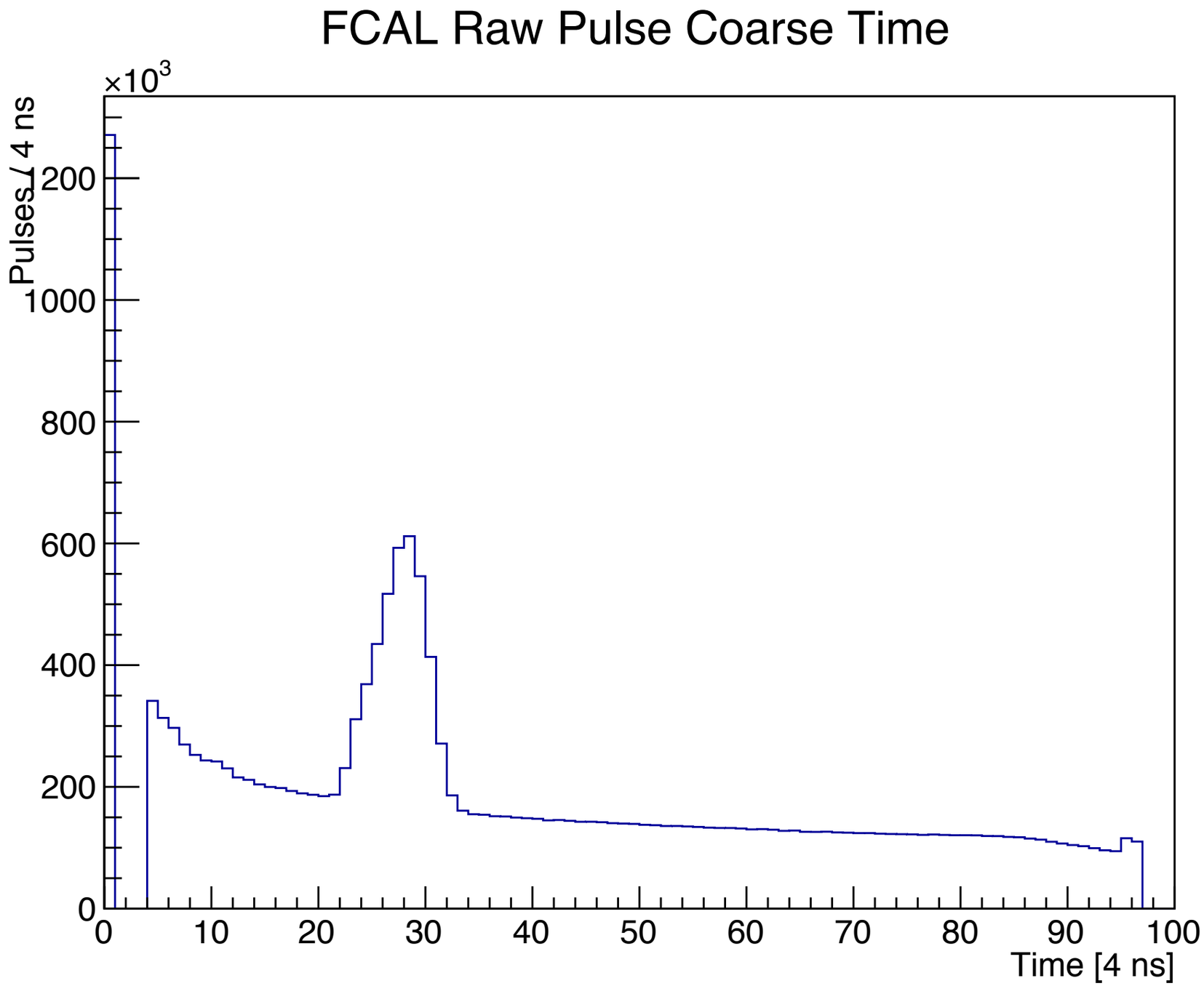
