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Collider Mode. Reduced Magnetic Field.

Progress on task 2:

Particle identification determination of spectra using information about the energy losses (dE/dx) in the TPC and the Time-of-flight from the TOF detector.

Parameters used for analysis



Production-Generator

request 28 - 125 kEvents UrQMD
BiBi@ 9.2 GeV reduced magnetic
field.

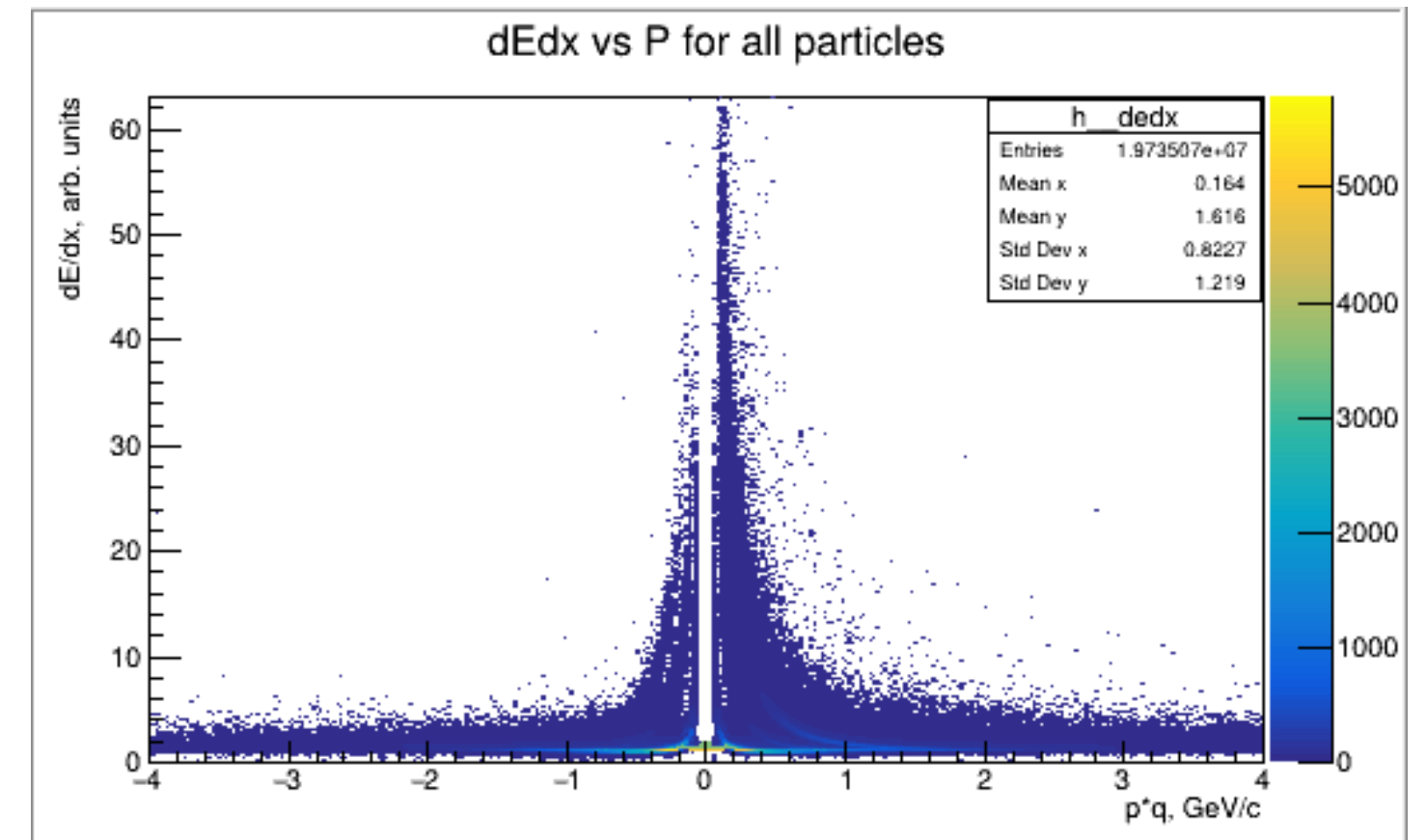
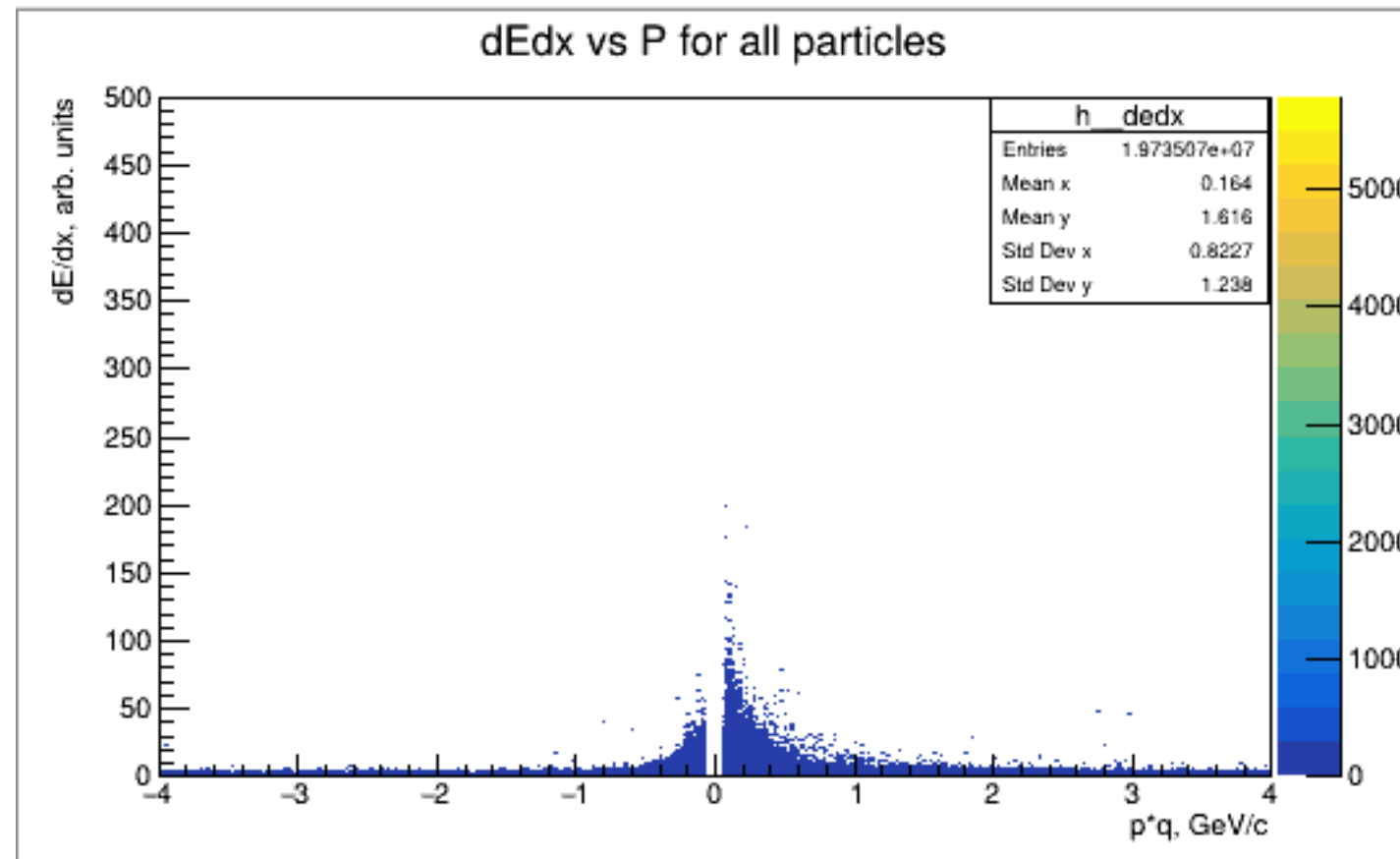


