HANUL MEETING

E45 Hodoscope

Korea Univ.
Wooseung Jung

CONDITIONS

B field ~ 1.0 T

EventGen - PHSP model

$(\pi^- p \rightarrow)$ N* $\rightarrow \pi^0 \pi^- p$
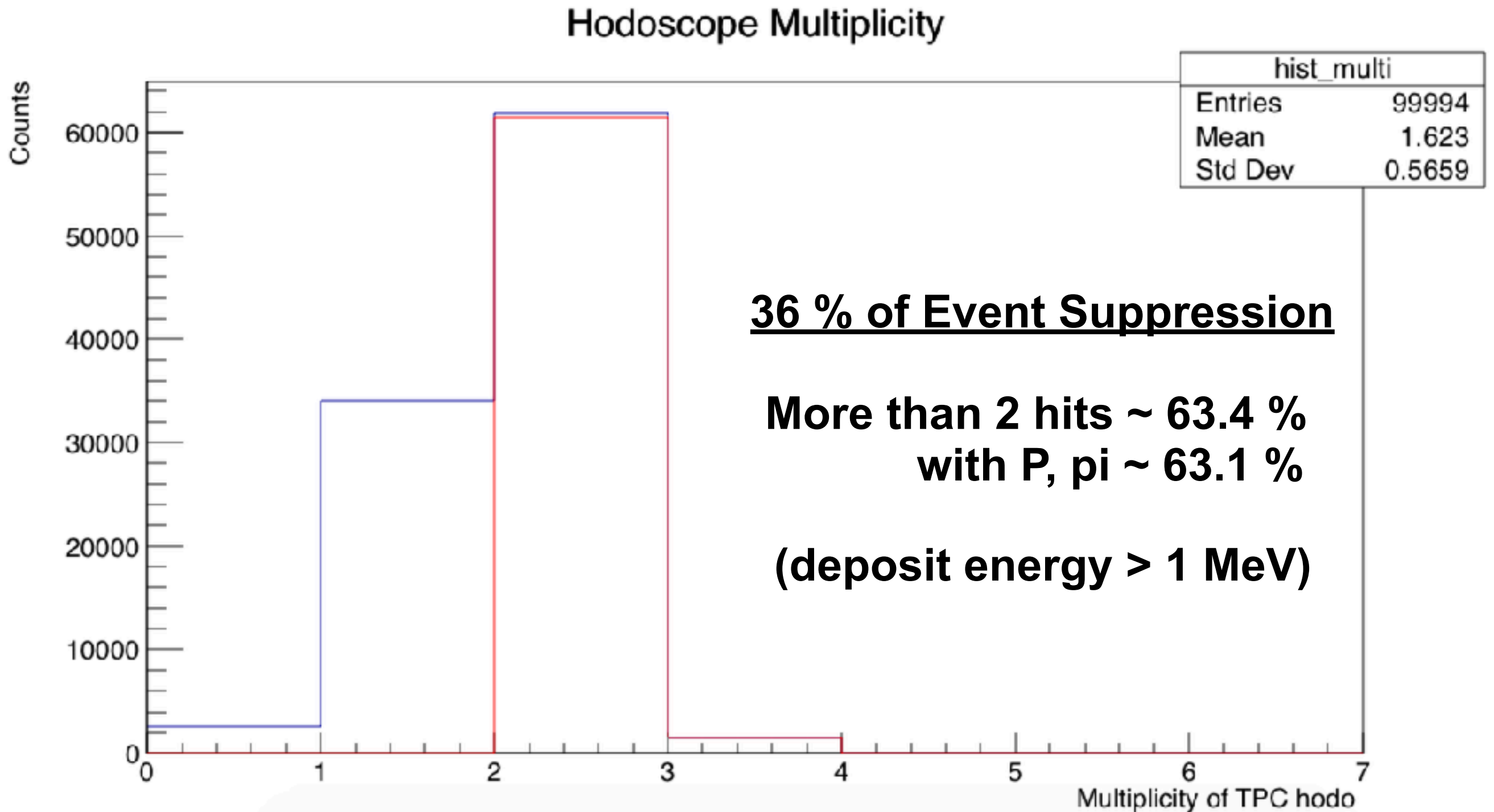
$(\pi^+ p \rightarrow)$ $\underline{\Delta^* \rightarrow \pi^0 \pi^+ p}$

Generated data (Event number : 100,000)

