

# I'm not sure about a title

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# Motivation

To study QGP in heavy ion collisions it is important to understand events from pp collisions so that we can see what effects arise from the formation of a medium.

# Analysis

This analysis identifies potential b-jet events by classifying high-pt electrons.

Once the high-pt electrons have been classified we compare the energy and eta-phi distributions of all events and events containing a high-pt electron.

In attempts to recreate the “near-side, away-side bumps,” we plot Delta-Phi in various Pt bins for the high-Pt electron and associated tracks.

We then explore the event in four Phi regions defined by a  $\pm \pi/4$  around the classified high-pt electron as the “tag-side.” The other 3 regions are defined as the “away-side”, the  $\pi/2$  region directly opposing the tag side, as well as the “transMax” and “transMin”, defined with the convention of the “tag-side” pointing forwards and the “away-side” backwards.

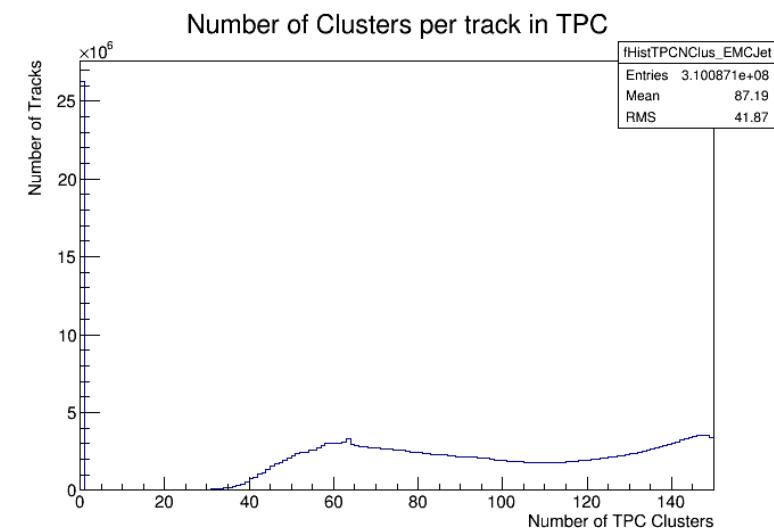
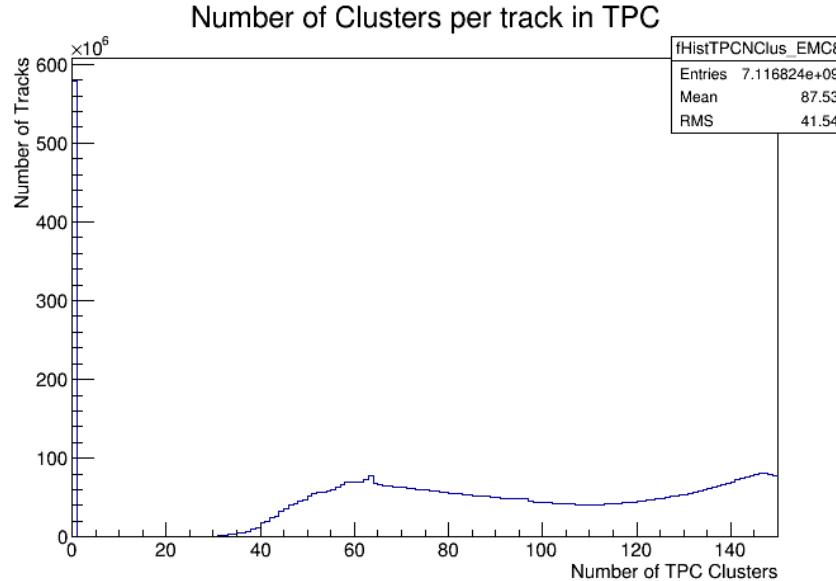
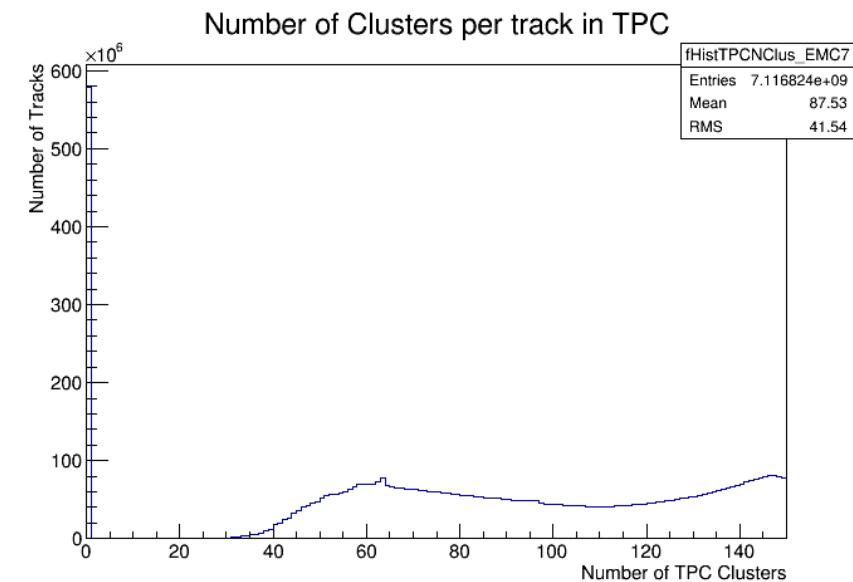
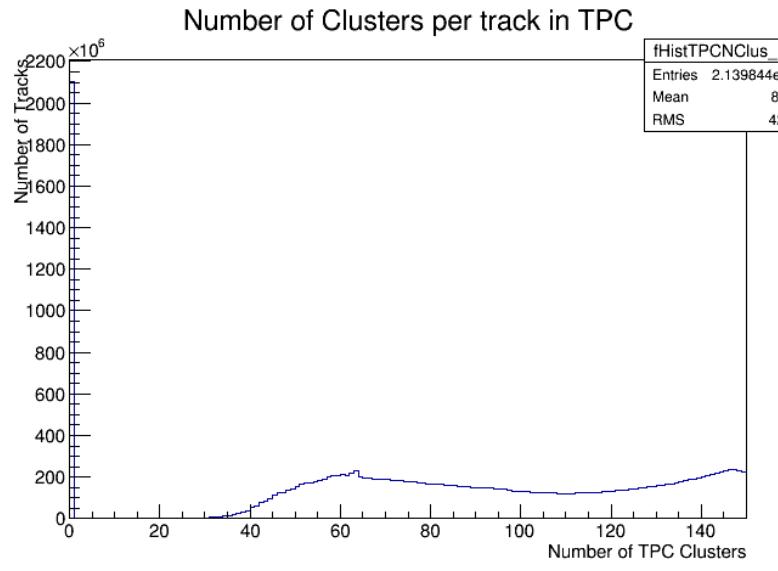
# eID

To select a good sample of electrons, we use the following basic track cuts

- StandardITSTPCTrackCuts2010
- 120 clusters minimum for track reconstruction in TPC(Electrons should have lots of clusters)
- 4 clusters minimum for track reconstruction in ITS(ditto above)
- Track momentum >1Gev(Looking for high-pt)
- Require a hit in the SPD(This is to minimize tracks from a secondary vertex, Q:Don't b quarks have a long lifetime->we want a secondary vertex?)
- Maximum Chi2 per cluster of 2 in the TPC(We ought to have a good fit for electrons.)
- Maximum DCAxy of 1(To avoid tracks from secondary vertexes)
- Maximum DCAz of 2(ditto above)
- $-.6 < \text{Track Eta} < .6$ (This is to make sure we avoid the fringes of detectors and get good samples.)
- No kinks(Avoiding secondary vertexes)

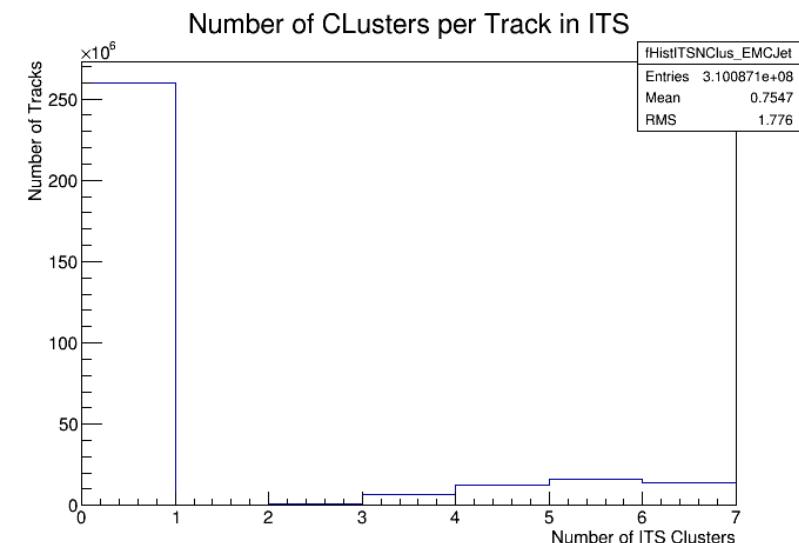
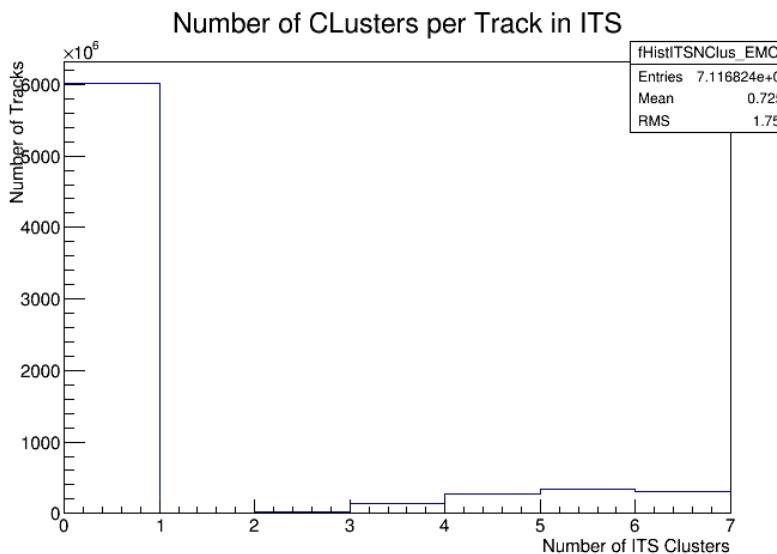
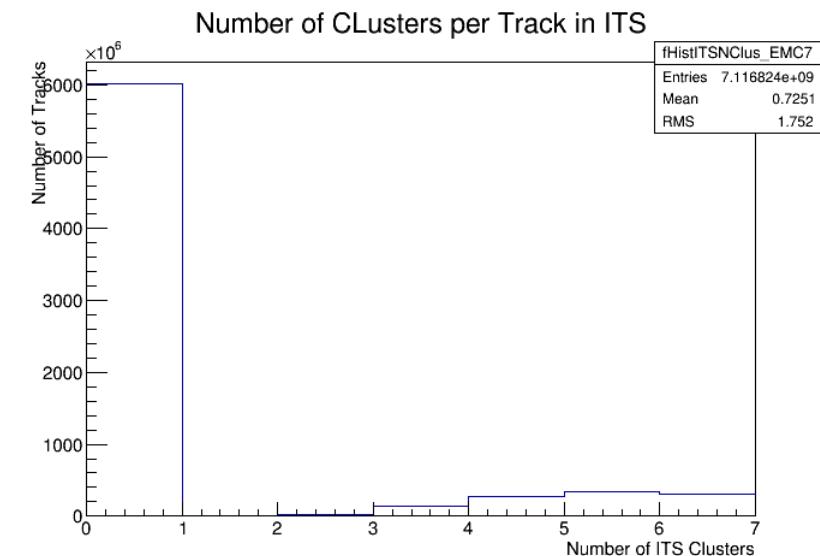
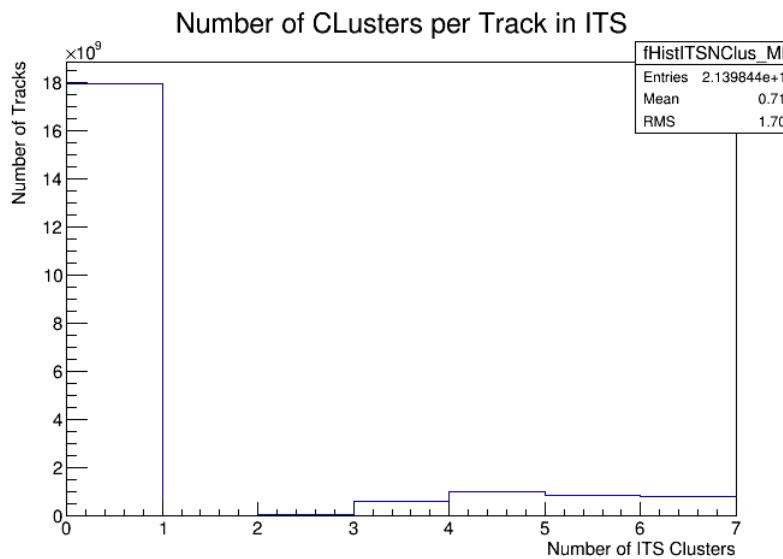
# eID cut QA Plots

## Number of clusters per track in TPC



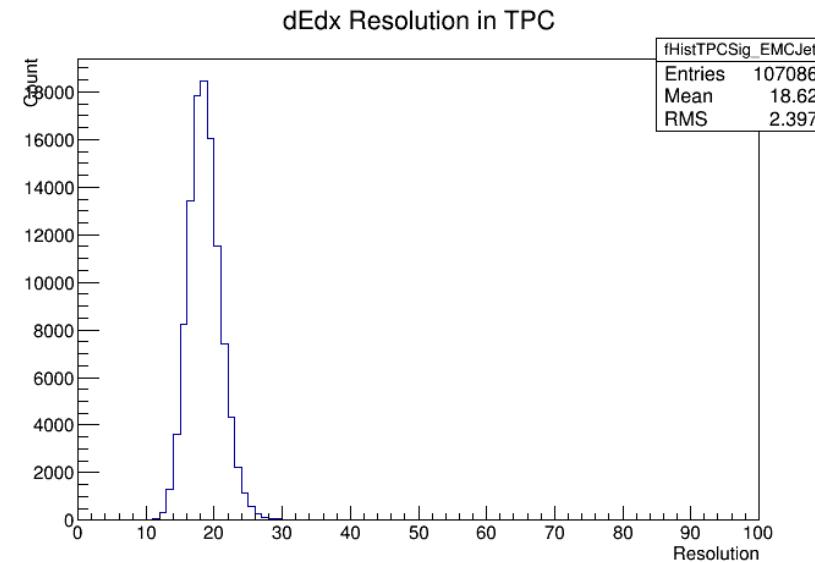
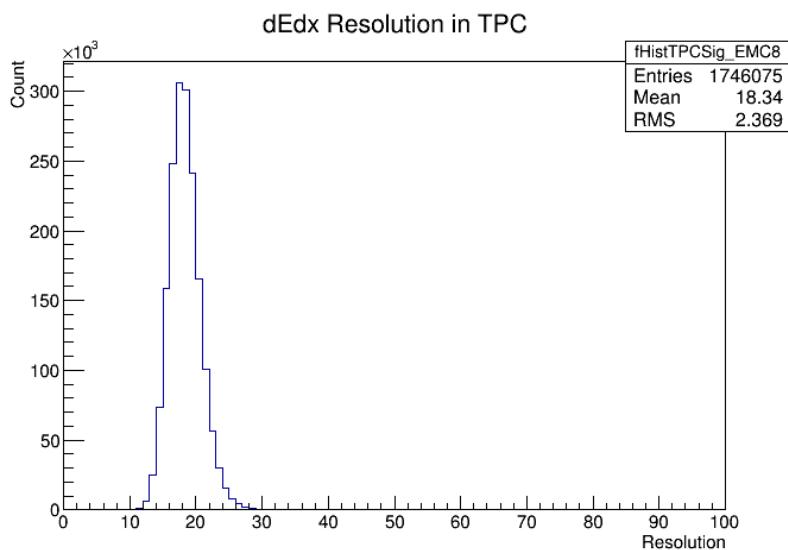
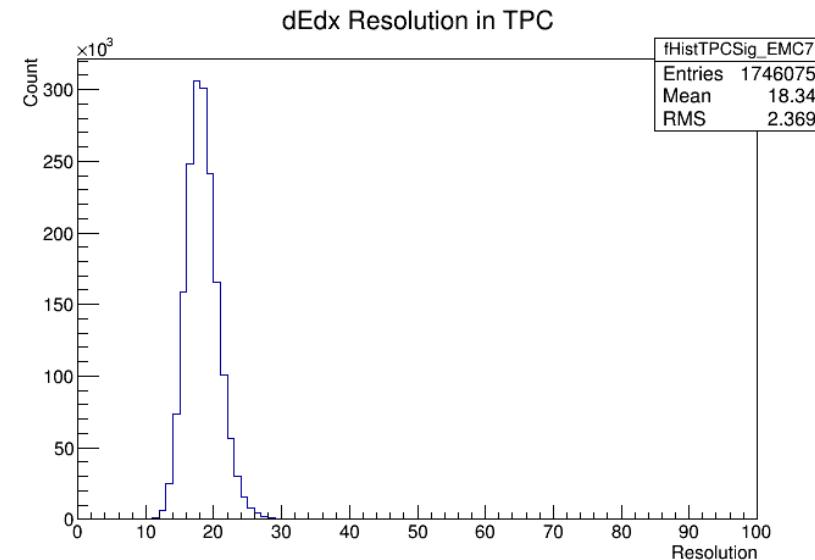
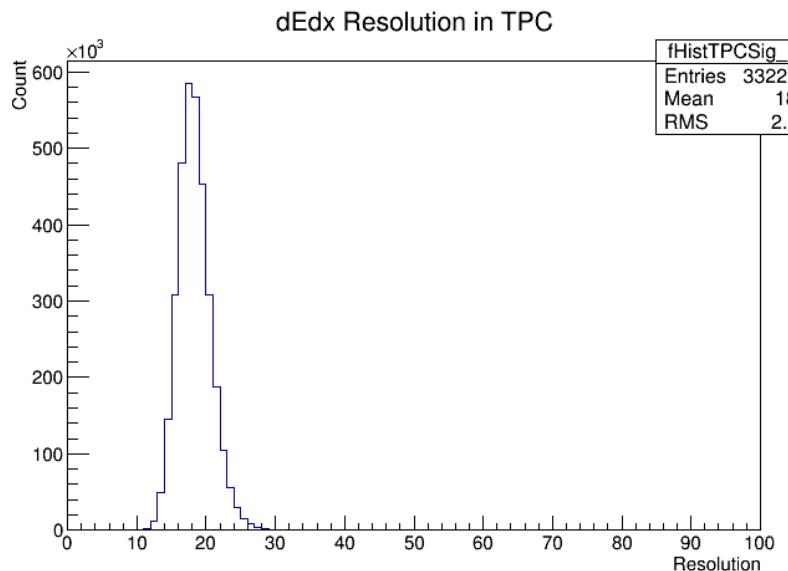
# eID cut QA plots

## Number of clusters per track in ITS



# eID cuts QA plots

## TPC dEdx resolution per track



# eID PID

For PID, we use four detectors: TPC, TOF, TRD, EMCal.

To select good PID cuts for our analysis, apply 3 detector cuts and check the electron sample with the fourth in 6 Pt bins:0-300MeV, 300-600Mev, 600Mev-1Gev, 1-2Gev, 2-5Gev, >5Gev.

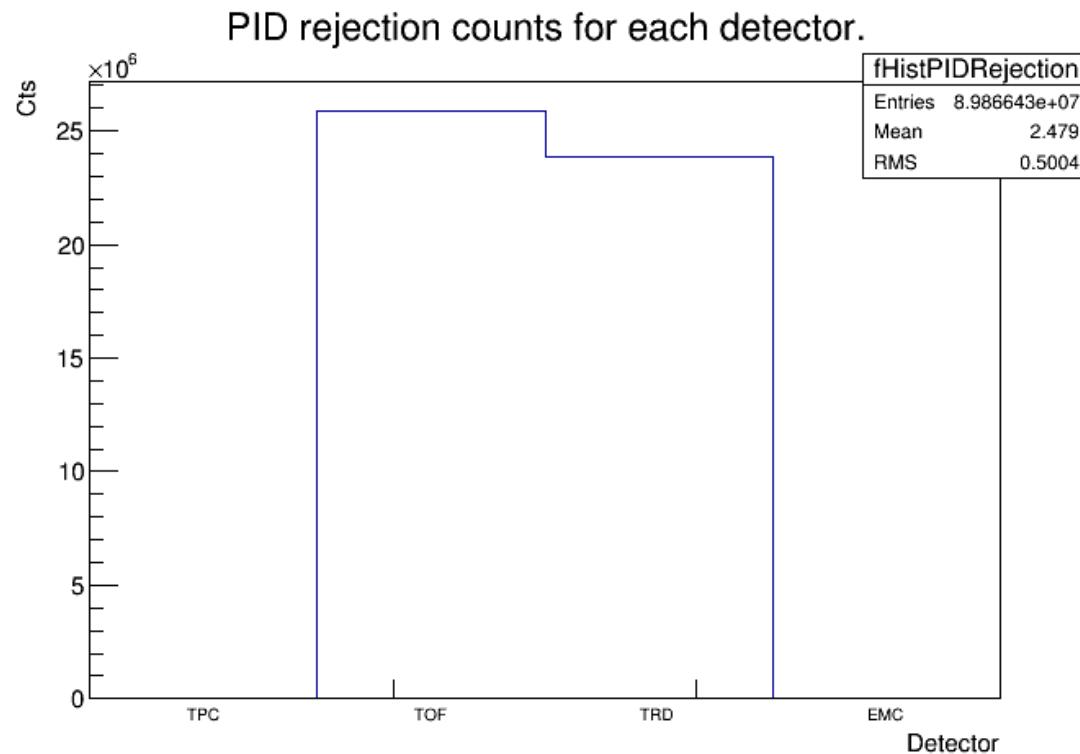
For the TPC and TOF we plot nSigma for an electron hypothesis computed from the AliPIDResponse class.

For TRD we plot likelihood of the track to be an electron.

For EMCal, we plot the deposited Energy divided by the track momentum.

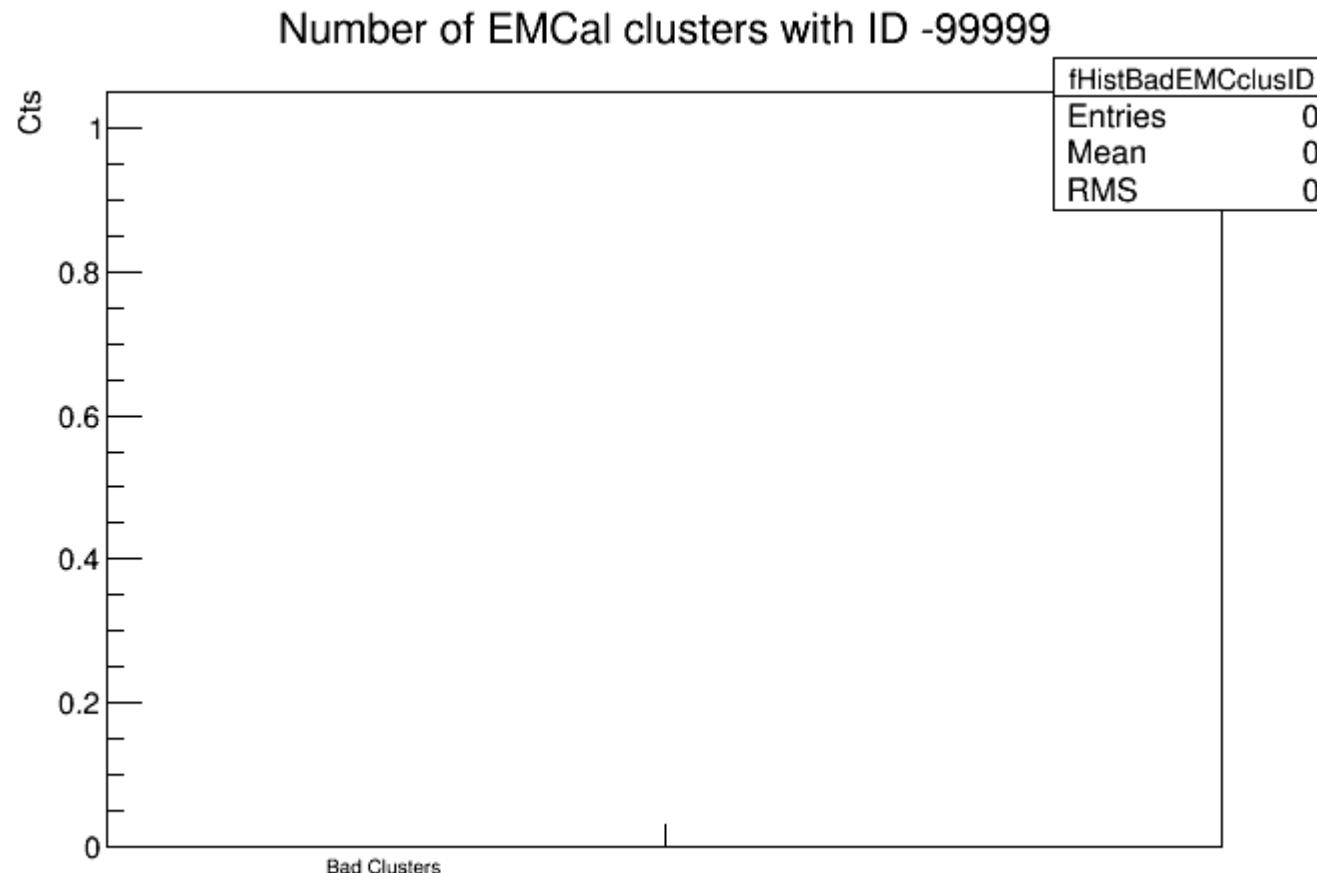
# eID PID Rejection

We would like to see how many tracks are rejected on the basis of bad PID response by detector. This is the result of the method CheckPIDStatus.



# Emcal bad cluster ID rejection

We would like to know how many EMCAL clusters have bad Ids(-99999). This is shown here.

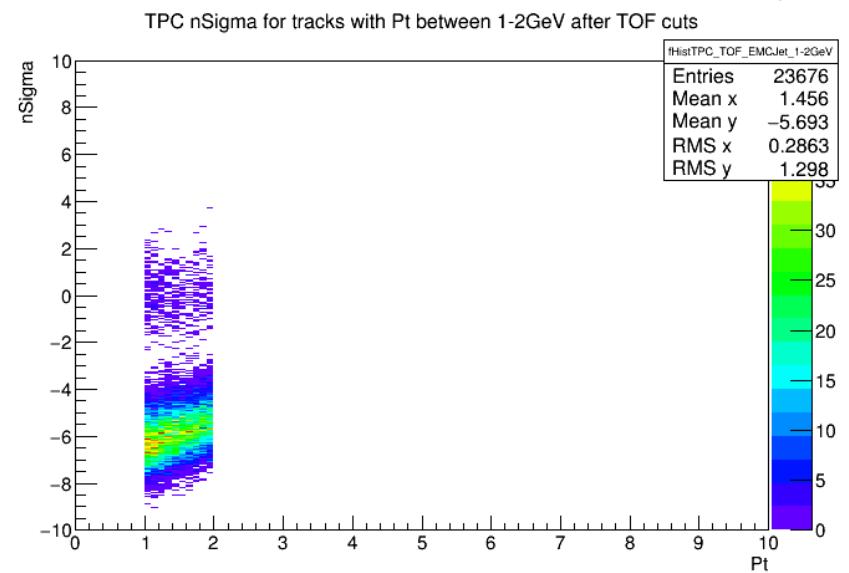
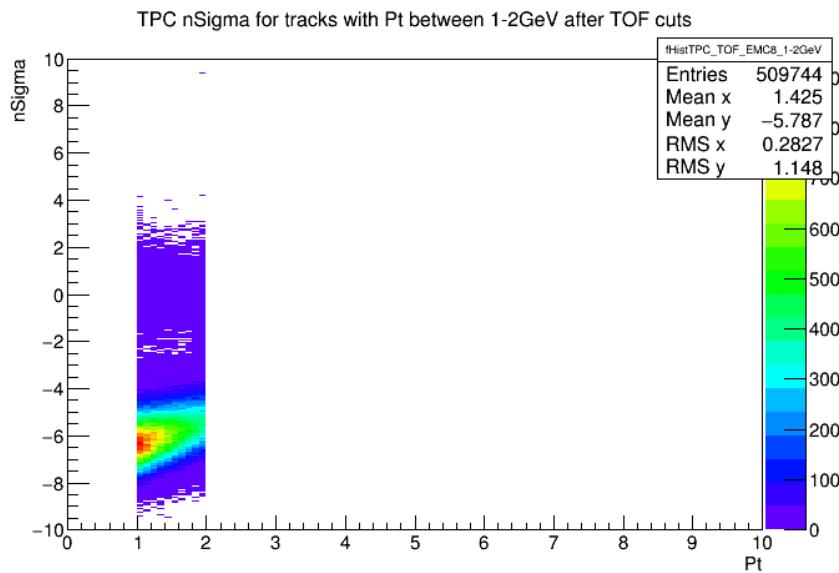
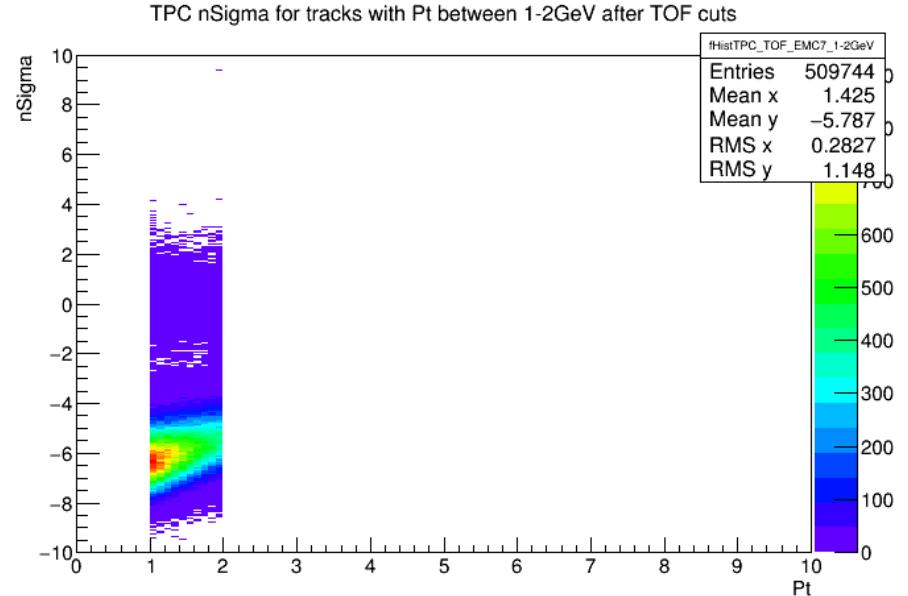
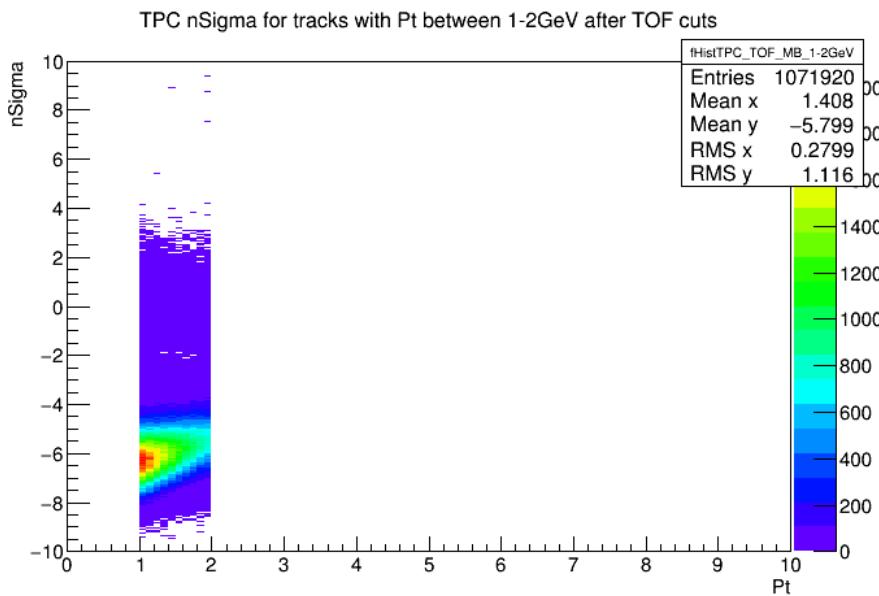


# eID PID Plots Index

- TPC nSigma plots: Slides 12-53
- TOF nSigma plots: Slides 54-95
- E/p plots: Slides 96-137
- TRD plots: Slides 138-179

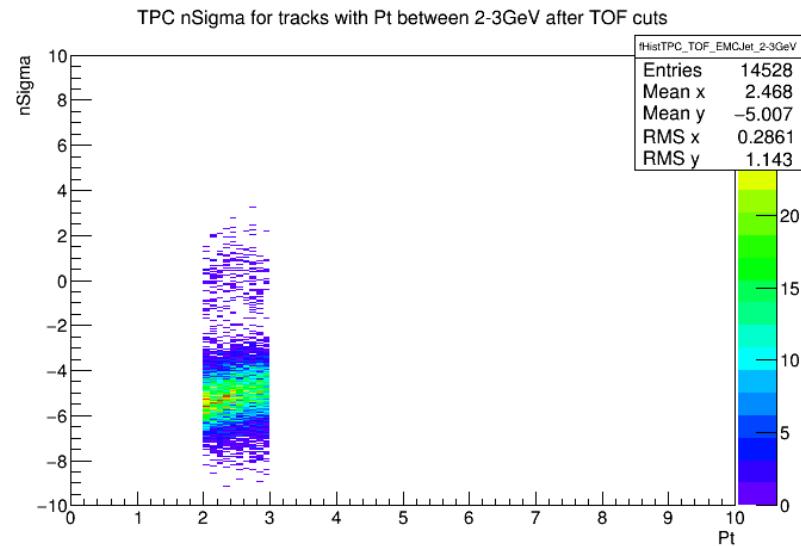
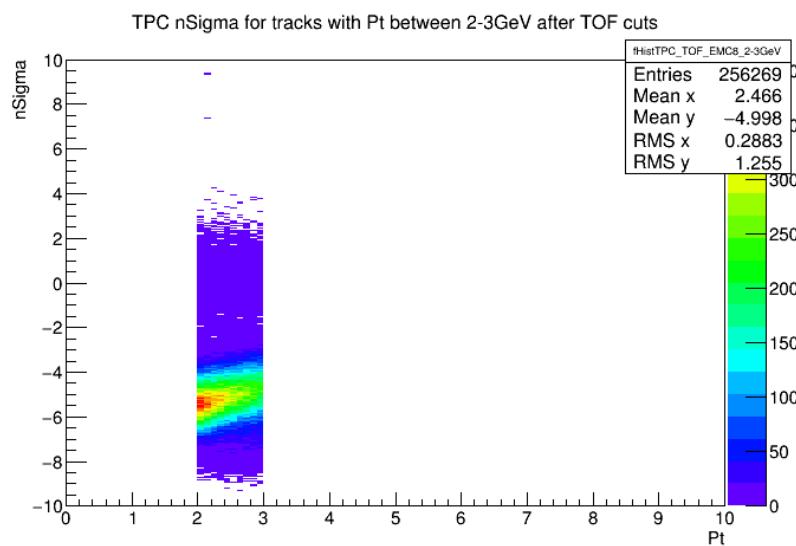
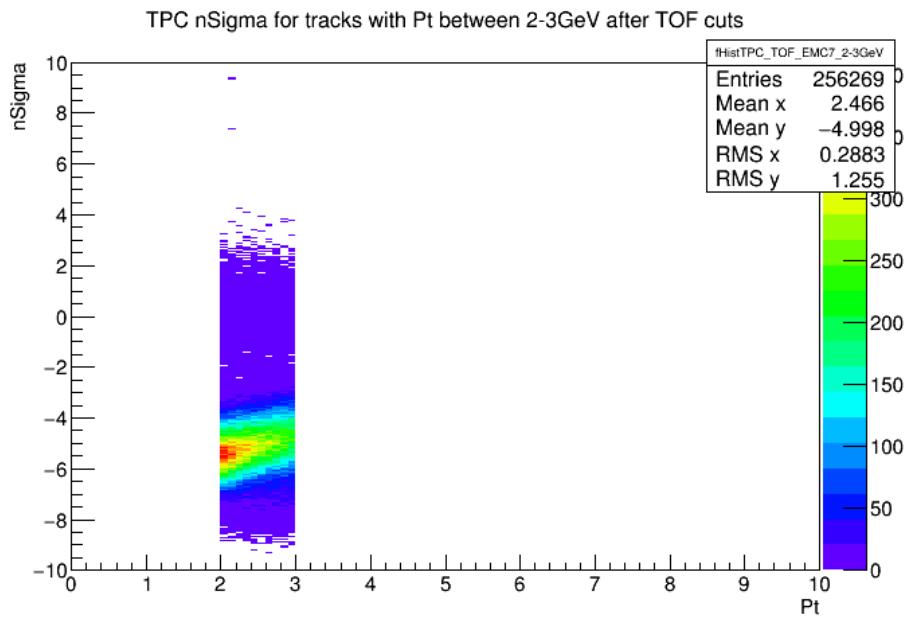
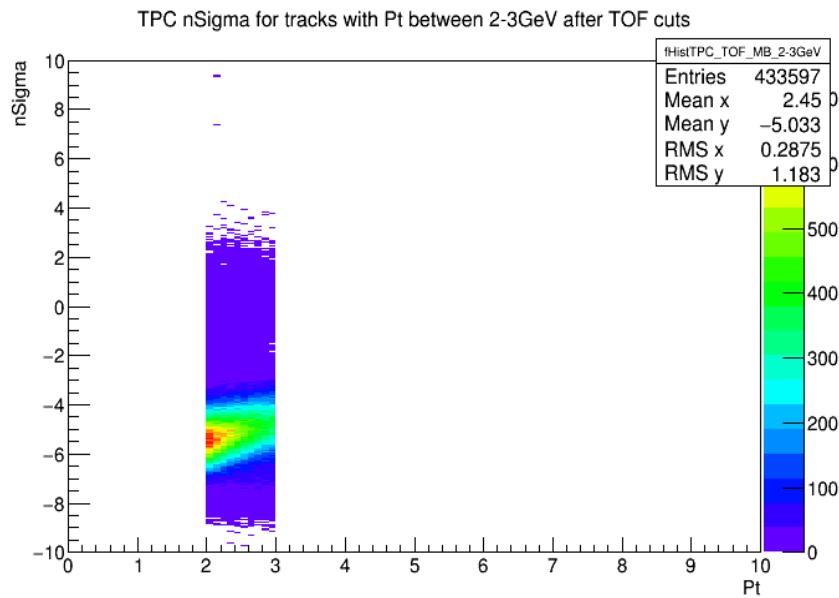
# TPC nSigma after 2Sig TOF Cut

## 1-2Gev



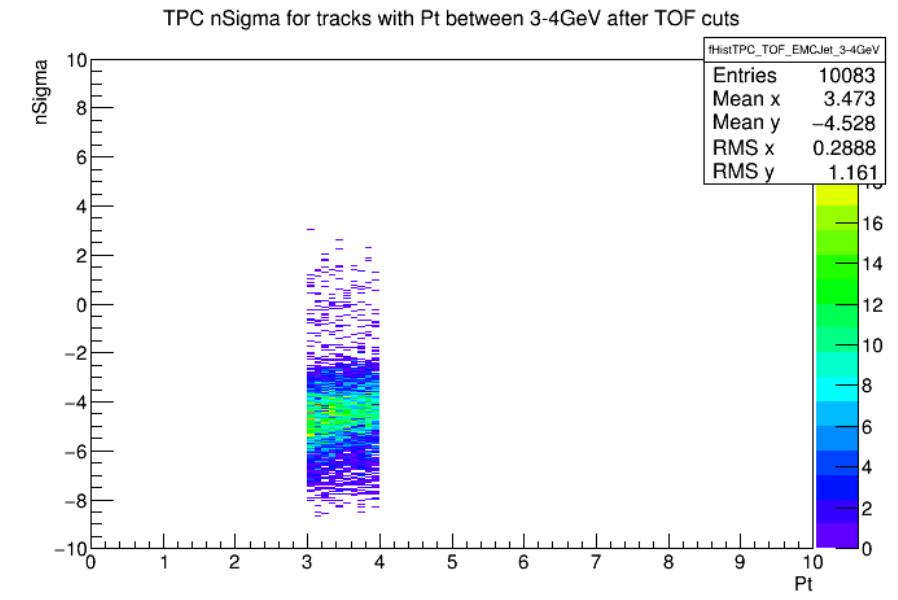
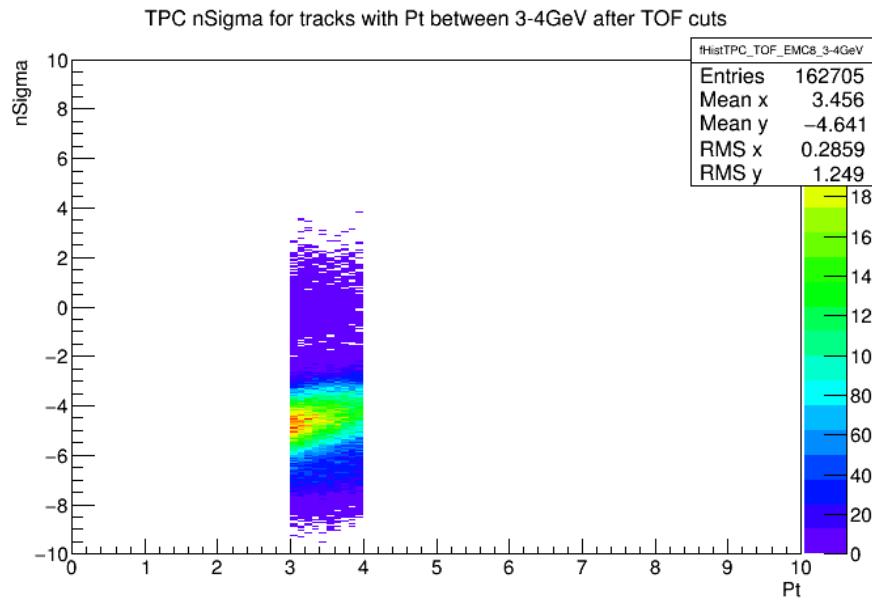
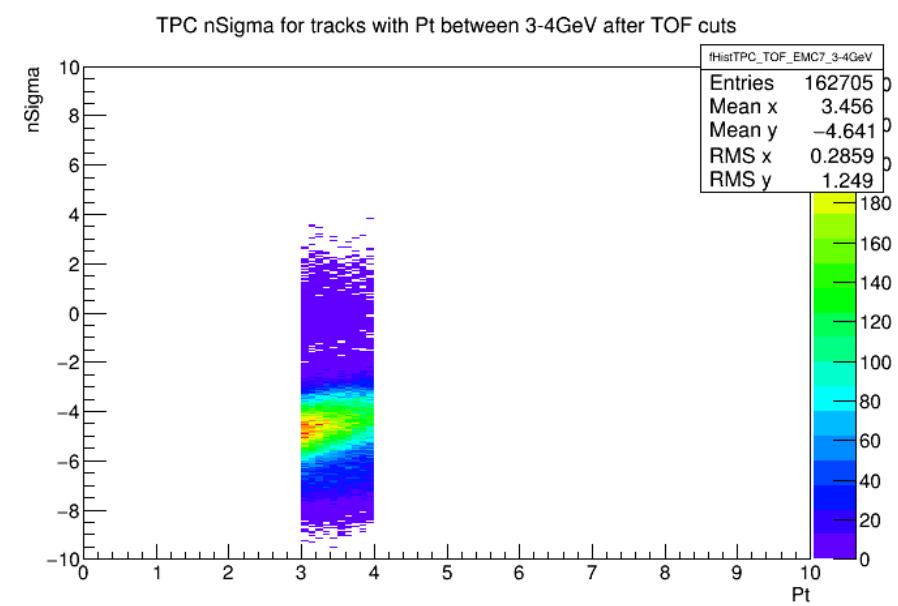
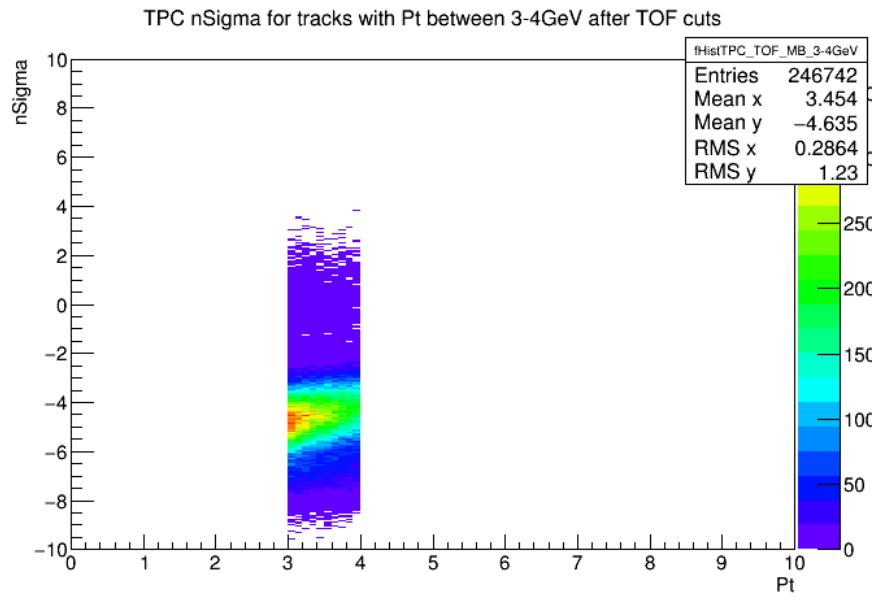
# TPC nSigma after 2Sig TOF cut

## 2-3Gev



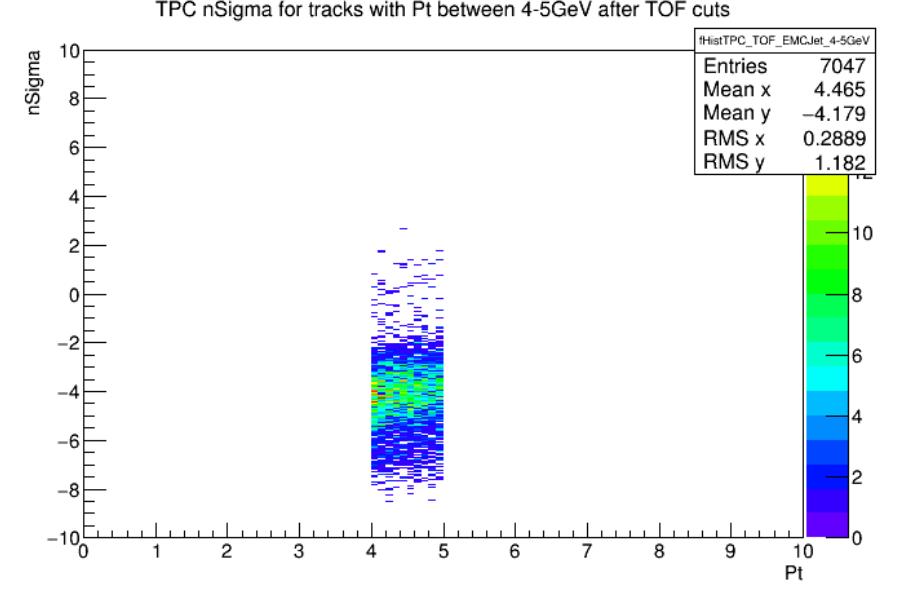
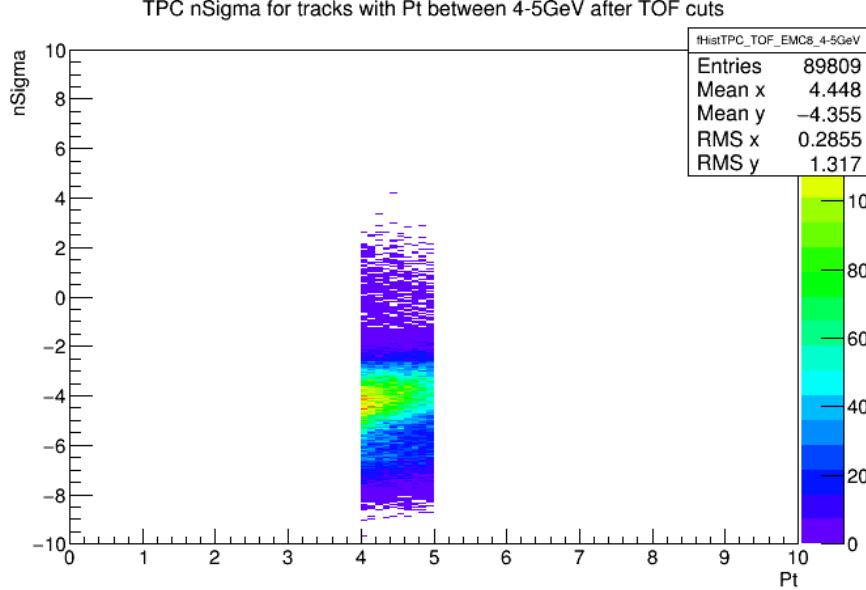
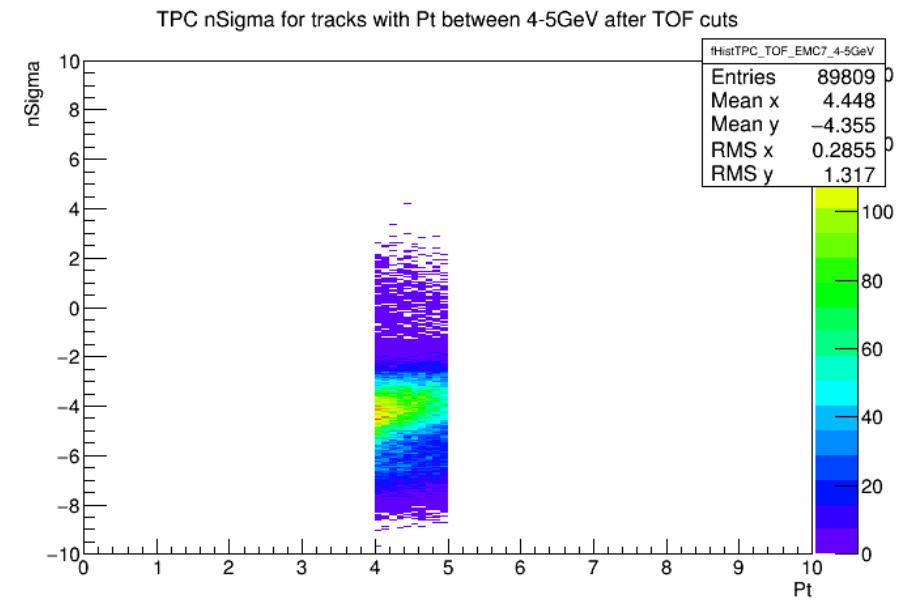
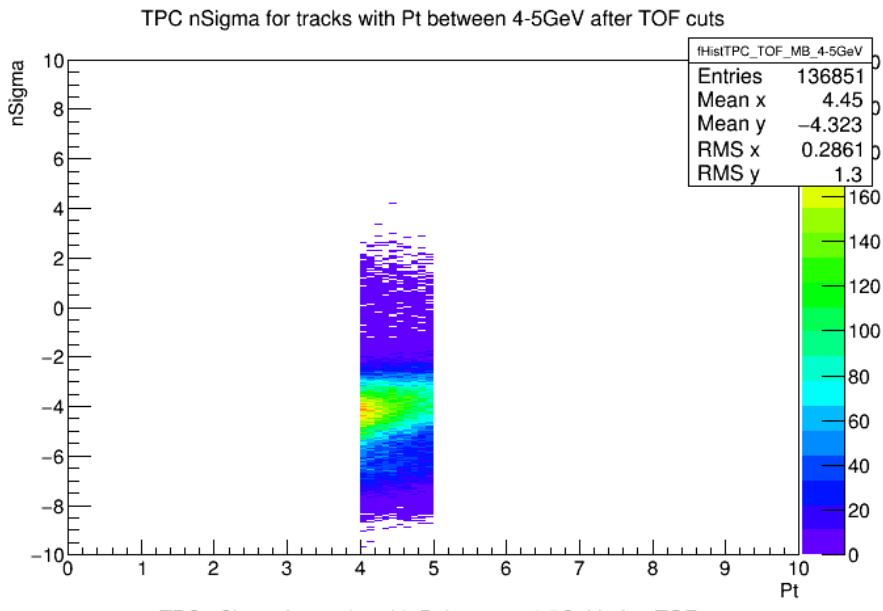
# TPC nSigma after 2Sig TOF cut

## 3-4Gev



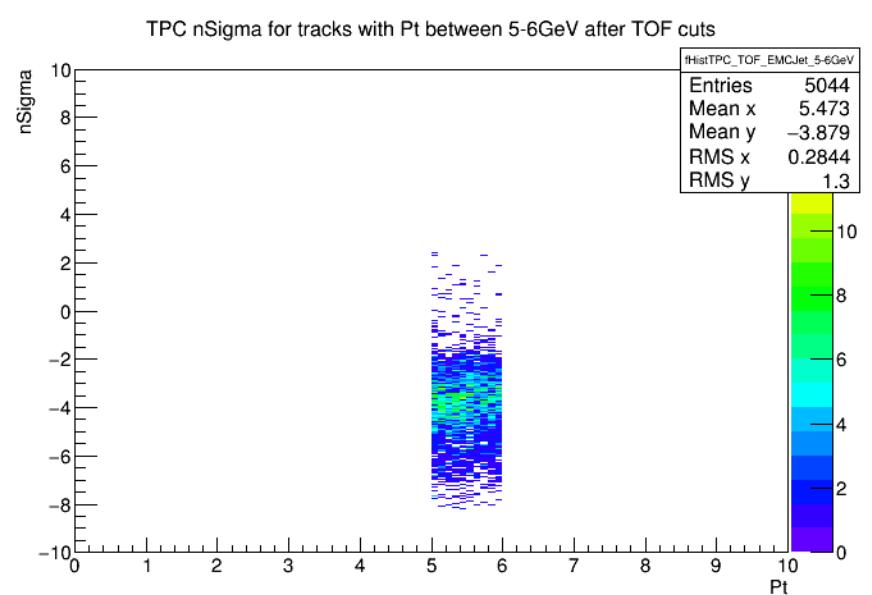
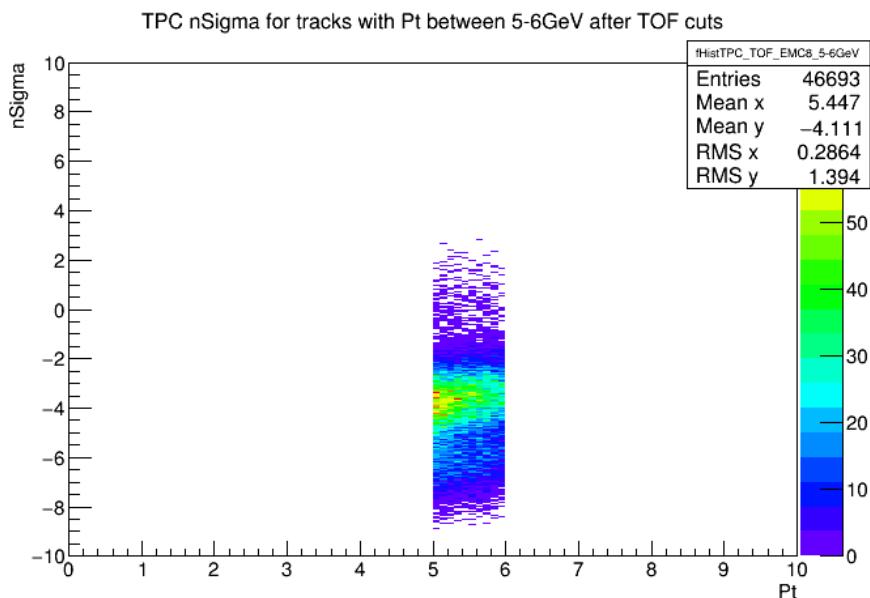
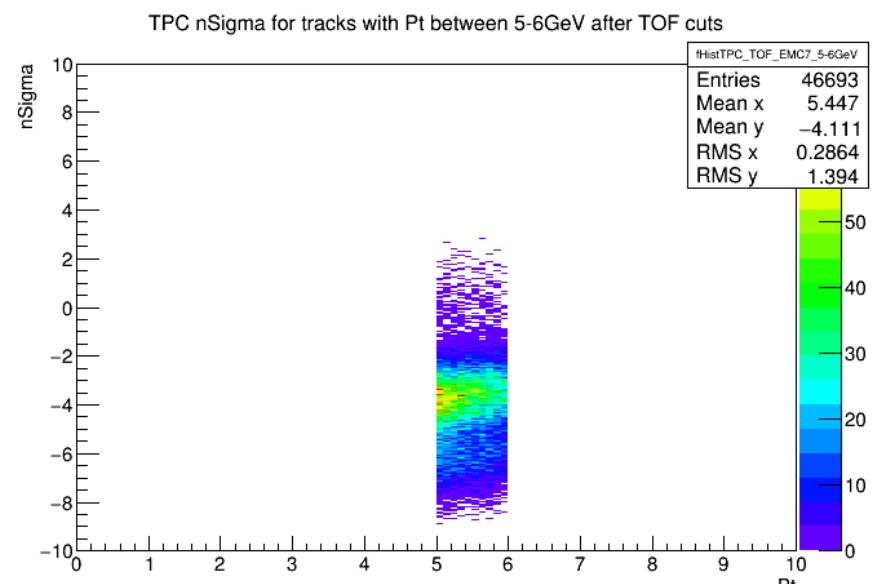
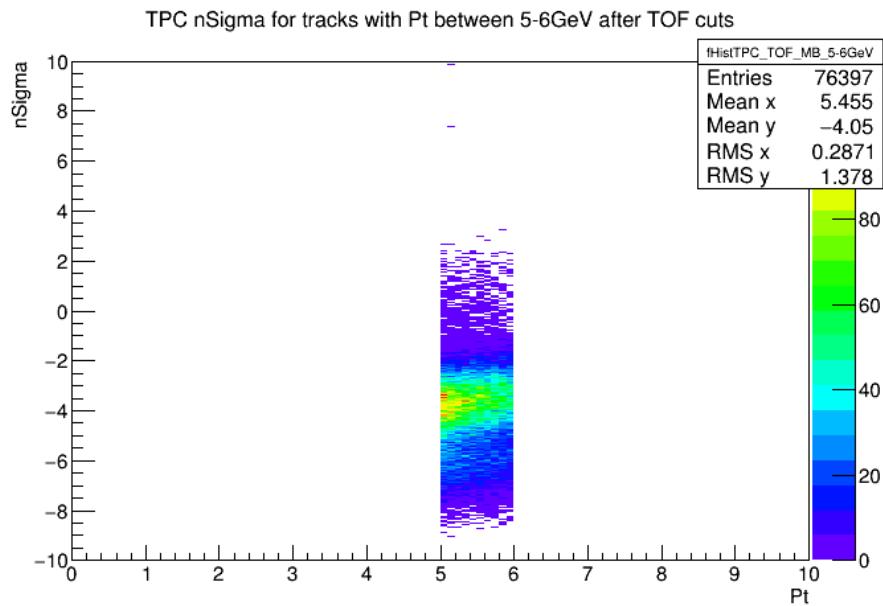
# TPC nSigma after 2Sig TOF cut

## 4-5Gev

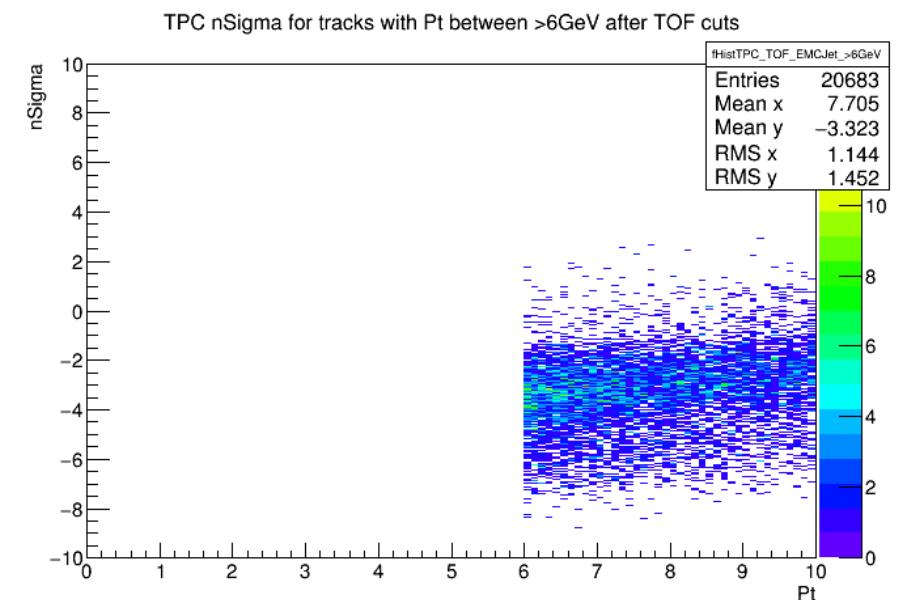
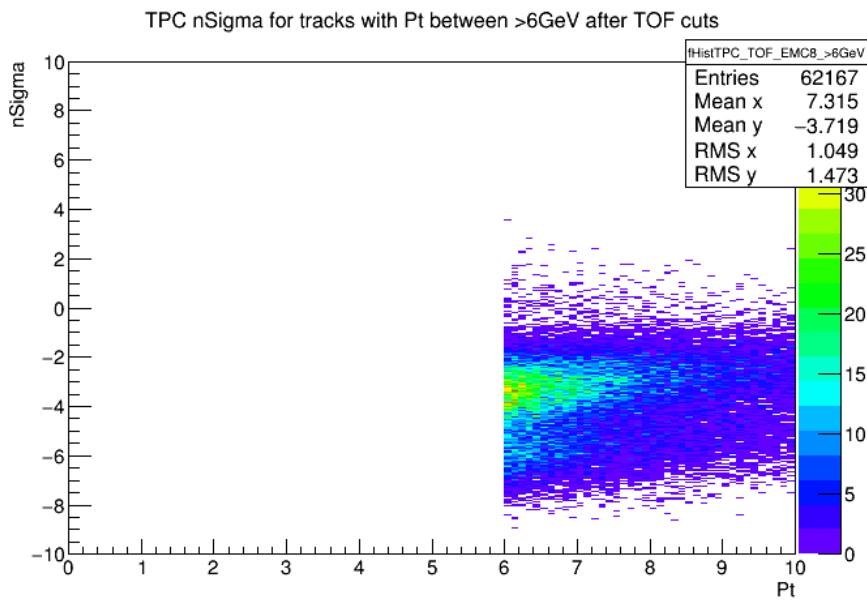
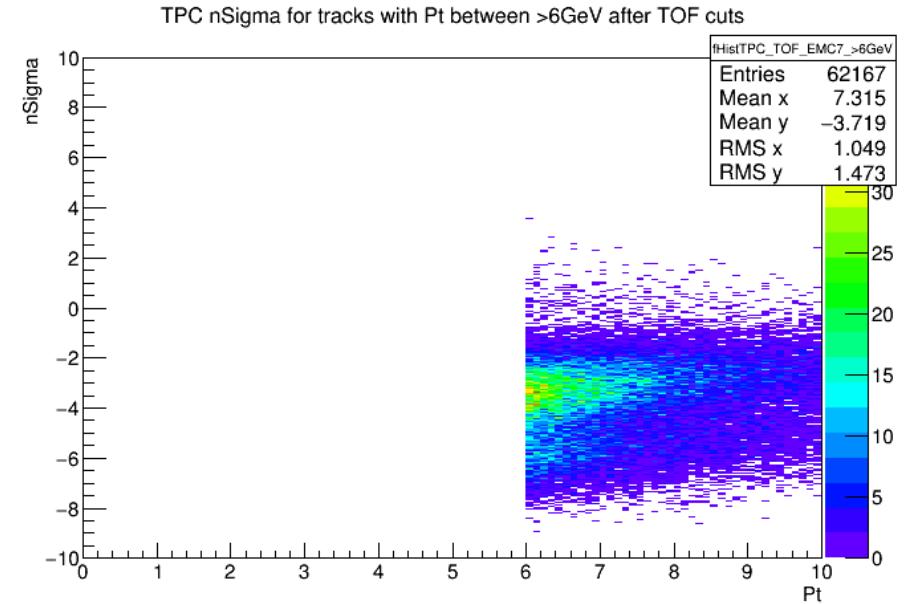
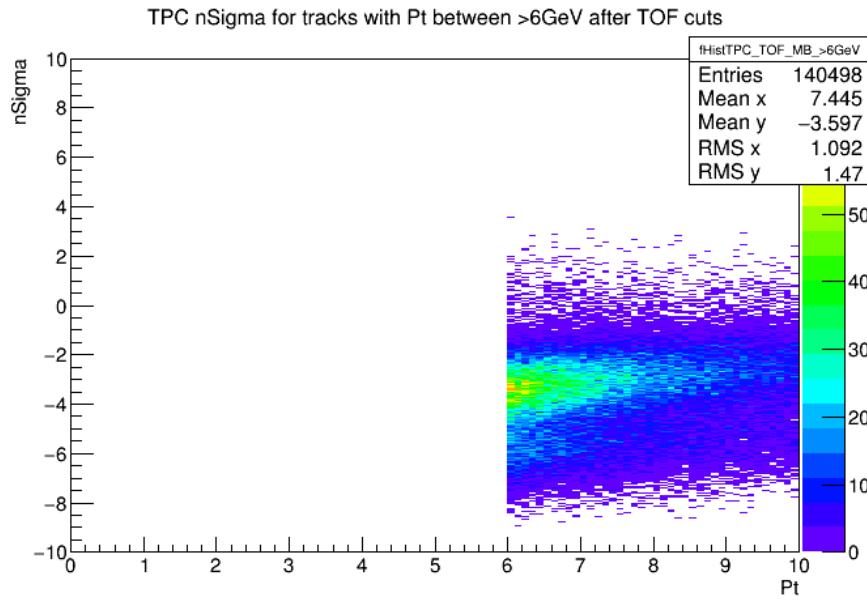


# TPC nSigma after 2Sig TOF cut

5-6Gev



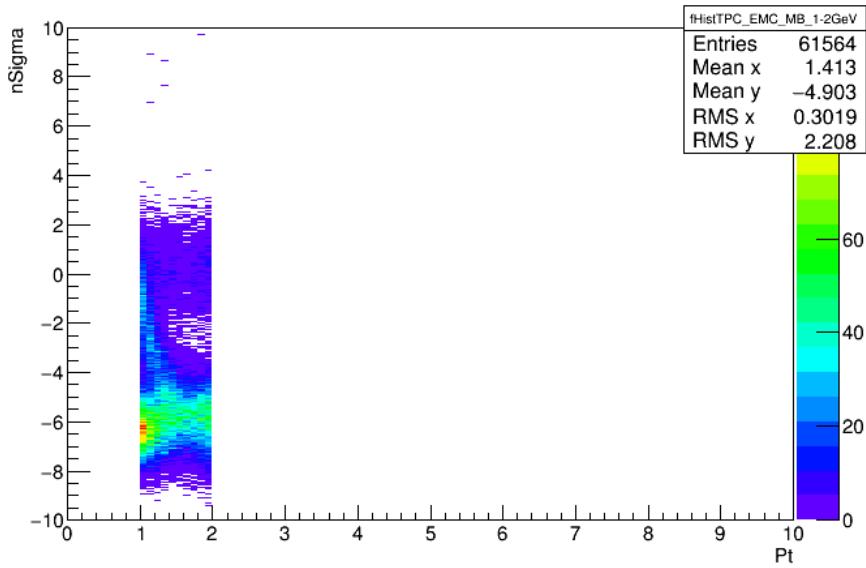
# TPC nSigma after 2Sig TOF cut >6Gev



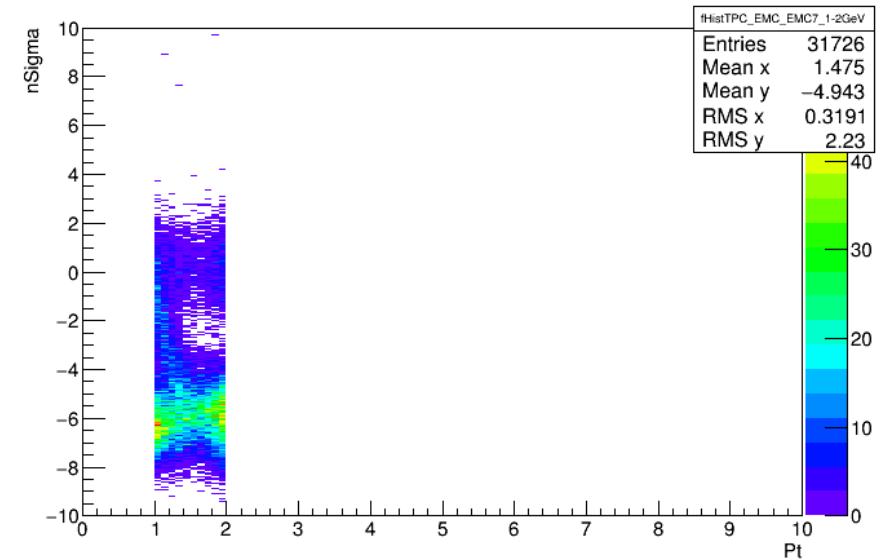
# TPC nSigma after 1+-0.1 E/p Cut

## 1-2Gev

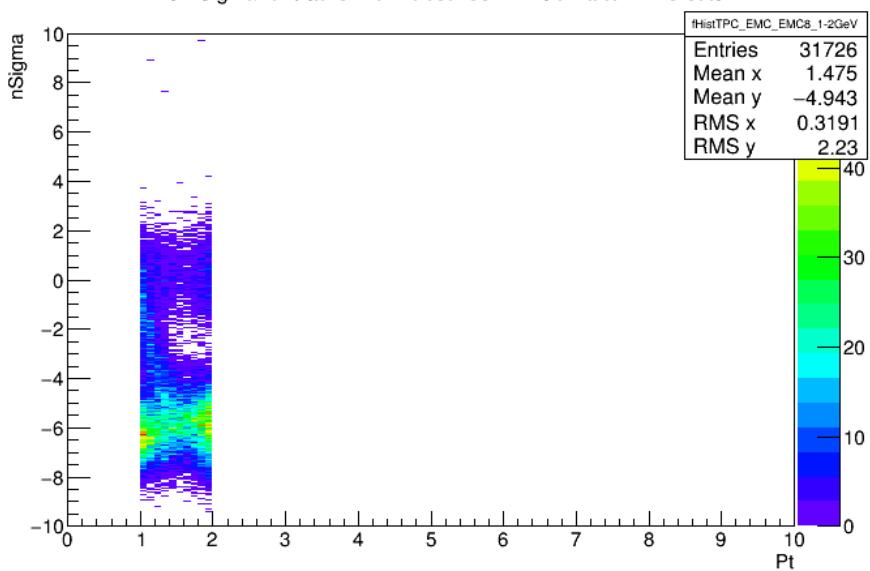
TPC nSigma for tracks with Pt between 1-2GeV after EMC cuts



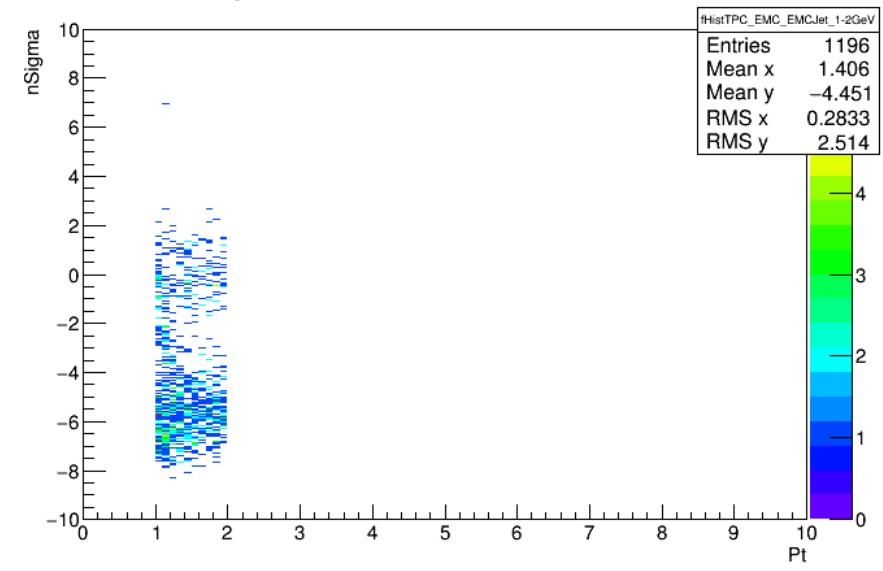
TPC nSigma for tracks with Pt between 1-2GeV after EMC cuts



TPC nSigma for tracks with Pt between 1-2GeV after EMC cuts

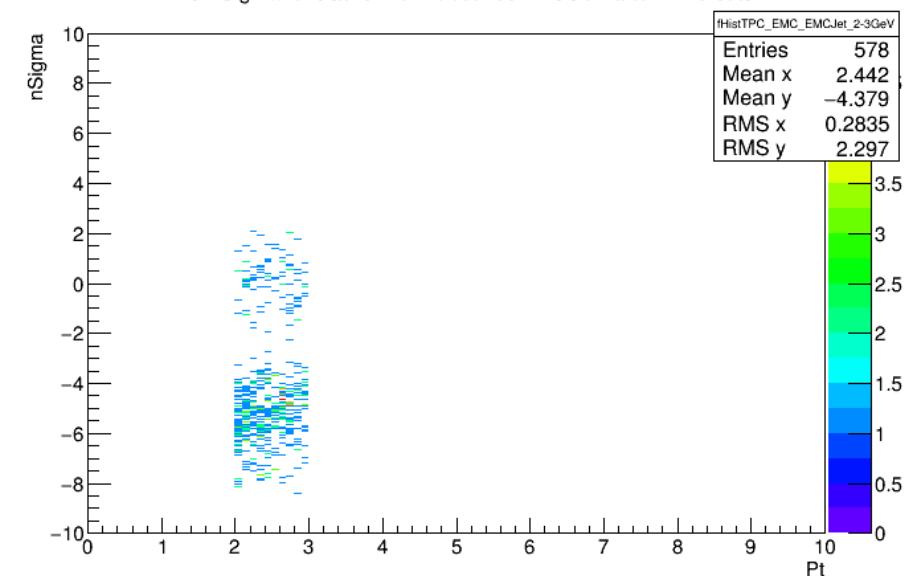
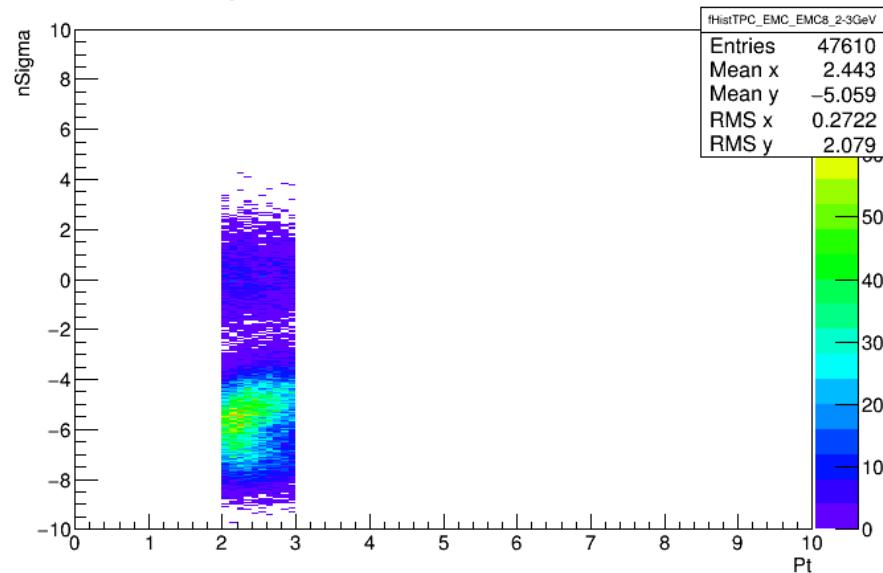
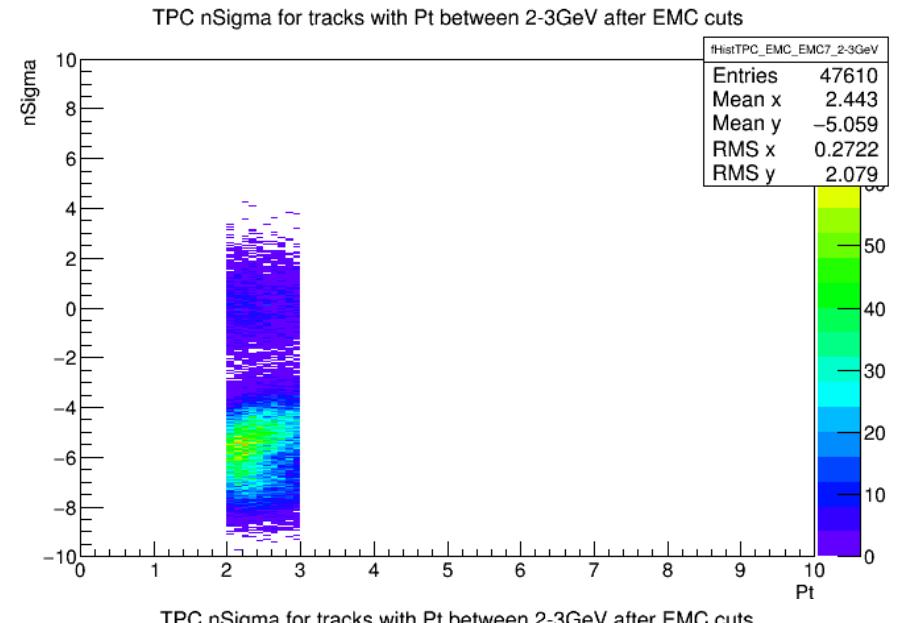
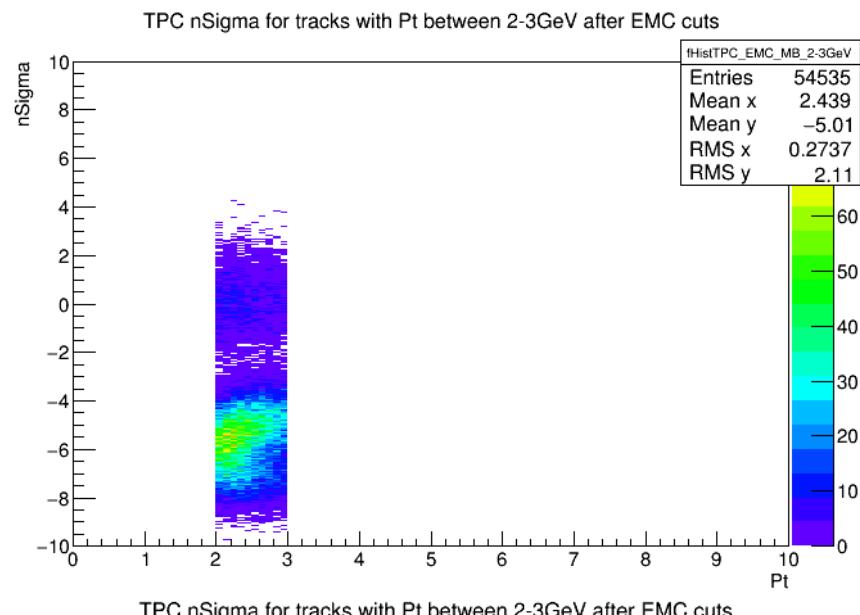


TPC nSigma for tracks with Pt between 1-2GeV after EMC cuts



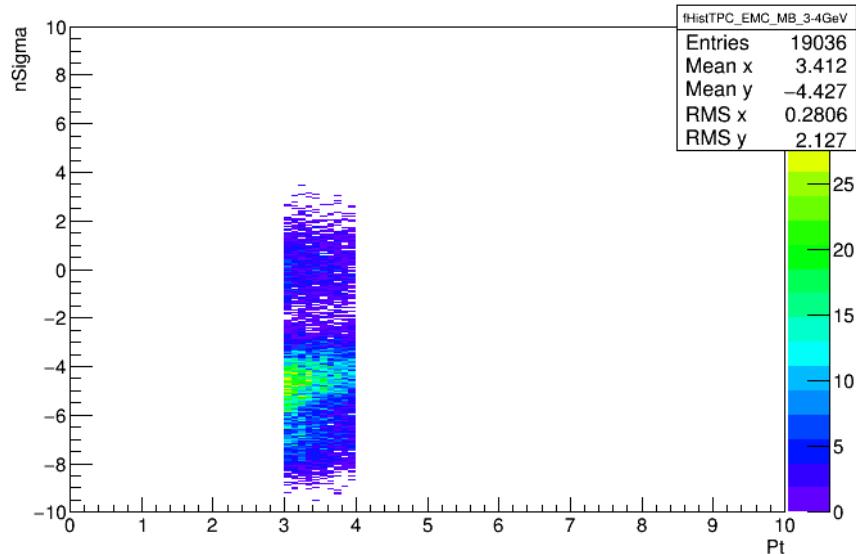
# TPC nSigma after 1+-0.1 E/p cut

## 2-3Gev

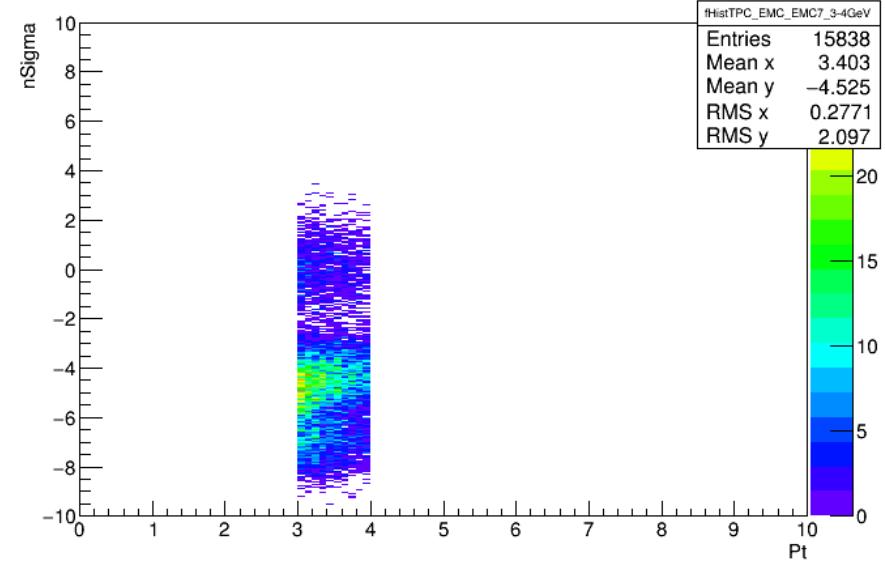


# TPC nSigma after 1+-0.1 E/p cut 3-4Gev

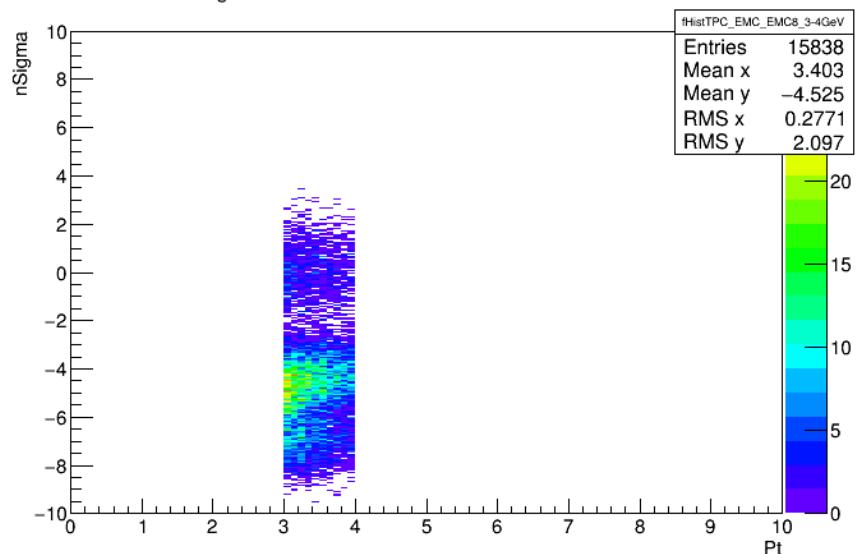
TPC nSigma for tracks with Pt between 3-4GeV after EMC cuts



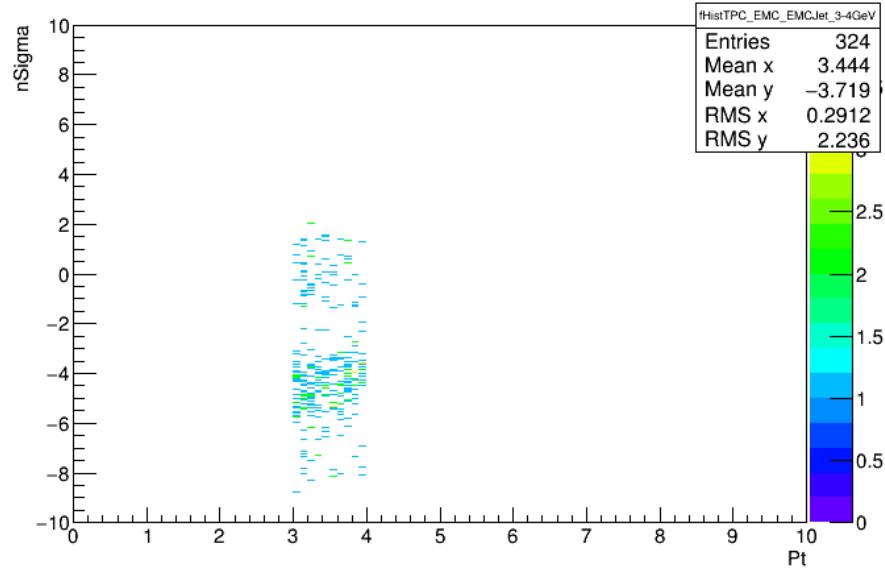
TPC nSigma for tracks with Pt between 3-4GeV after EMC cuts



TPC nSigma for tracks with Pt between 3-4GeV after EMC cuts

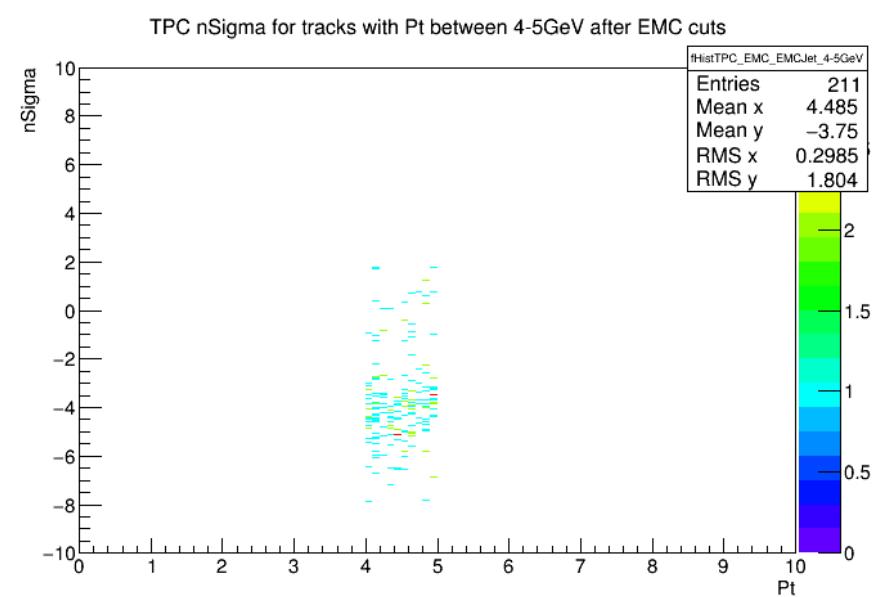
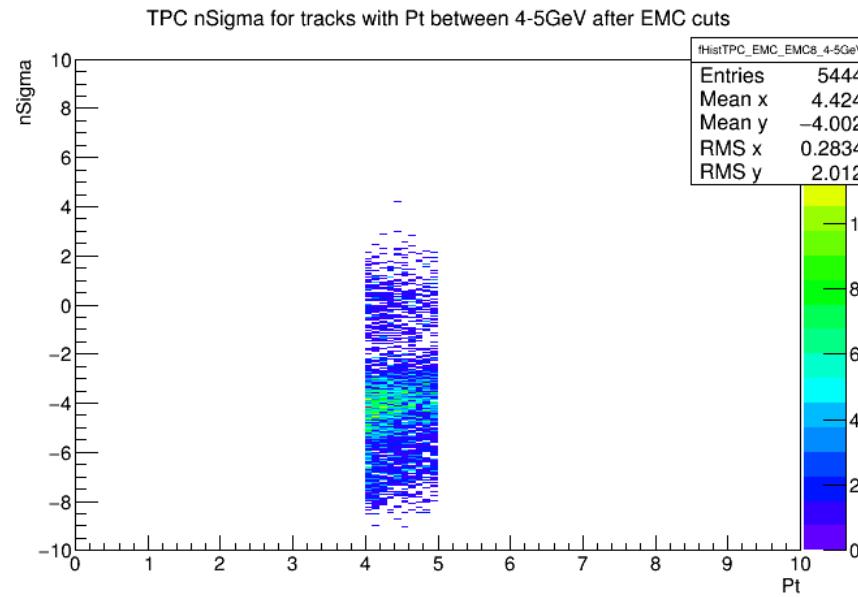
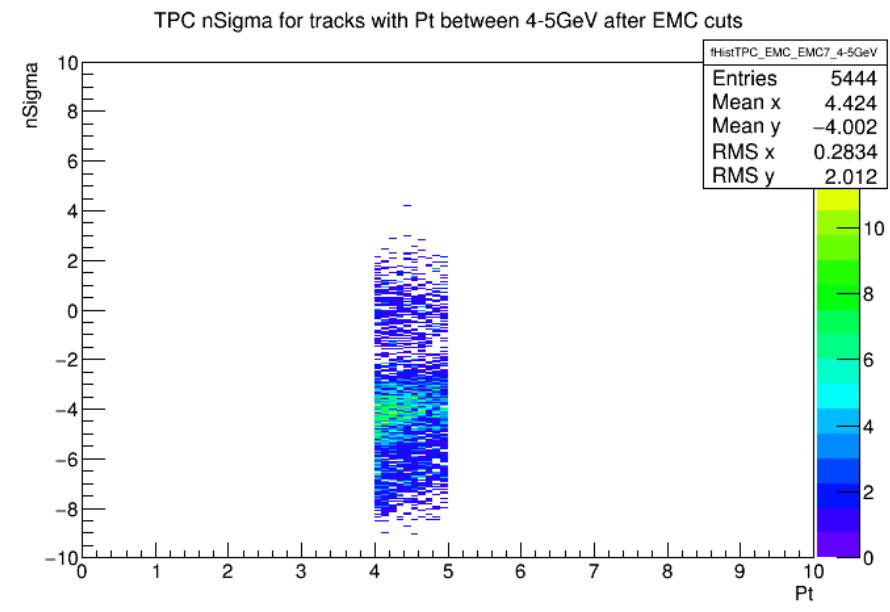
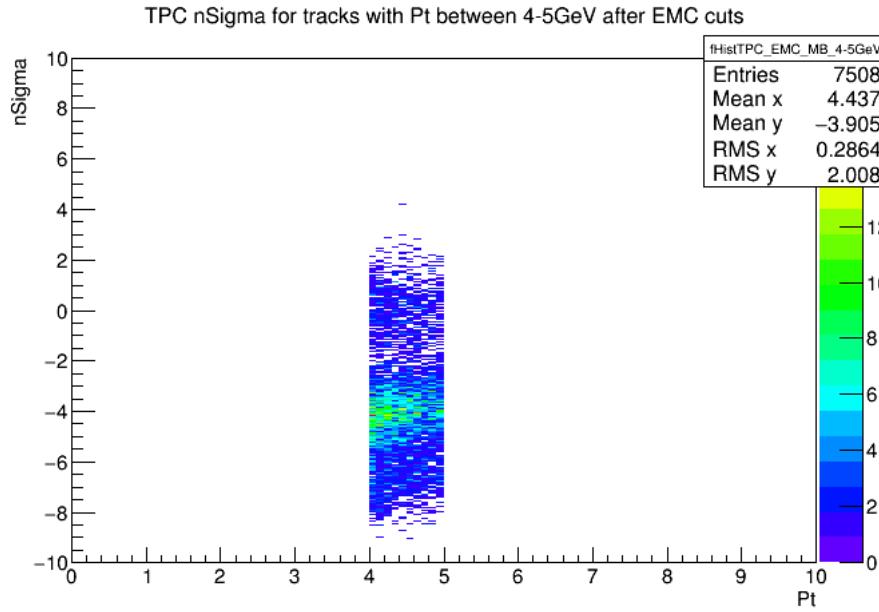