Processing time

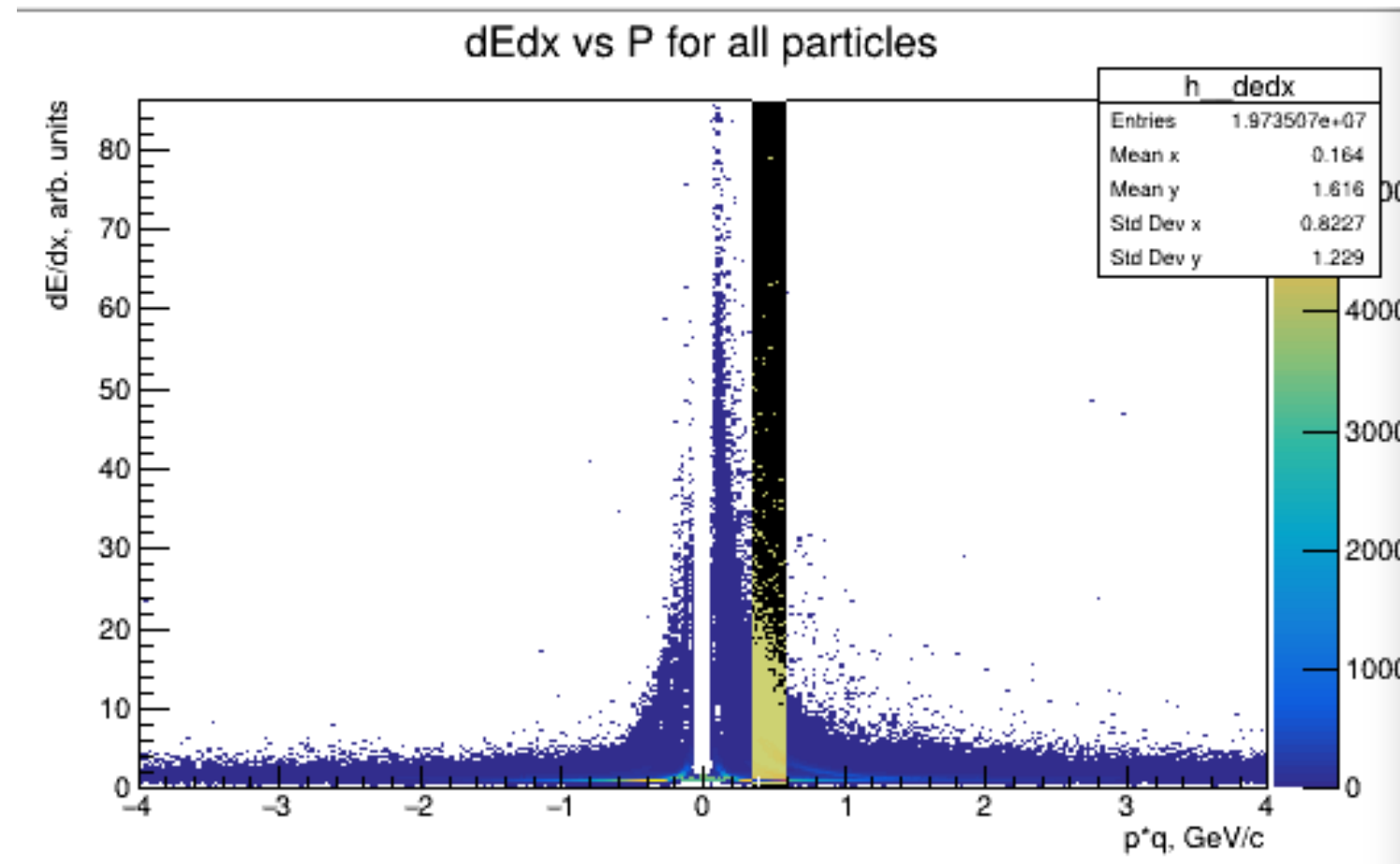
3:00 hrs approx.