Assumed beam momentum :
0.635 (1.46)   0.835 (1.58)   1.035 (1.69)   1.235 (1.80)
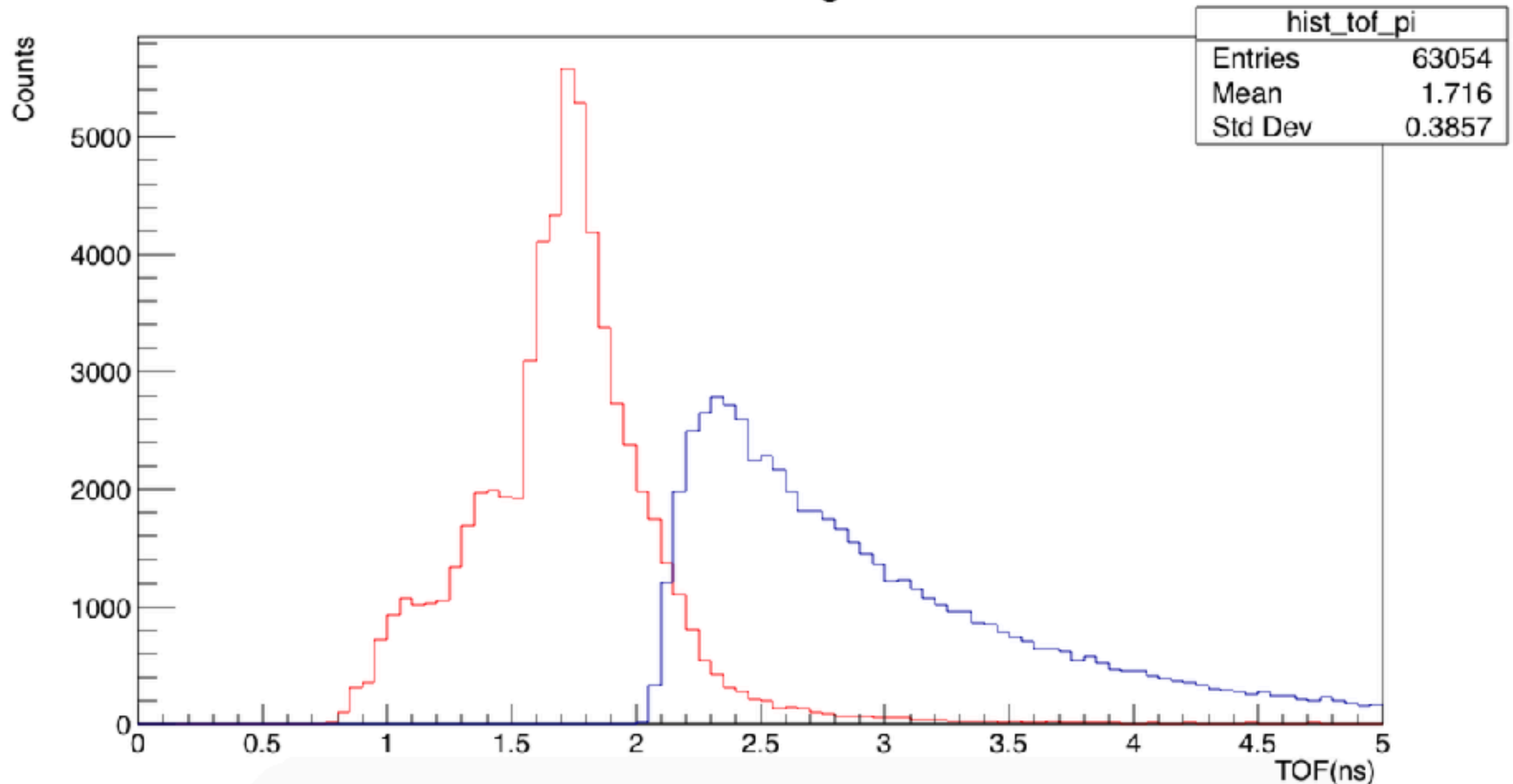**1.435 (1.90)   1.635 (1.99)   1.835 (2.09)   2.000 (2.16)   GeV/c**