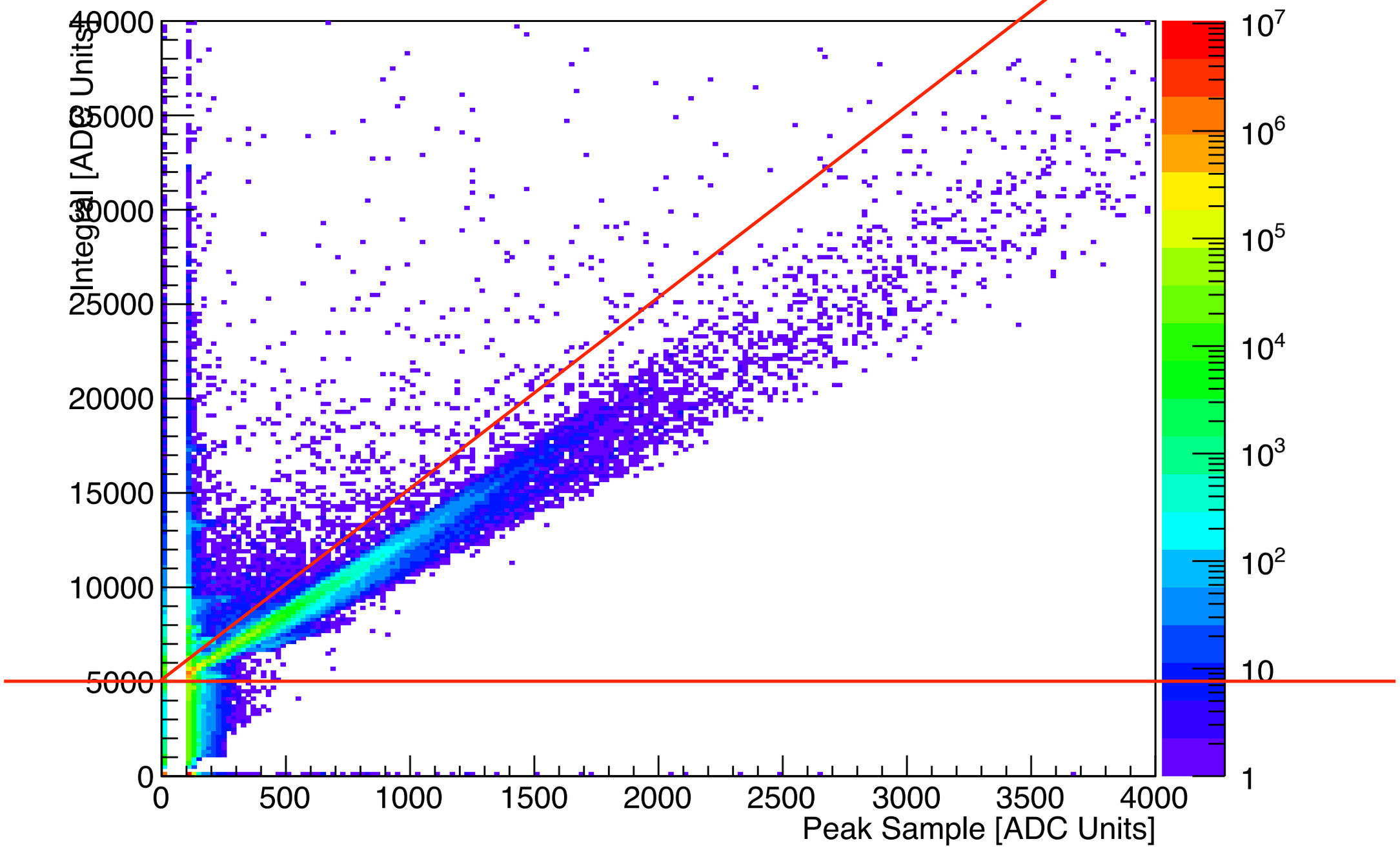
Data Information

