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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.

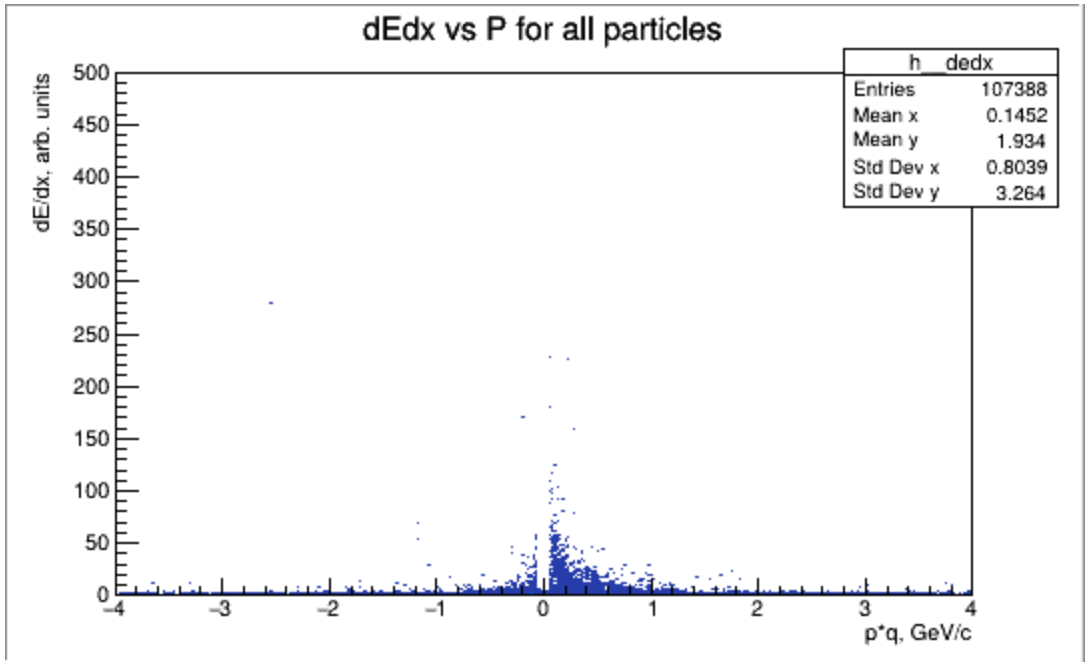
Supervisors:
Dr. Vadim Kolesnikov
Dr. Ivonne Alicia Maldonado Cervantes
Dr. Viktar Kireyeu

PREVIOUS ACTIVITIES

With the new class created "EnerClass" I obtained:

- "dEdx vs p" Histograms for all particles

The data analyzed was "urqmd-BiBi-09.2GeV-mb-eos0-500-0.reco.root", only to test how the class works, but I plan to run it for many more.