First activity

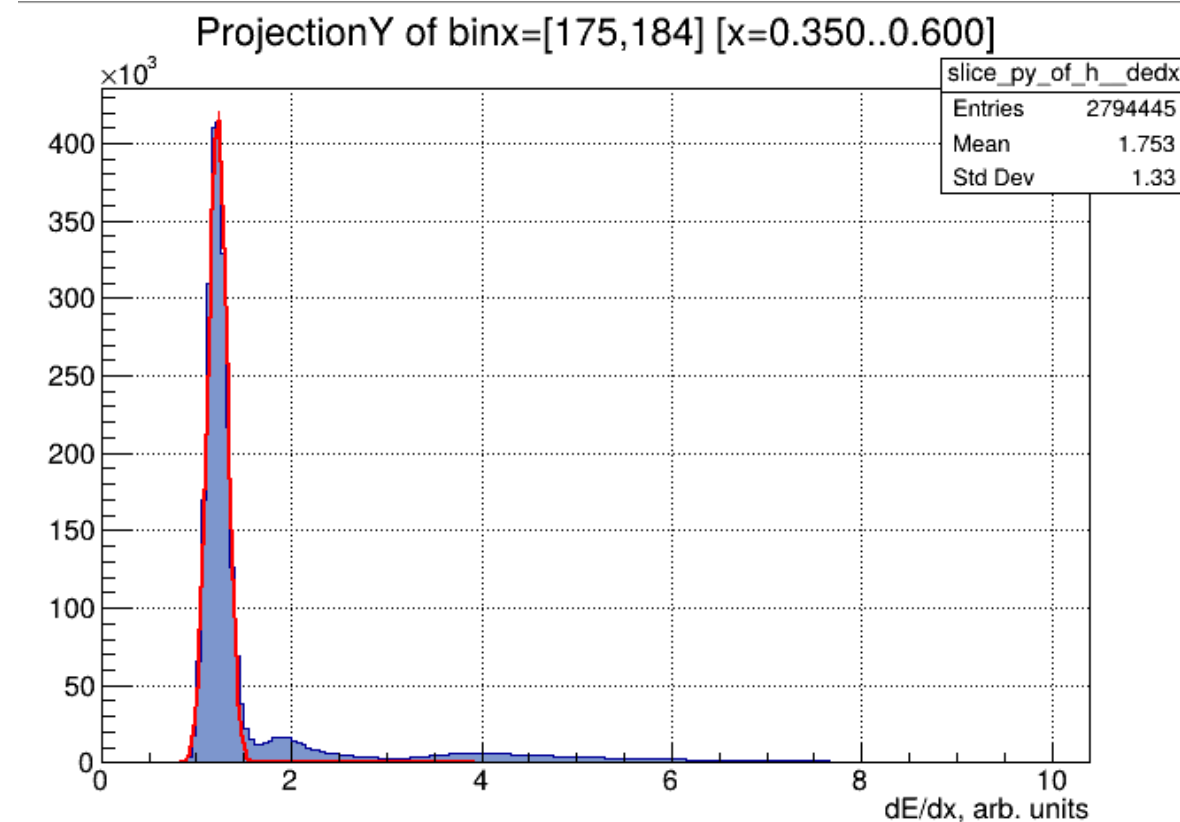
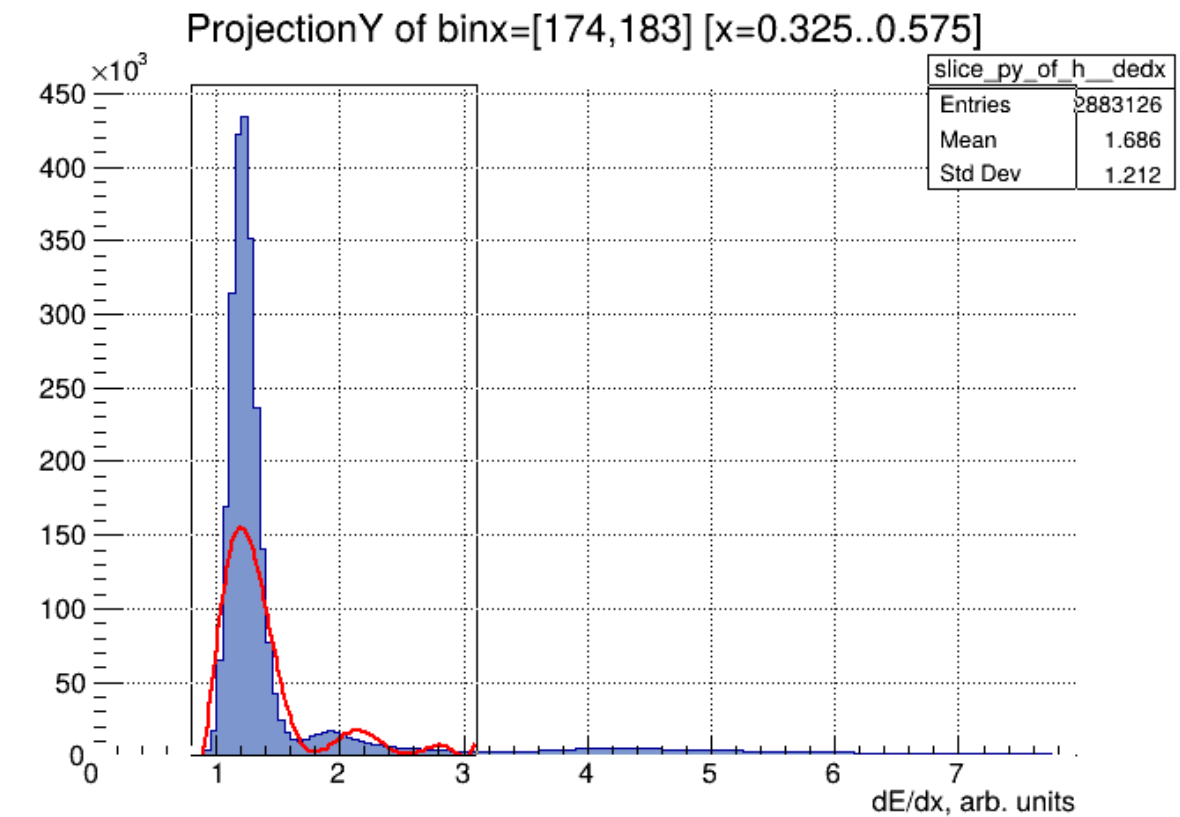
Get the momentum dependence of the average energy loss and the mass squared resolution for charged particles.