ONLINE TRIGGER - MULTIPLICITY

36 % of Event Suppression

More than 2 hits ~ 63.4 %
with P, pi ~ 63.1 %
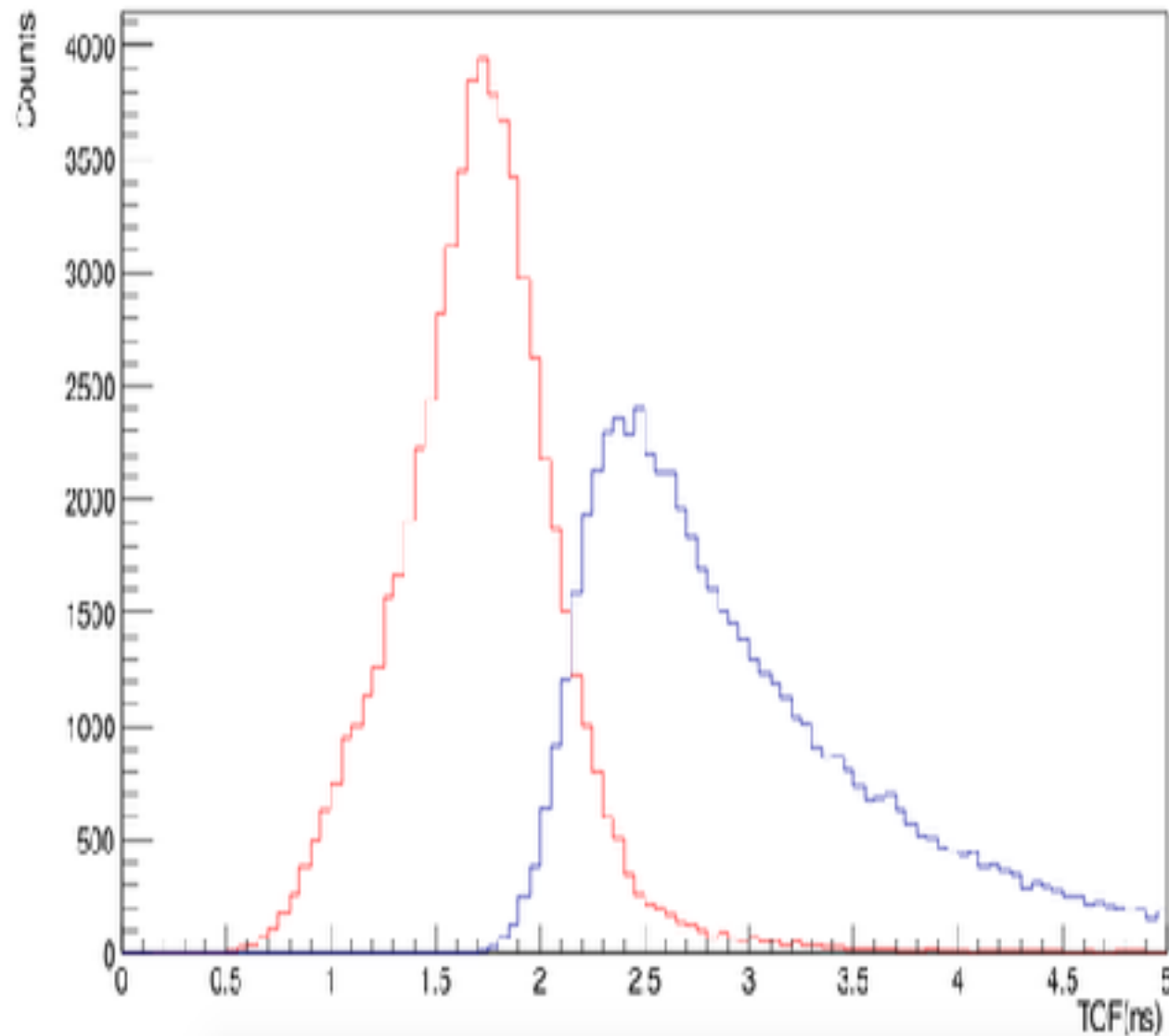
(deposit energy > 1 MeV)
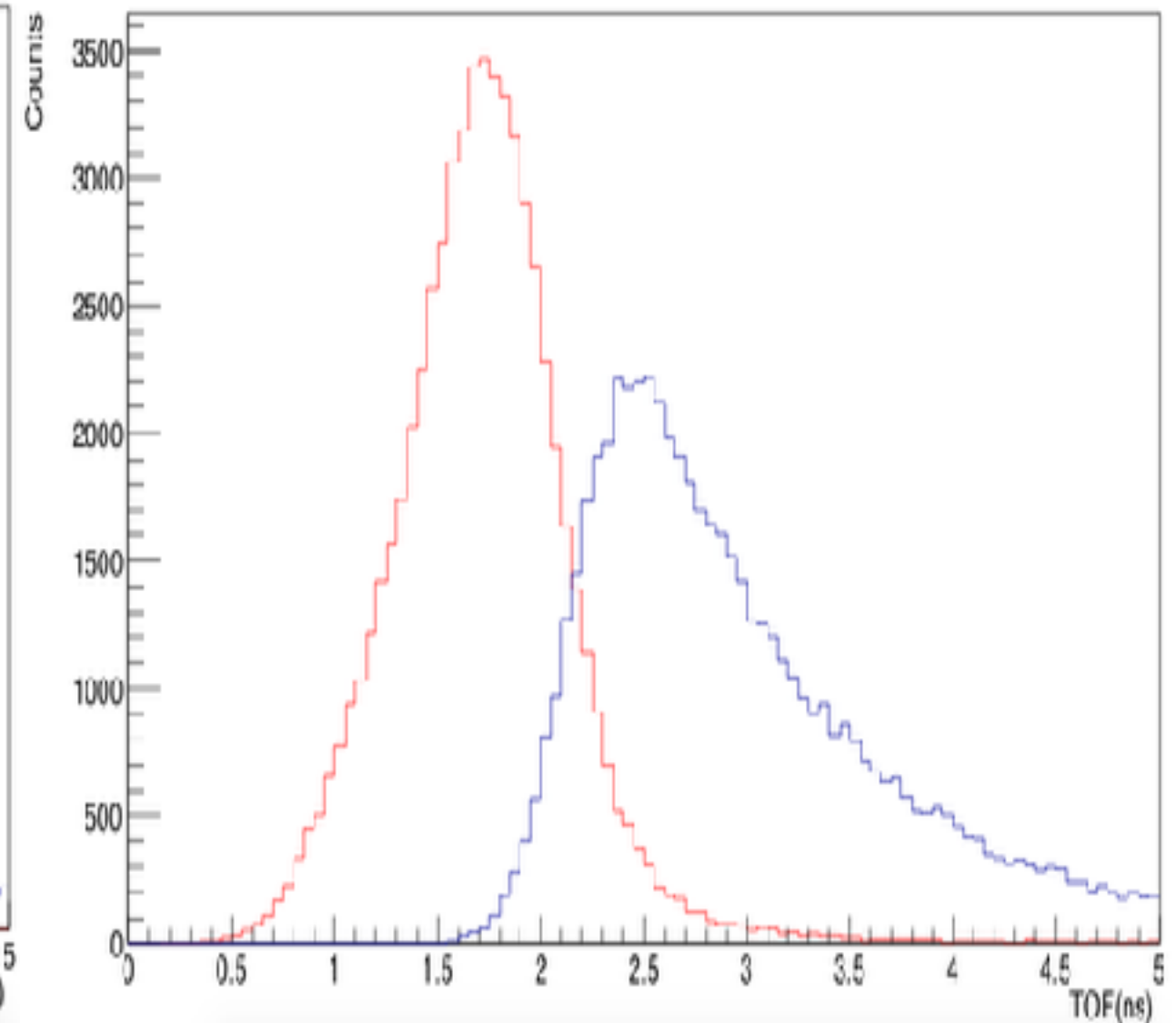
Tof distributions of pi, p