TPC nSigma for tracks with Pt between 3-4GeV after EMC cuts



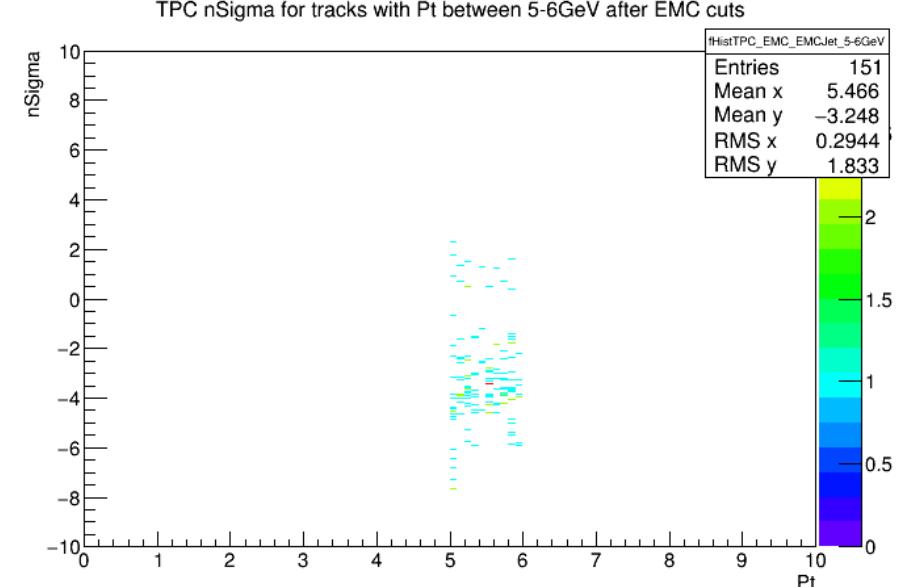
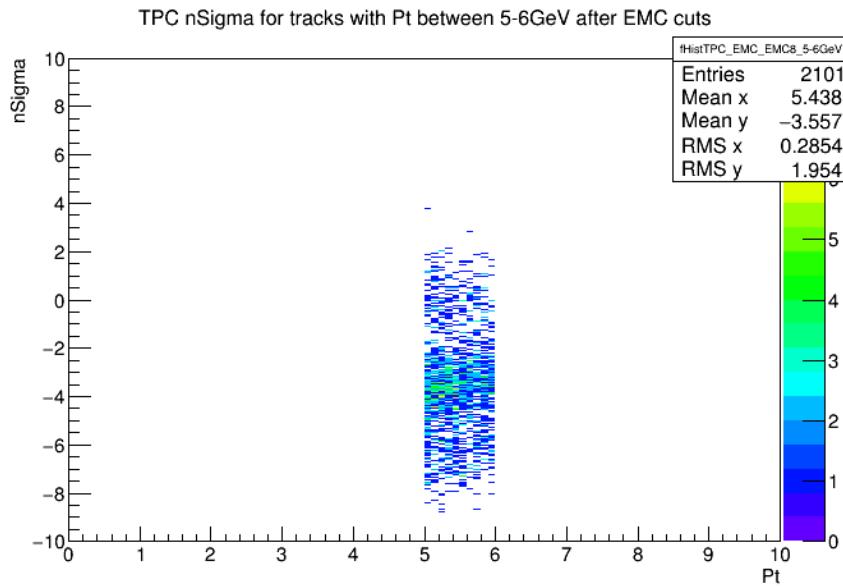
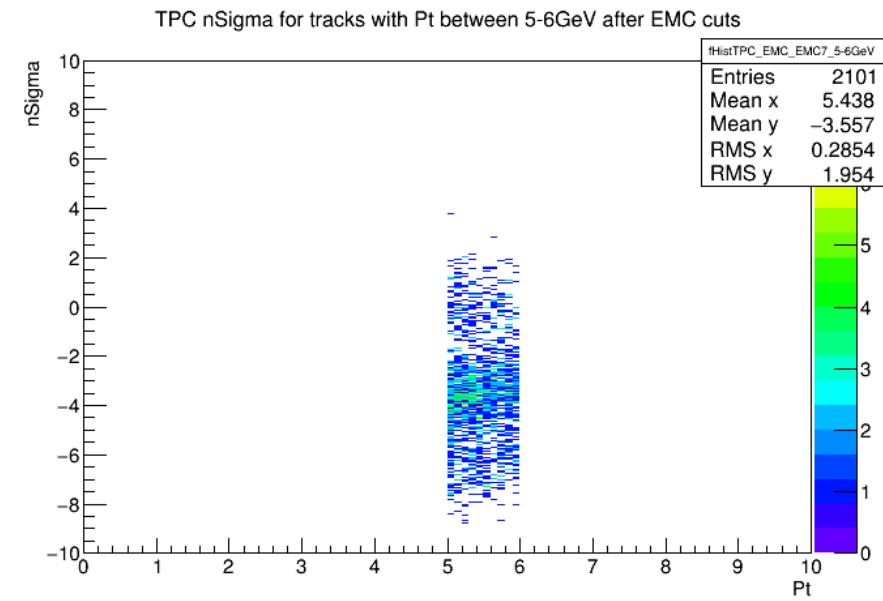
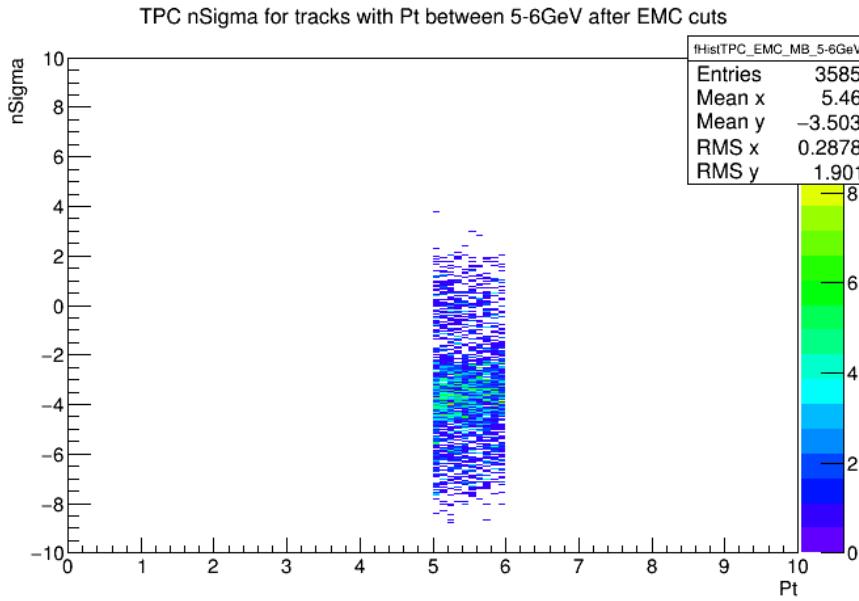
# TPC nSigma after 1+-0.1 E/p cut

## 4-5Gev



# TPC nSigma after 1+-0.1 E/p cut

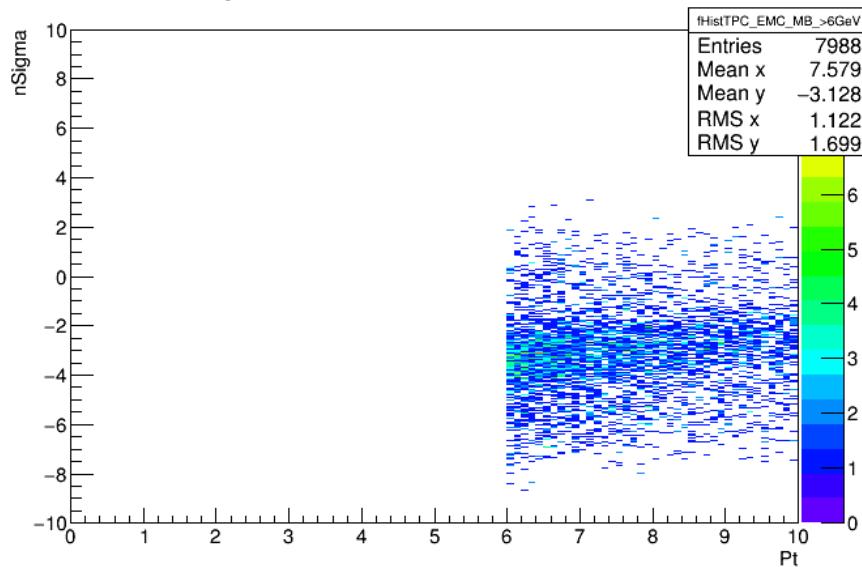
## 5-6Gev



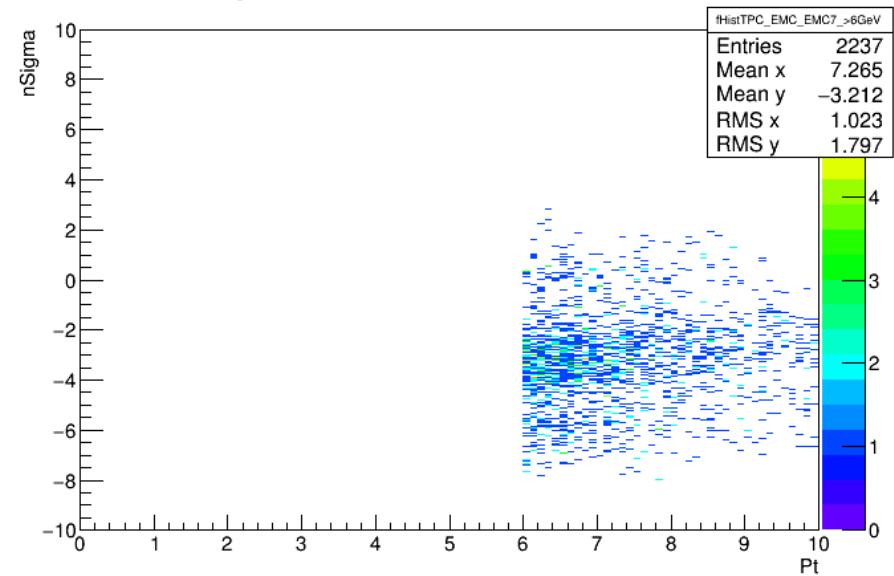
# TPC nSigma after 1+-0.1 E/p cut

>6Gev

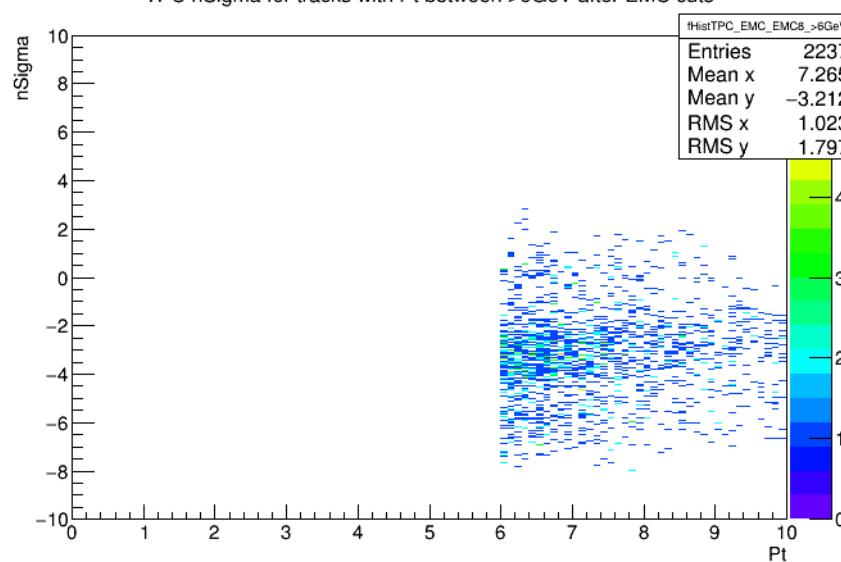
TPC nSigma for tracks with Pt between >6GeV after EMC cuts



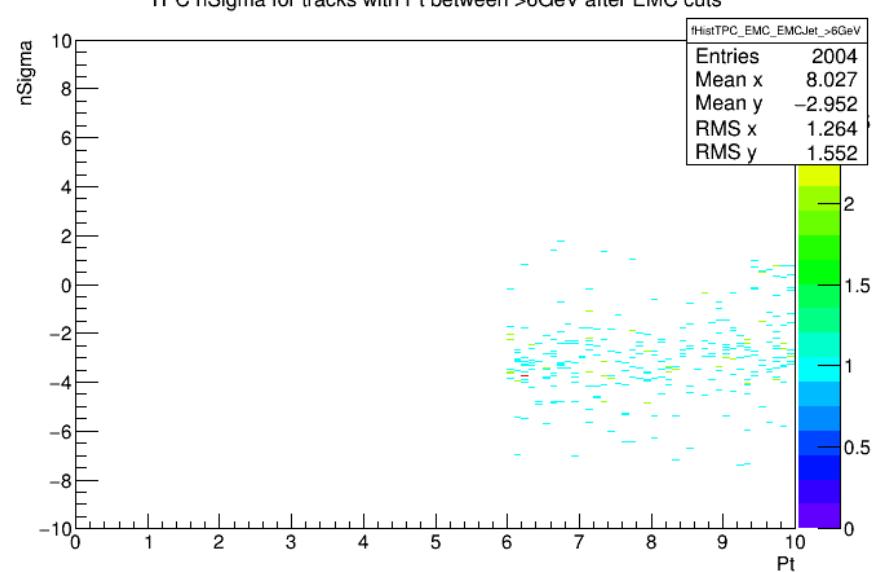
TPC nSigma for tracks with Pt between >6GeV after EMC cuts



TPC nSigma for tracks with Pt between >6GeV after EMC cuts



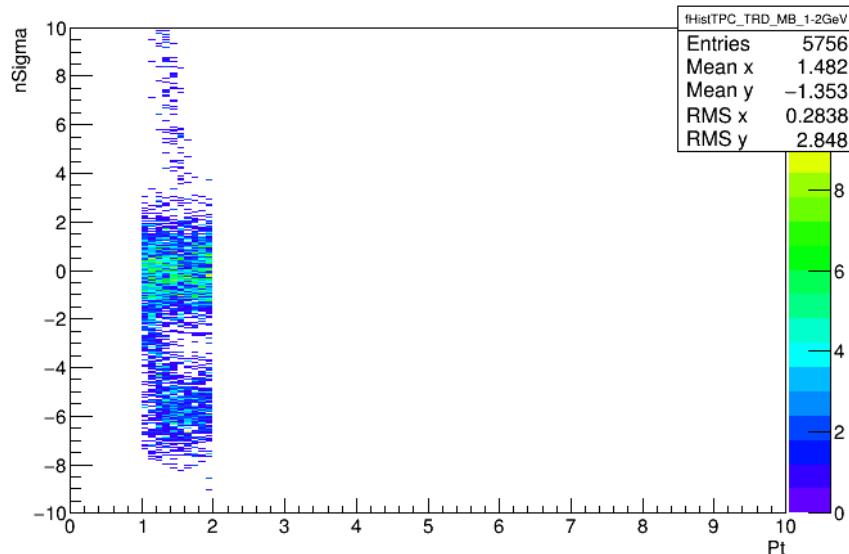
TPC nSigma for tracks with Pt between >6GeV after EMC cuts



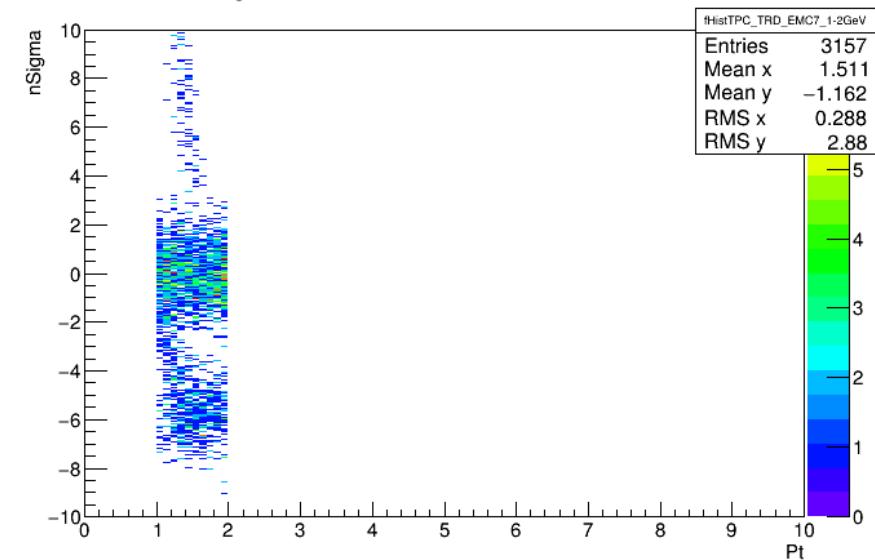
# TPC nSigma after >.9 TRD cut

## 1-2Gev

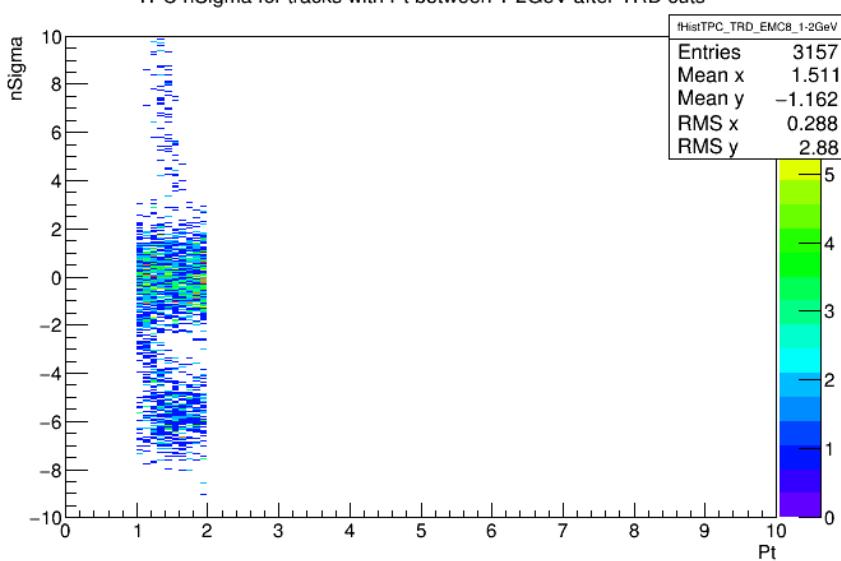
TPC nSigma for tracks with Pt between 1-2GeV after TRD cuts



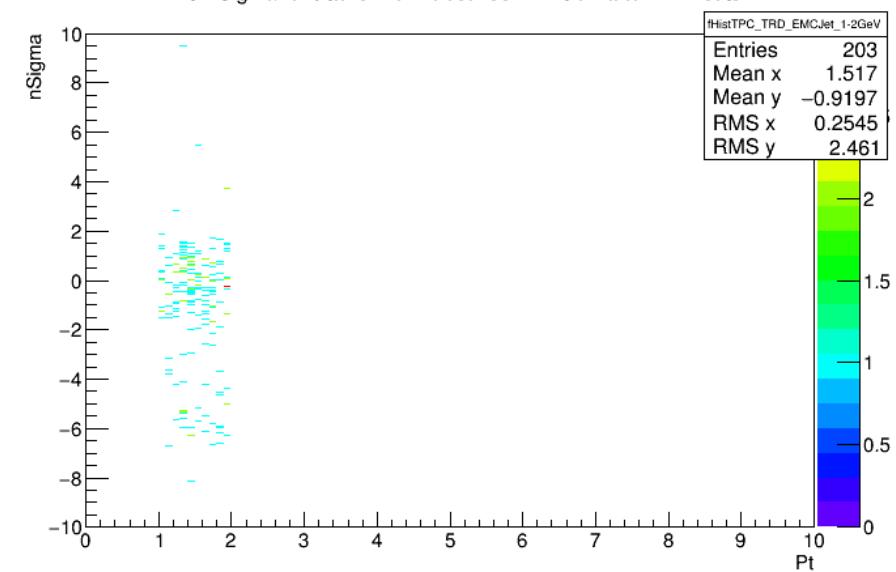
TPC nSigma for tracks with Pt between 1-2GeV after TRD cuts



TPC nSigma for tracks with Pt between 1-2GeV after TRD cuts

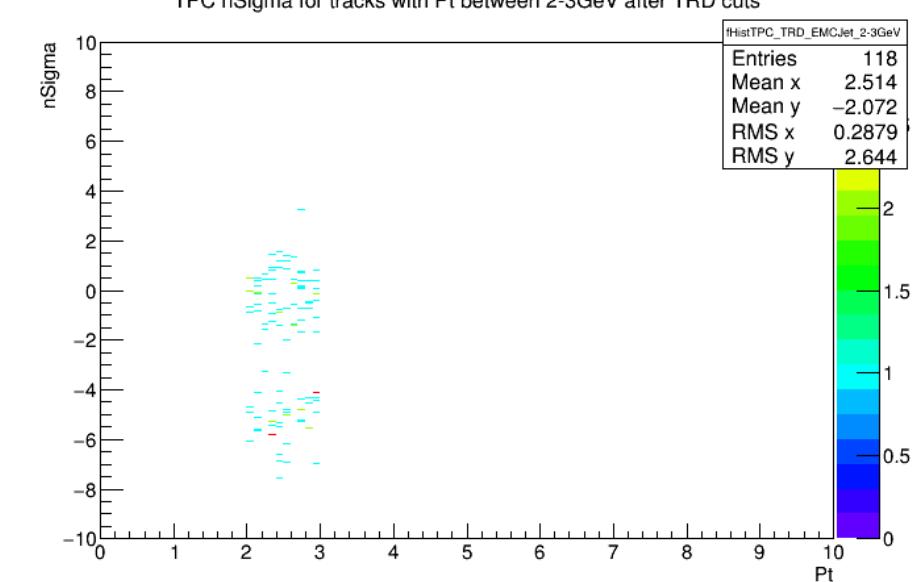
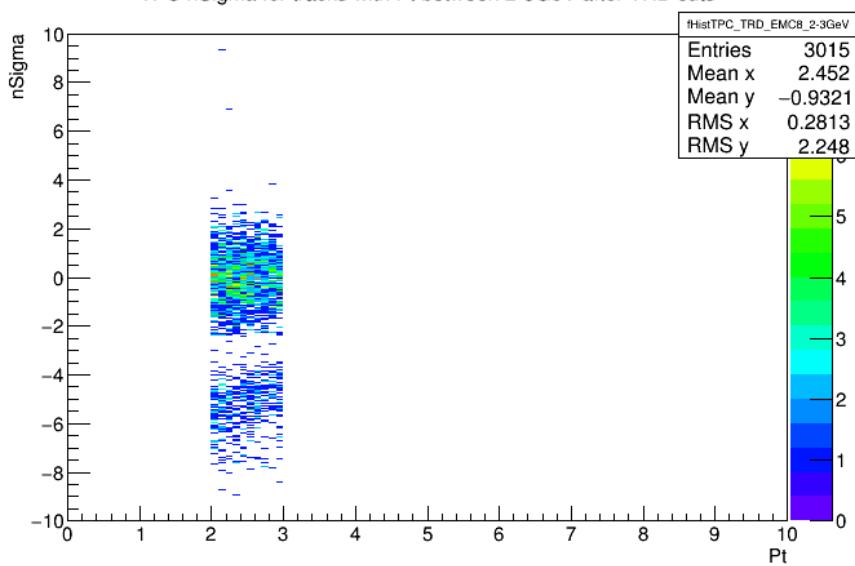
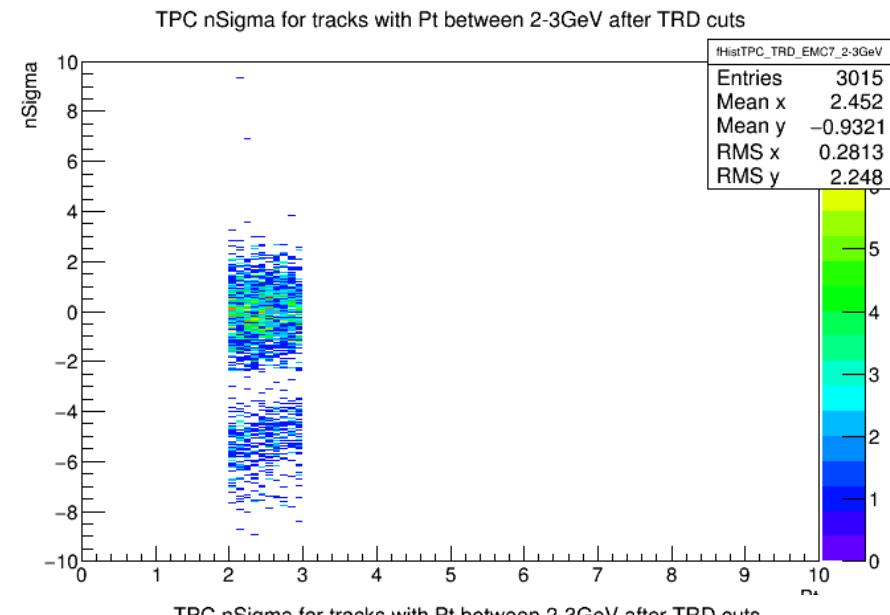
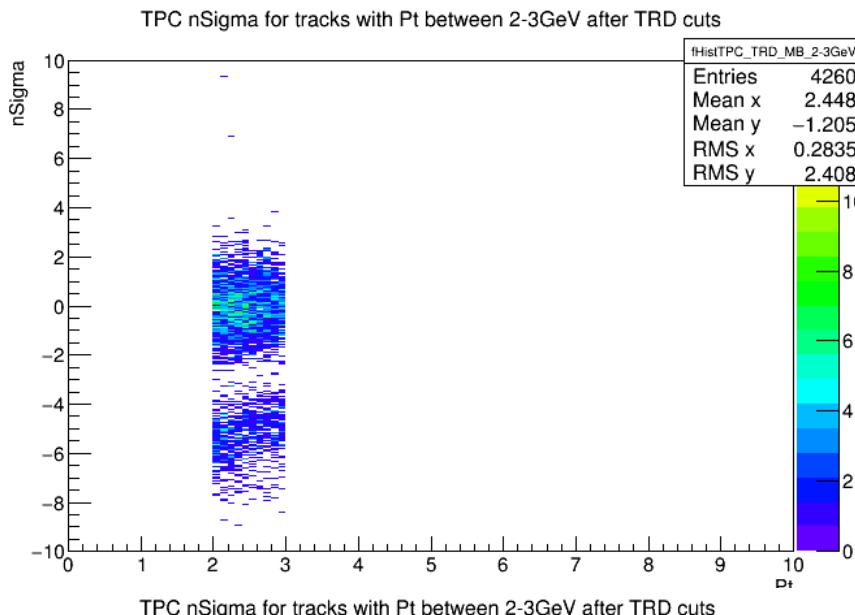


TPC nSigma for tracks with Pt between 1-2GeV after TRD cuts

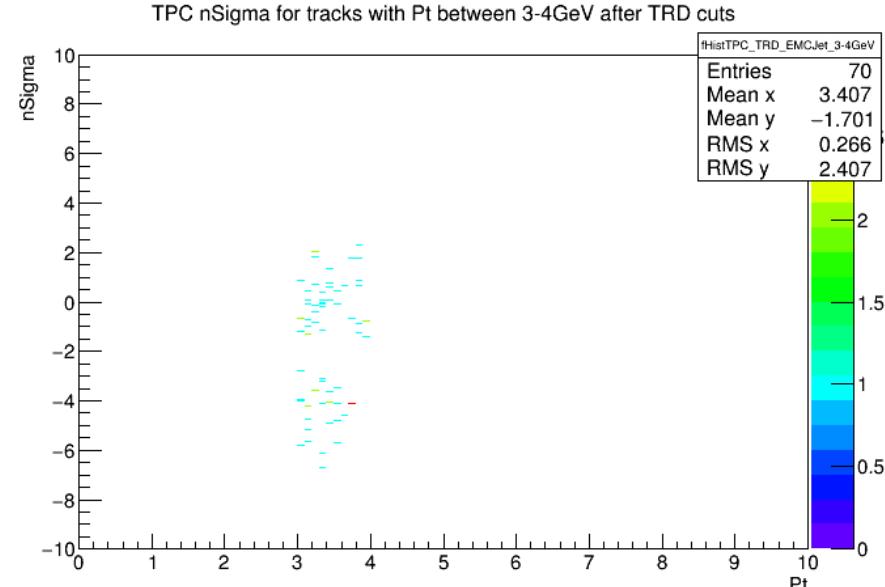
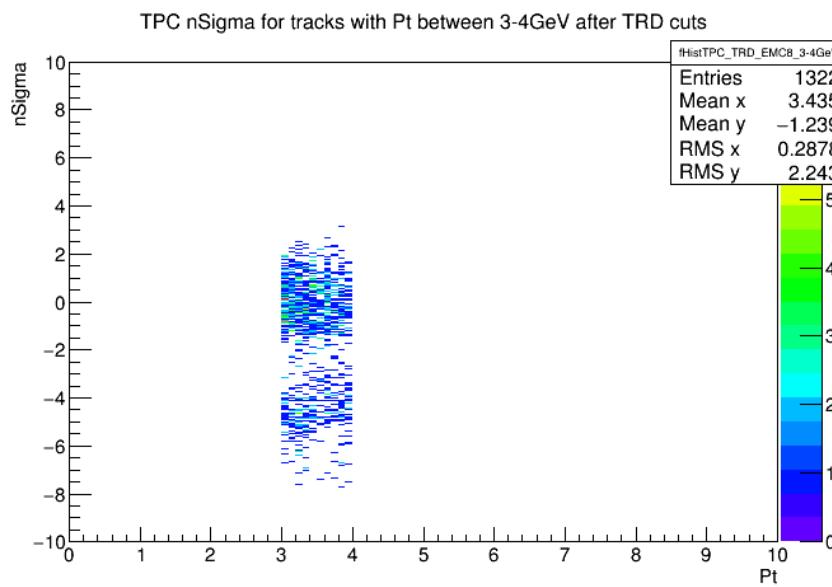
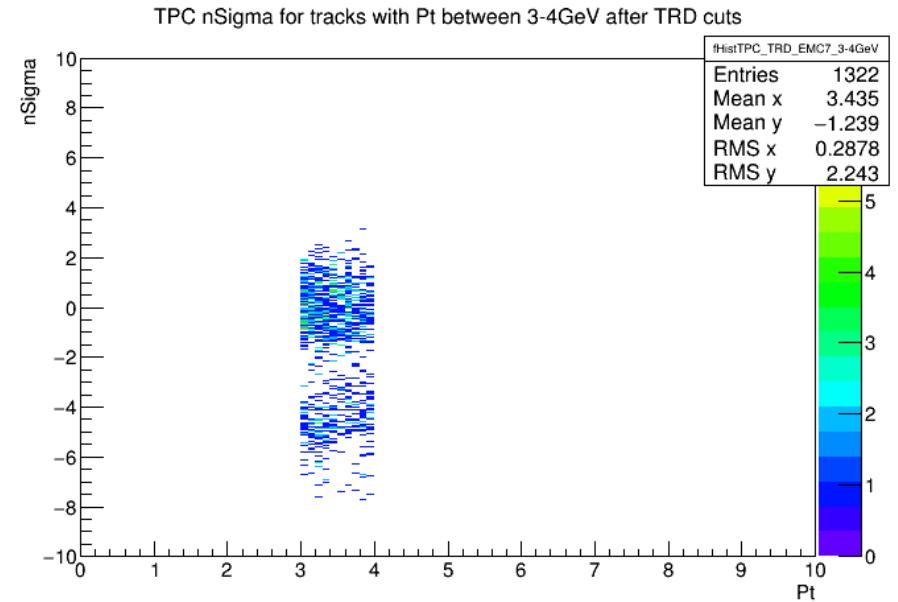
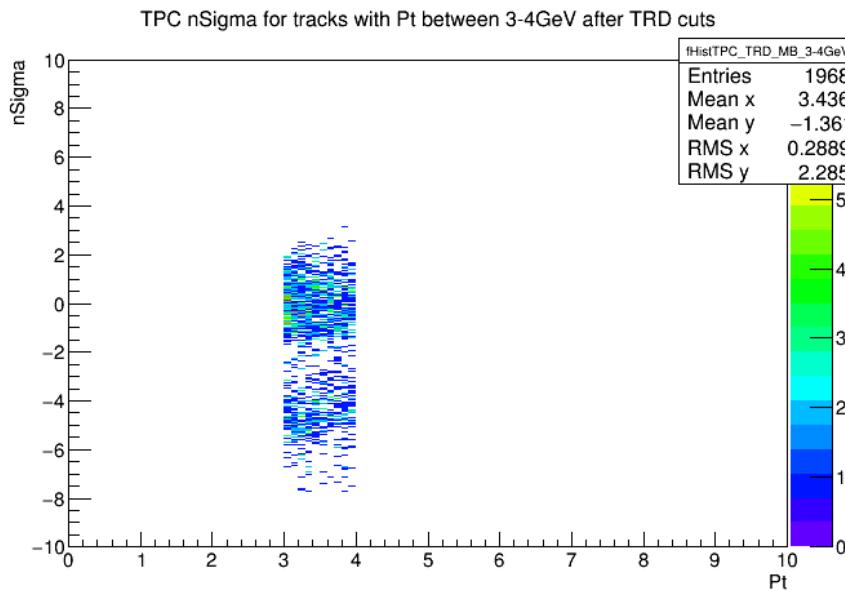


# TPC nSigma after >.9 TRD cut

## 2-3Gev



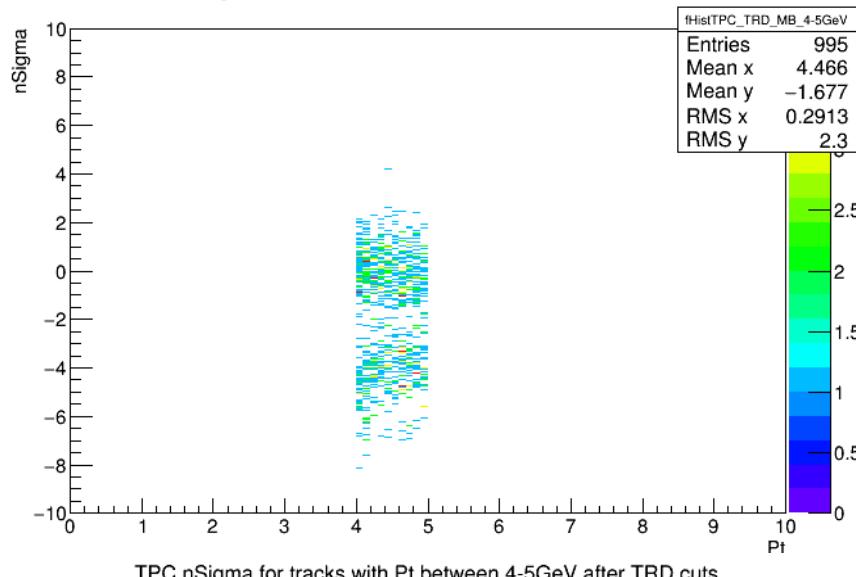
# TPC nSigma after >.9 TRD cut 3-4Gev



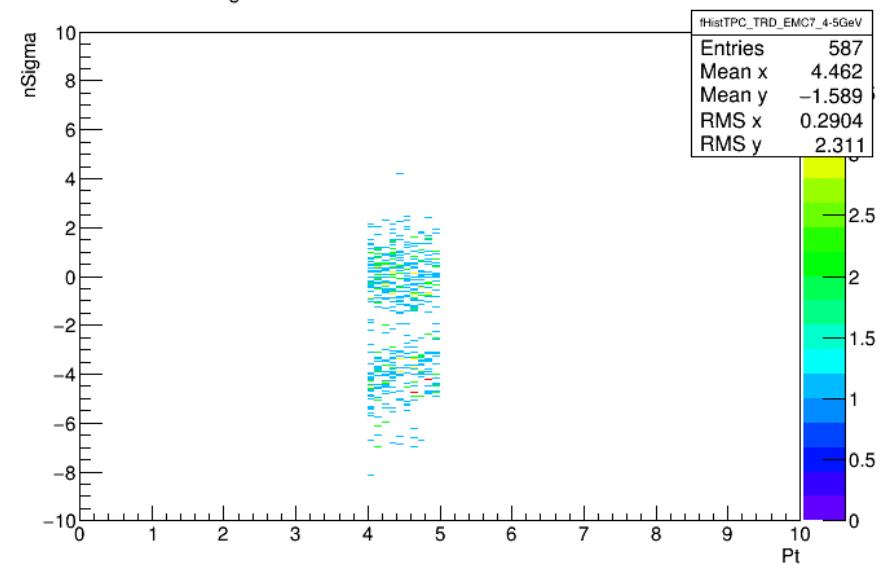
# TPC nSigma after >.9 TRD cut

## 4-5Gev

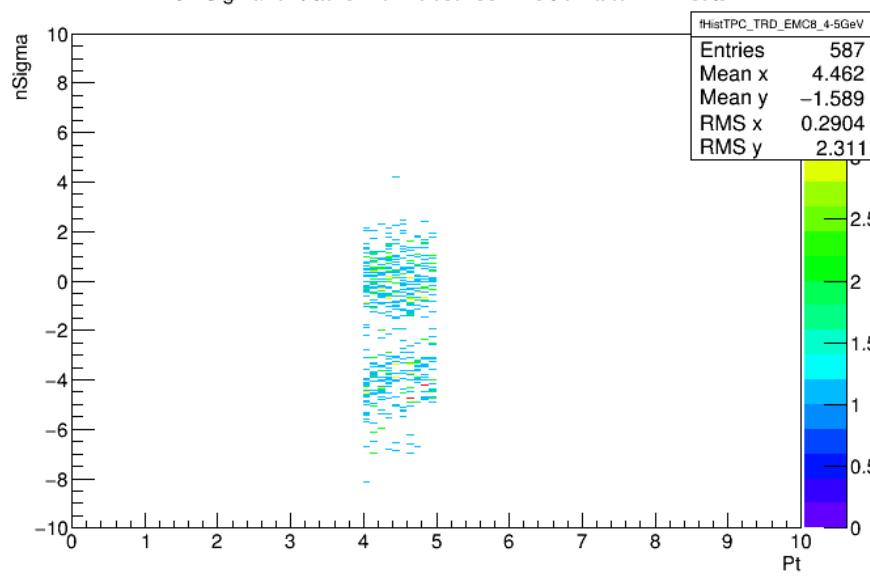
TPC nSigma for tracks with Pt between 4-5GeV after TRD cuts



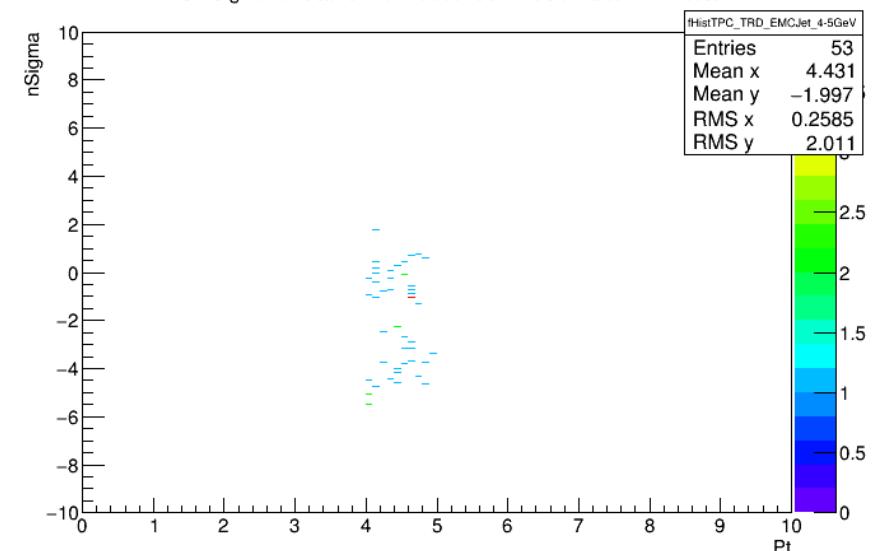
TPC nSigma for tracks with Pt between 4-5GeV after TRD cuts



TPC nSigma for tracks with Pt between 4-5GeV after TRD cuts

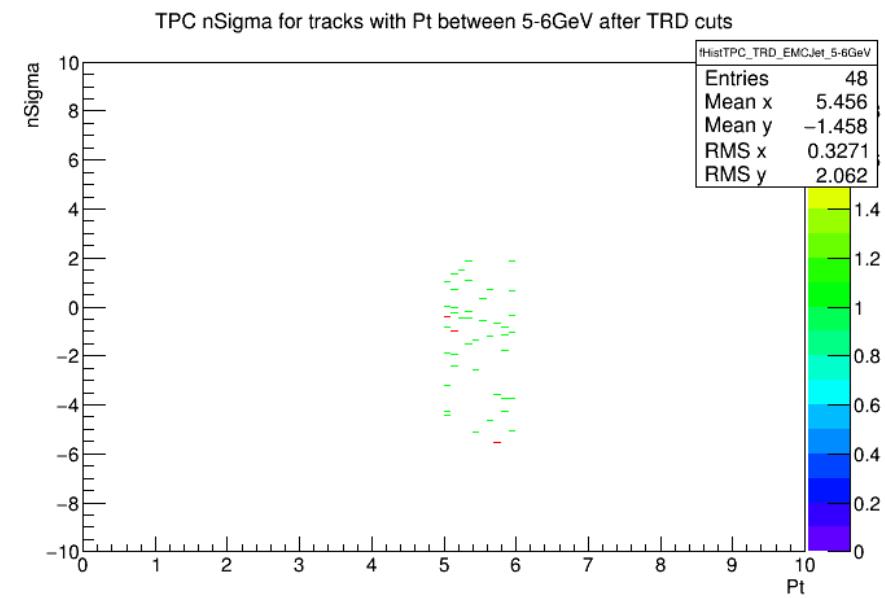
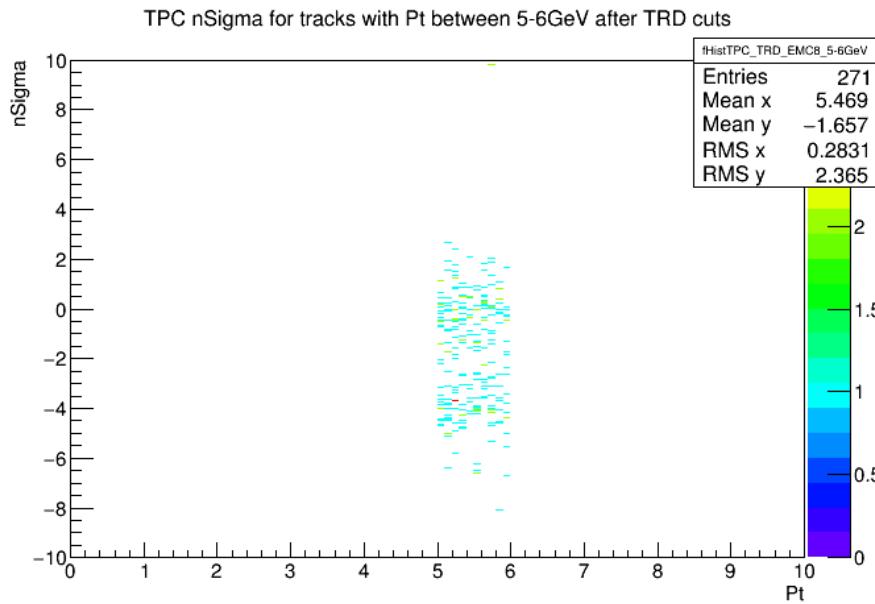
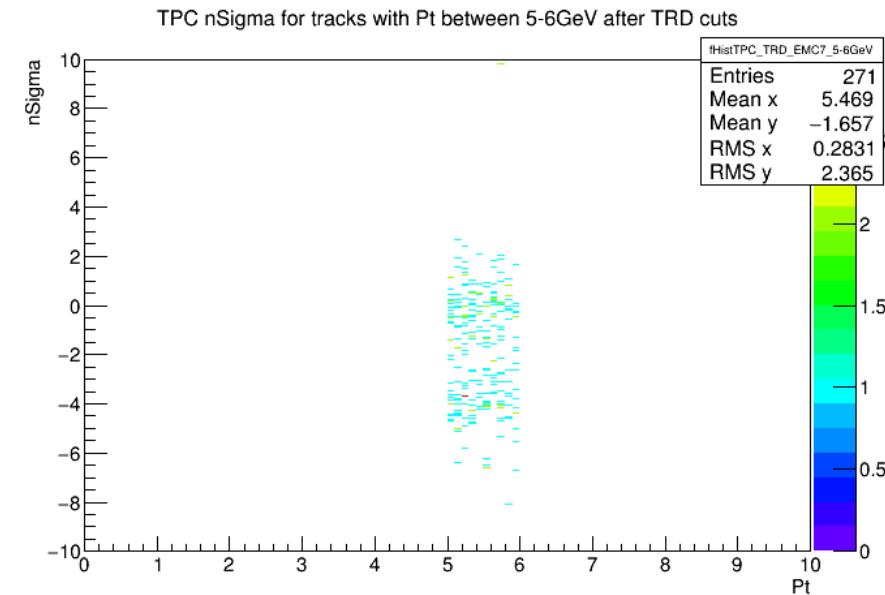
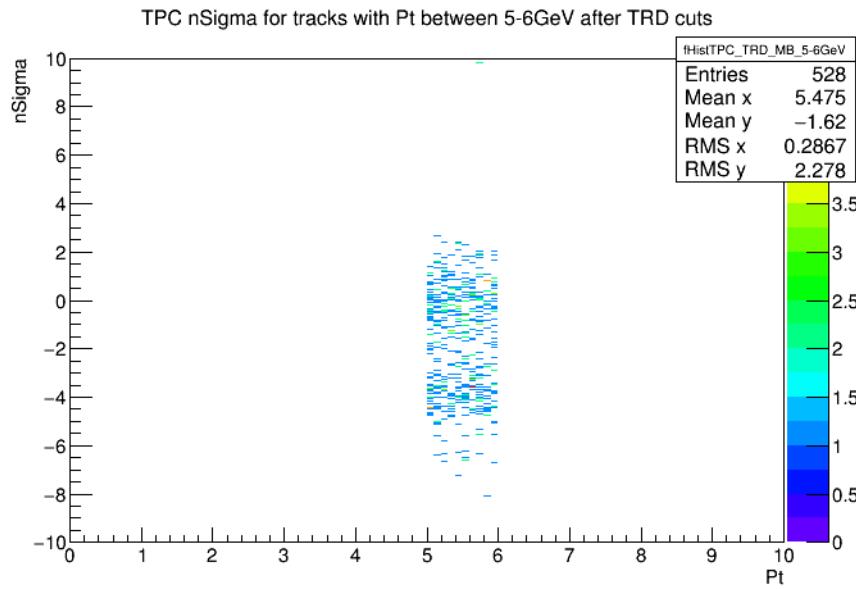


TPC nSigma for tracks with Pt between 4-5GeV after TRD cuts



# TPC nSigma after >.9 TRD cut

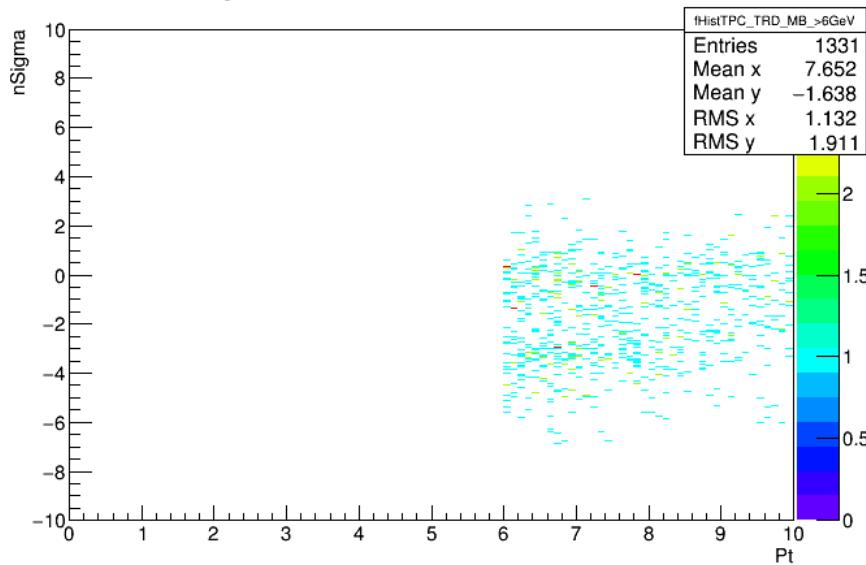
## 5-6Gev



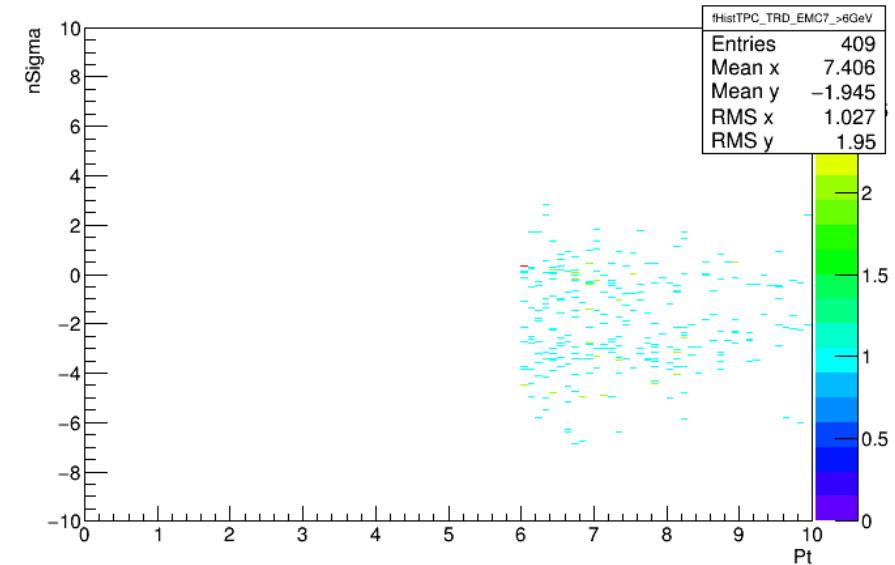
# TPC nSigma after >.9 TRD cut

## >6Gev

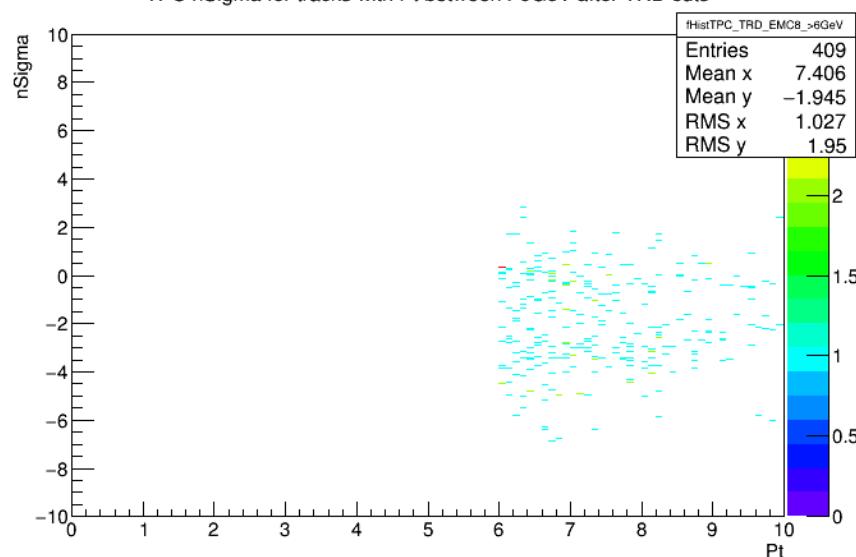
TPC nSigma for tracks with Pt between >6GeV after TRD cuts



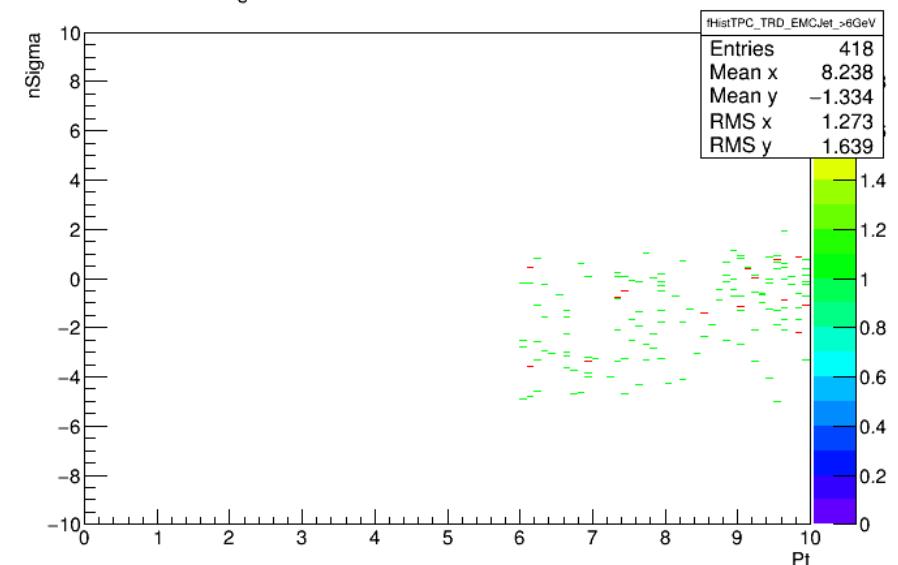
TPC nSigma for tracks with Pt between >6GeV after TRD cuts



TPC nSigma for tracks with Pt between >6GeV after TRD cuts



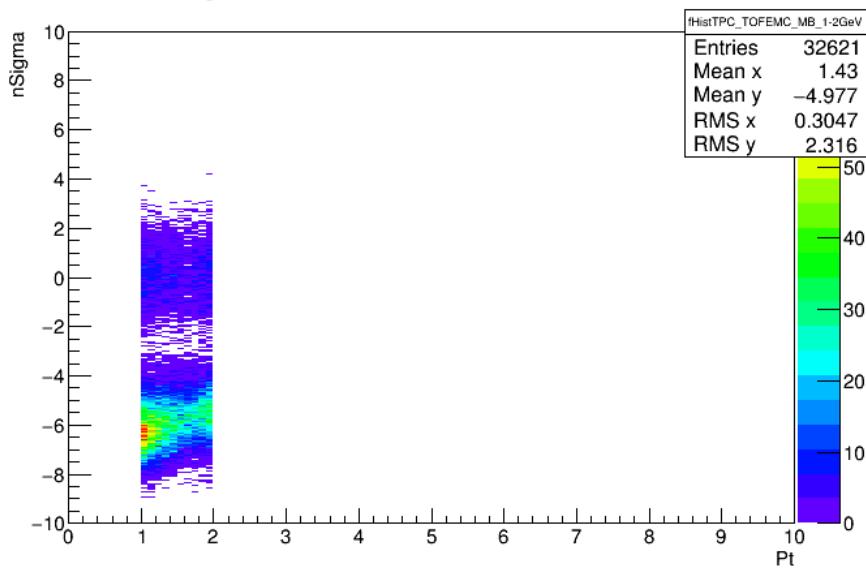
TPC nSigma for tracks with Pt between >6GeV after TRD cuts



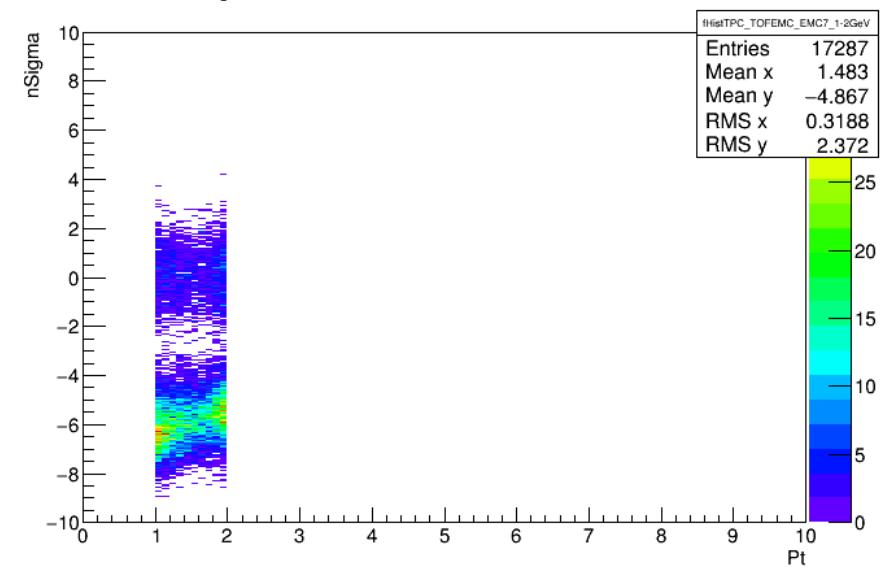
# TPC nSigma after 2Sig TOF Cut and 1+-0.1 E/p cut

## 1-2Gev

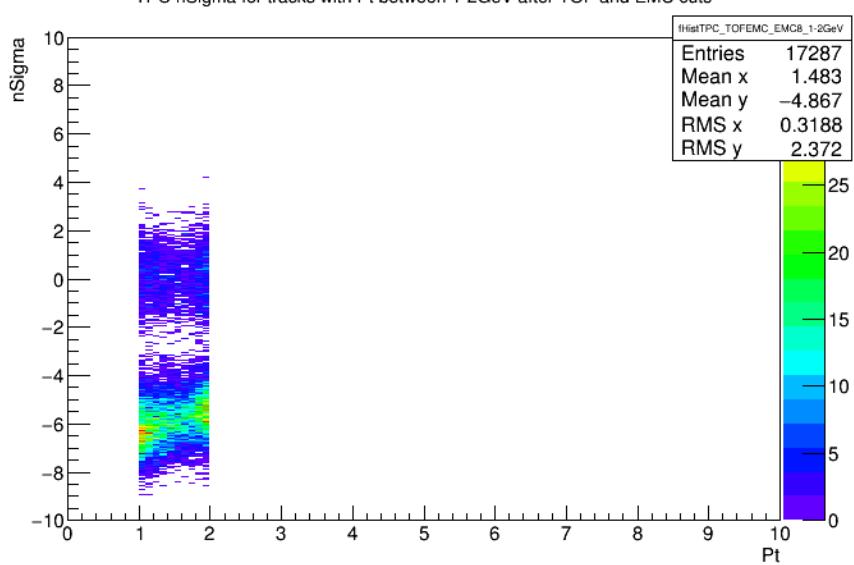
TPC nSigma for tracks with Pt between 1-2GeV after TOF and EMC cuts



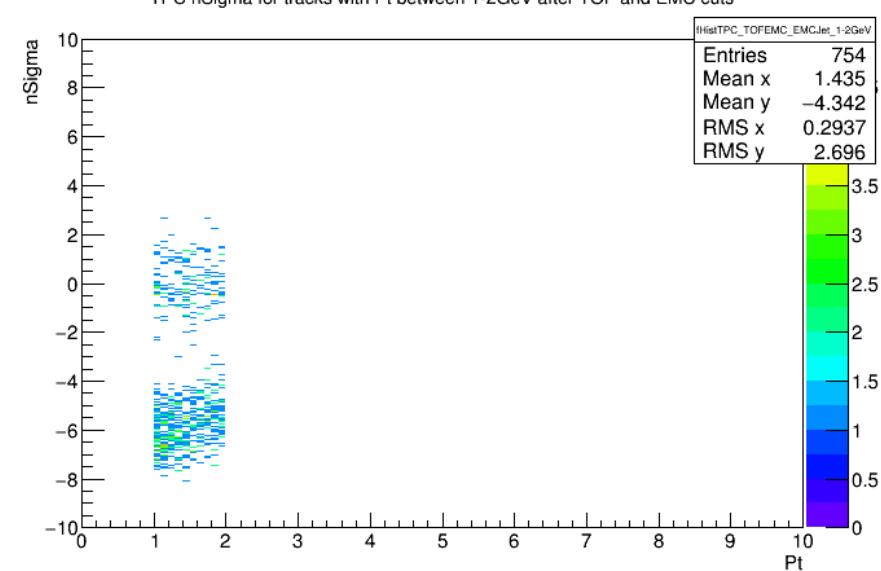
TPC nSigma for tracks with Pt between 1-2GeV after TOF and EMC cuts



TPC nSigma for tracks with Pt between 1-2GeV after TOF and EMC cuts



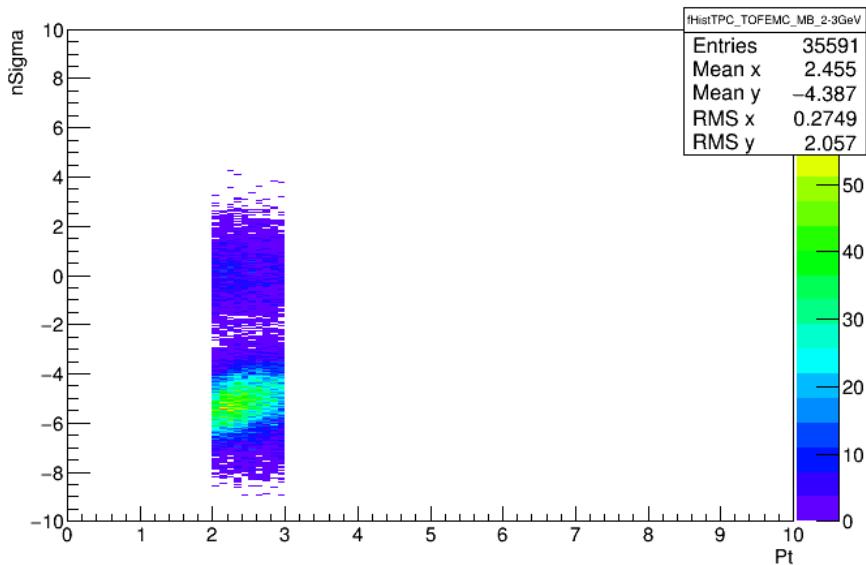
TPC nSigma for tracks with Pt between 1-2GeV after TOF and EMC cuts



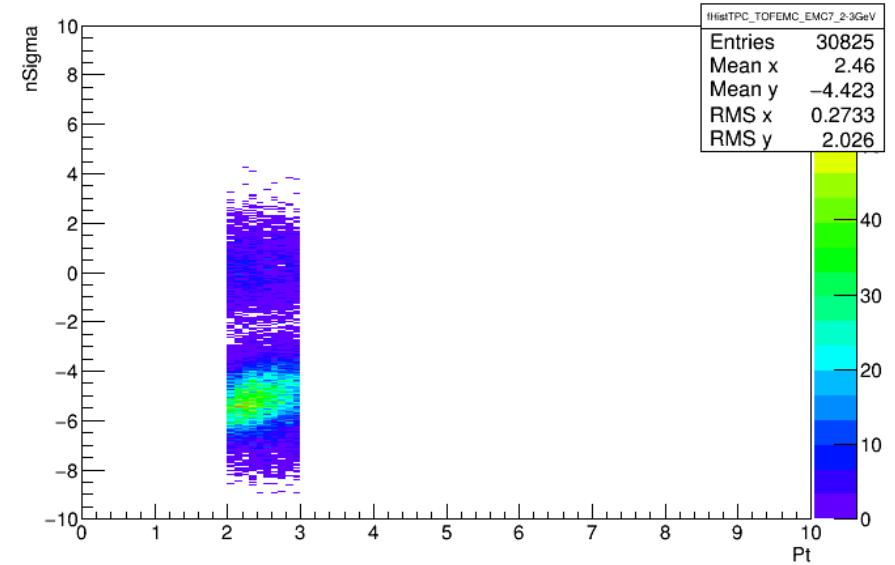
# TPC nSigma after 2Sig TOF cut and 1+-0.1 E/p cut

## 2-3Gev

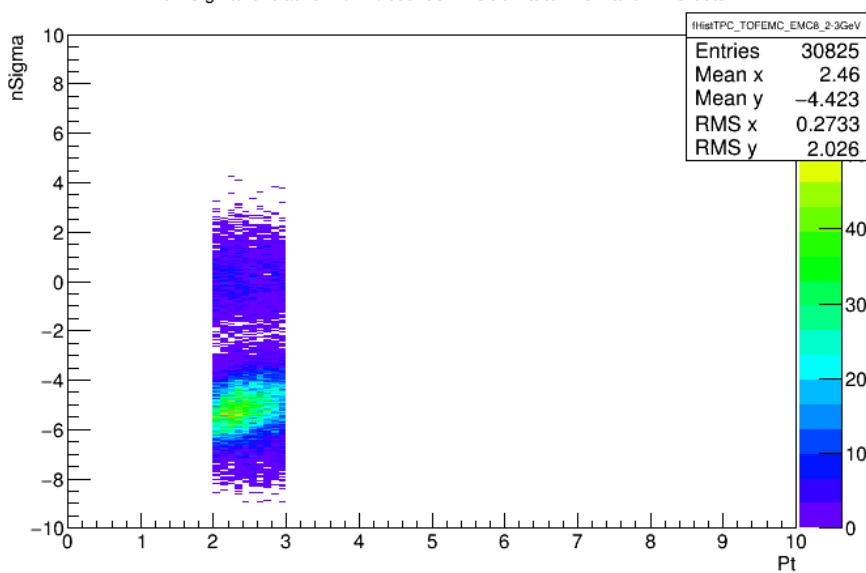
TPC nSigma for tracks with Pt between 2-3GeV after TOF and EMC cuts



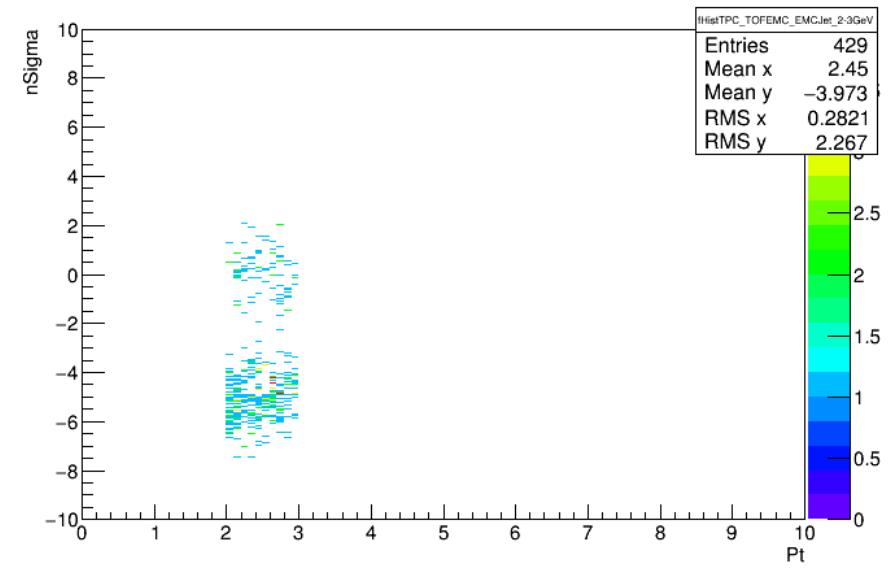
TPC nSigma for tracks with Pt between 2-3GeV after TOF and EMC cuts



TPC nSigma for tracks with Pt between 2-3GeV after TOF and EMC cuts

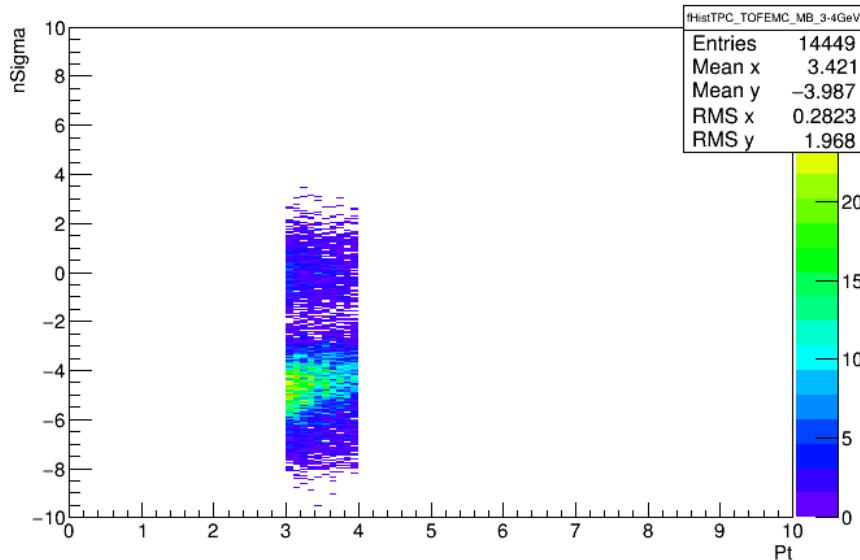


TPC nSigma for tracks with Pt between 2-3GeV after TOF and EMC cuts

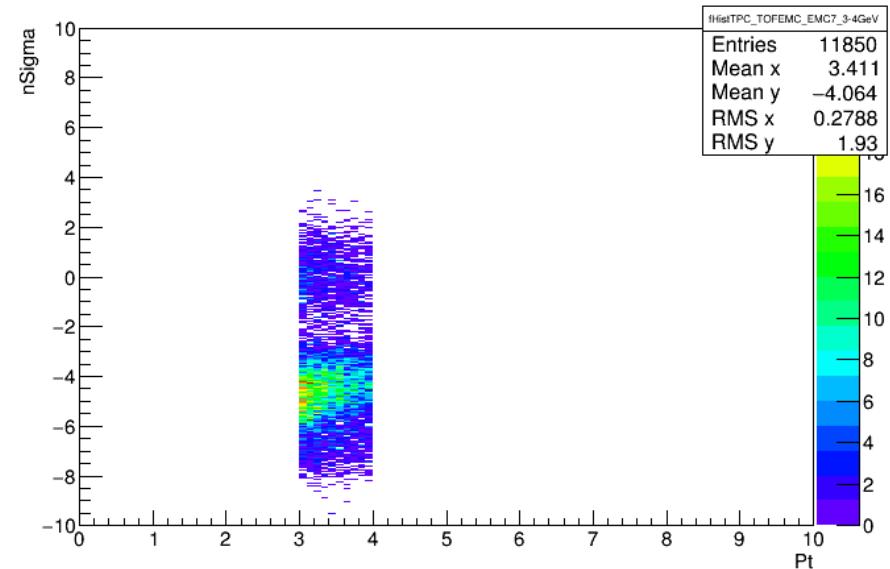


# TPC nSigma after 2Sig TOF cut and 3-4Gev 1+-0.1 E/p cut

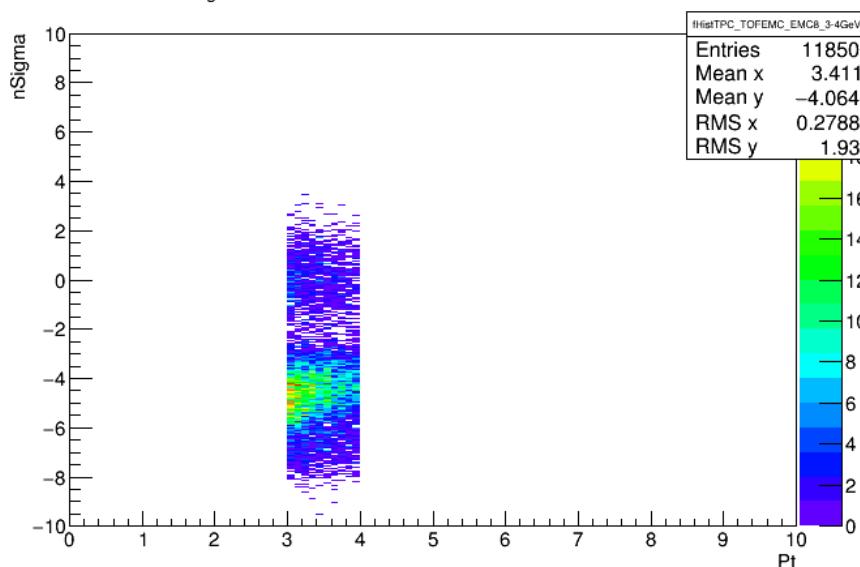
TPC nSigma for tracks with Pt between 3-4GeV after TOF and EMC cuts



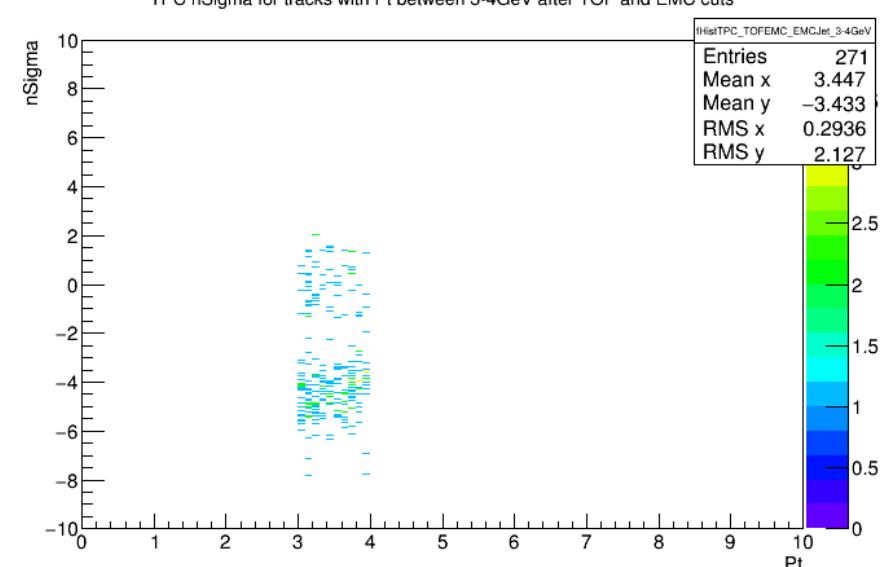
TPC nSigma for tracks with Pt between 3-4GeV after TOF and EMC cuts



TPC nSigma for tracks with Pt between 3-4GeV after TOF and EMC cuts



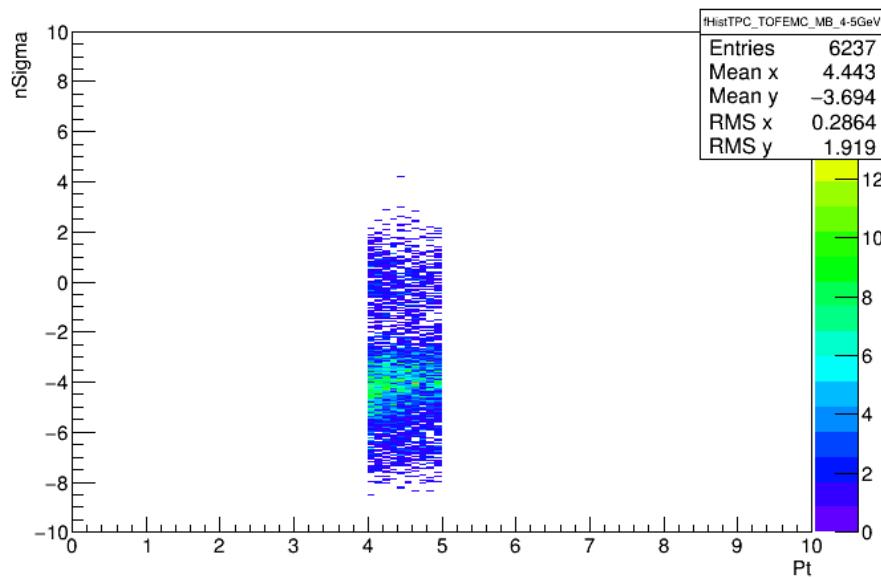
TPC nSigma for tracks with Pt between 3-4GeV after TOF and EMC cuts



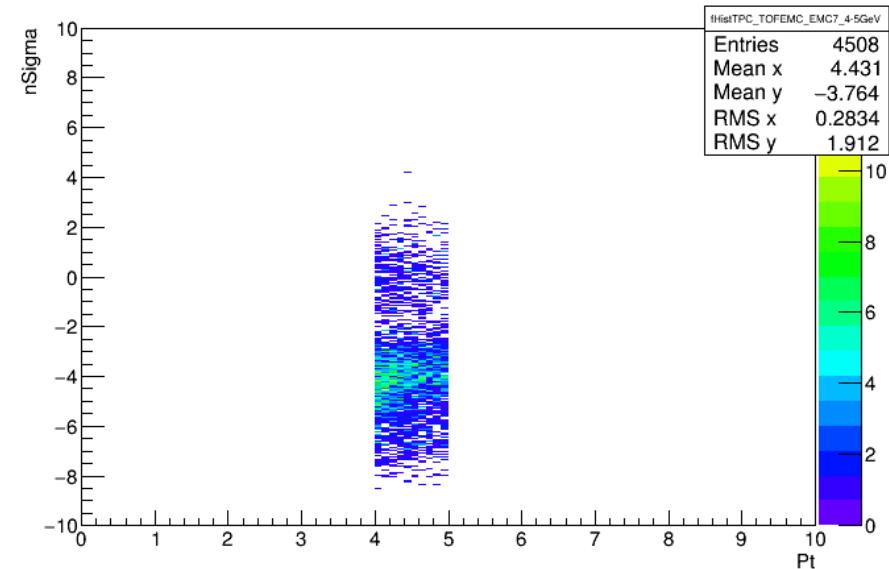
# TPC nSigma after 2Sig TOF cut and 1+-0.1 E/p cut

## 4-5Gev

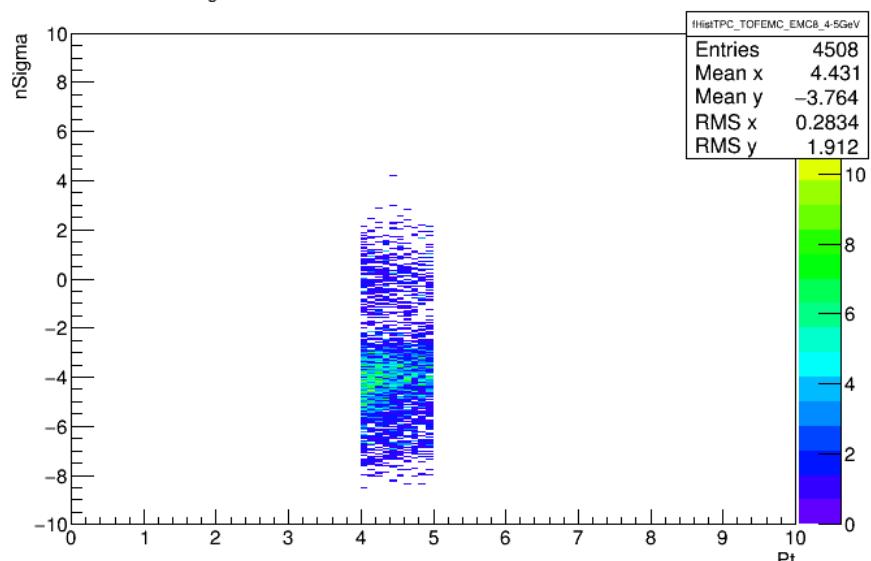
TPC nSigma for tracks with Pt between 4-5GeV after TOF and EMC cuts



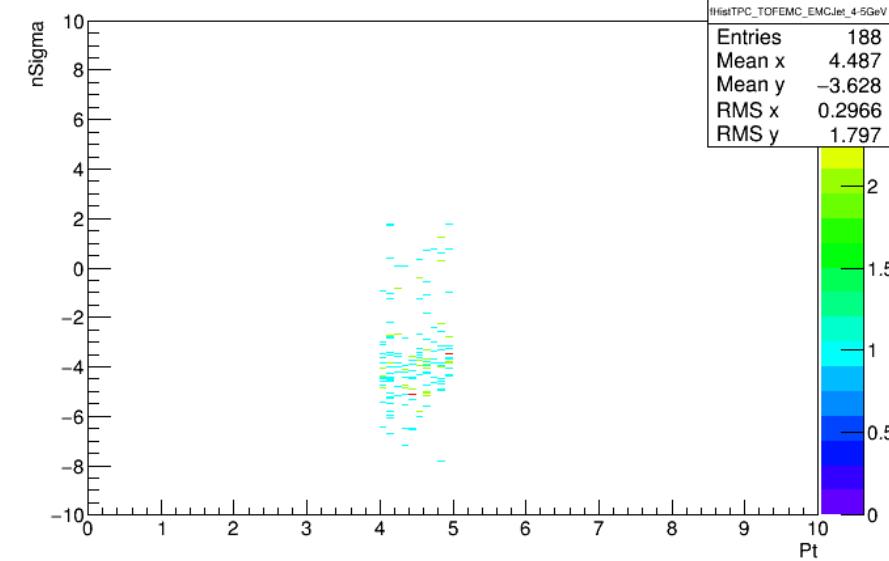
TPC nSigma for tracks with Pt between 4-5GeV after TOF and EMC cuts



TPC nSigma for tracks with Pt between 4-5GeV after TOF and EMC cuts

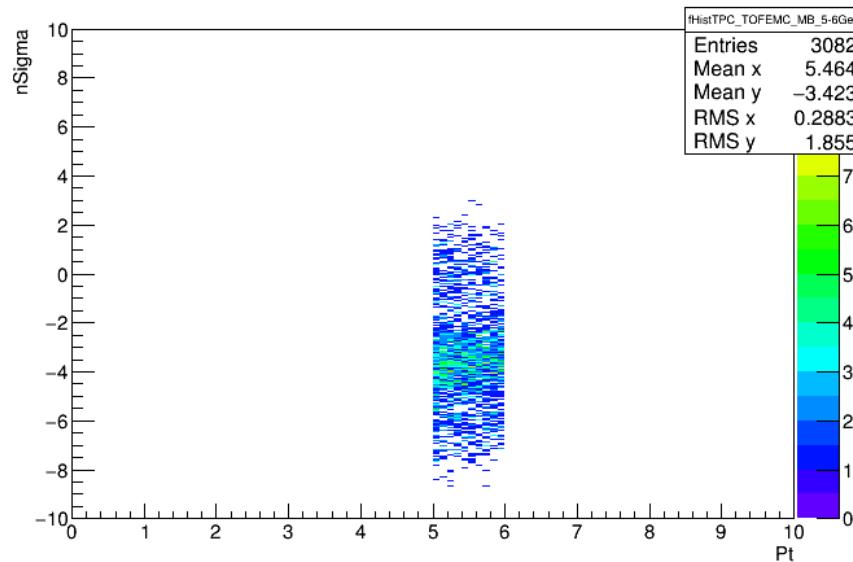


TPC nSigma for tracks with Pt between 4-5GeV after TOF and EMC cuts

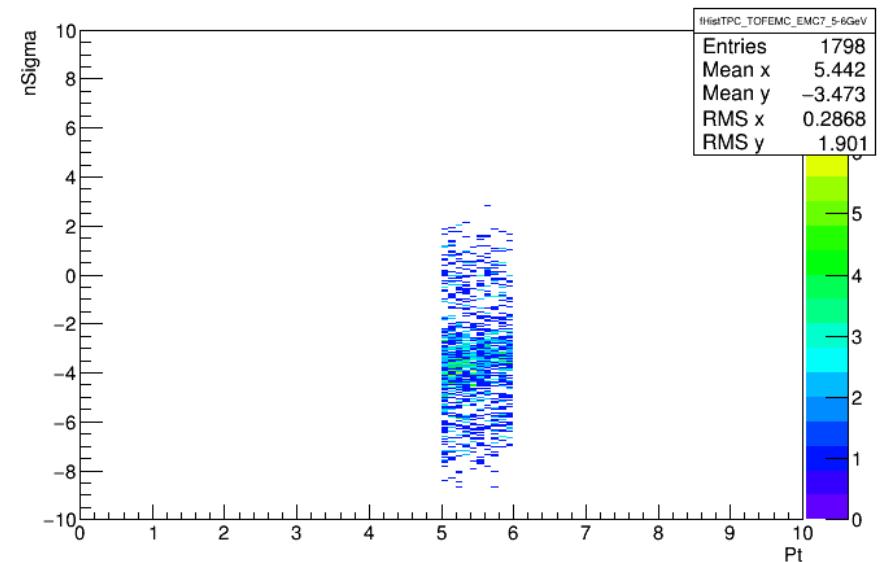


# TPC nSigma after 2Sig TOF cut and 5-6Gev 1+-0.1 E/p cut

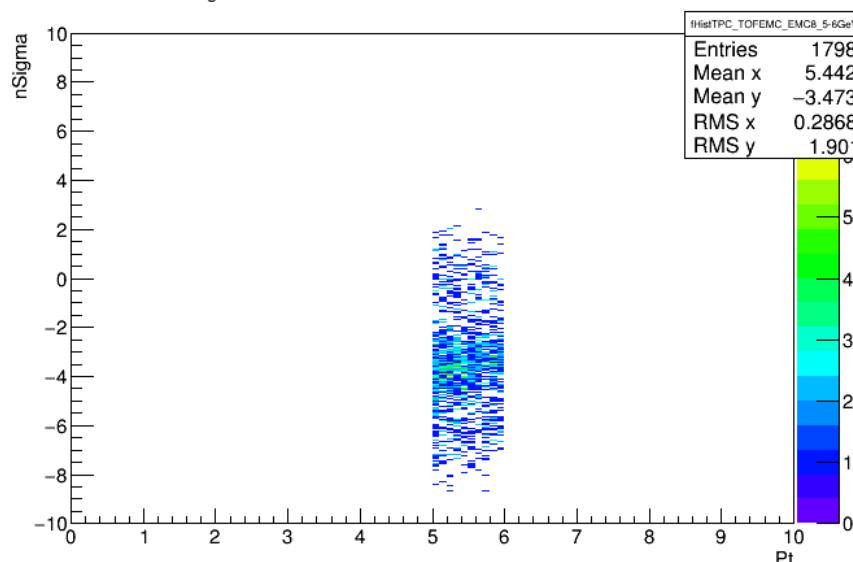
TPC nSigma for tracks with Pt between 5-6GeV after TOF and EMC cuts



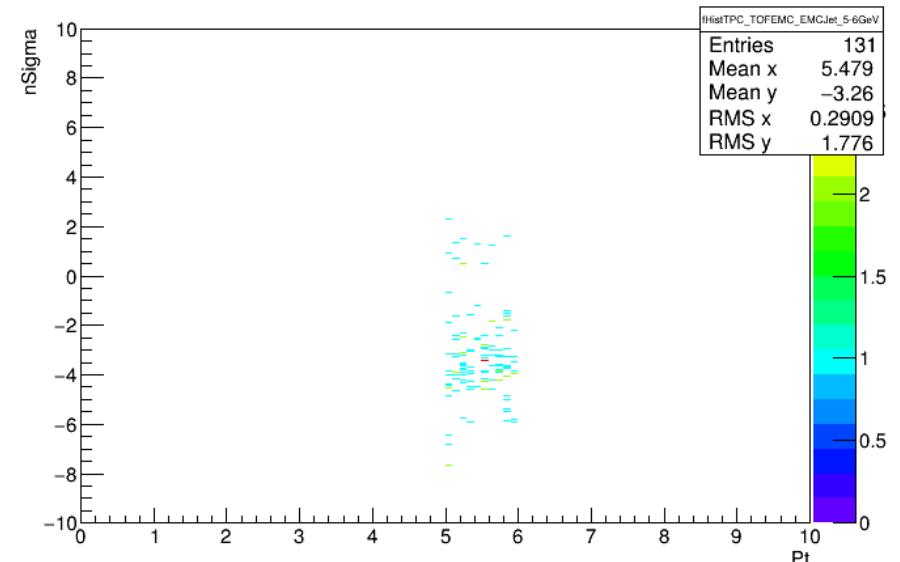
TPC nSigma for tracks with Pt between 5-6GeV after TOF and EMC cuts



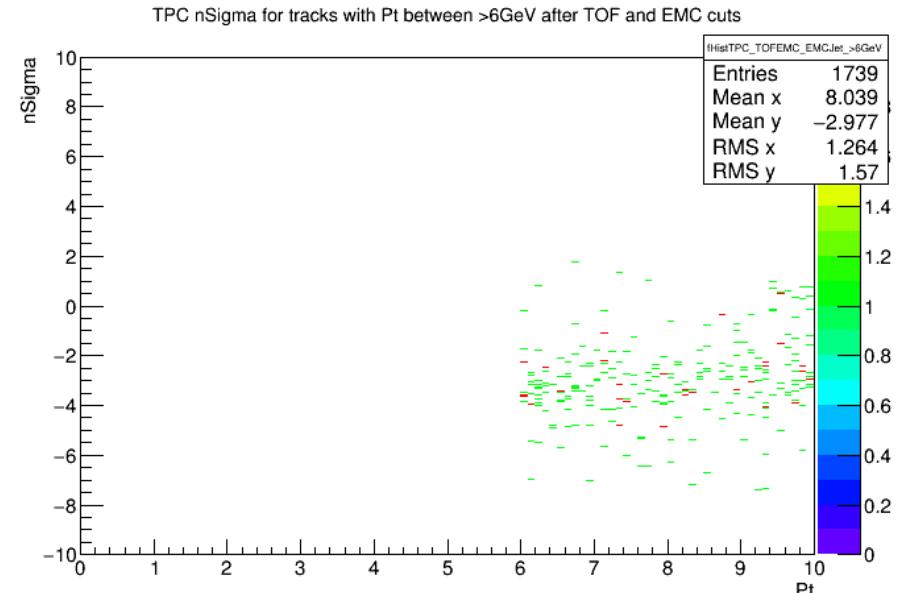
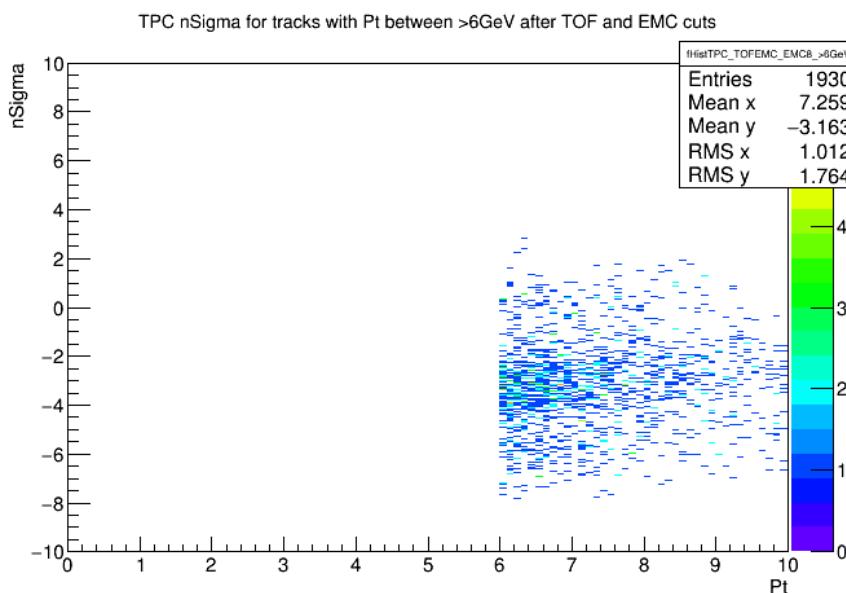
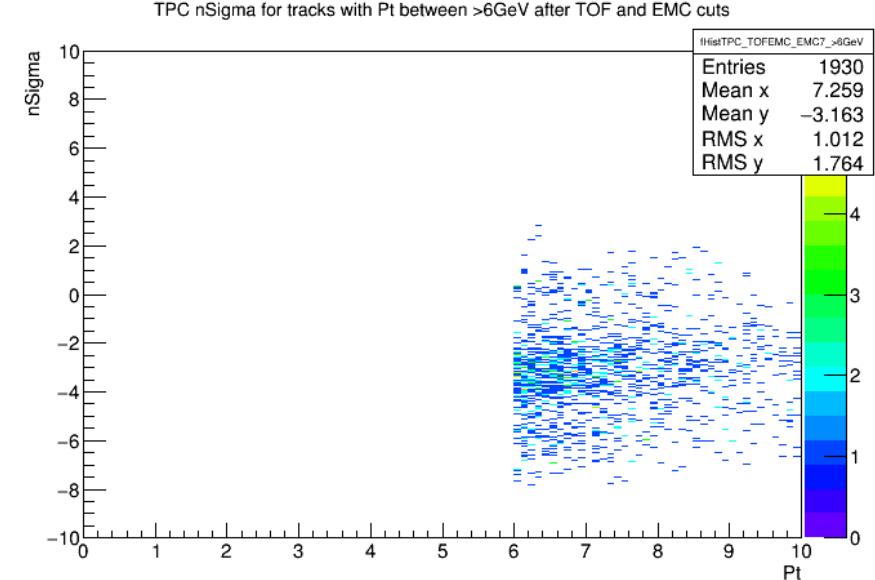
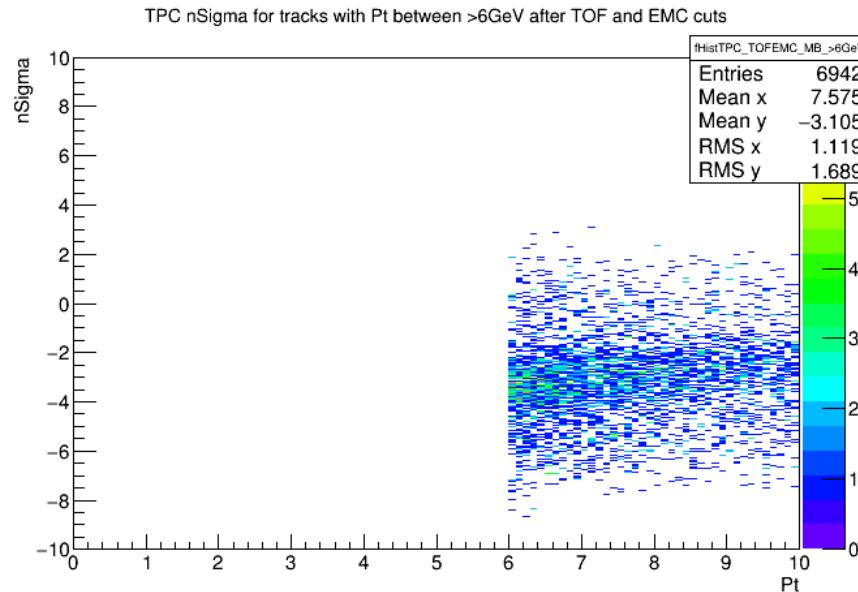
TPC nSigma for tracks with Pt between 5-6GeV after TOF and EMC cuts



TPC nSigma for tracks with Pt between 5-6GeV after TOF and EMC cuts

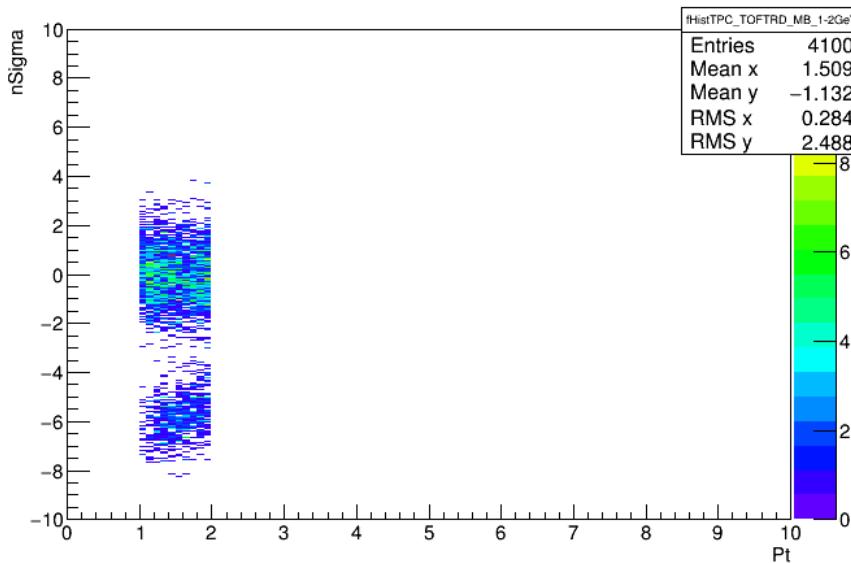


# TPC nSigma after 2Sig TOF cut and >6Gev      1+-0.1 E/p cut

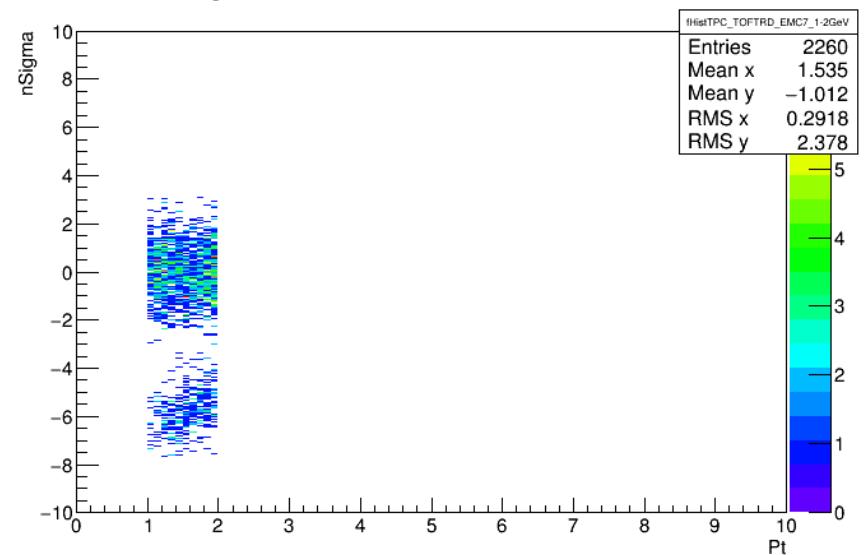


# TPC nSigma after 2Sig TOF Cut 1-2Gev and >.9 TRD cut

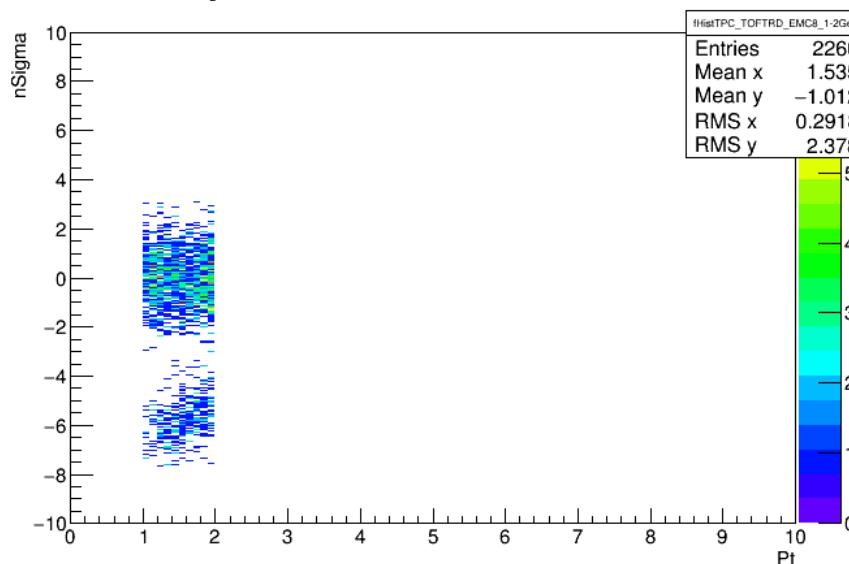
TPC nSigma for tracks with Pt between 1-2GeV after TOF and TRD cuts