Identification of particles through a cut



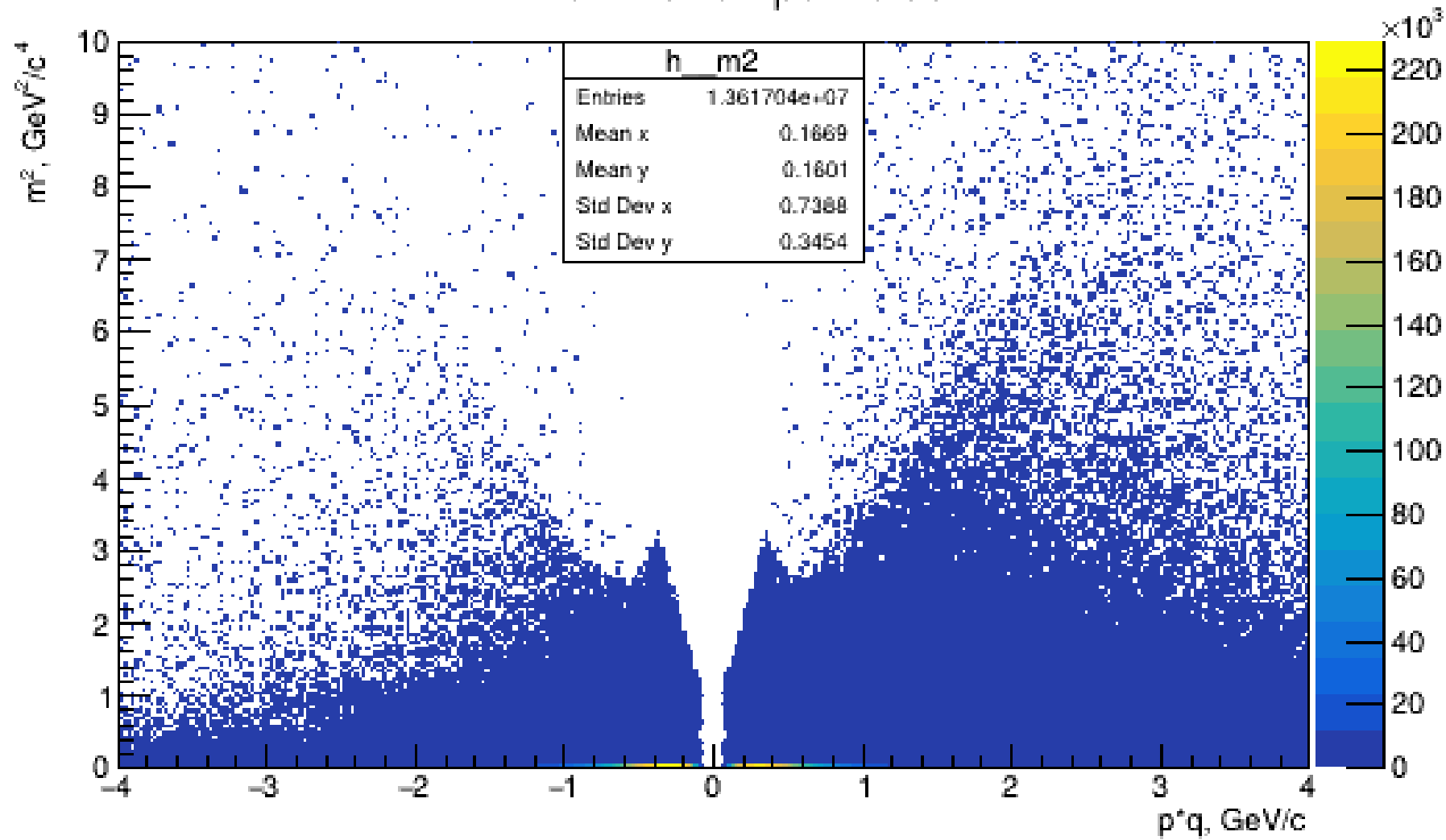
- We observe at least three maxima, which represents at least three particles of the ten (pim, pip, km, kp, p, ap, d, t, He3, He4).
- We need to graph the distribution of each particle.



