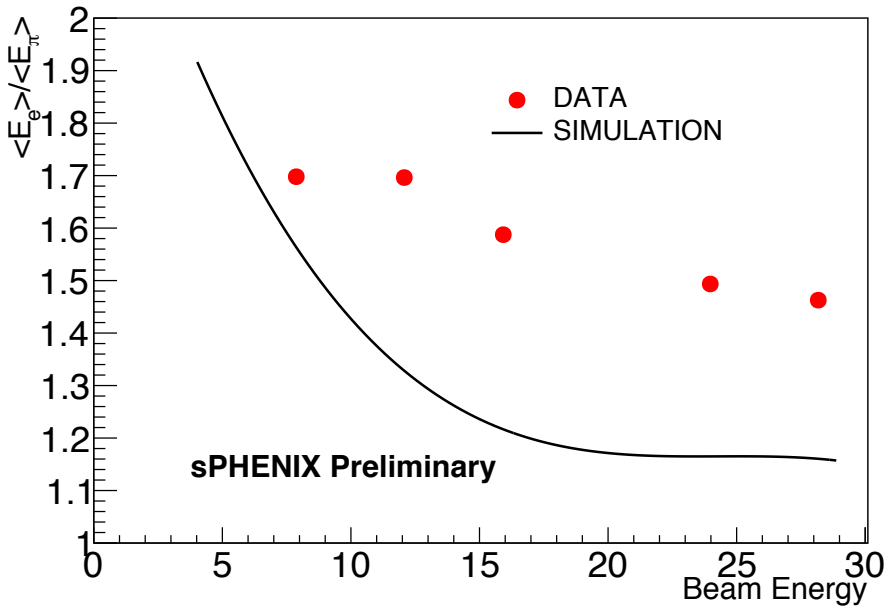


NEW



e/pi





To-do: Simulation needs tuning.