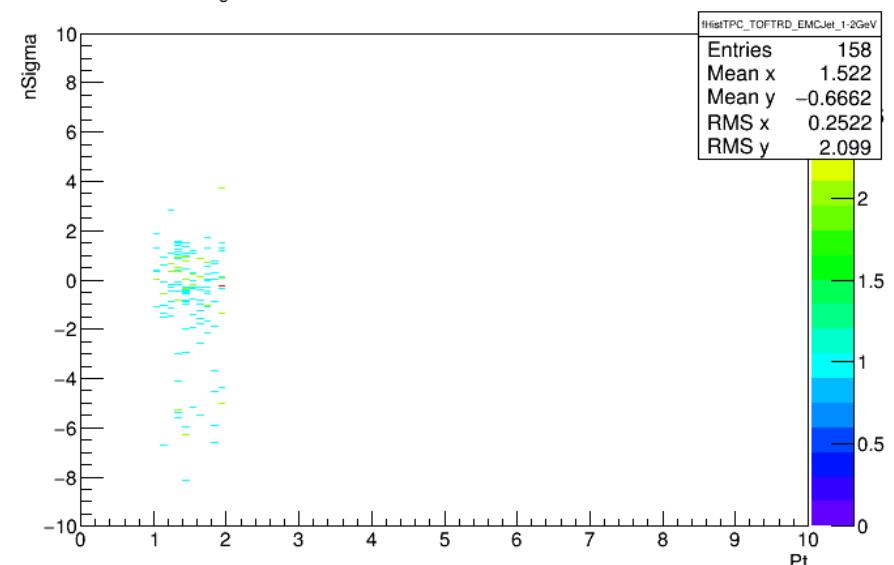
TPC nSigma for tracks with Pt between 1-2GeV after TOF and TRD cuts



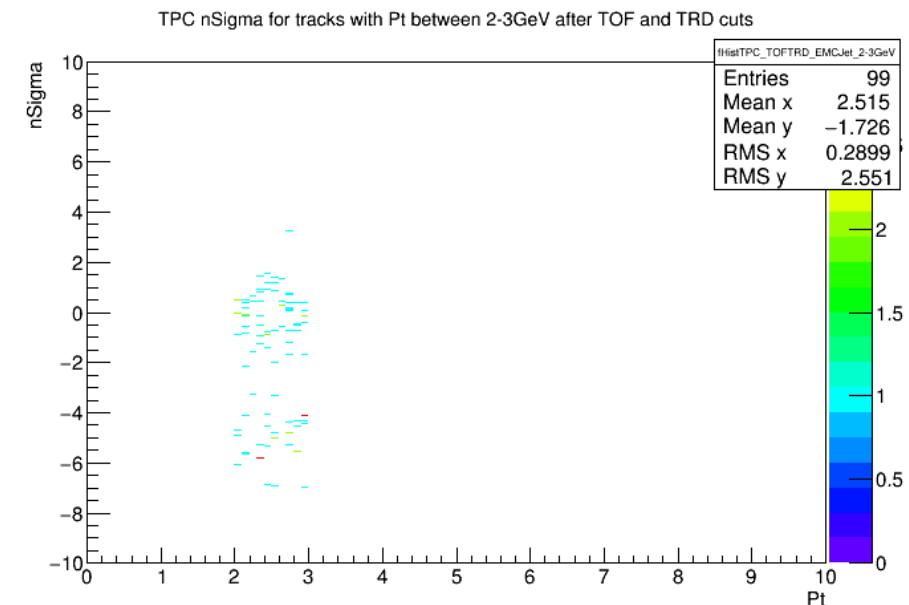
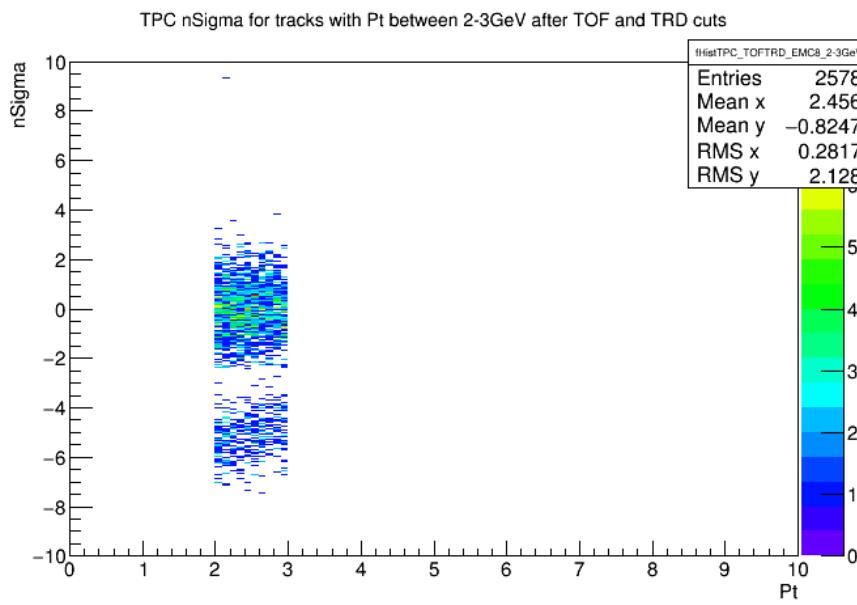
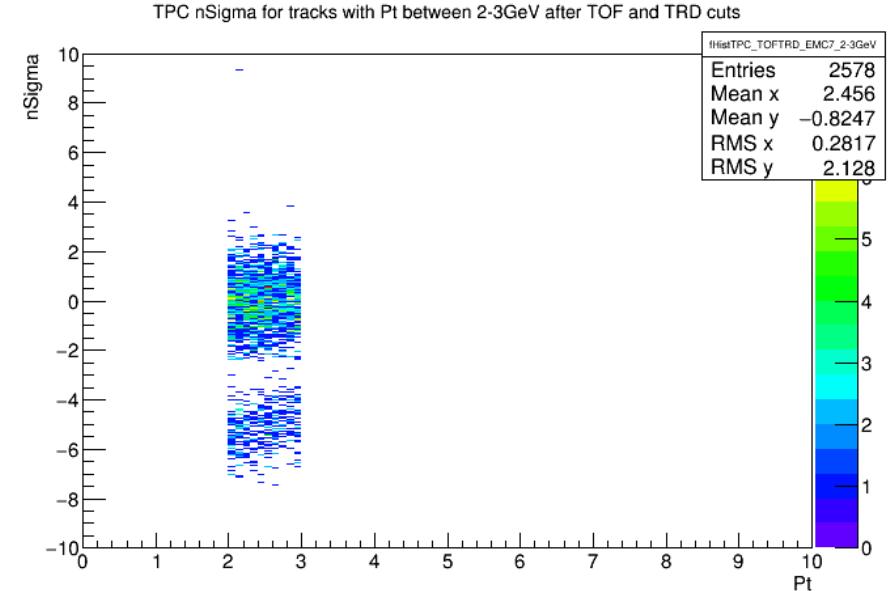
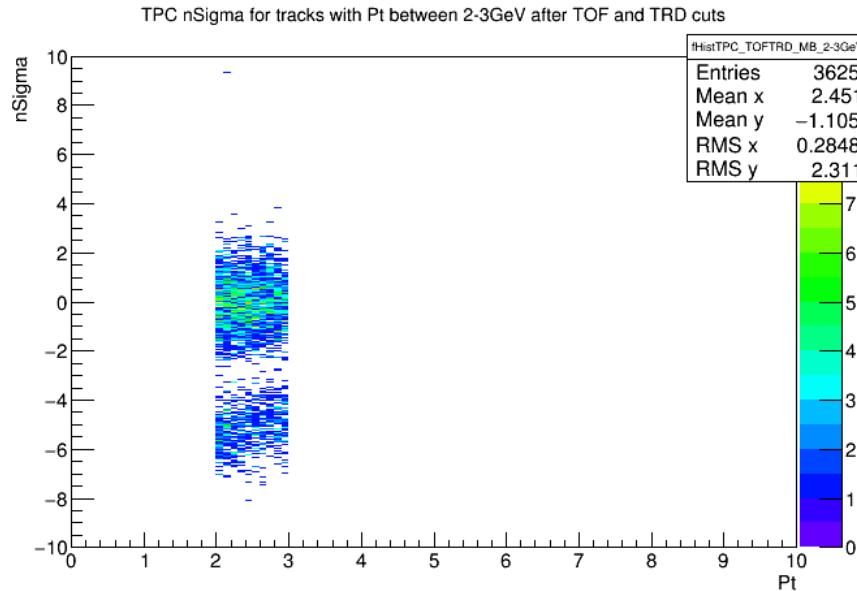
TPC nSigma for tracks with Pt between 1-2GeV after TOF and TRD cuts



TPC nSigma for tracks with Pt between 1-2GeV after TOF and TRD cuts

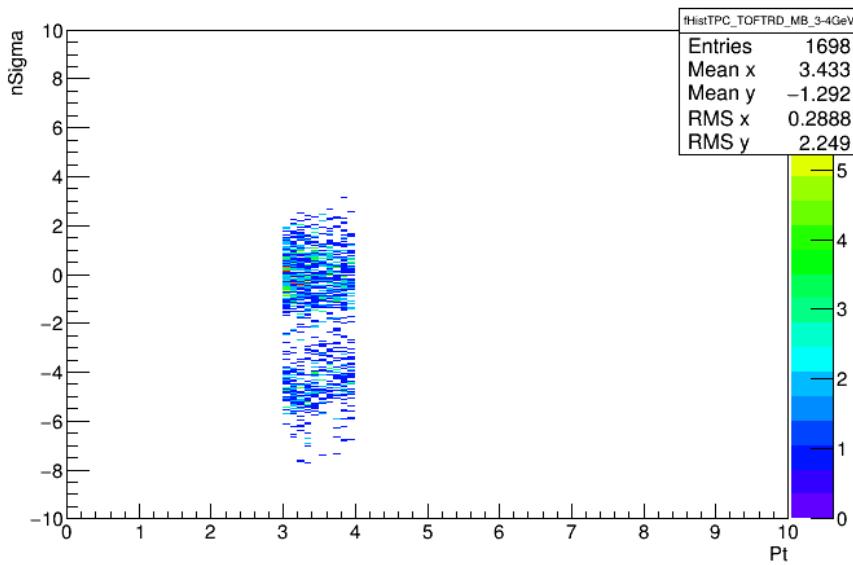


# TPC nSigma after 2Sig TOF cut and 2-3Gev >.9 TRD cut

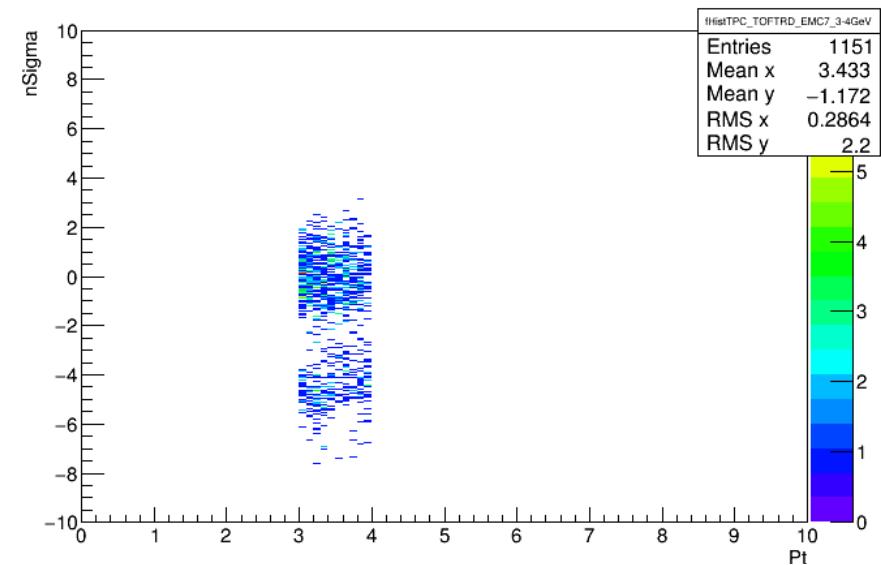


# TPC nSigma after 2Sig TOF cut and 3-4Gev >.9 TRD cut

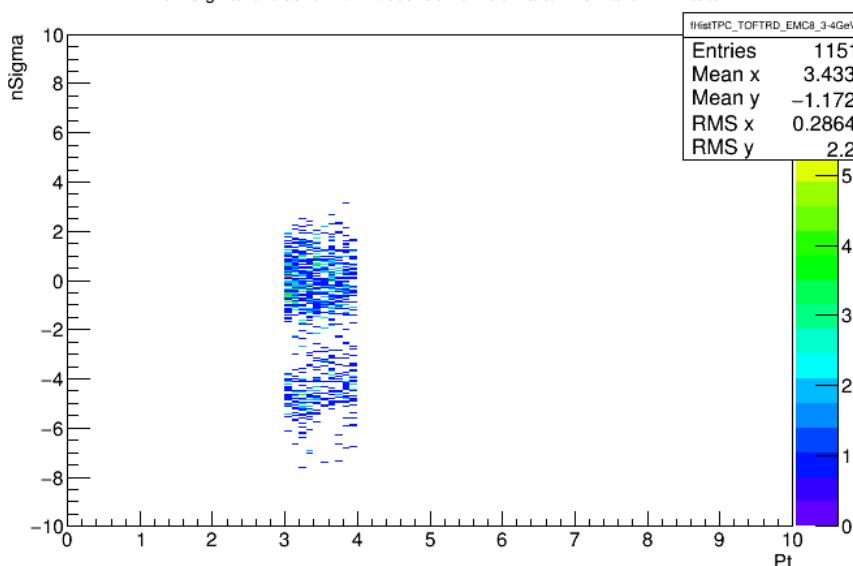
TPC nSigma for tracks with Pt between 3-4GeV after TOF and TRD cuts



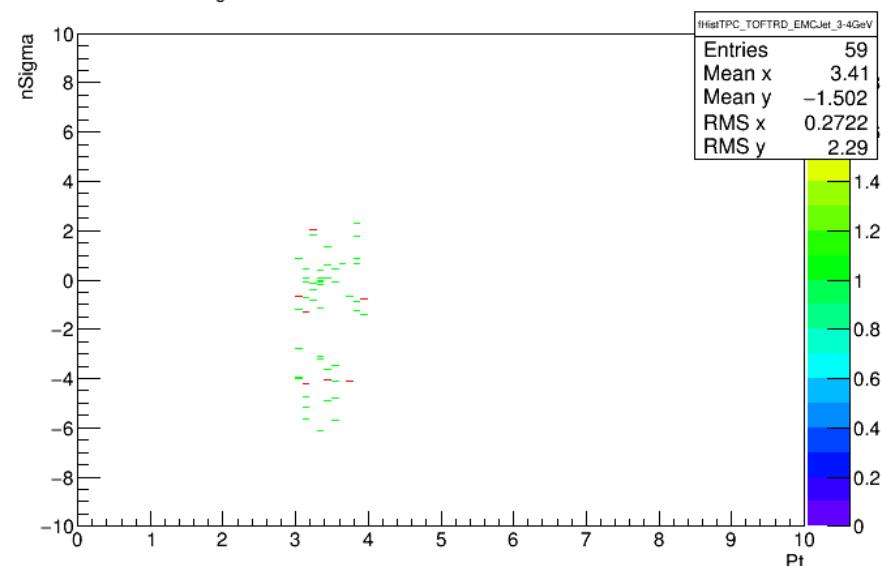
TPC nSigma for tracks with Pt between 3-4GeV after TOF and TRD cuts



TPC nSigma for tracks with Pt between 3-4GeV after TOF and TRD cuts

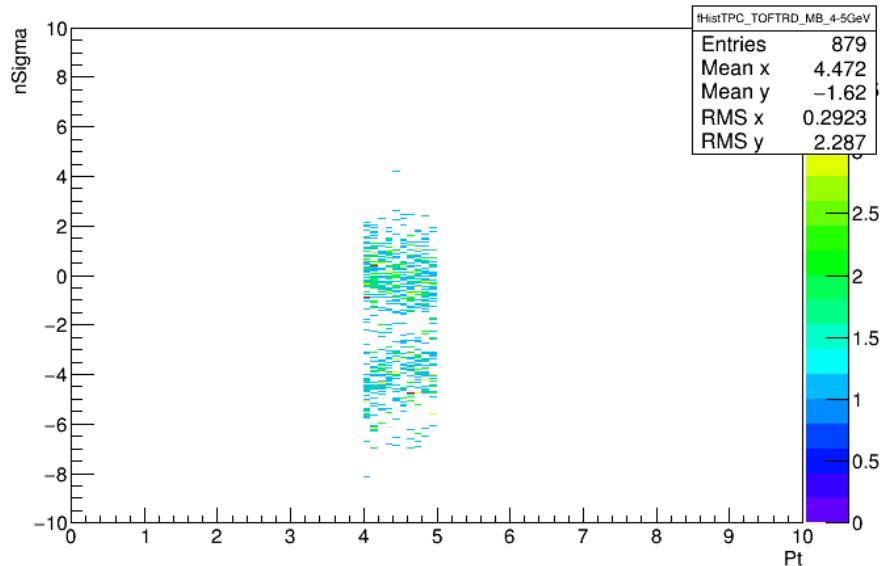


TPC nSigma for tracks with Pt between 3-4GeV after TOF and TRD cuts

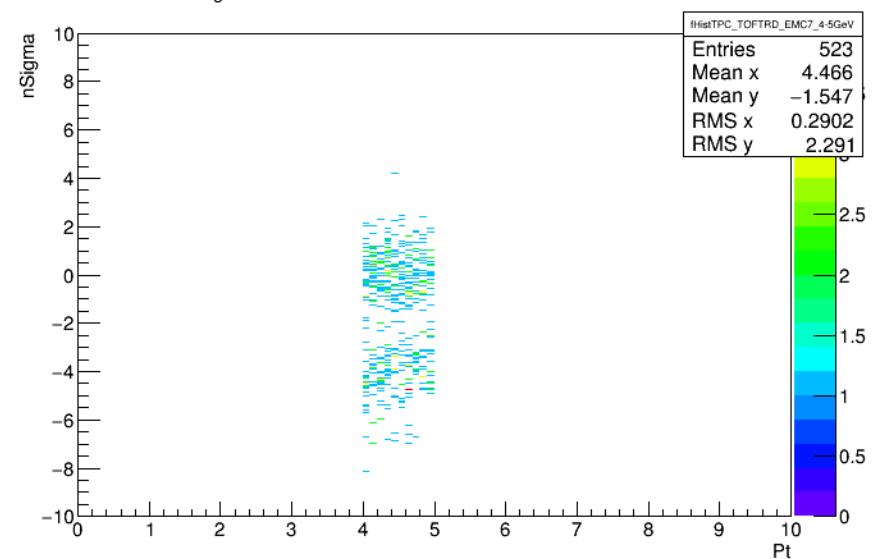


# TPC nSigma after 2Sig TOF cut and 4-5Gev >.9 TRD cut

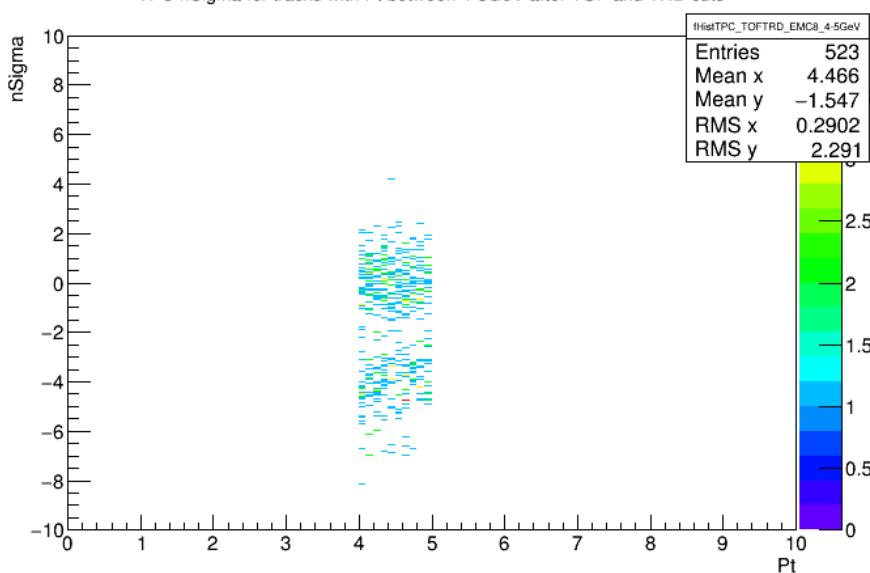
TPC nSigma for tracks with Pt between 4-5GeV after TOF and TRD cuts



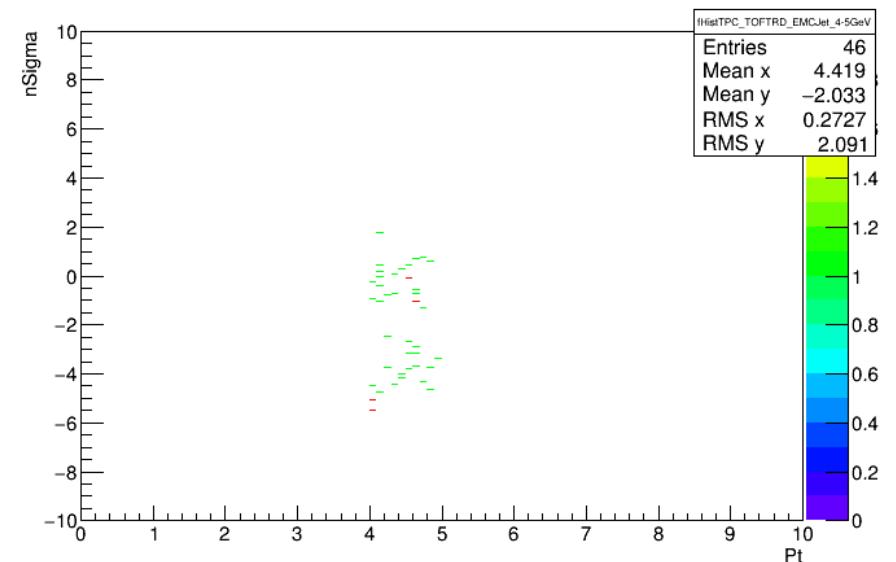
TPC nSigma for tracks with Pt between 4-5GeV after TOF and TRD cuts



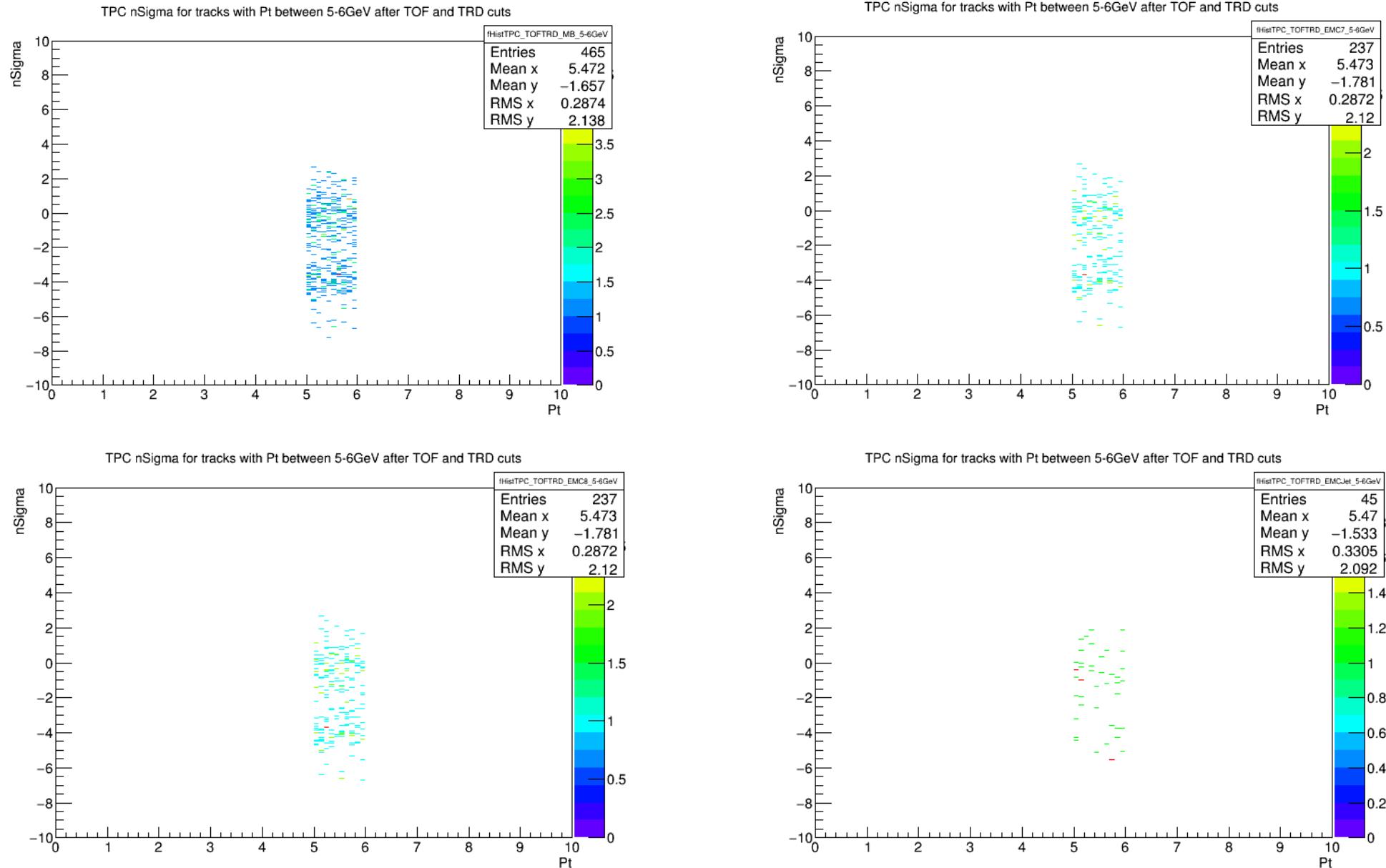
TPC nSigma for tracks with Pt between 4-5GeV after TOF and TRD cuts



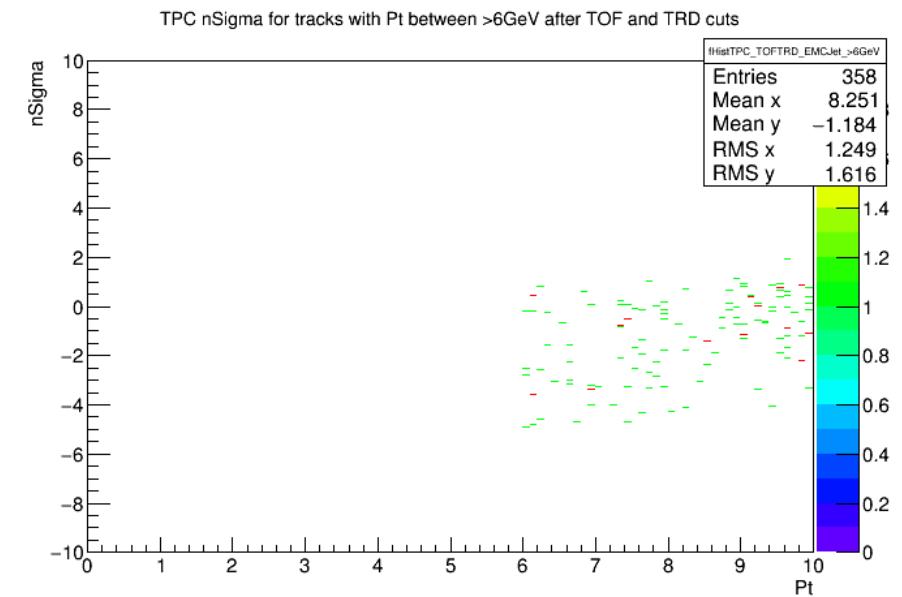
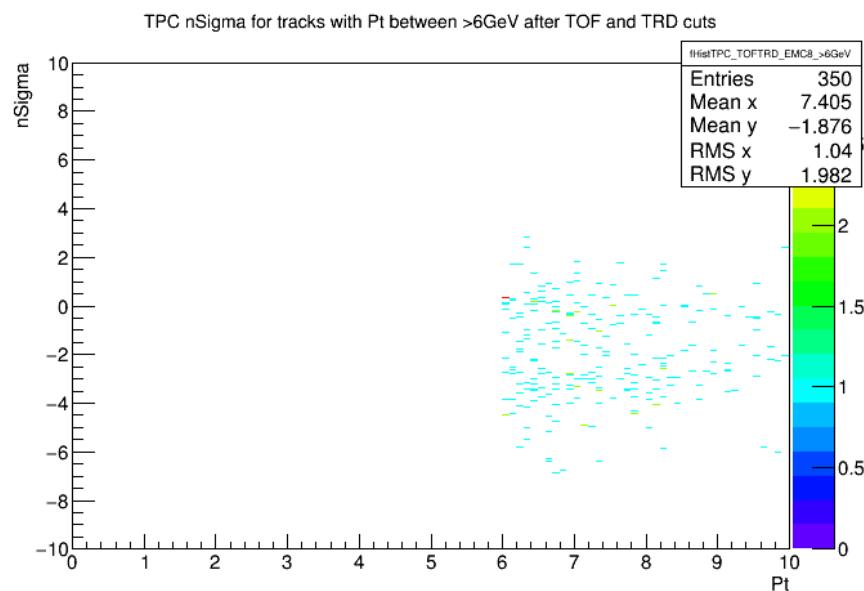
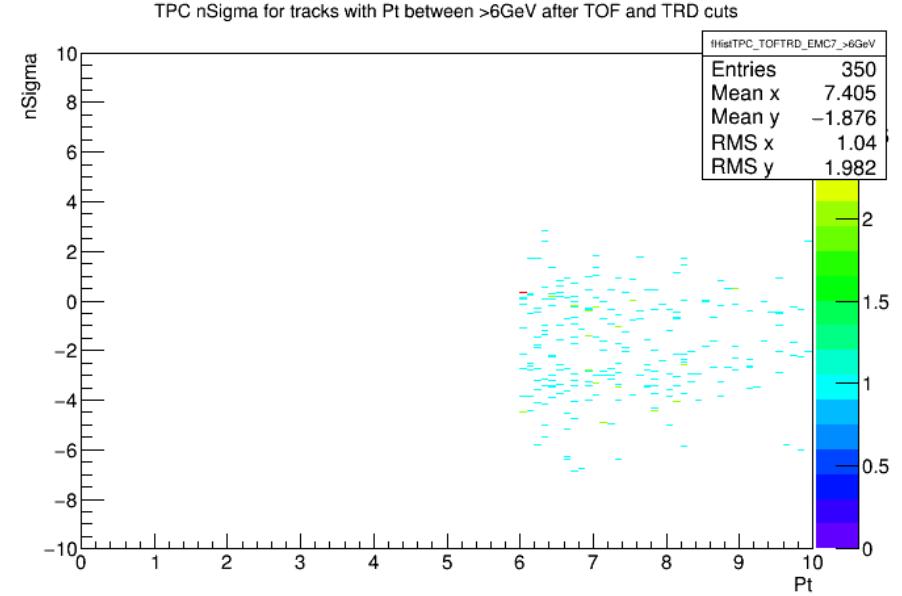
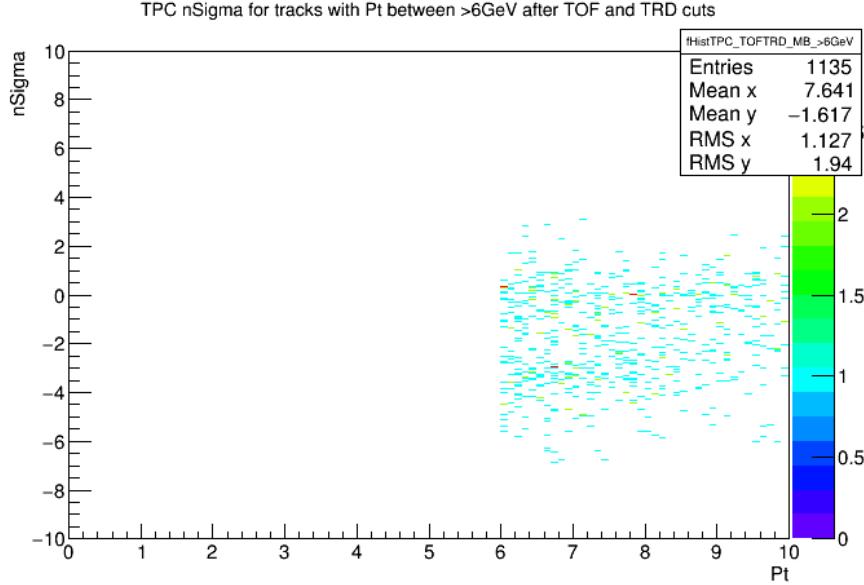
TPC nSigma for tracks with Pt between 4-5GeV after TOF and TRD cuts



# TPC nSigma after 2Sig TOF cut and 5-6Gev >.9 TRD cut

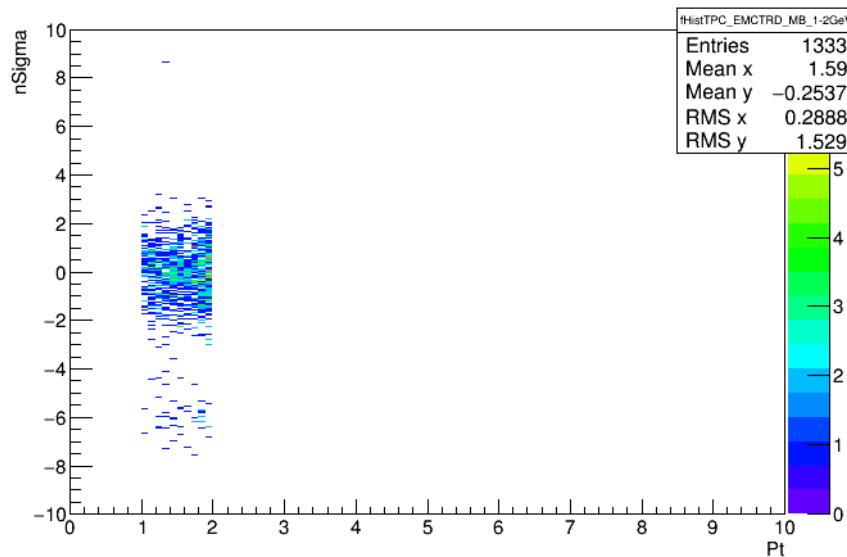


# TPC nSigma after 2Sig TOF cut and >6Gev >.9 TRD cut

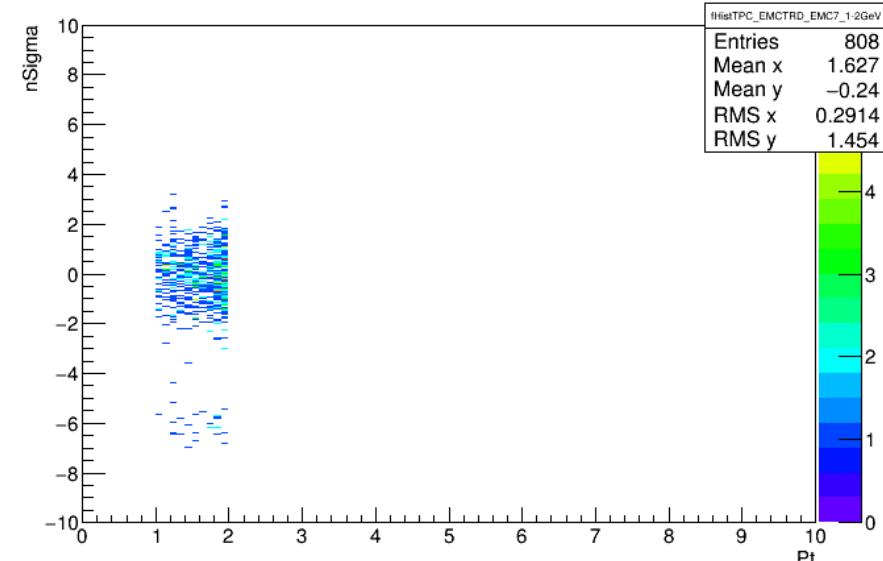


# TPC nSigma after 1+-0.1 E/p Cut 1-2Gev and >.9 TRD cut

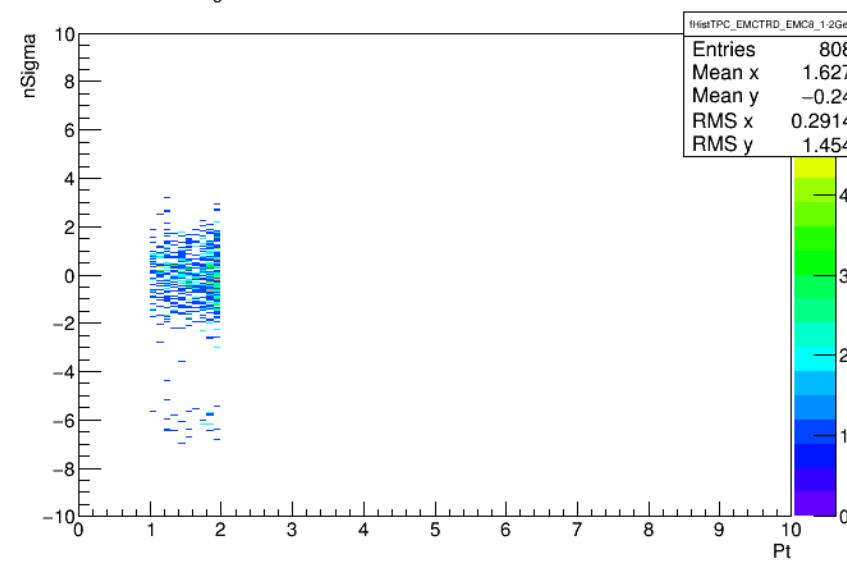
TPC nSigma for tracks with Pt between 1-2GeV after EMC and TRD cuts



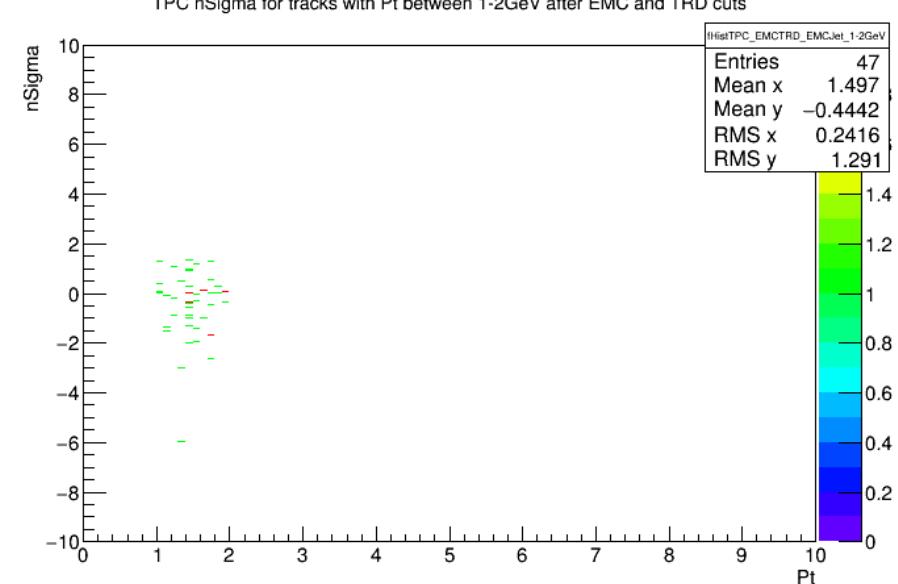
TPC nSigma for tracks with Pt between 1-2GeV after EMC and TRD cuts



TPC nSigma for tracks with Pt between 1-2GeV after EMC and TRD cuts

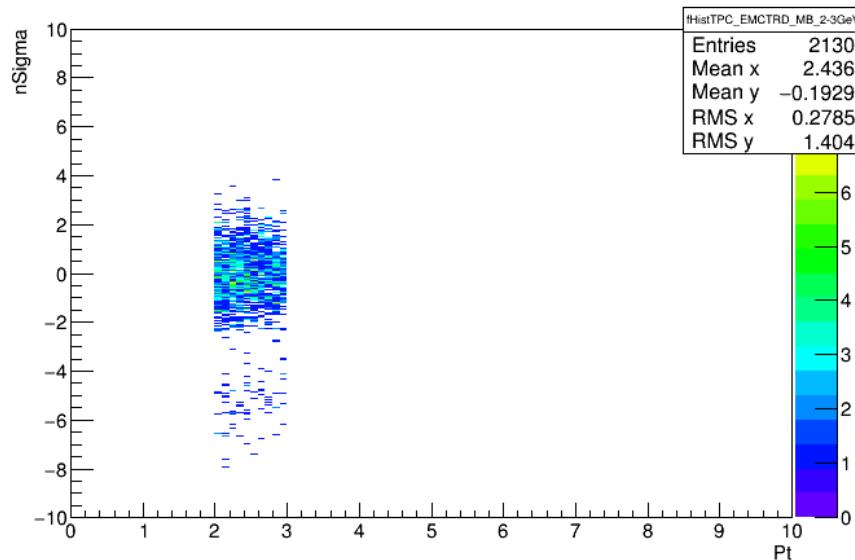


TPC nSigma for tracks with Pt between 1-2GeV after EMC and TRD cuts

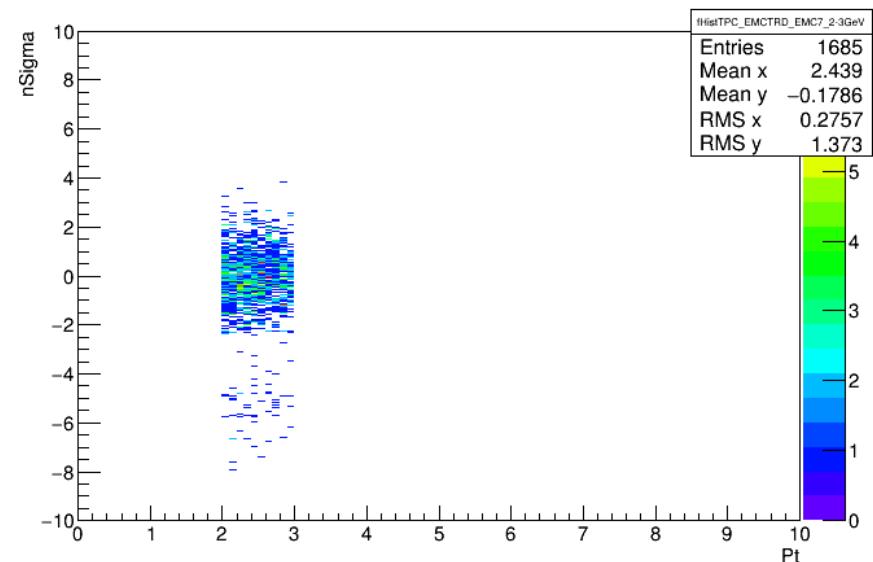


# TPC nSigma after 1+-0.1 E/p cut 2-3Gev and >.9 TRD cut

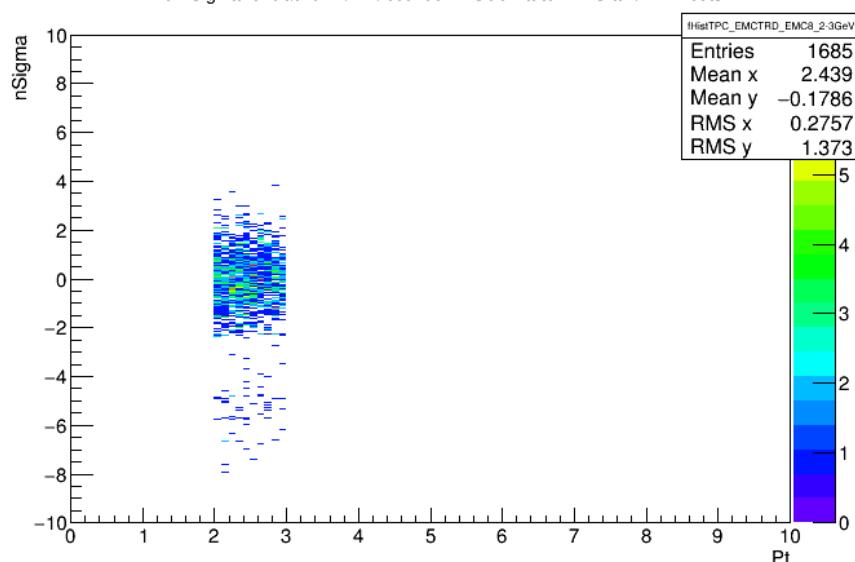
TPC nSigma for tracks with Pt between 2-3GeV after EMC and TRD cuts



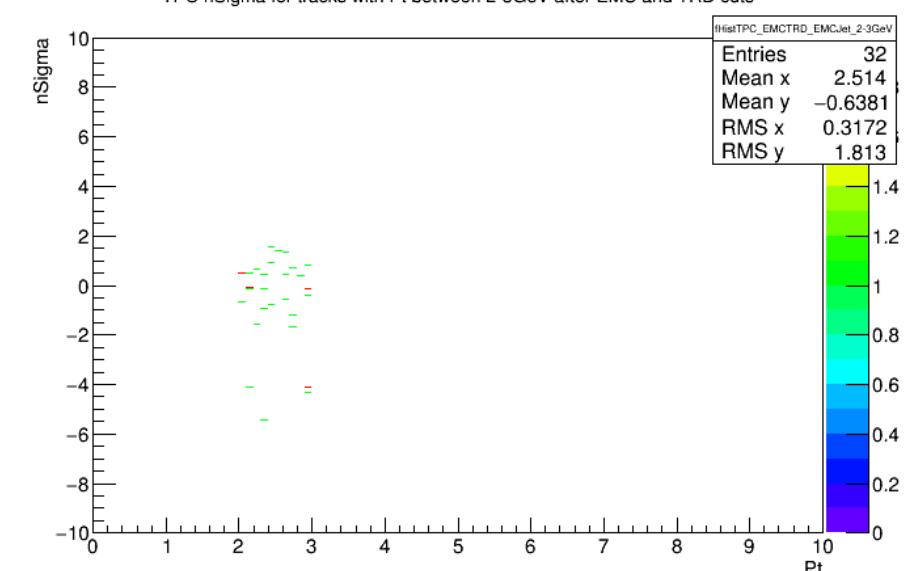
TPC nSigma for tracks with Pt between 2-3GeV after EMC and TRD cuts



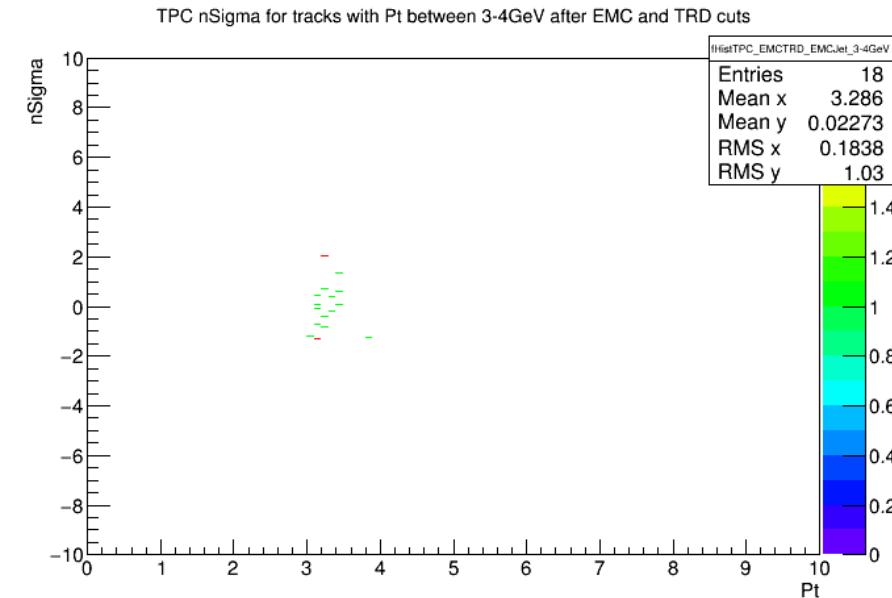
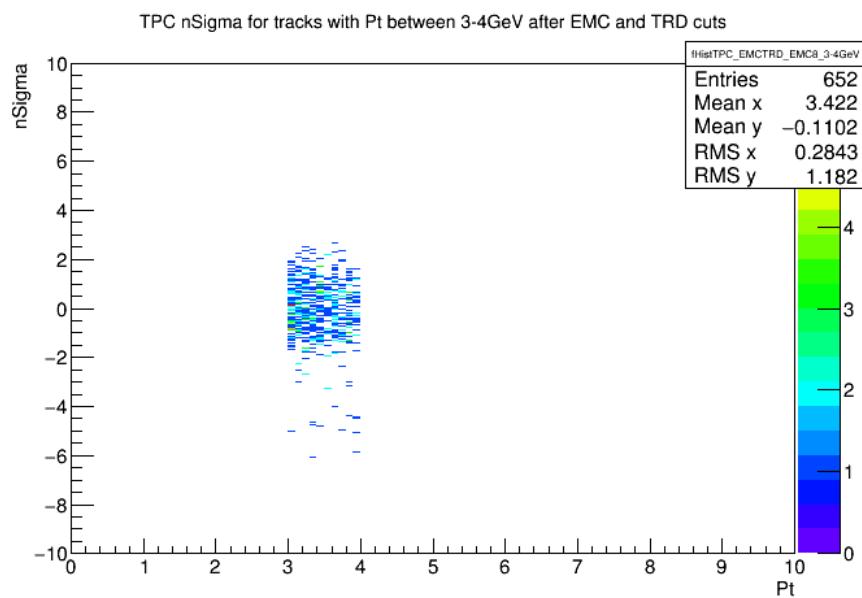
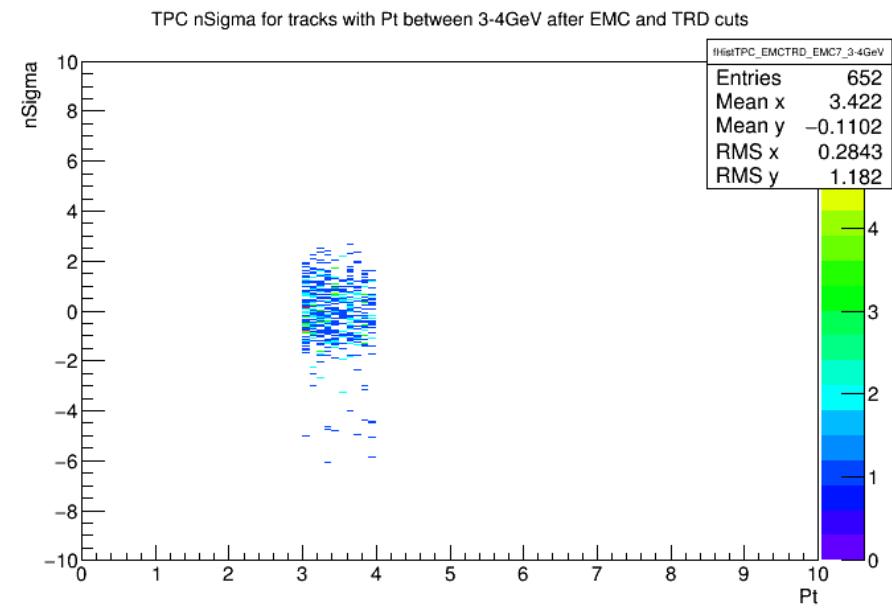
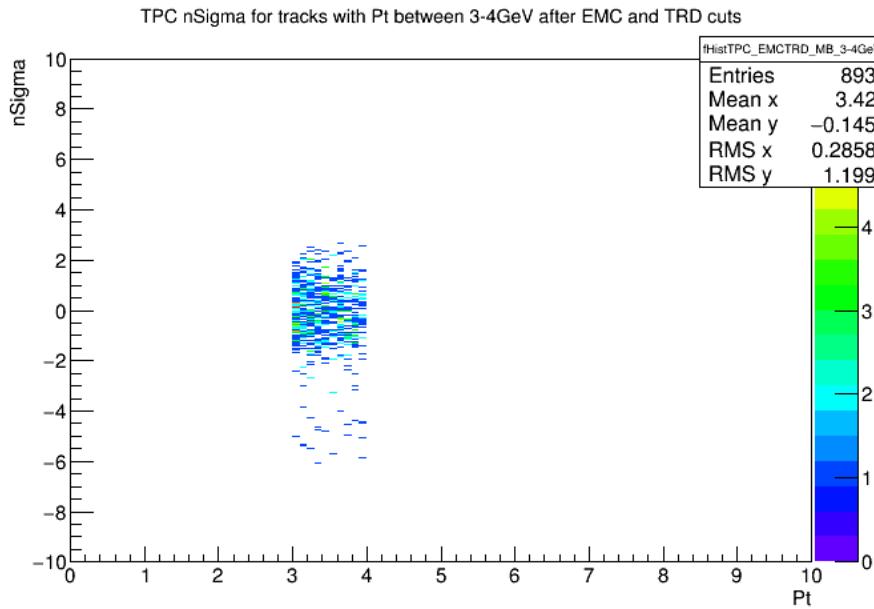
TPC nSigma for tracks with Pt between 2-3GeV after EMC and TRD cuts



TPC nSigma for tracks with Pt between 2-3GeV after EMC and TRD cuts

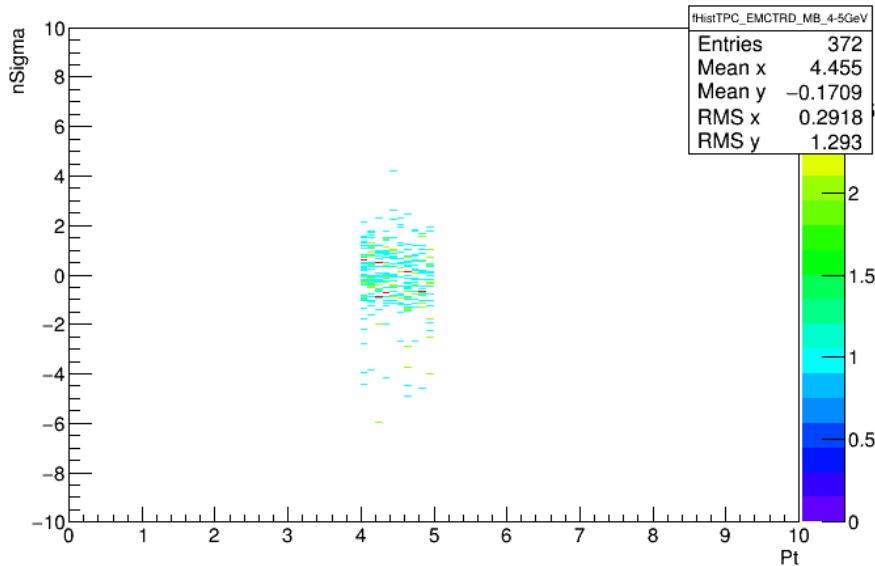


# TPC nSigma after 1+-0.1 E/p cut 3-4Gev and >.9 TRD cut

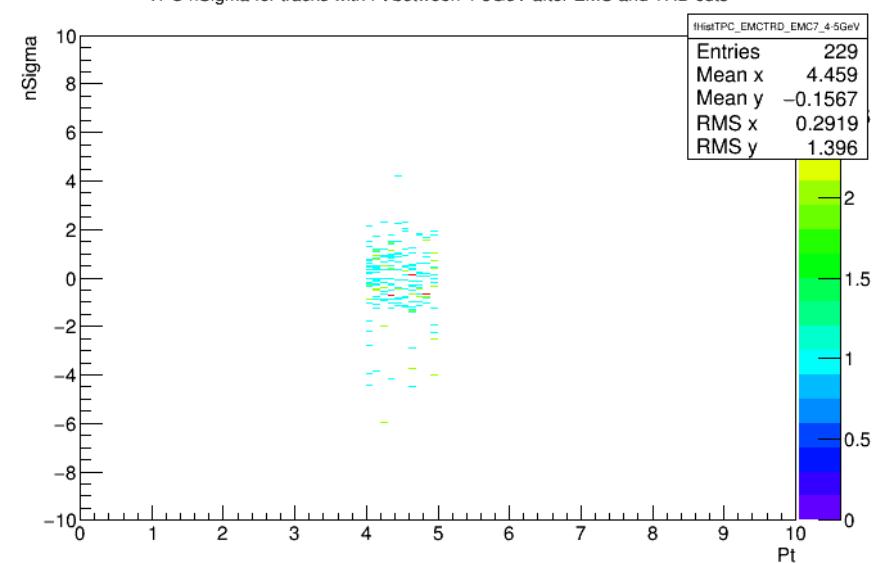


# TPC nSigma after 1+-0.1 E/p cut 4-5Gev and >.9 TRD cut

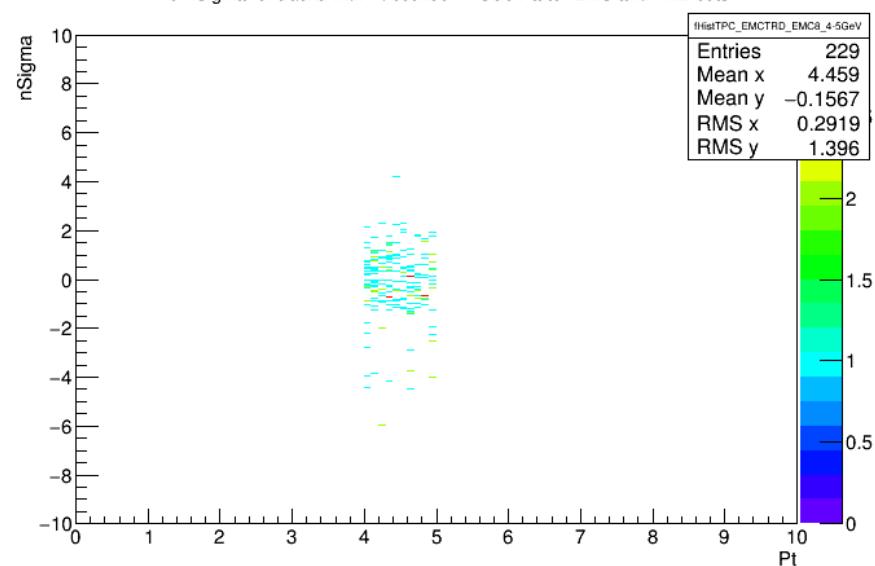
TPC nSigma for tracks with Pt between 4-5GeV after EMC and TRD cuts



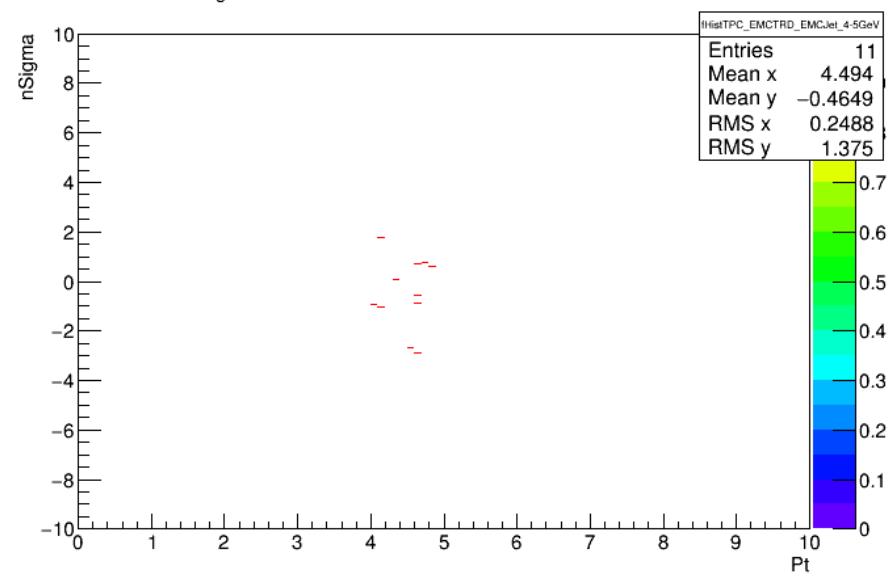
TPC nSigma for tracks with Pt between 4-5GeV after EMC and TRD cuts



TPC nSigma for tracks with Pt between 4-5GeV after EMC and TRD cuts

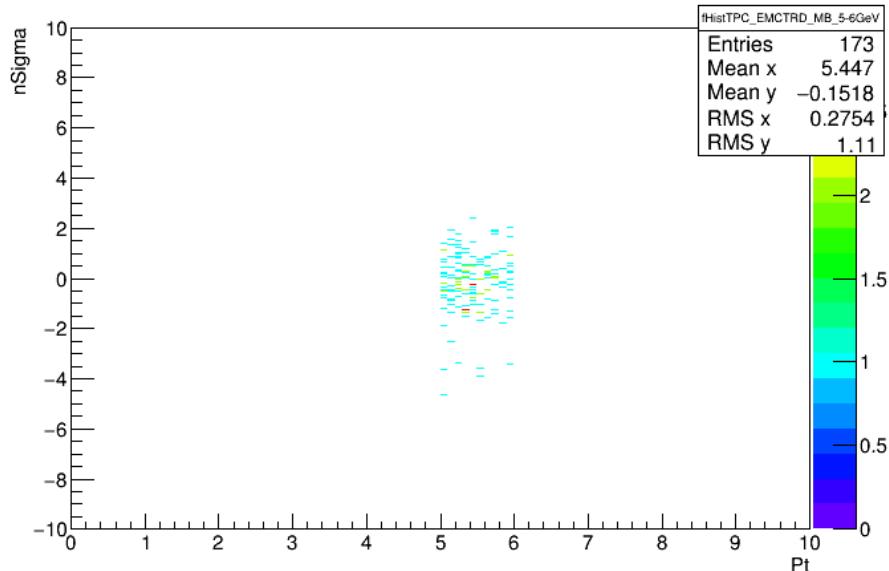


TPC nSigma for tracks with Pt between 4-5GeV after EMC and TRD cuts

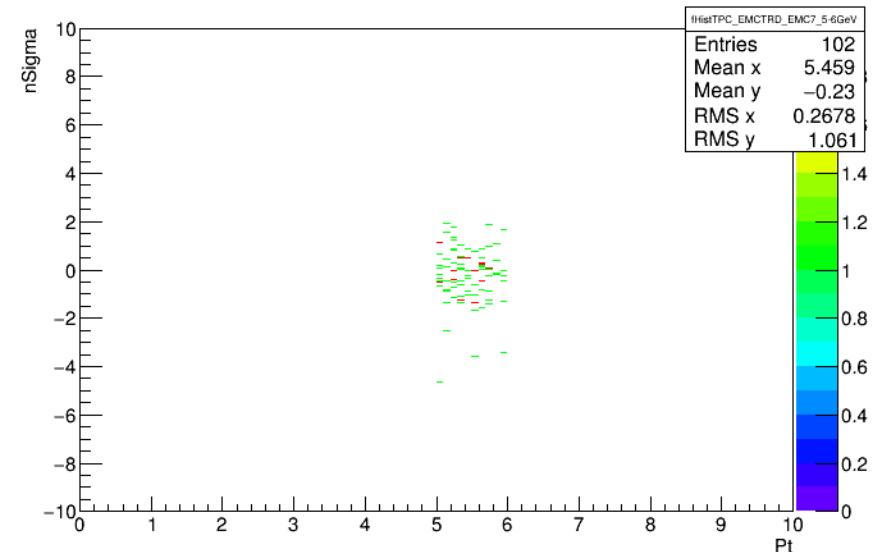


# TPC nSigma after 1+-0.1 E/p cut 5-6Gev and >.9 TRD cut

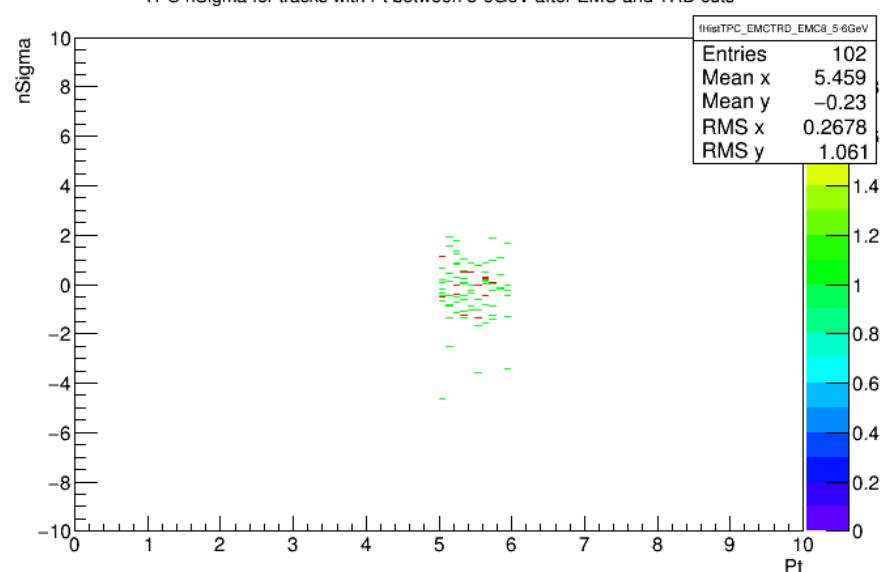
TPC nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



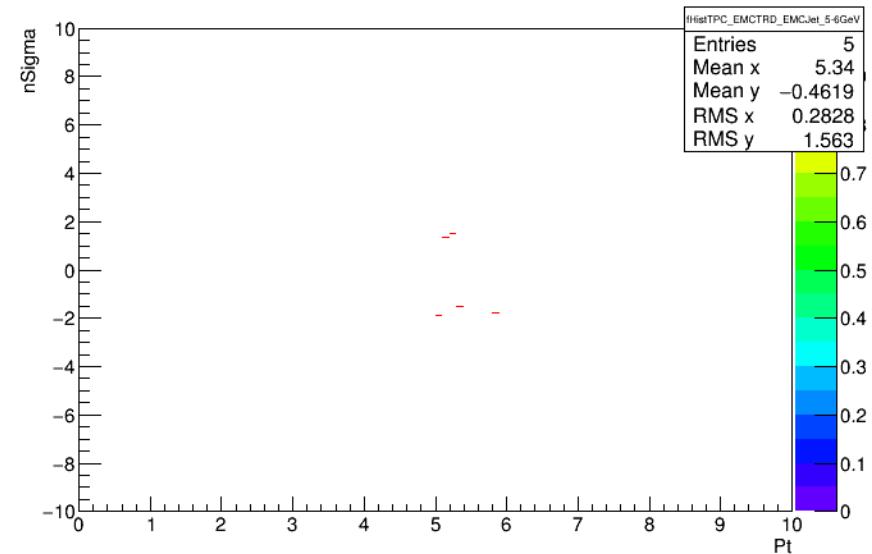
TPC nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



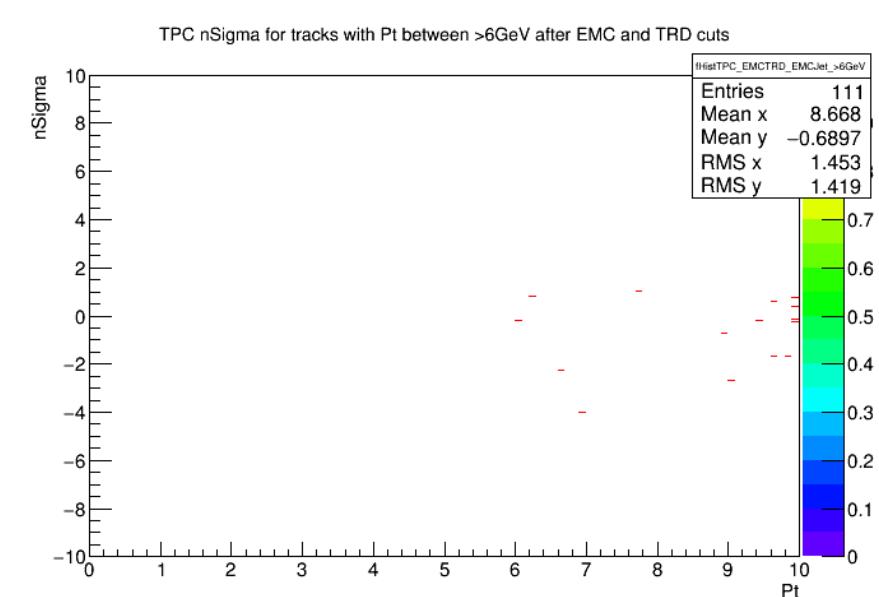
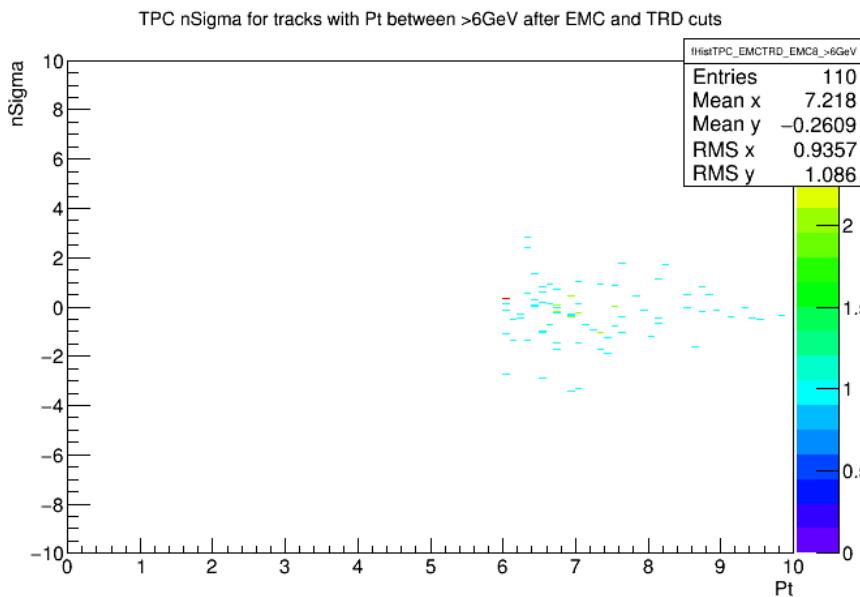
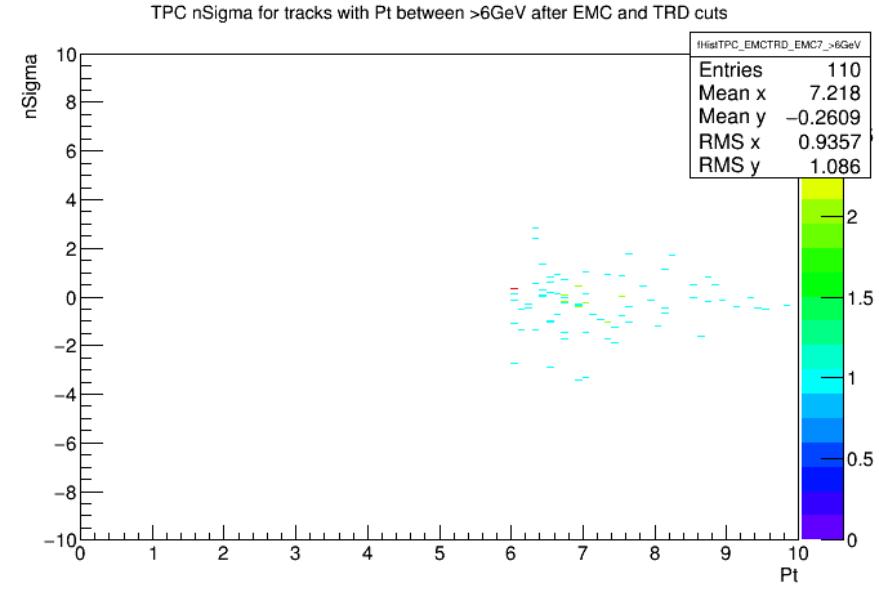
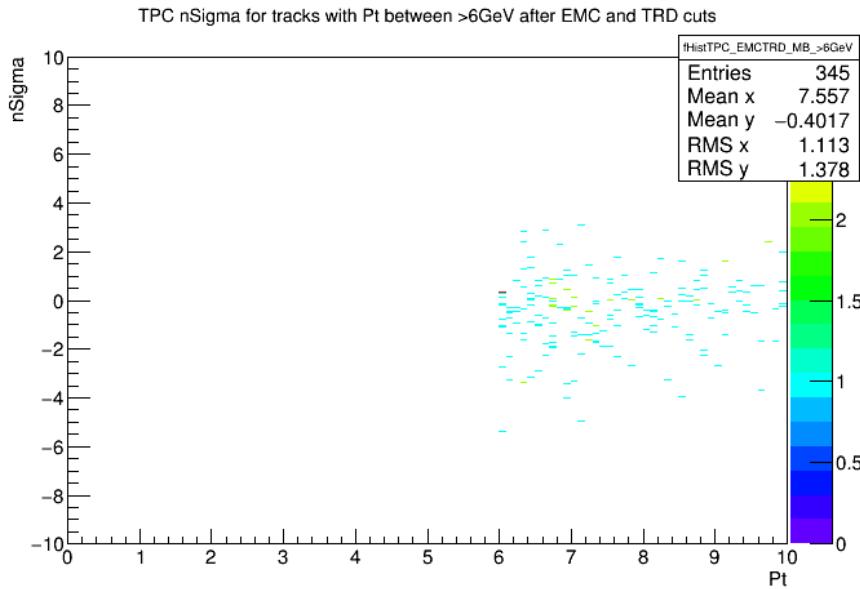
TPC nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



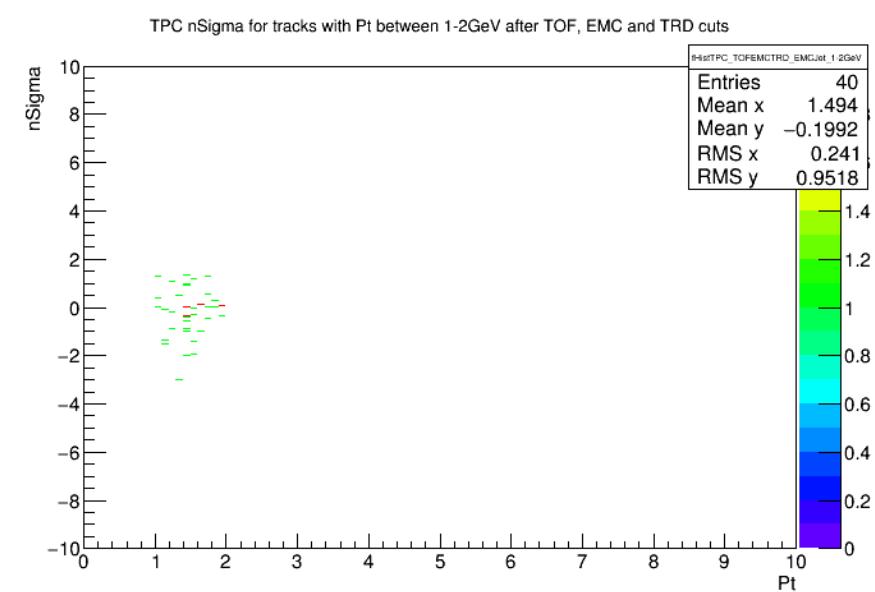
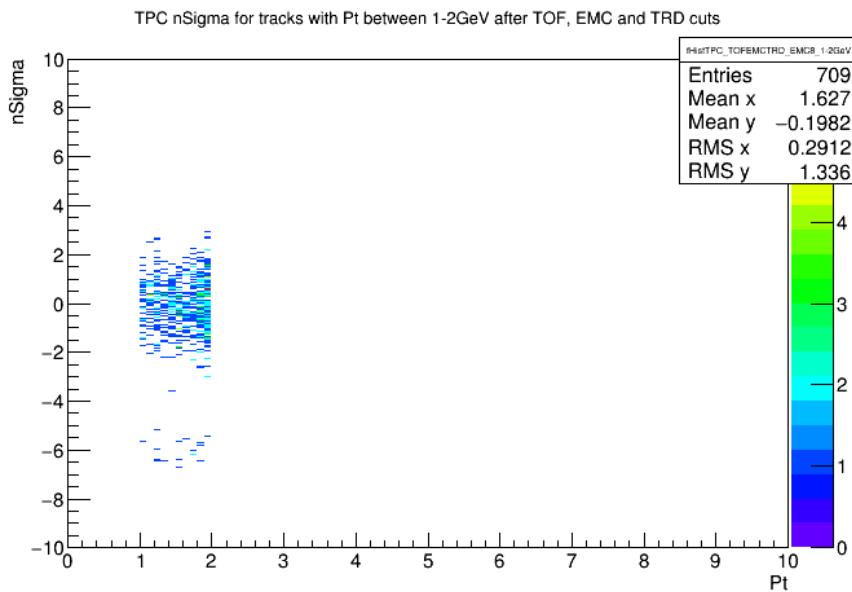
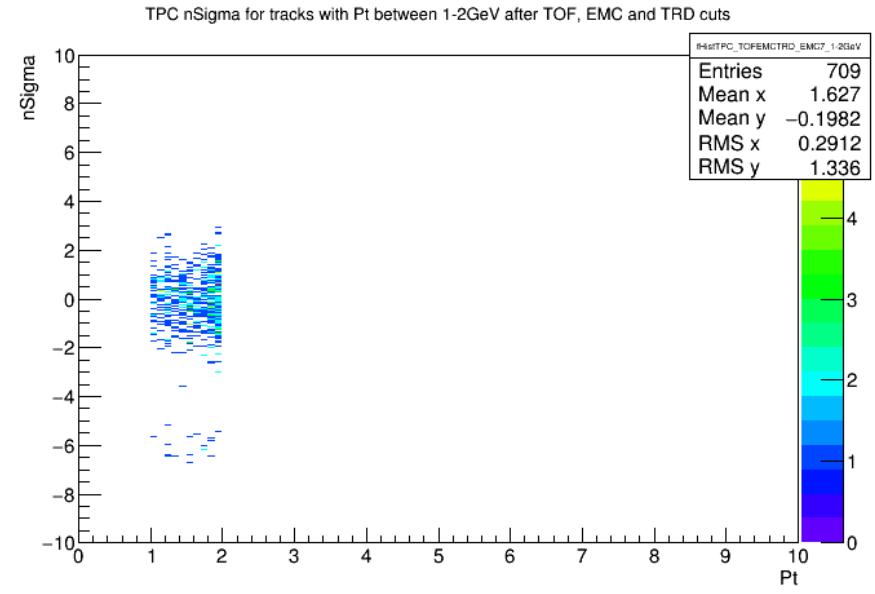
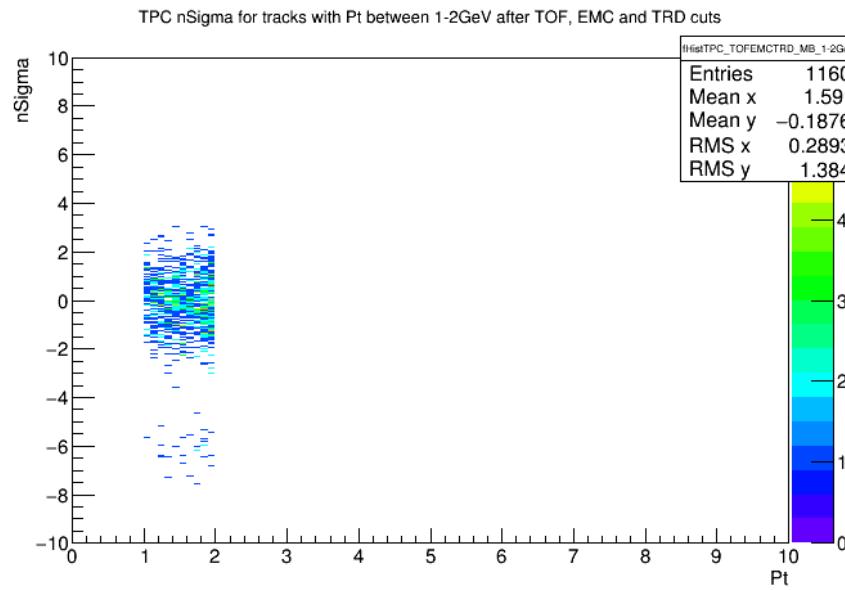
TPC nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



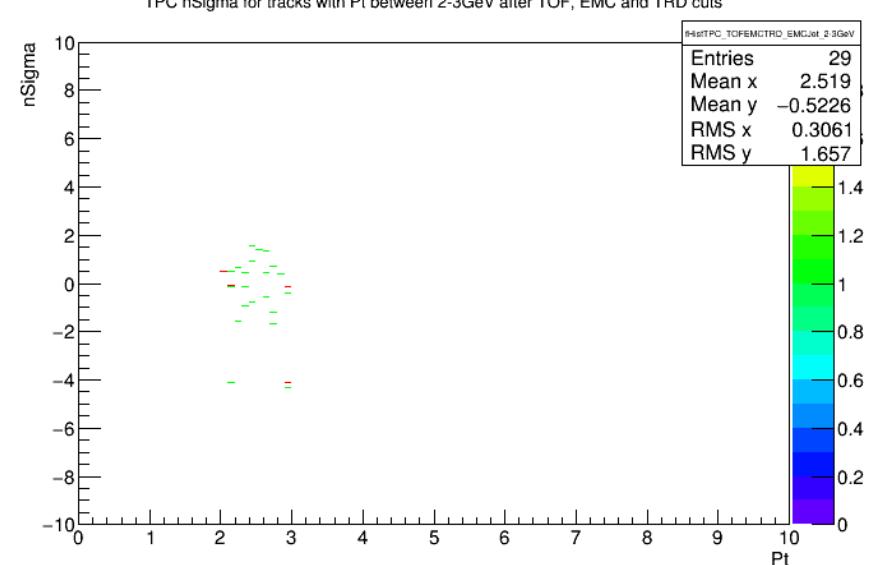
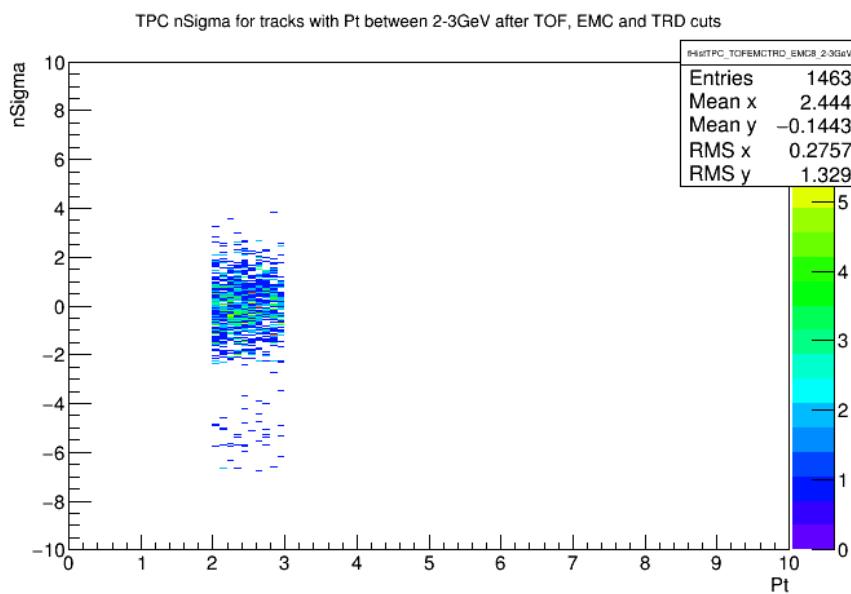
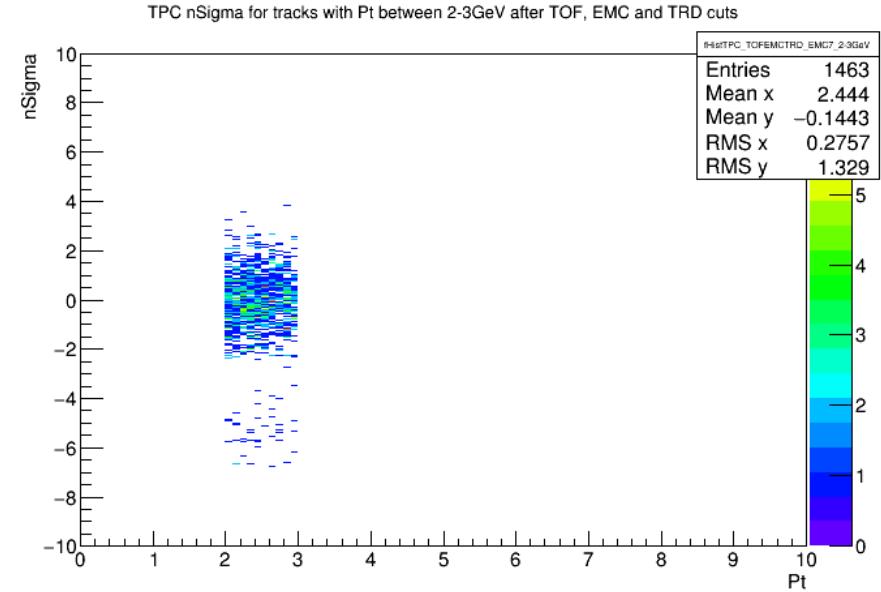
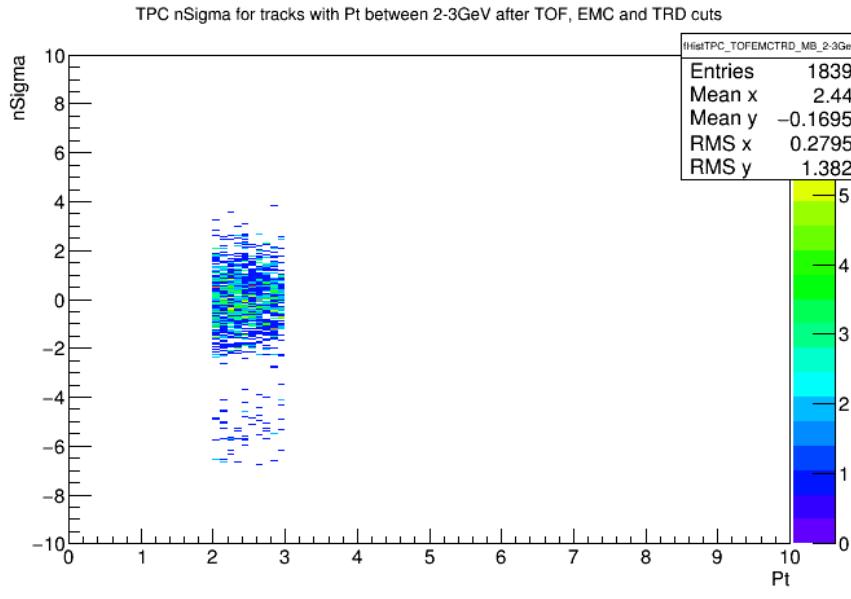
# TPC nSigma after 1+-0.1 E/p cut >6Gev and >.9 TRD cut



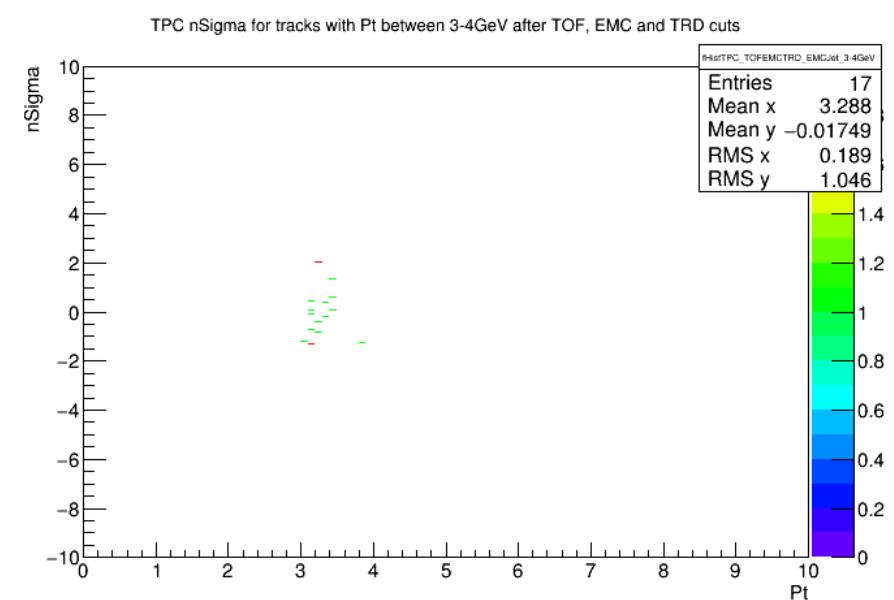
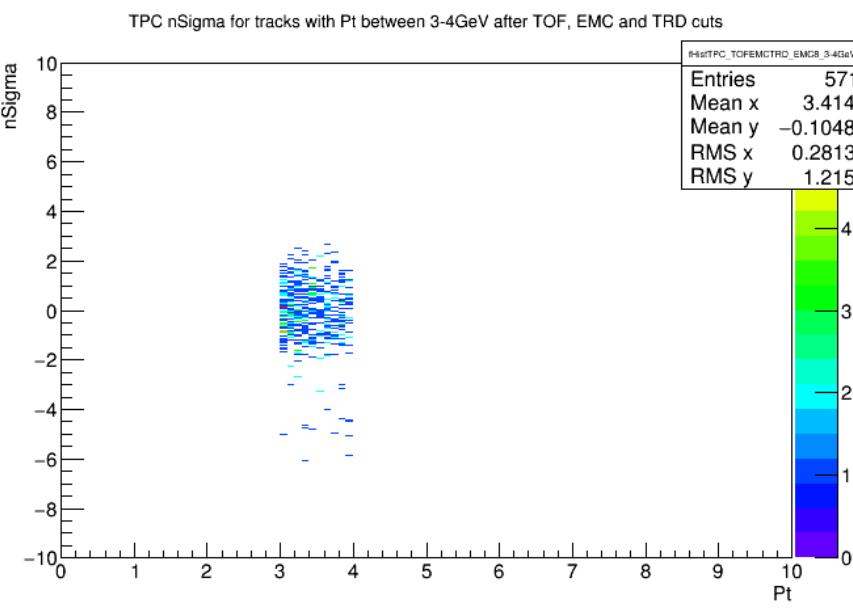
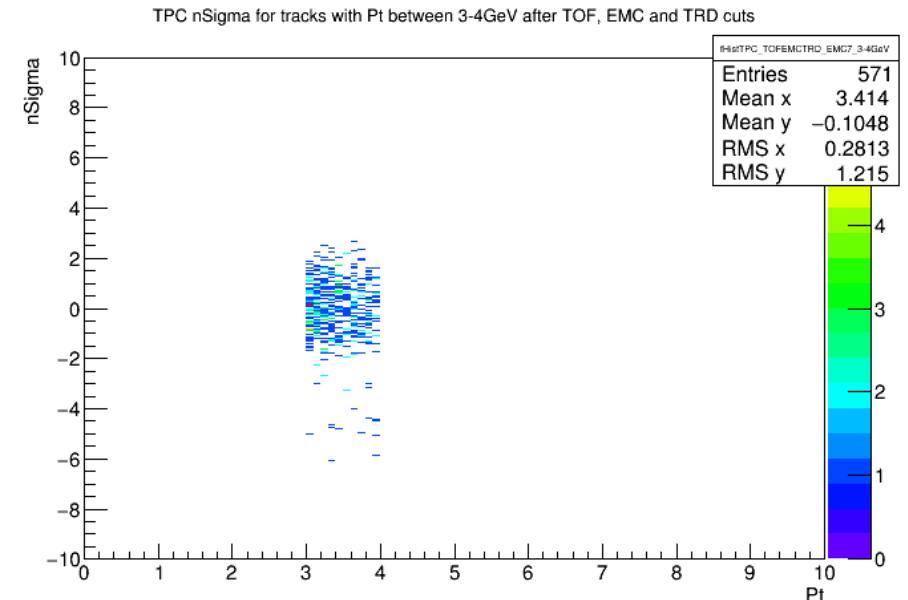
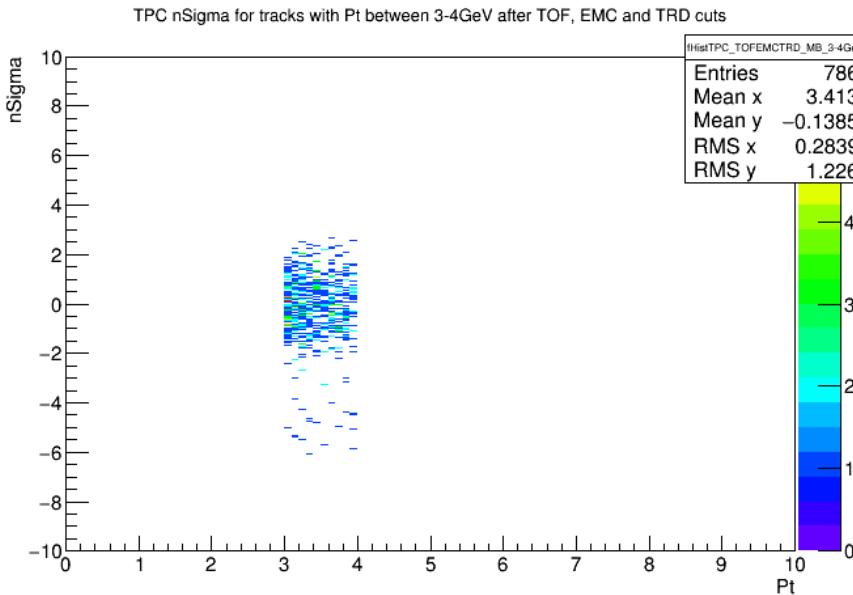
# TPC nSigma after 2Sig TOF Cut, 1+0.1 E/p cut and >.9 TRD cut 1-2Gev