- Runs 1280, 1282, 1286
- Trigger threshold varies
- FCAL HV setting: 300 mV
    - FCAL ADC scale: 2.7E-4 GeV/ADC count
      (2x DB value)
- FCAL FADC Mode: 8
- Inner rows masked in trigger to enhance hadronic events



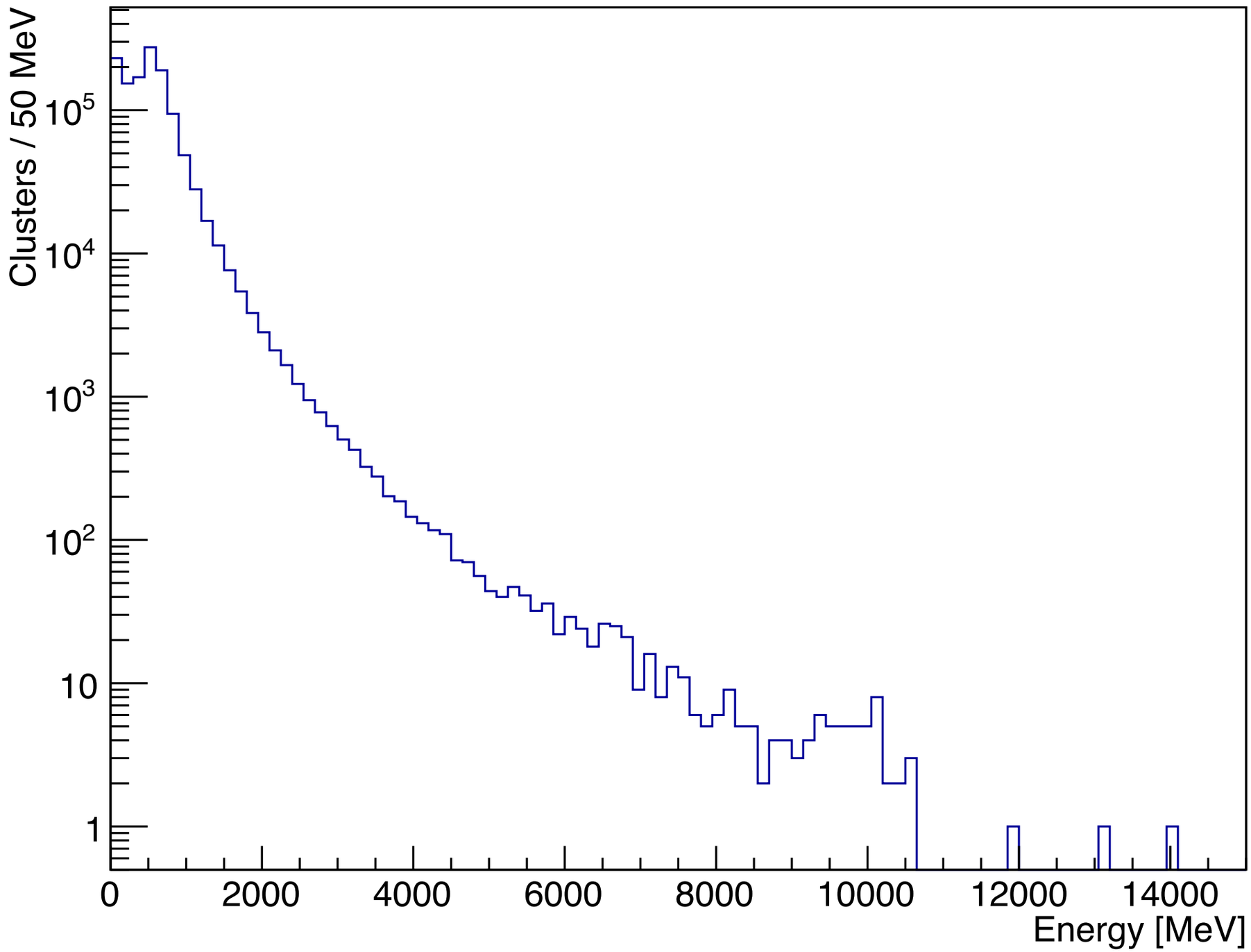
Use fact that trigger is defined by FCAL:
reject hits with time < 20 and > 35