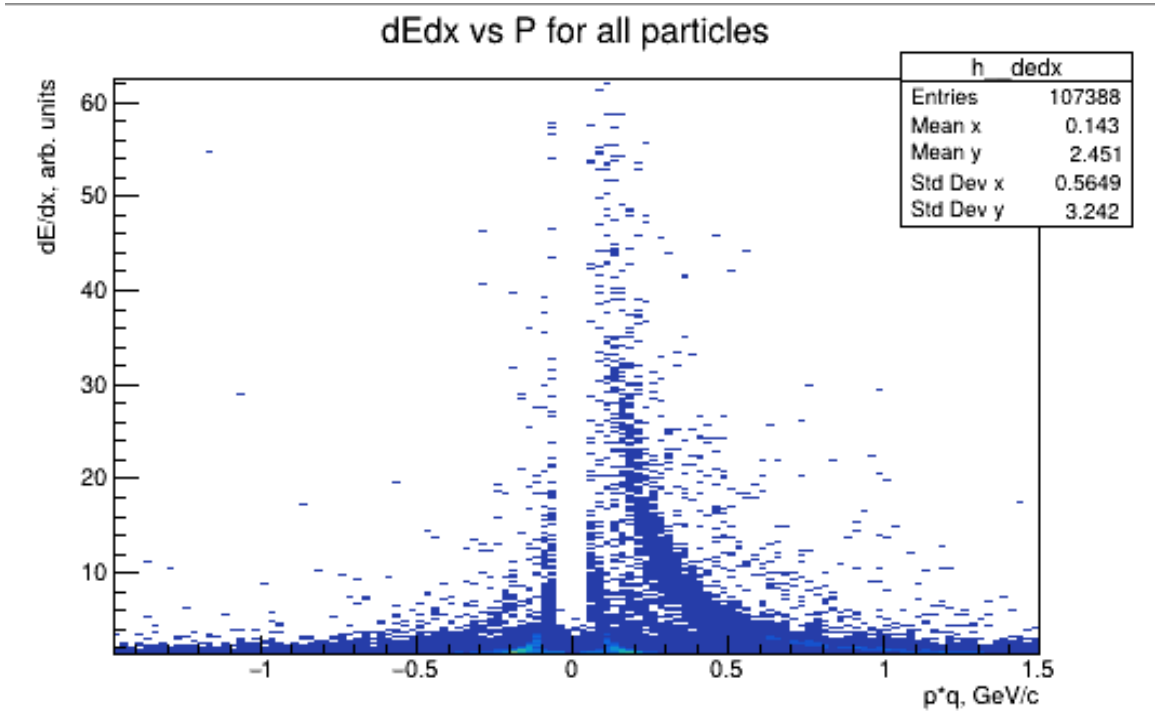


ADVANCES

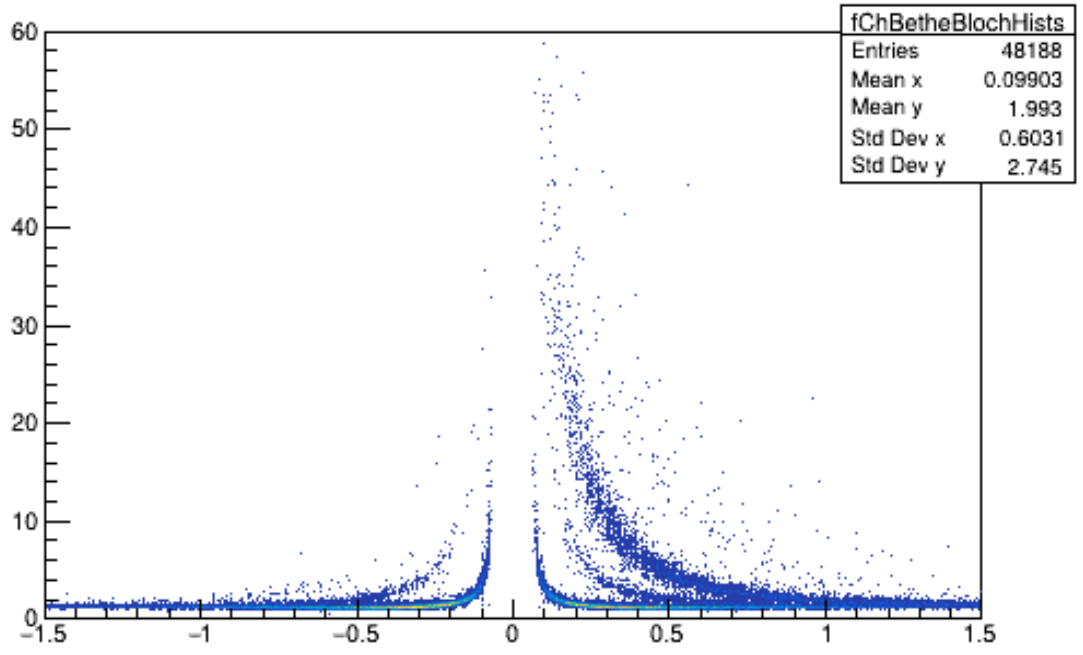
- Added classification for the "m^2 vs p" histograms using the reconstructed tracks implementing the "GlobalTracks" and "TpcKalmanTrack" branches.