ONLINE TRIGGER - TOF CUT

Tof distributions of pi, p smeared with σ_T
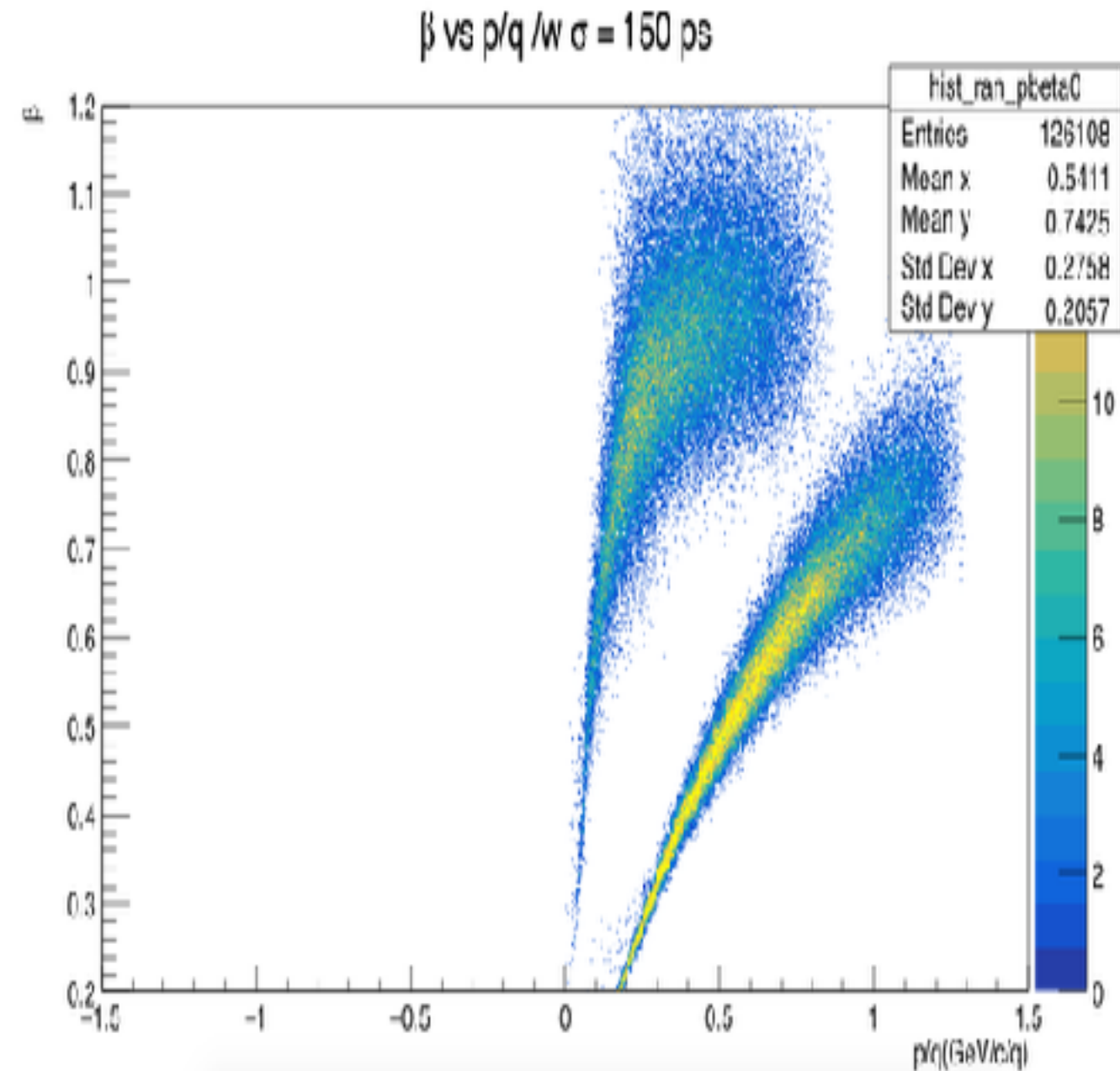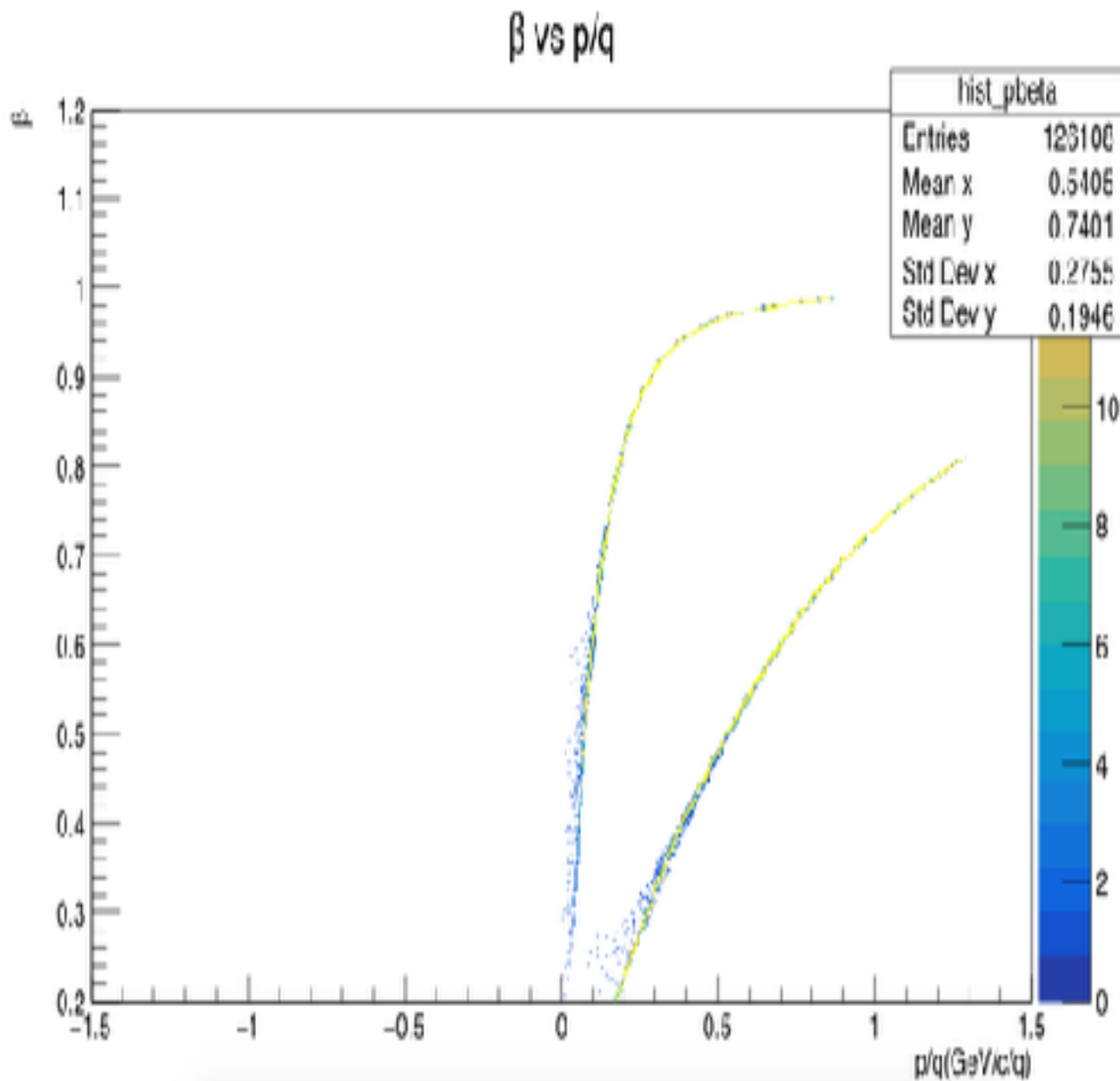