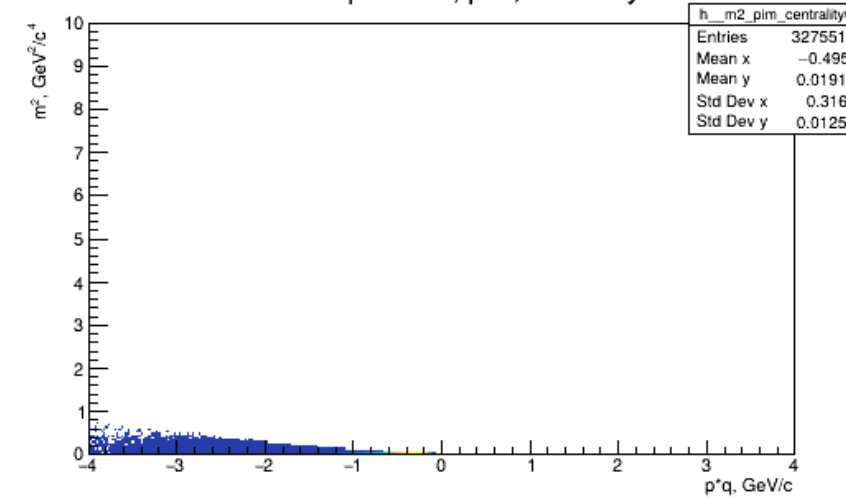
For the square mass

- With the updated wagon code, we obtained

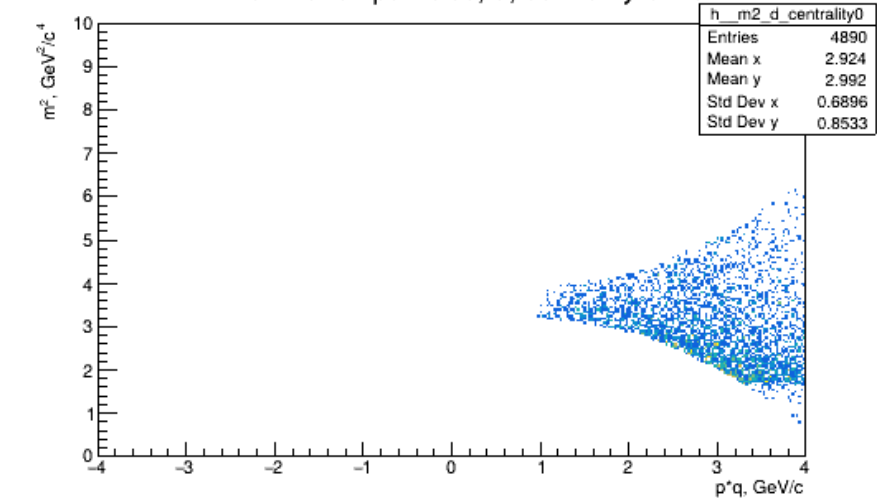
m^2 vs P for all particles



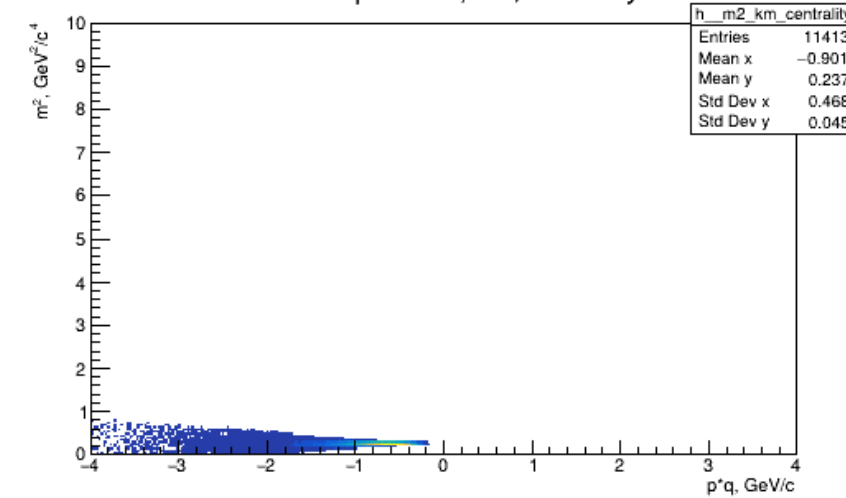
m^2 vs P for all particles, pim, centrality bin 0



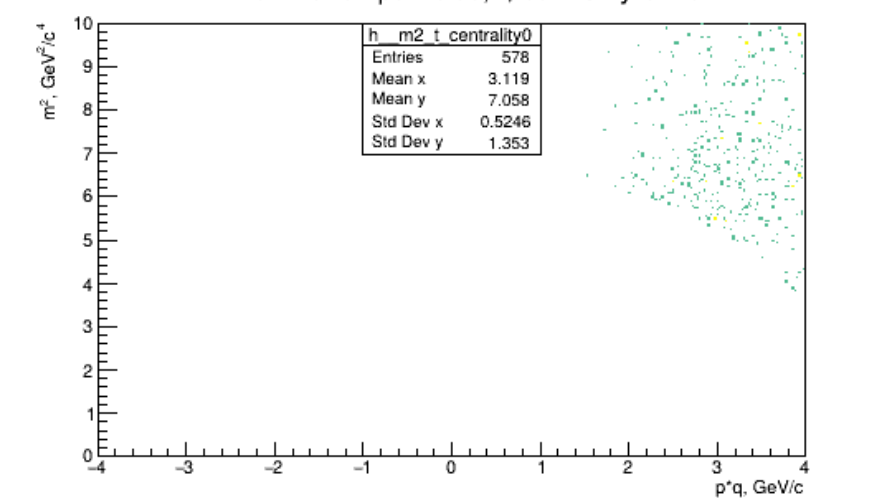
m^2 vs P for all particles, d, centrality bin 0



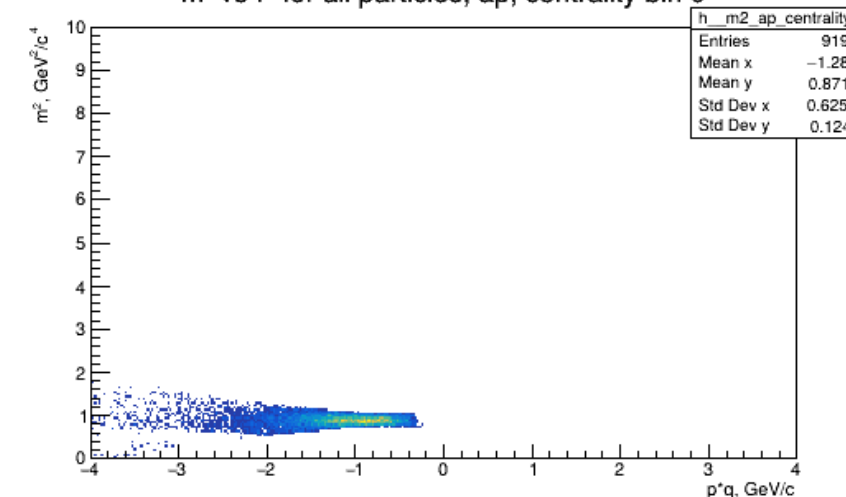
m^2 vs P for all particles, km, centrality bin 0