- The MpdPidQA class was implemented to obtain the histograms of energy loss and square mass, and I am also working on the implementation of the MpdPid class to obtain the parameterization settings.

Histograms of energy loss "dEdx vs P"



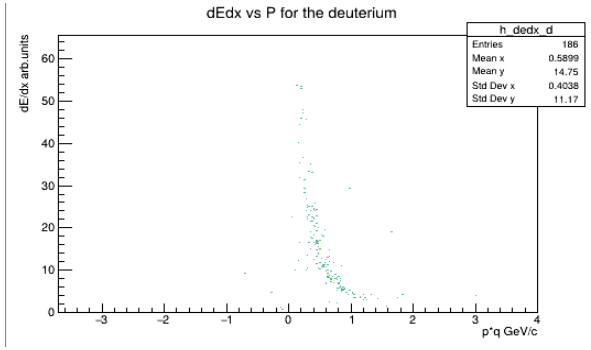
For reconstructed tracks

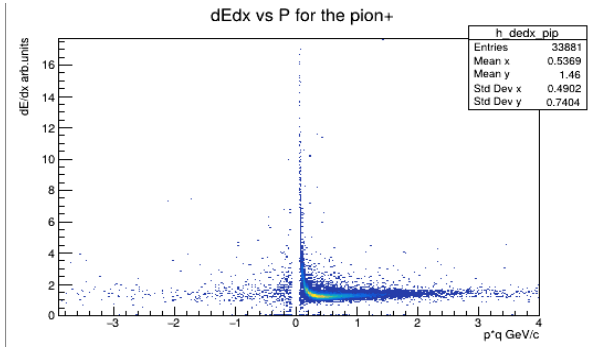


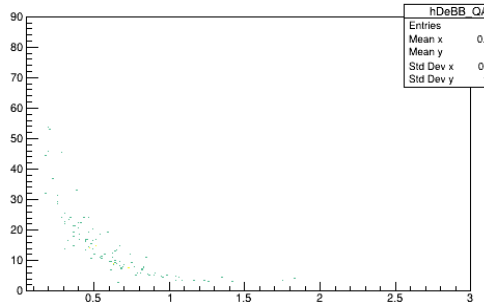
For MpdPidQA

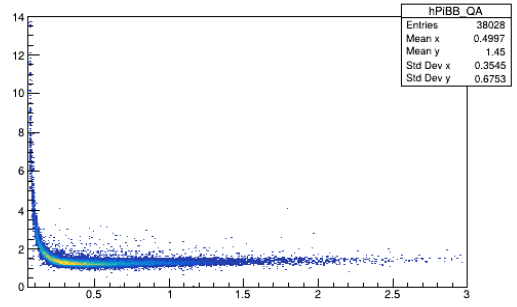
Using the "urqmd-BiBi-09.2GeV-mb-eos0-500-0.reco.root"

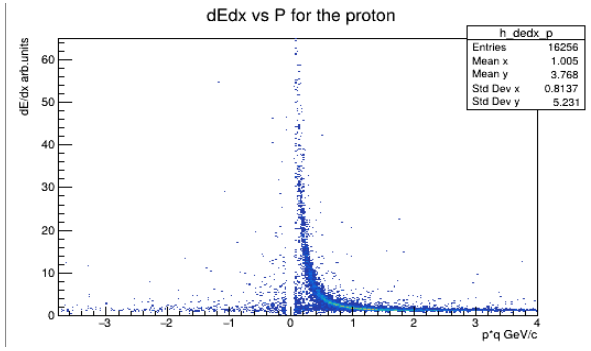
Histograms of energy loss "dEdx vs P"