Time of flight /w σ = 150 ps

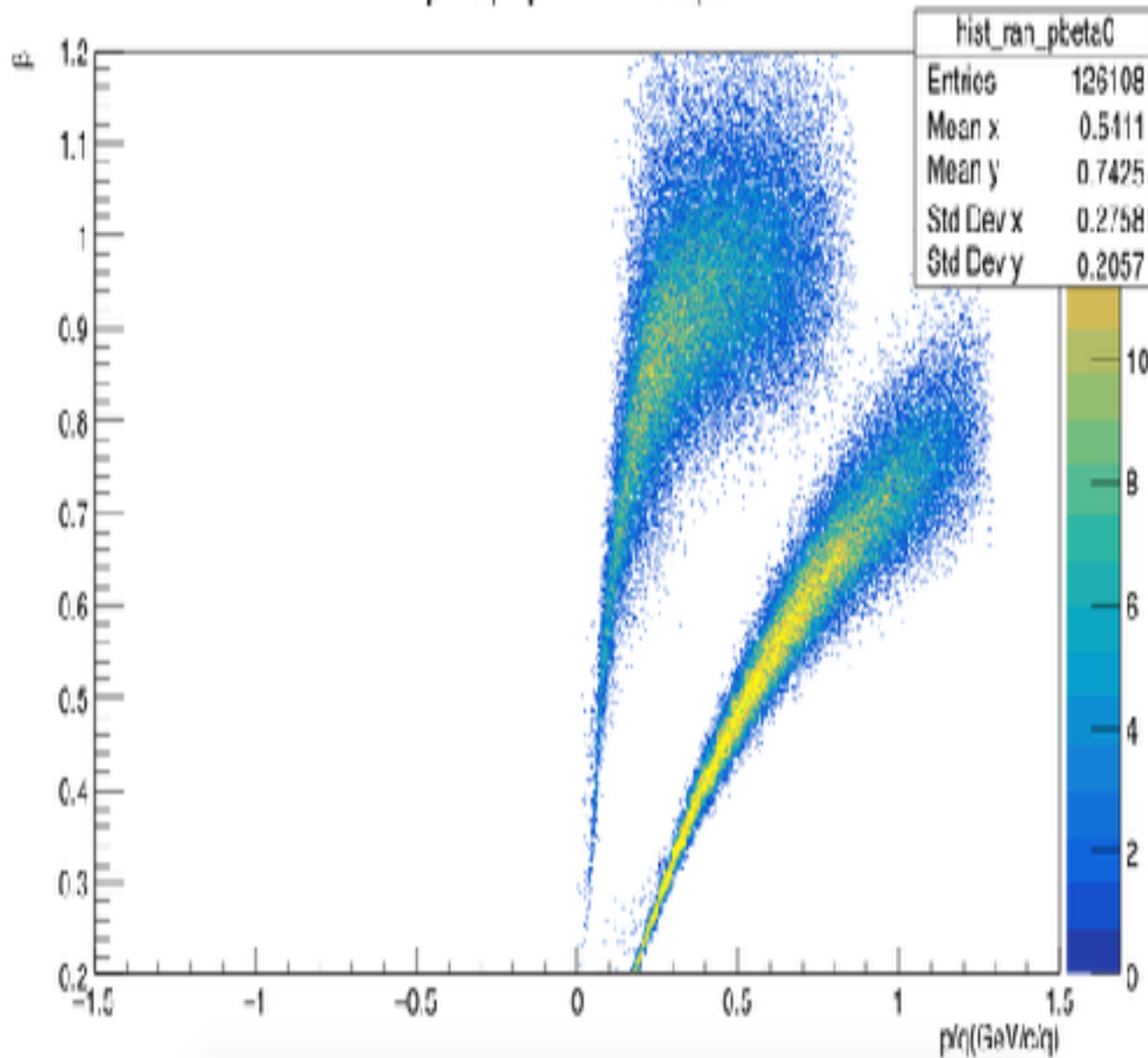Time of flight /w σ = 200 ps

β vs p/q distribution smeared with σ$_T$
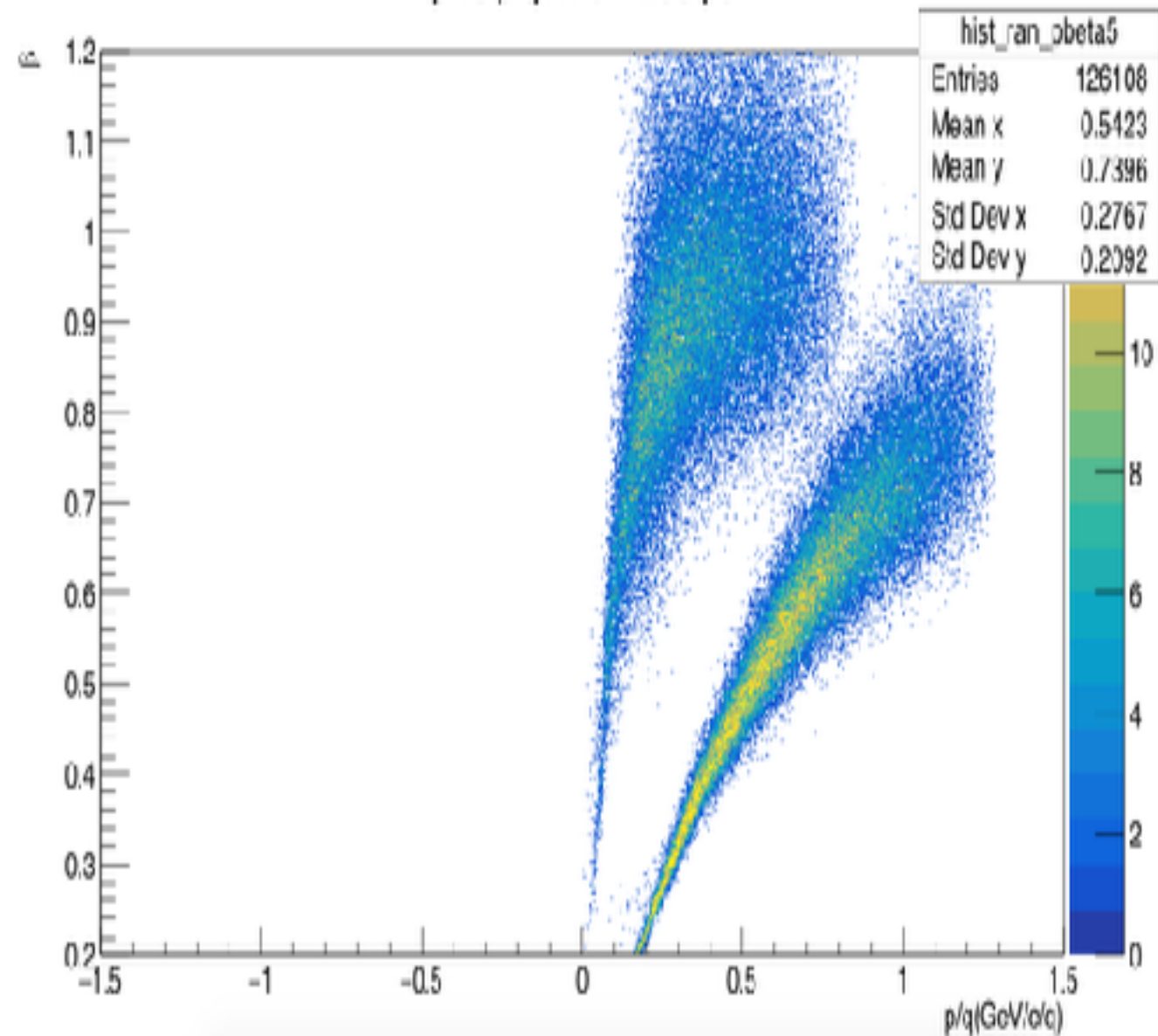
Momentum and position resolution are not yet included