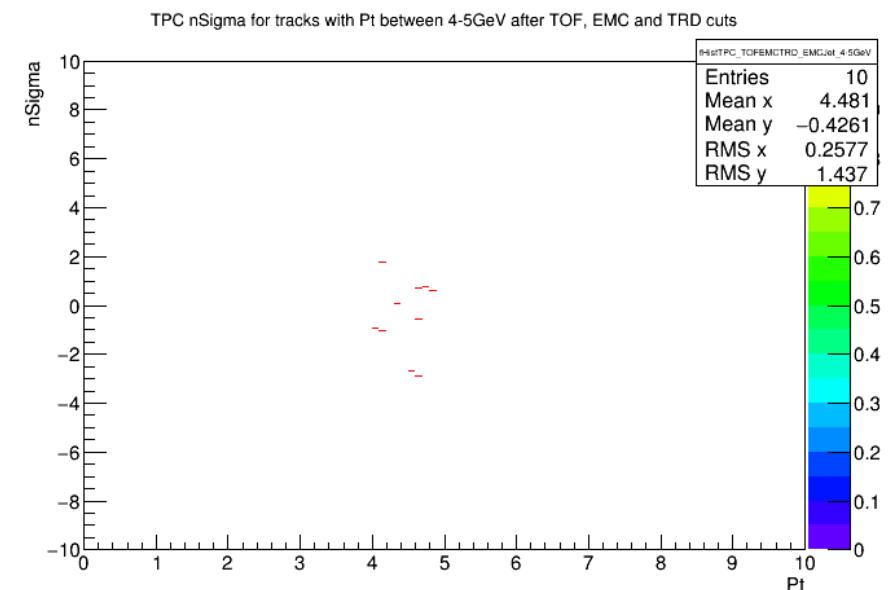
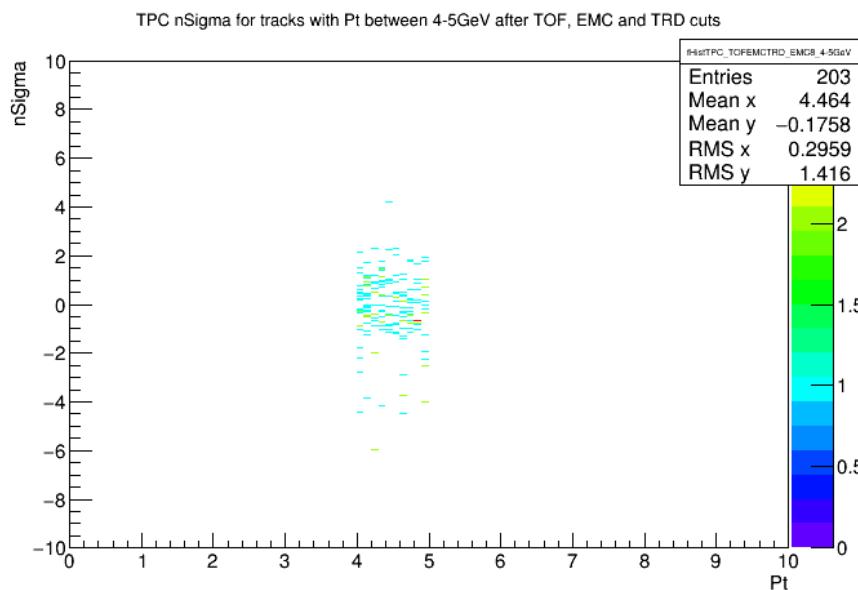
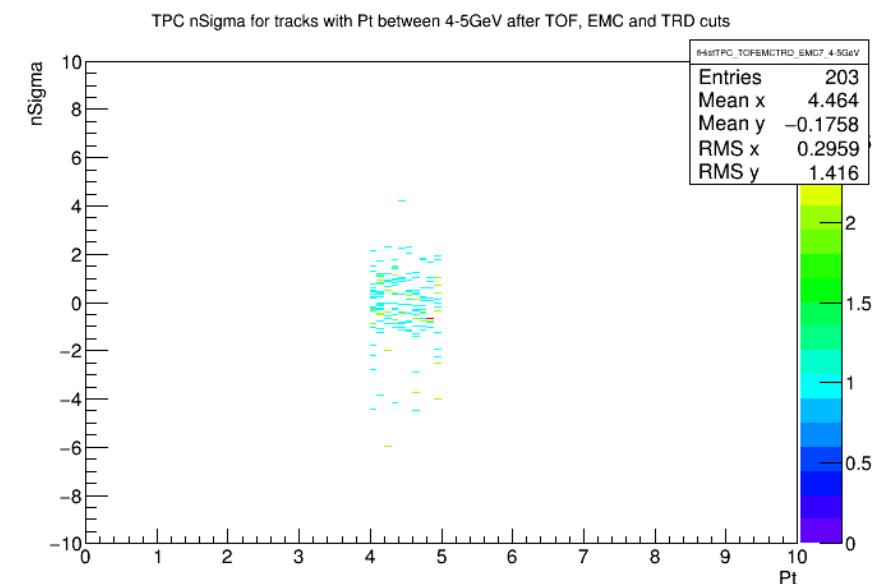
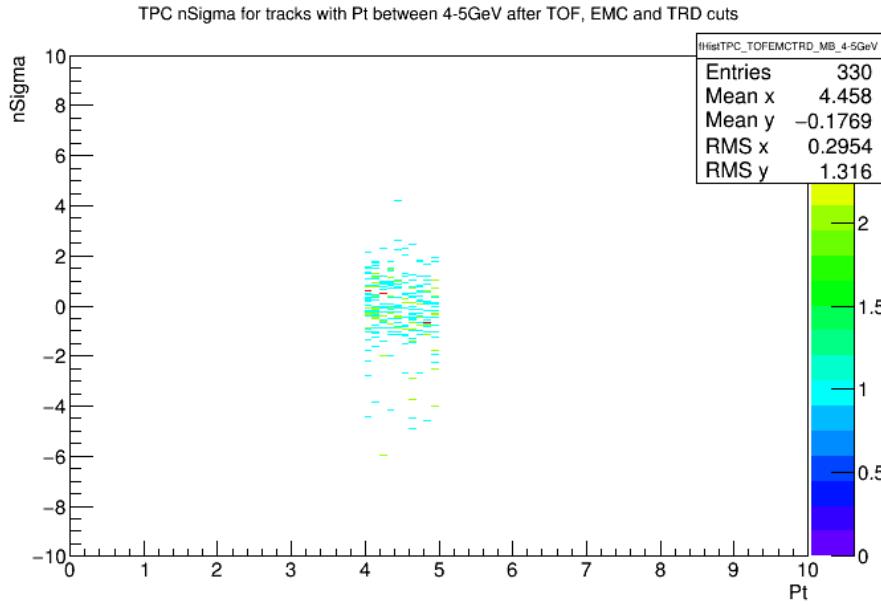
# TPC nSigma after 2Sig TOF cut, 1+- 2-3Gev 0.1 E/p cut and >.9 TRD cut



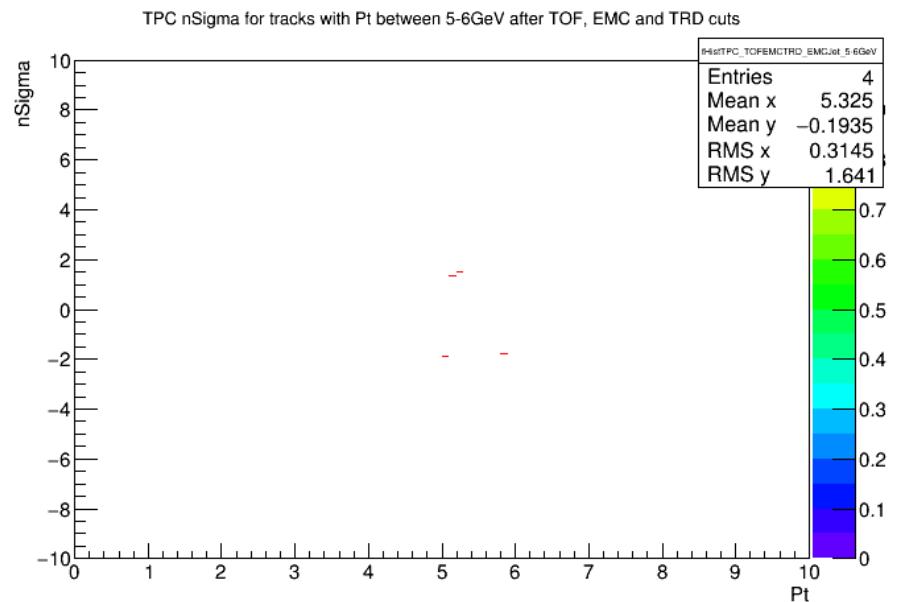
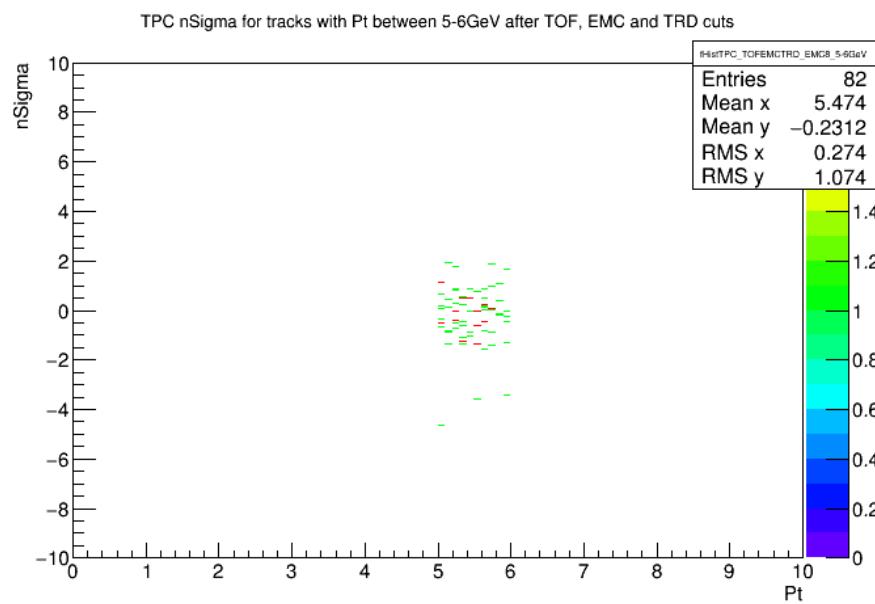
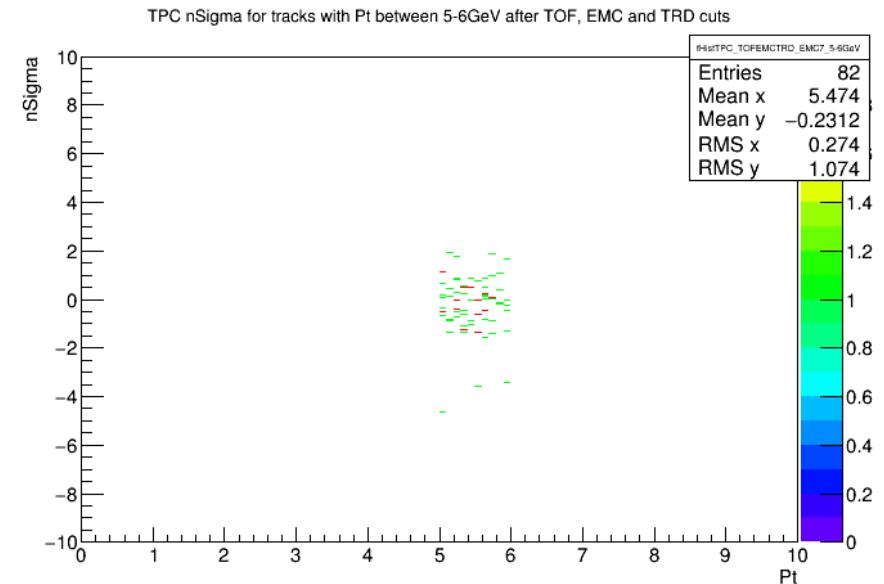
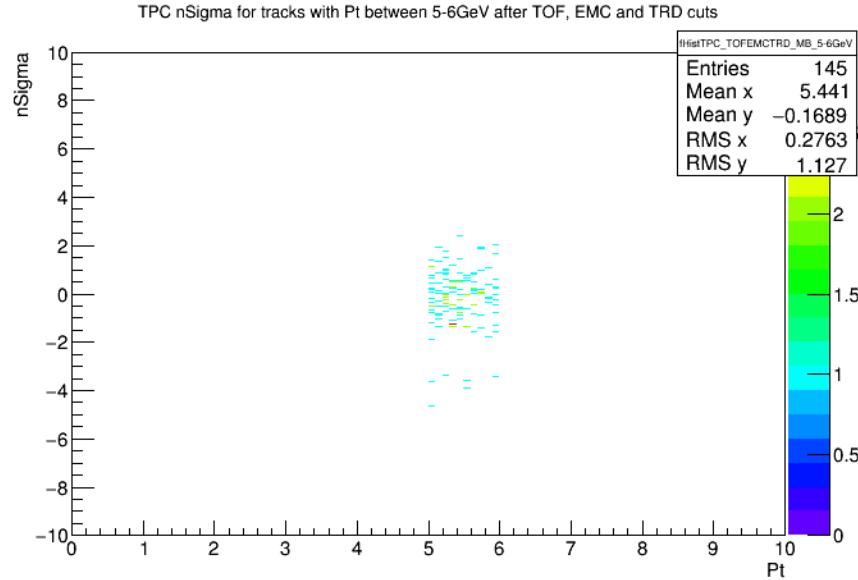
# TPC nSigma after 2Sig TOF cut, 1+- 3-4Gev0.1 E/p cut and >.9 TRD cut



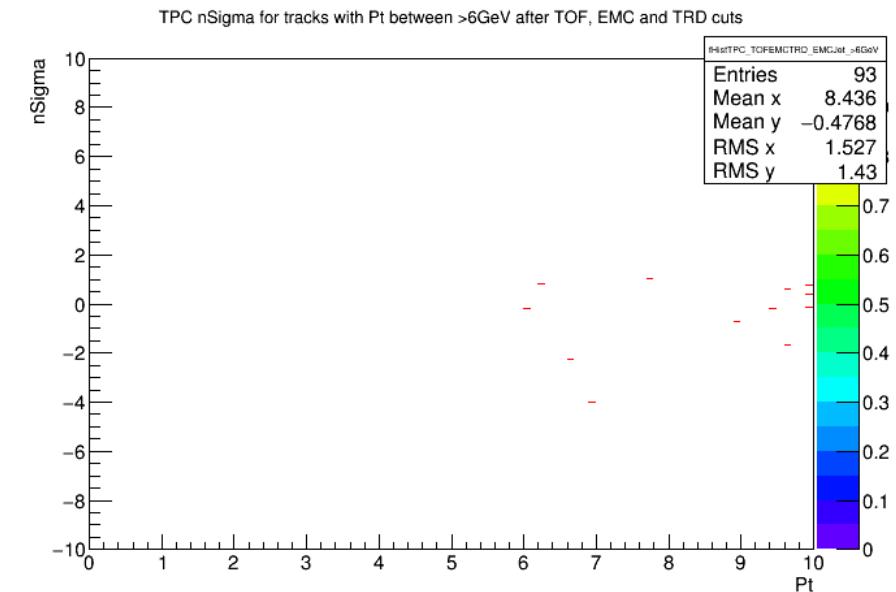
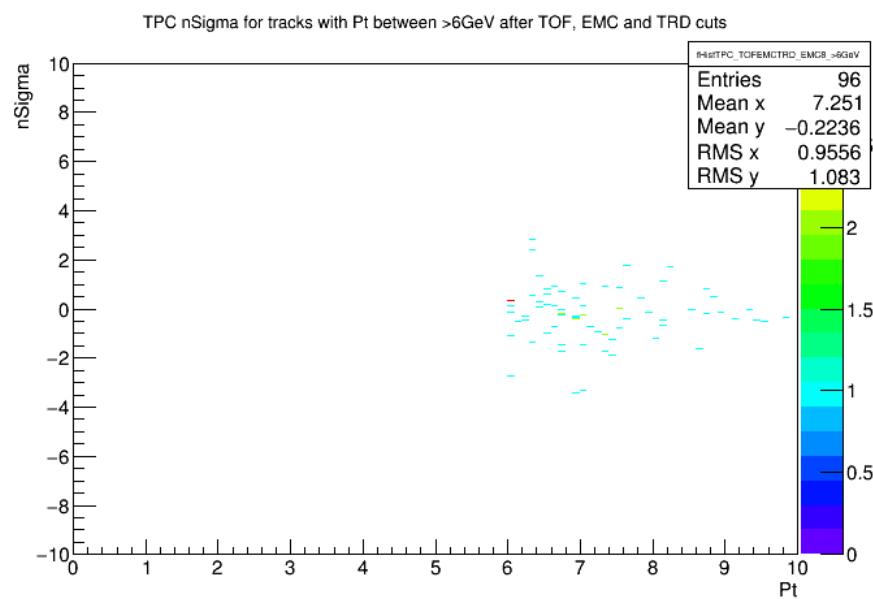
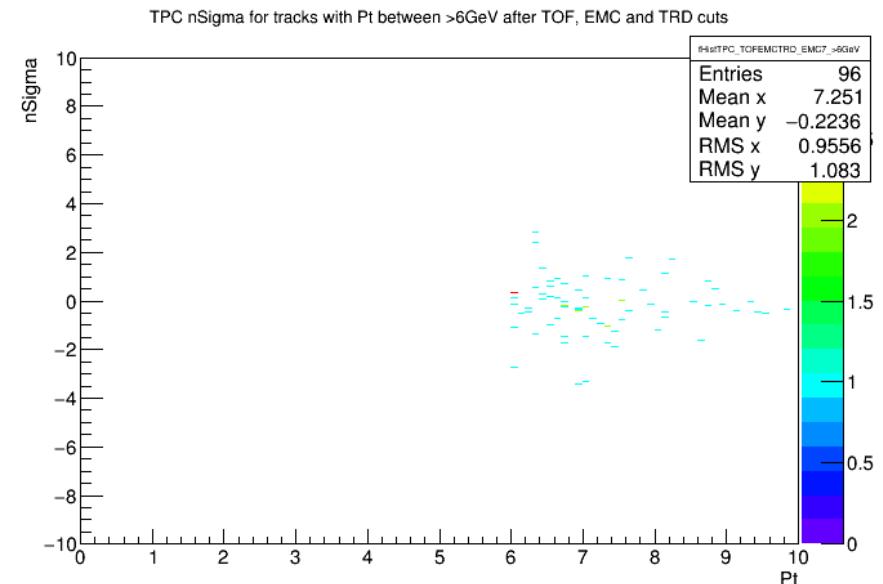
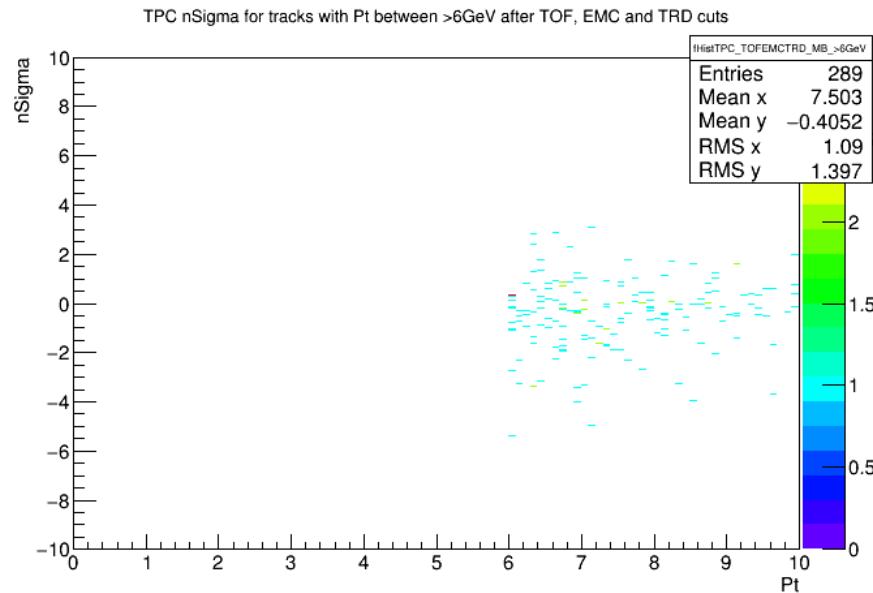
# TPC nSigma after 2Sig TOF cut, 1+- 4-5Gev 0.1 E/p cut and >.9 TRD cut



# TPC nSigma after 2Sig TOF cut, 1+- 5-6Gev 0.1 E/p cut and >.9 TRD cut

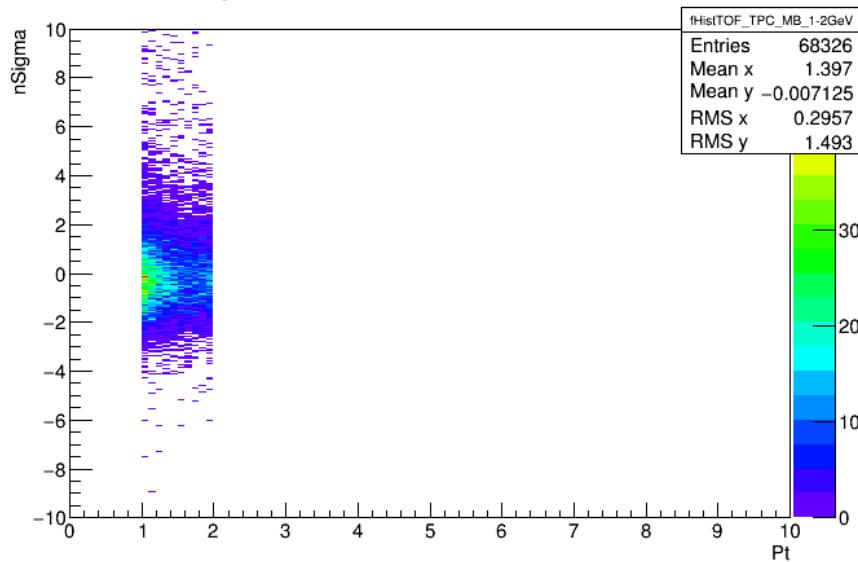


# TPC nSigma after 2Sig TOF cut, 1+->6Gev 0.1 E/p cut and >.9 TRD cut

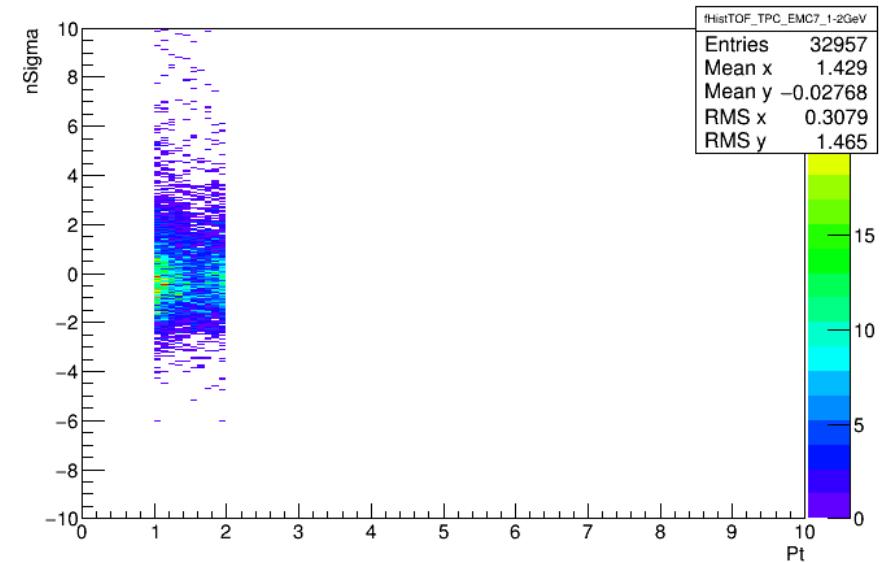


# TOF nSigma after 2Sig TPC Cut 1-2Gev

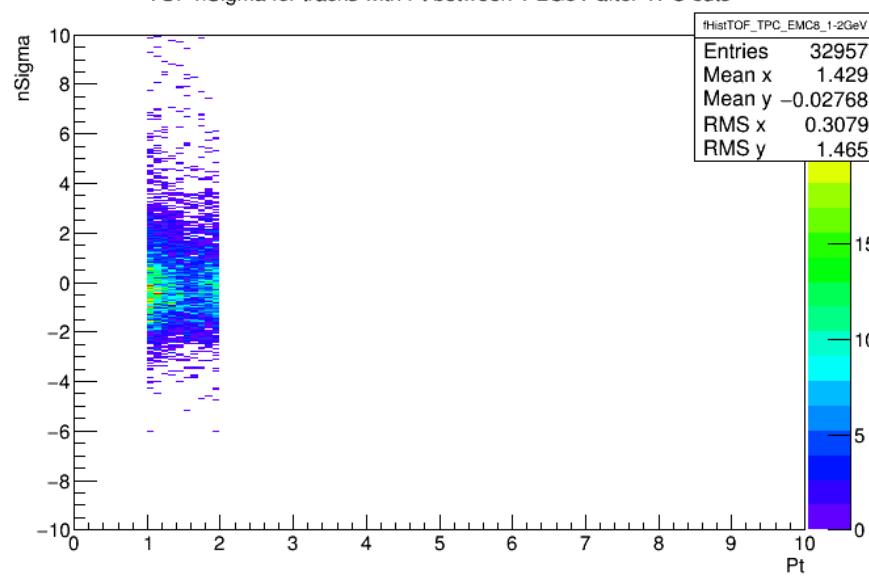
TOF nSigma for tracks with Pt between 1-2GeV after TPC cuts



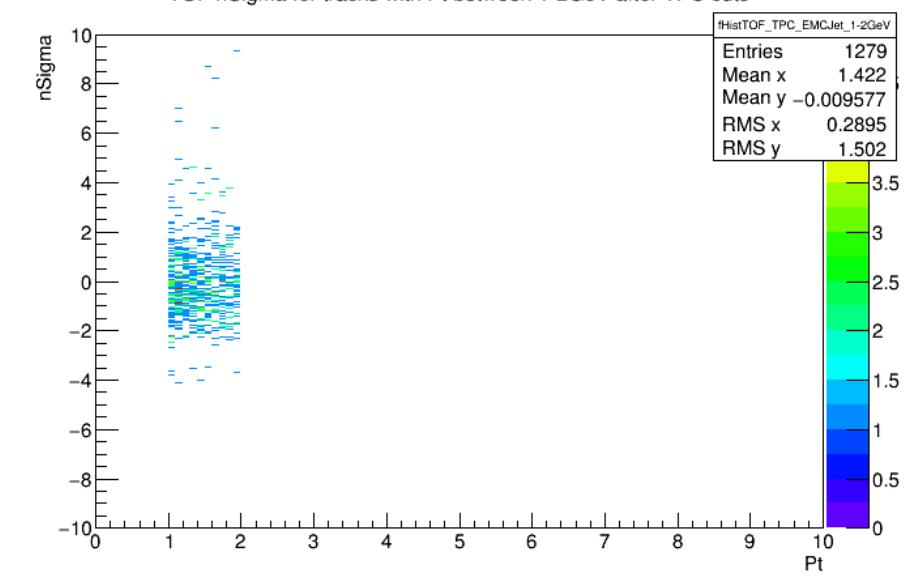
TOF nSigma for tracks with Pt between 1-2GeV after TPC cuts



TOF nSigma for tracks with Pt between 1-2GeV after TPC cuts

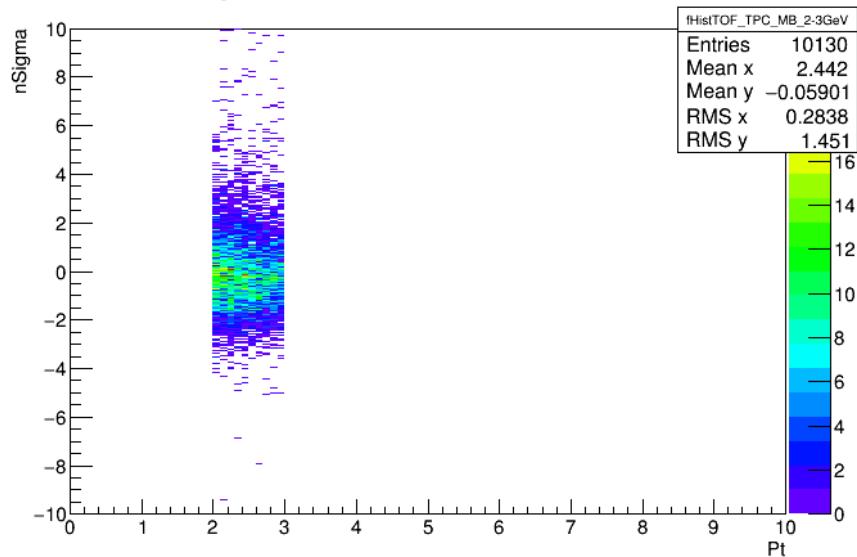


TOF nSigma for tracks with Pt between 1-2GeV after TPC cuts

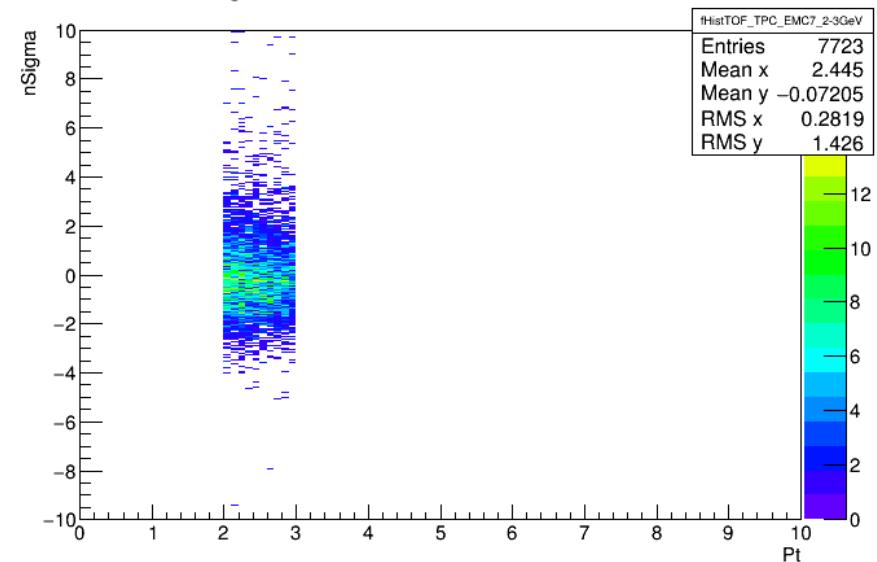


# TOF nSigma after 2Sig TPC cut 2-3Gev

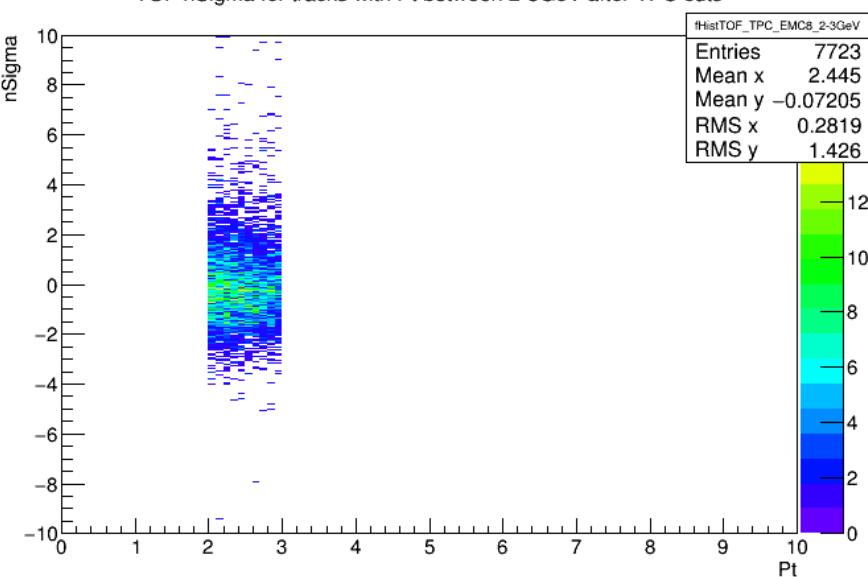
TOF nSigma for tracks with Pt between 2-3GeV after TPC cuts



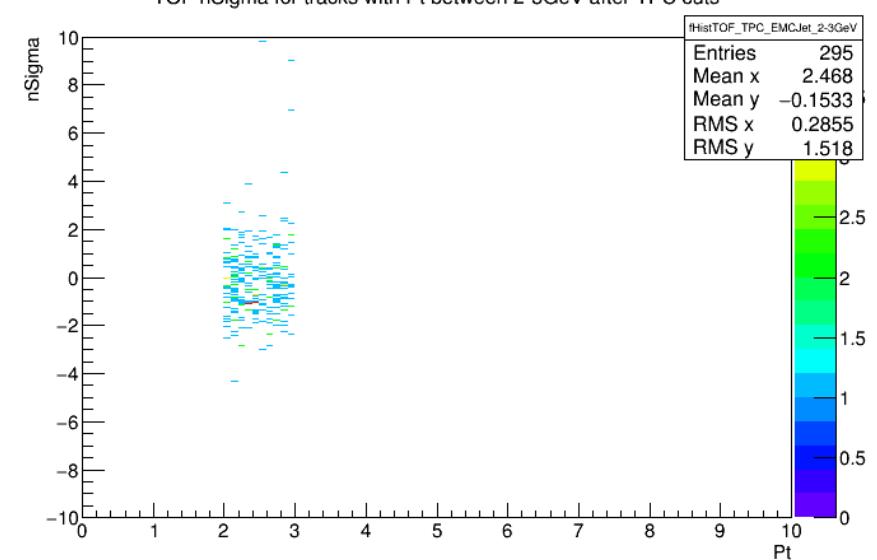
TOF nSigma for tracks with Pt between 2-3GeV after TPC cuts



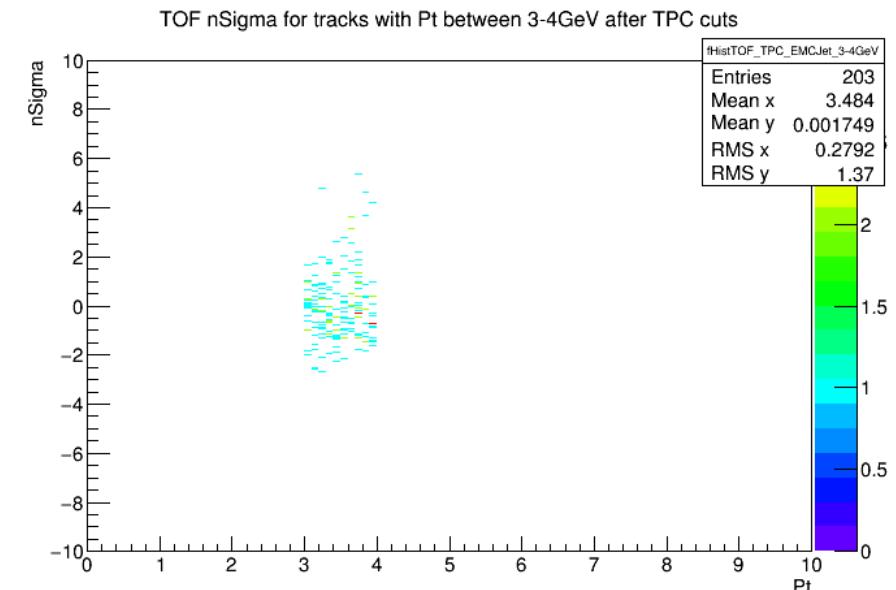
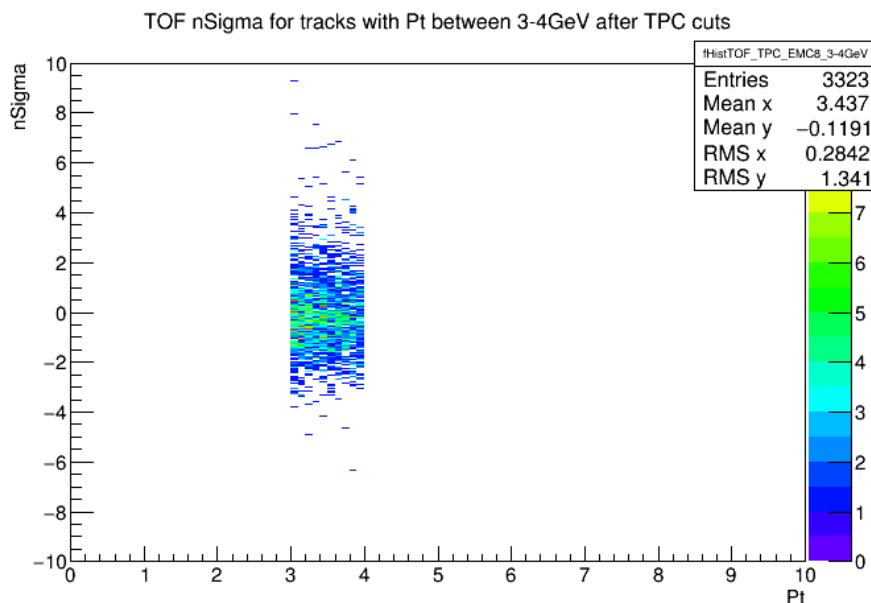
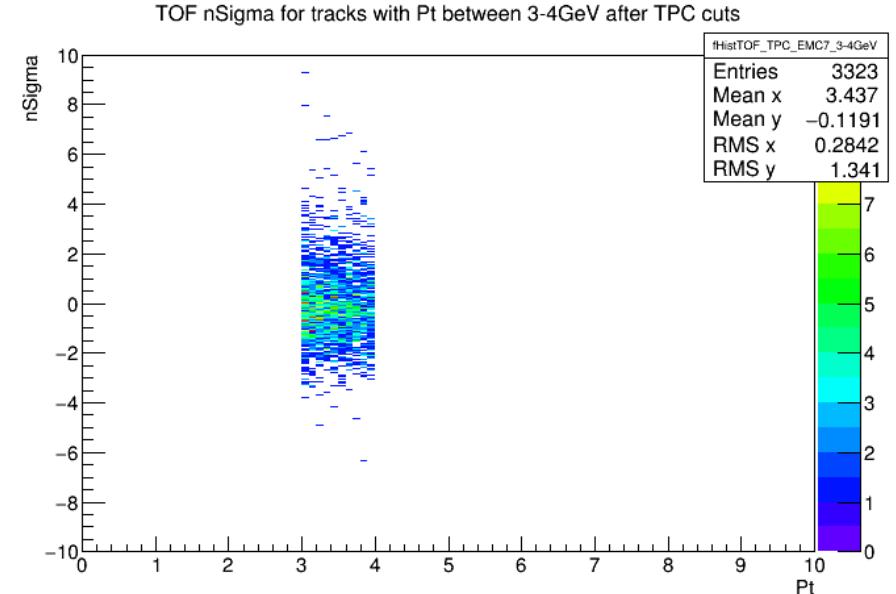
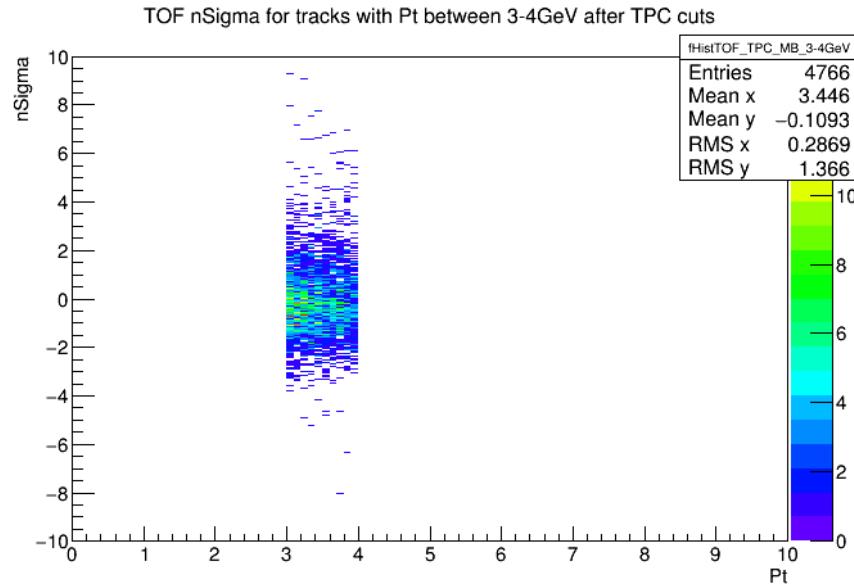
TOF nSigma for tracks with Pt between 2-3GeV after TPC cuts



TOF nSigma for tracks with Pt between 2-3GeV after TPC cuts

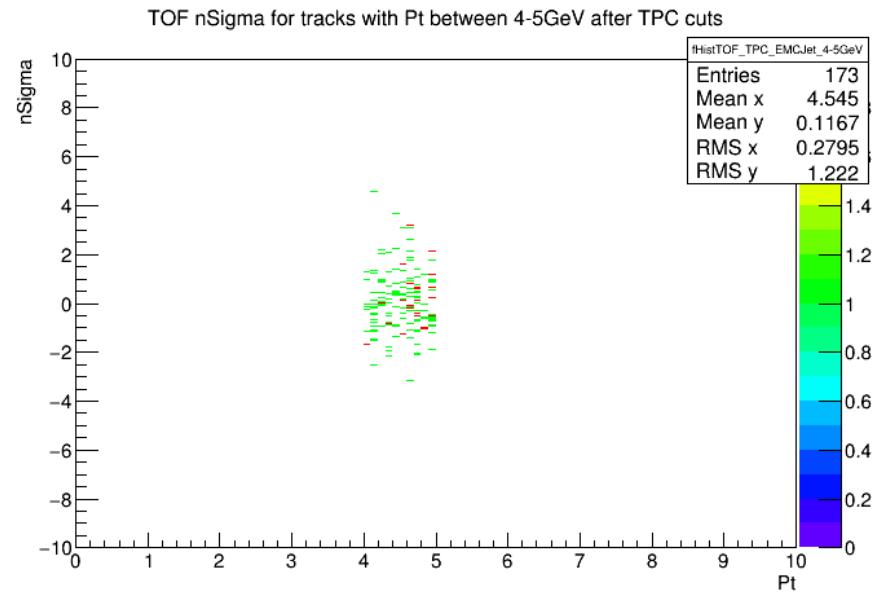
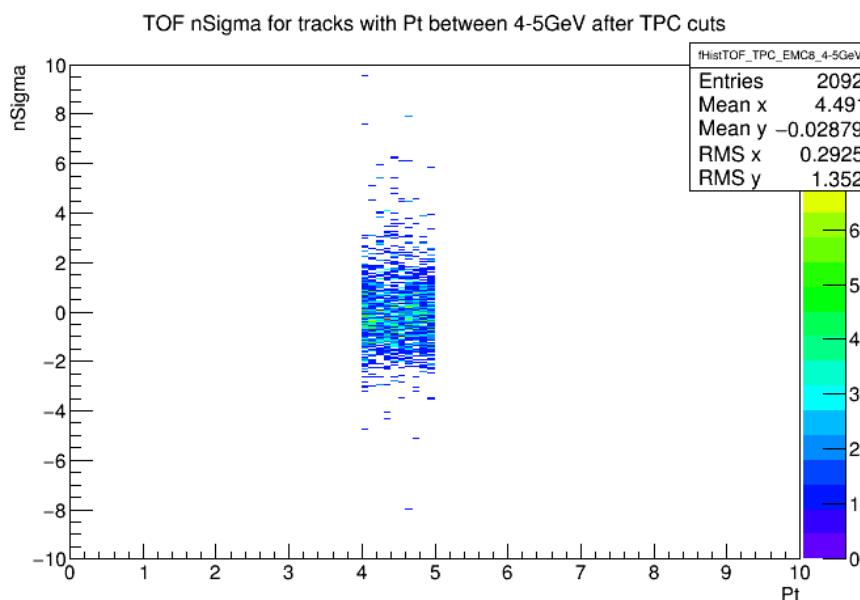
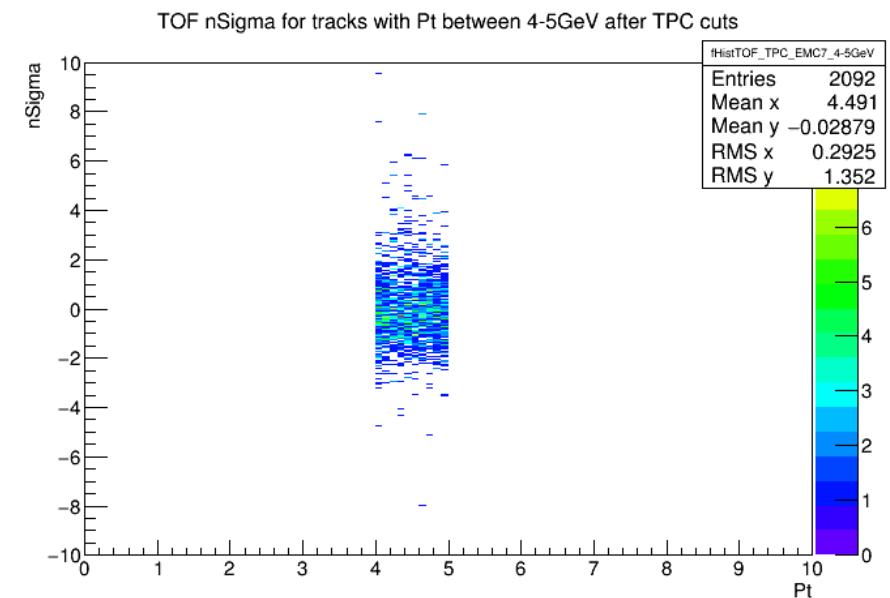
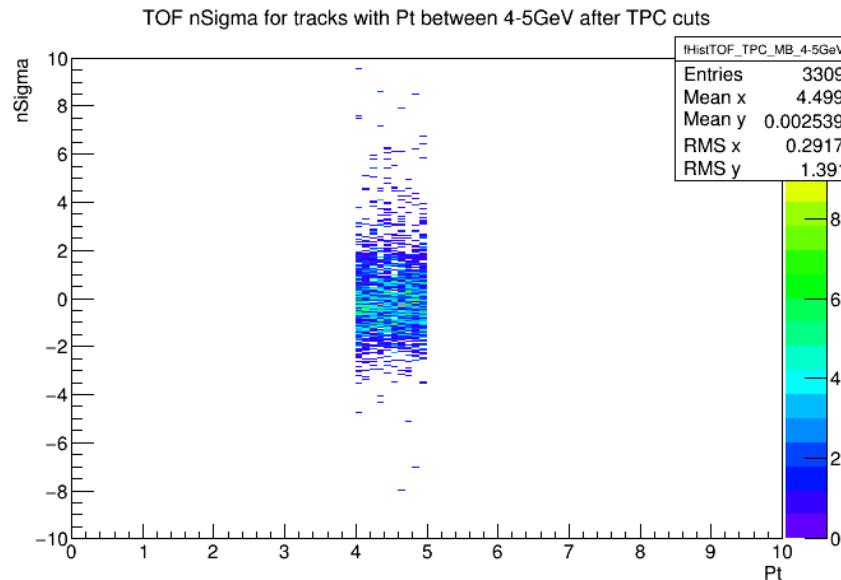


# TOF nSigma after 2Sig TPC cut 3-4Gev

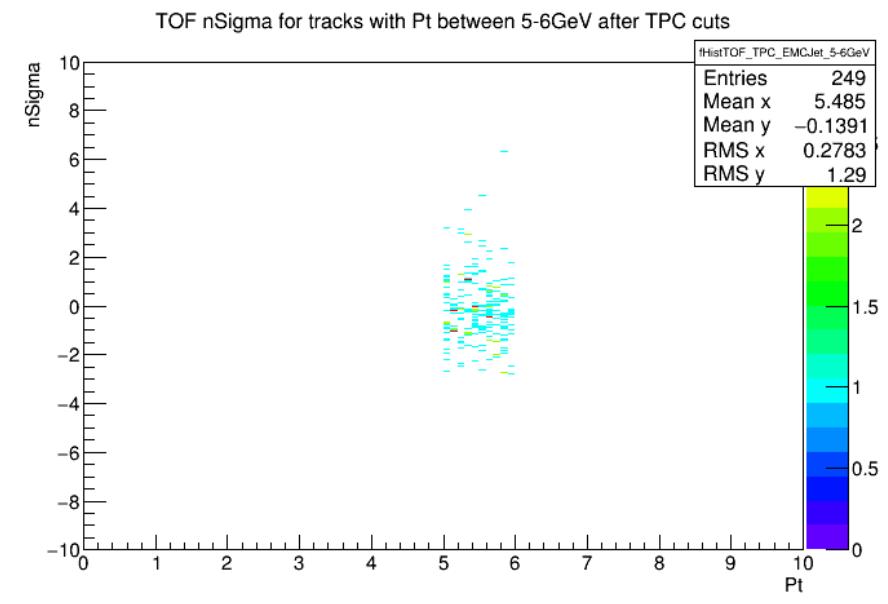
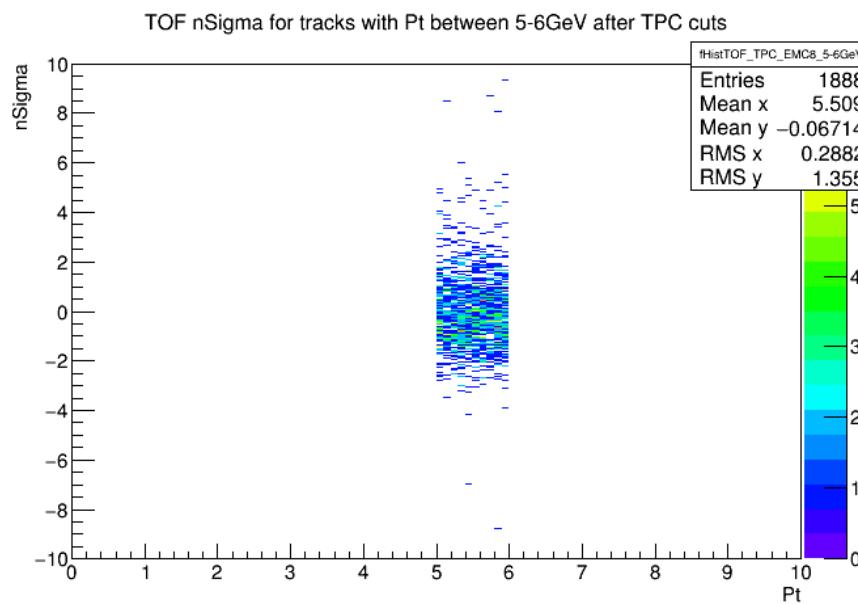
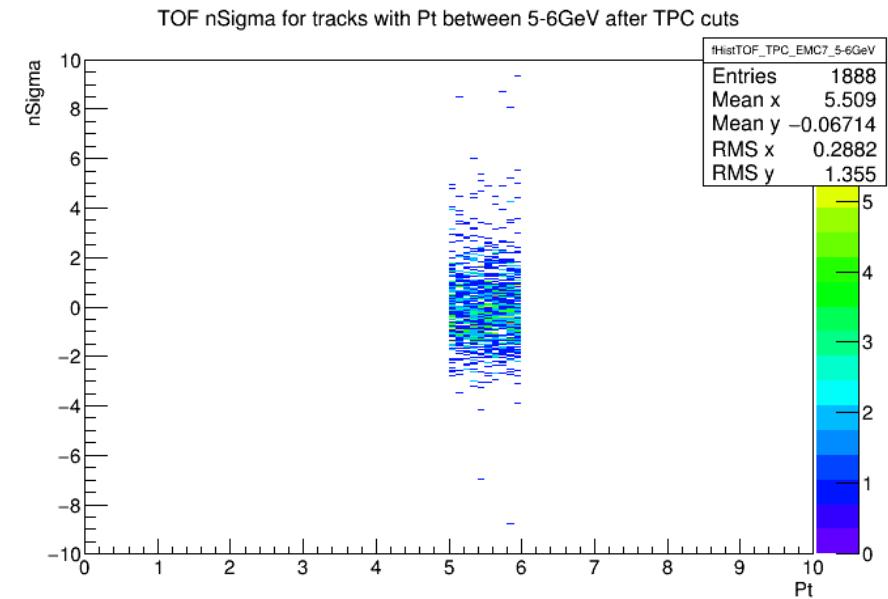
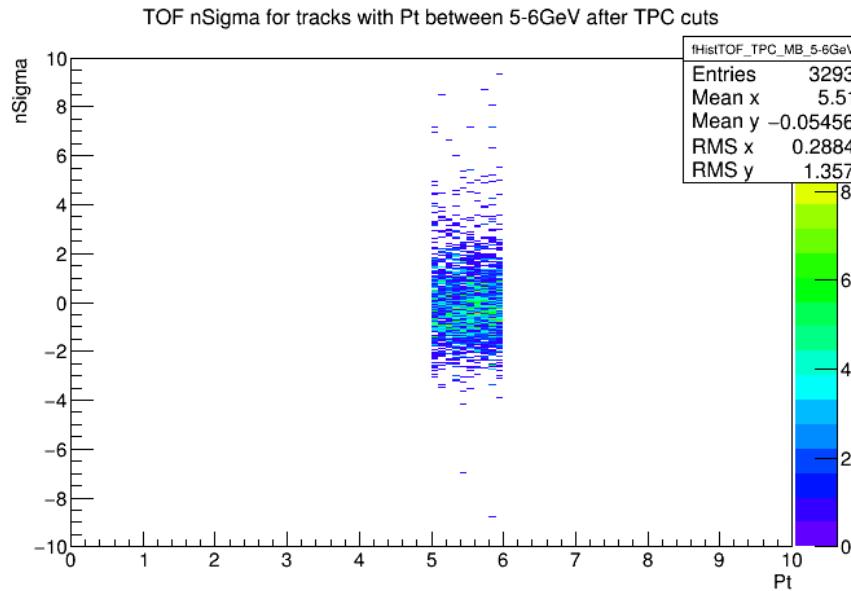


# TOF nSigma after 2Sig TPC cut

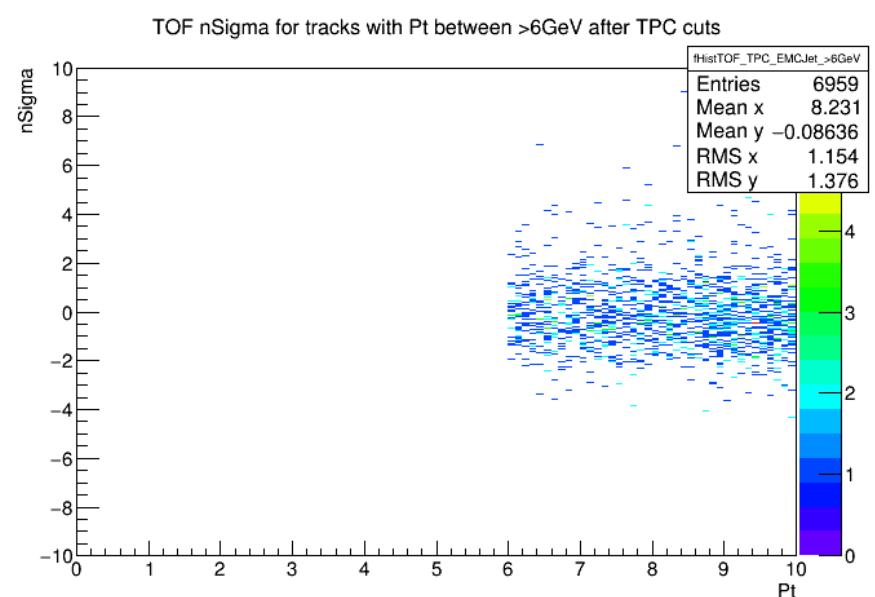
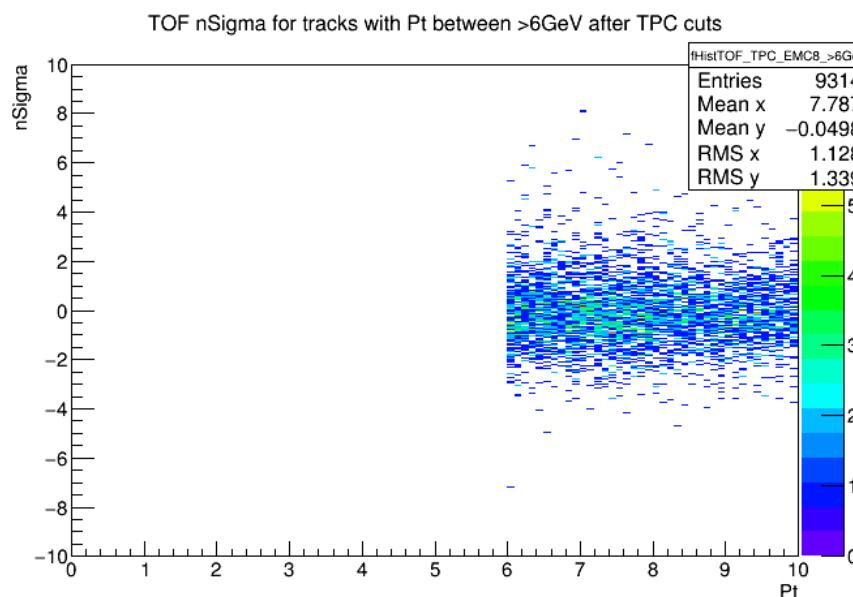
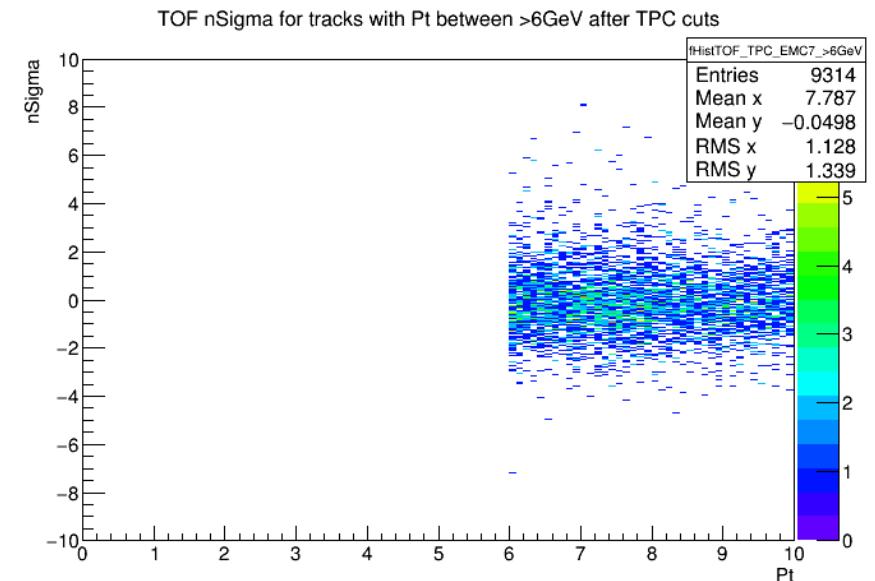
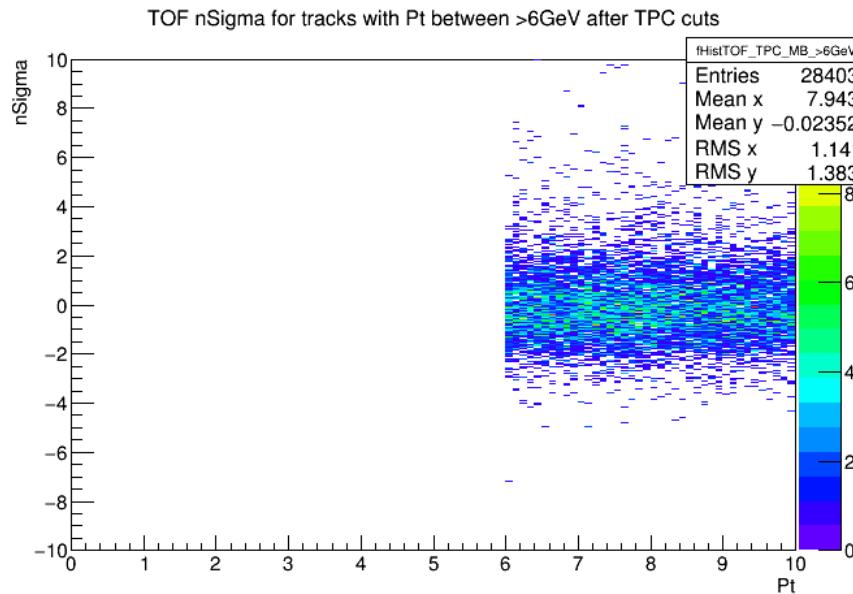
## 4-5Gev



# TOF nSigma after 2Sig TPC cut 5-6Gev

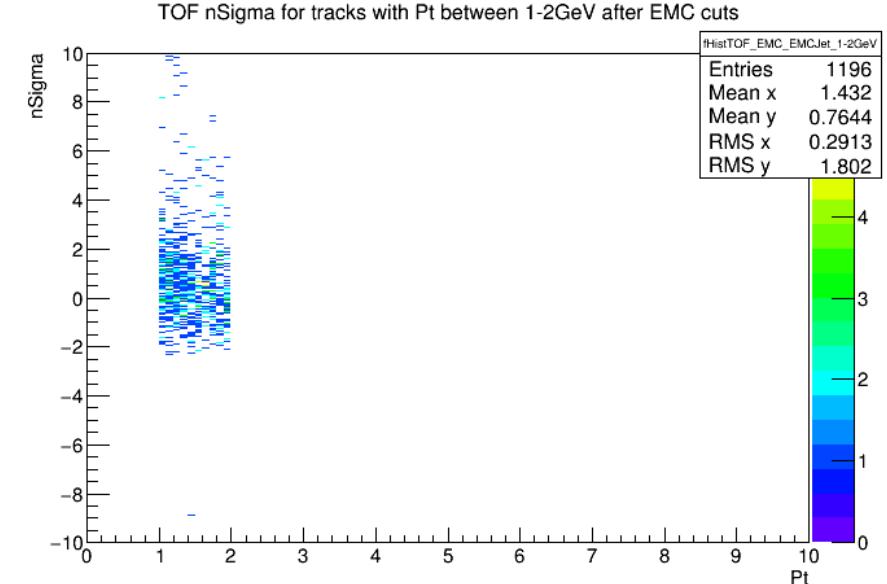
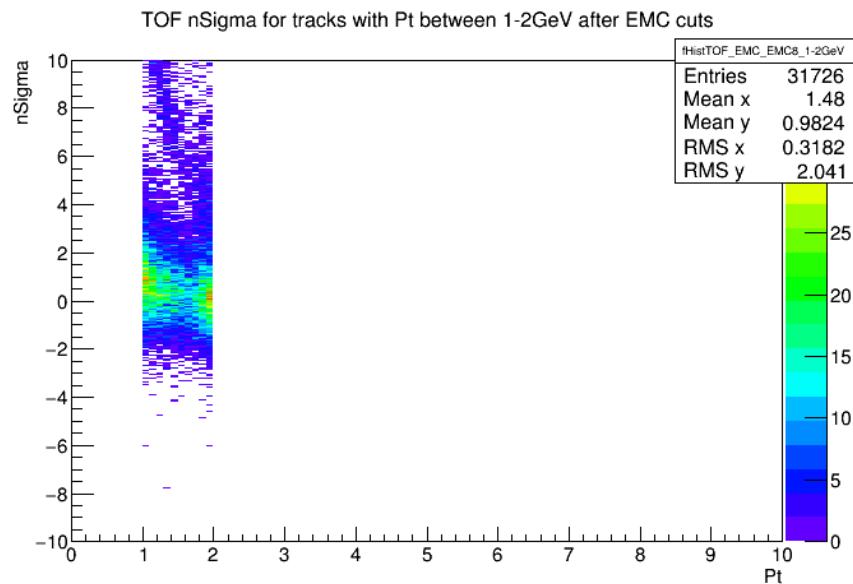
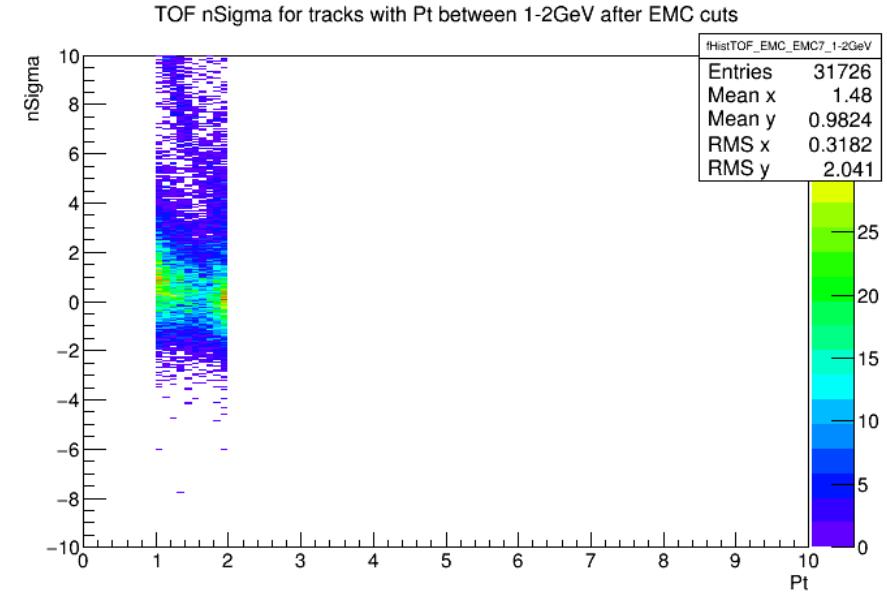
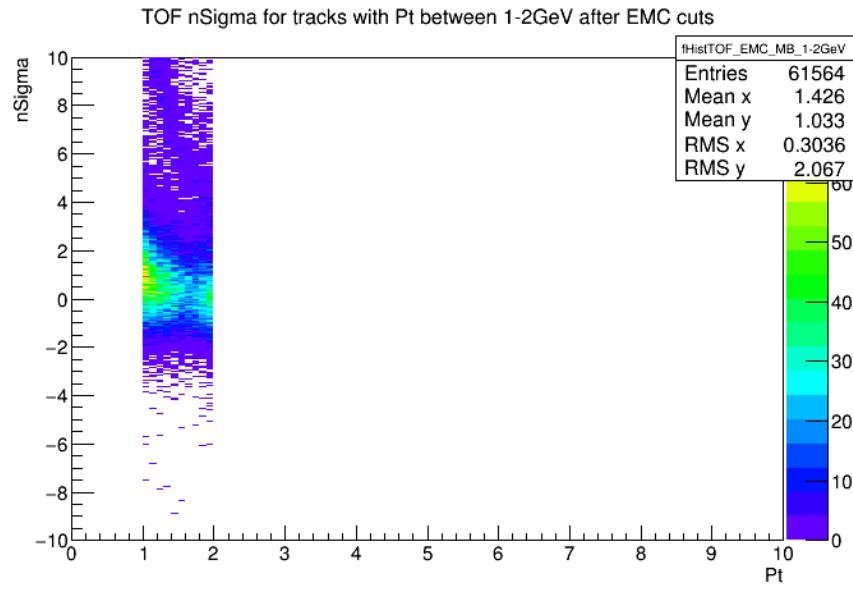


# TOF nSigma after 2Sig TPC cut >6Gev



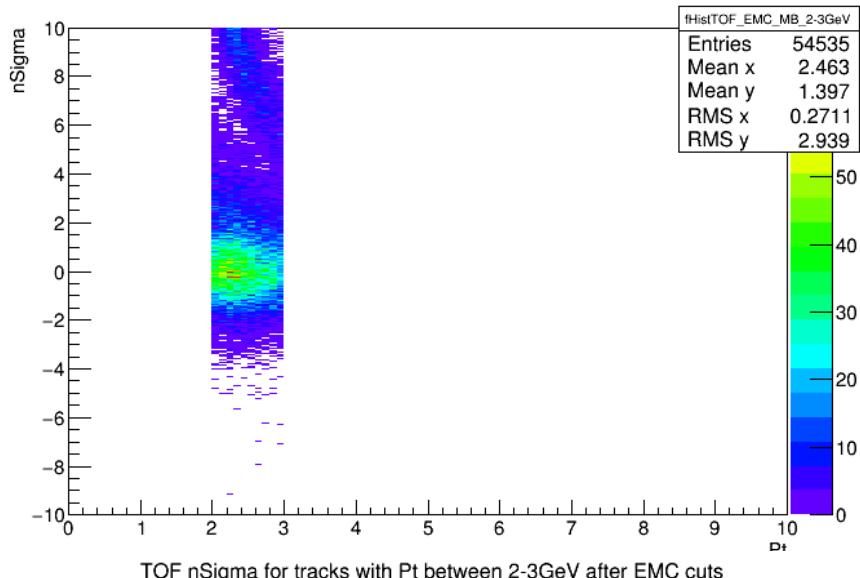
# TOF nSigma after 1+-0.1 E/p Cut

## 1-2Gev

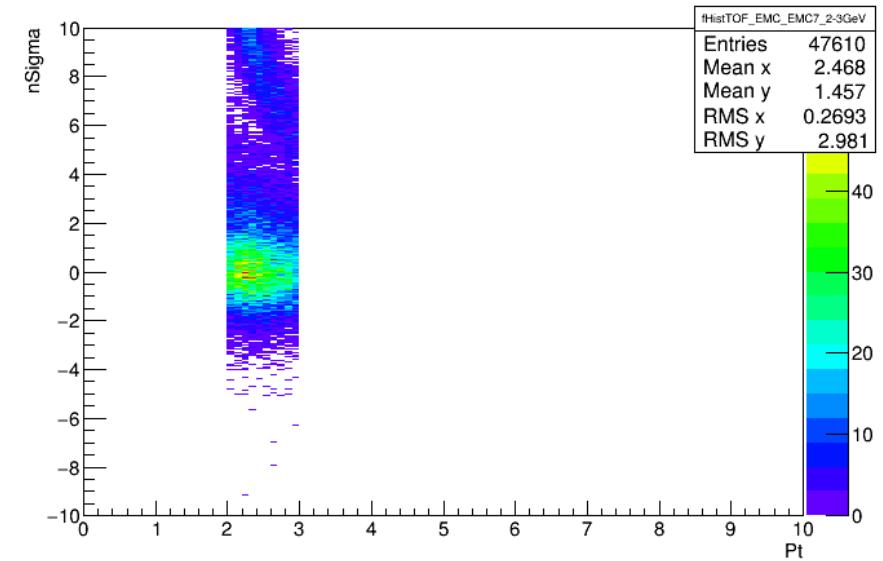


# TOF nSigma after 1+-0.1 E/p cut 2-3Gev

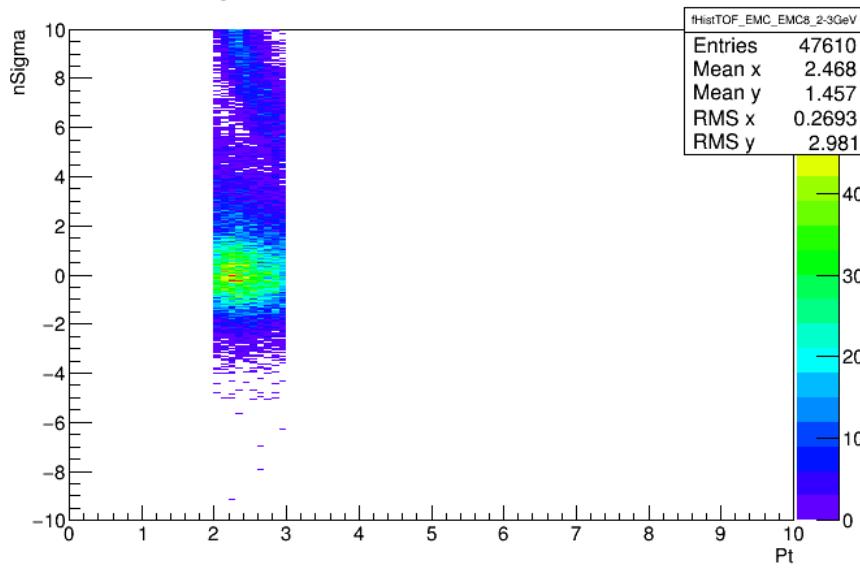
TOF nSigma for tracks with Pt between 2-3GeV after EMC cuts



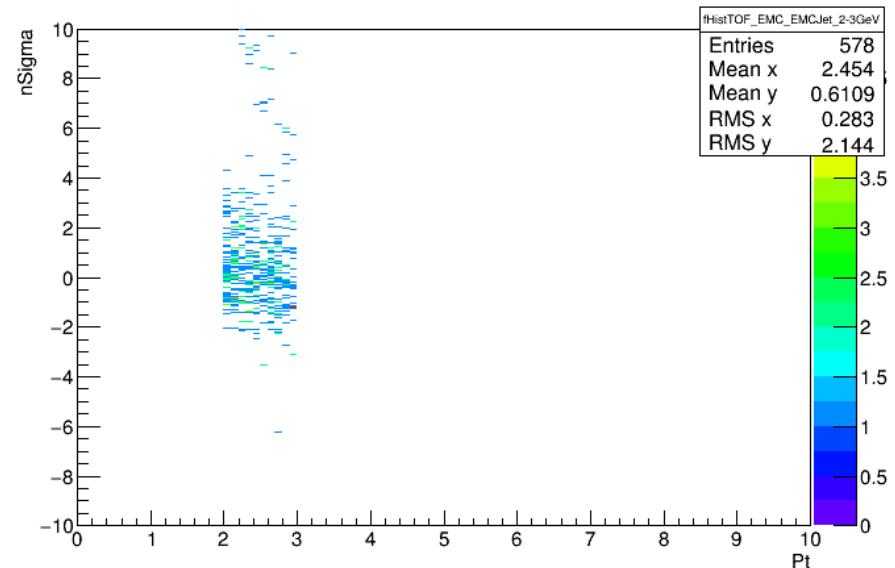
TOF nSigma for tracks with Pt between 2-3GeV after EMC cuts



TOF nSigma for tracks with Pt between 2-3GeV after EMC cuts



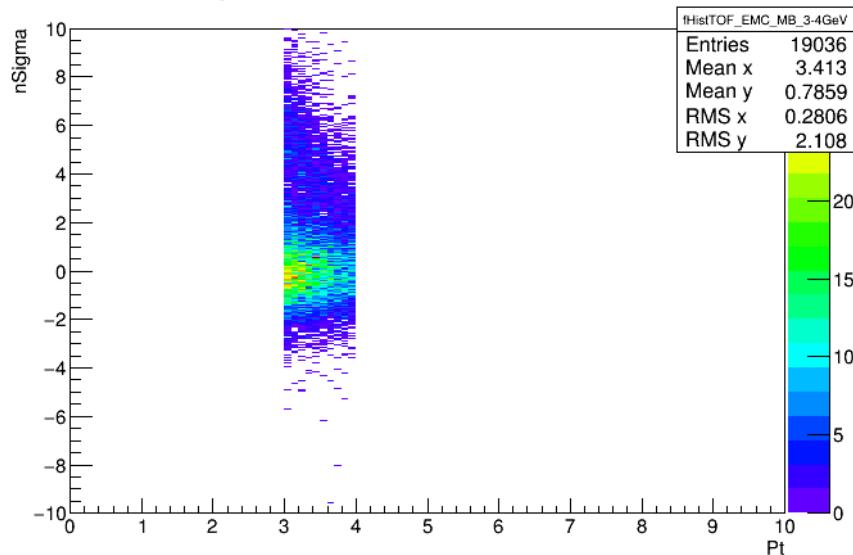
TOF nSigma for tracks with Pt between 2-3GeV after EMC cuts



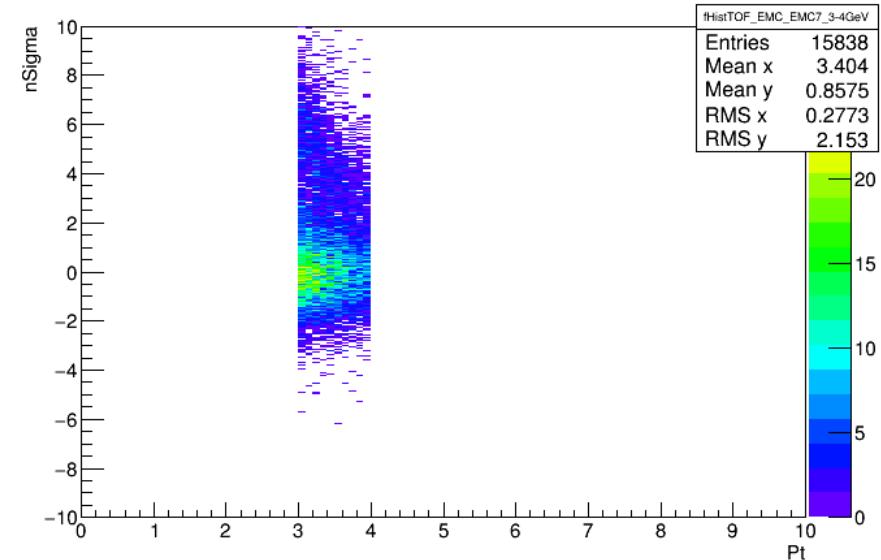
# TOF nSigma after 1+-0.1 E/p cut

3-4Gev

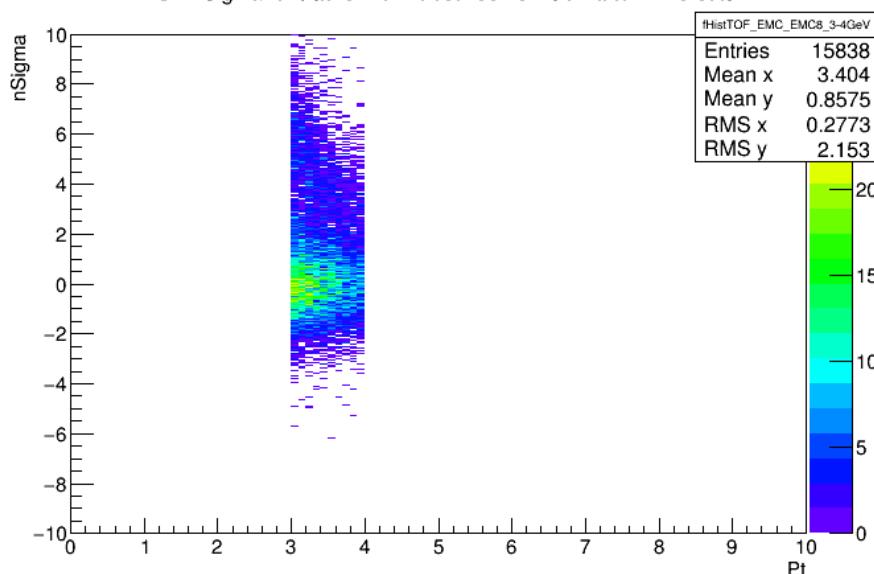
TOF nSigma for tracks with Pt between 3-4GeV after EMC cuts



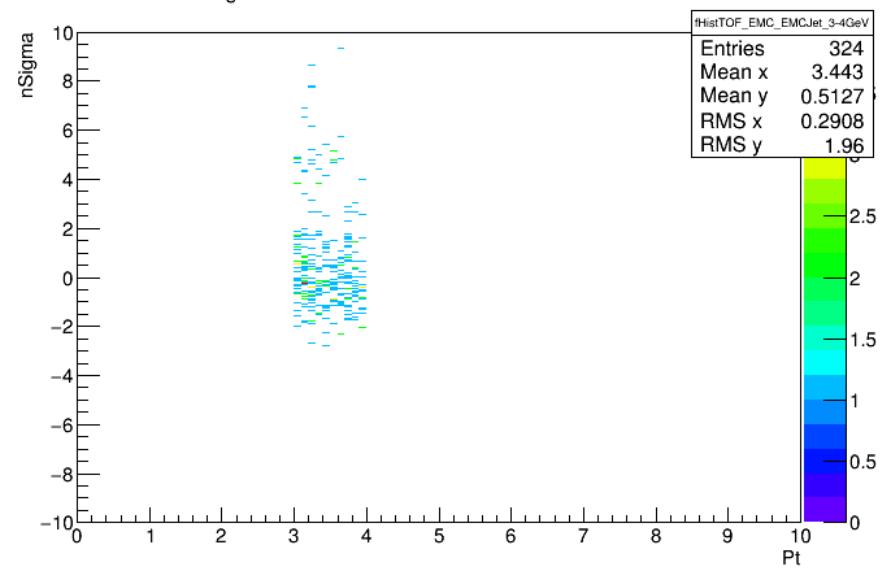
TOF nSigma for tracks with Pt between 3-4GeV after EMC cuts



TOF nSigma for tracks with Pt between 3-4GeV after EMC cuts

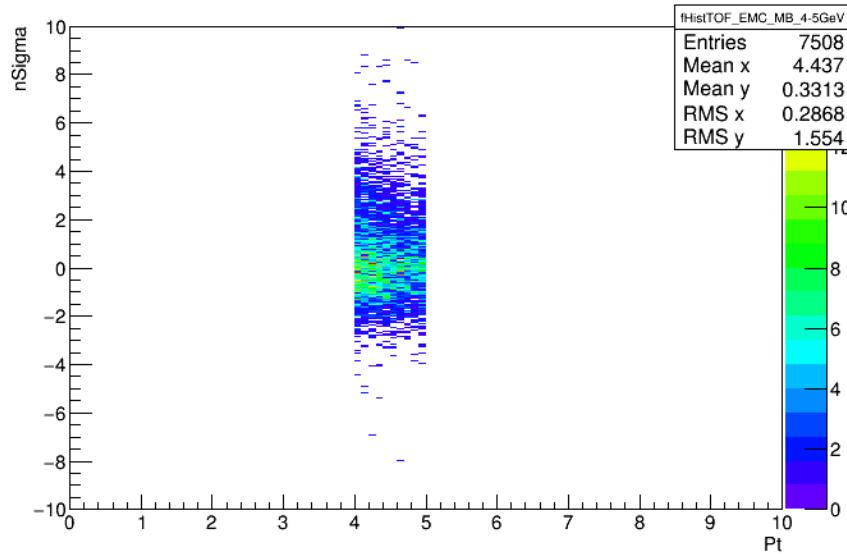


TOF nSigma for tracks with Pt between 3-4GeV after EMC cuts

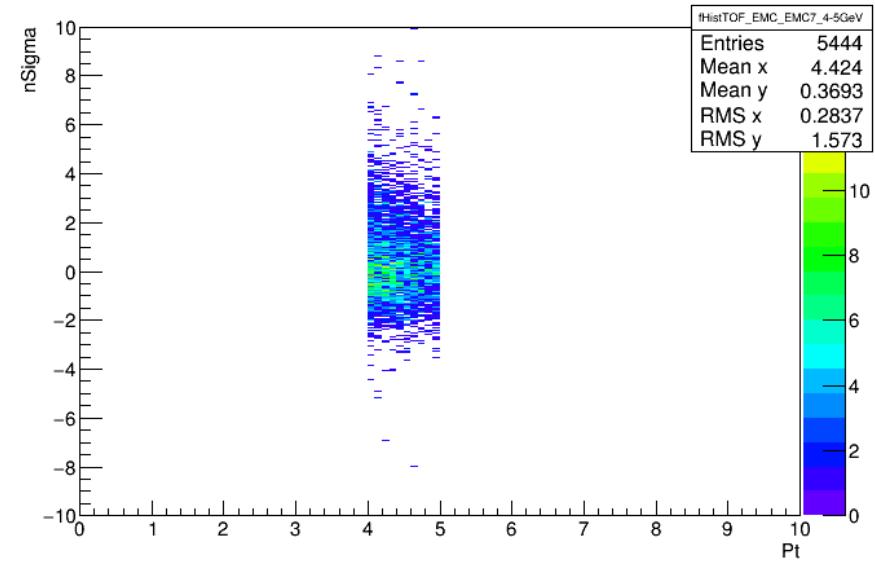


# TOF nSigma after 1+-0.1 E/p cut 4-5Gev

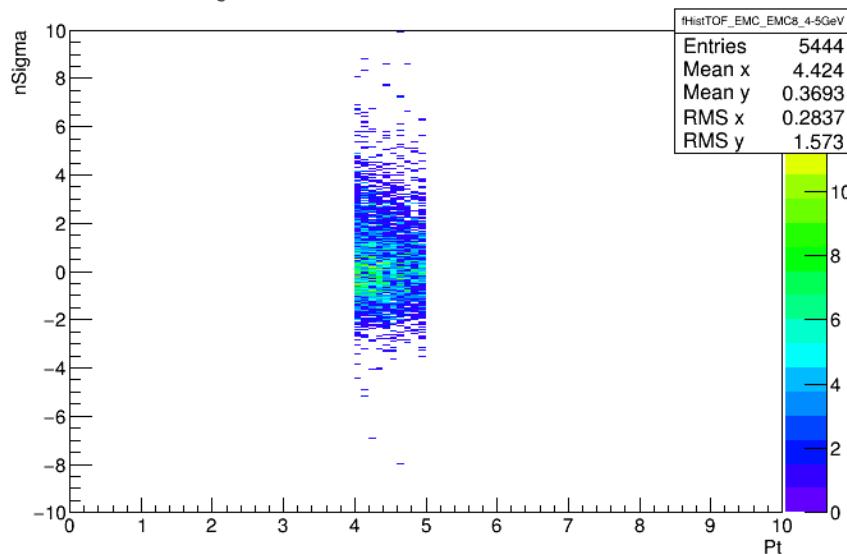
TOF nSigma for tracks with Pt between 4-5GeV after EMC cuts



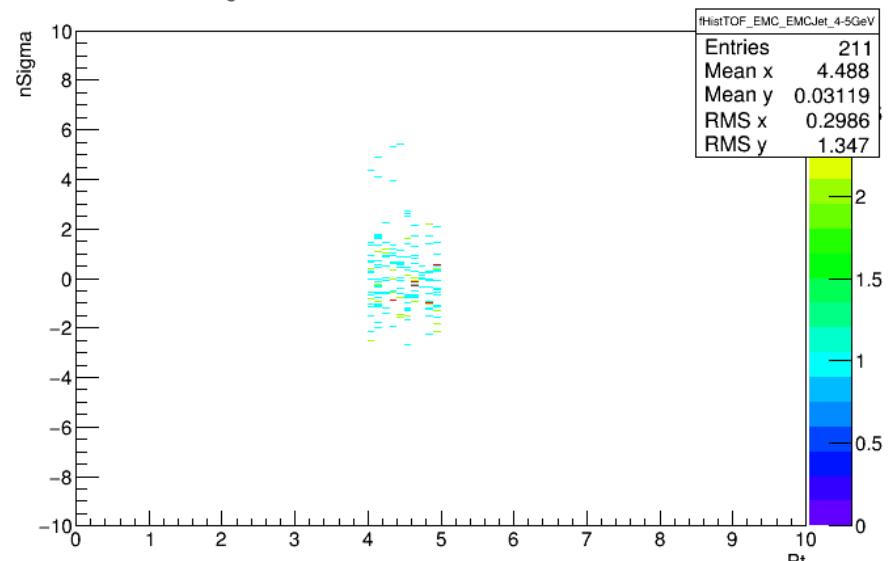
TOF nSigma for tracks with Pt between 4-5GeV after EMC cuts



TOF nSigma for tracks with Pt between 4-5GeV after EMC cuts

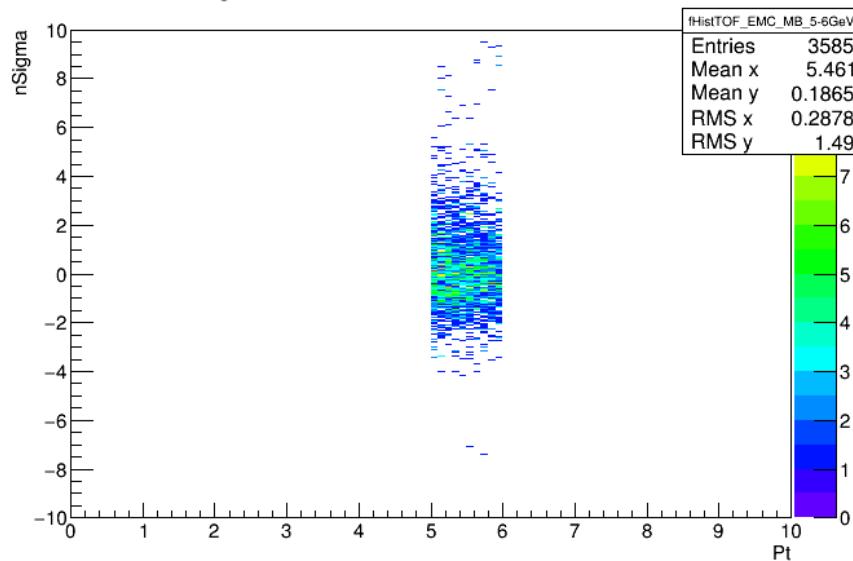


TOF nSigma for tracks with Pt between 4-5GeV after EMC cuts

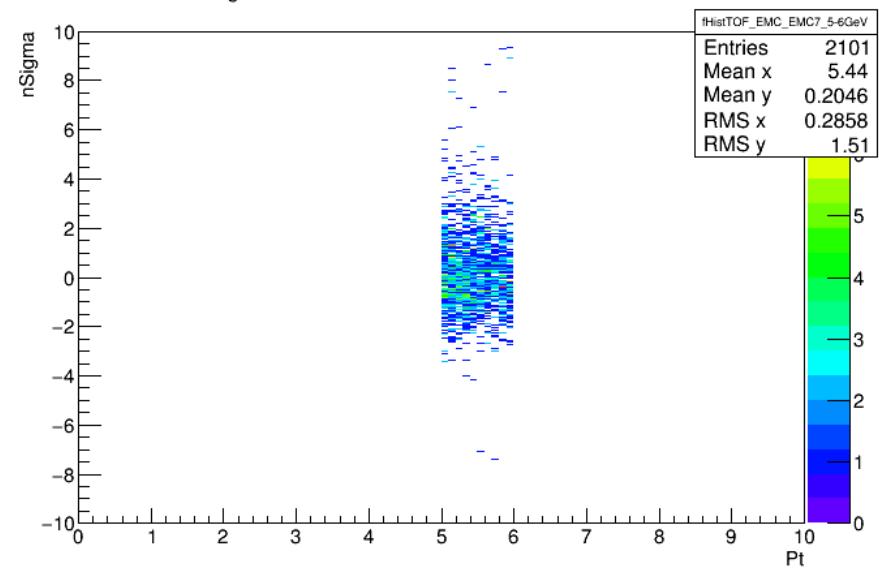


# TOF nSigma after 1+-0.1 E/p cut 5-6Gev

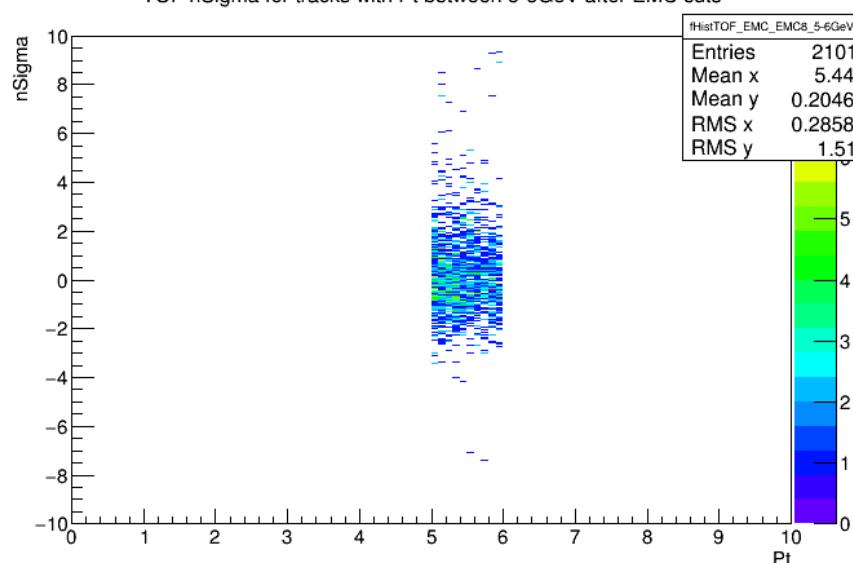
TOF nSigma for tracks with Pt between 5-6GeV after EMC cuts



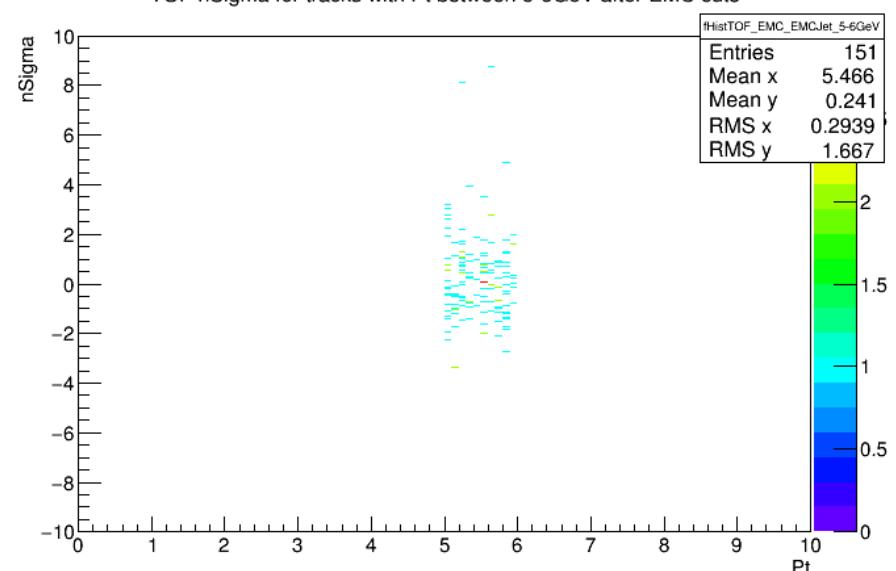
TOF nSigma for tracks with Pt between 5-6GeV after EMC cuts



TOF nSigma for tracks with Pt between 5-6GeV after EMC cuts

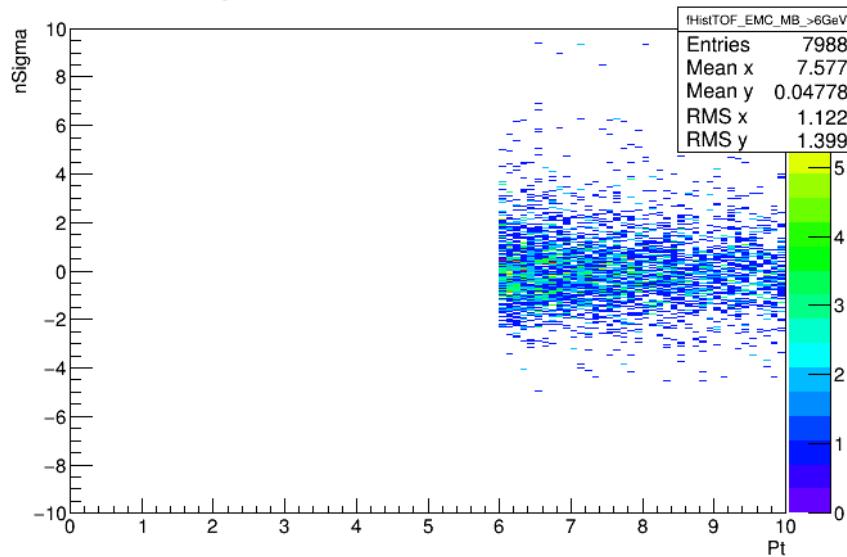


TOF nSigma for tracks with Pt between 5-6GeV after EMC cuts

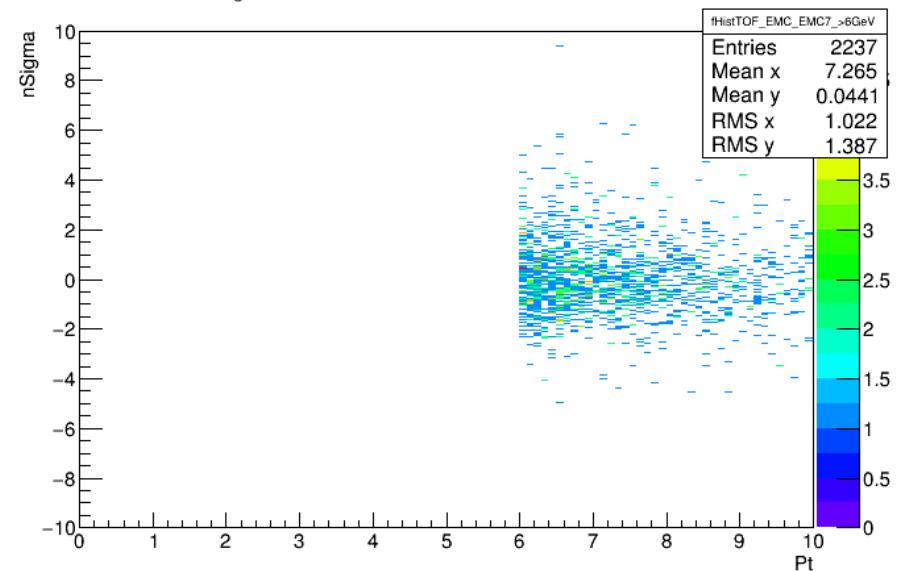


# TOF nSigma after 1+-0.1 E/p cut >6Gev

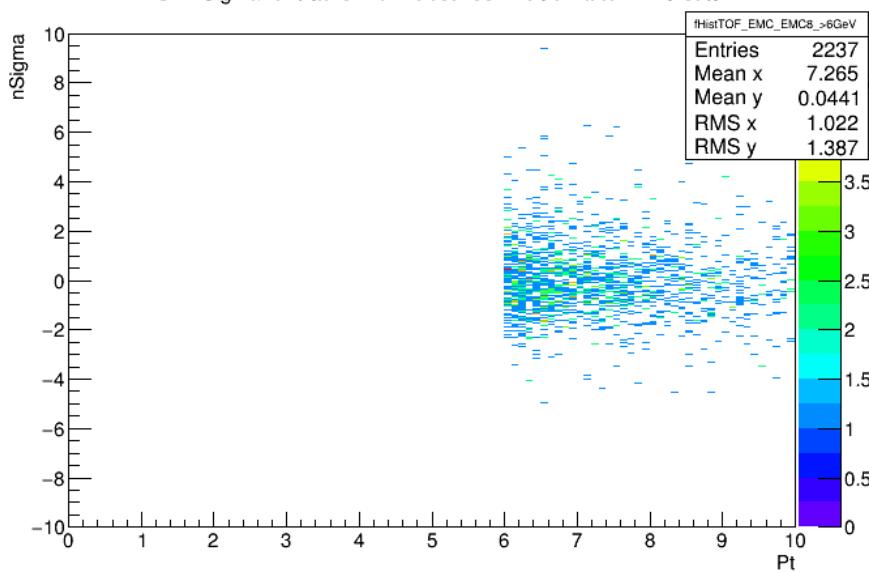
TOF nSigma for tracks with Pt between >6GeV after EMC cuts