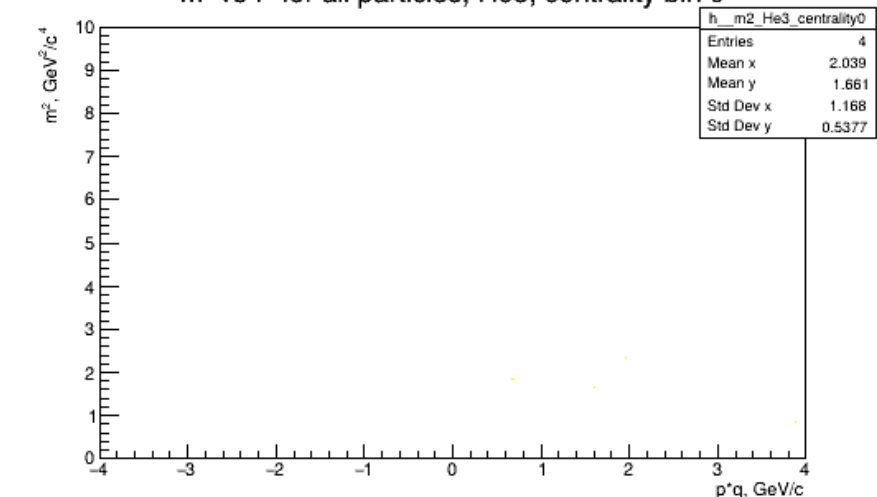
m^2 vs P for all particles, t, centrality bin 0