β vs p/q distribution smeared with σT

150 ps < σT < 200 ps

PID

Hodoscope PID

hist_pid	
Entries	203803
Mean	1075
Std Dev	1031
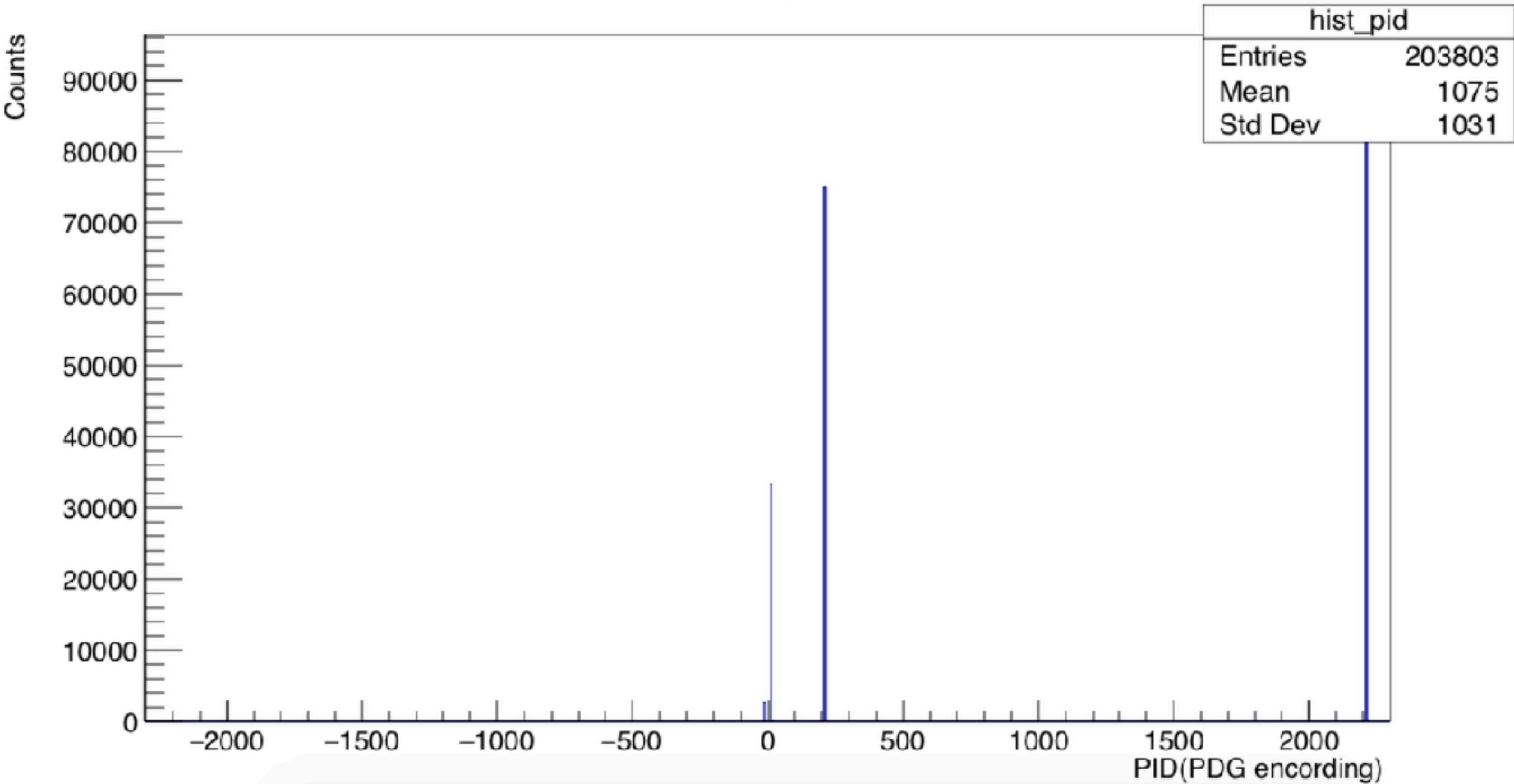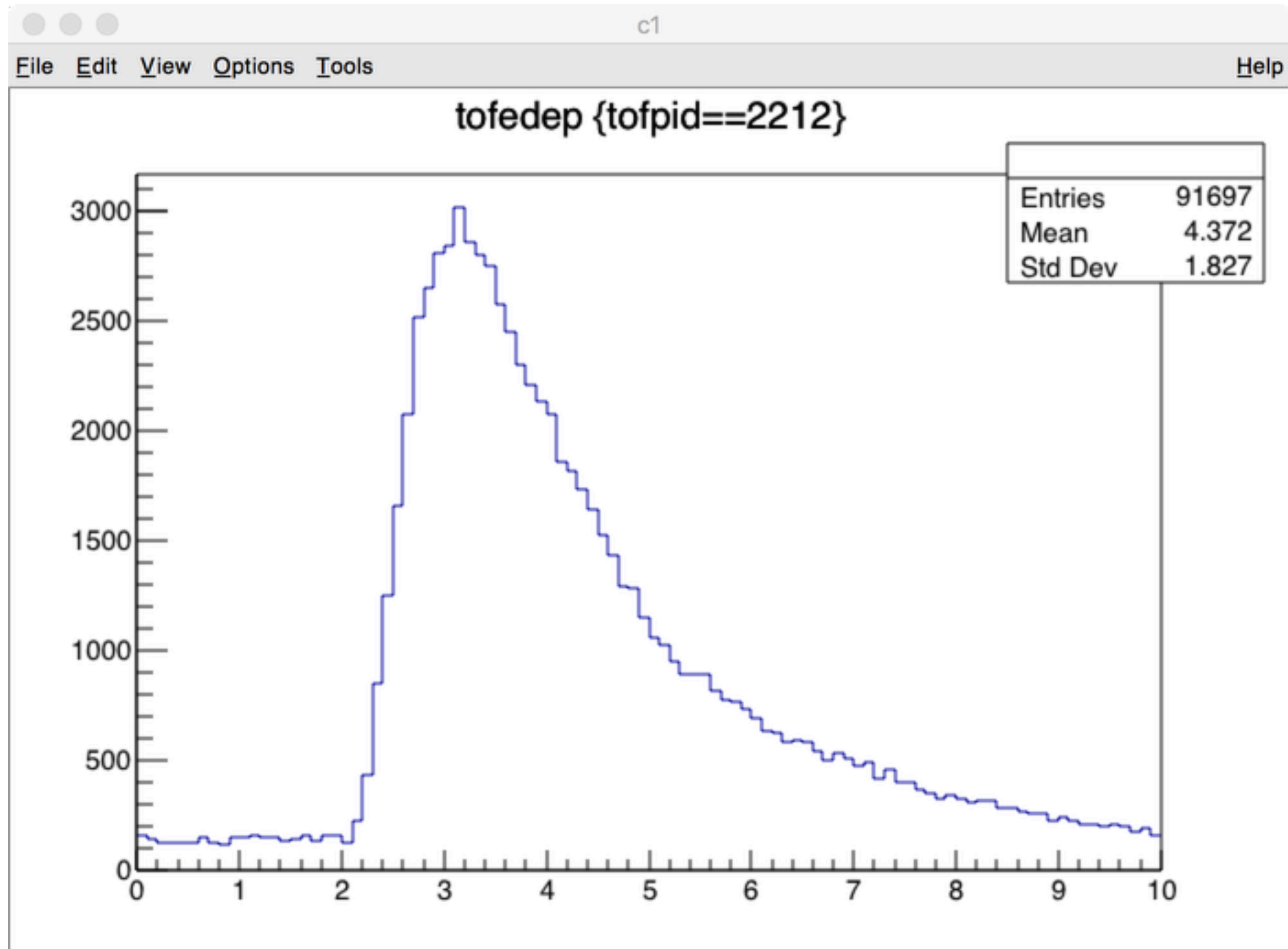
P EDEP

E- EDEP

GAMMA- EDEP

EDEP - PI, MUON