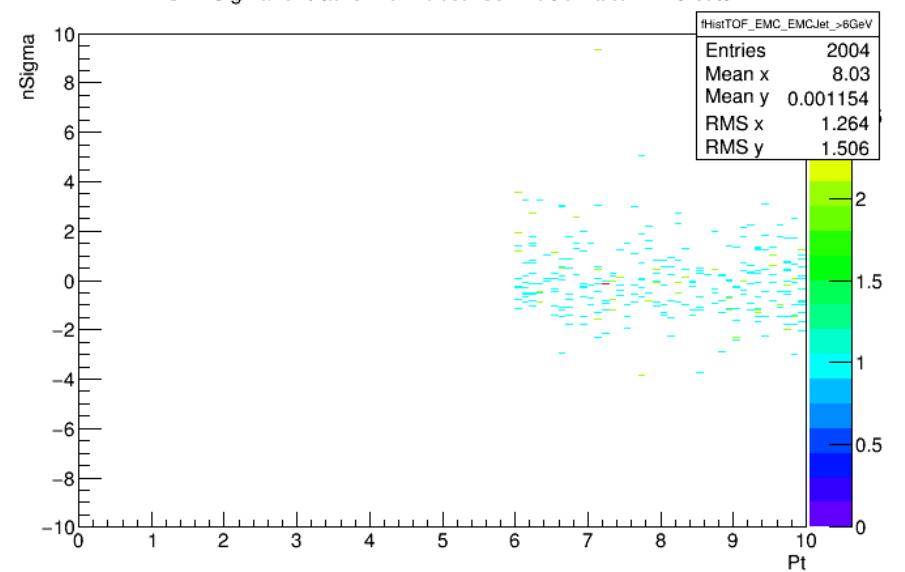
TOF nSigma for tracks with Pt between >6GeV after EMC cuts



TOF nSigma for tracks with Pt between >6GeV after EMC cuts



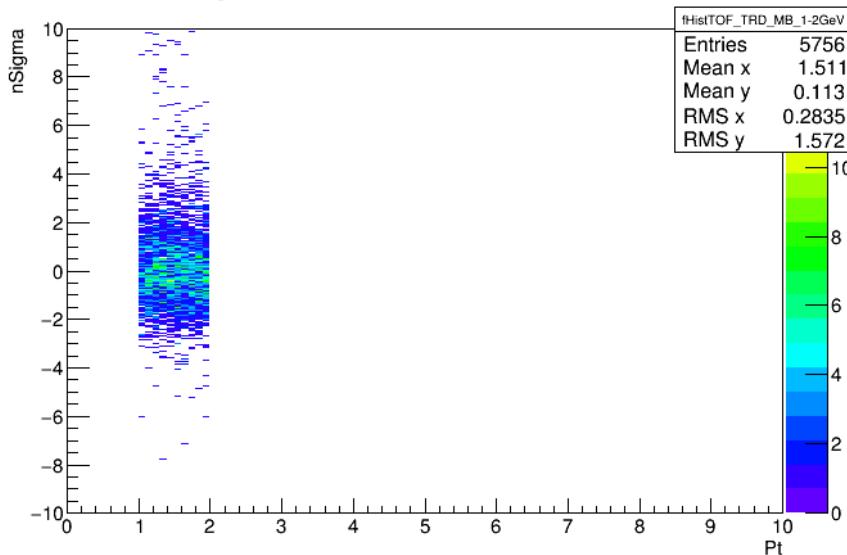
TOF nSigma for tracks with Pt between >6GeV after EMC cuts



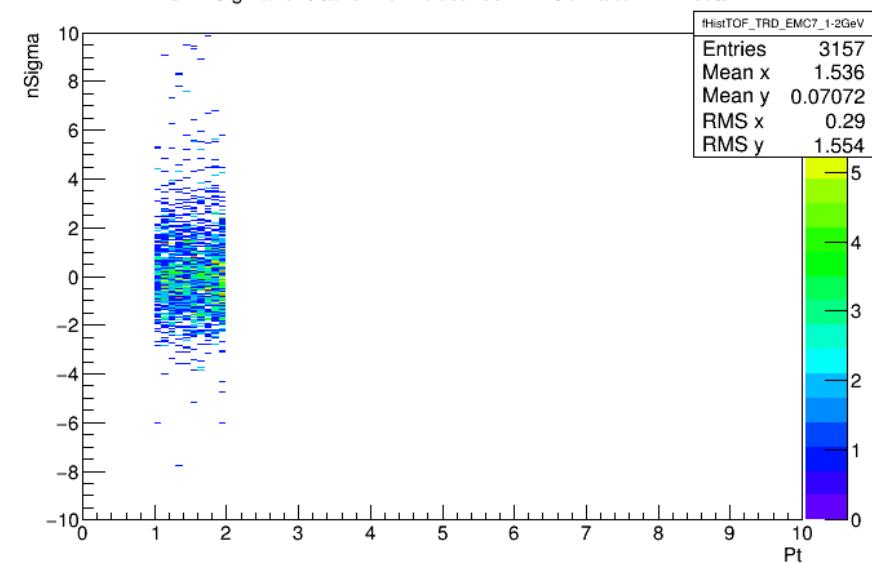
# TOF nSigma after >.9 TRD cut

## 1-2Gev

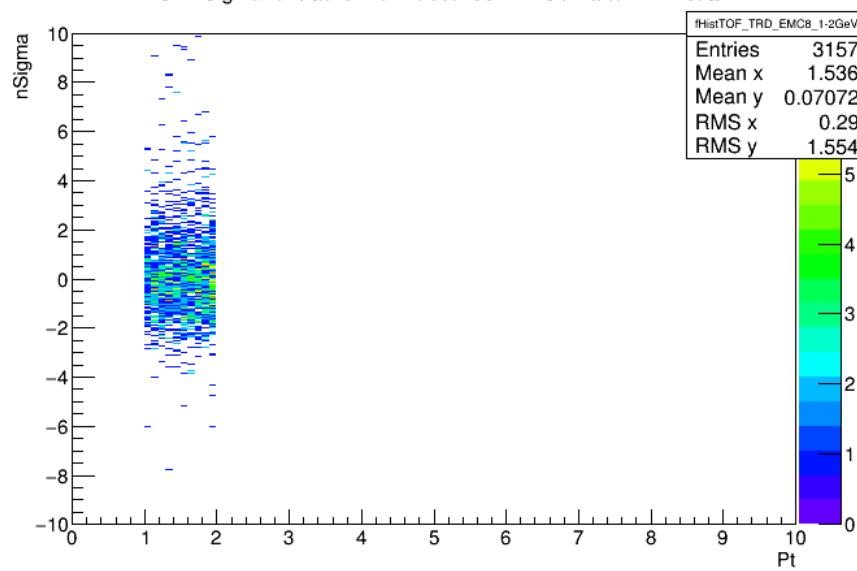
TOF nSigma for tracks with Pt between 1-2GeV after TRD cuts



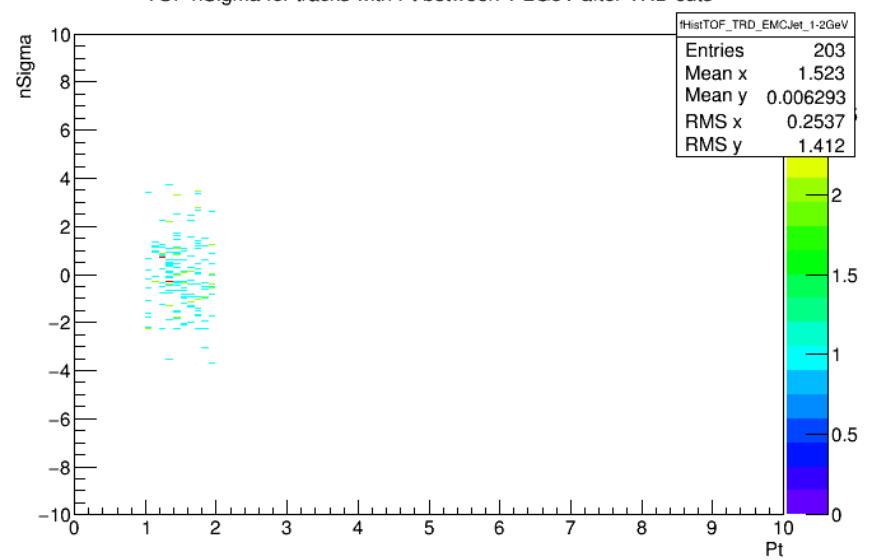
TOF nSigma for tracks with Pt between 1-2GeV after TRD cuts



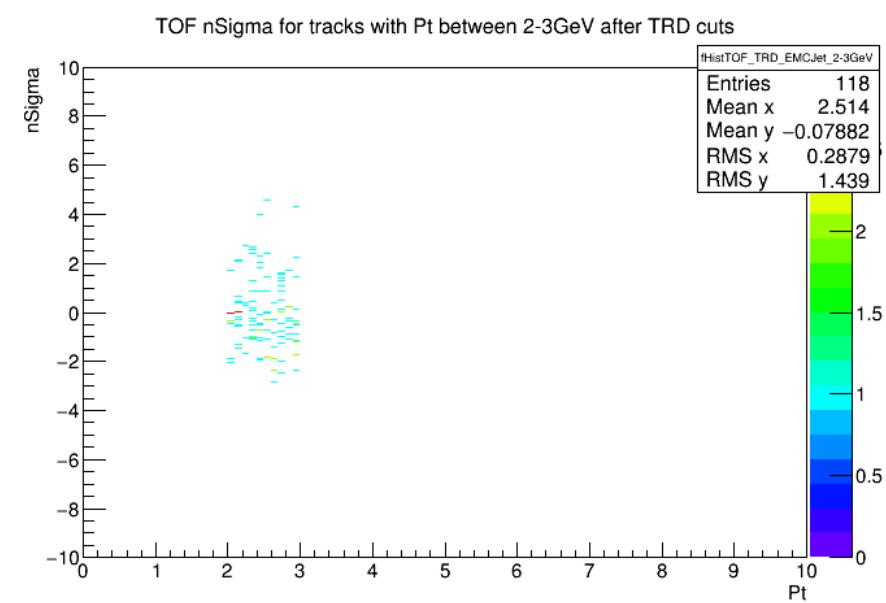
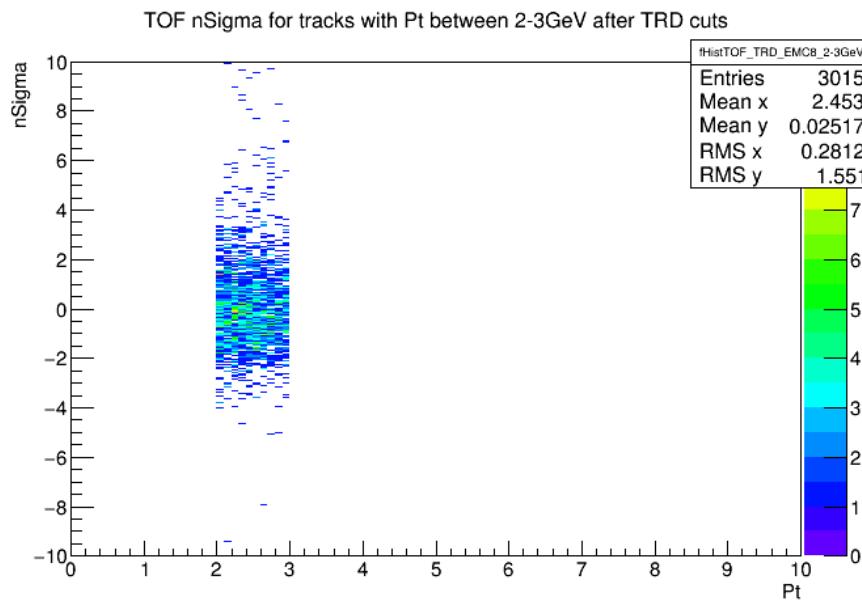
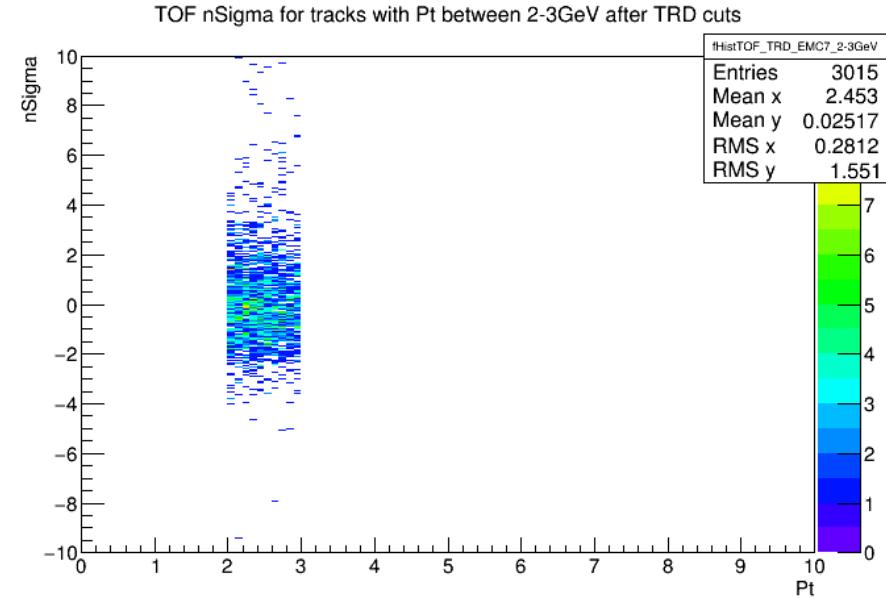
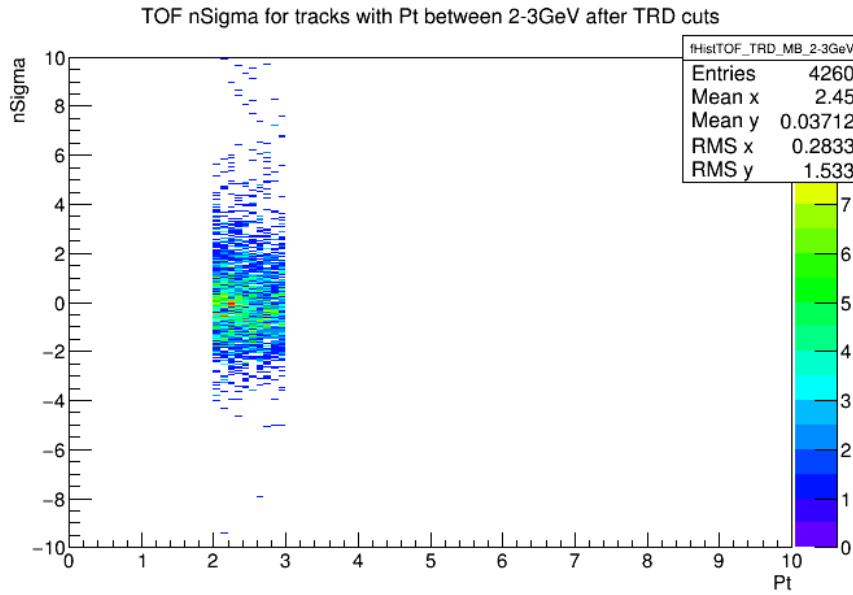
TOF nSigma for tracks with Pt between 1-2GeV after TRD cuts



TOF nSigma for tracks with Pt between 1-2GeV after TRD cuts



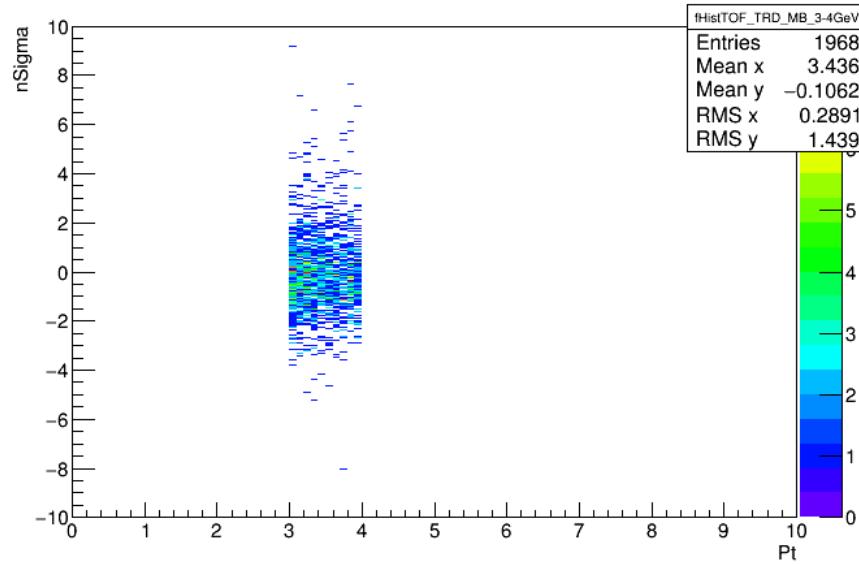
# TOF nSigma after >.9 TRD cut 2-3Gev



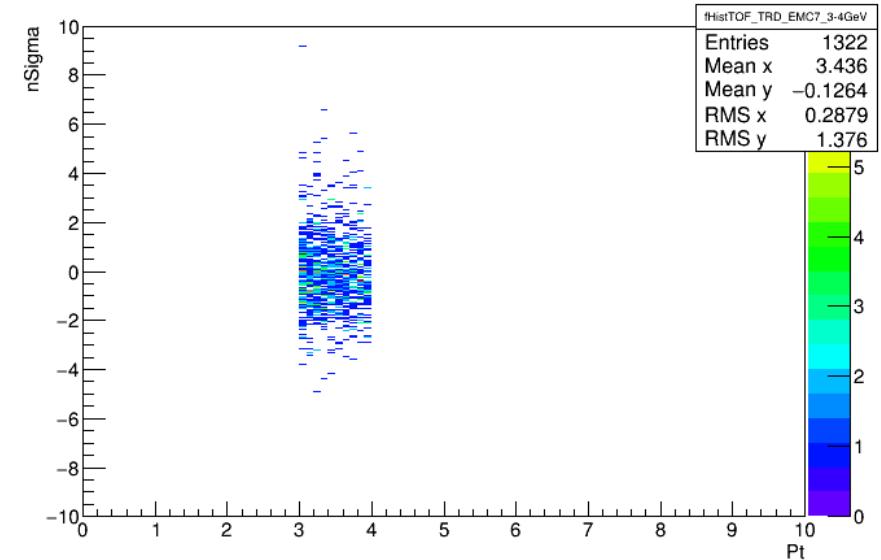
# TOF nSigma after >.9 TRD cut

## 3-4Gev

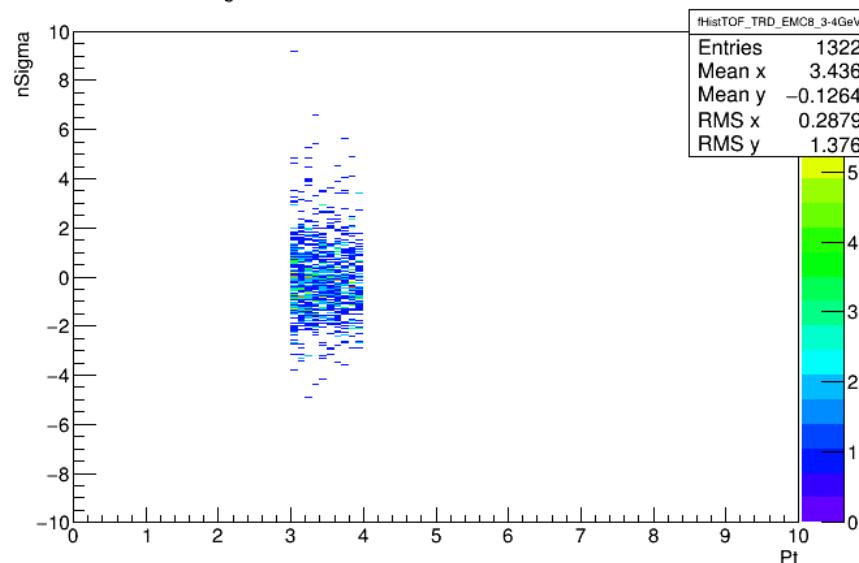
TOF nSigma for tracks with Pt between 3-4GeV after TRD cuts



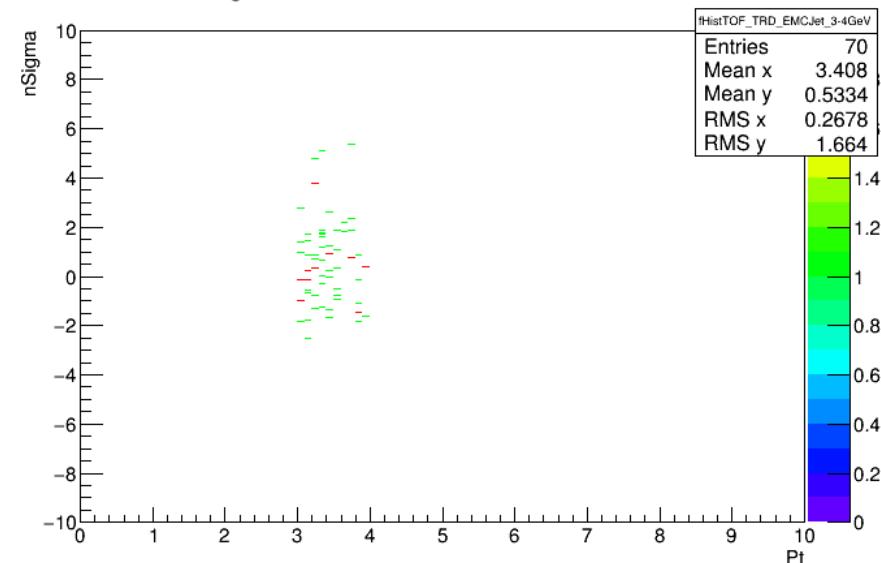
TOF nSigma for tracks with Pt between 3-4GeV after TRD cuts



TOF nSigma for tracks with Pt between 3-4GeV after TRD cuts

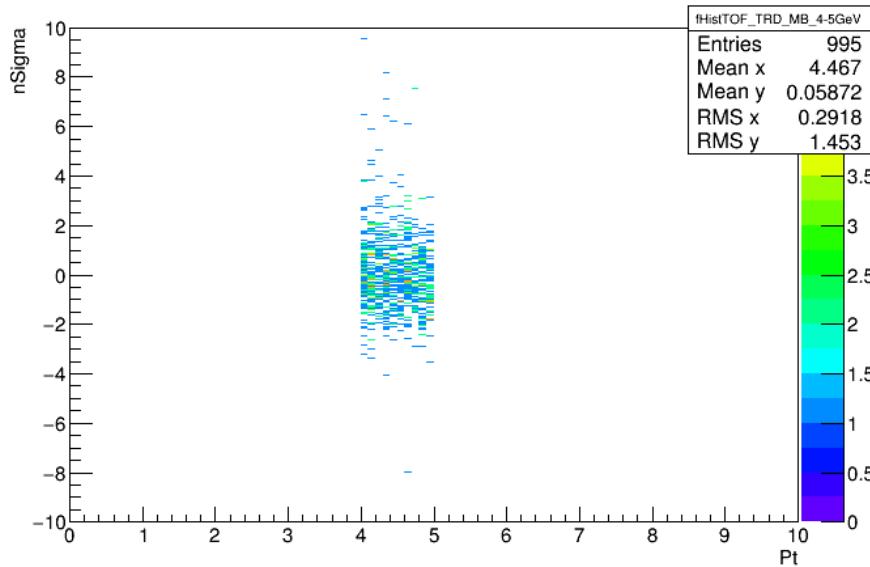


TOF nSigma for tracks with Pt between 3-4GeV after TRD cuts

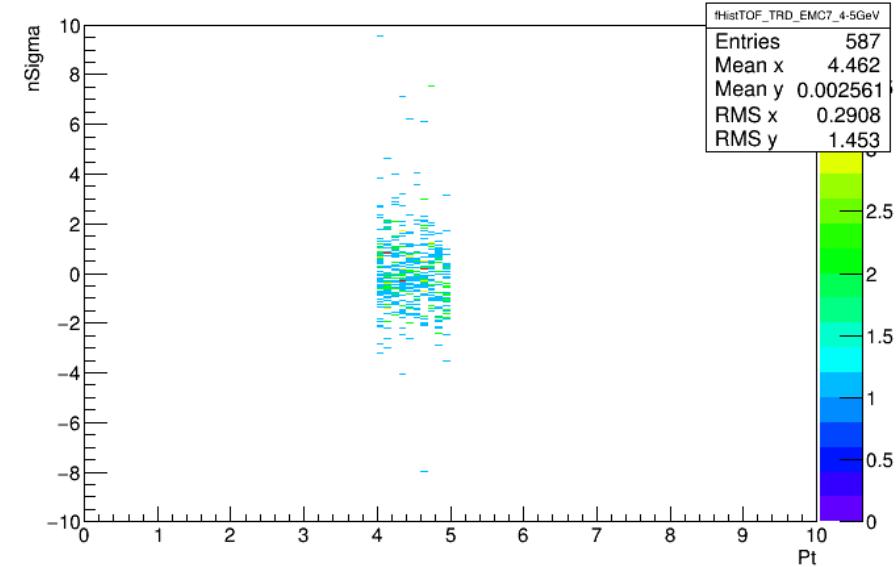


# TOF nSigma after >.9 TRD cut 4-5Gev

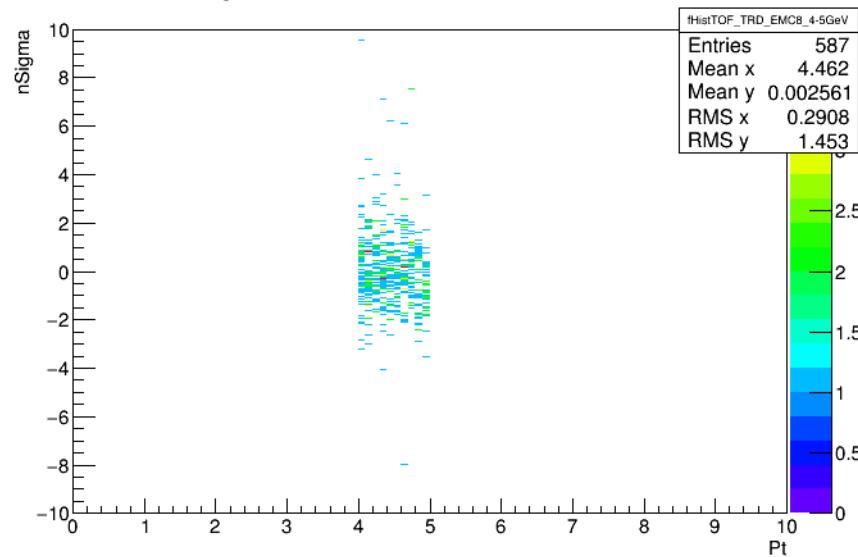
TOF nSigma for tracks with Pt between 4-5GeV after TRD cuts



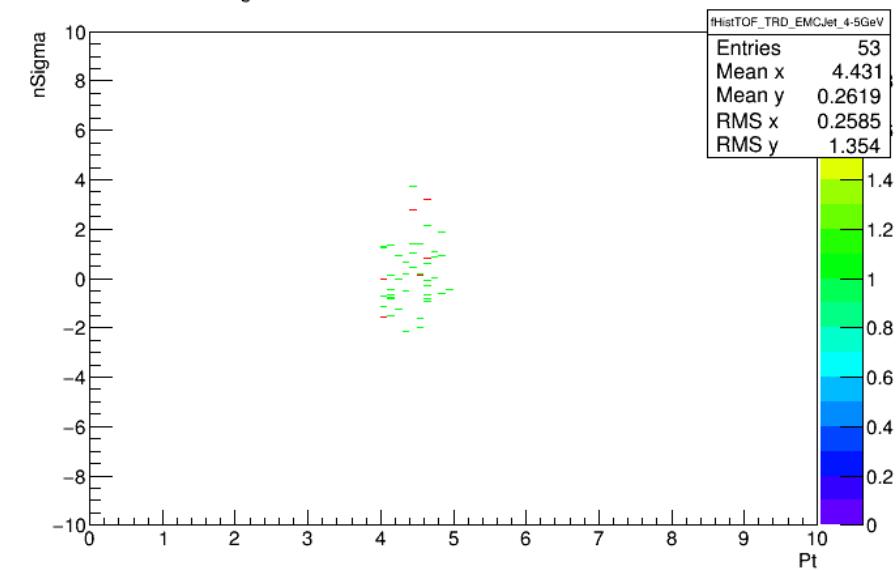
TOF nSigma for tracks with Pt between 4-5GeV after TRD cuts



TOF nSigma for tracks with Pt between 4-5GeV after TRD cuts



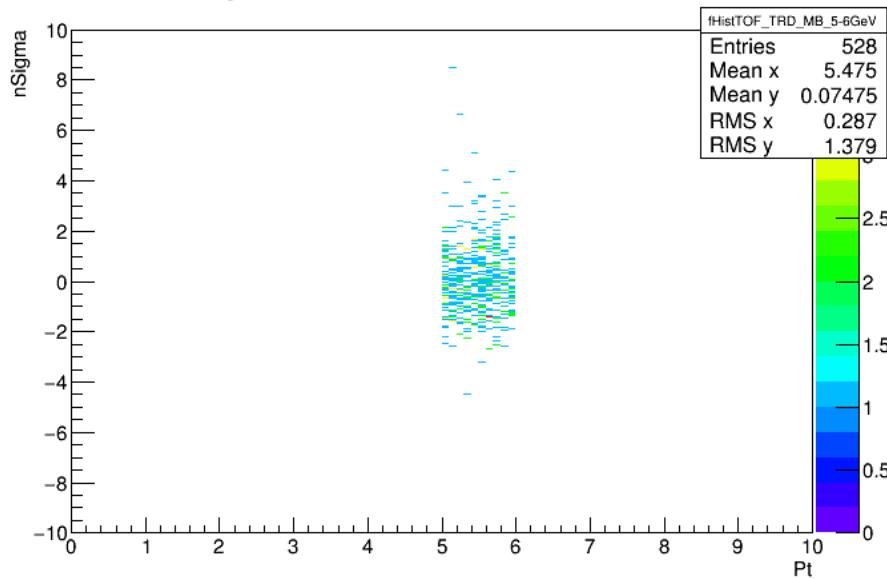
TOF nSigma for tracks with Pt between 4-5GeV after TRD cuts



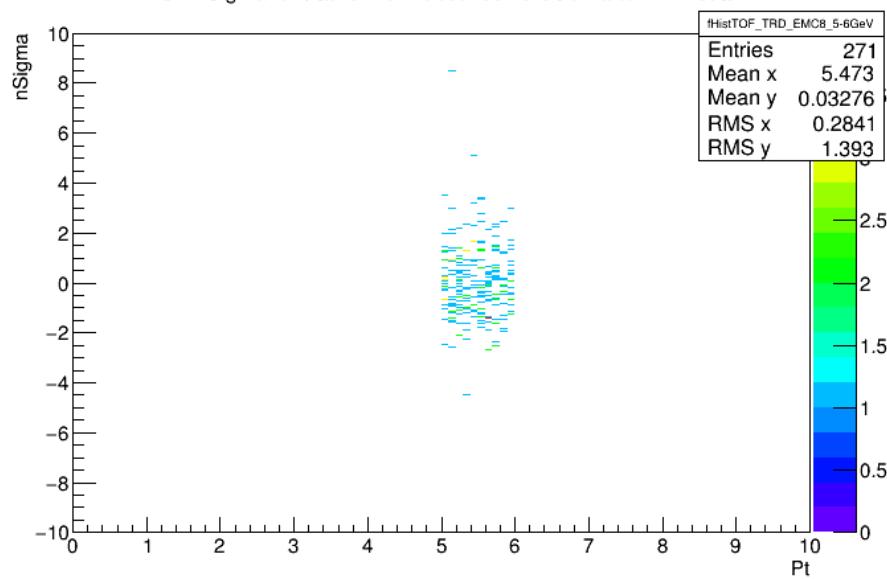
# TOF nSigma after >.9 TRD cut

## 5-6Gev

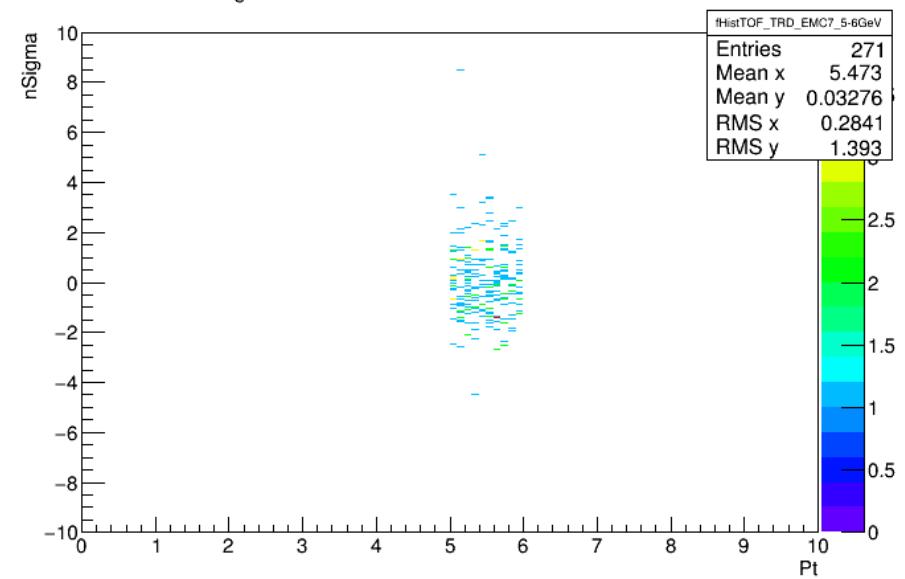
TOF nSigma for tracks with Pt between 5-6GeV after TRD cuts



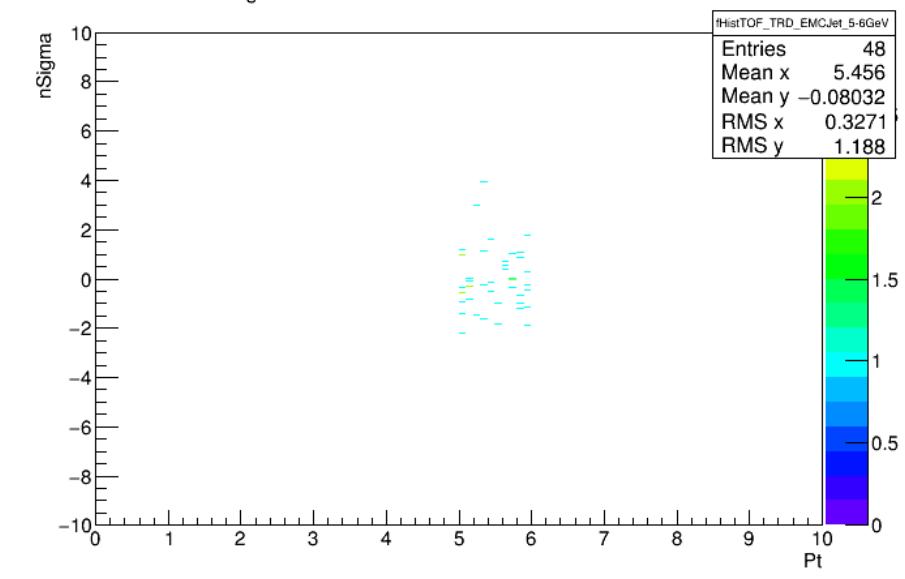
TOF nSigma for tracks with Pt between 5-6GeV after TRD cuts



TOF nSigma for tracks with Pt between 5-6GeV after TRD cuts

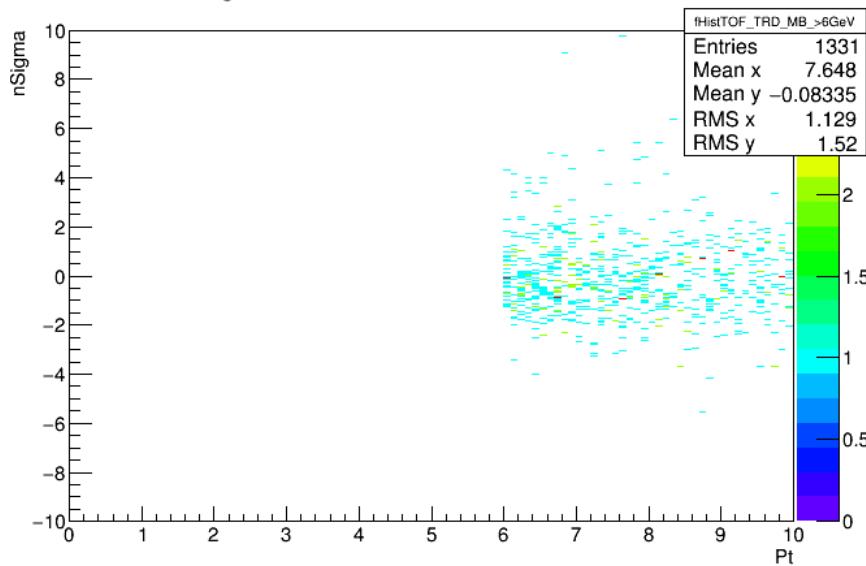


TOF nSigma for tracks with Pt between 5-6GeV after TRD cuts

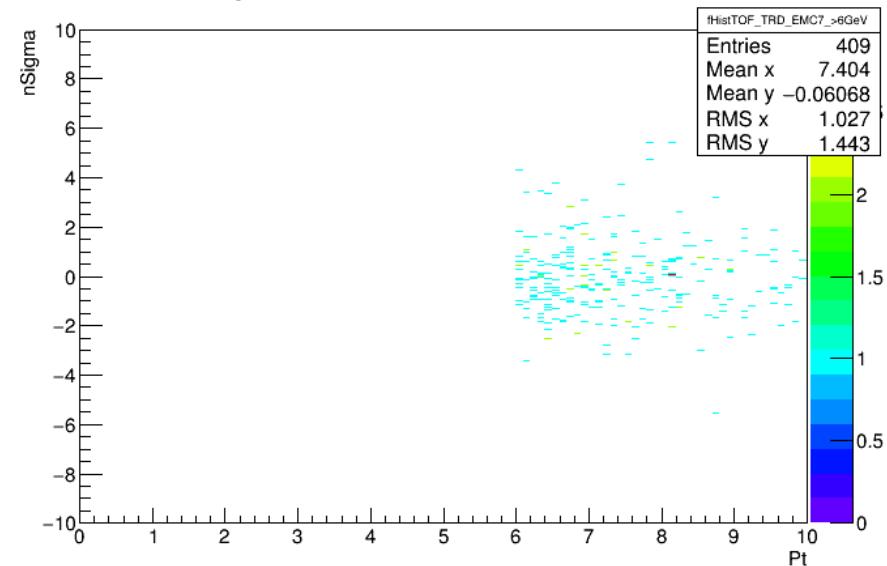


# TOF nSigma after >.9 TRD cut >6Gev

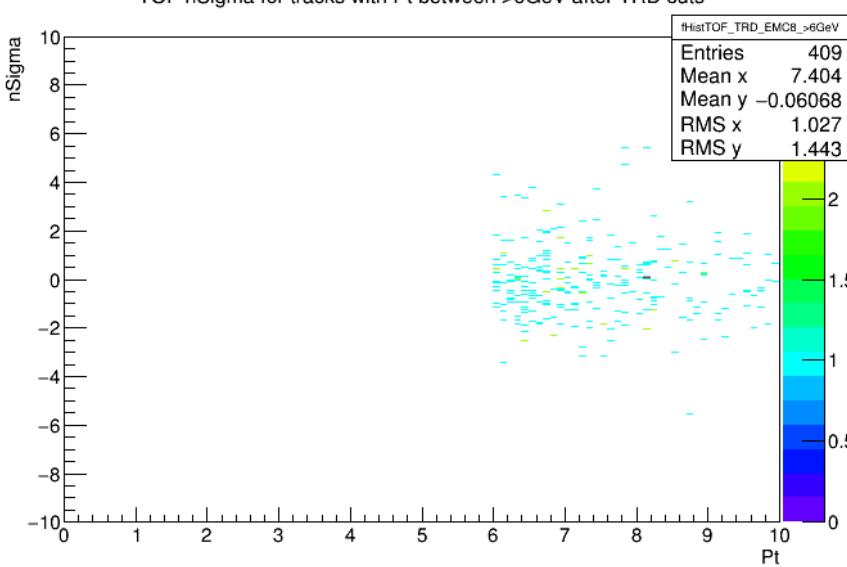
TOF nSigma for tracks with Pt between >6GeV after TRD cuts



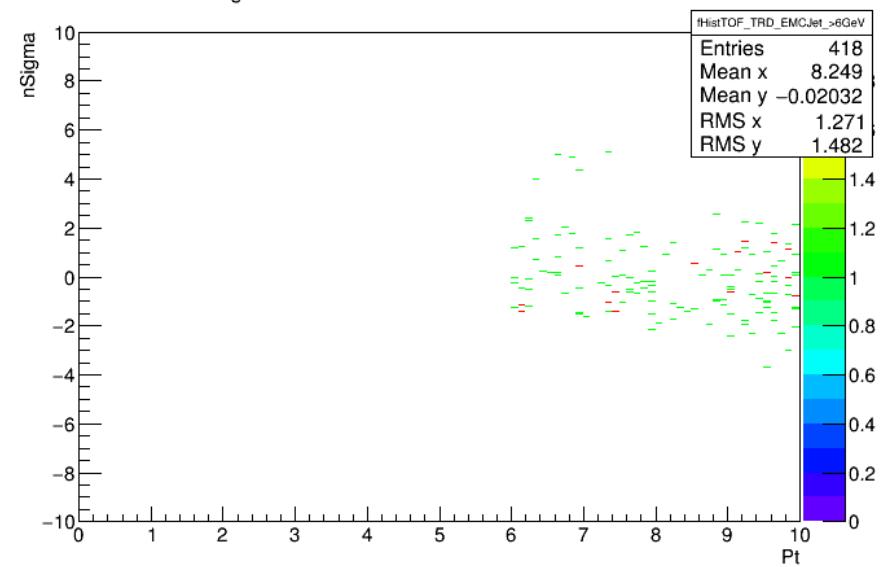
TOF nSigma for tracks with Pt between >6GeV after TRD cuts



TOF nSigma for tracks with Pt between >6GeV after TRD cuts



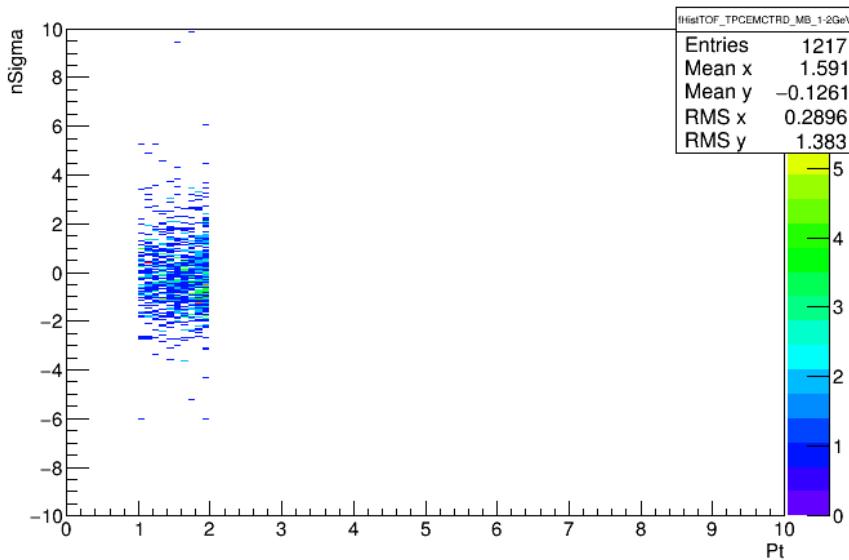
TOF nSigma for tracks with Pt between >6GeV after TRD cuts



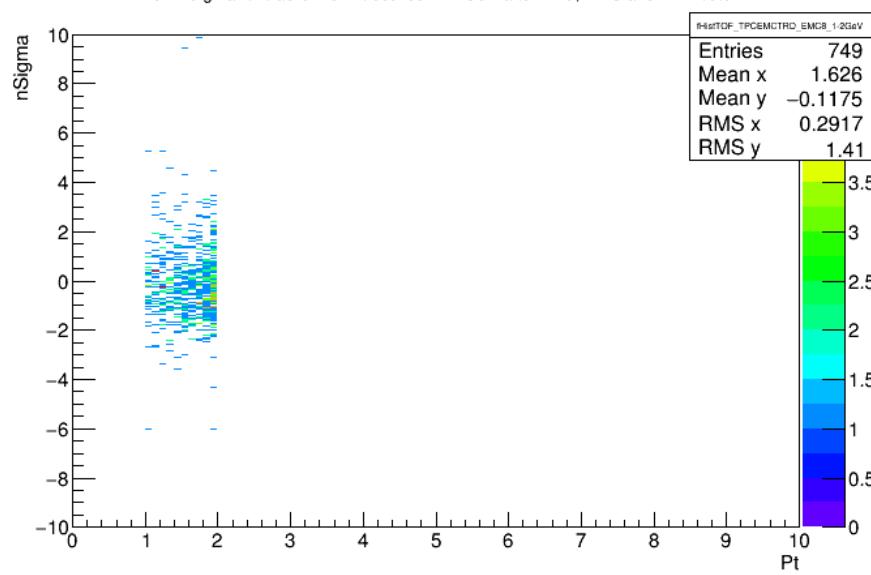
# TOF nSigma after 2Sig TPC Cut

## 1-2Gev and 1+-0.1 E/p cut

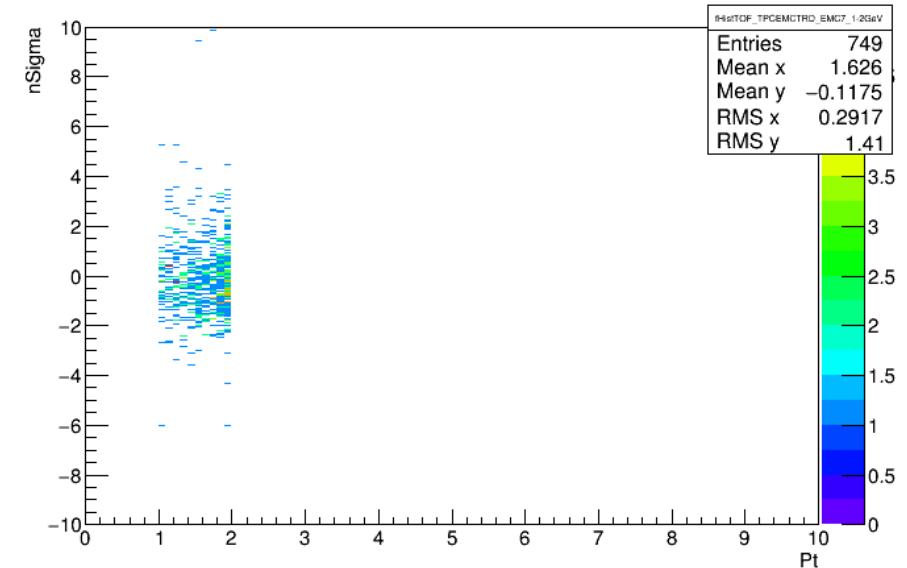
TOF nSigma for tracks with Pt between 1-2GeV after TPC, EMC and TRD cuts



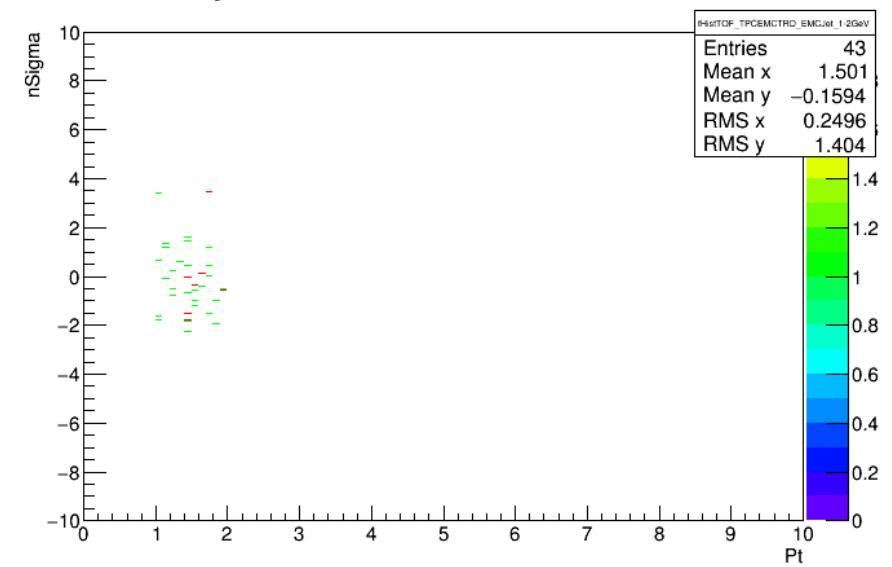
TOF nSigma for tracks with Pt between 1-2GeV after TPC, EMC and TRD cuts



TOF nSigma for tracks with Pt between 1-2GeV after TPC, EMC and TRD cuts

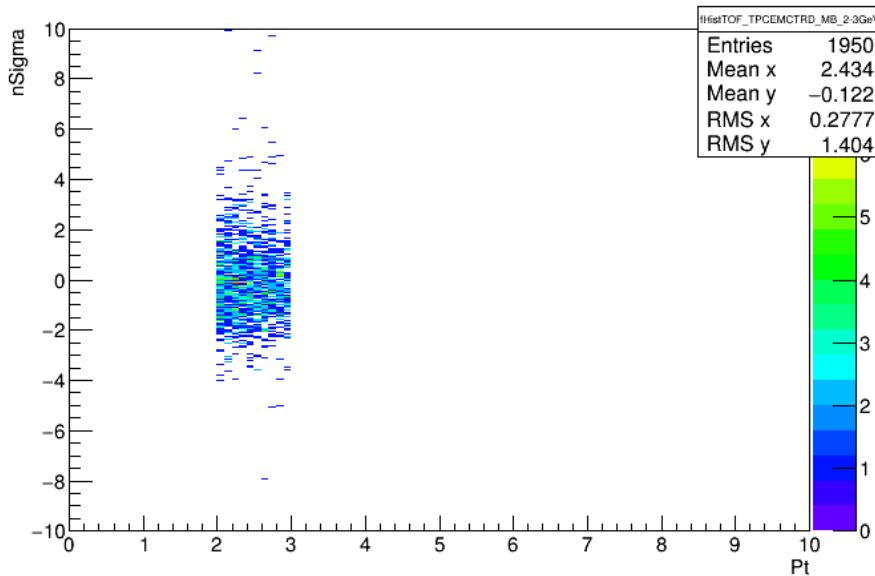


TOF nSigma for tracks with Pt between 1-2GeV after TOF, EMC and TRD cuts

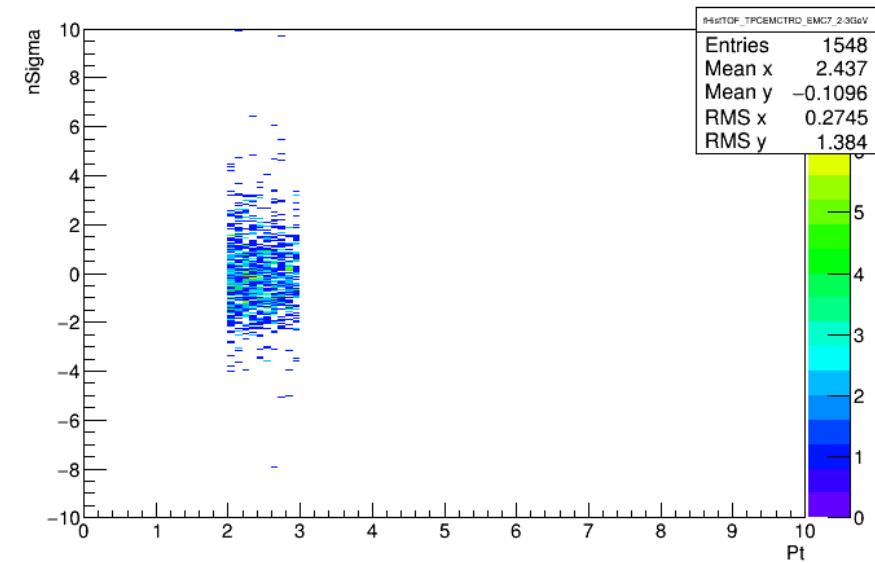


# TOF nSigma after 2Sig TPC cut and 2-3Gev 1+-0.1 E/p cut

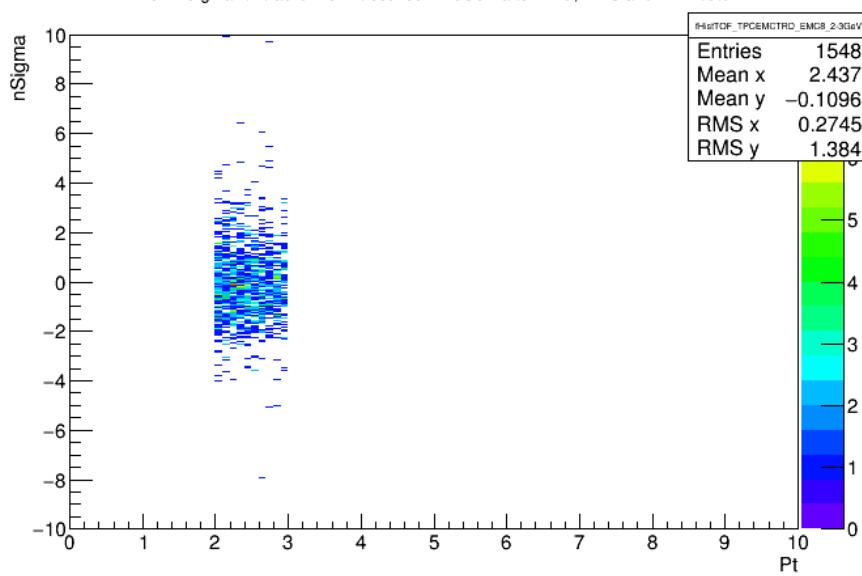
TOF nSigma for tracks with Pt between 2-3GeV after TPC, EMC and TRD cuts



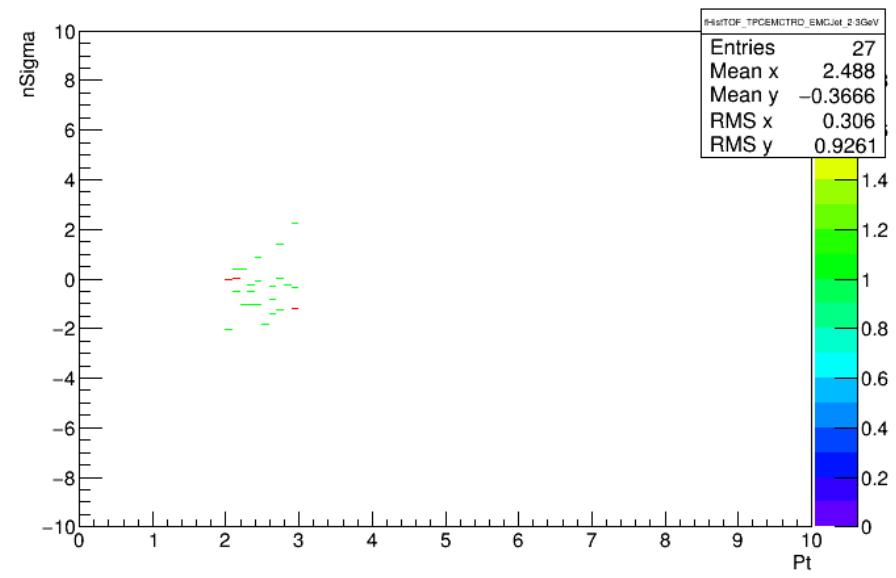
TOF nSigma for tracks with Pt between 2-3GeV after TPC, EMC and TRD cuts



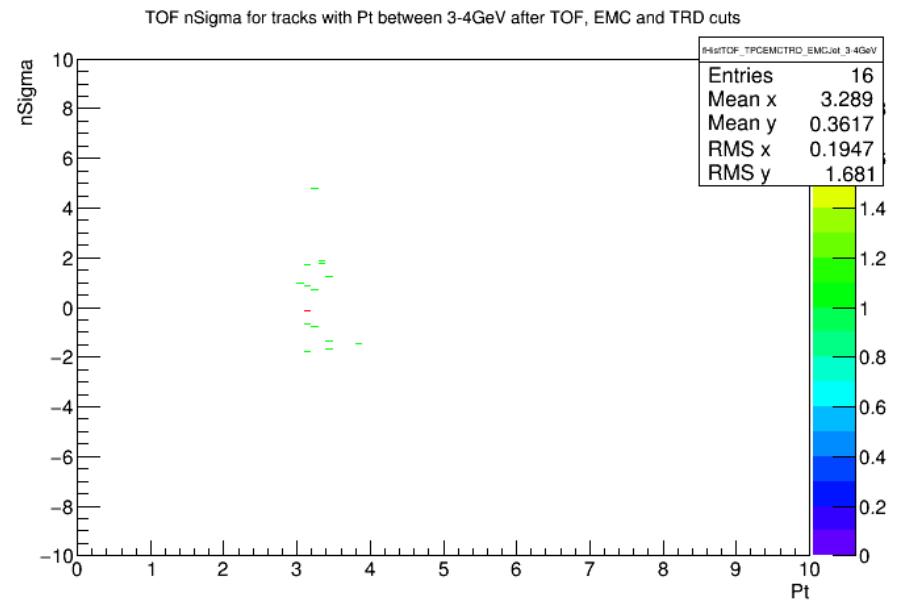
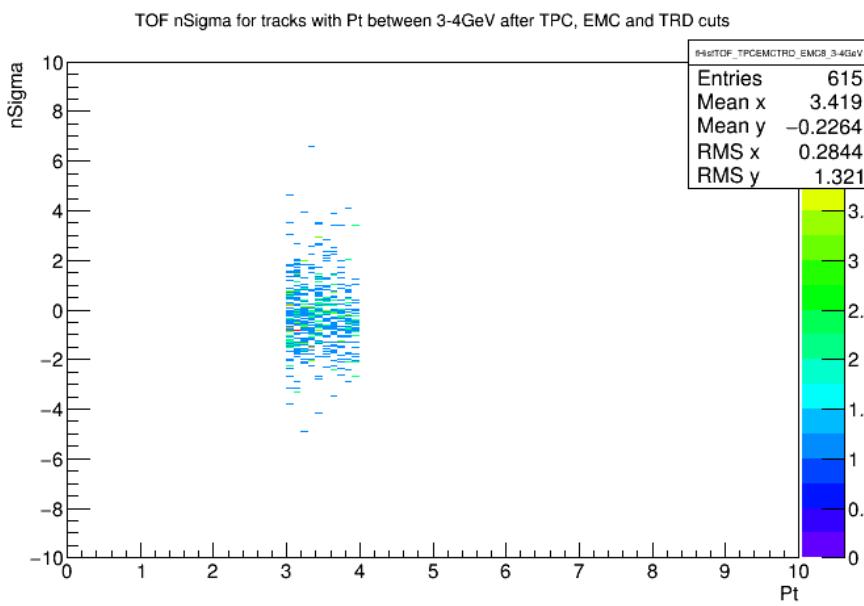
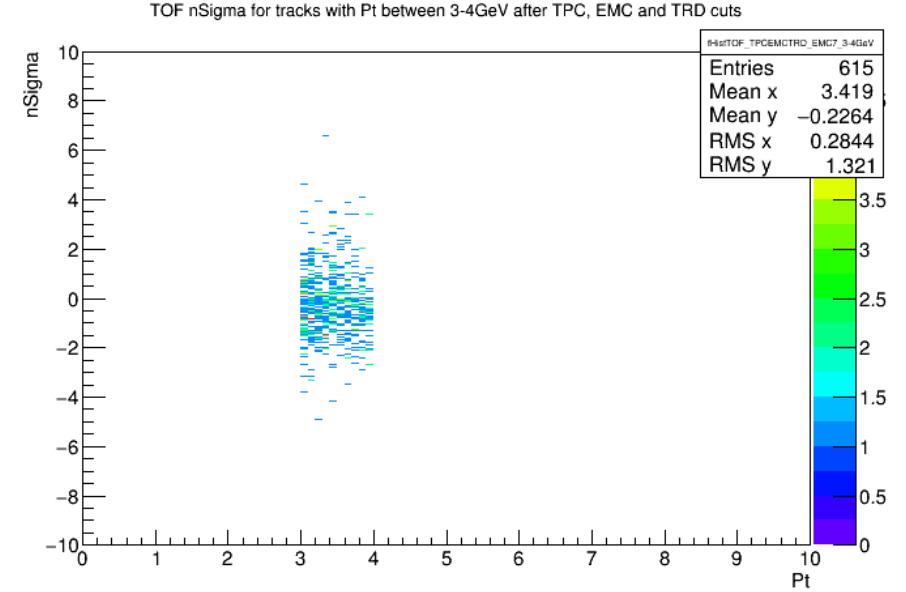
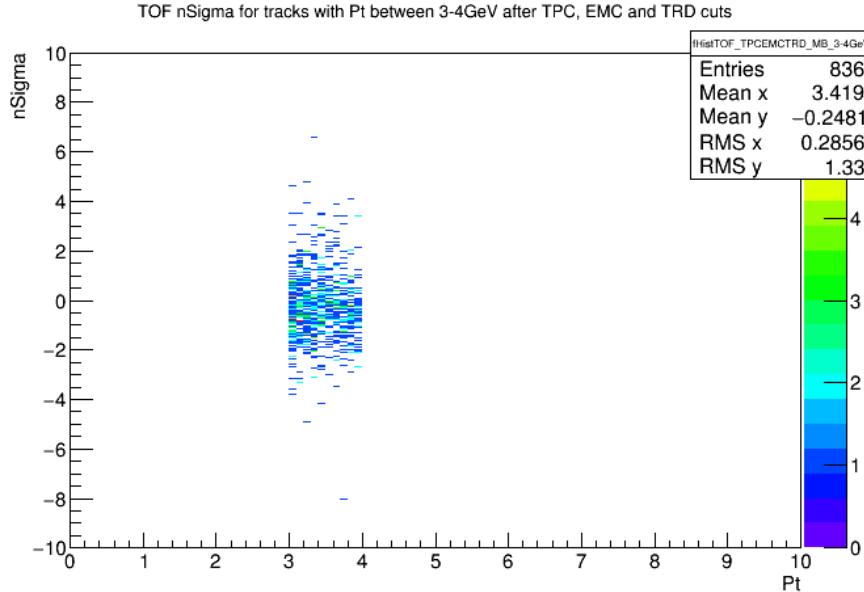
TOF nSigma for tracks with Pt between 2-3GeV after TPC, EMC and TRD cuts



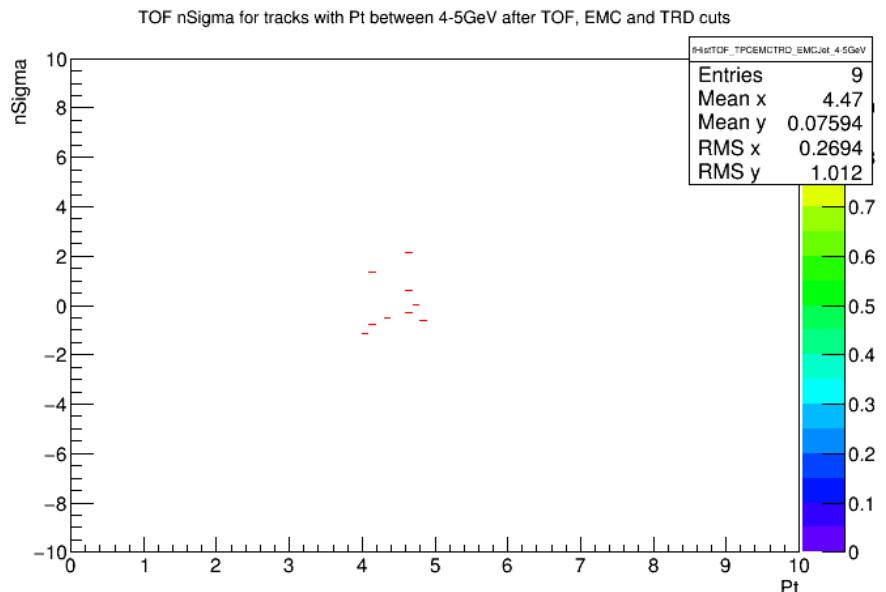
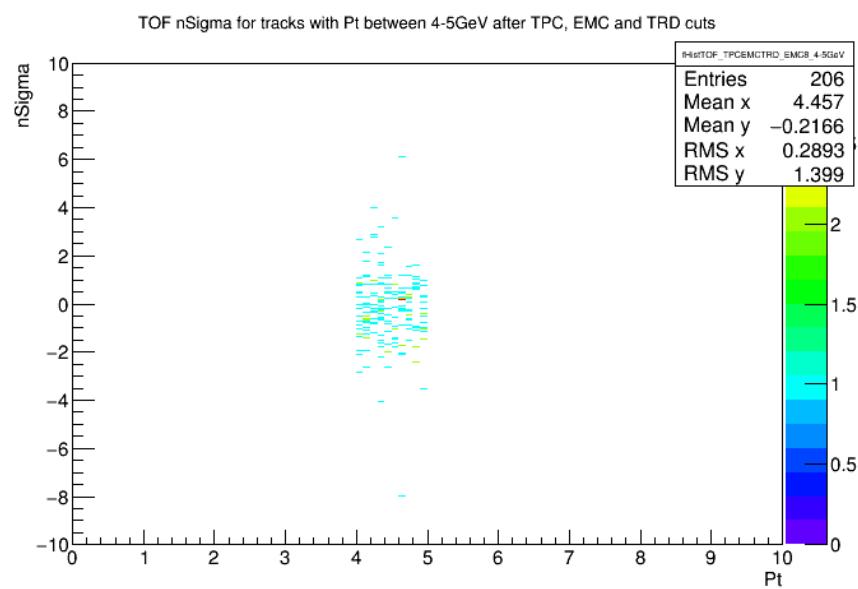
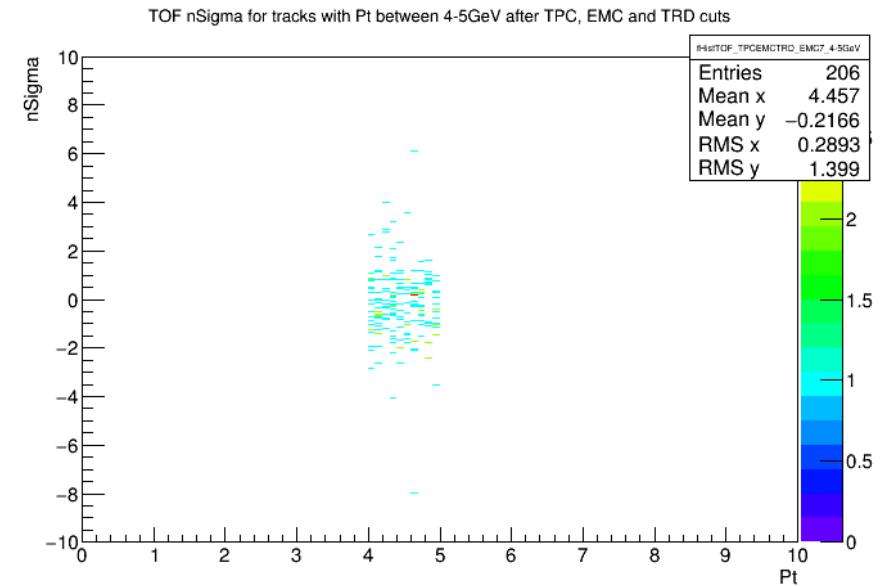
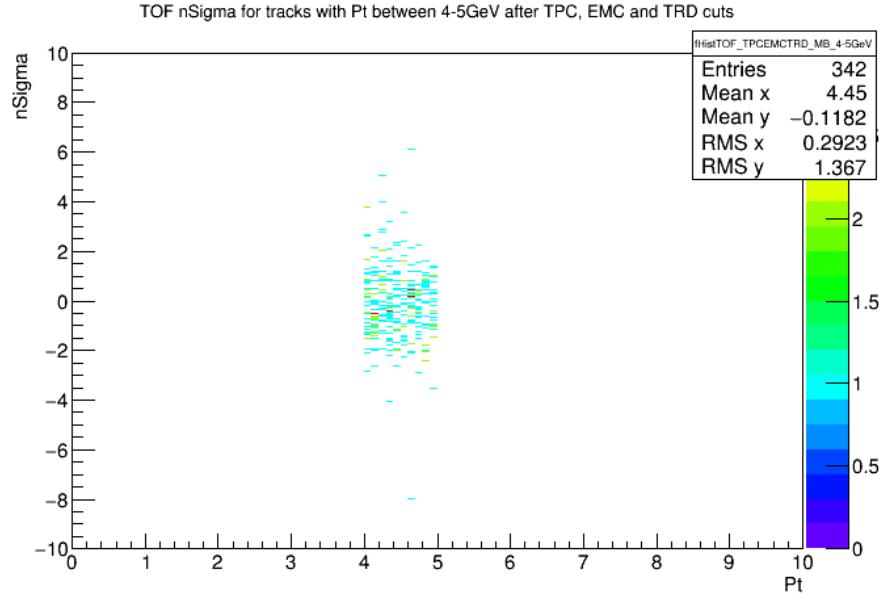
TOF nSigma for tracks with Pt between 2-3GeV after TOF, EMC and TRD cuts



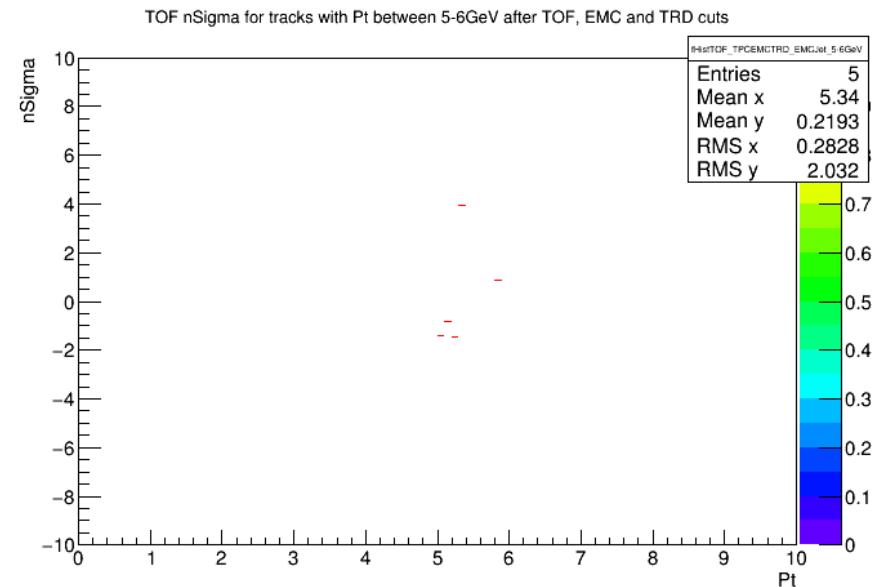
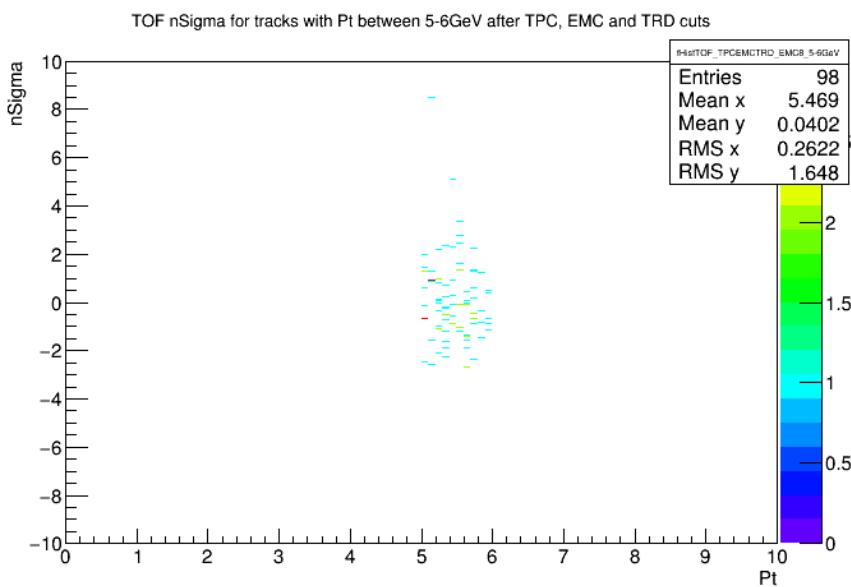
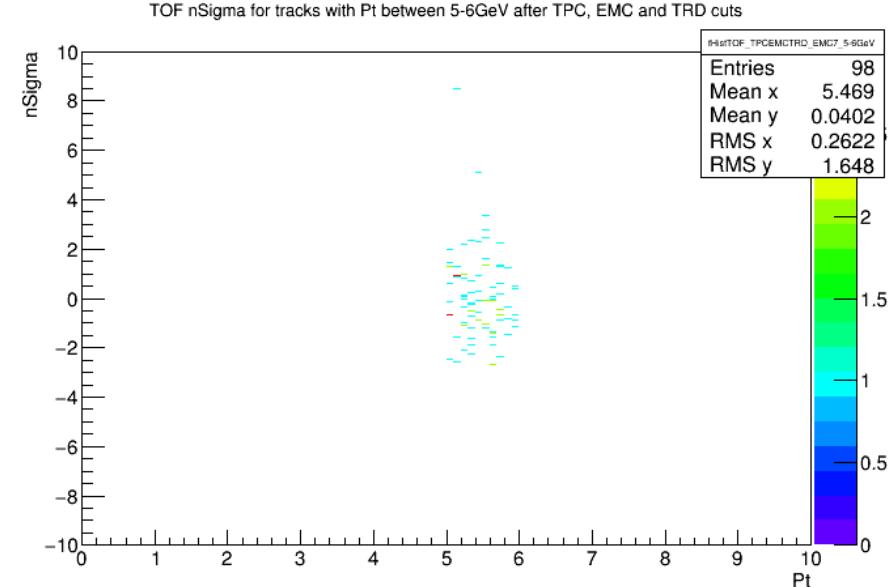
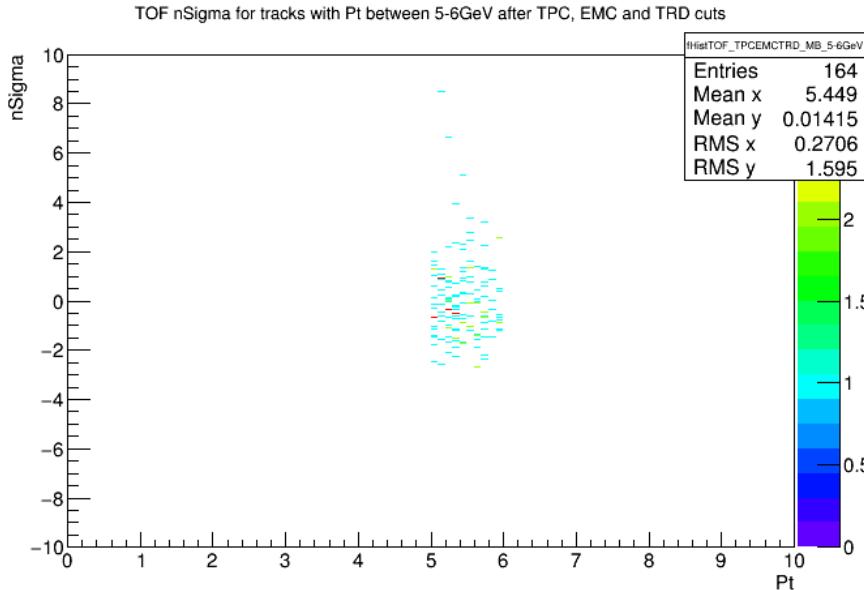
# TOF nSigma after 2Sig TPC cut and 3-4Gev 1+-0.1 E/p cut



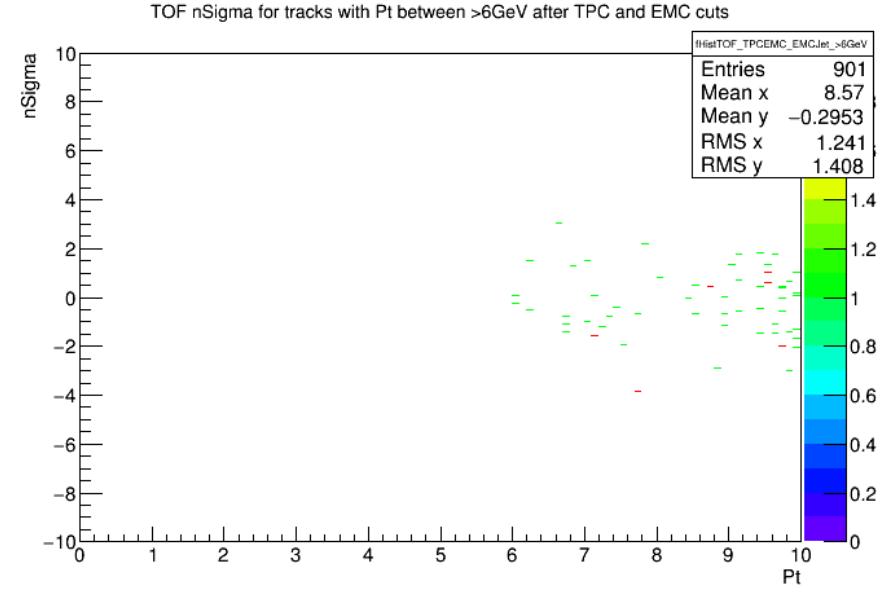
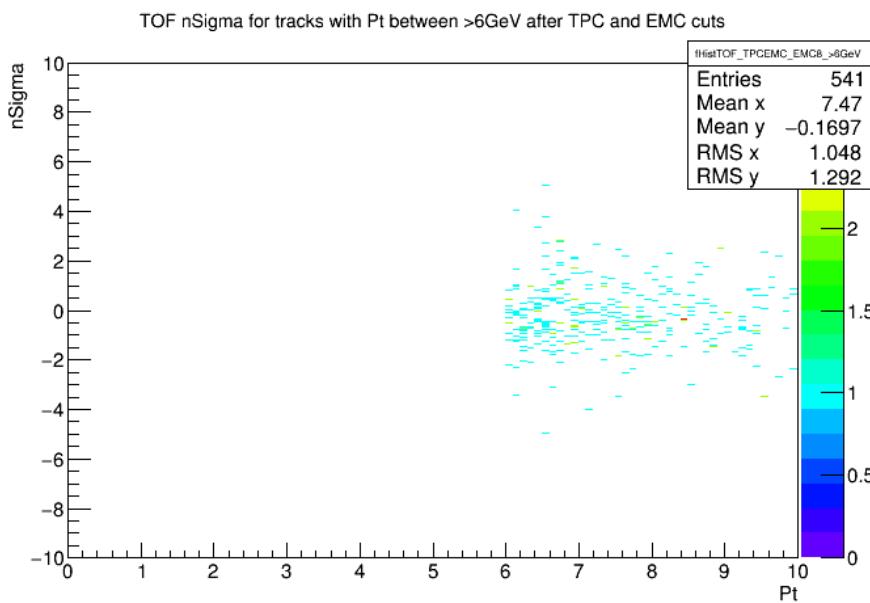
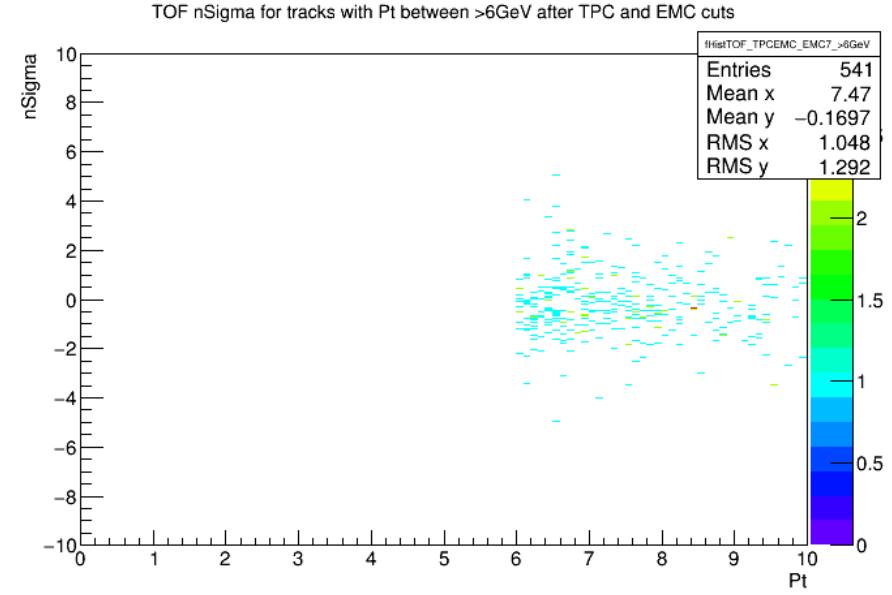
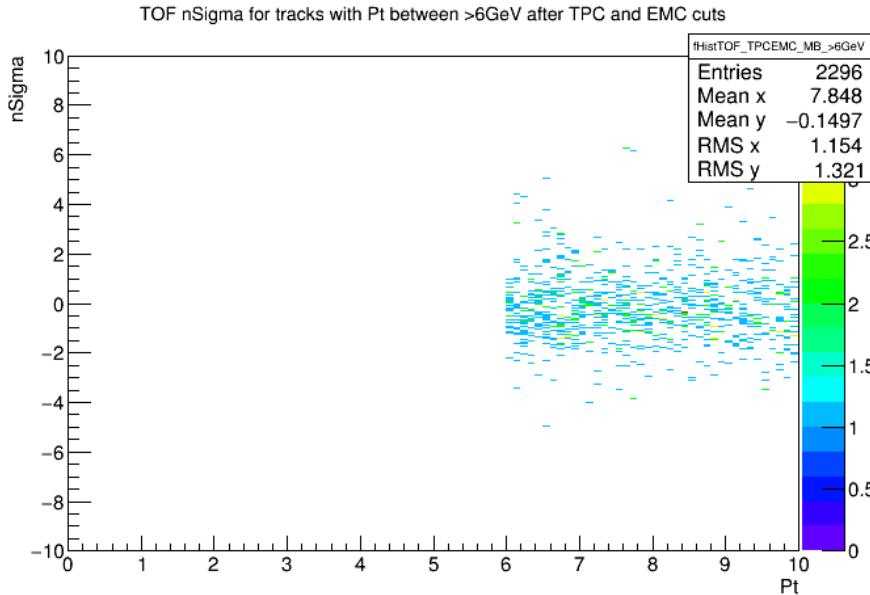
# TOF nSigma after 2Sig TPC cut and 4-5Gev 1+-0.1 E/p cut



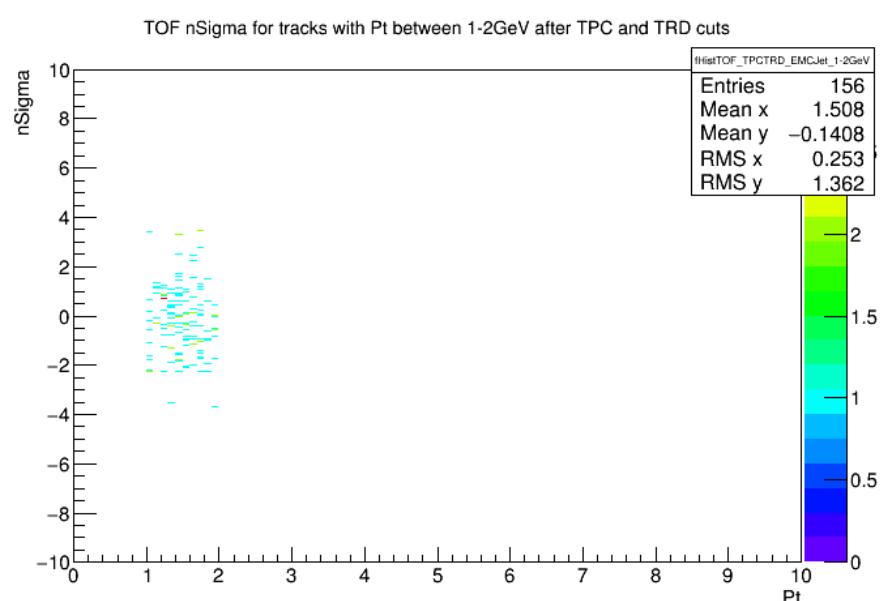
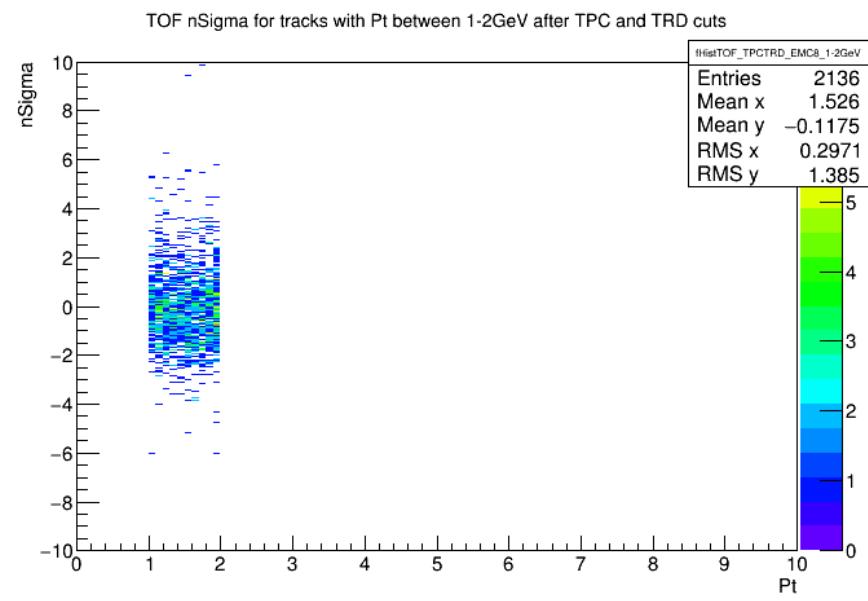
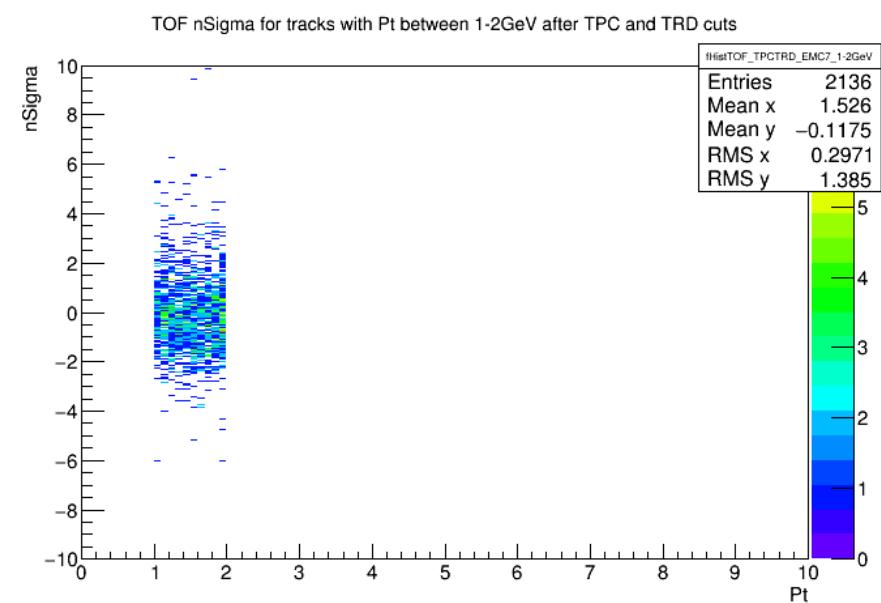
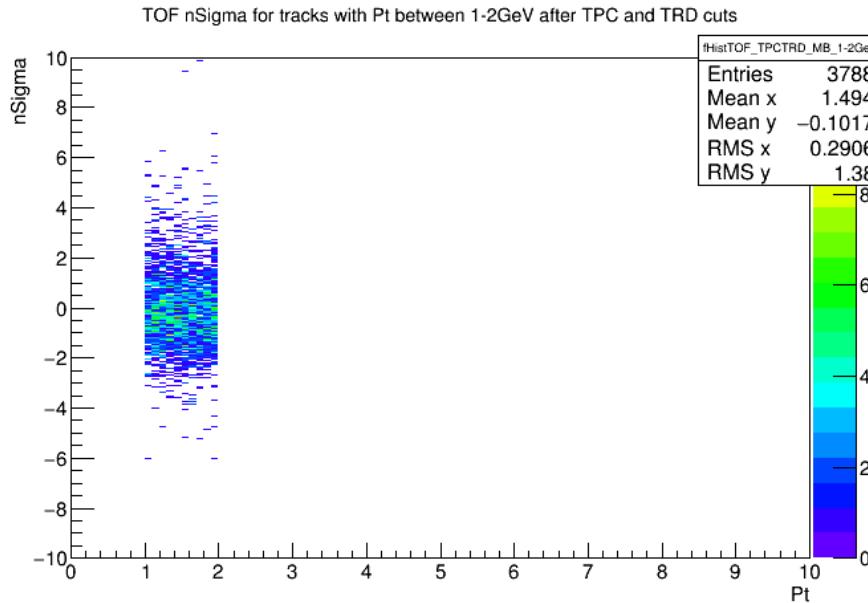
# TOF nSigma after 2Sig TPC cut and 5-6Gev 1+-0.1 E/p cut



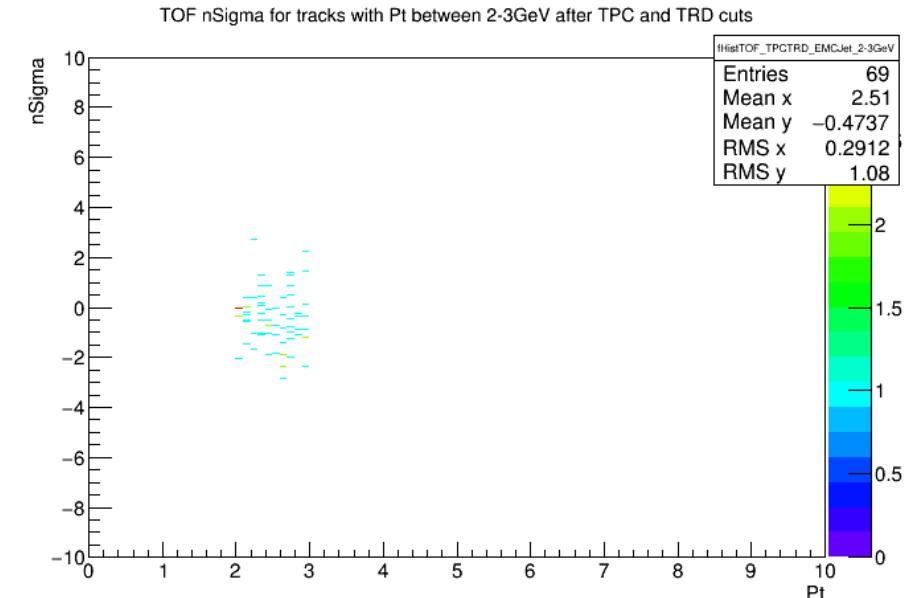
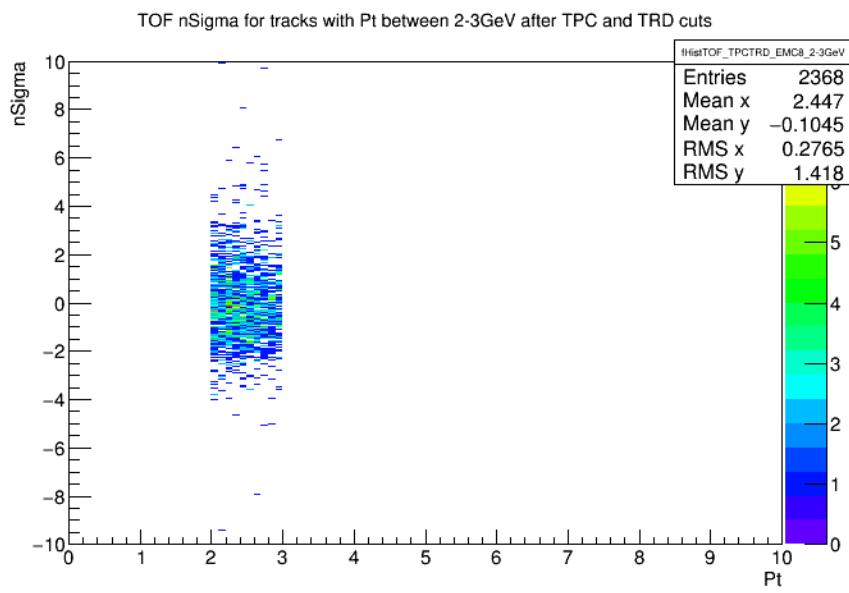
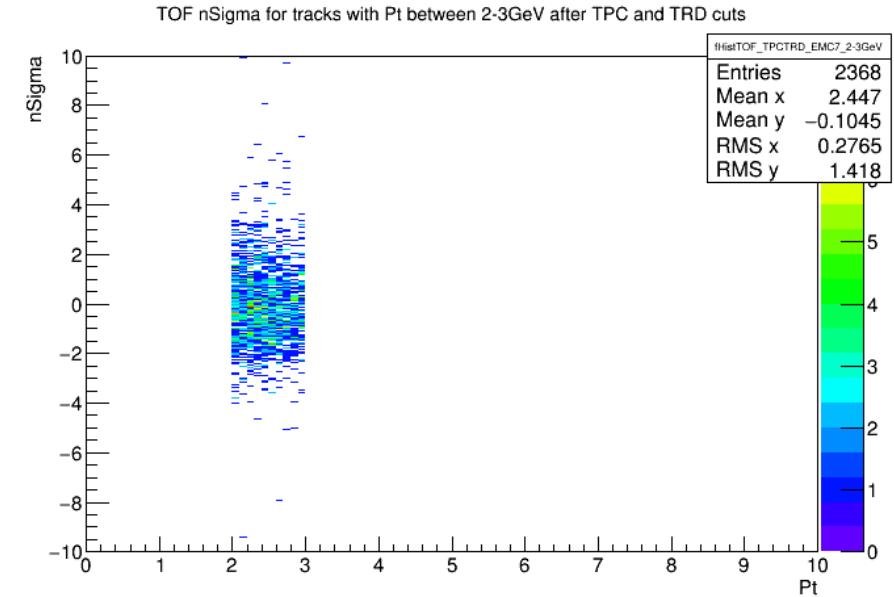
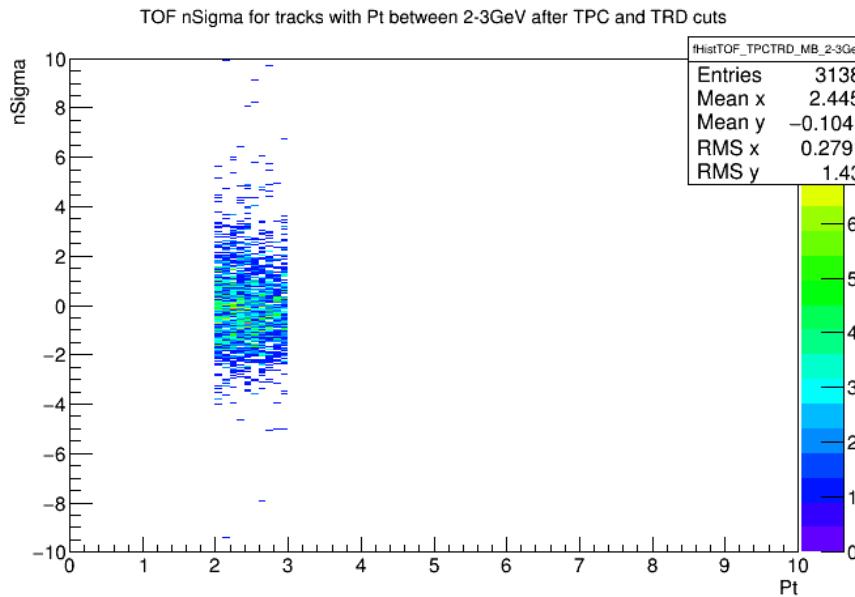
# TOF nSigma after 2Sig TPC cut and >6Gev 1+-0.1 E/p cut