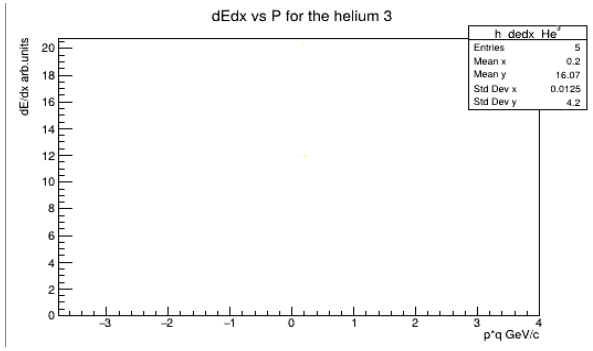


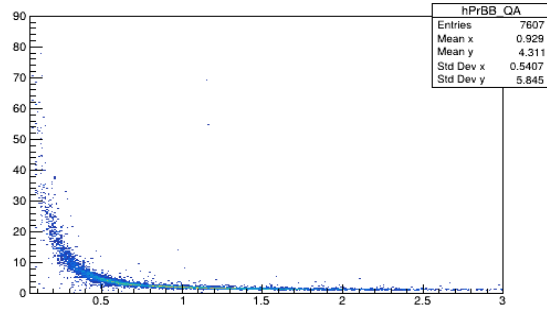


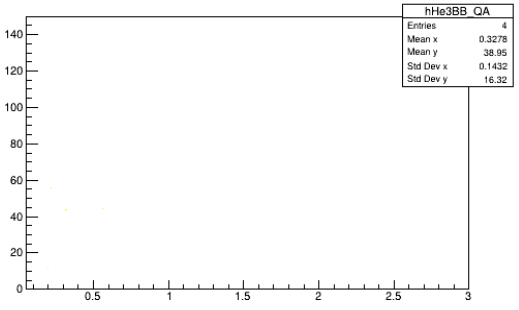










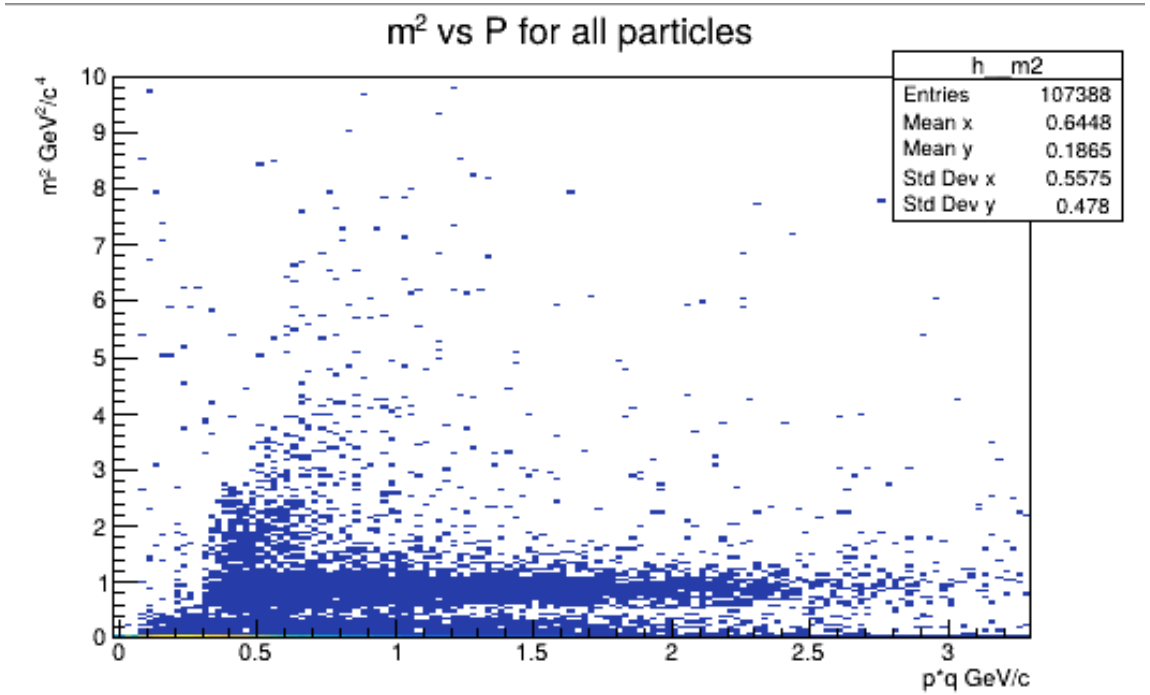