FCAL Pulse Integral vs. Peak Sample

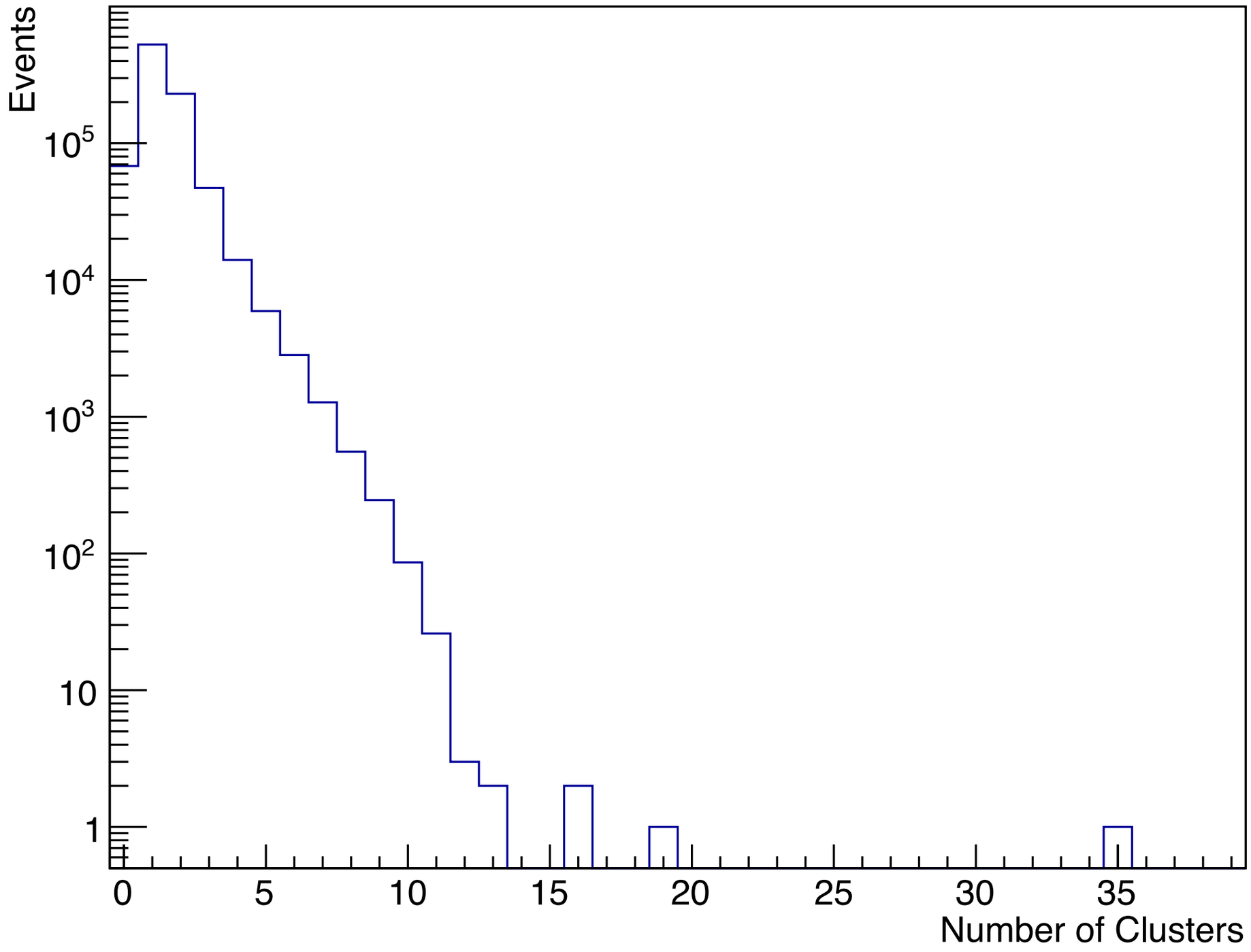


Require pulse integral to peak be in triangle.