# TOF nSigma after 2Sig TPC Cut 1-2Gev and >.9 TRD cut

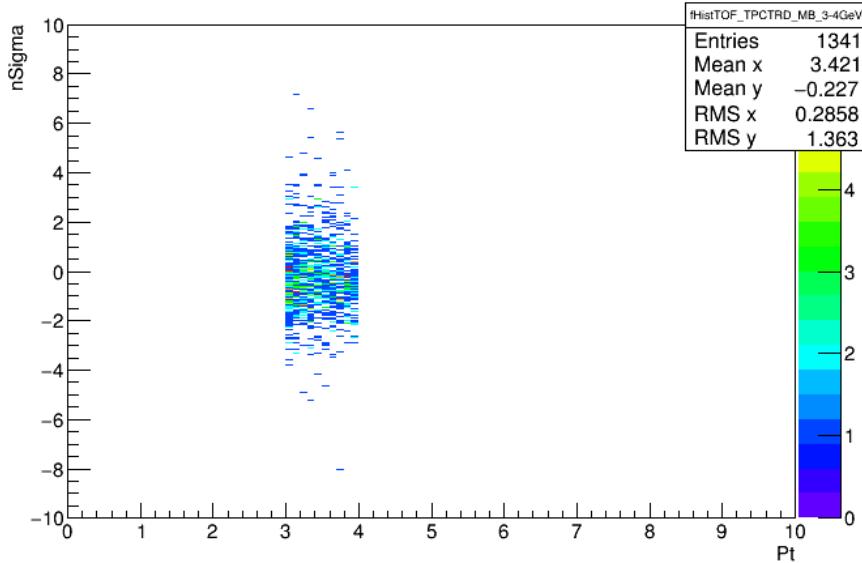


# TOF nSigma after 2Sig TPC cut and 2-3Gev >.9 TRD cut



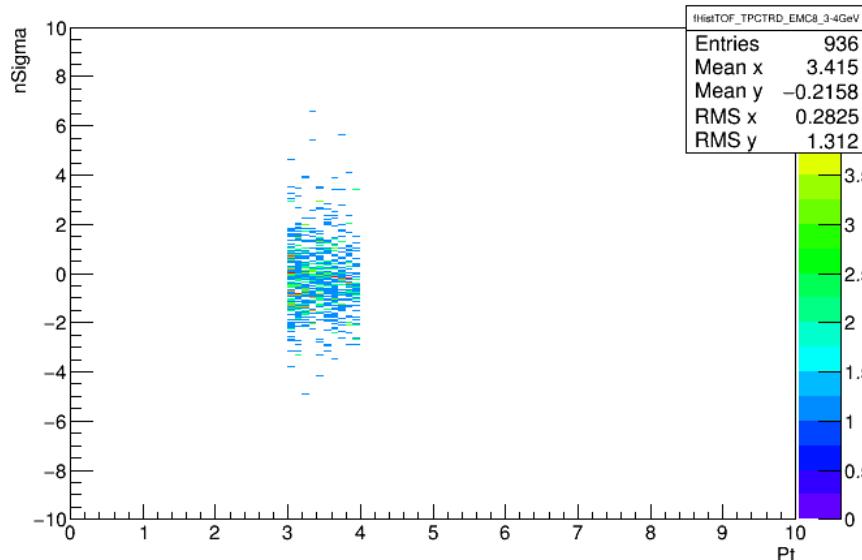
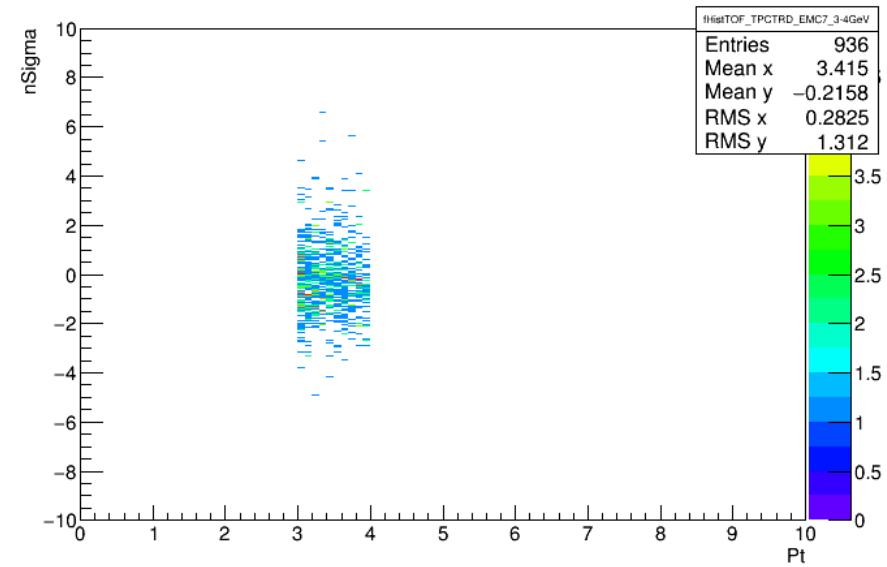
# TOF nSigma after 2Sig TPC cut and 3-4Gev >.9 TRD cut

TOF nSigma for tracks with Pt between 3-4GeV after TPC and TRD cuts

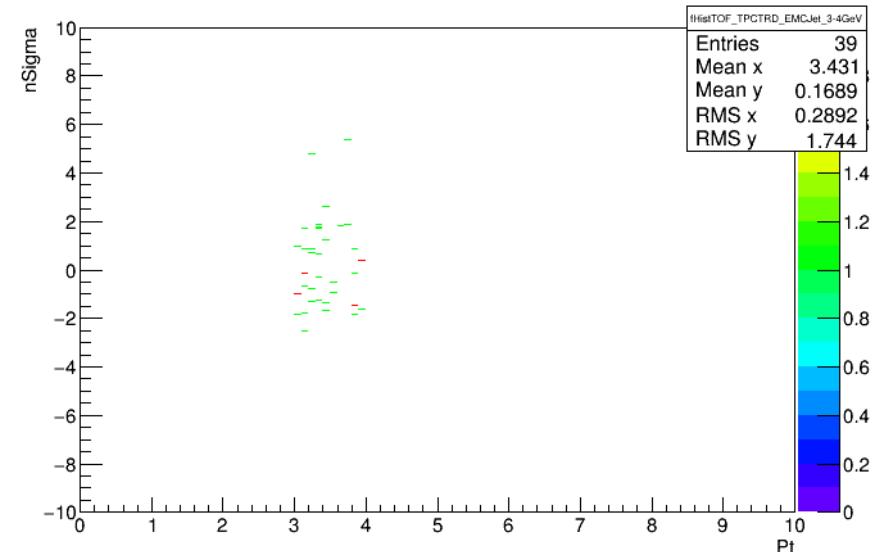


TOF nSigma for tracks with Pt between 3-4GeV after TPC and TRD cuts

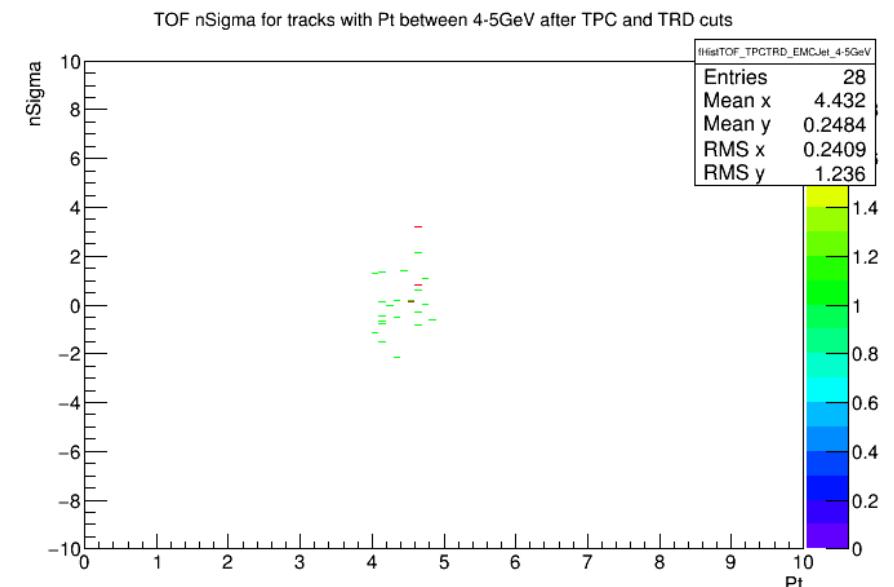
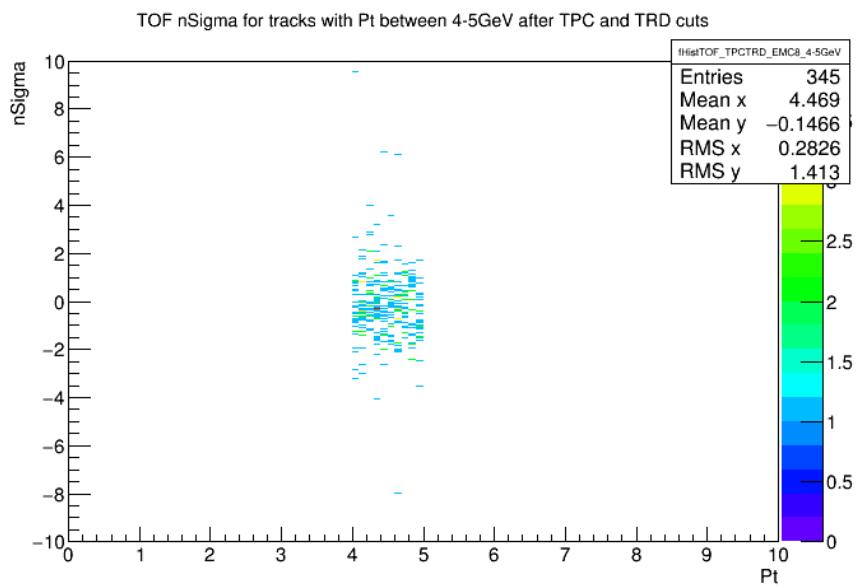
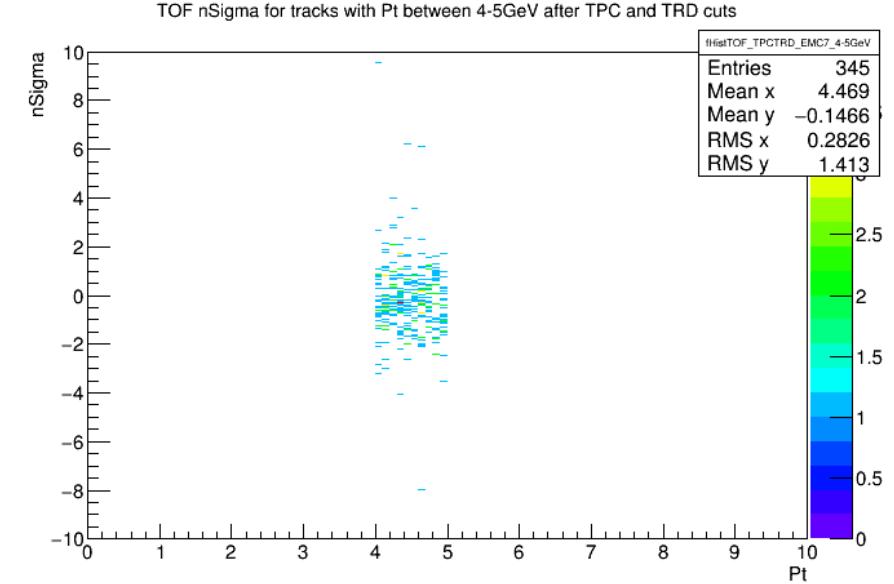
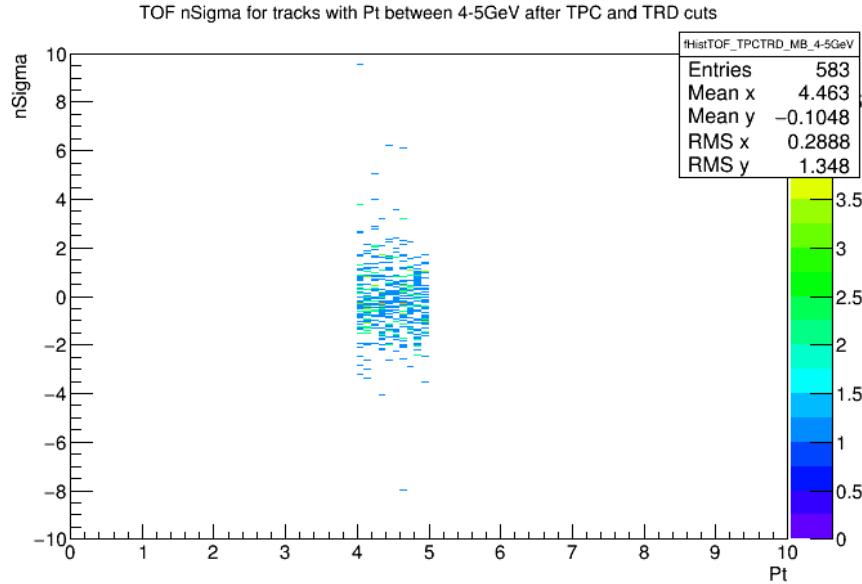
TOF nSigma for tracks with Pt between 3-4GeV after TPC and TRD cuts



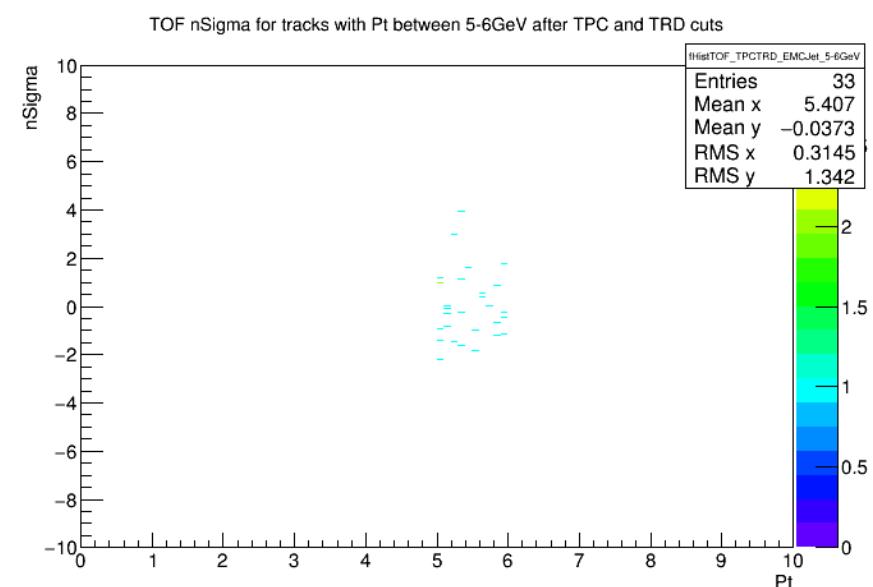
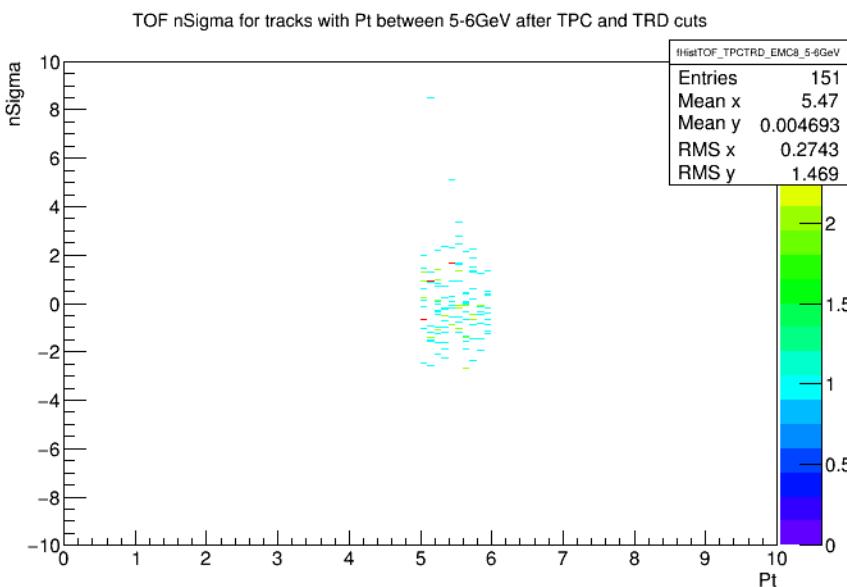
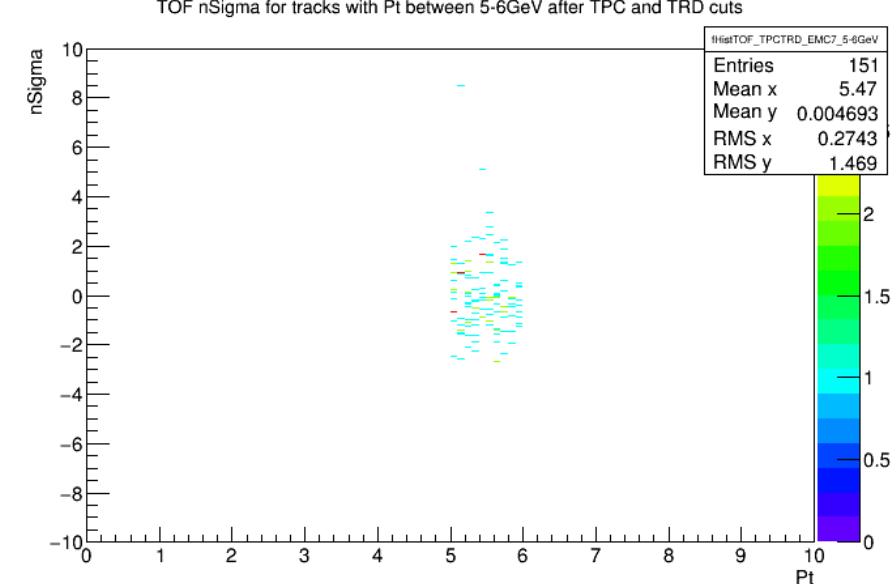
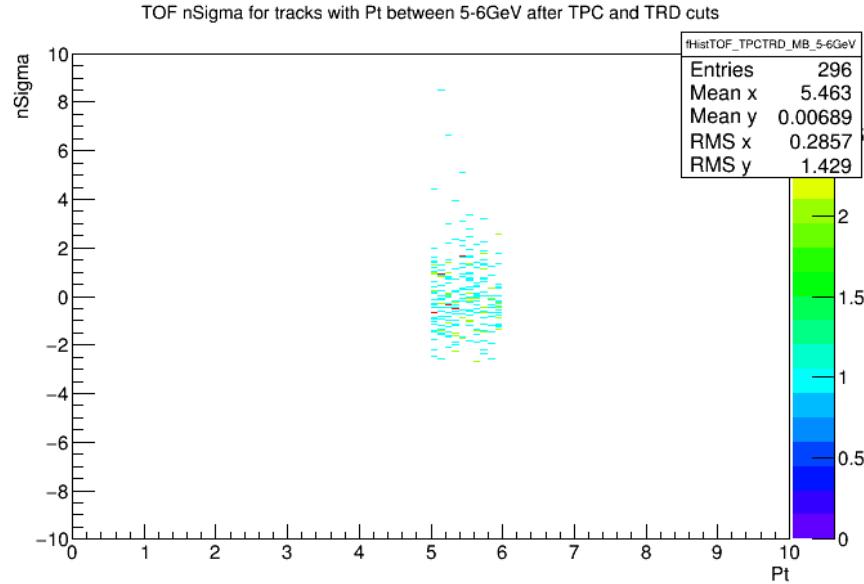
TOF nSigma for tracks with Pt between 3-4GeV after TPC and TRD cuts



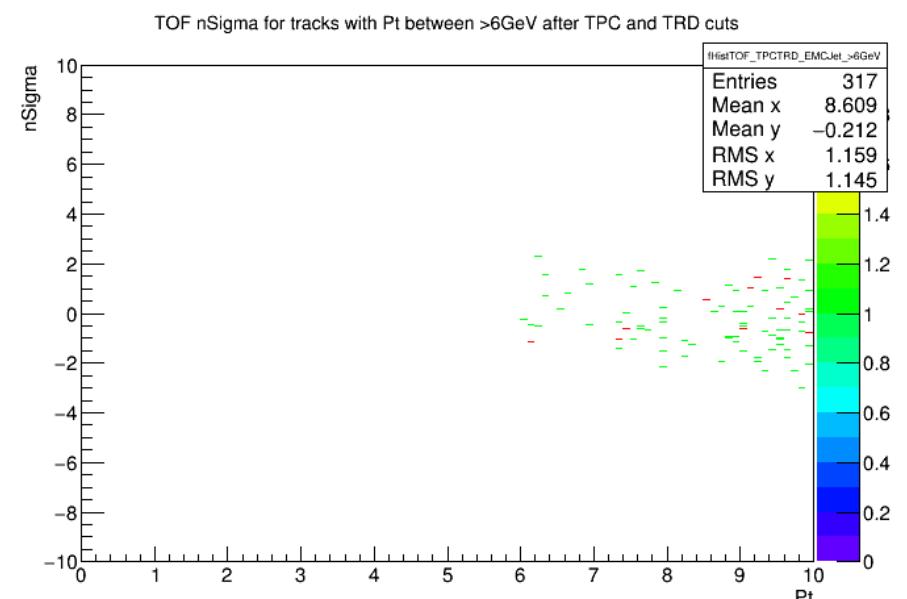
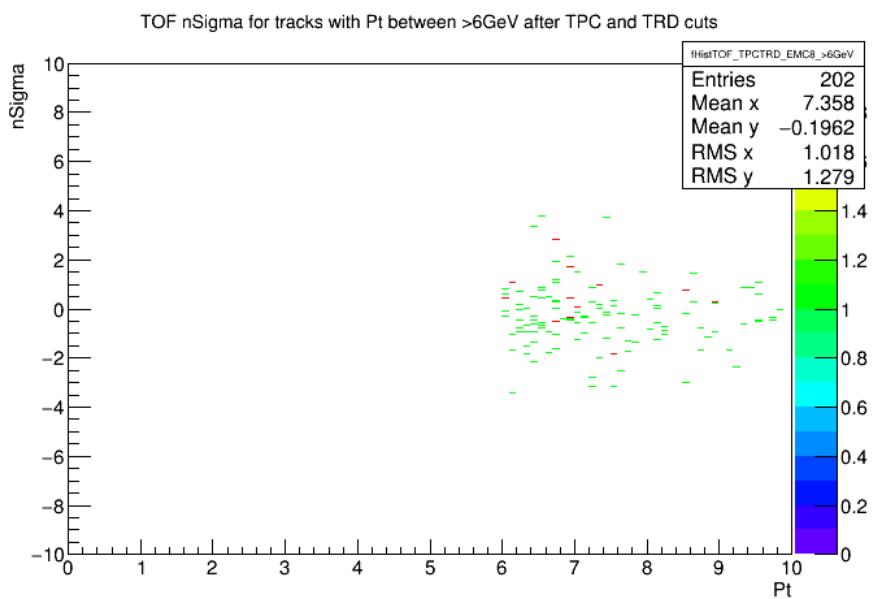
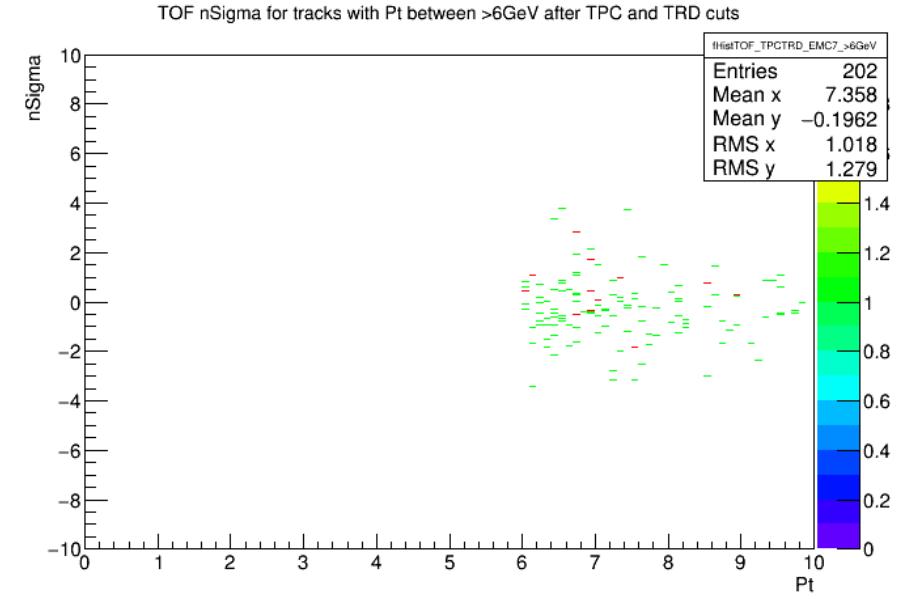
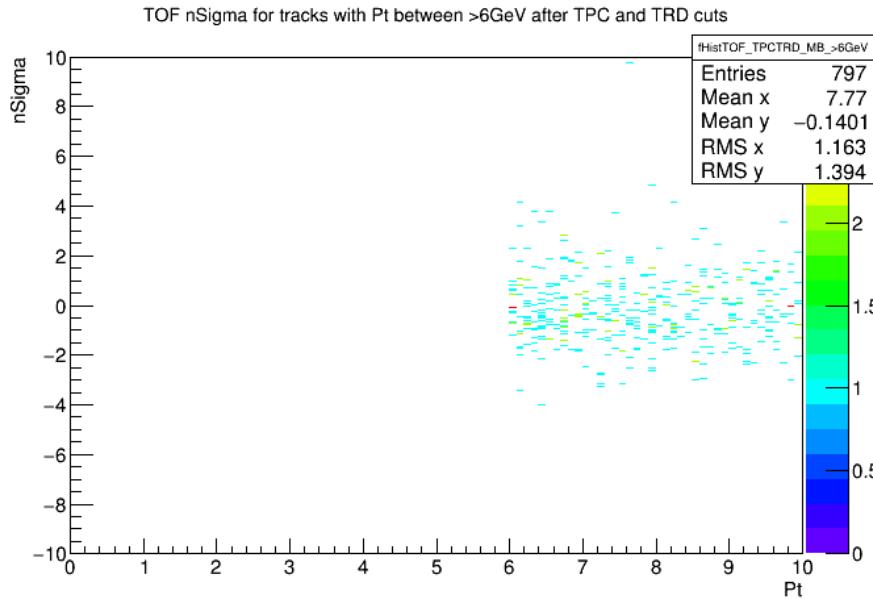
# TOF nSigma after 2Sig TPC cut and 4-5Gev >.9 TRD cut



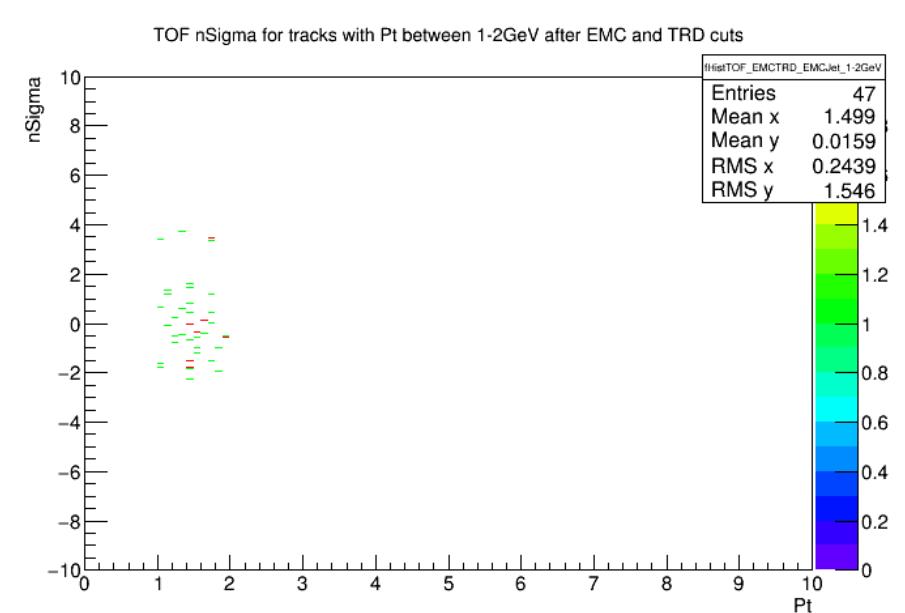
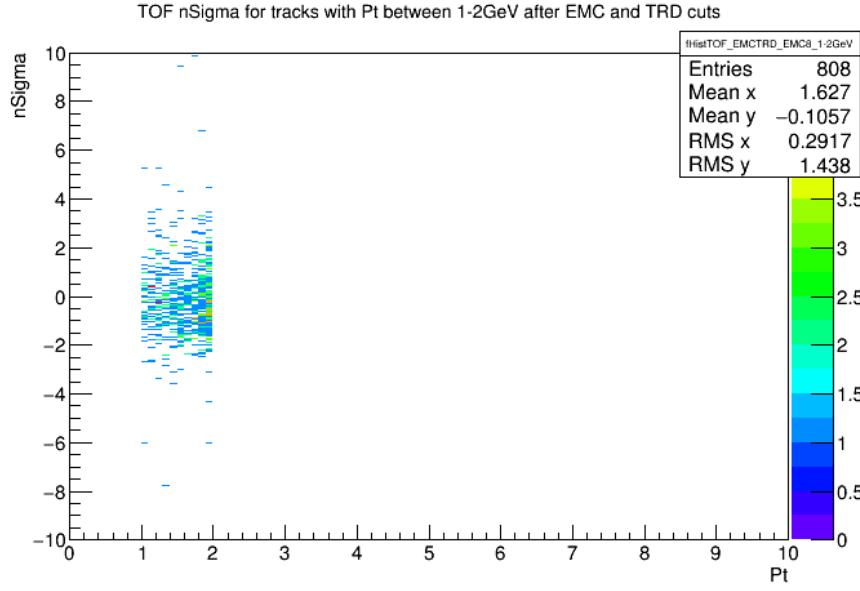
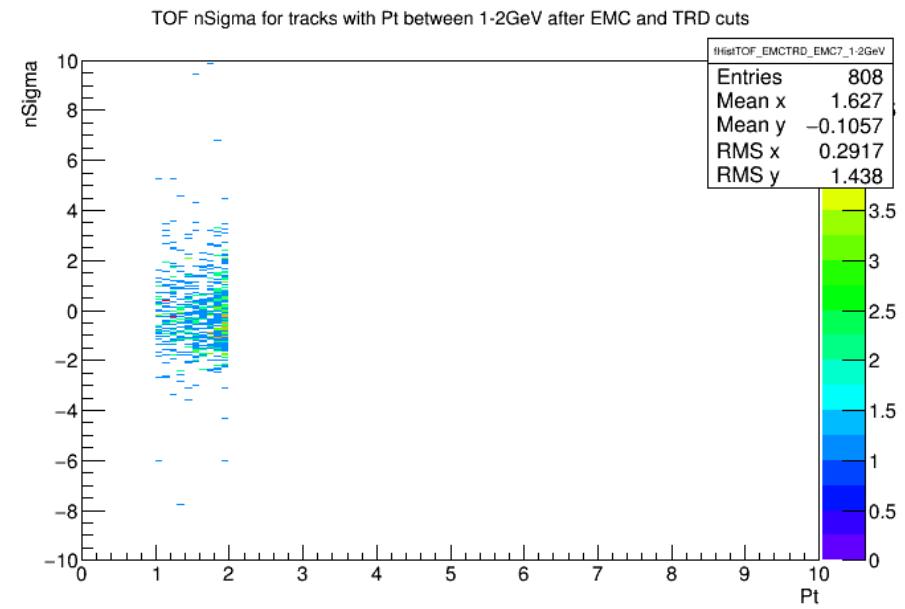
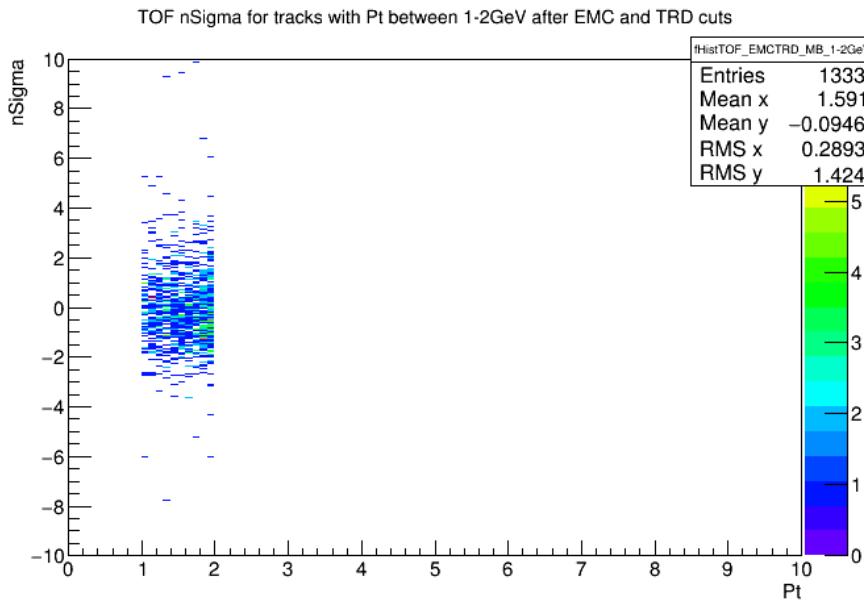
# TOF nSigma after 2Sig TPC cut and 5-6Gev >.9 TRD cut



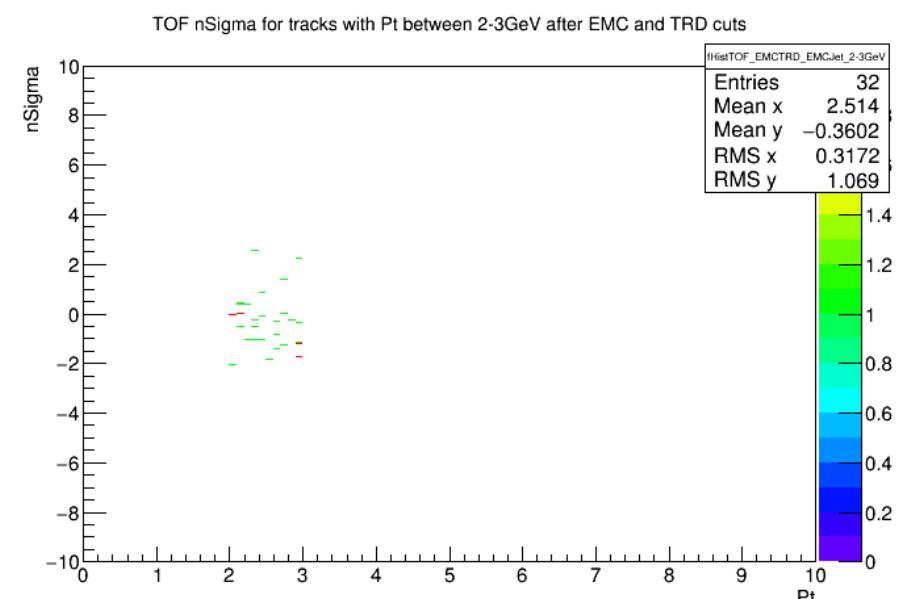
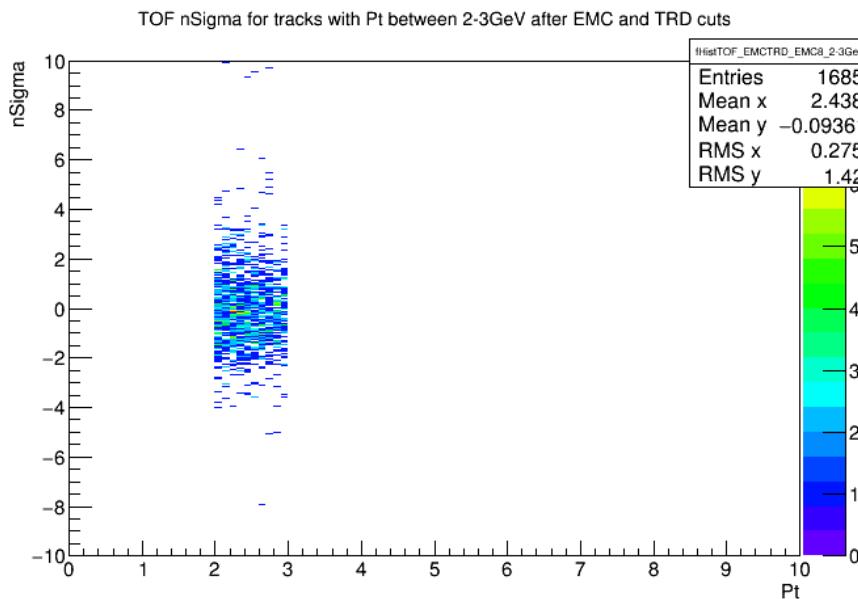
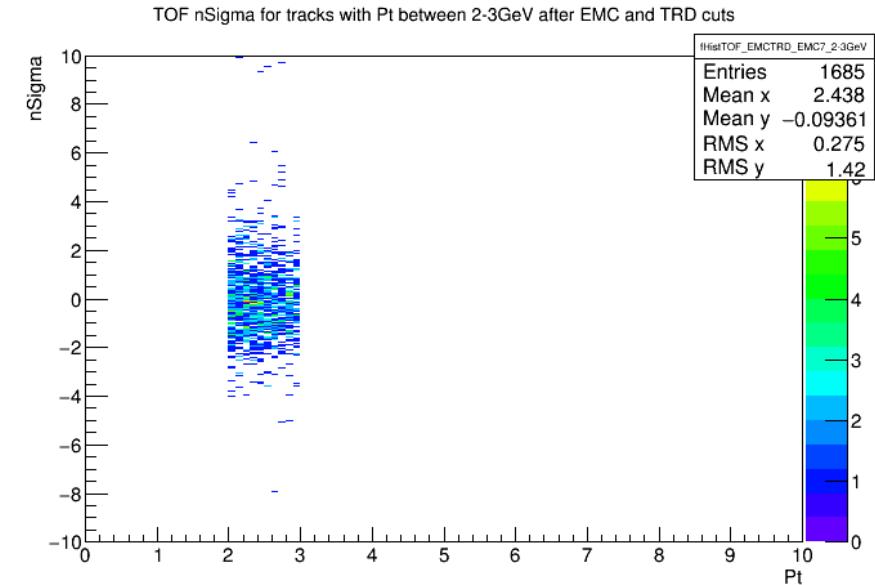
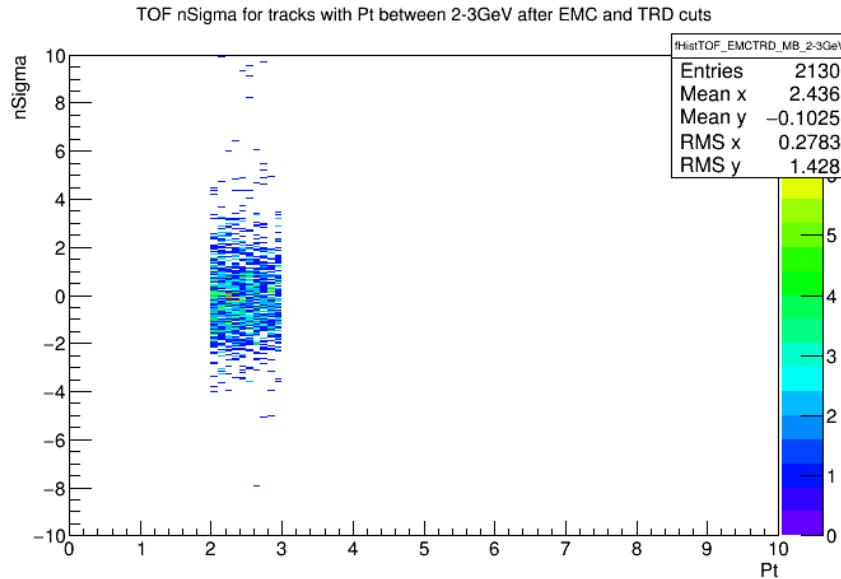
# TOF nSigma after 2Sig TPC cut and >6Gev >.9 TRD cut



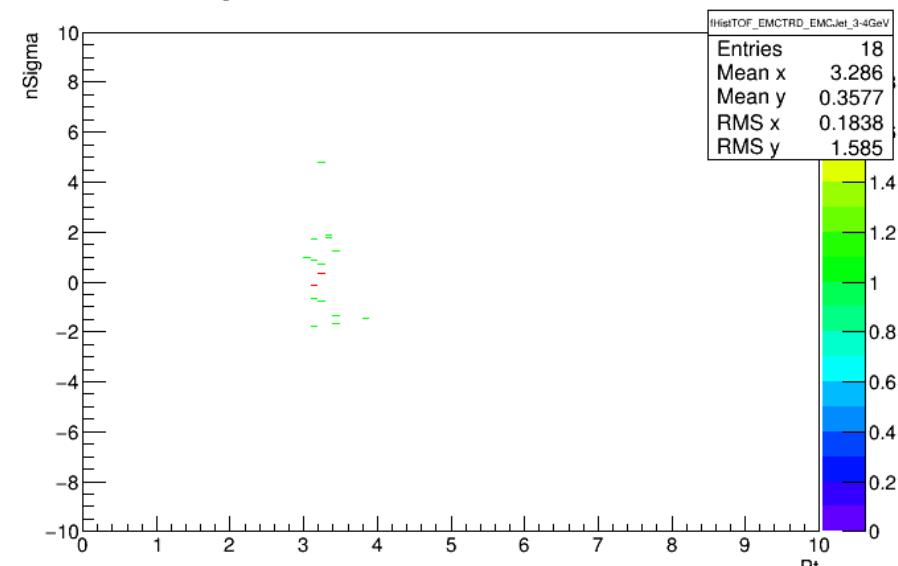
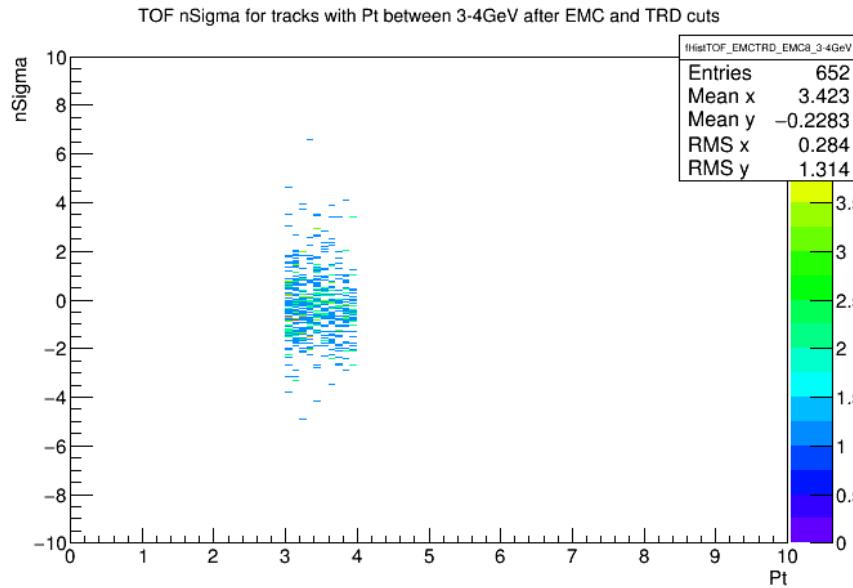
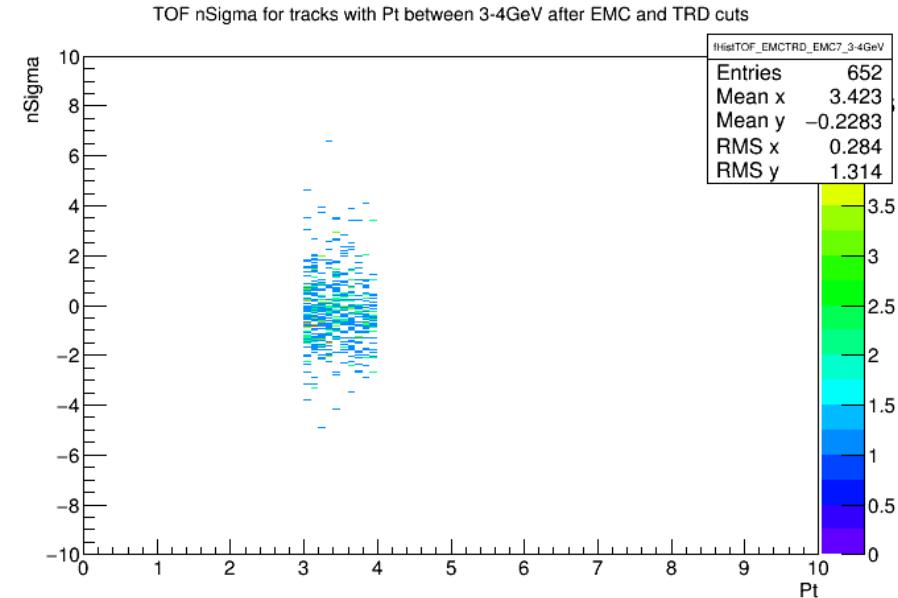
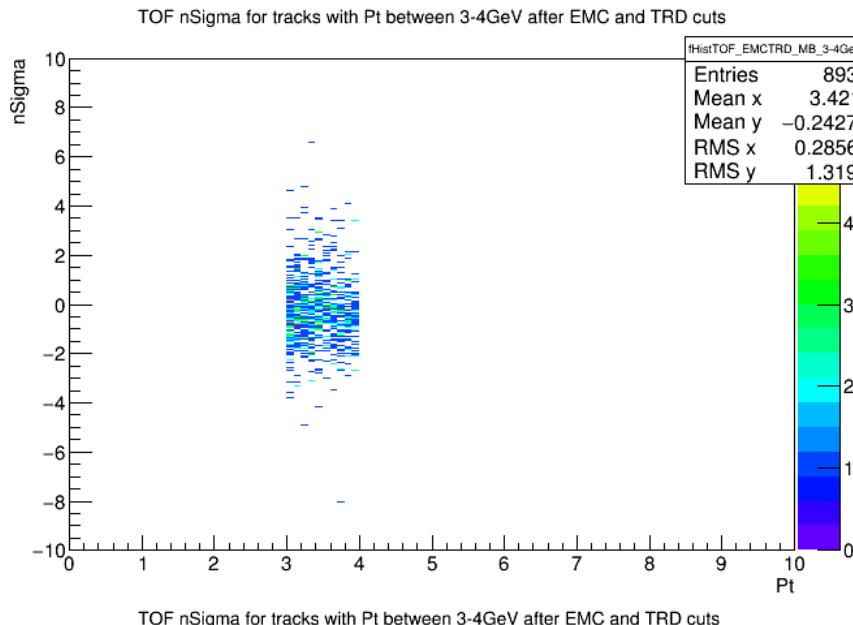
# TOF nSigma after 1+-0.1 E/p Cut 1-2Gev and >.9 TRD cut



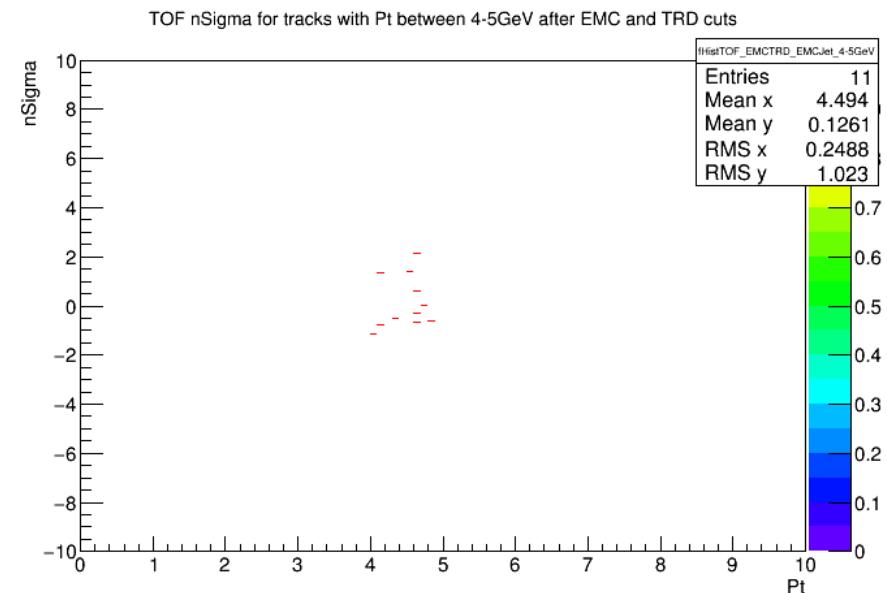
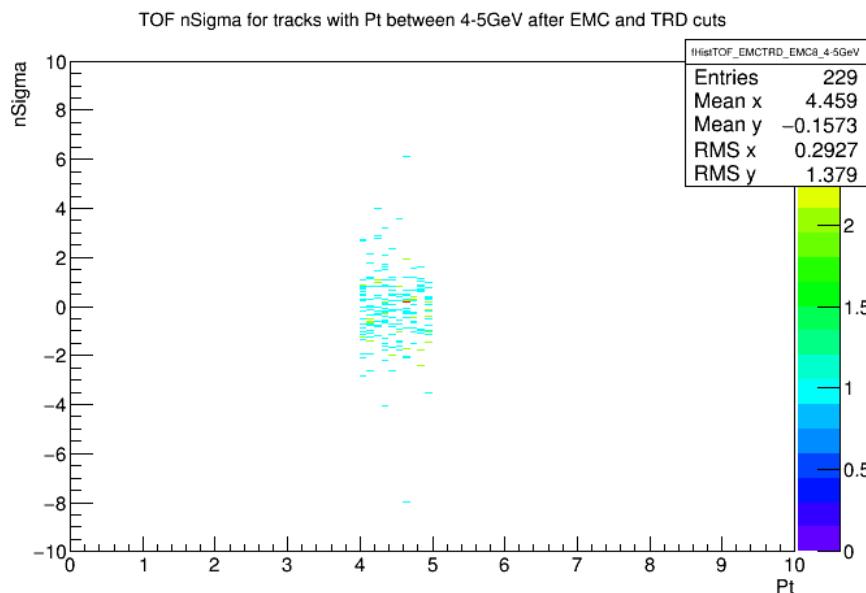
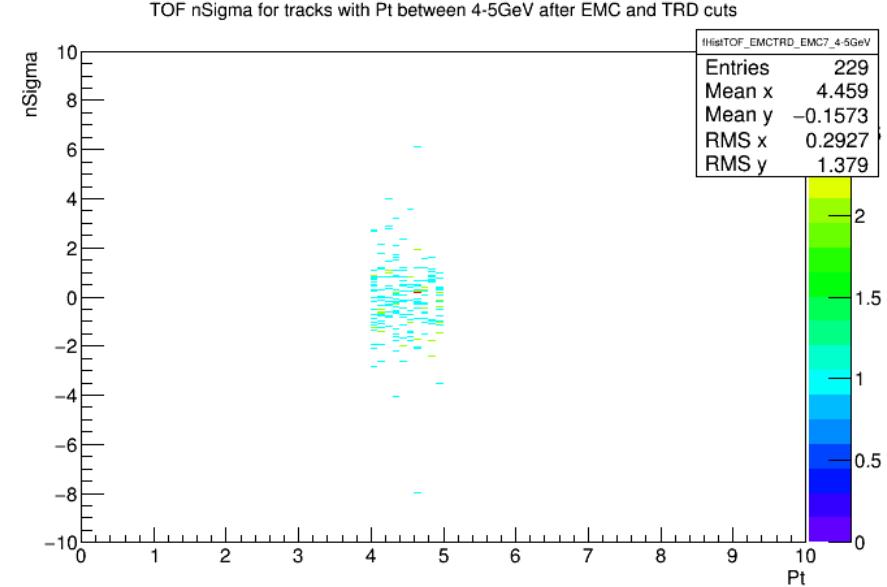
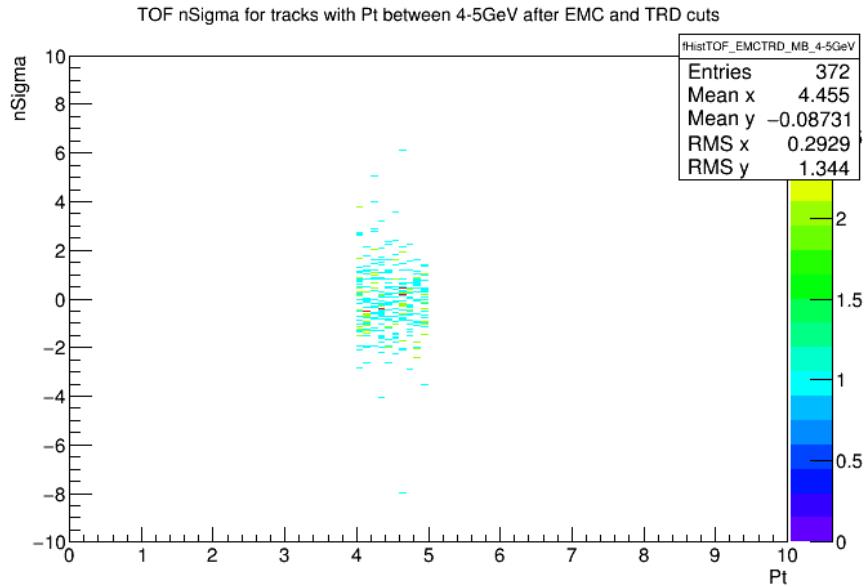
# TOF nSigma after 1+-0.1 E/p cut 2-3Gev and >.9 TRD cut



# TOF nSigma after 1+-0.1 E/p cut 3-4Gev and >.9 TRD cut

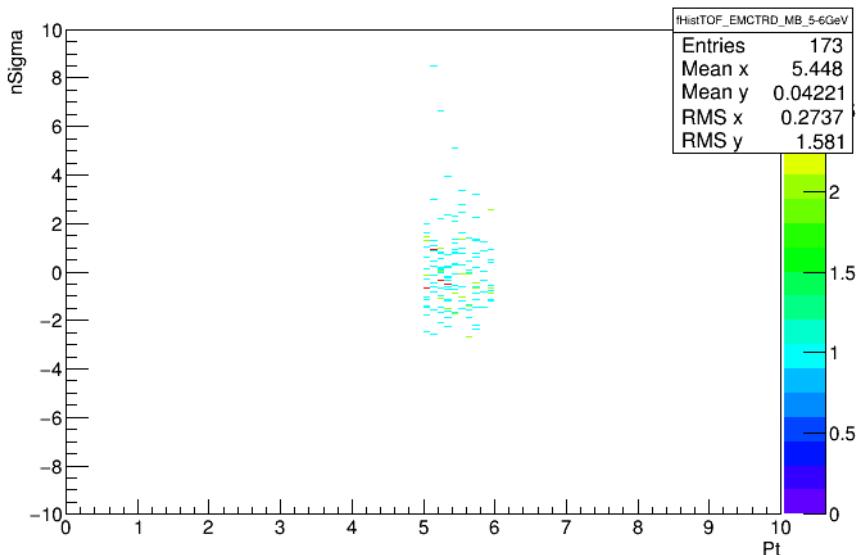


# TOF nSigma after 1+-0.1 E/p cut 4-5Gev and >.9 TRD cut

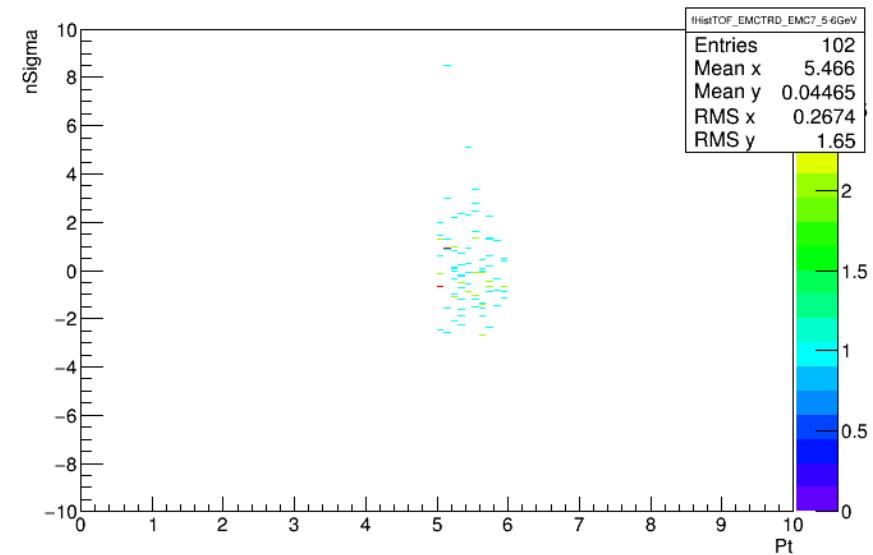


# TOF nSigma after 1+-0.1 E/p cut 5-6Gev and >.9 TRD cut

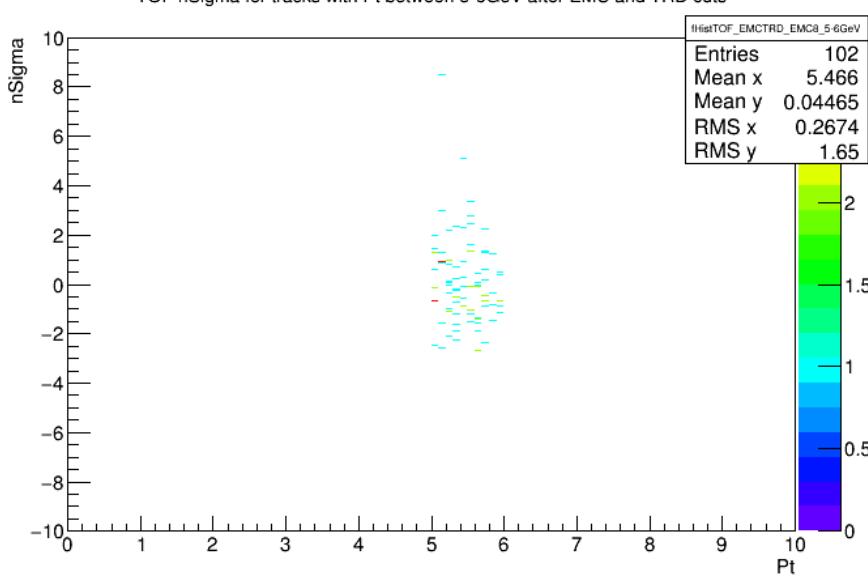
TOF nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



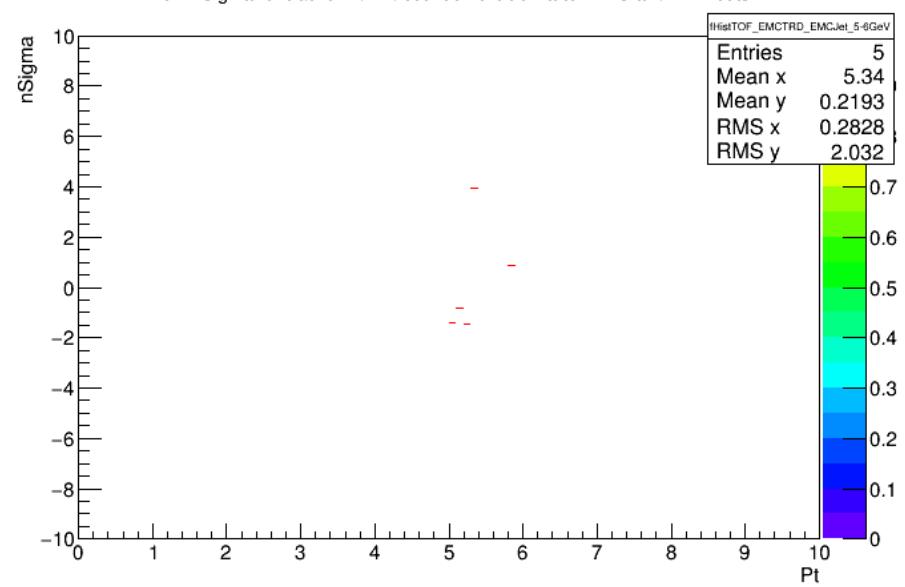
TOF nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



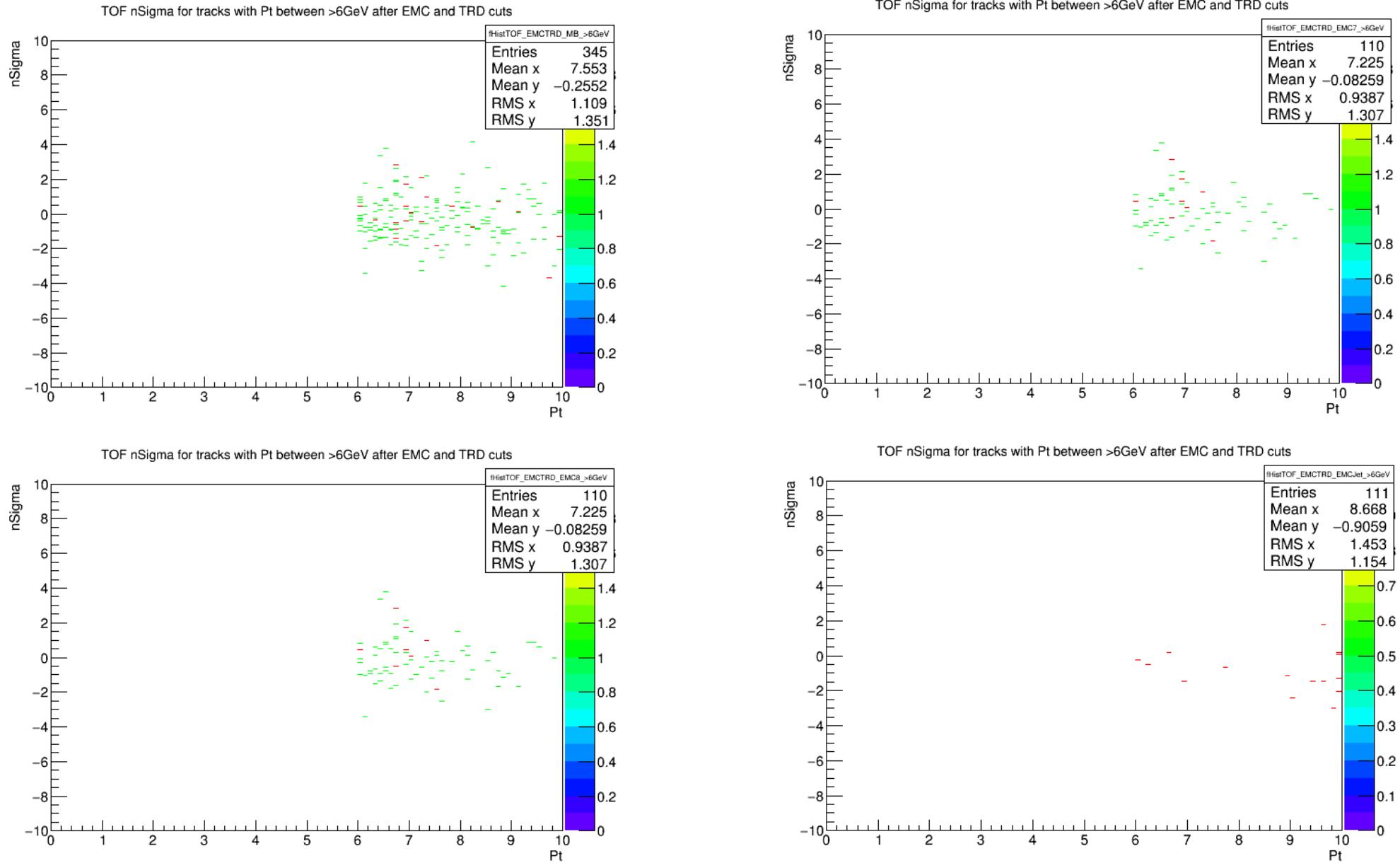
TOF nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



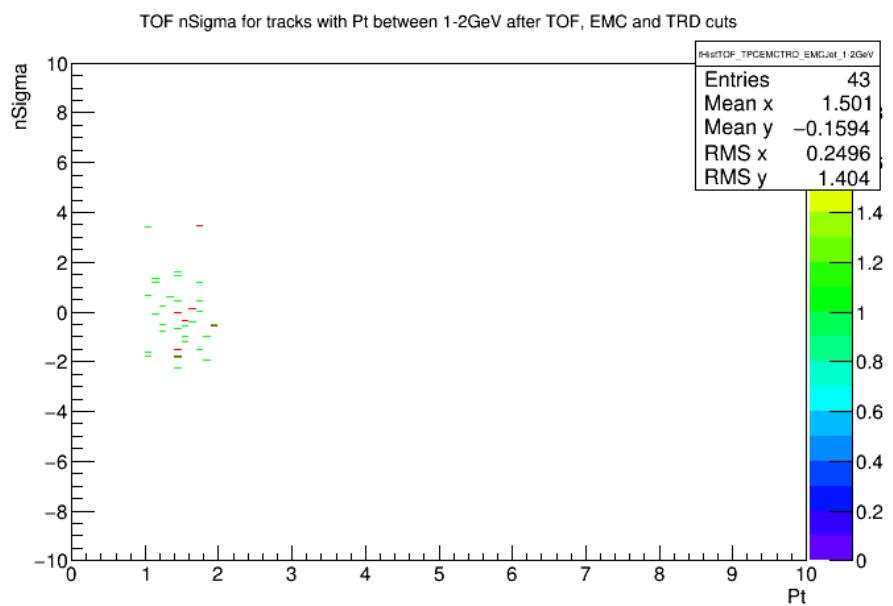
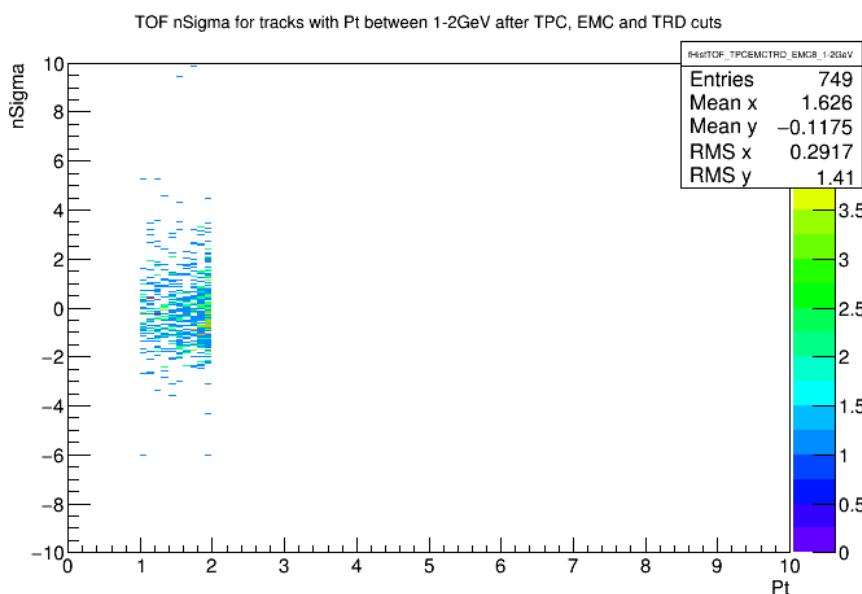
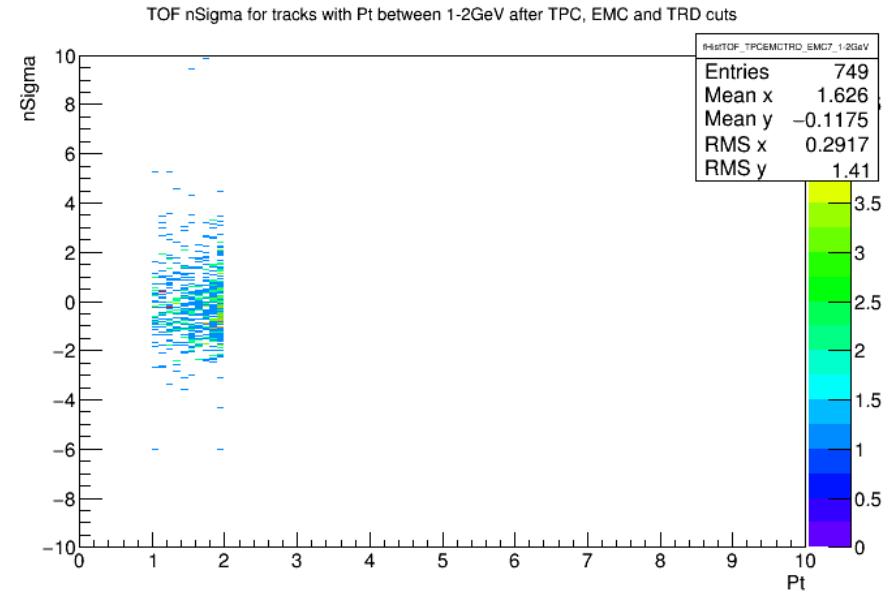
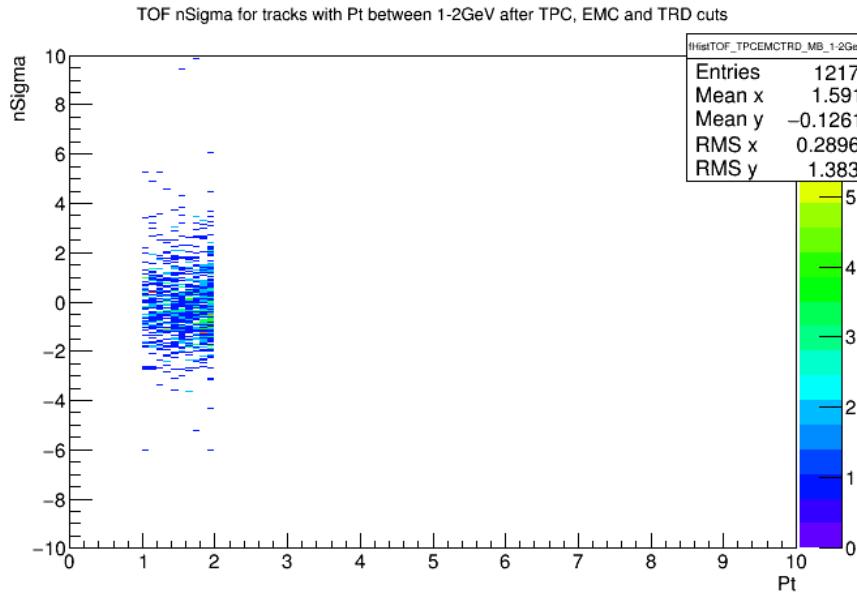
TOF nSigma for tracks with Pt between 5-6GeV after EMC and TRD cuts



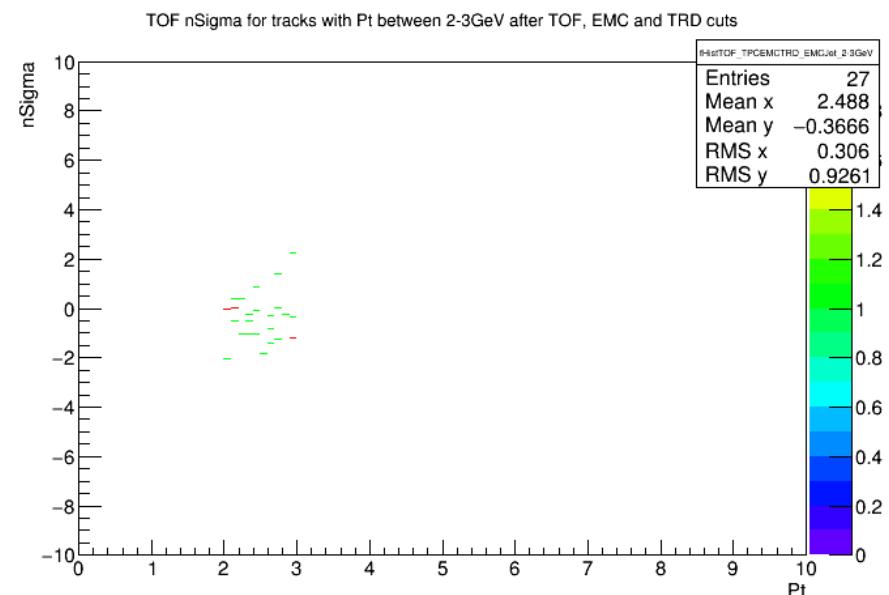
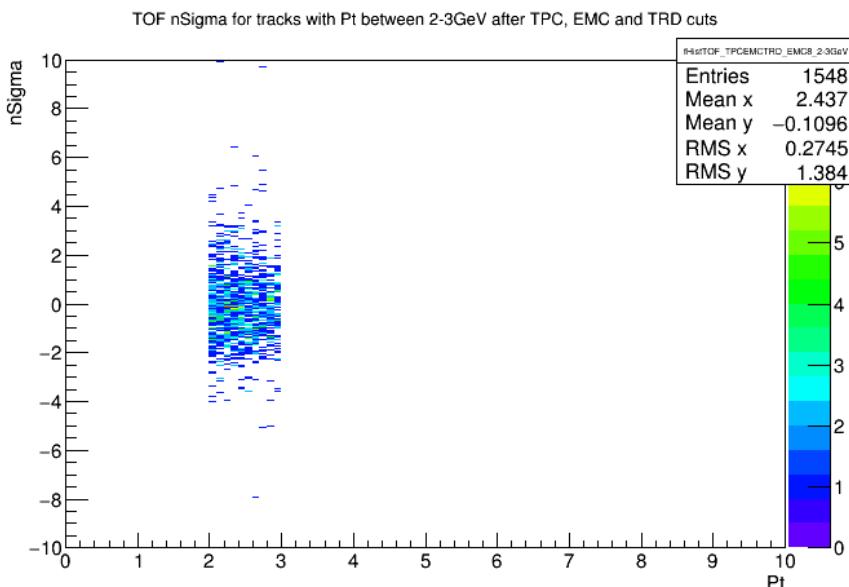
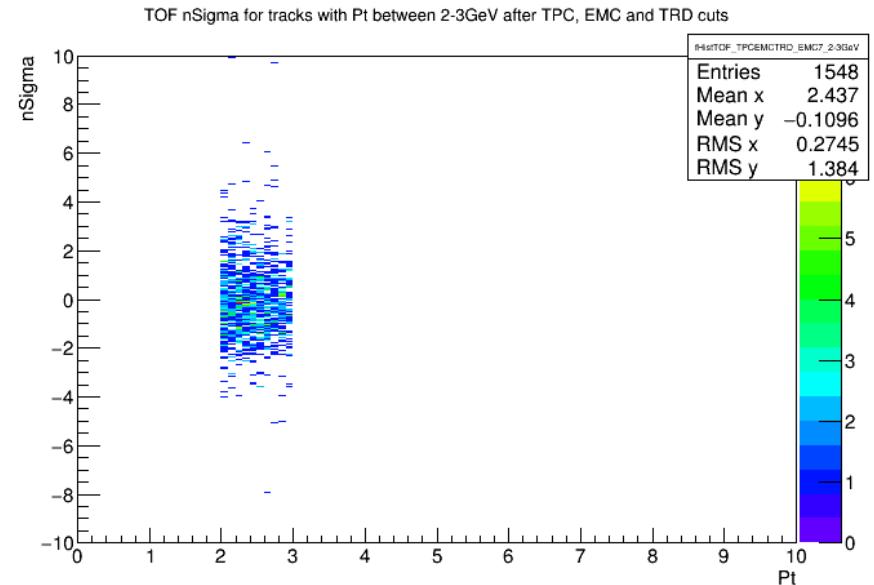
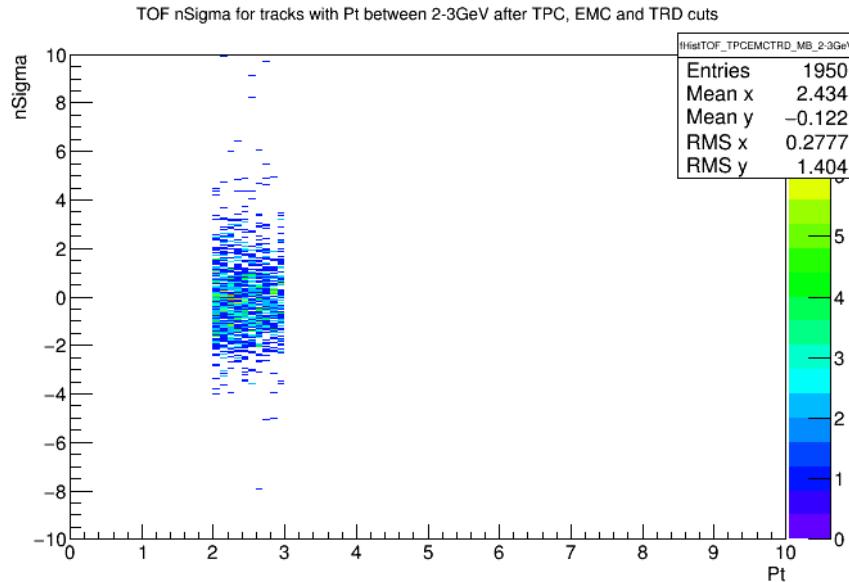
# TOF nSigma after 1+-0.1 E/p cut >6Gev and >.9 TRD cut



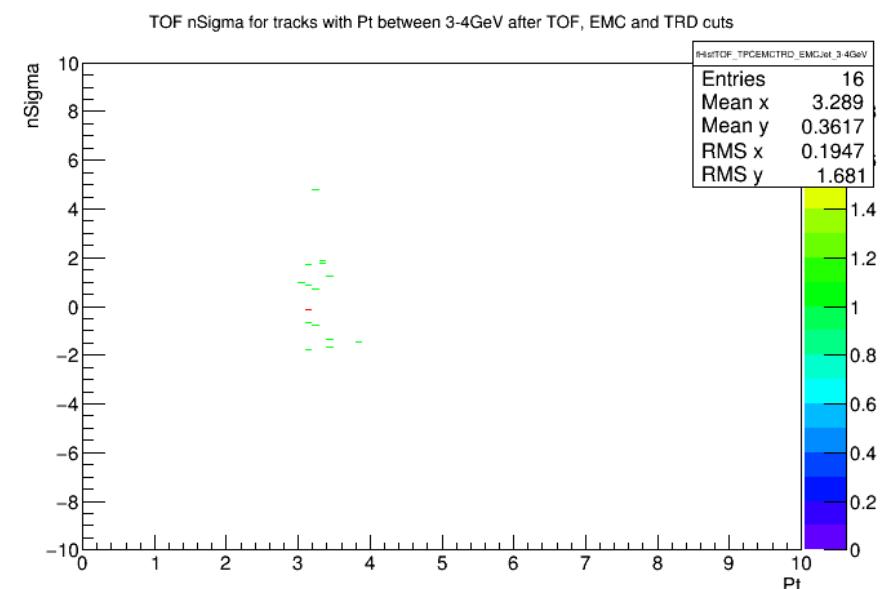
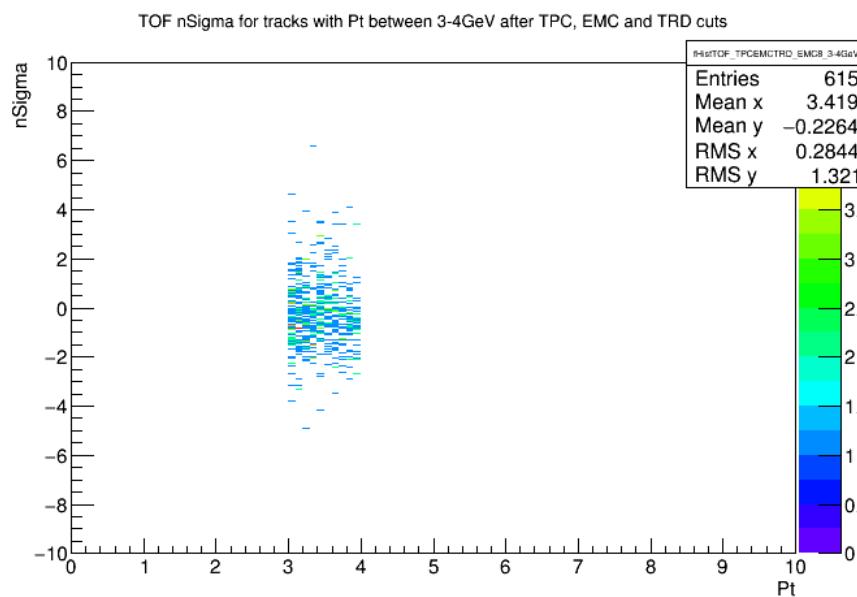
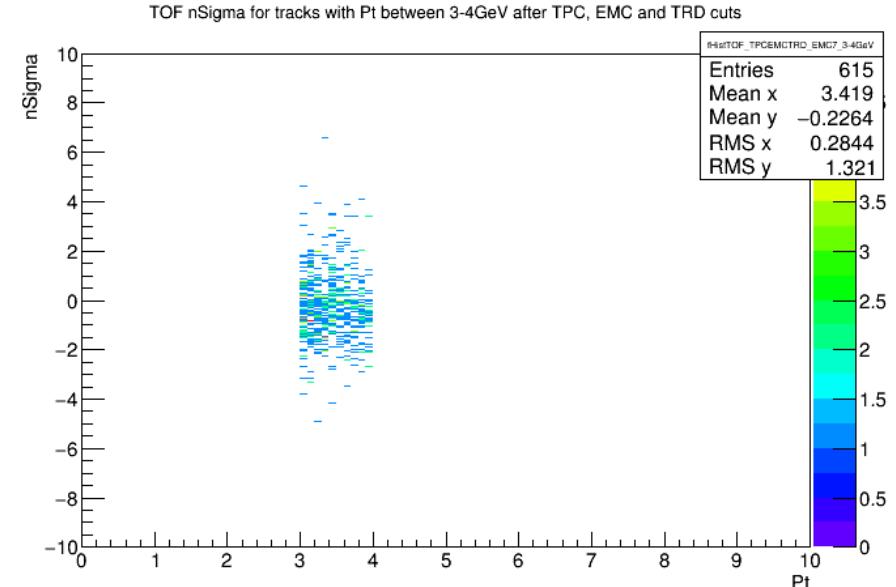
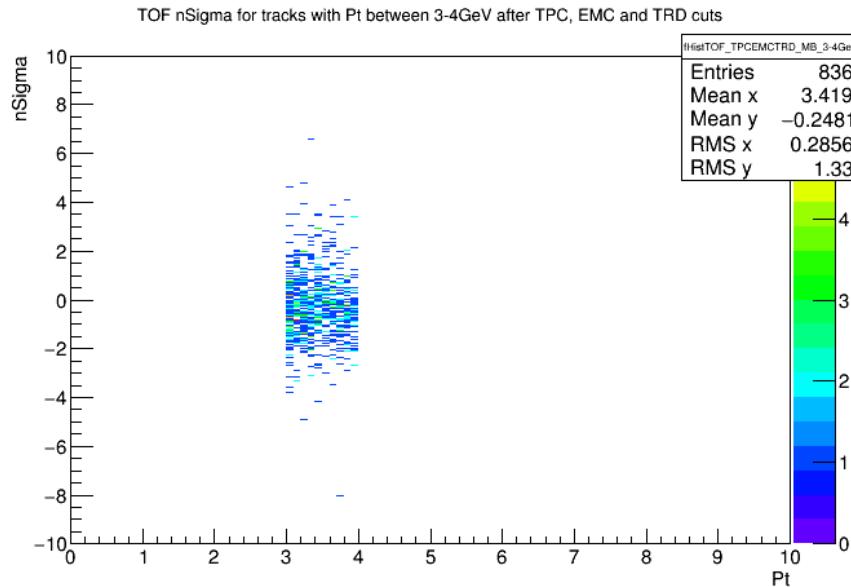
# TOF nSigma after 2Sig TPC cut, 1+- 1-2Gev 0.1 E/p cut and >.9 TRD cut



# TOF nSigma after 2Sig TPC cut, 1+- 2-3Gev 0.1 E/p cut and >.9 TRD cut

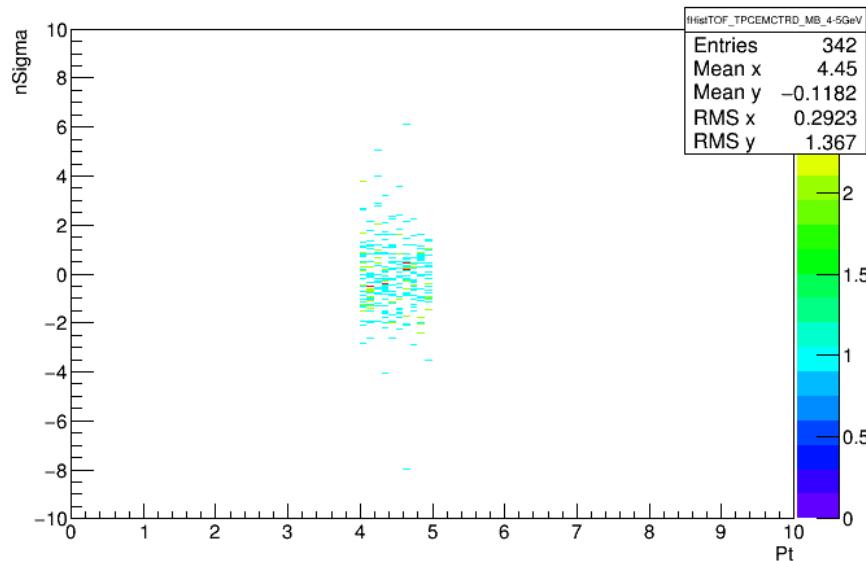


# TOF nSigma after 2Sig TPC cut, 1+- 3-4Gev0.1 E/p cut and >.9 TRD cut

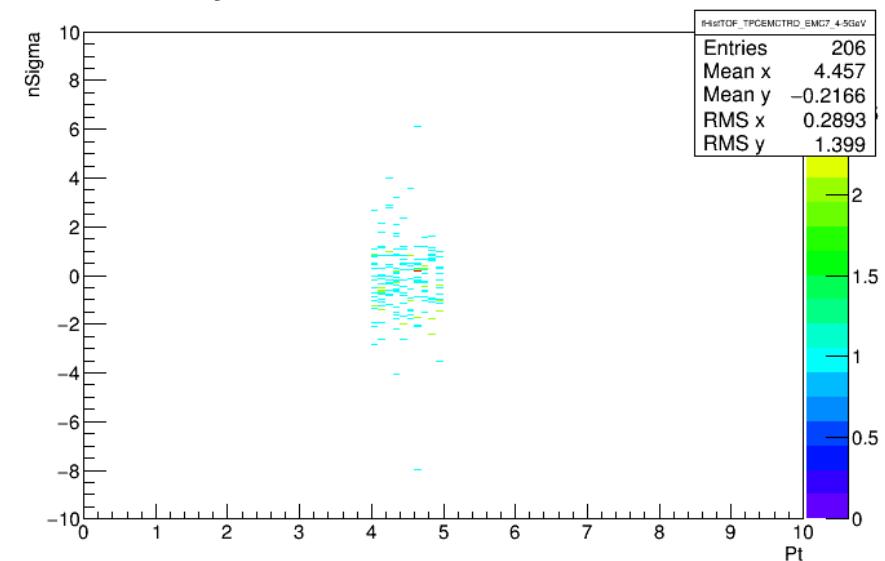


# TOF nSigma after 2Sig TPC cut, 1+- 4-5Gev0.1 E/p cut and >.9 TRD cut

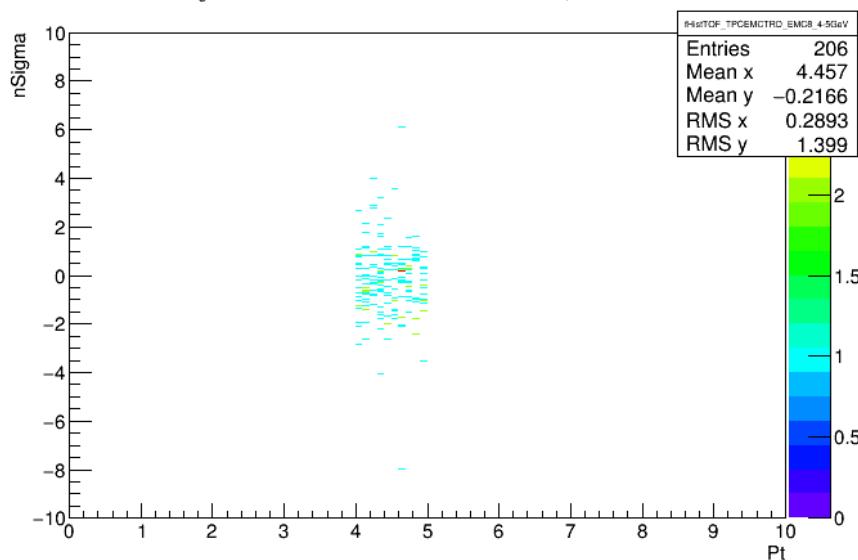
TOF nSigma for tracks with Pt between 4-5GeV after TPC, EMC and TRD cuts



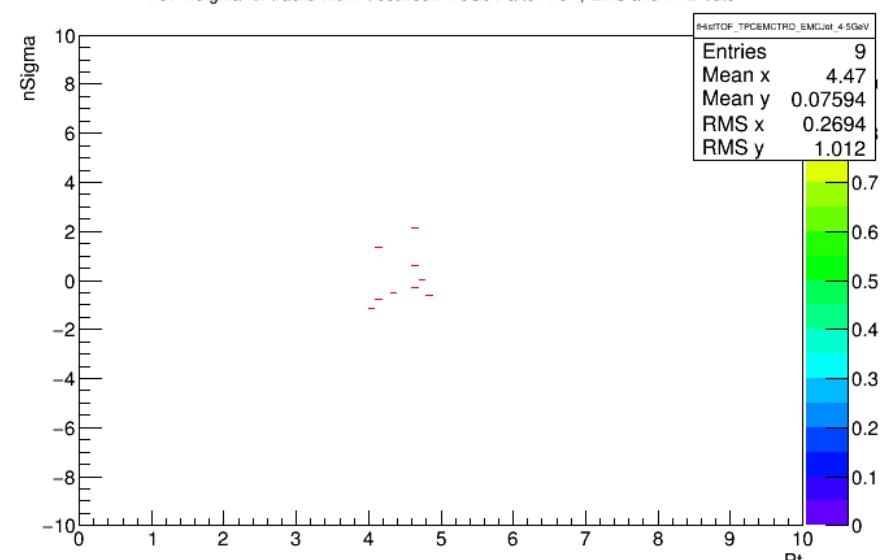
TOF nSigma for tracks with Pt between 4-5GeV after TPC, EMC and TRD cuts



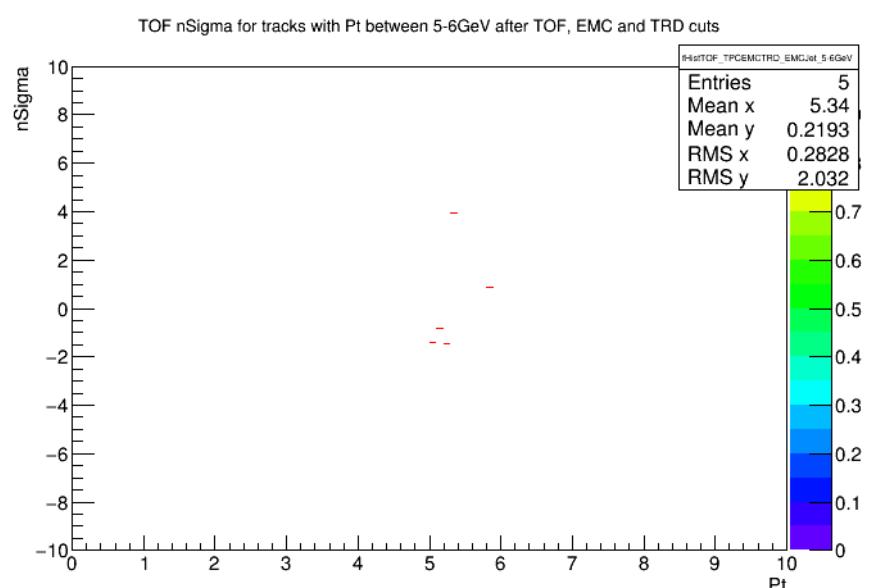
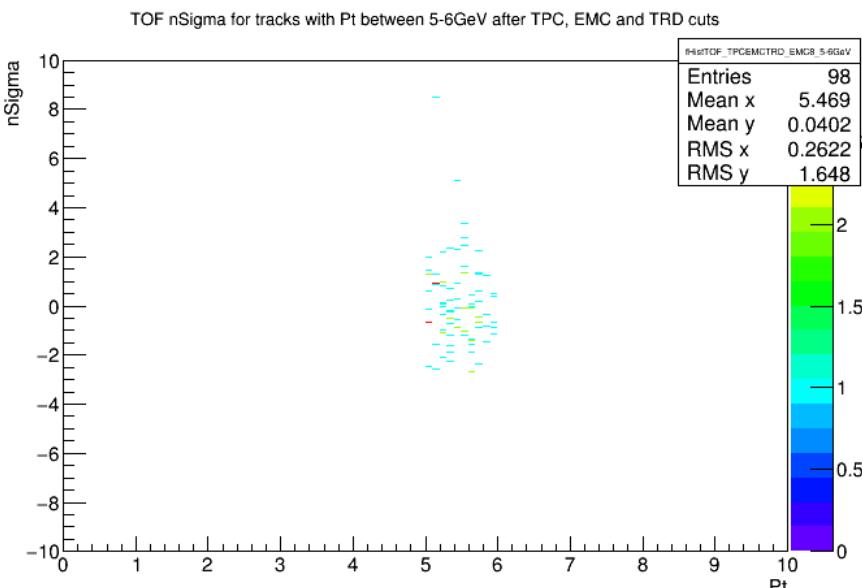
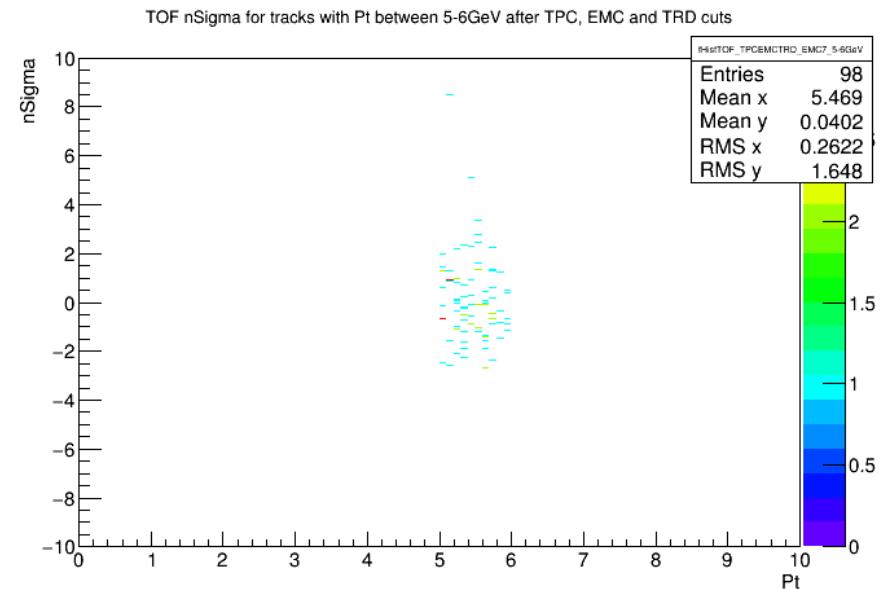
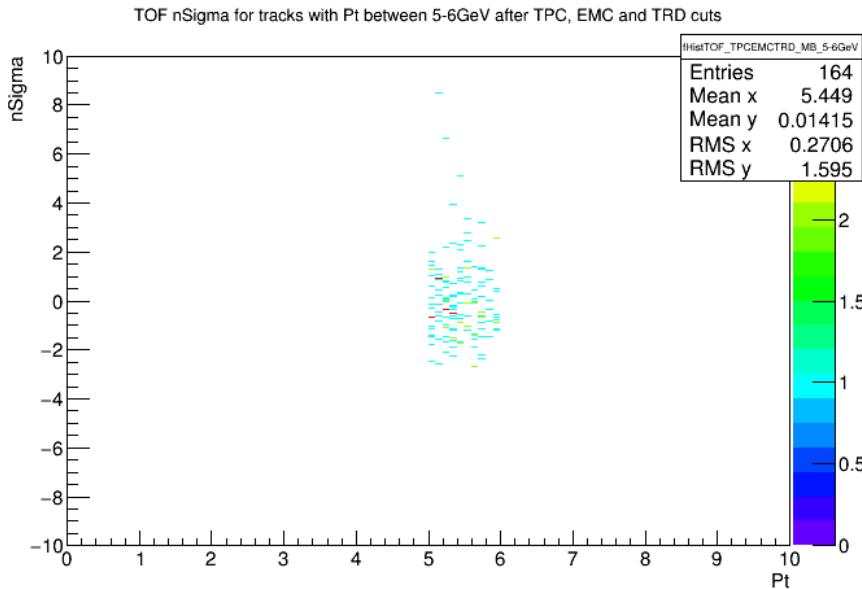
TOF nSigma for tracks with Pt between 4-5GeV after TPC, EMC and TRD cuts