For reconstructed tracks

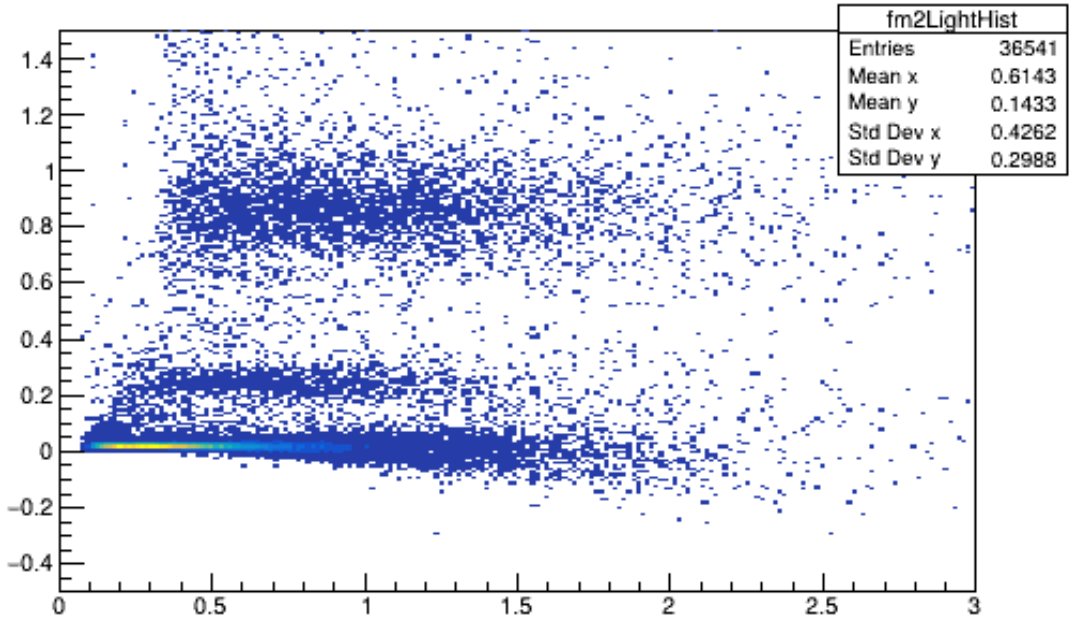
For MpdPidQA

Using the "urqmd-BiBi-09.2GeV-mb-eos0-500-0.reco.root"

Histograms of "m^2 vs P"