m^2 vs P for all particles, ap, centrality bin 0



m^2 vs P for all particles, He3, centrality bin 0



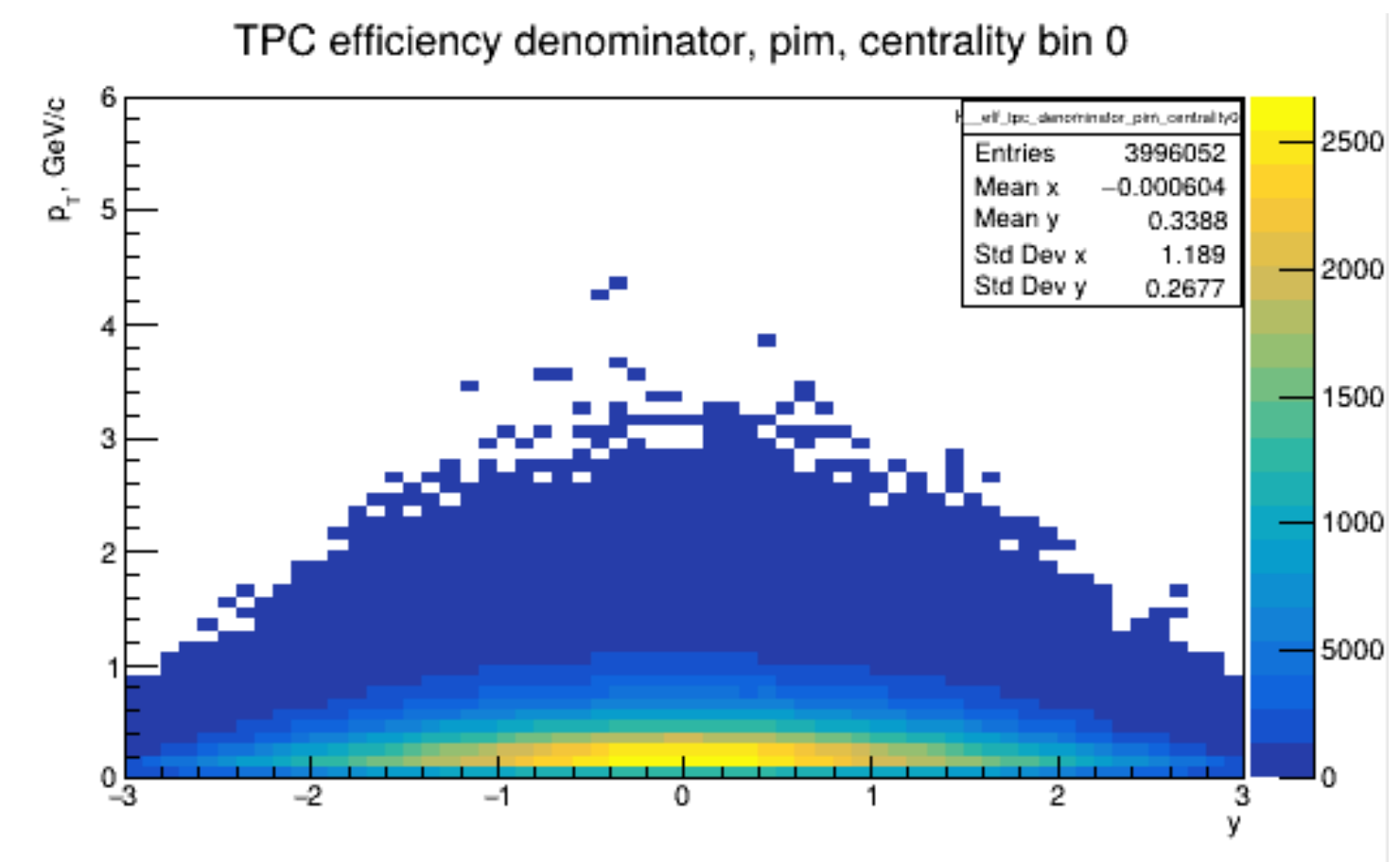
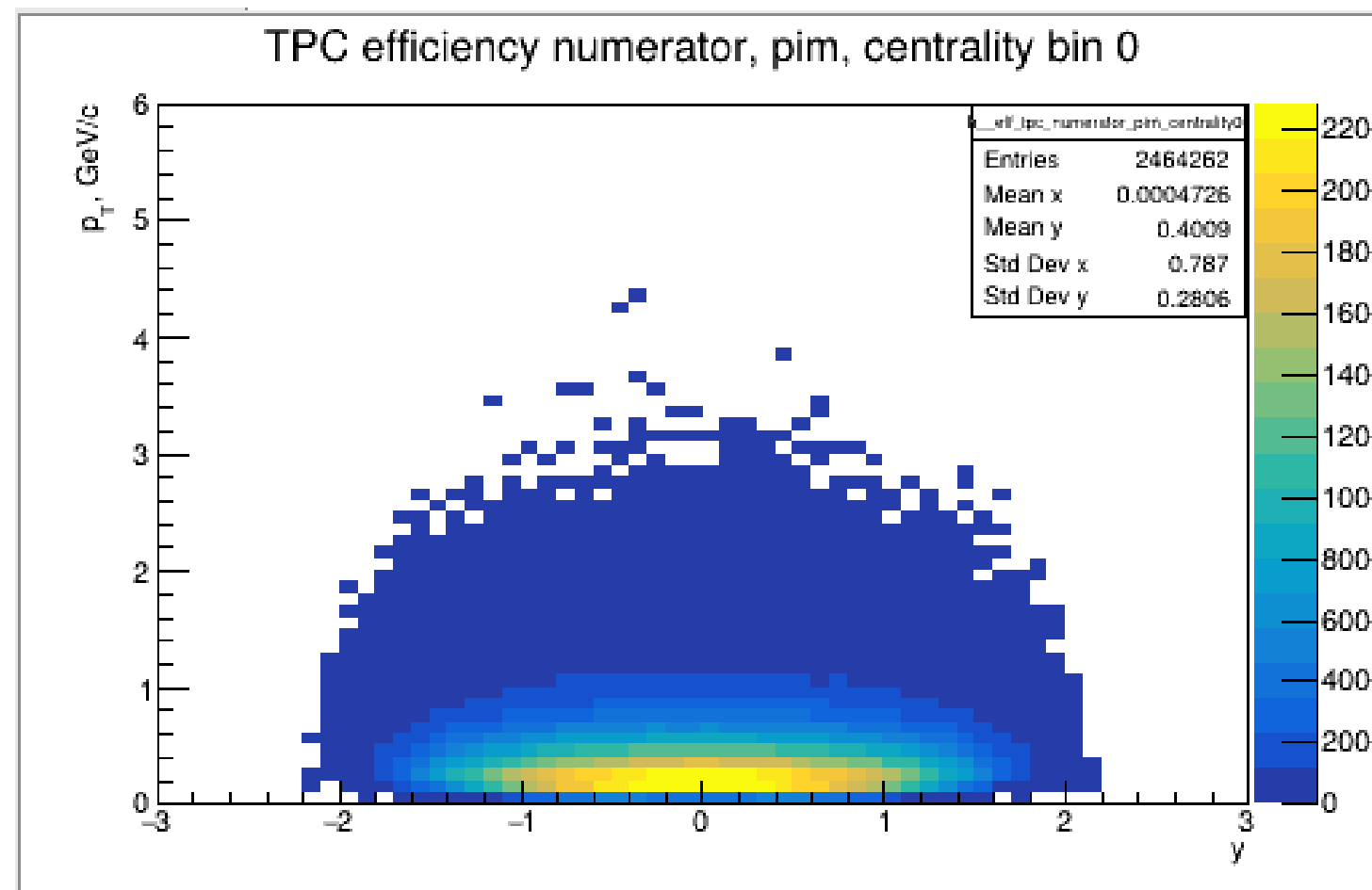
What should be done with these distributions?

Second activity

Get Particle identification efficiency as a function of momentum with TPC.

- We obtain the efficiency distribution for each particle, but at different centrality

For centrality bin 0



The other particles will also have different distributions according to centrality.

- What is the meaning of varying centrality?
- Why do we have a numerator and a denominator?