TOF nSigma for tracks with Pt between 4-5GeV after TOF, EMC and TRD cuts

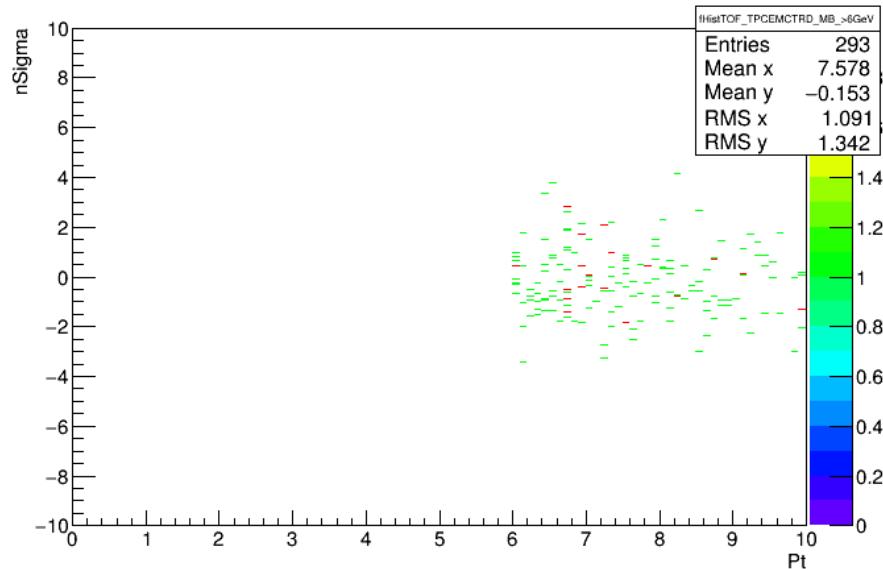


# TOF nSigma after 2Sig TPC cut, 1+- 5-6Gev 0.1 E/p cut and >.9 TRD cut

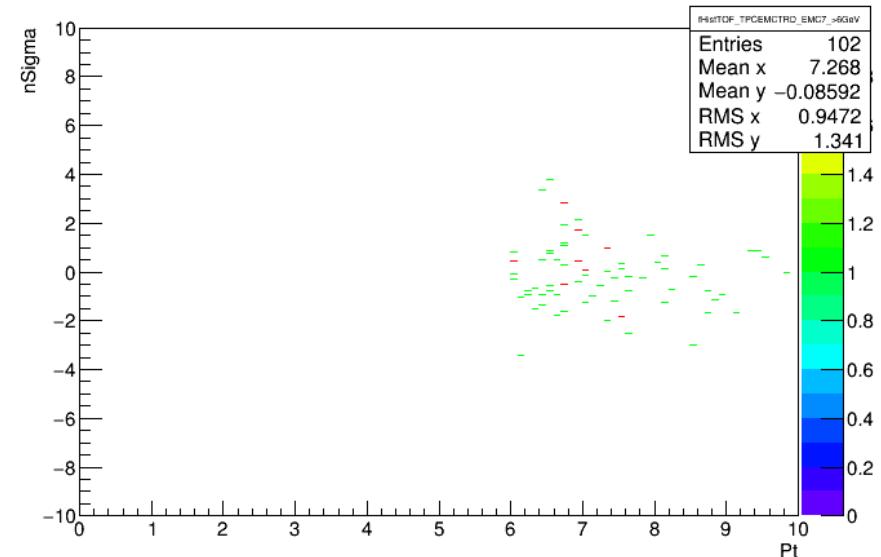


# TOF nSigma after 2Sig TPC cut, 1+>6Gev 0.1 E/p cut and >.9 TRD cut

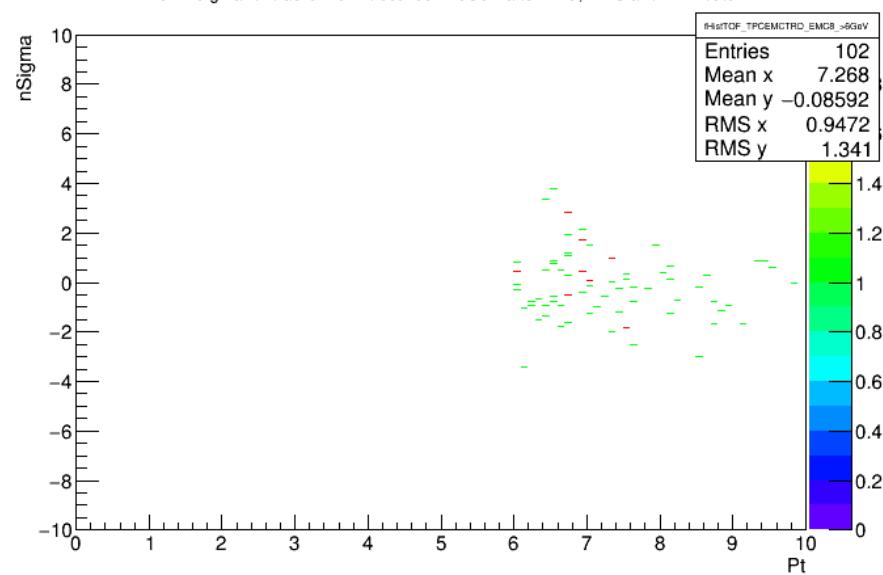
TOF nSigma for tracks with Pt between >6GeV after TPC, EMC and TRD cuts



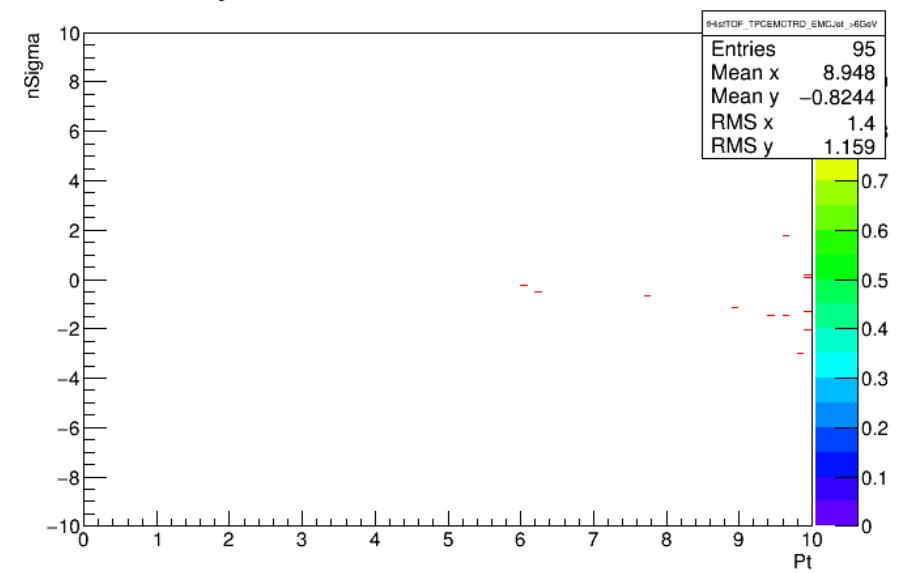
TOF nSigma for tracks with Pt between >6GeV after TPC, EMC and TRD cuts



TOF nSigma for tracks with Pt between >6GeV after TPC, EMC and TRD cuts

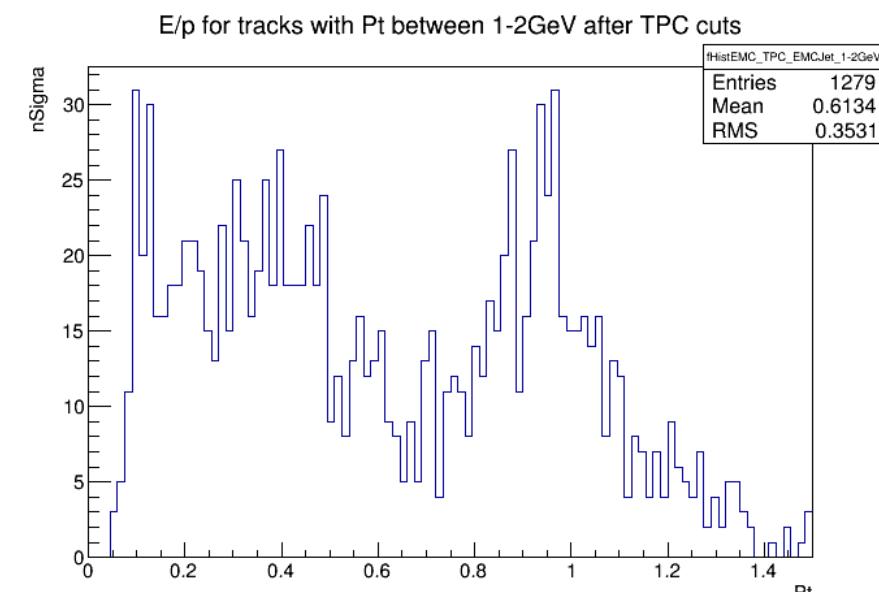
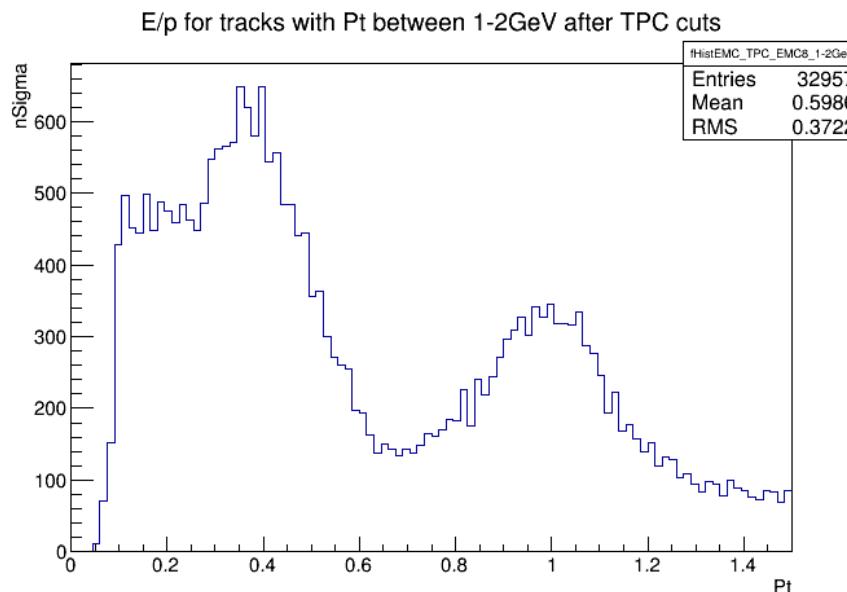
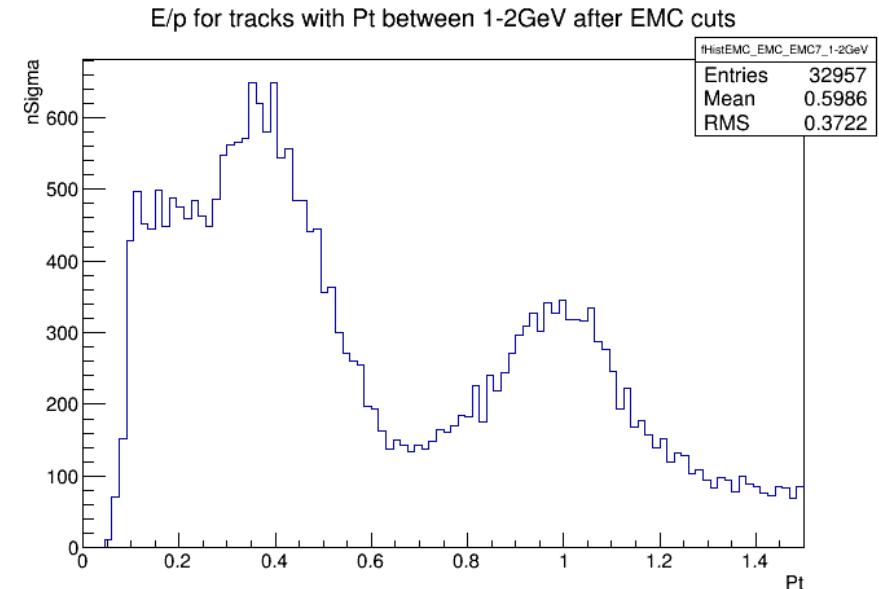
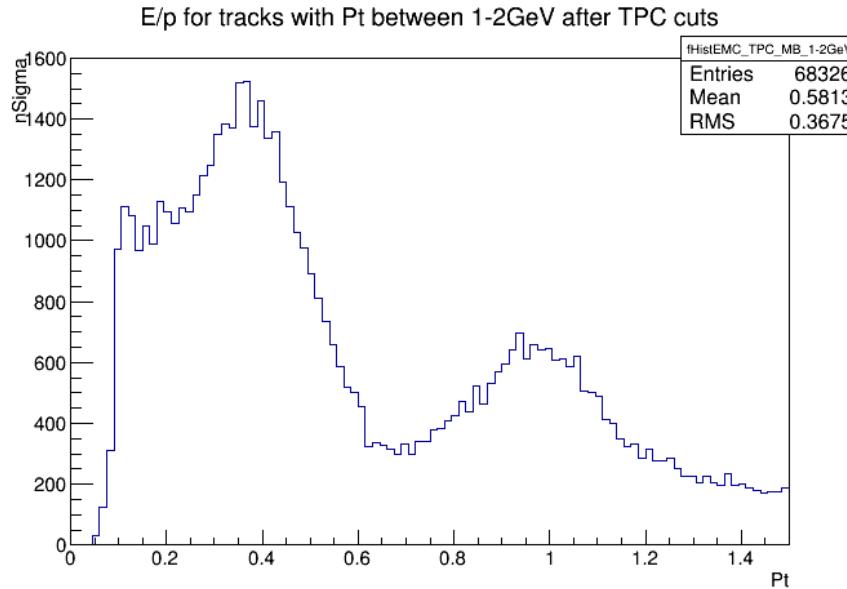


TOF nSigma for tracks with Pt between >6GeV after TOF, EMC and TRD cuts



# E/p after 2Sig TPC Cut

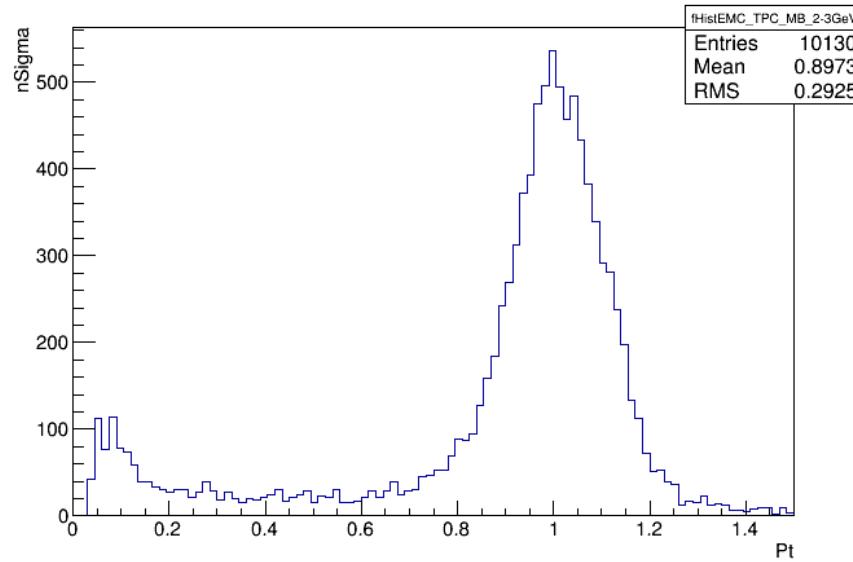
## 1-2Gev



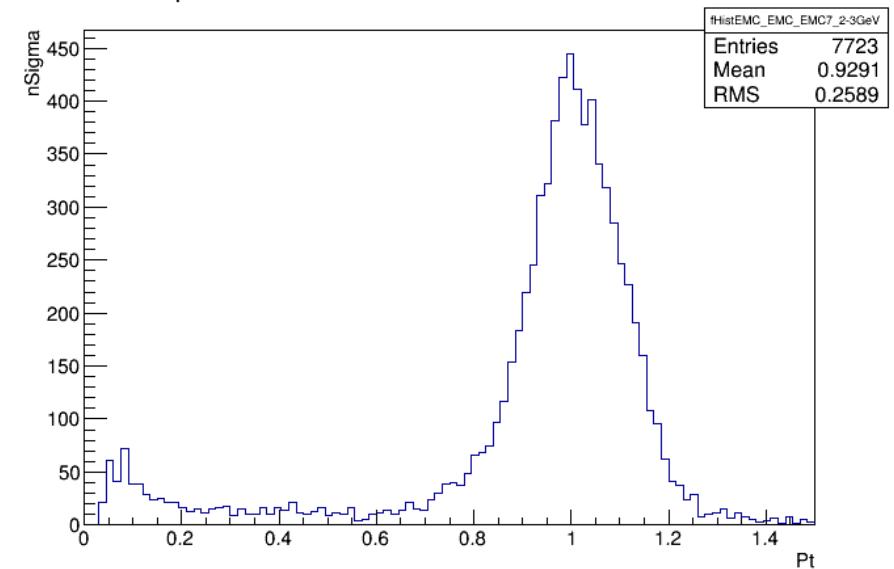
# E/p after 2Sig TPC cut

## 2-3Gev

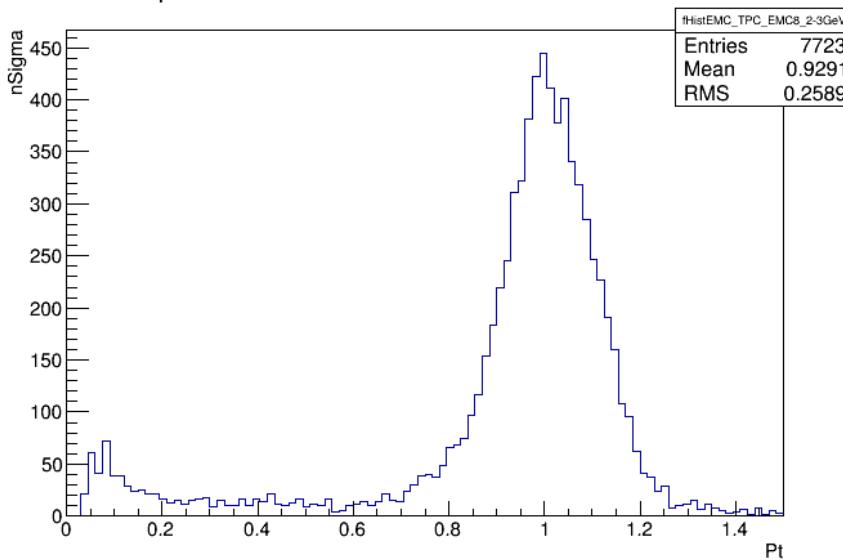
E/p for tracks with Pt between 2-3GeV after TPC cuts



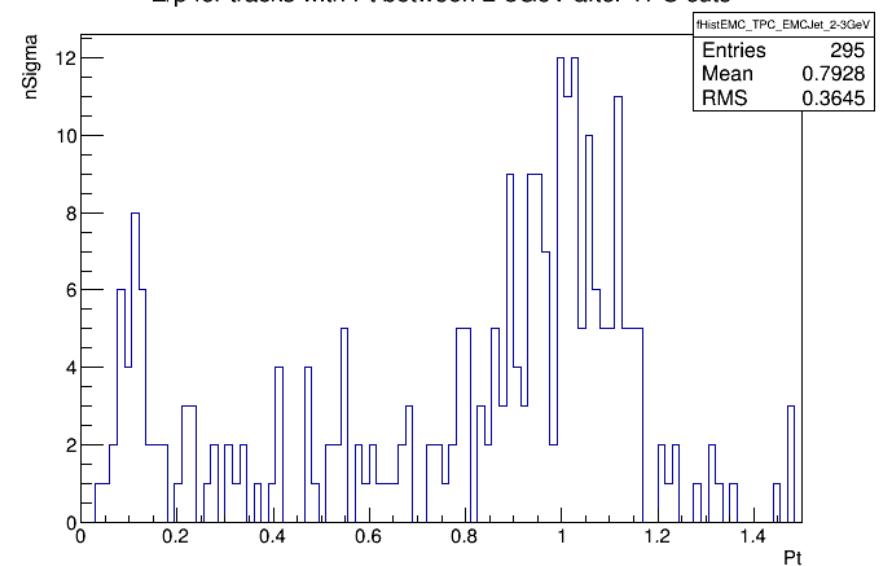
E/p for tracks with Pt between 2-3GeV after EMC cuts



E/p for tracks with Pt between 2-3GeV after TPC cuts

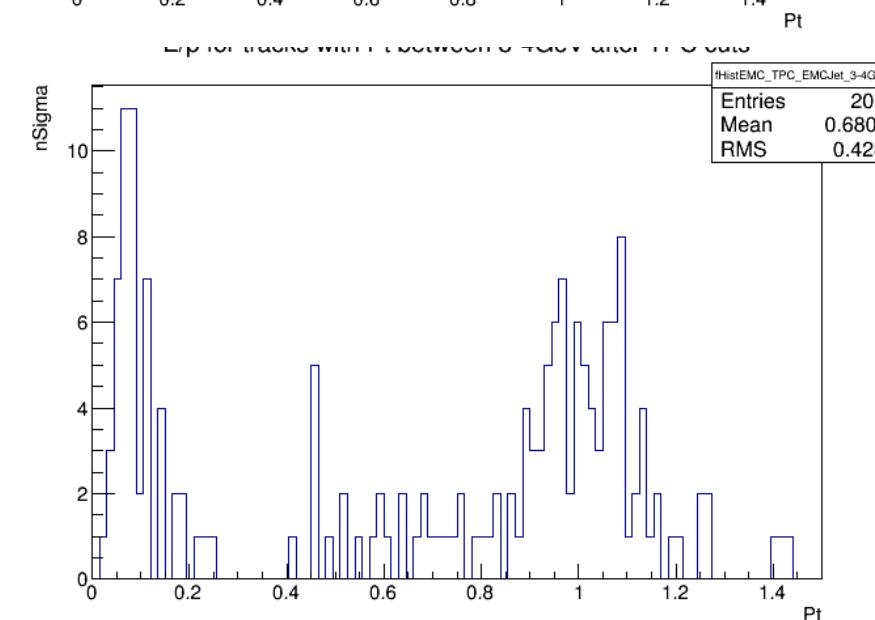
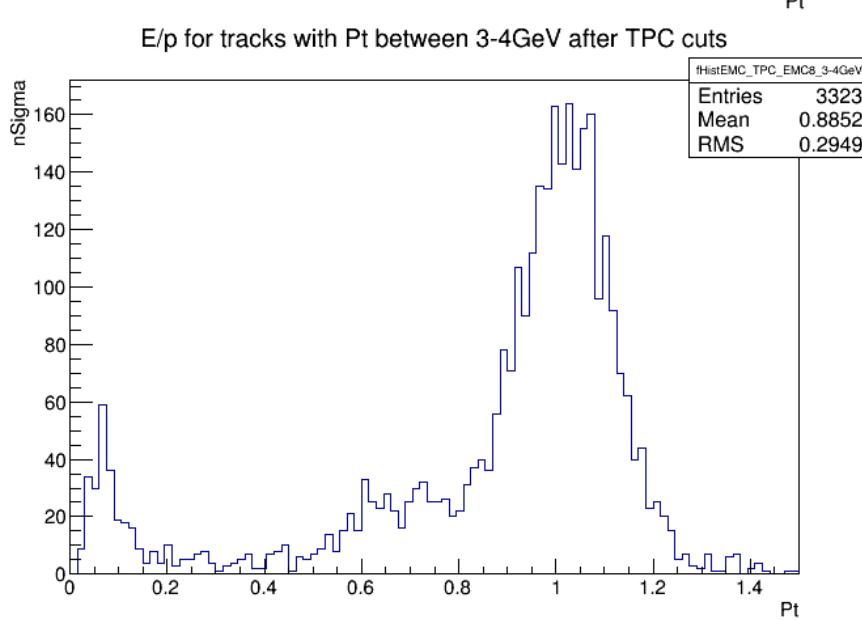
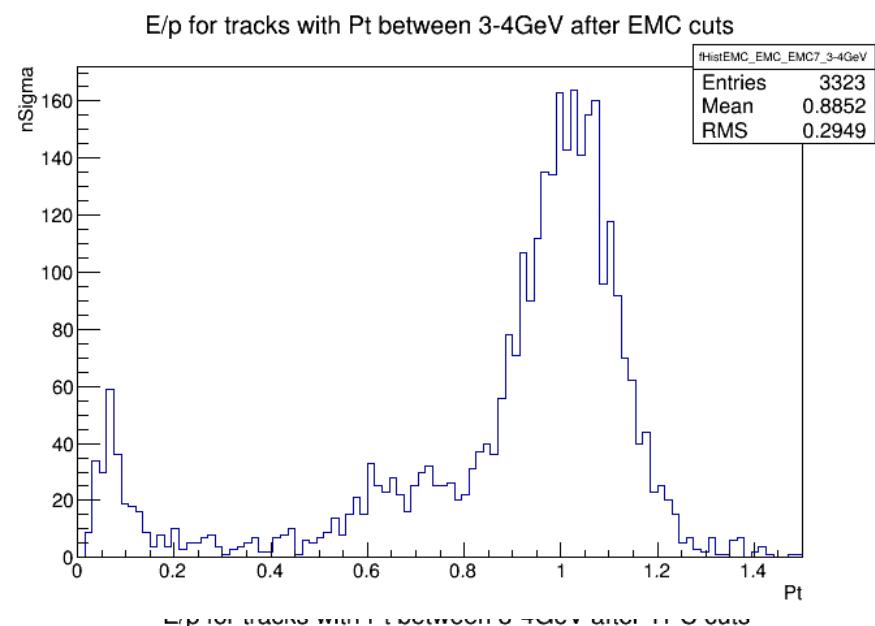
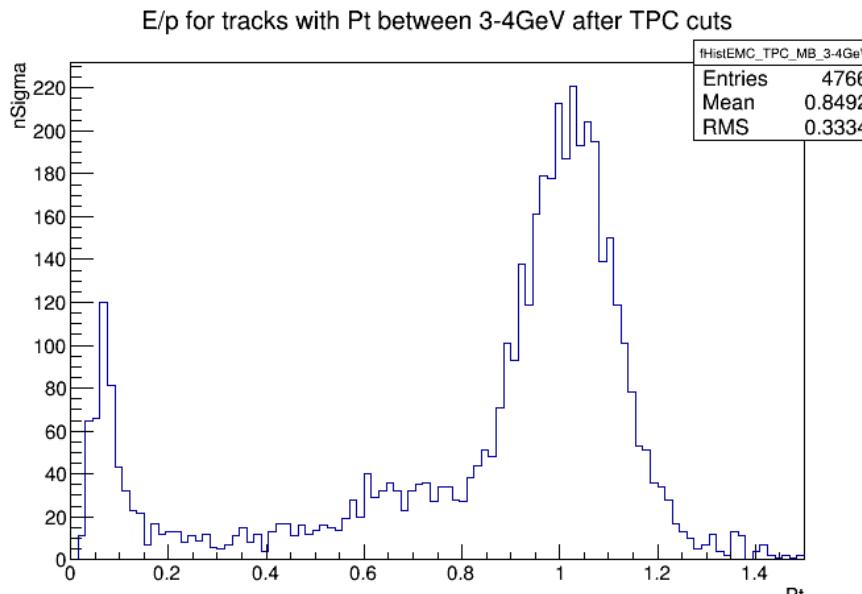


E/p for tracks with Pt between 2-3GeV after TPC cuts



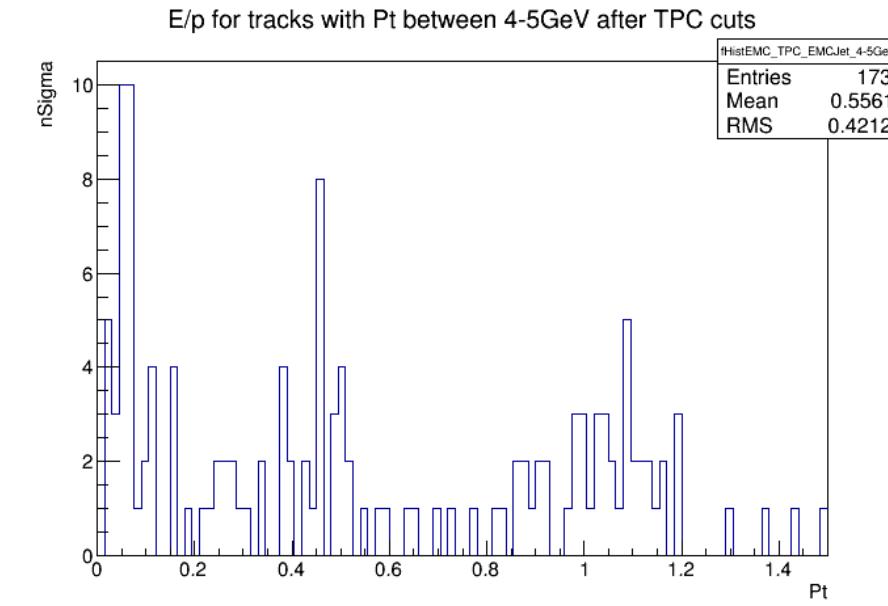
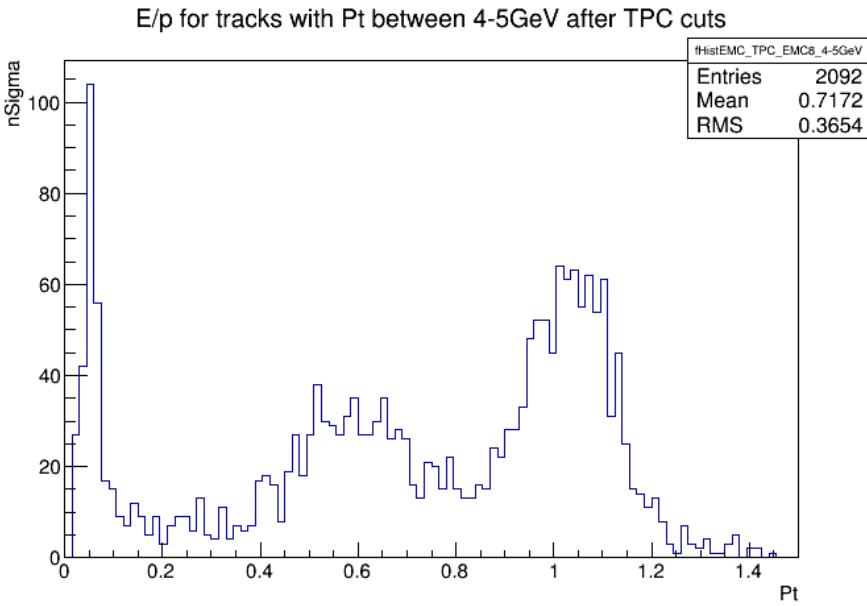
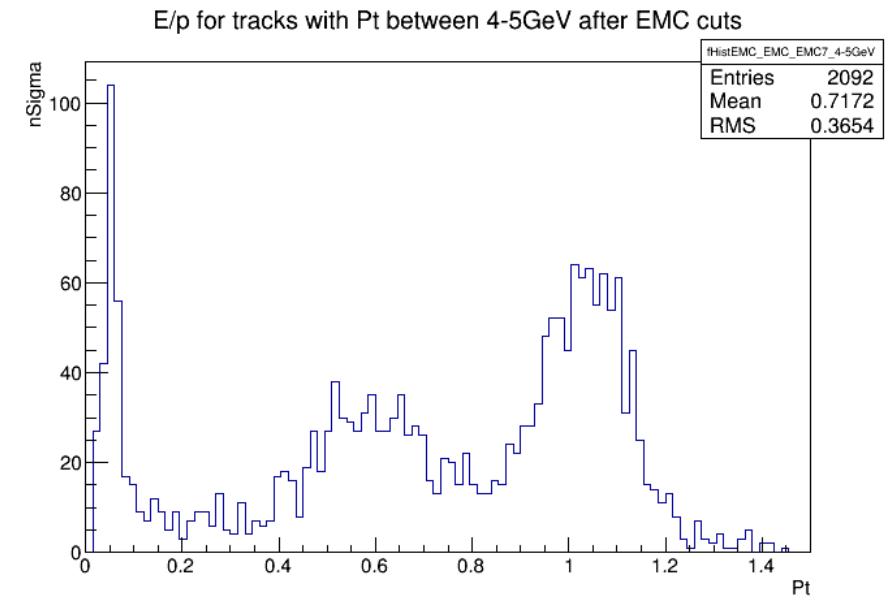
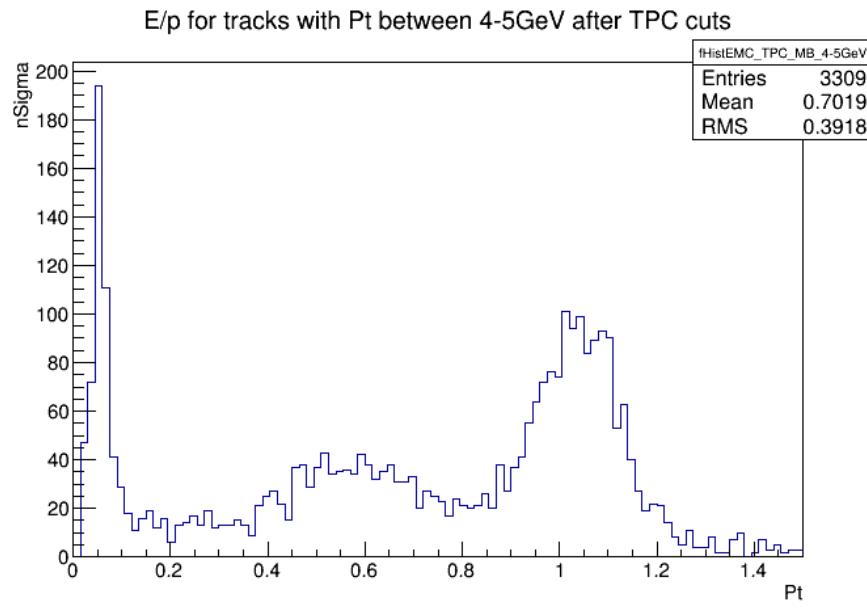
# E/p after 2Sig TPC cut

## 3-4Gev



# E/p after 2Sig TPC cut

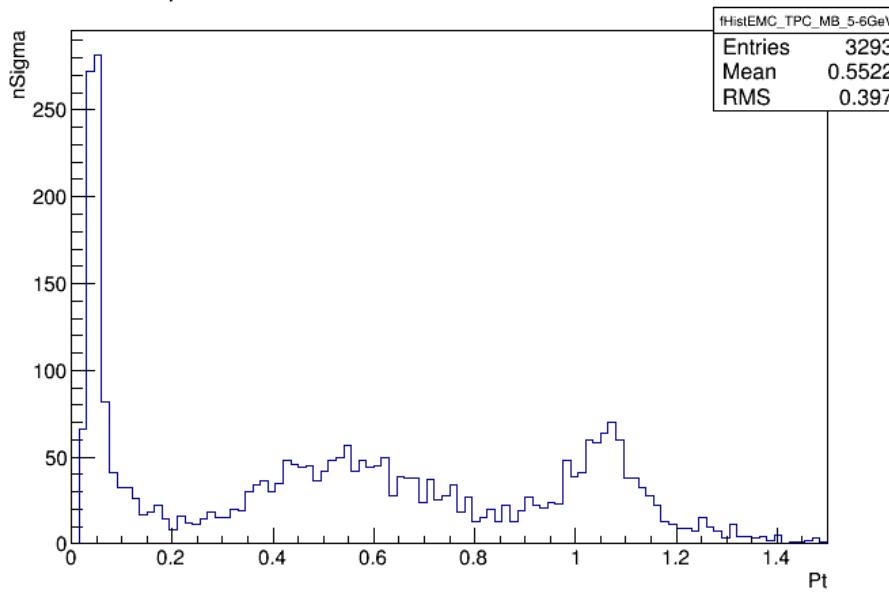
## 4-5Gev



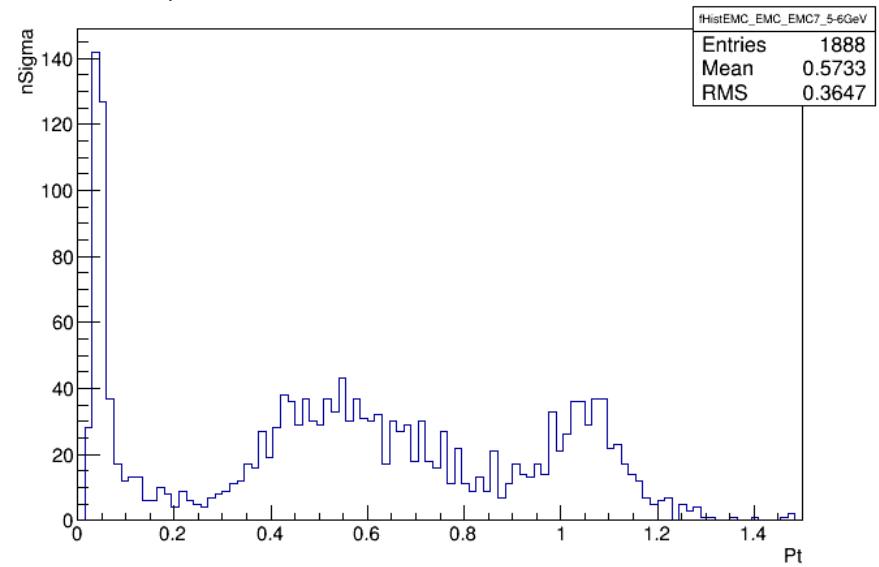
# E/p after 2Sig TPC cut

## 5-6Gev

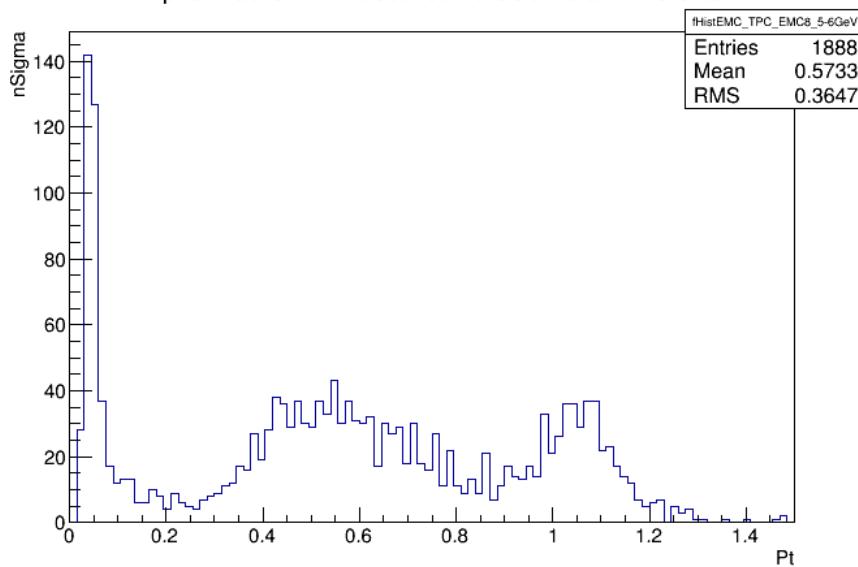
E/p for tracks with Pt between 5-6GeV after TPC cuts



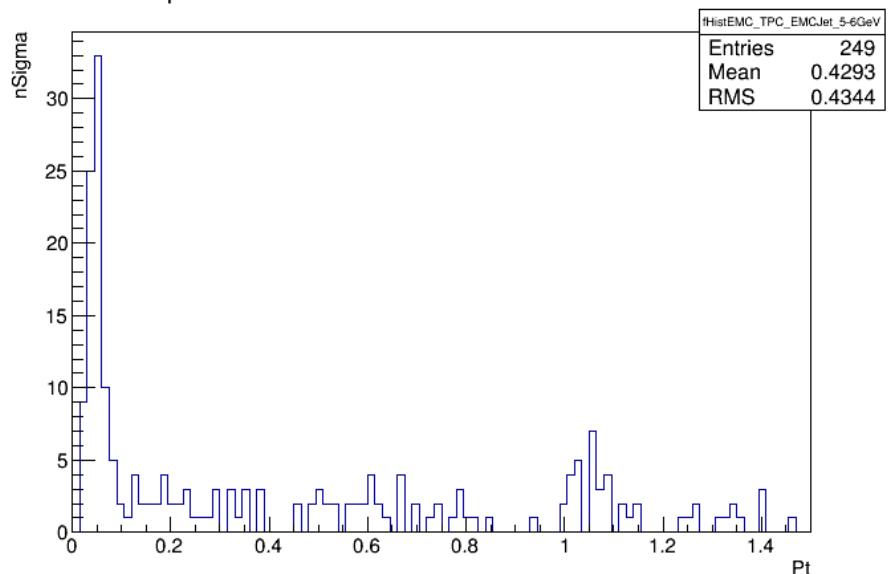
E/p for tracks with Pt between 5-6GeV after EMC cuts



E/p for tracks with Pt between 5-6GeV after TPC cuts

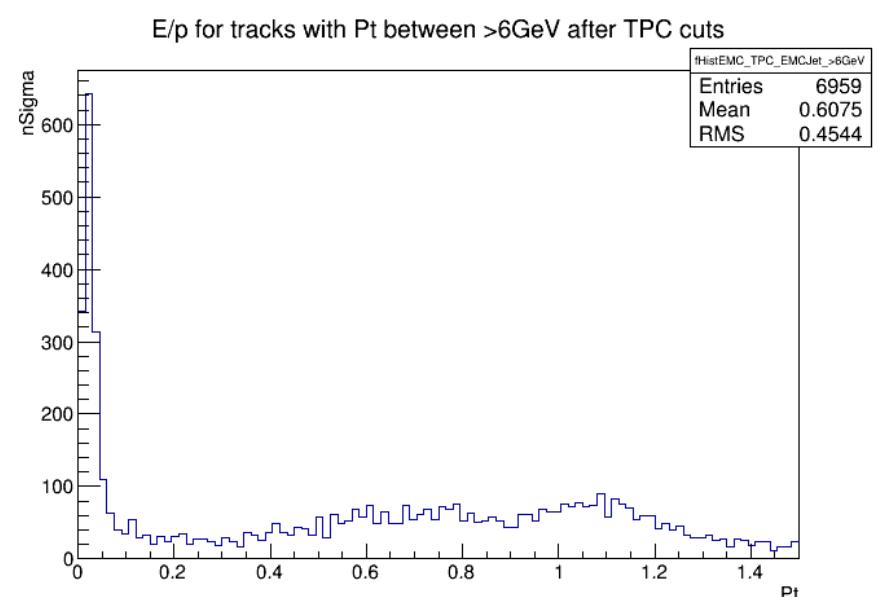
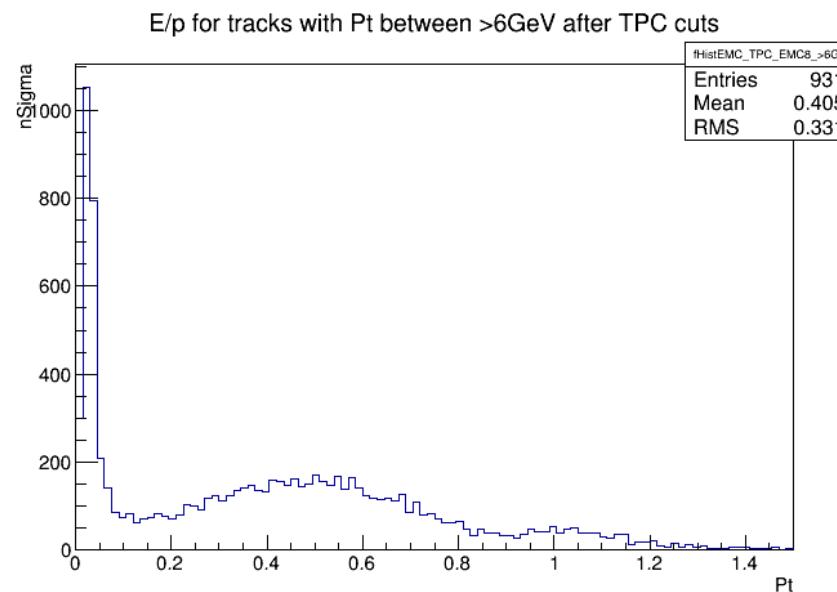
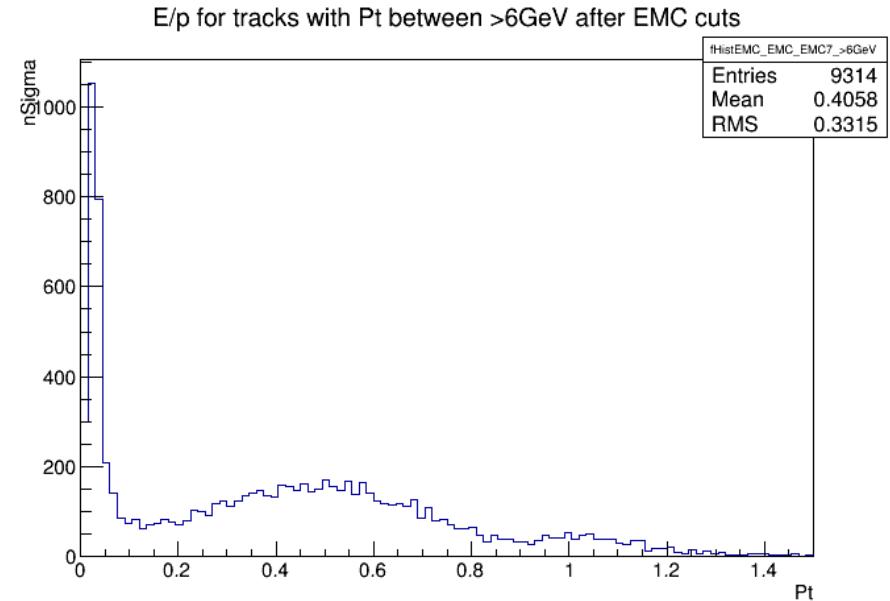
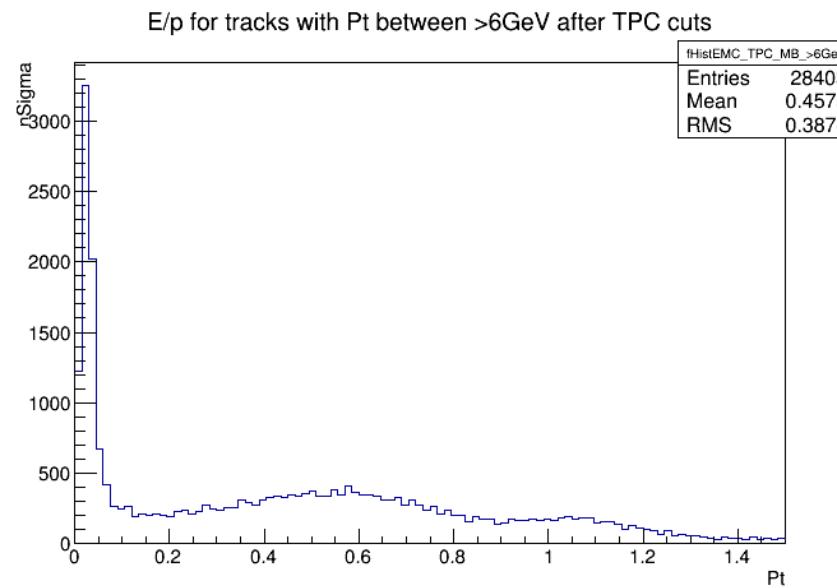


E/p for tracks with Pt between 5-6GeV after TPC cuts



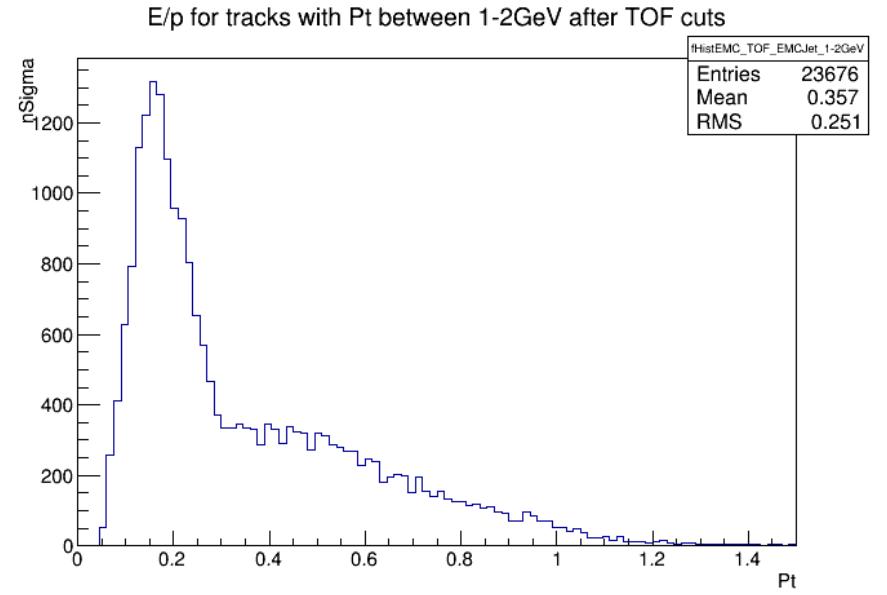
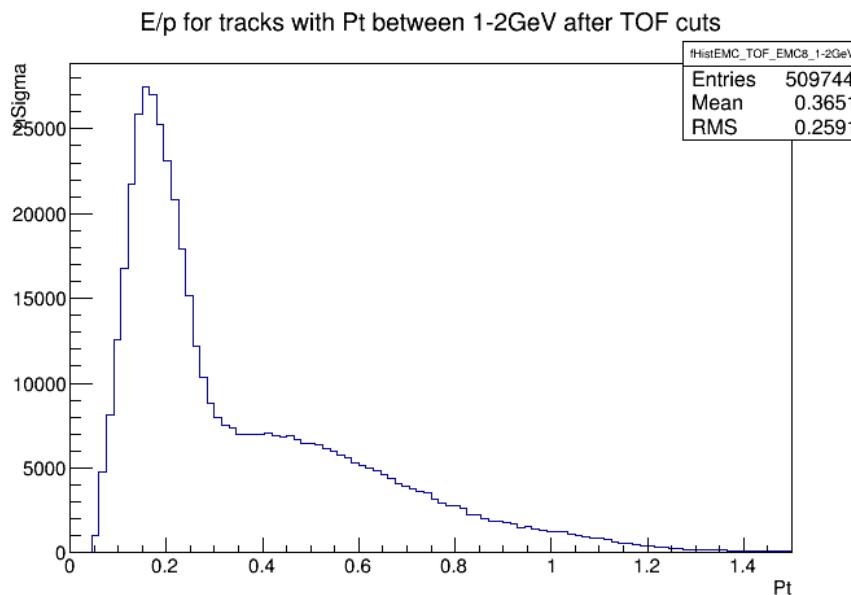
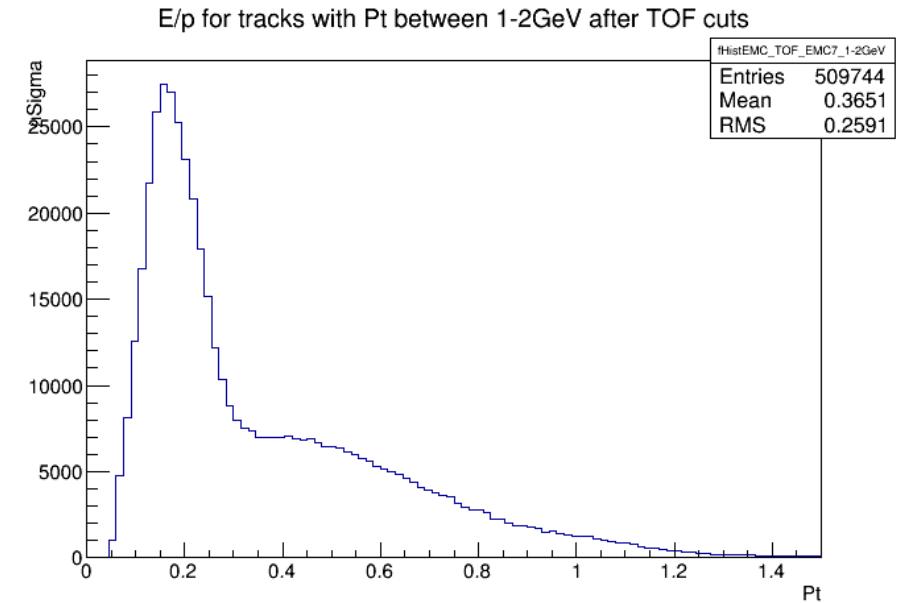
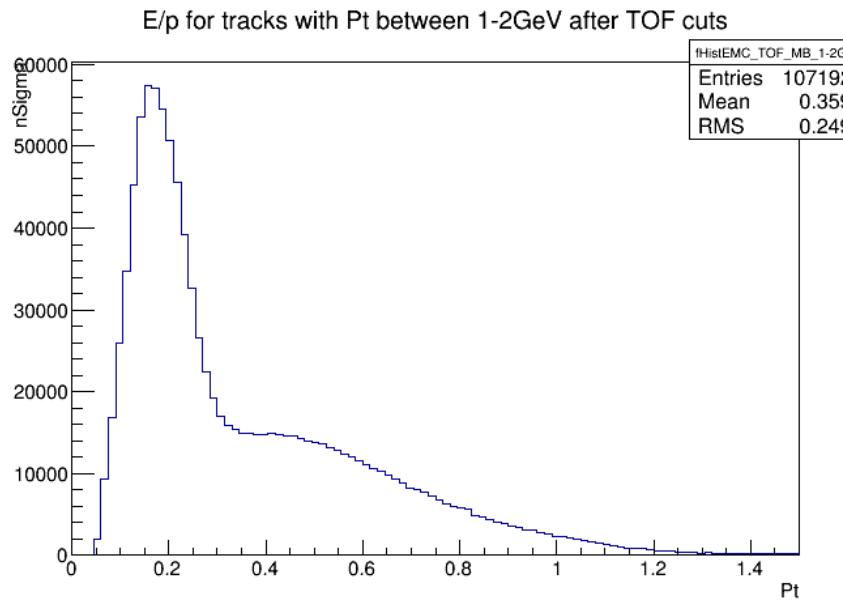
# E/p after 2Sig TPC cut

>6Gev



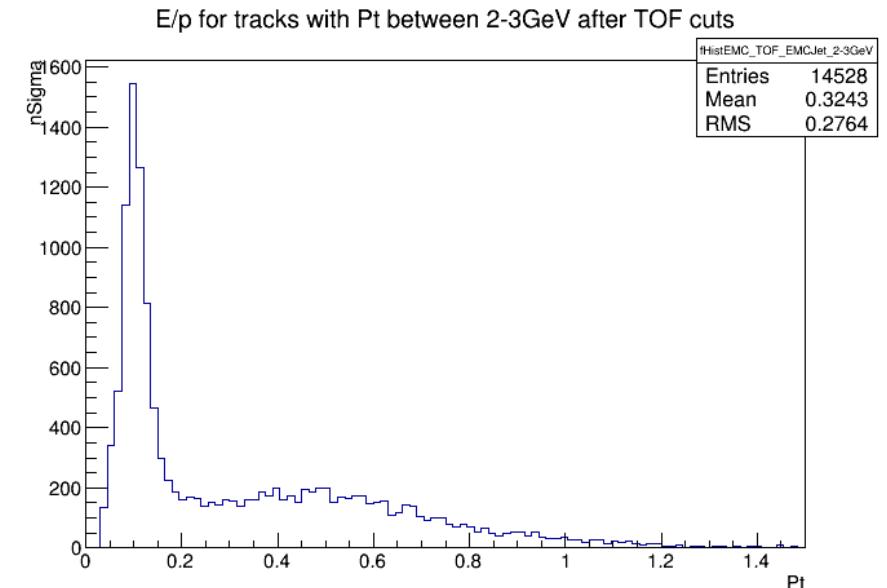
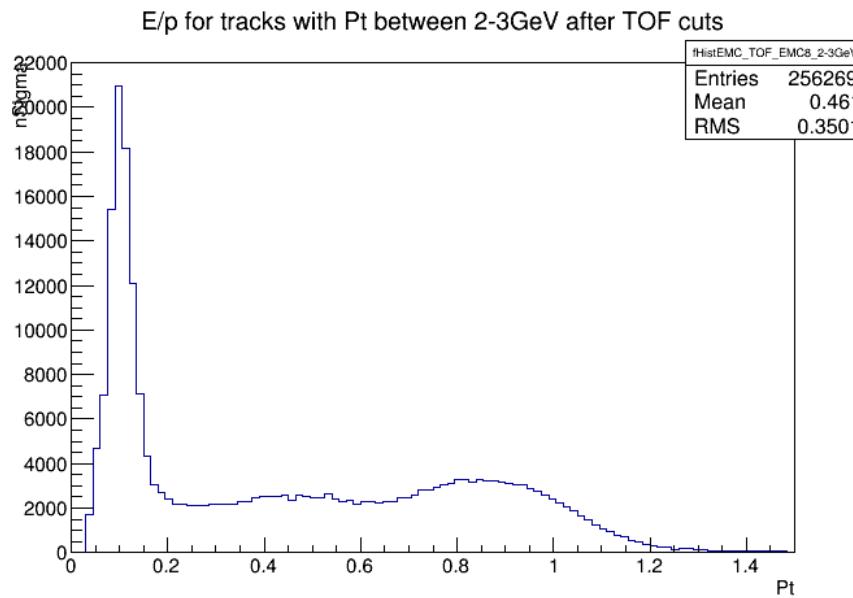
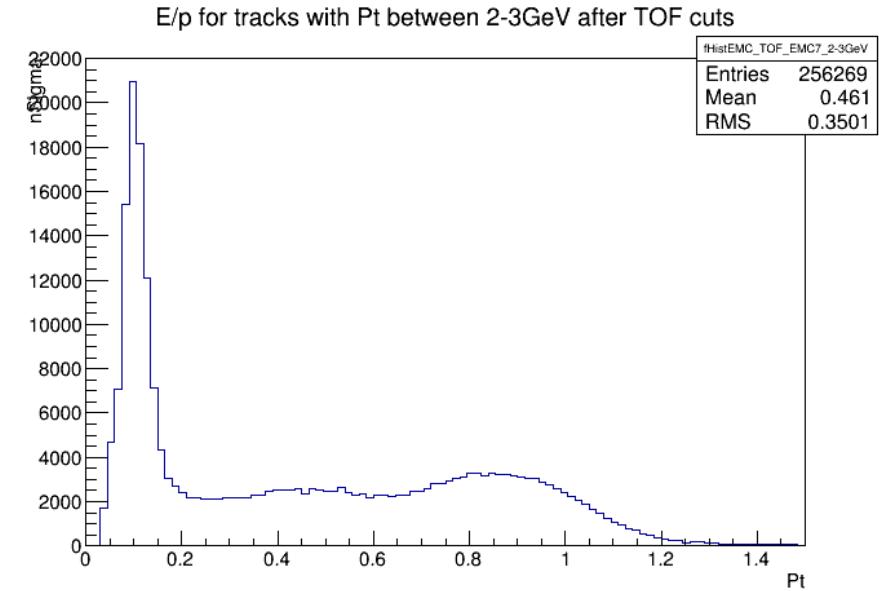
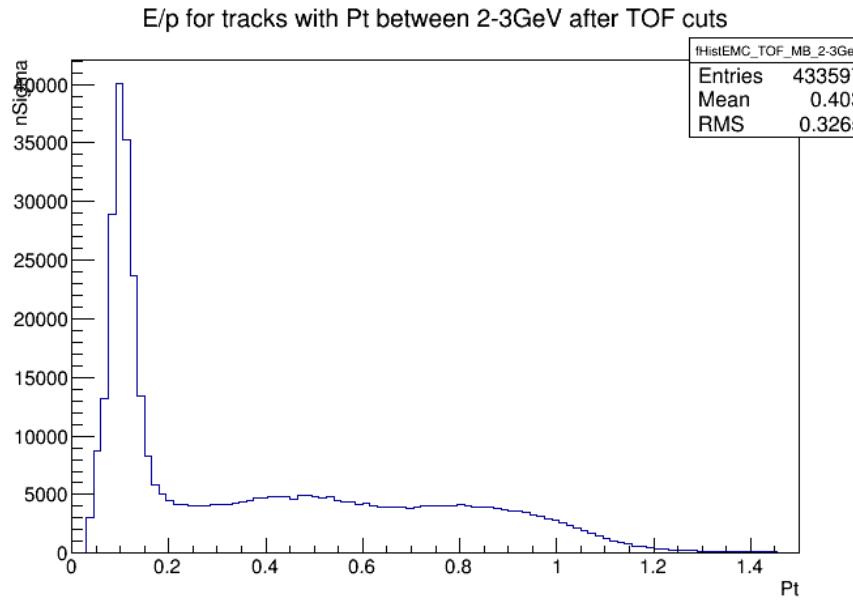
# E/p after 2Sig TOF Cut

## 1-2Gev



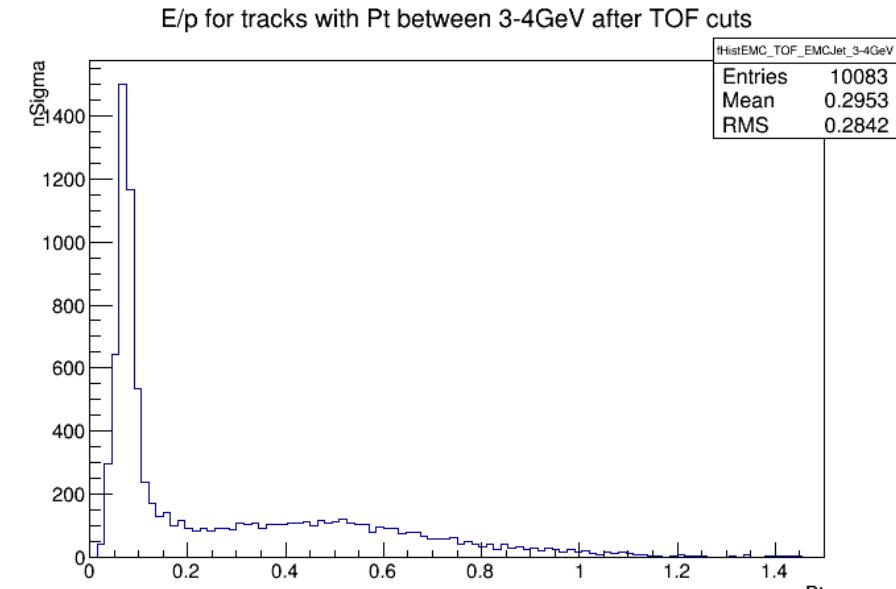
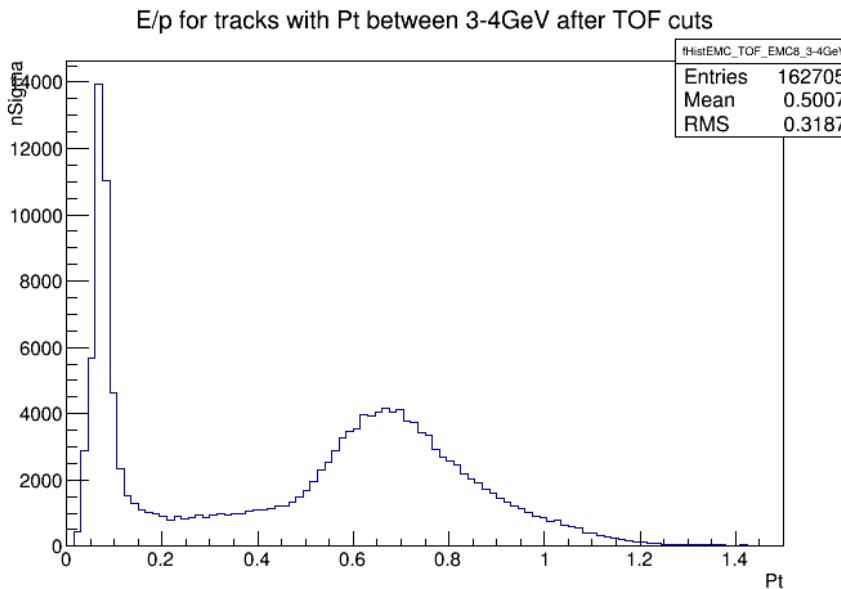
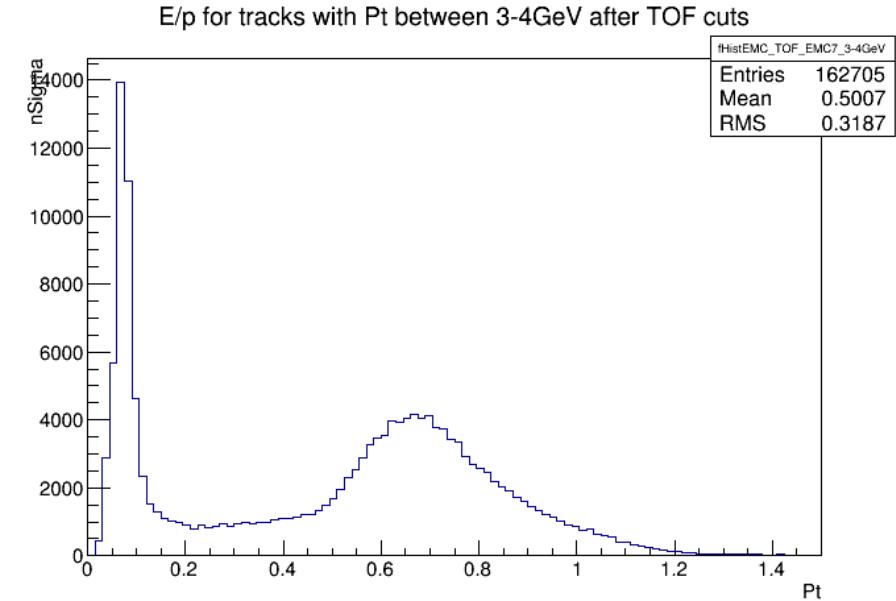
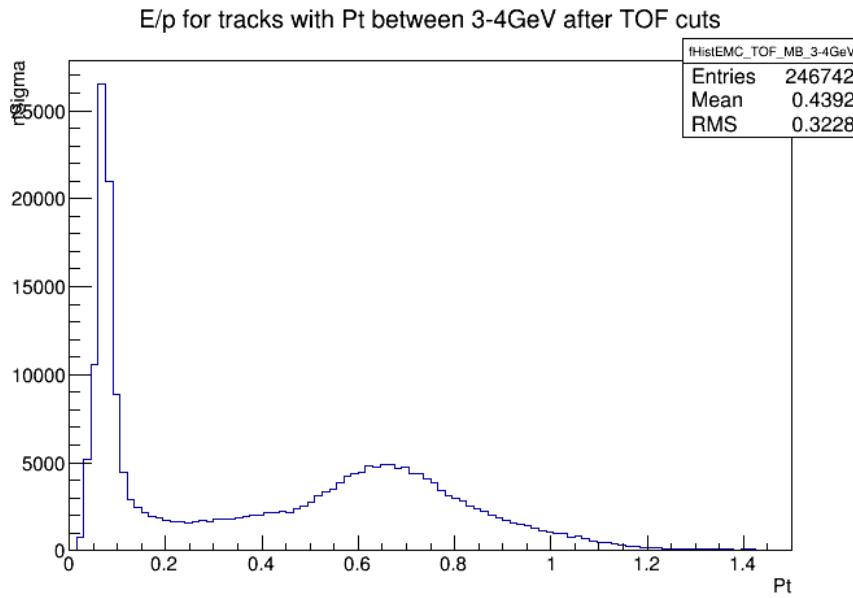
# E/p after 2Sig TOF cut

## 2-3Gev



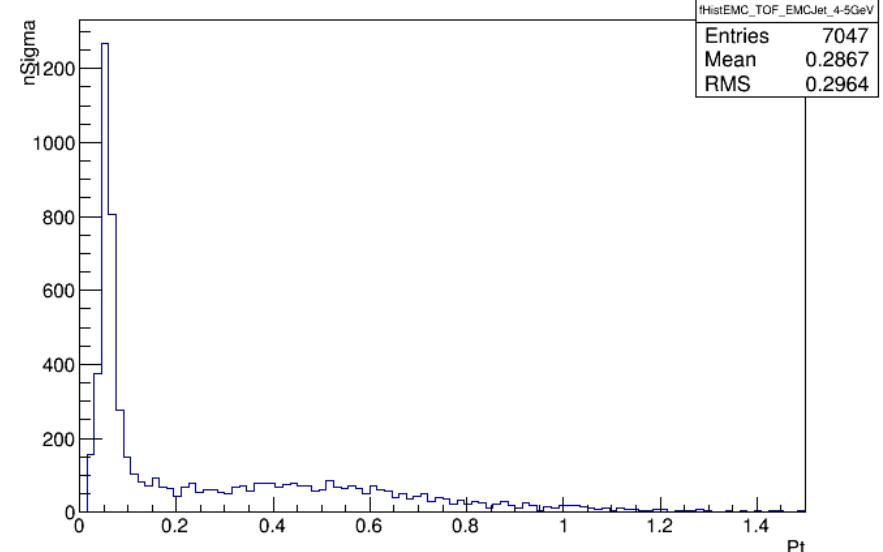
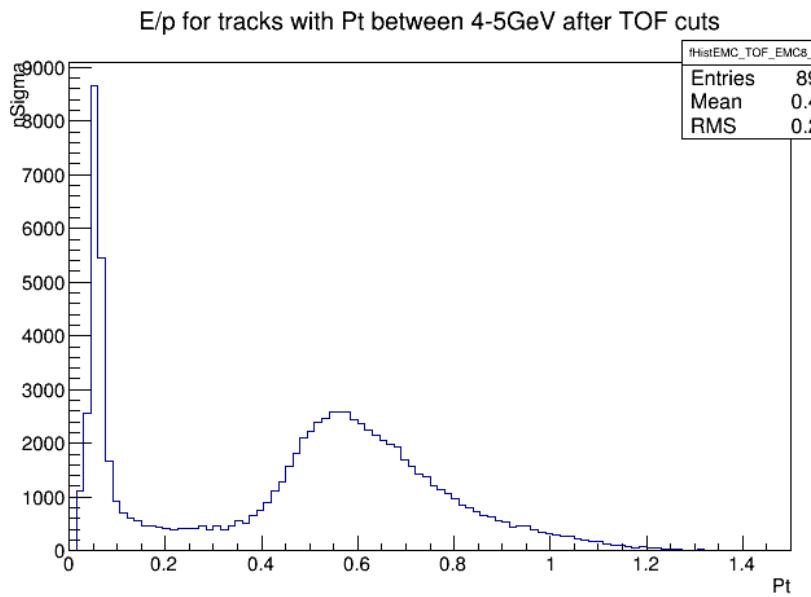
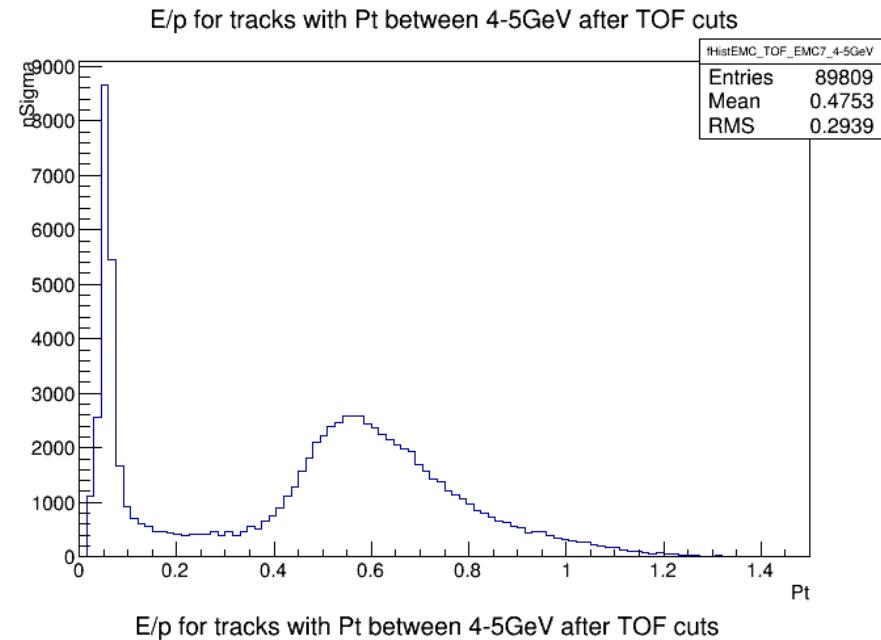
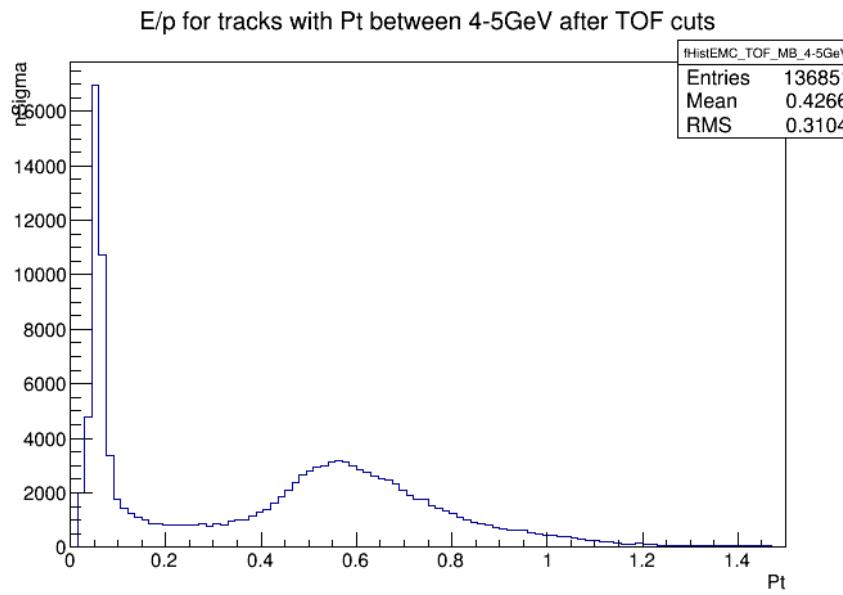
# E/p after 2Sig TOF cut

## 3-4Gev



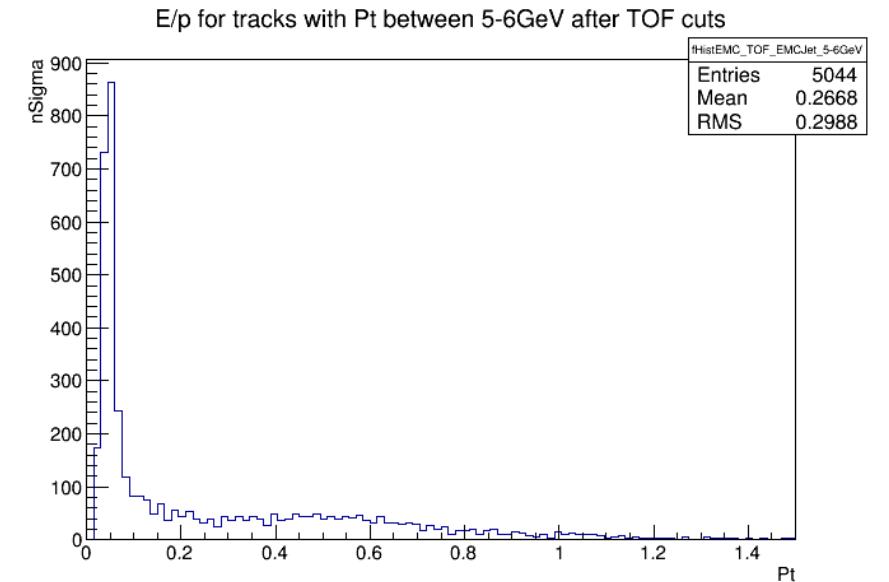
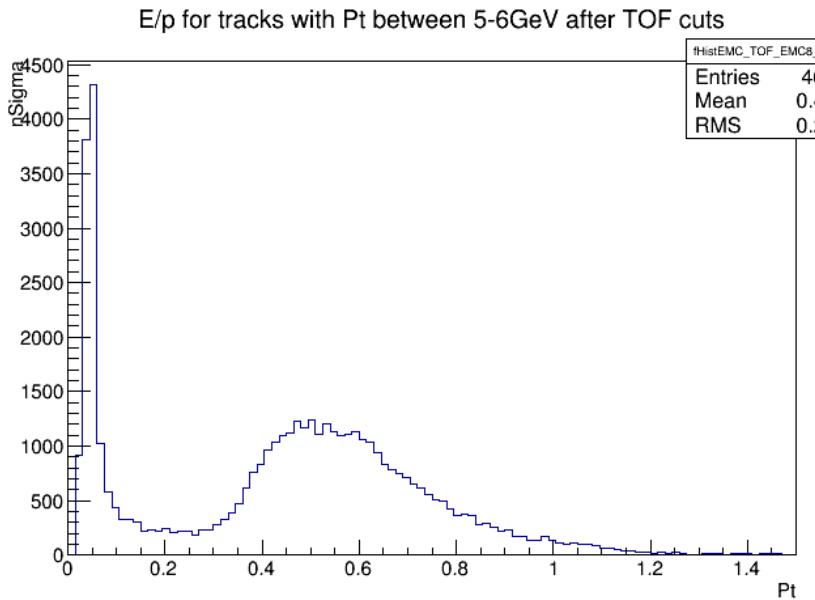
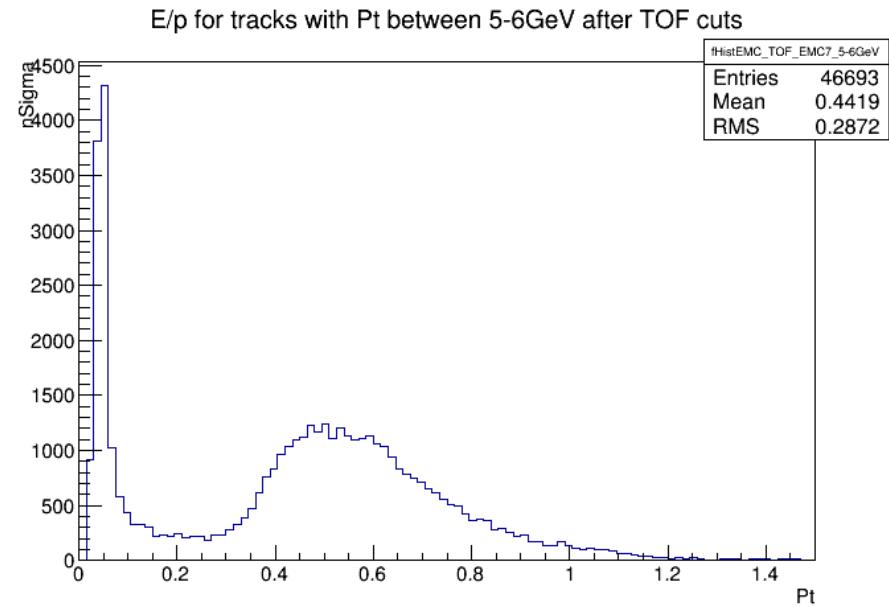
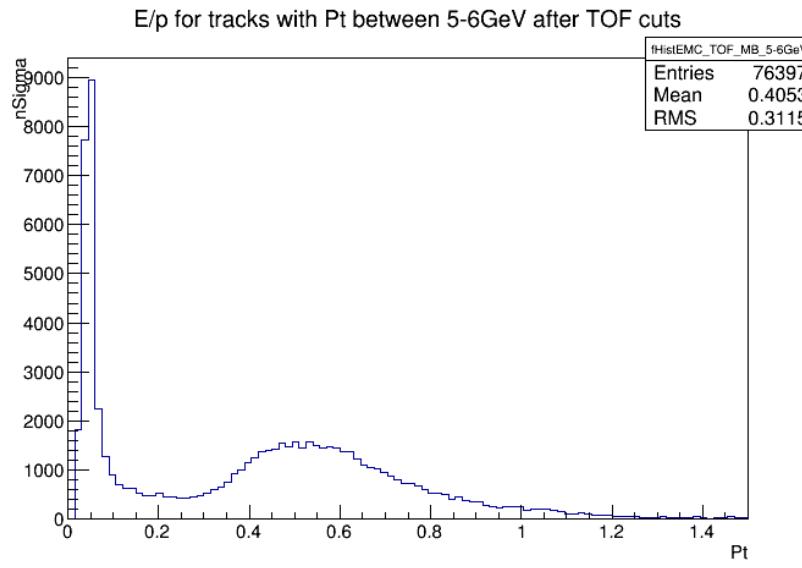
# E/p after 2Sig TOF cut

## 4-5Gev



# E/p after 2Sig TOF cut

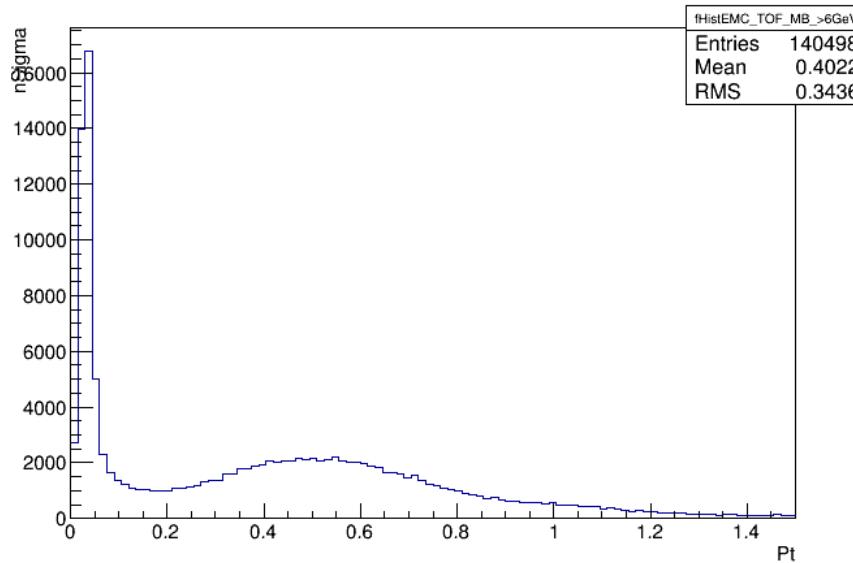
## 5-6Gev



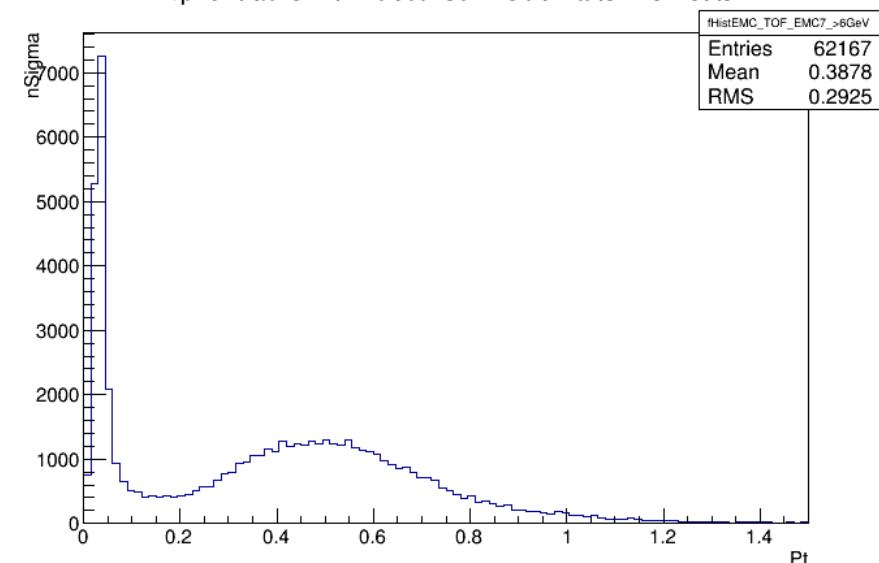
# E/p after 2Sig TOF cut

## >6Gev

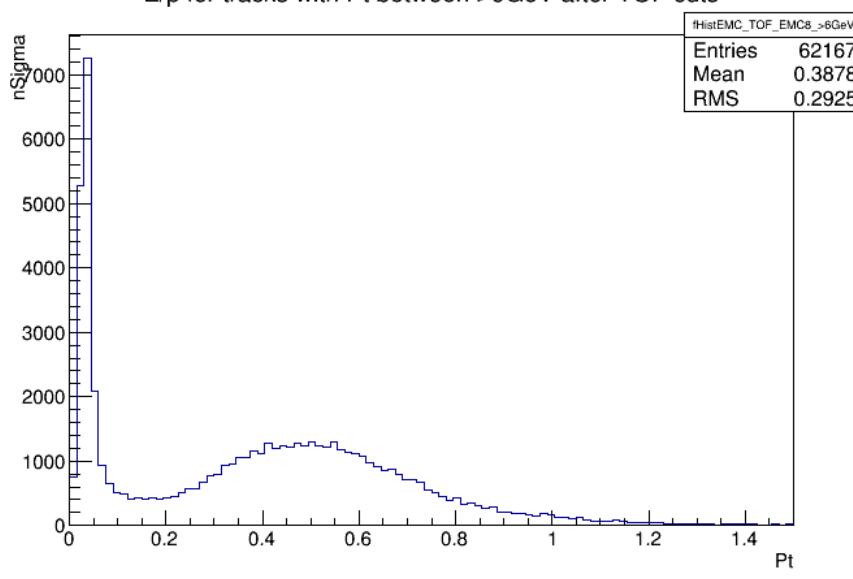
E/p for tracks with Pt between >6GeV after TOF cuts



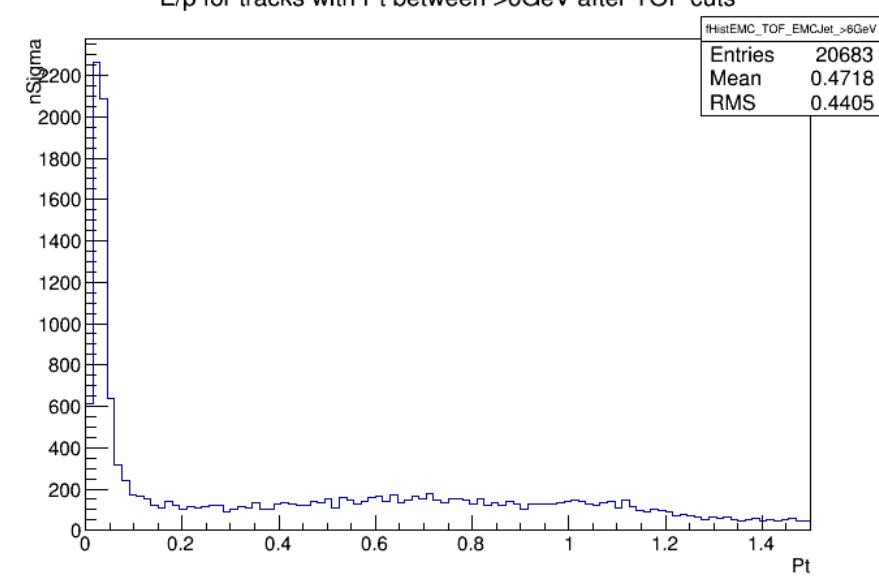
E/p for tracks with Pt between >6GeV after TOF cuts



E/p for tracks with Pt between >6GeV after TOF cuts



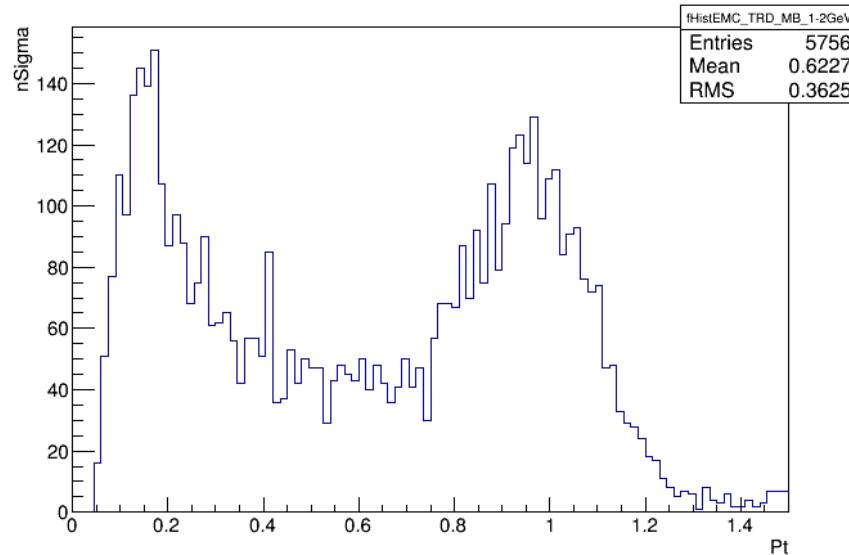
E/p for tracks with Pt between >6GeV after TOF cuts



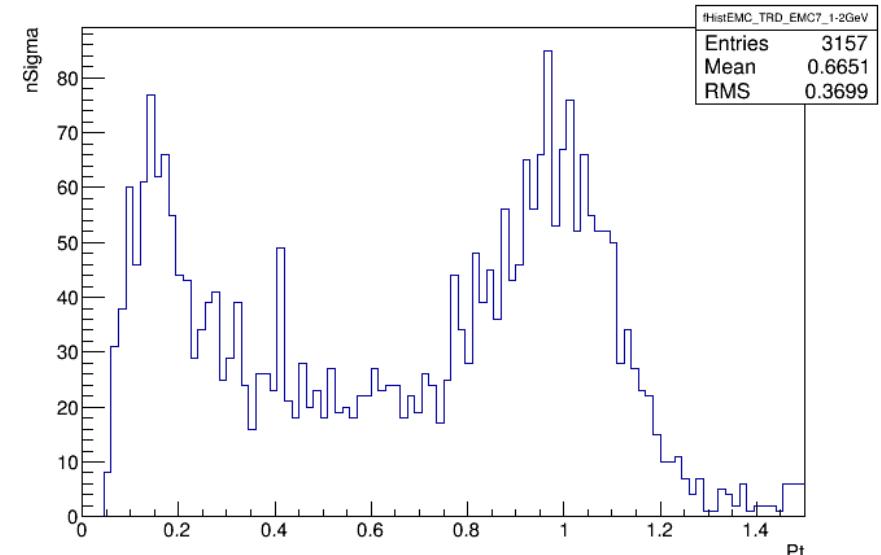
# E/p after >.9 TRD cut

## 1-2Gev

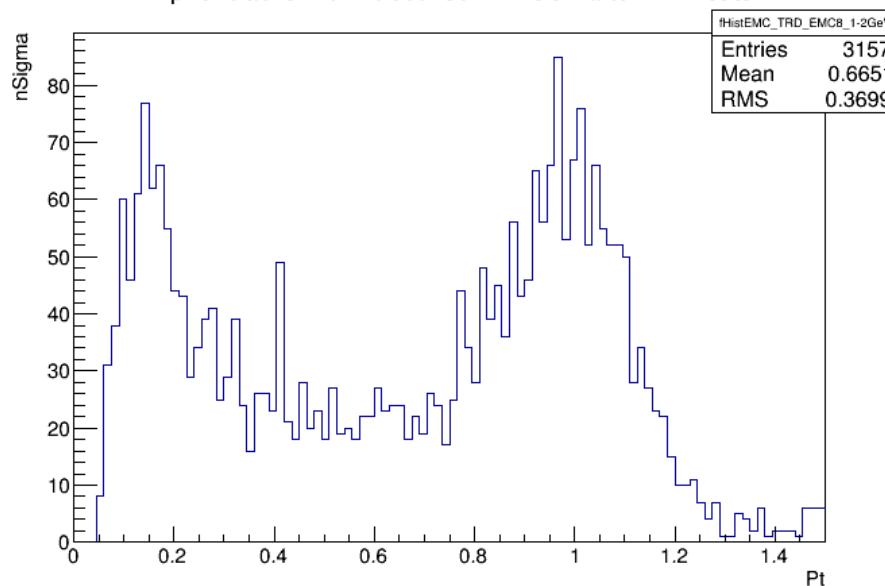
E/p for tracks with Pt between 1-2GeV after TRD cuts



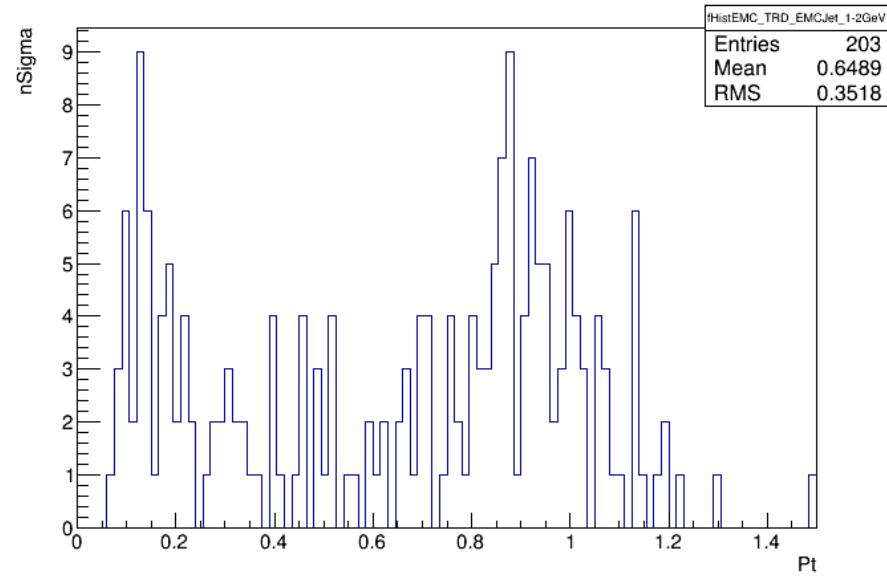
E/p for tracks with Pt between 1-2GeV after TRD cuts