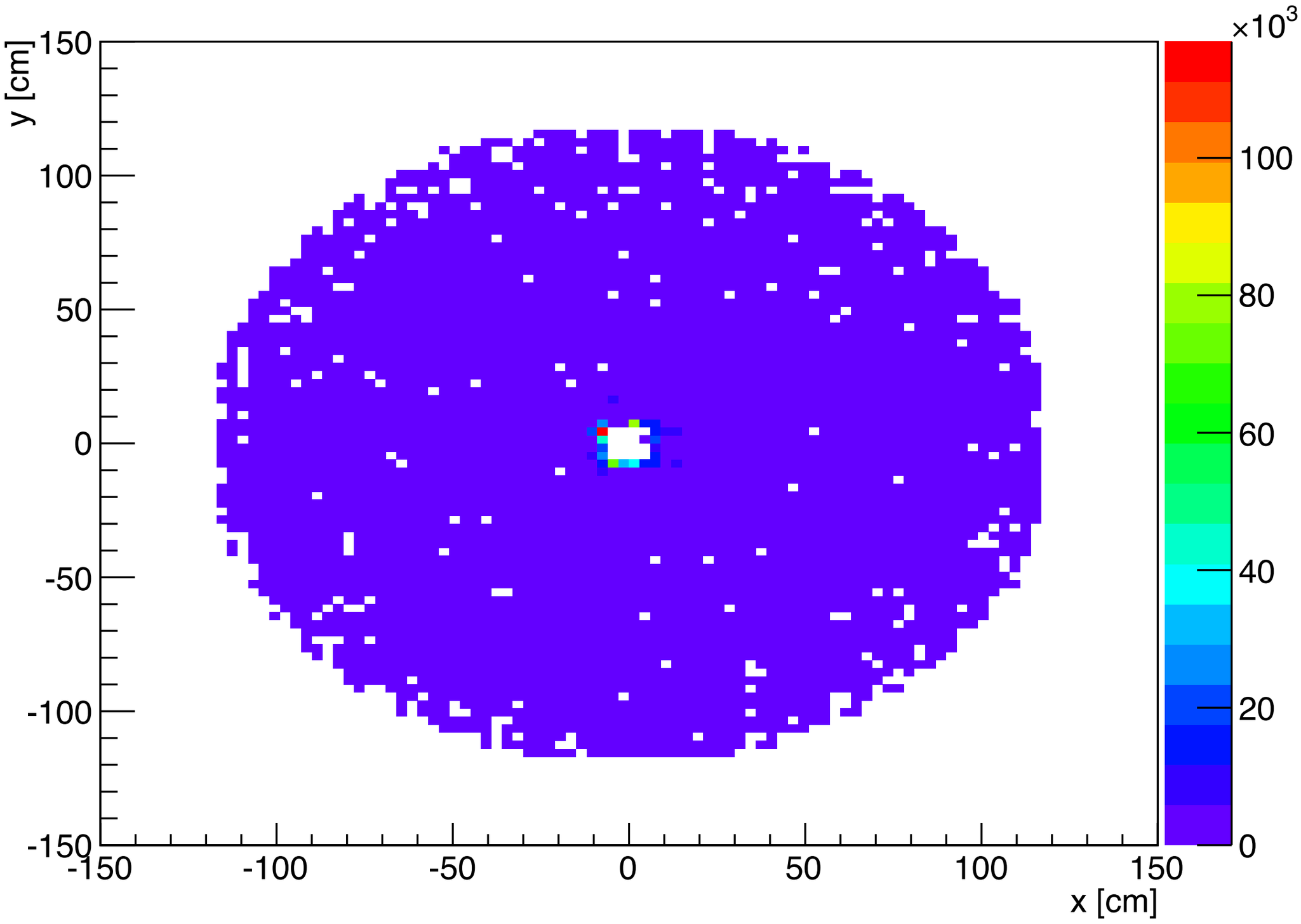
FCAL Cluster Energy



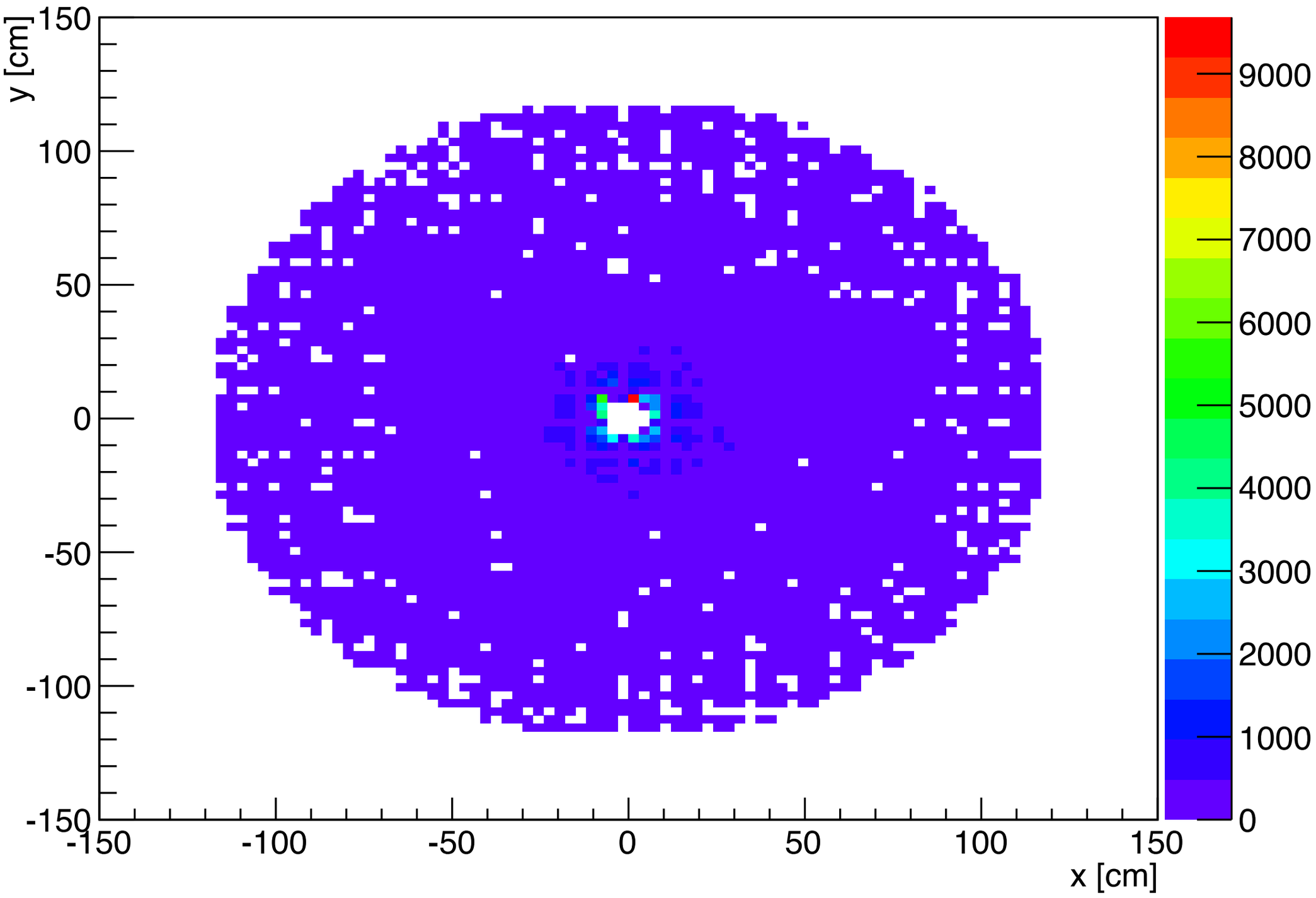