For reconstructed tracks



For MpdPidQA

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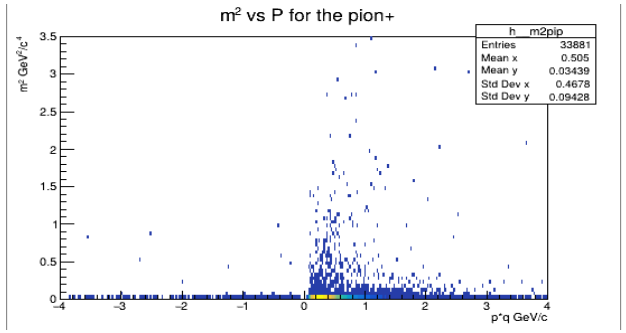
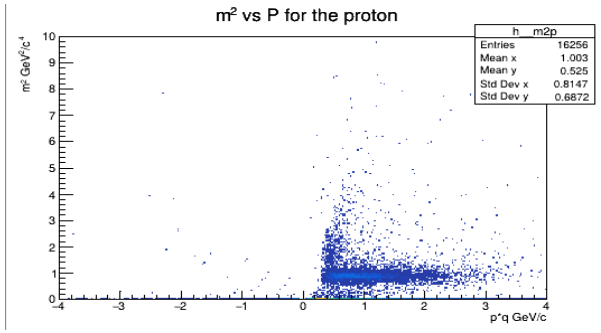
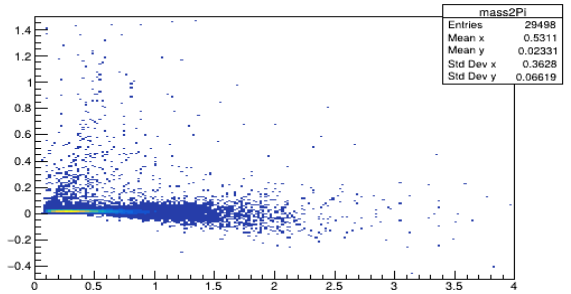
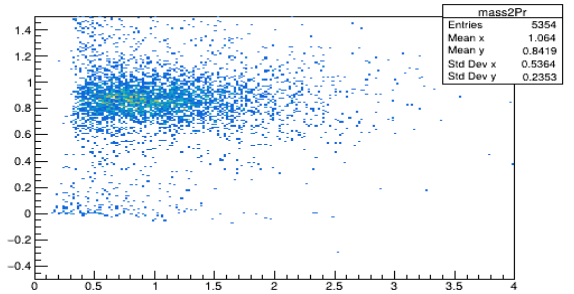
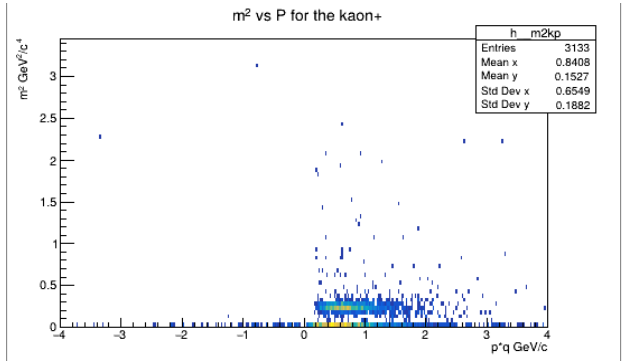
Histograms of "m^2 vs P"

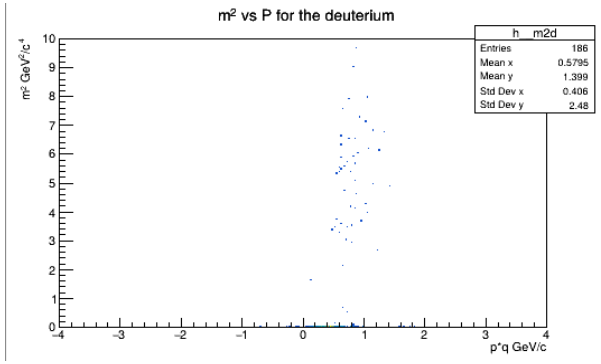


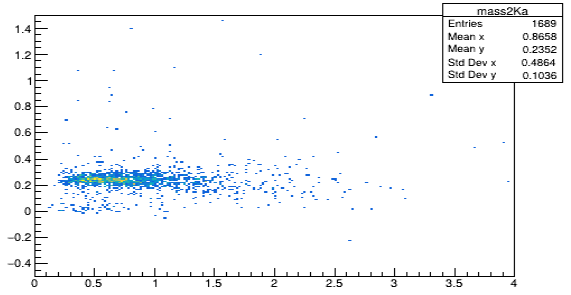


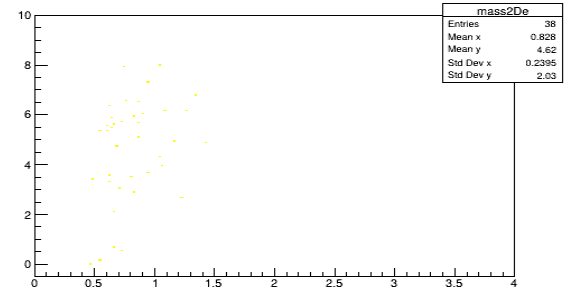












For reconstructed tracks

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Thanks for your attention