FCAL Number of Clusters

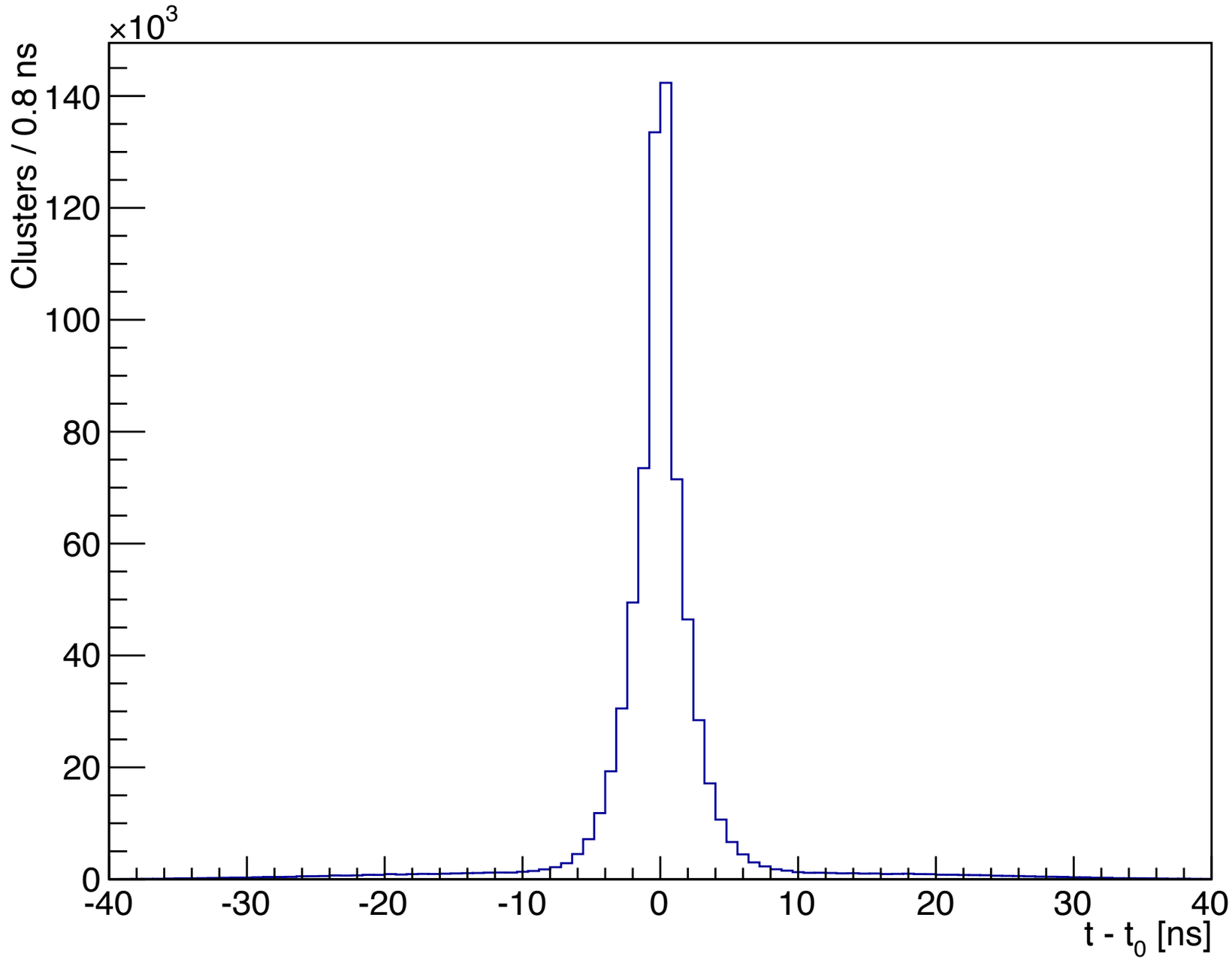


FCAL Cluster Positions (E > 200 MeV)



FCAL Cluster Positions (E < 200 MeV)





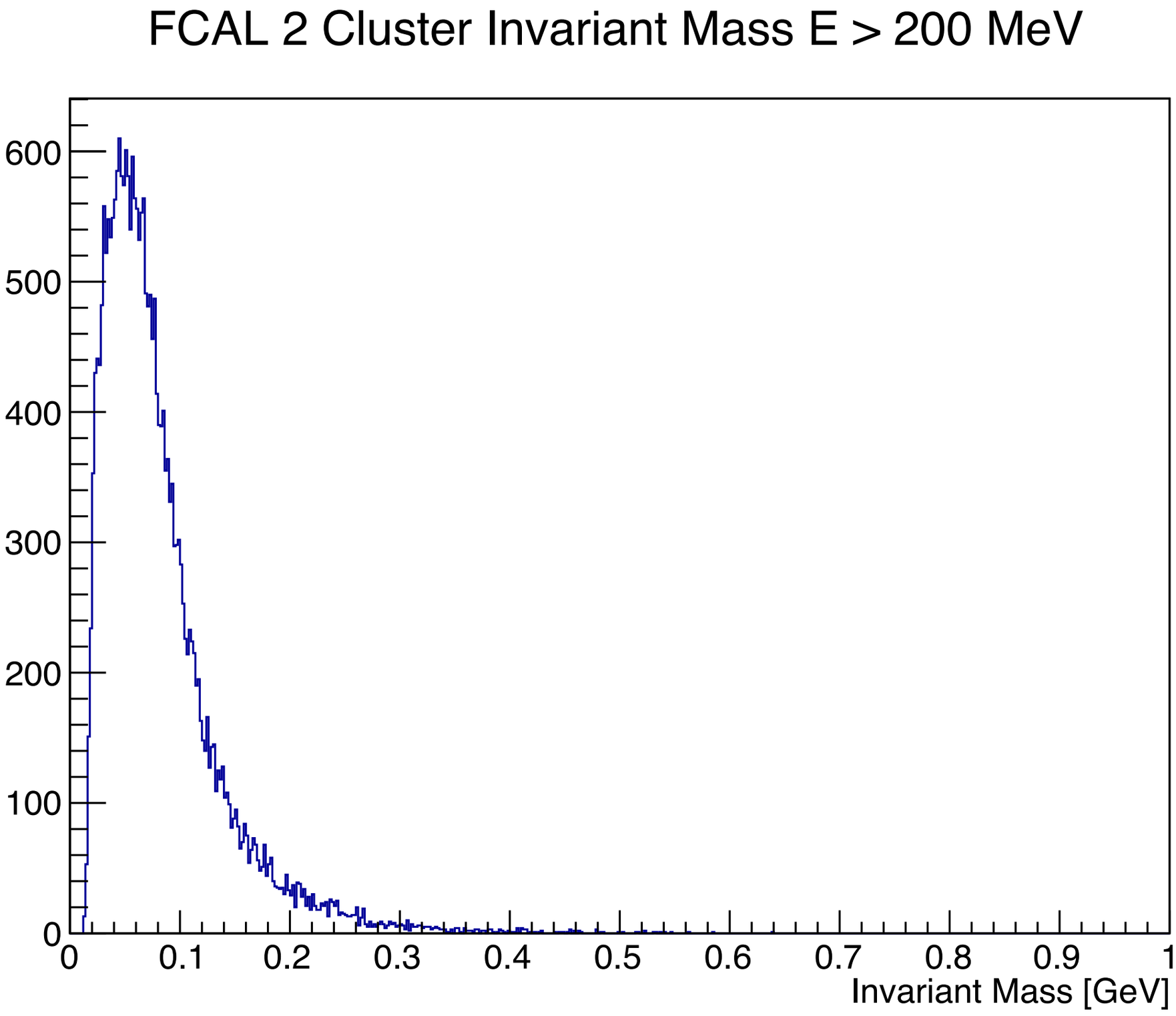
t0: is energy weighted average cluster time for event

plot is filled only when there is more than one cluster

multi-cluster events have multiple “in time” clusters

Looking for π^0

- At least 3 clusters
- Cluster distance to beam line greater than 15 cm
- Both clusters have energy greater than 200 MeV
- Cluster time difference less than 10 ns
- Cluster separation greater than 30 cm
- Assume photons come from z location of target


FCAL 2 Cluster Invariant Mass E > 200 MeV
600
500
400
300
200
100
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Invariant Mass [GeV]