E/p for tracks with Pt between 1-2GeV after TRD cuts

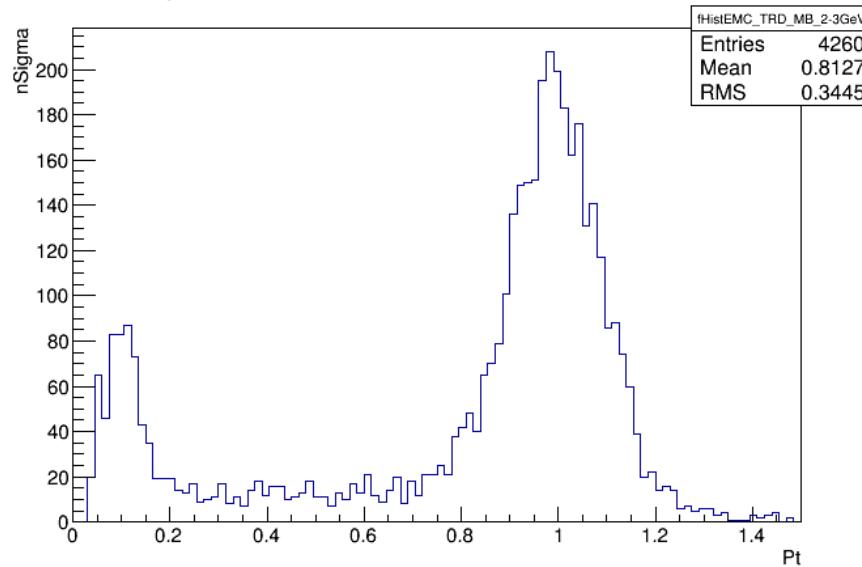


E/p for tracks with Pt between 1-2GeV after TRD cuts

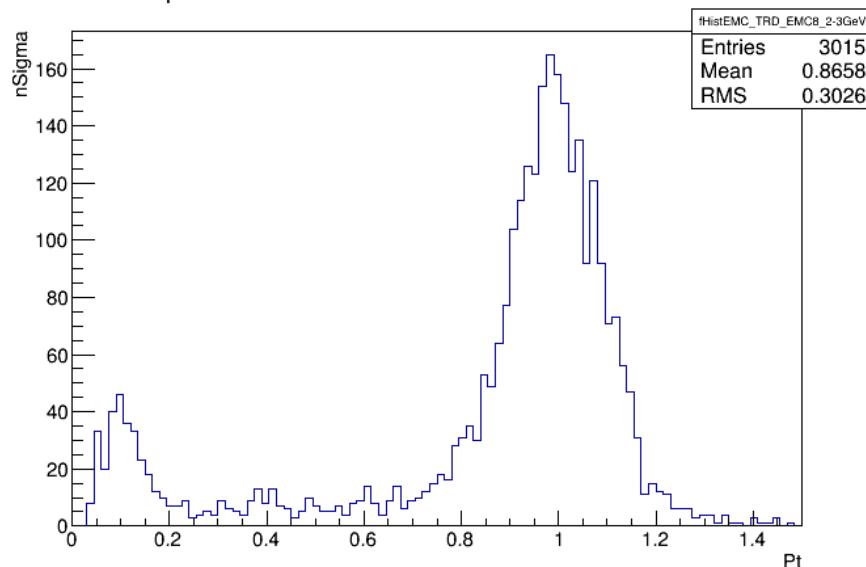


# 2-3Gev E/p after >.9 TRD cut

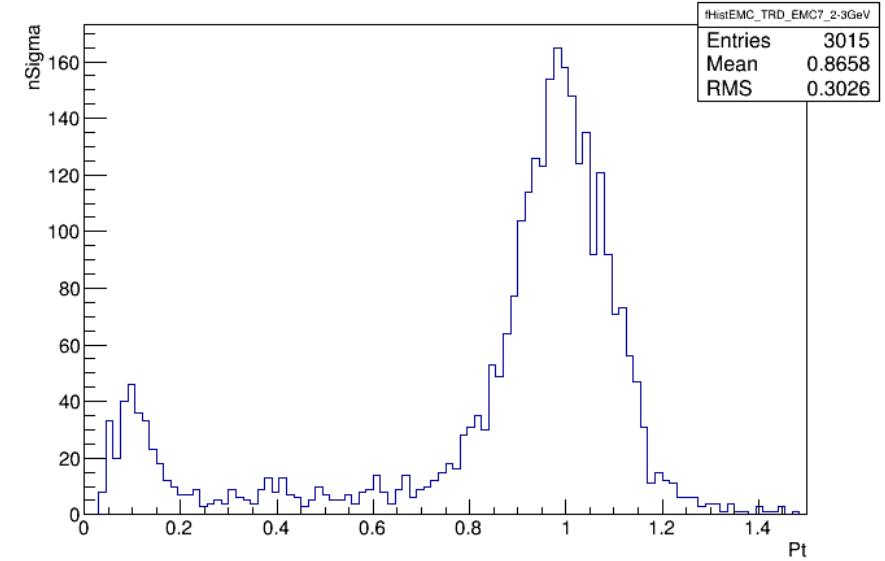
E/p for tracks with Pt between 2-3GeV after TRD cuts



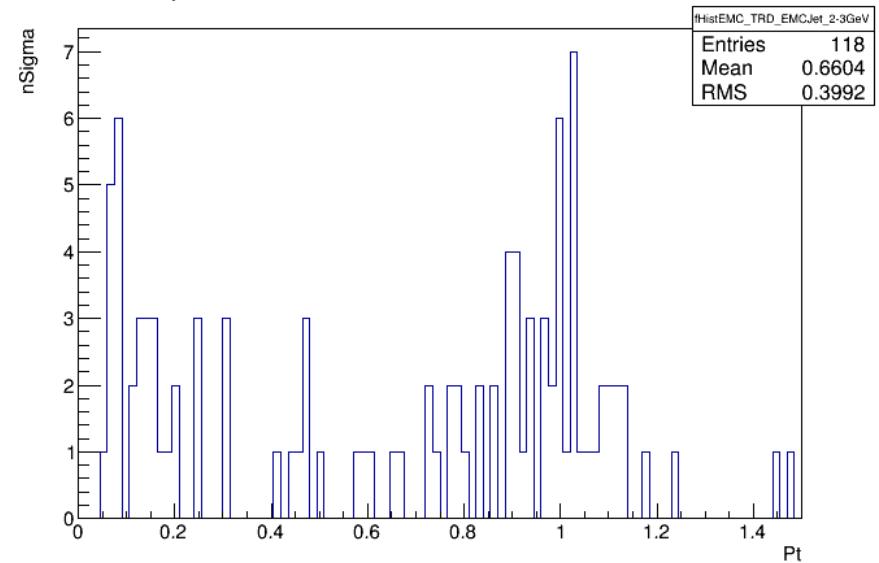
E/p for tracks with Pt between 2-3GeV after TRD cuts



E/p for tracks with Pt between 2-3GeV after TRD cuts



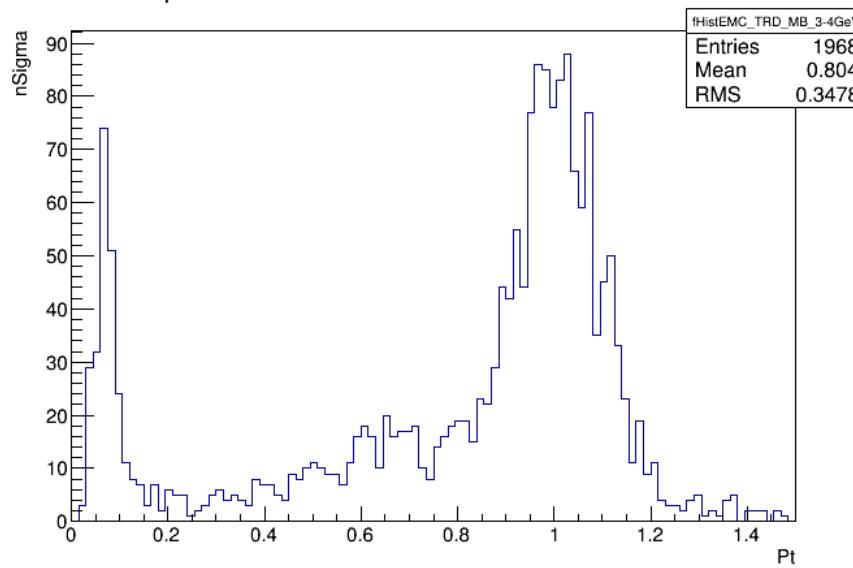
E/p for tracks with Pt between 2-3GeV after TRD cuts



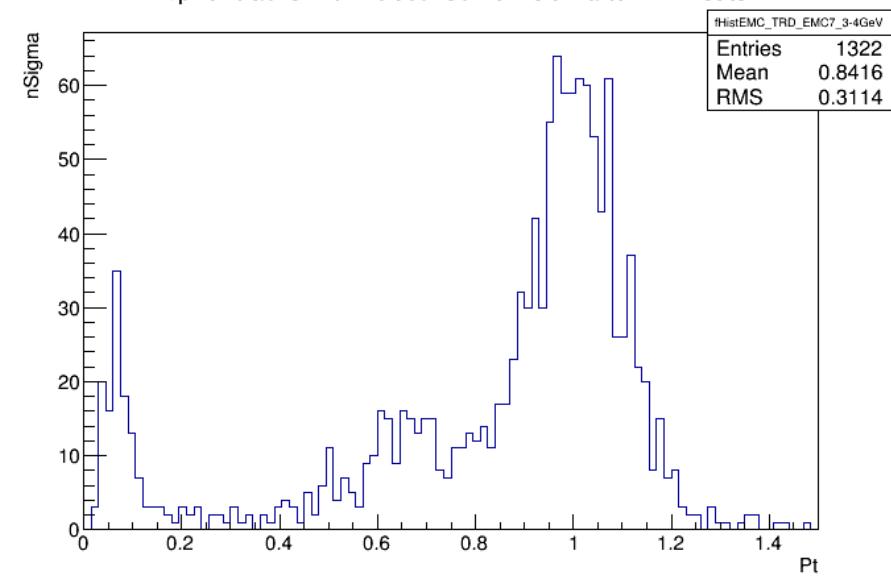
# E/p after >.9 TRD cut

## 3-4Gev

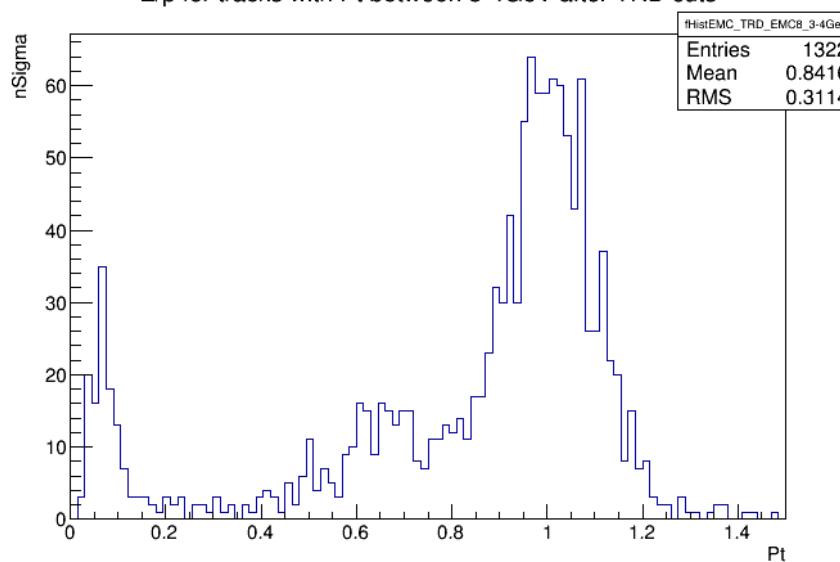
E/p for tracks with Pt between 3-4GeV after TRD cuts



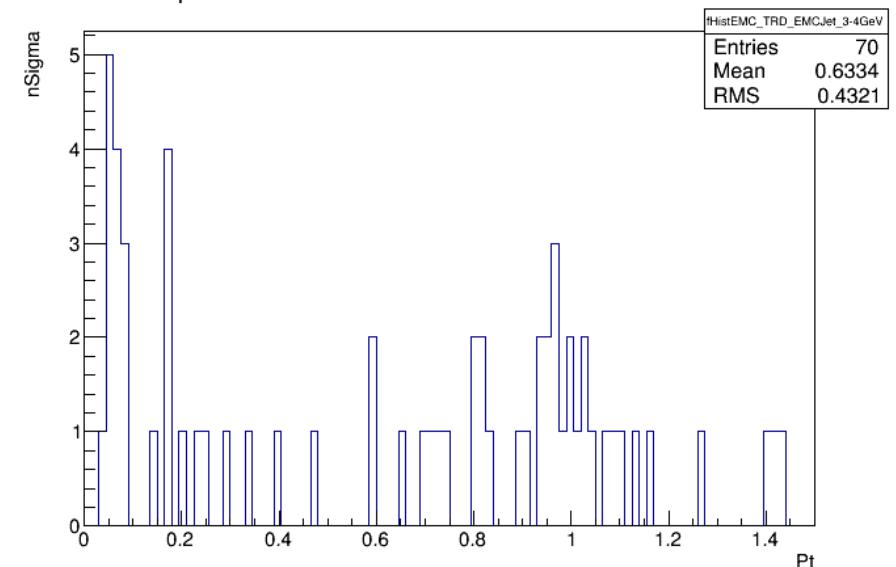
E/p for tracks with Pt between 3-4GeV after TRD cuts



E/p for tracks with Pt between 3-4GeV after TRD cuts



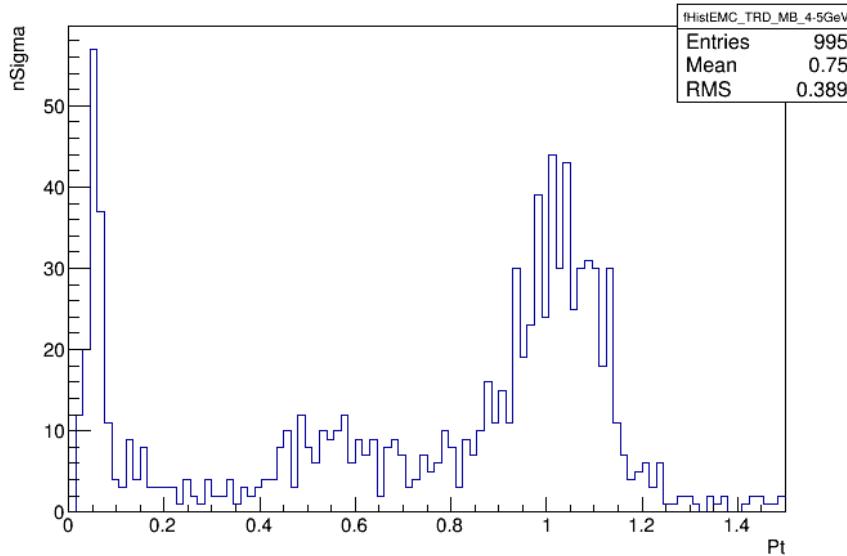
E/p for tracks with Pt between 3-4GeV after TRD cuts



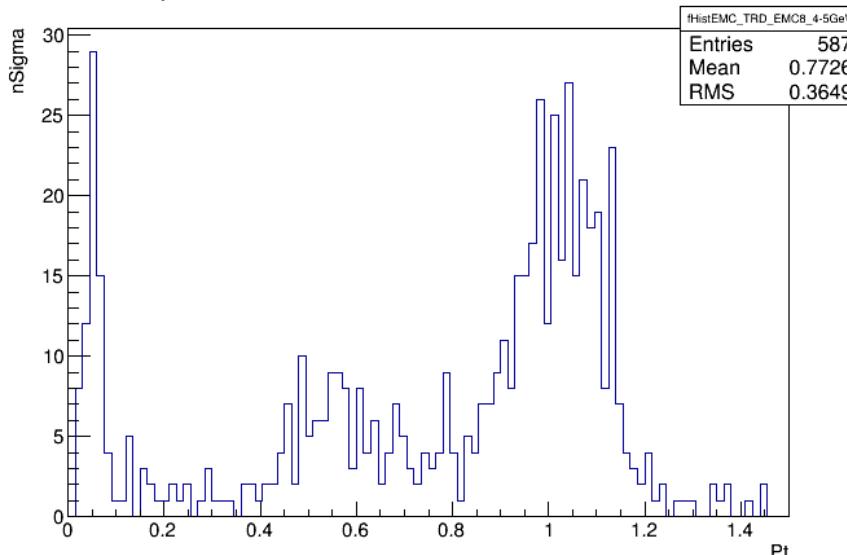
# E/p after >.9 TRD cut

## 4-5Gev

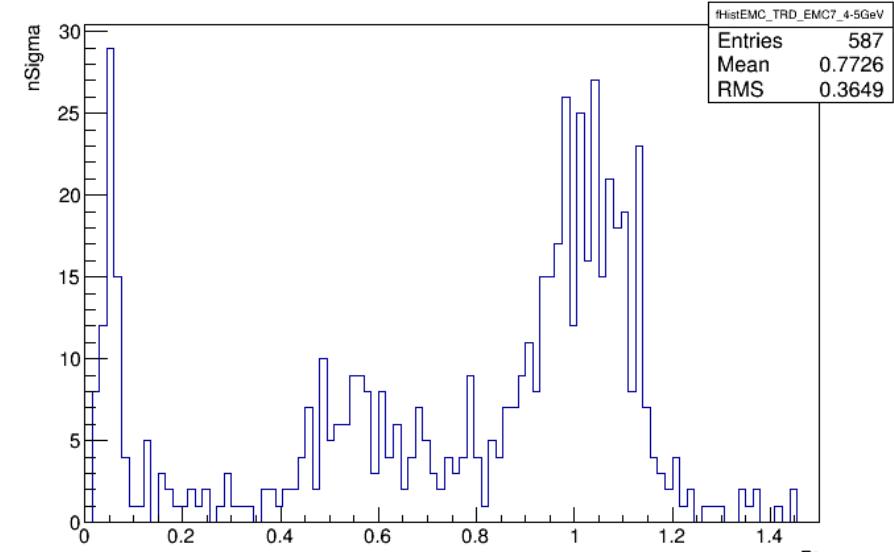
E/p for tracks with Pt between 4-5GeV after TRD cuts



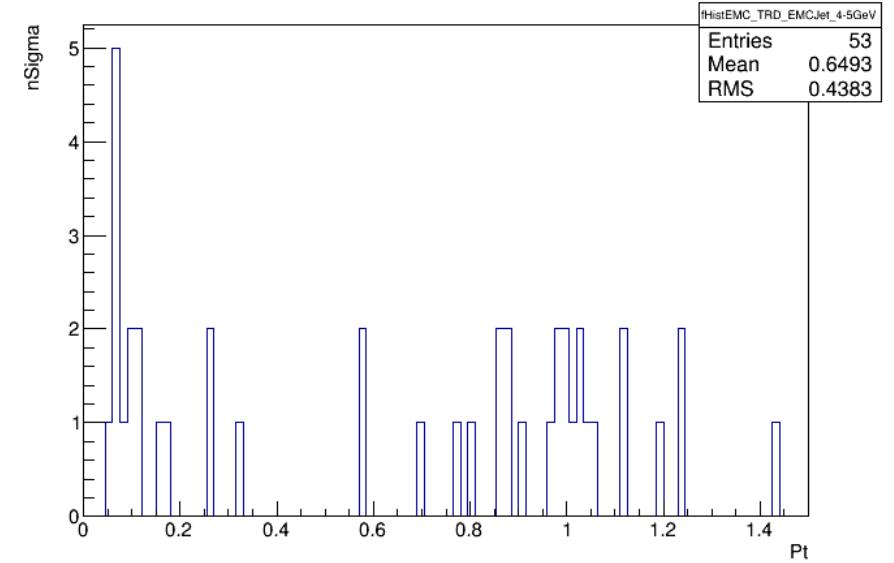
E/p for tracks with Pt between 4-5GeV after TRD cuts



E/p for tracks with Pt between 4-5GeV after TRD cuts

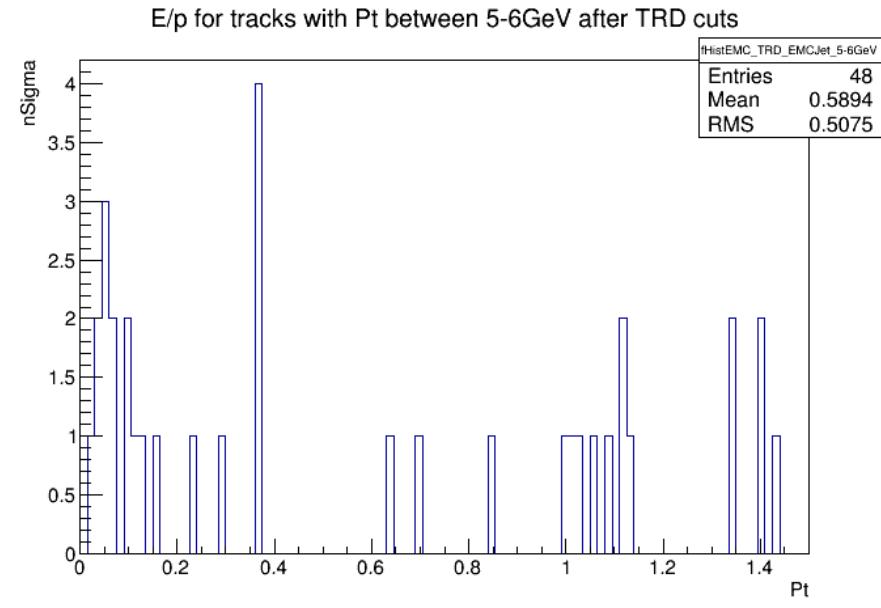
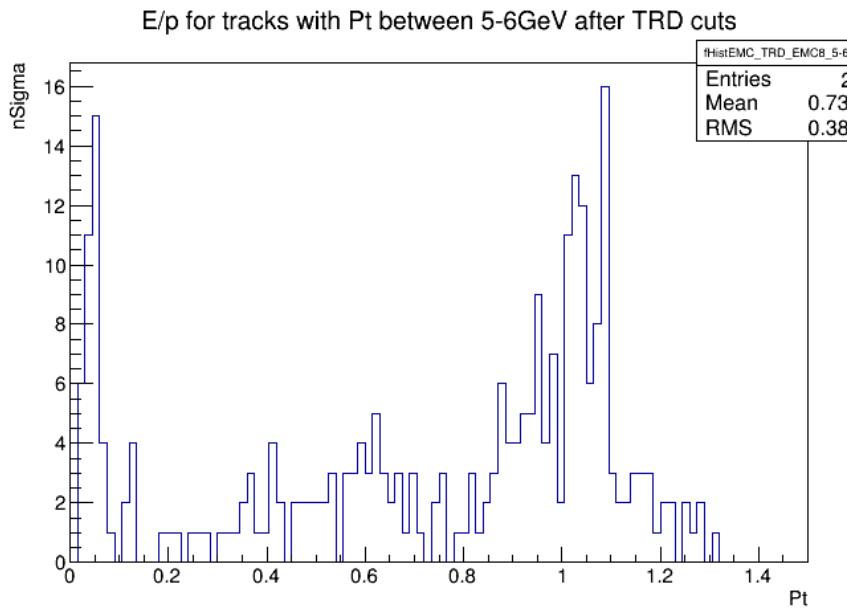
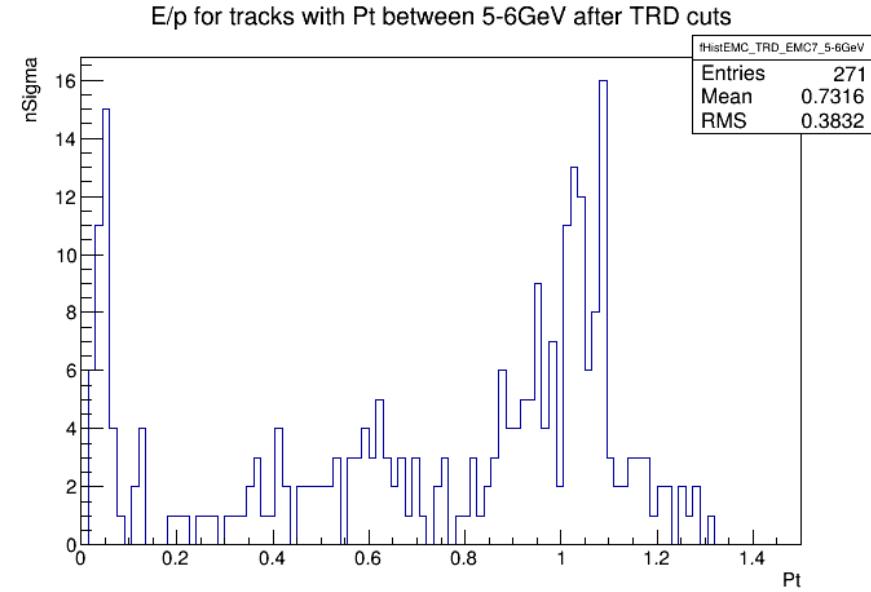
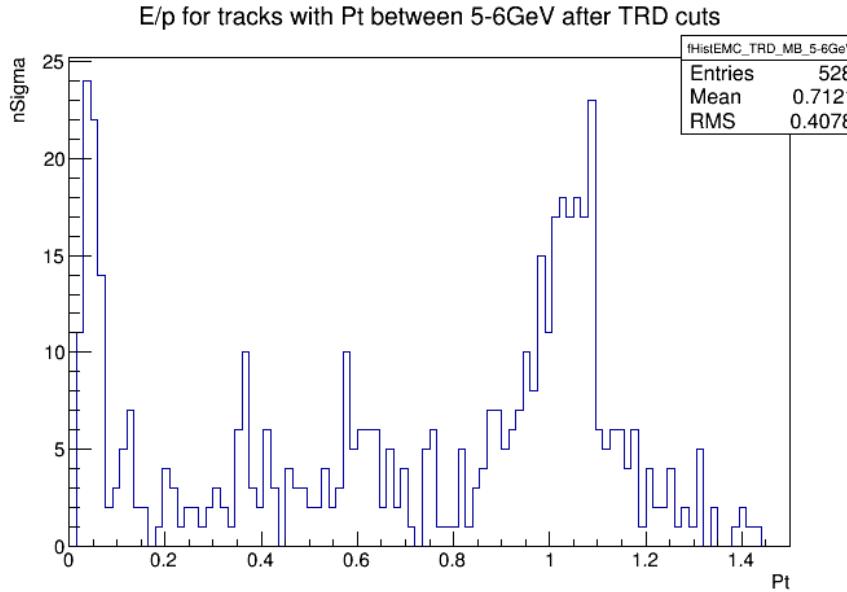


E/p for tracks with Pt between 4-5GeV after TRD cuts



# E/p after >.9 TRD cut

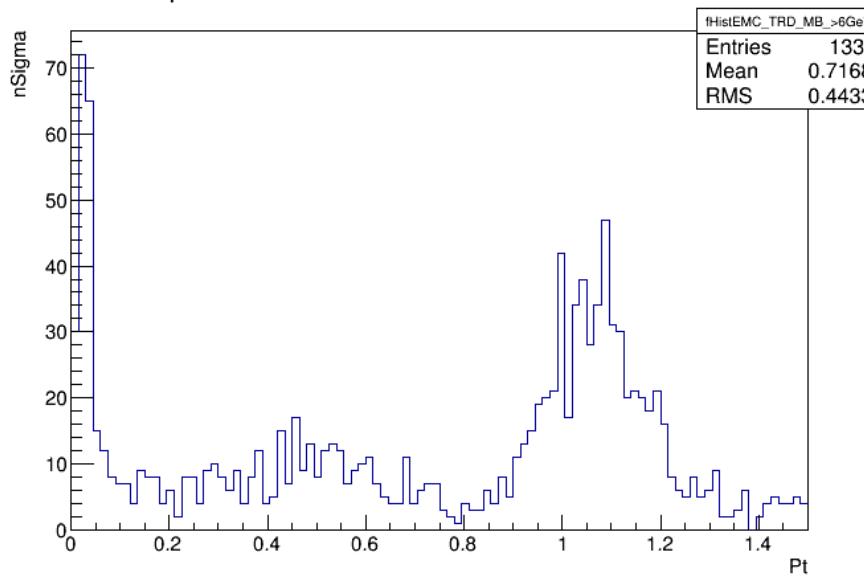
## 5-6Gev



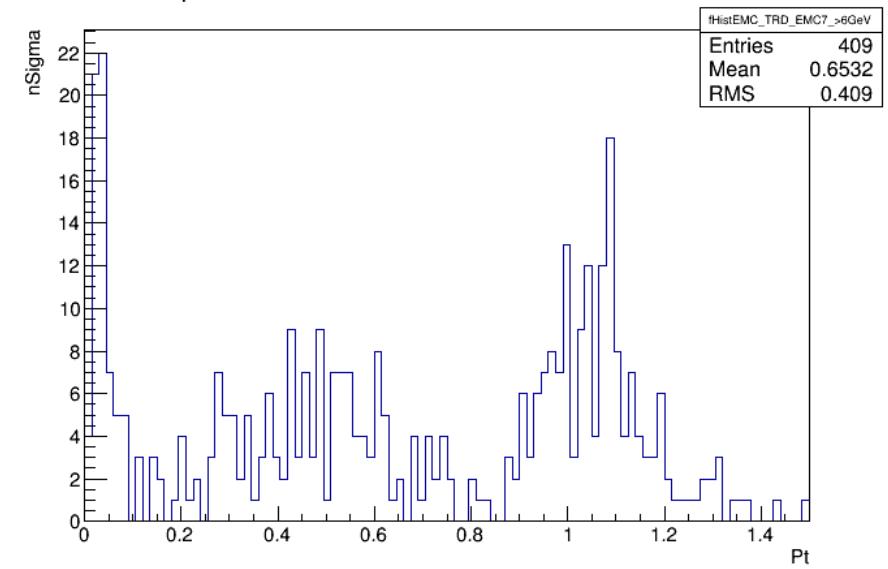
# E/p after >.9 TRD cut

## >6Gev

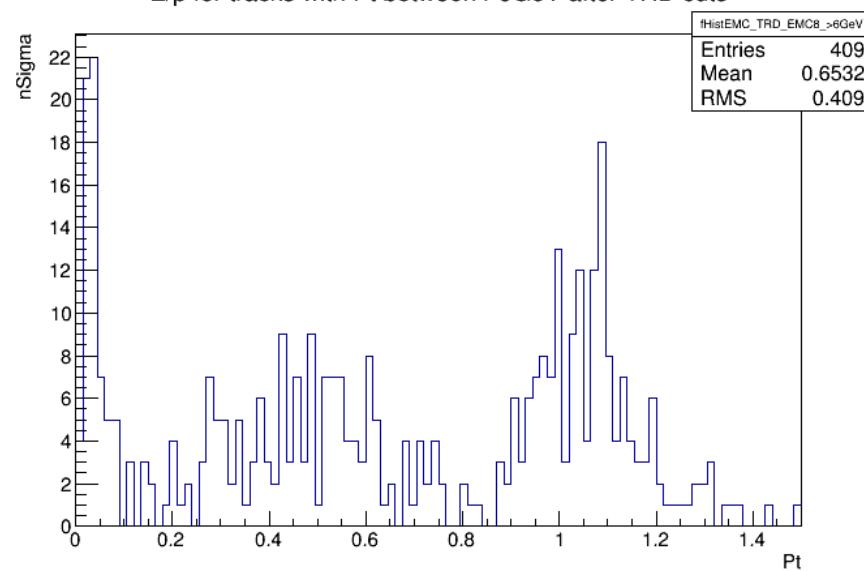
E/p for tracks with Pt between >6GeV after TRD cuts



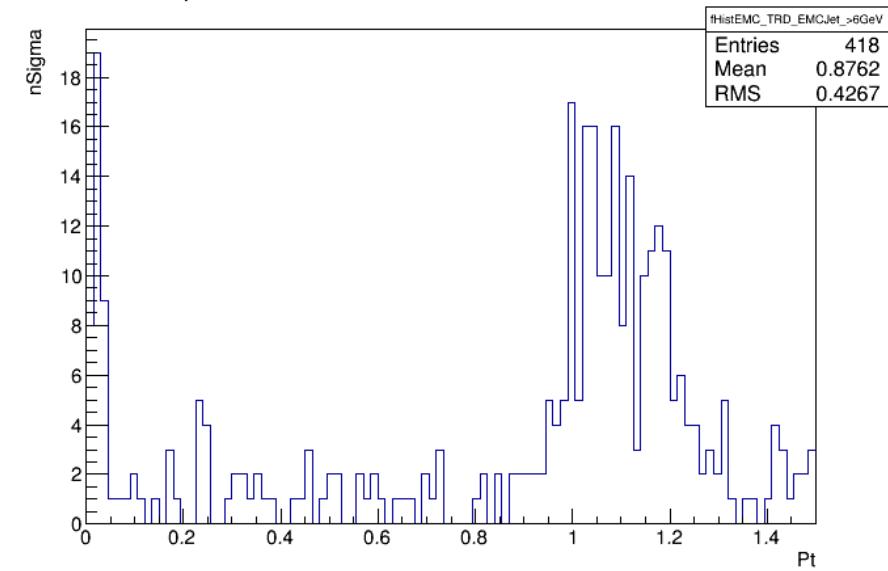
E/p for tracks with Pt between >6GeV after TRD cuts



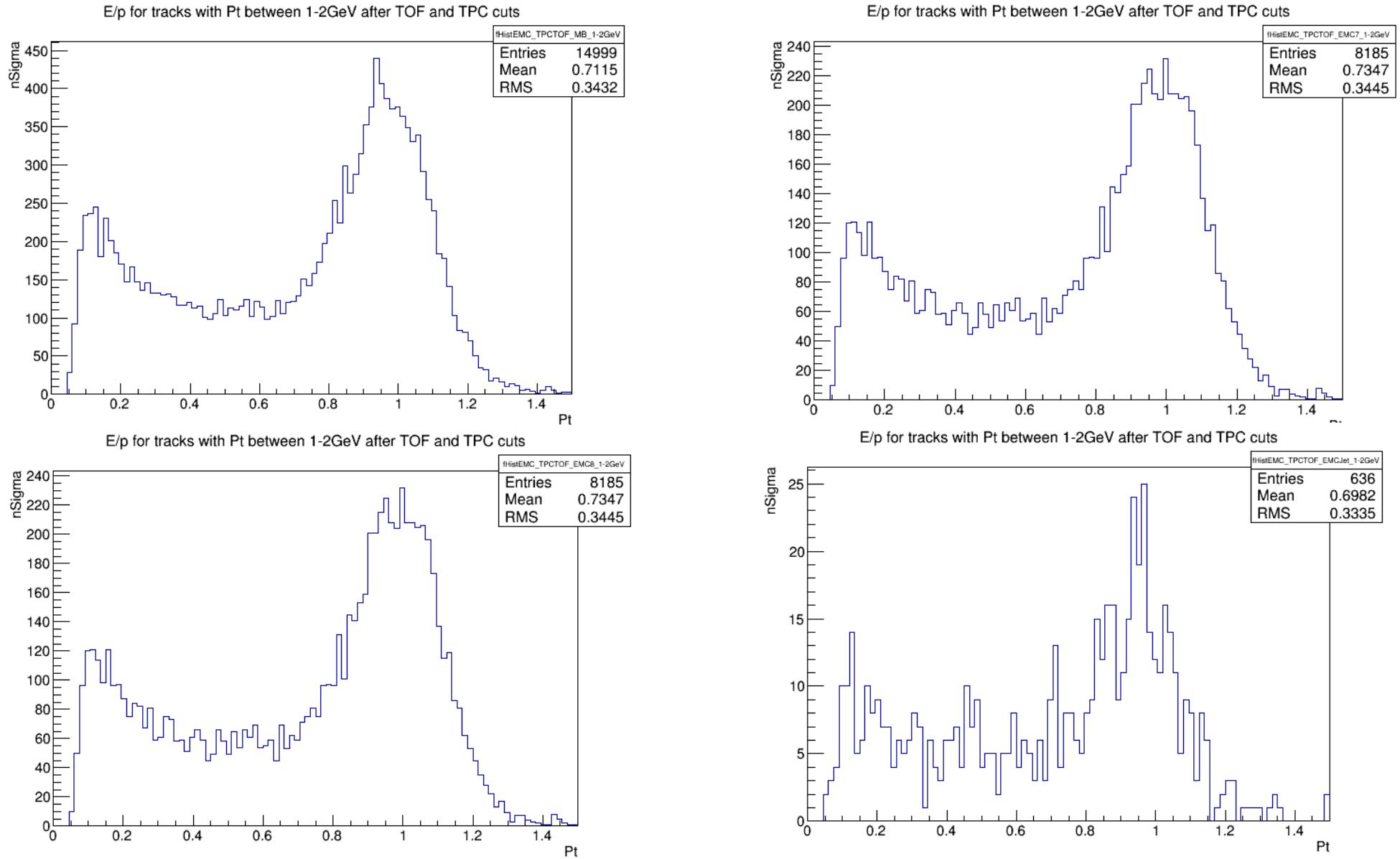
E/p for tracks with Pt between >6GeV after TRD cuts



E/p for tracks with Pt between >6GeV after TRD cuts



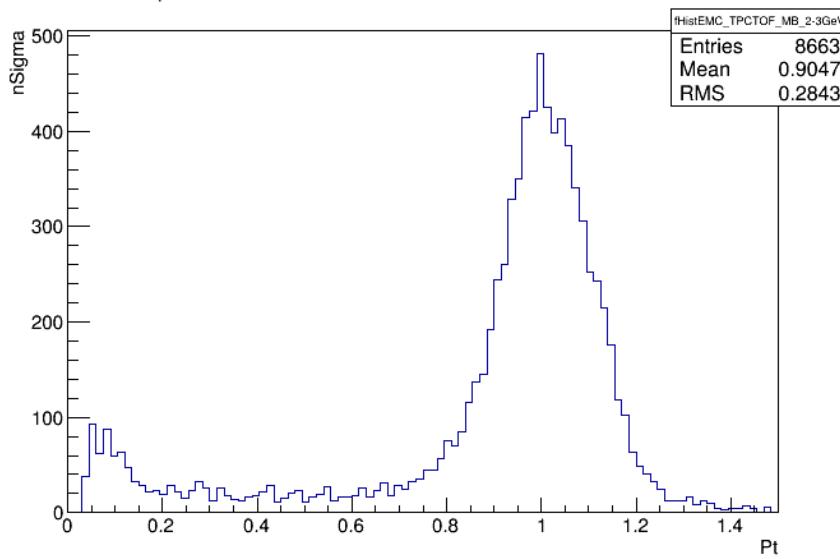
# E/p after 2Sig TPC Cut and 2Sig 1-2Gev TOF cut



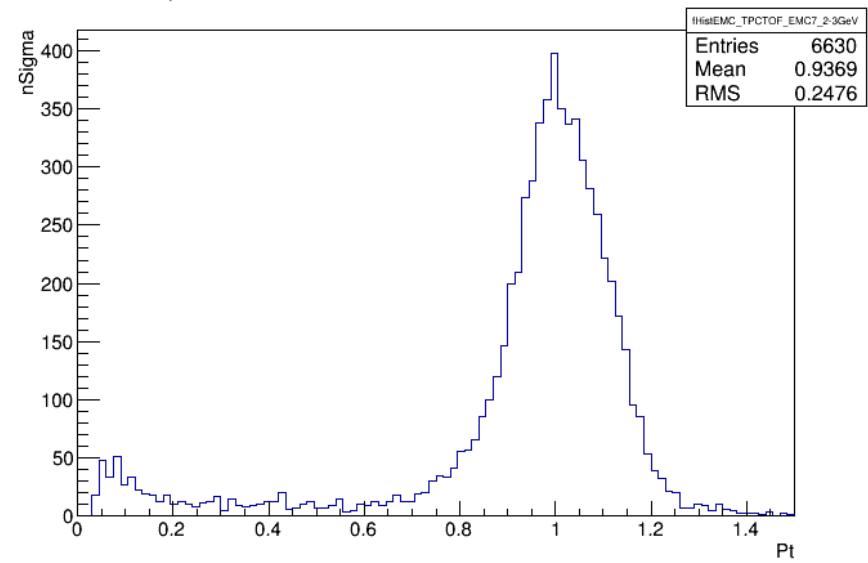
# E/p after 2Sig TPC cut and 2Sig TOF cut

## 2-3Gev

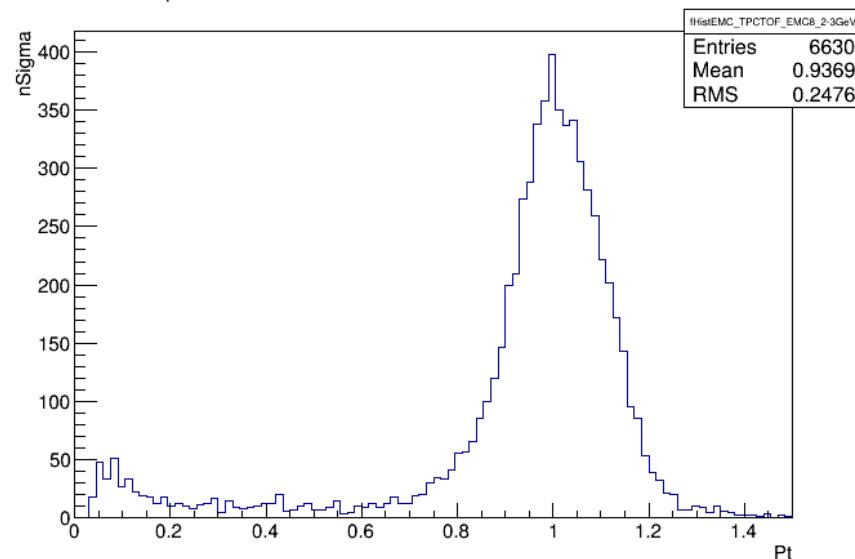
E/p for tracks with Pt between 2-3GeV after TOF and TPC cuts



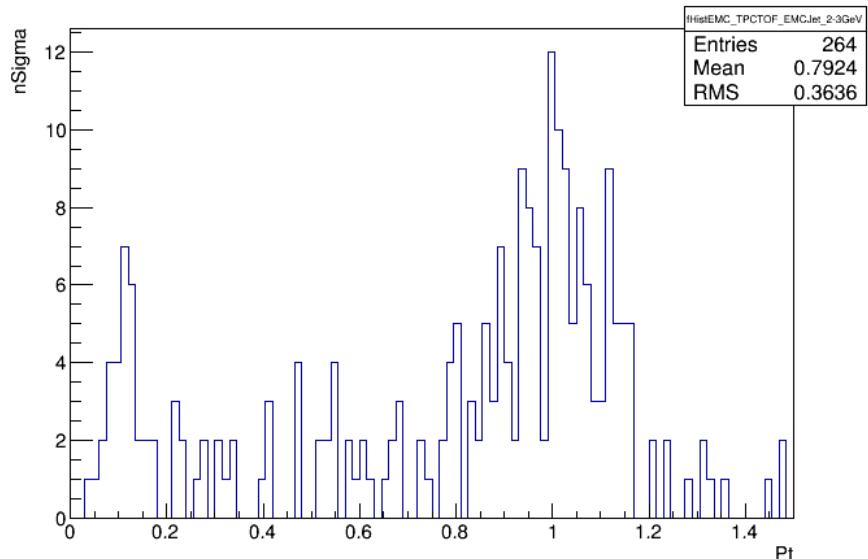
E/p for tracks with Pt between 2-3GeV after TOF and TPC cuts



E/p for tracks with Pt between 2-3GeV after TOF and TPC cuts

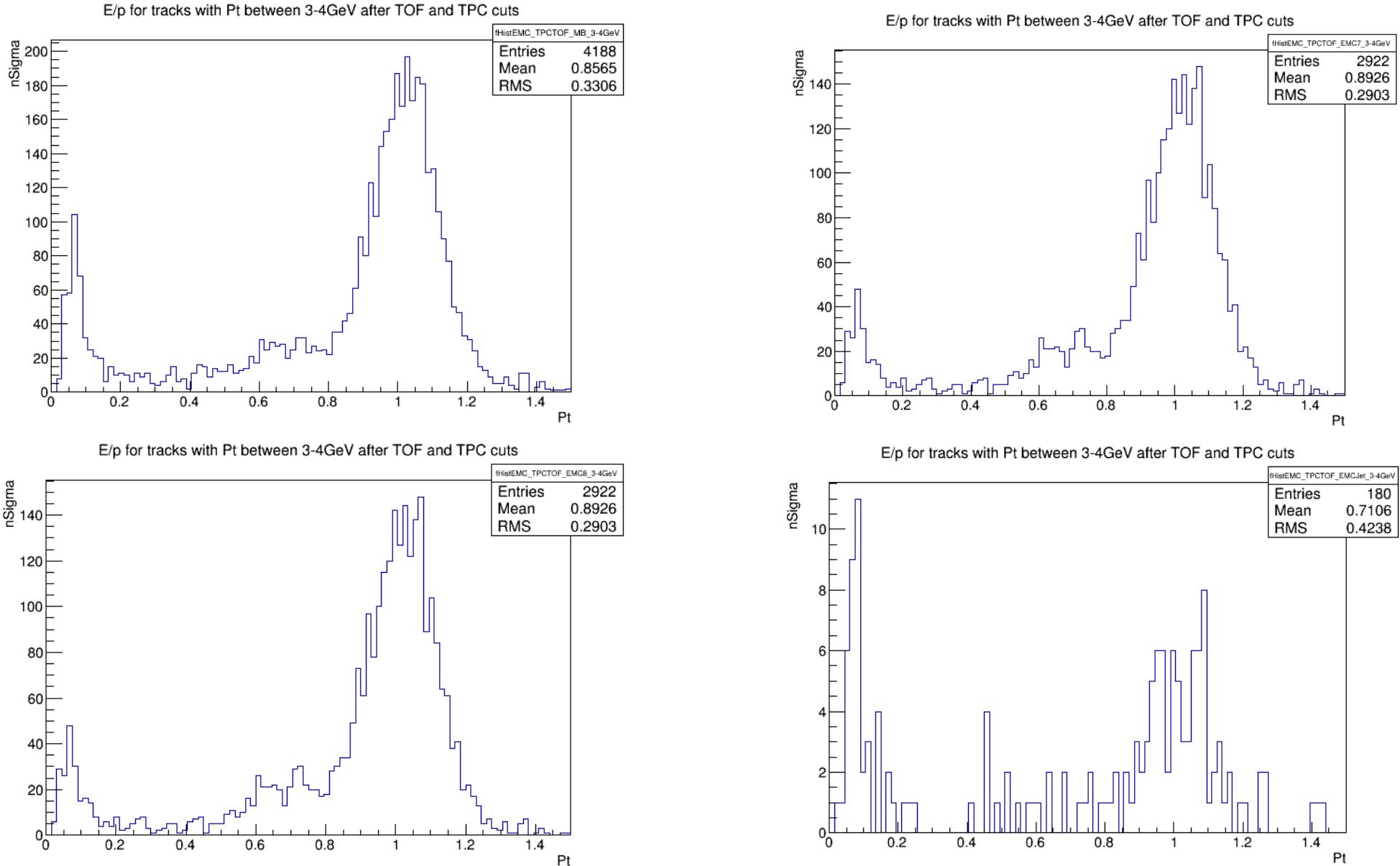


E/p for tracks with Pt between 2-3GeV after TOF and TPC cuts



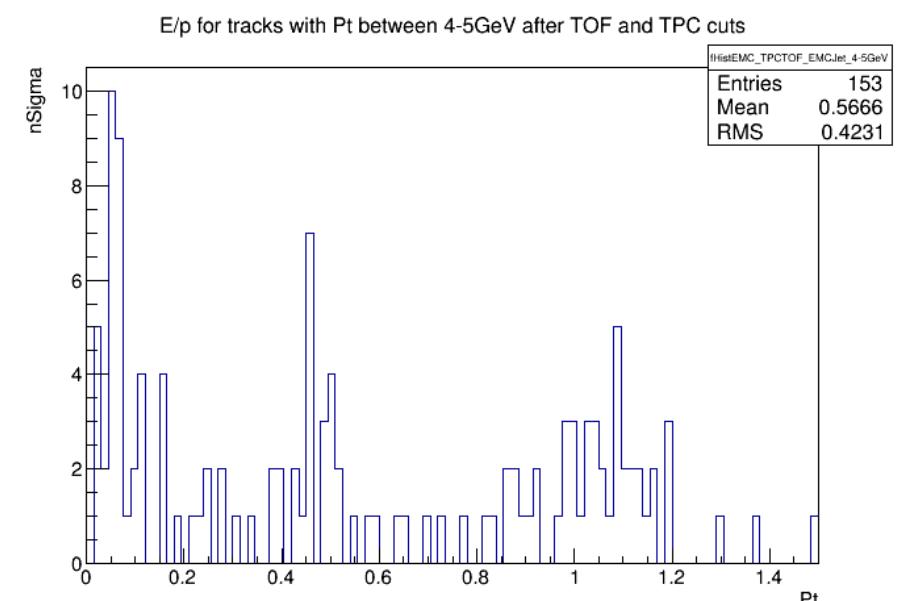
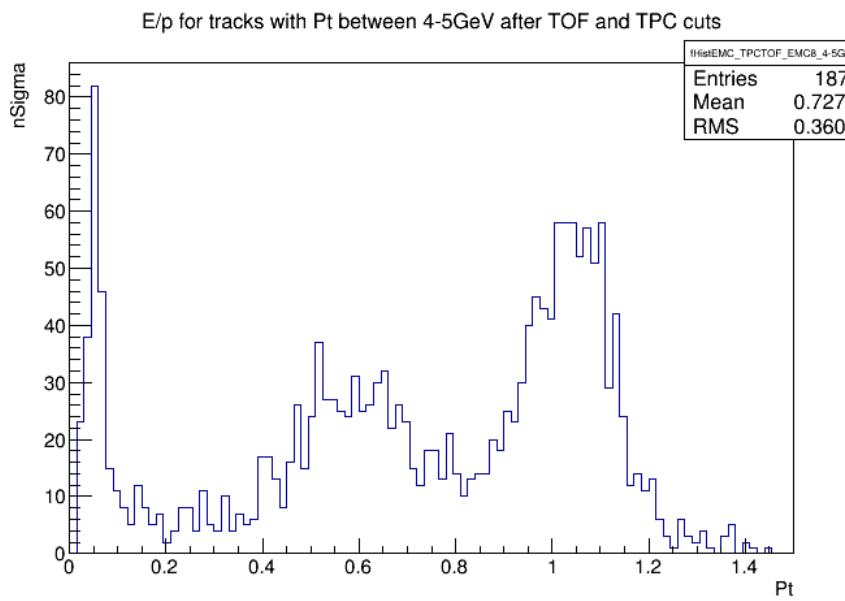
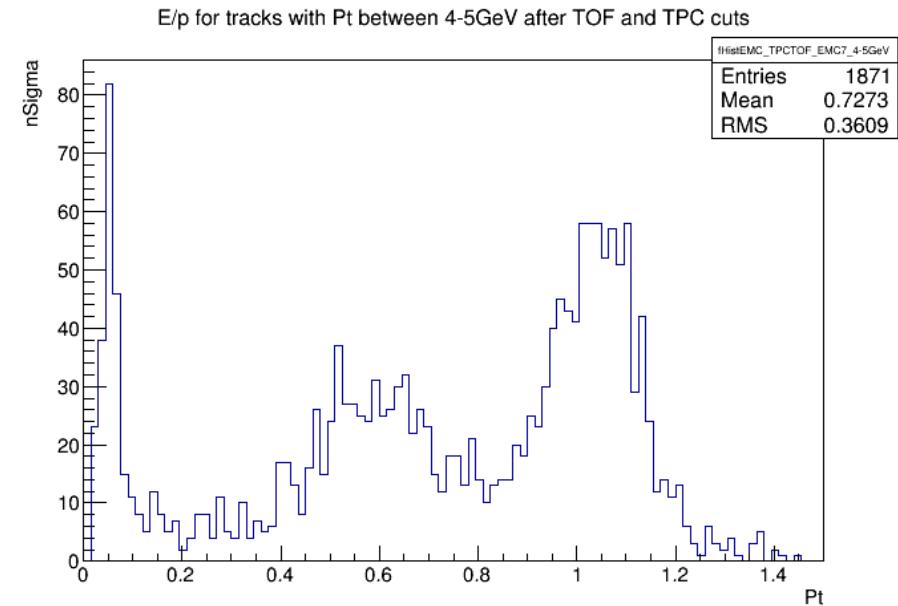
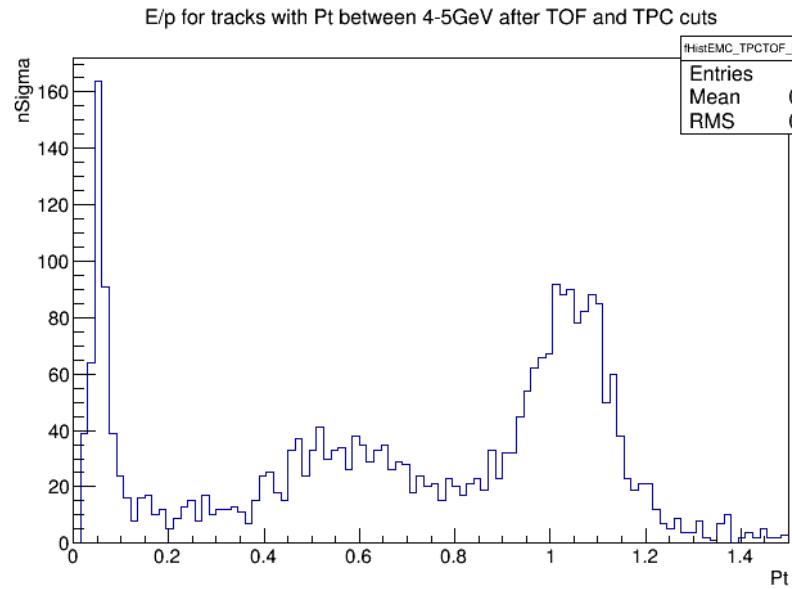
# E/p after 2Sig TPC cut and 2Sig TOF cut

## 3-4Gev



# E/p after 2Sig TPC cut and 2Sig TOF cut

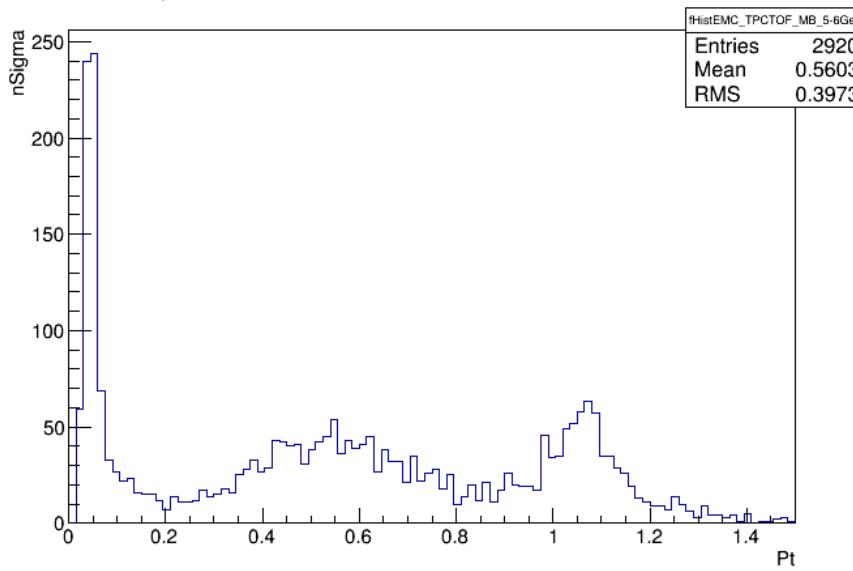
## 4-5Gev



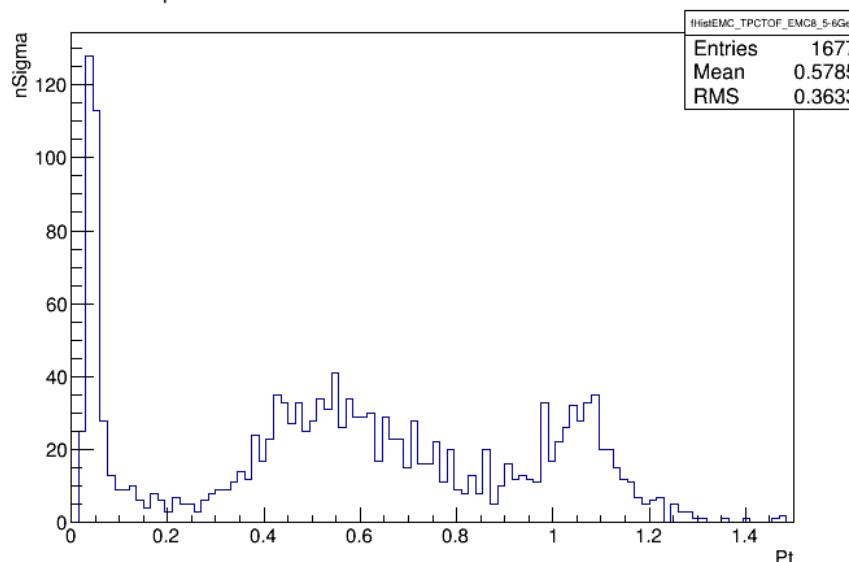
# E/p after 2Sig TPC cut and 2Sig TOF cut

## 5-6Gev

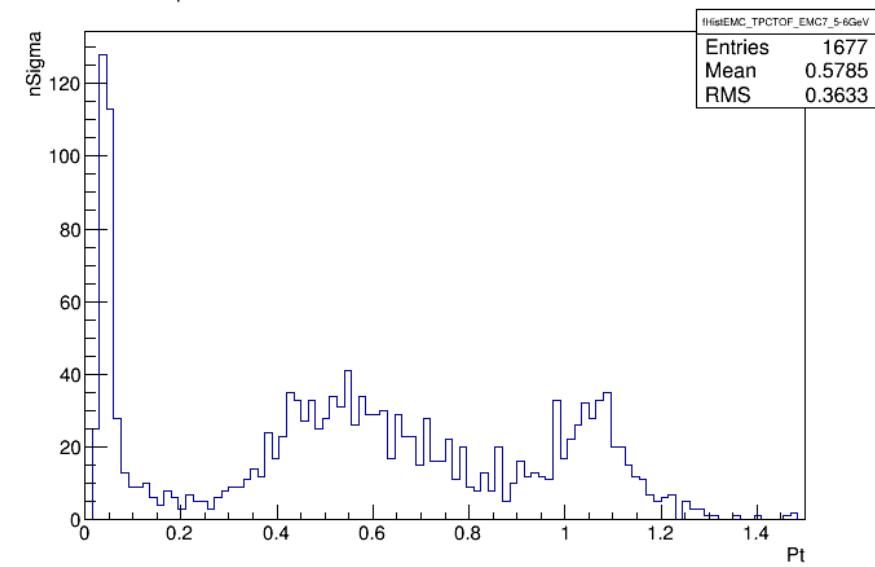
E/p for tracks with Pt between 5-6GeV after TOF and TPC cuts



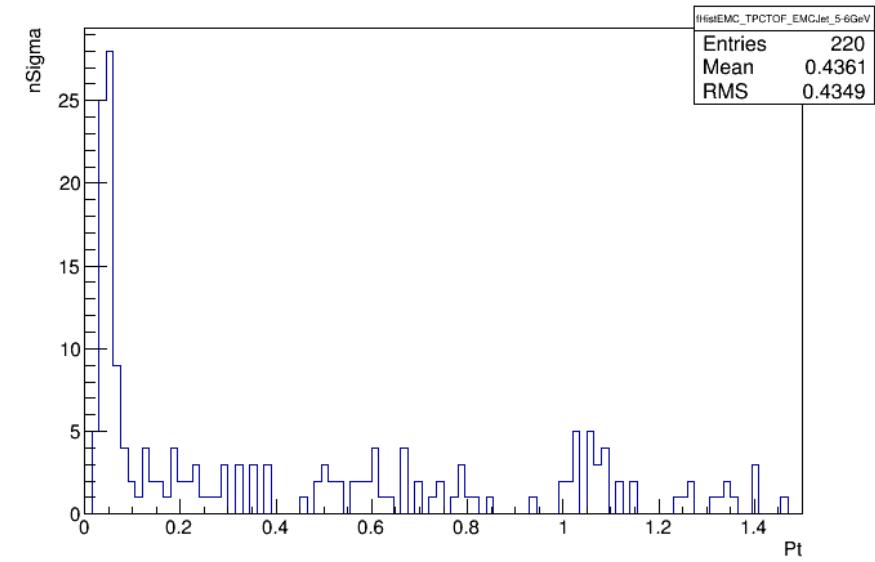
E/p for tracks with Pt between 5-6GeV after TOF and TPC cuts



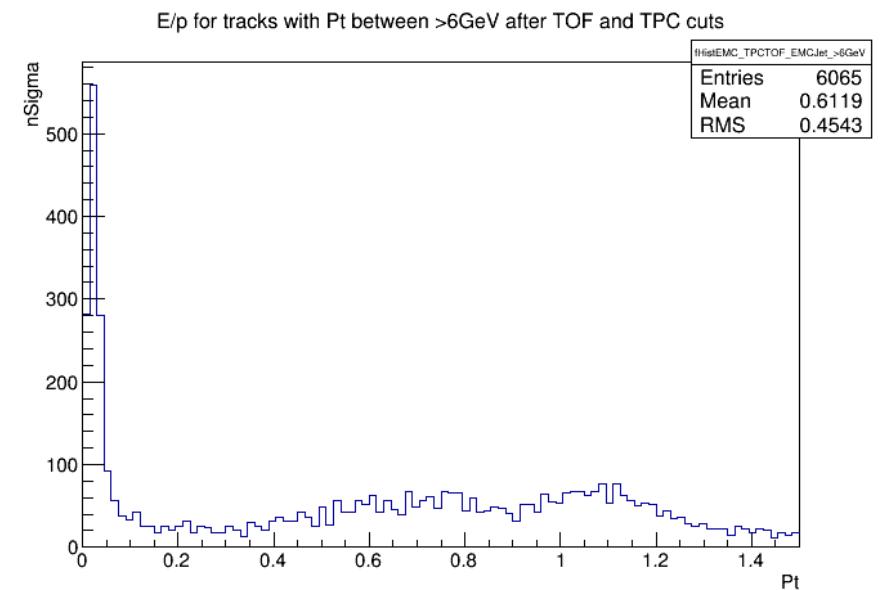
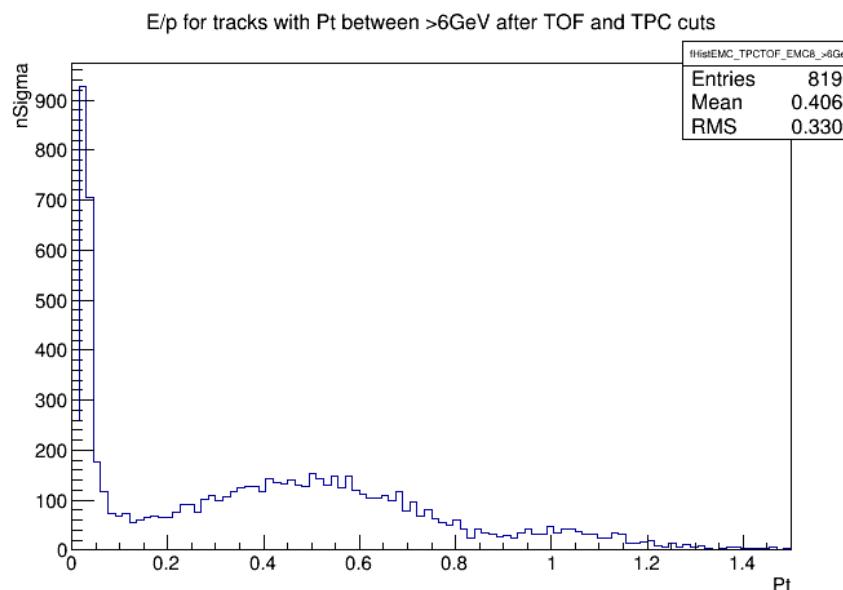
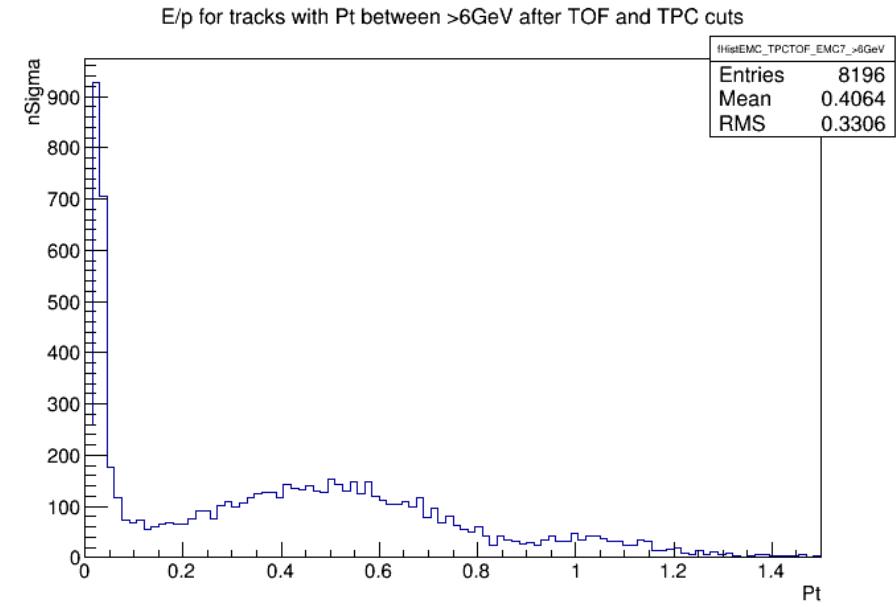
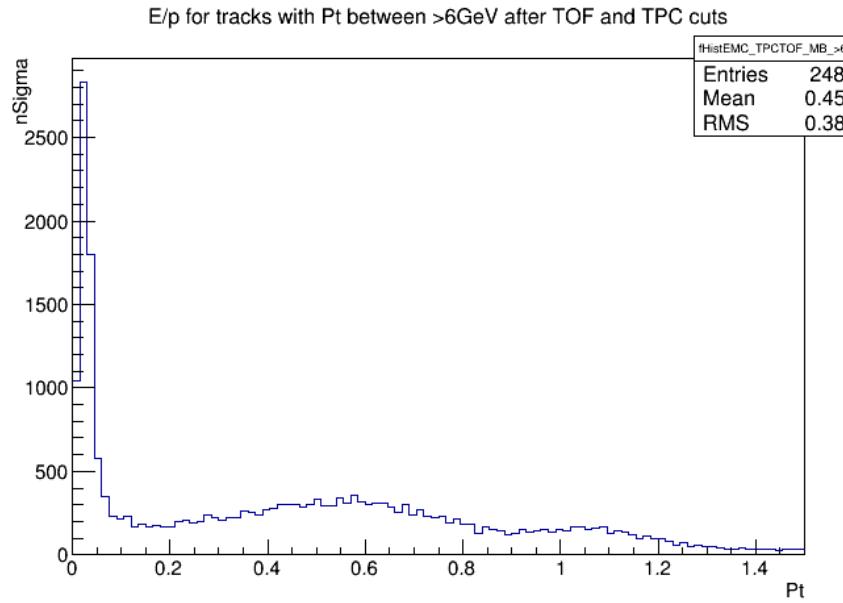
E/p for tracks with Pt between 5-6GeV after TOF and TPC cuts



E/p for tracks with Pt between 5-6GeV after TOF and TPC cuts

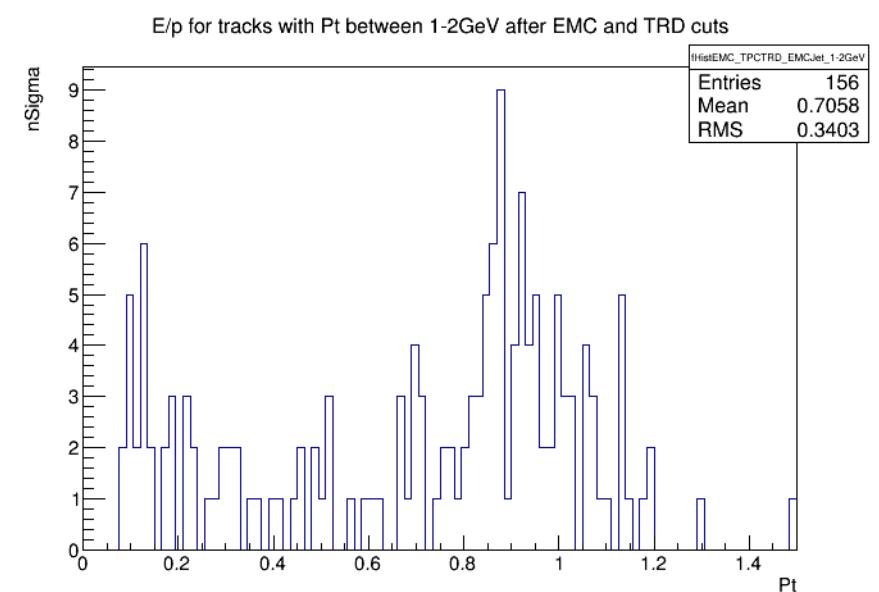
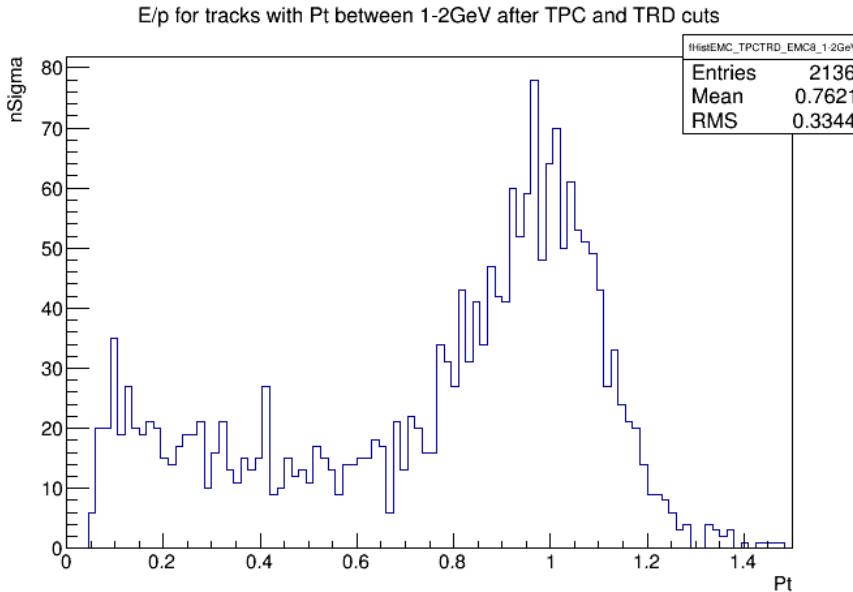
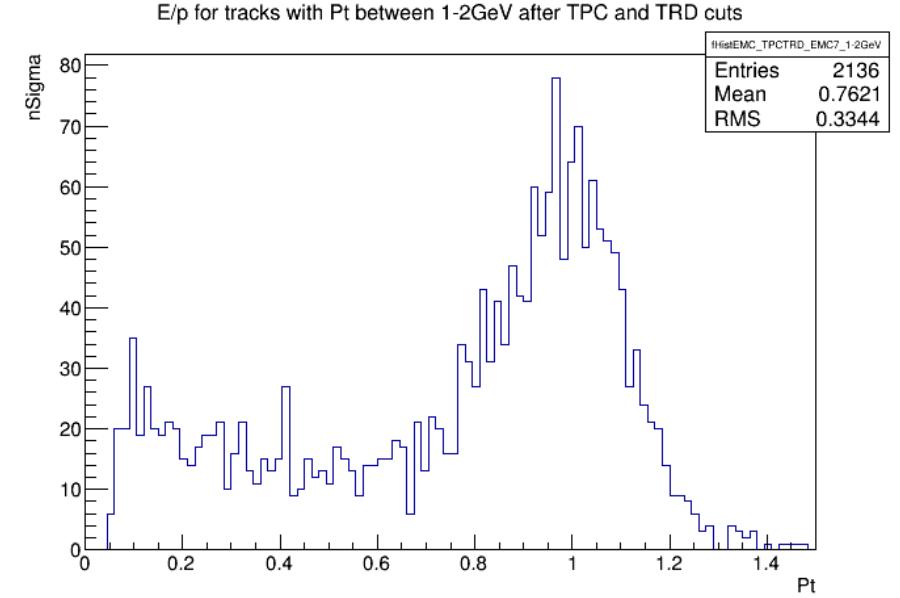
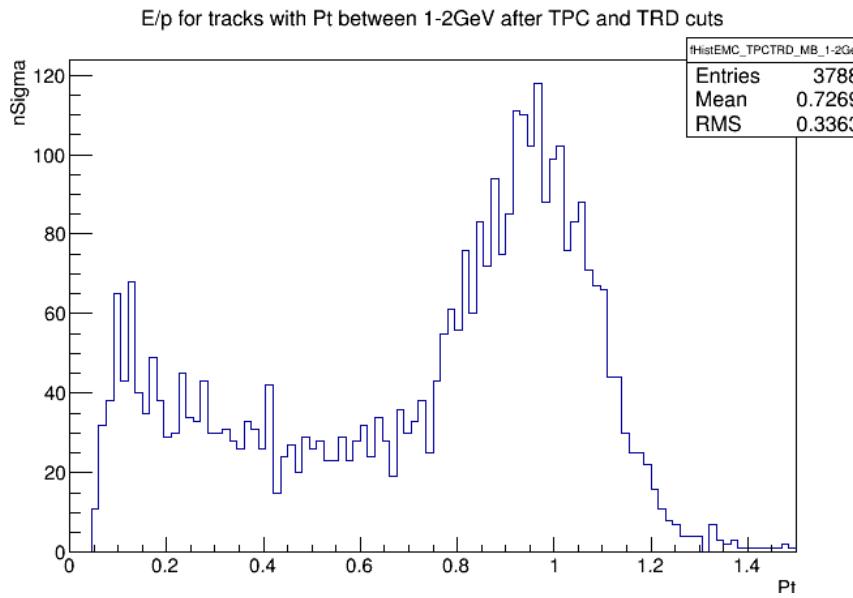


# E/p after 2Sig TPC cut and 2Sig >6Gev TOF cut



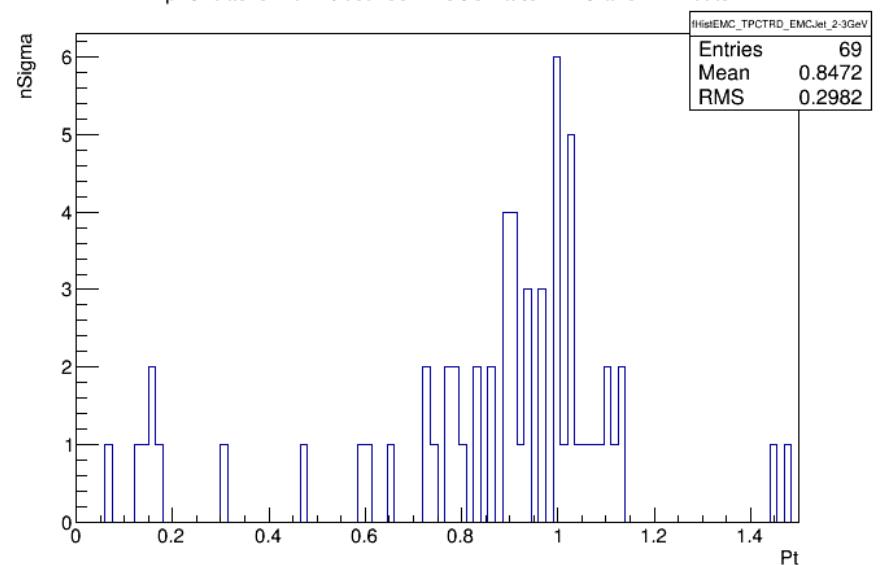
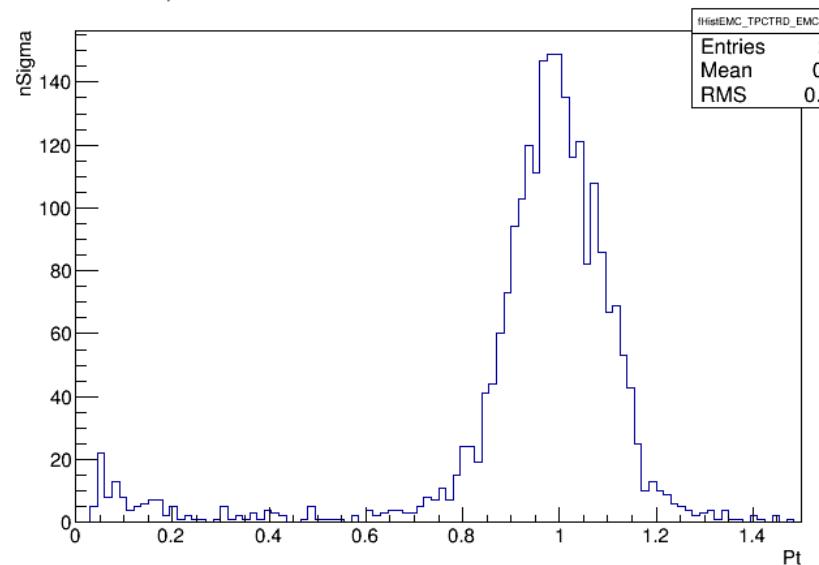
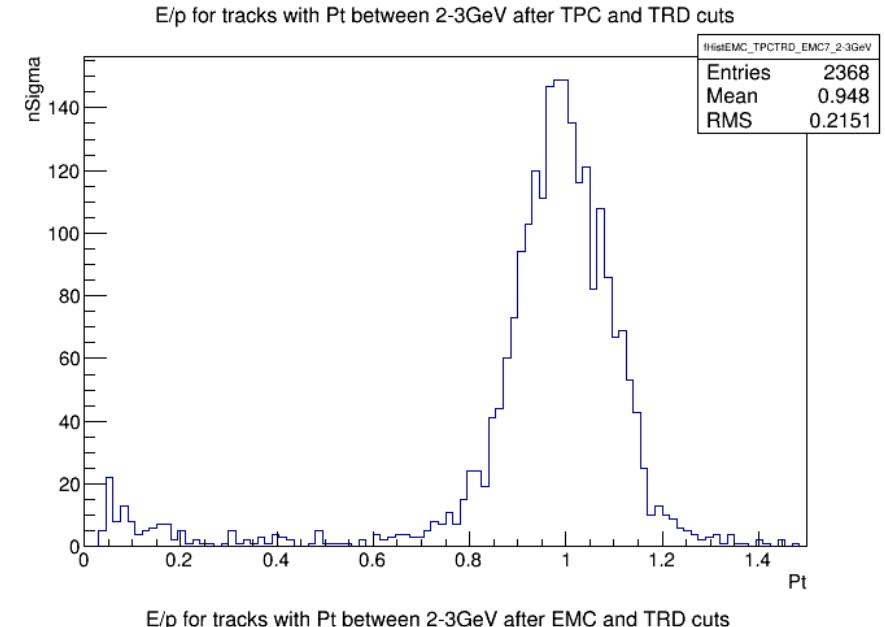
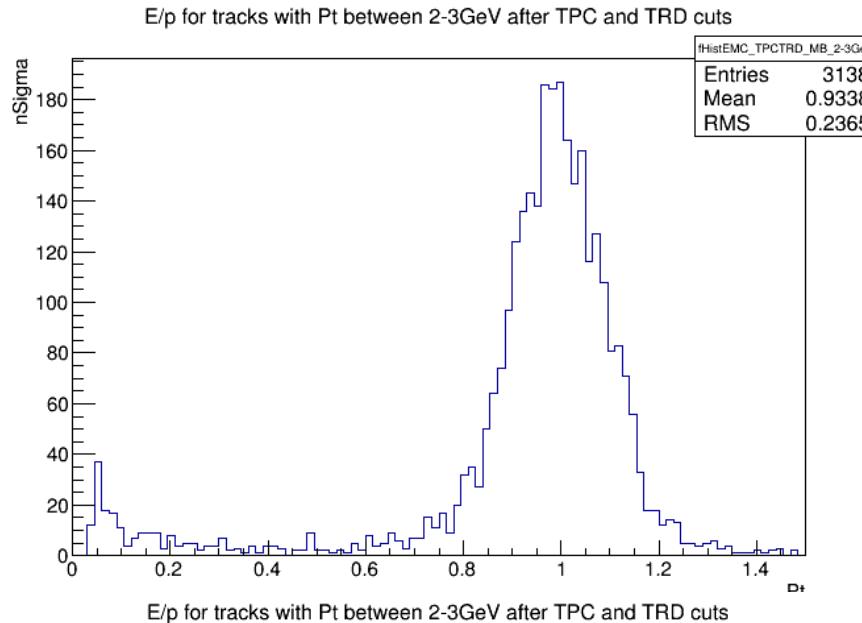
# E/p after 2Sig TPC Cut and >.9 TRD cut

## 1-2Gev



# E/p after 2Sig TPC cut and >.9 TRD cut

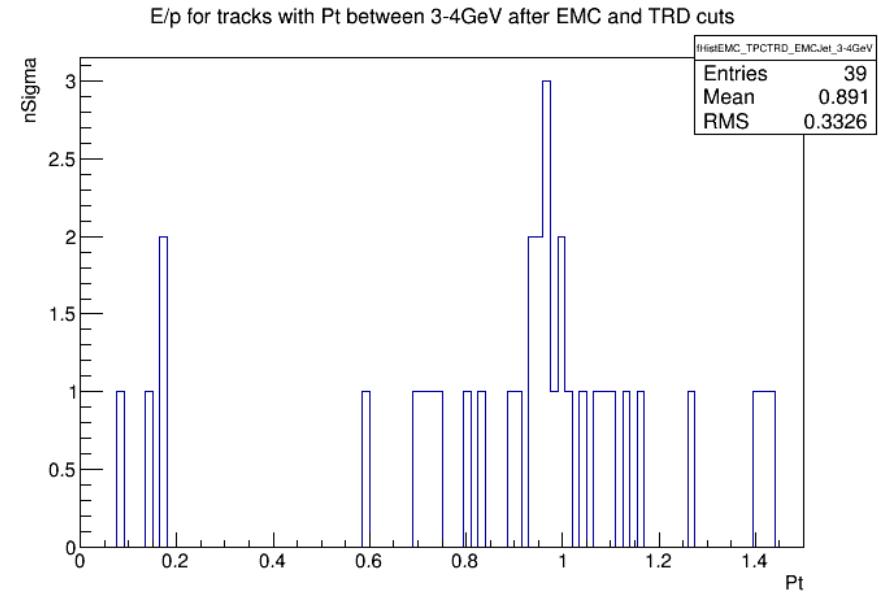
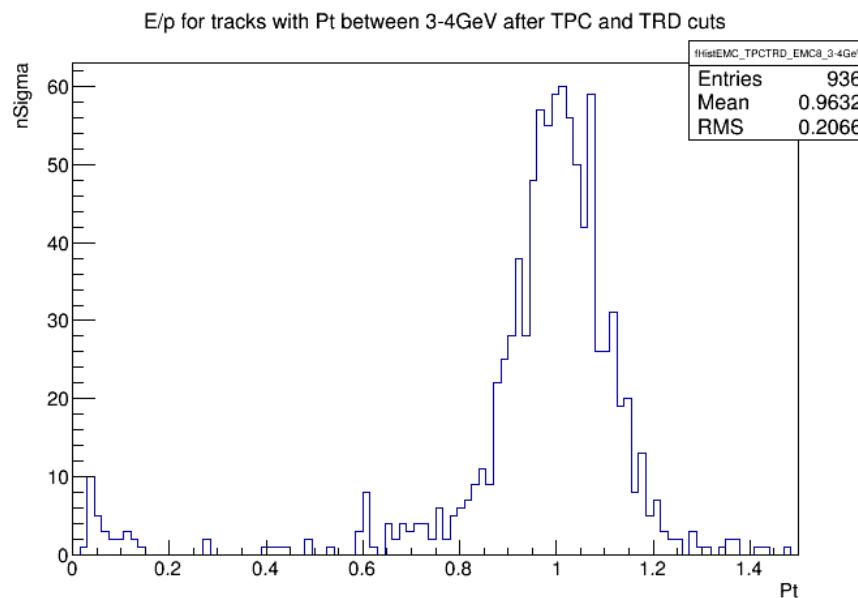
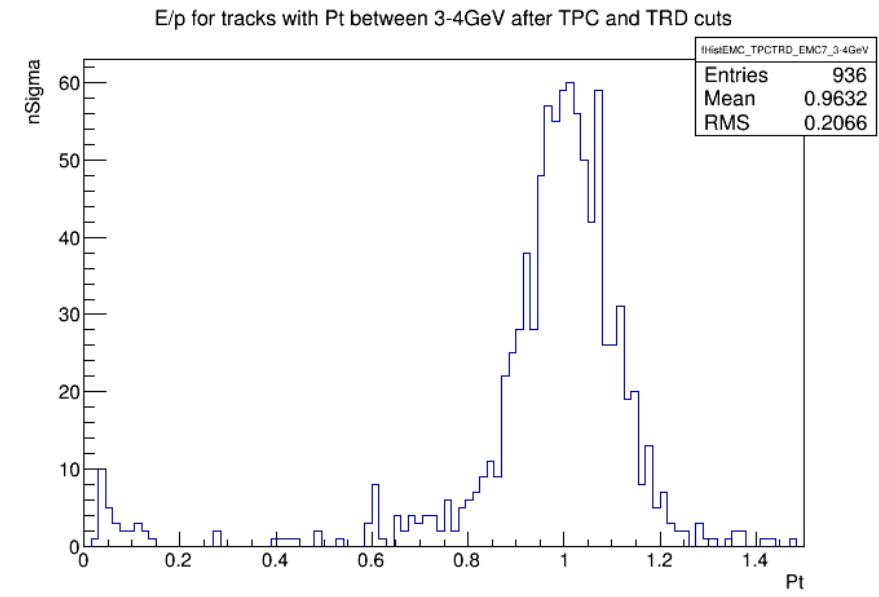
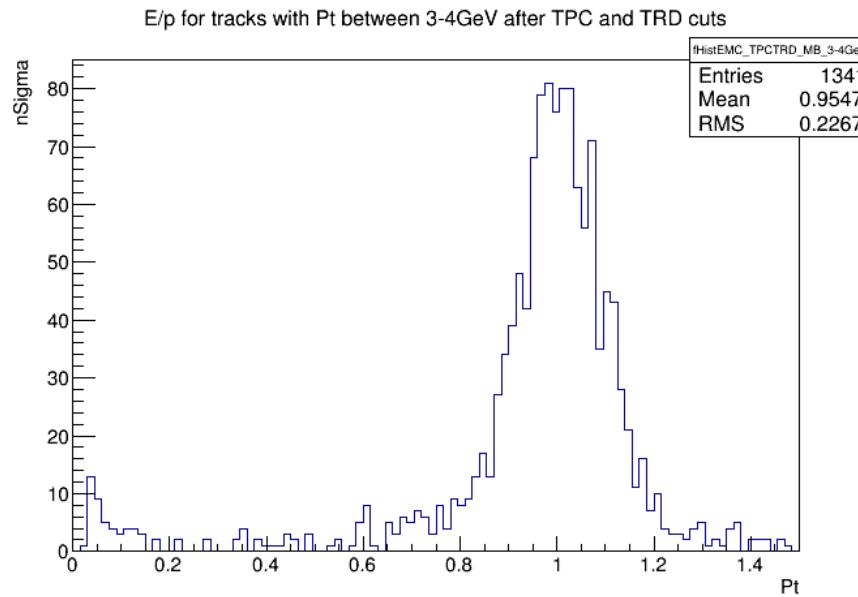
2-3Gev



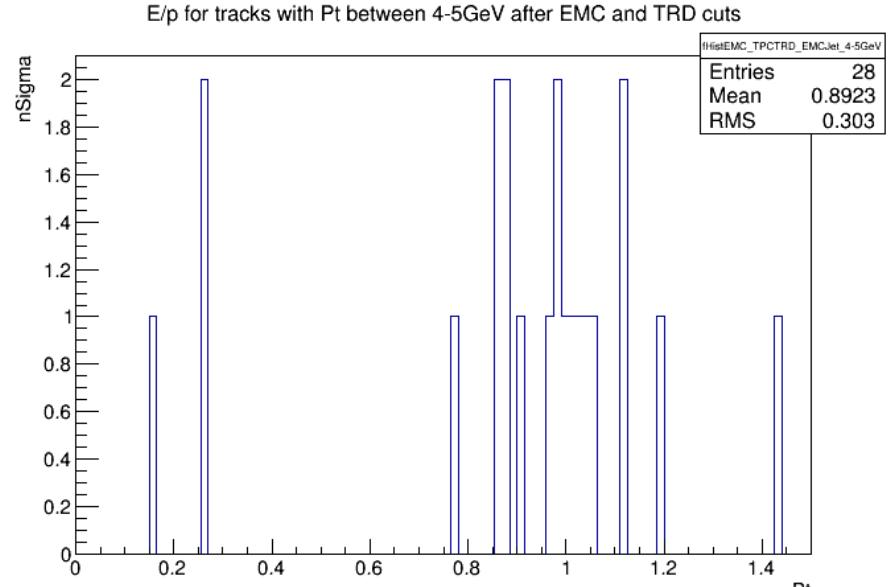
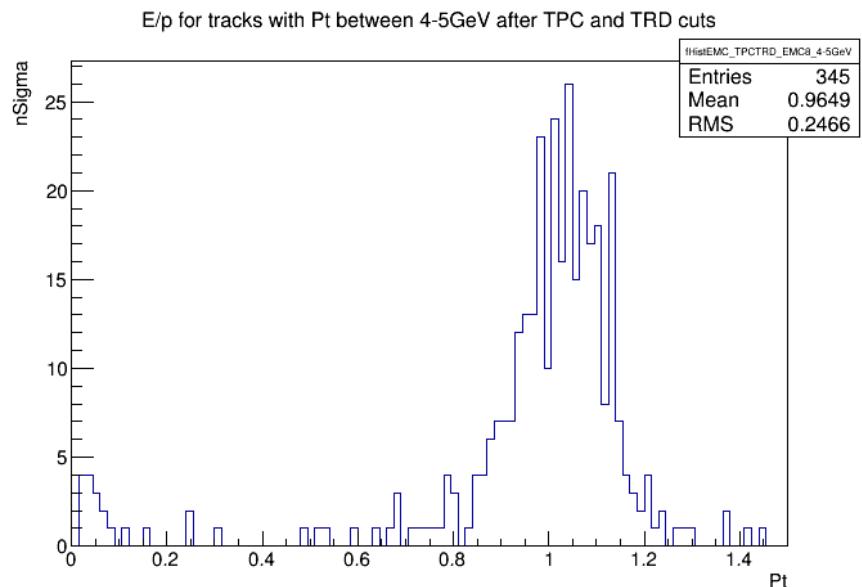
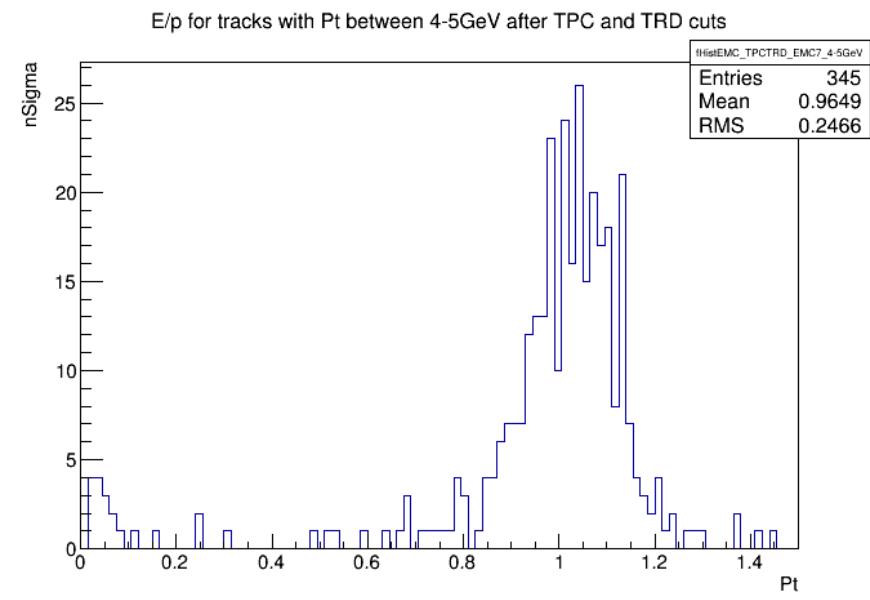
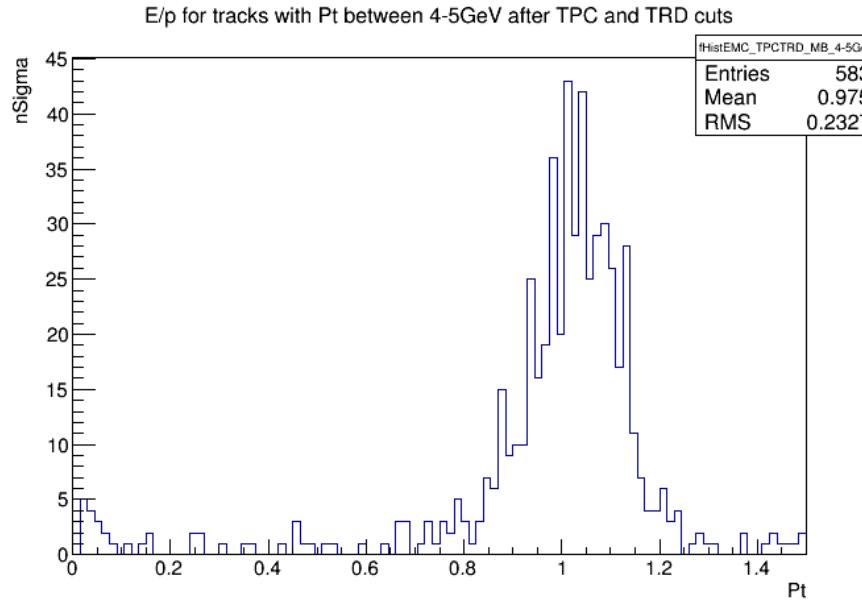
# E/p after 2Sig TPC cut and >.9 TRD

3-4Gev

cut



# E/p after 2Sig TPC cut and >.9 TRD 4-5Gev cut

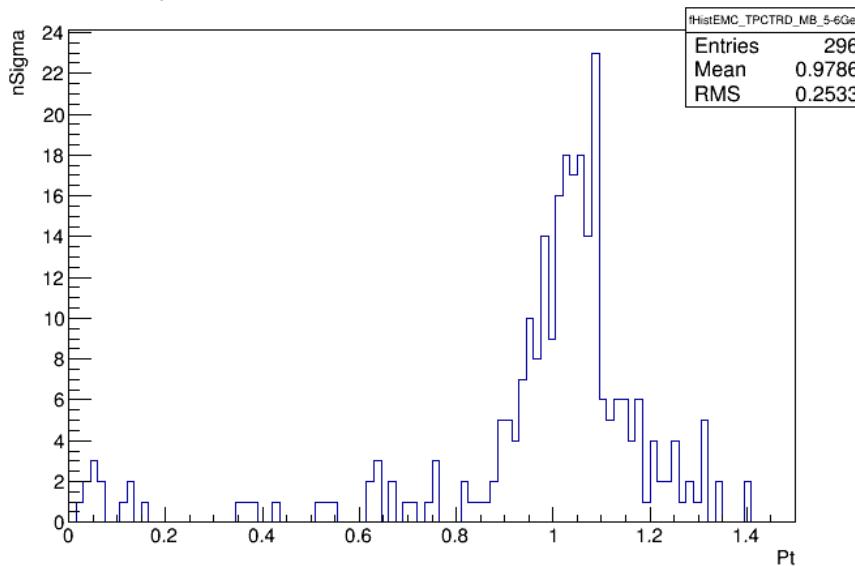


# E/p after 2Sig TPC cut and >.9 TRD

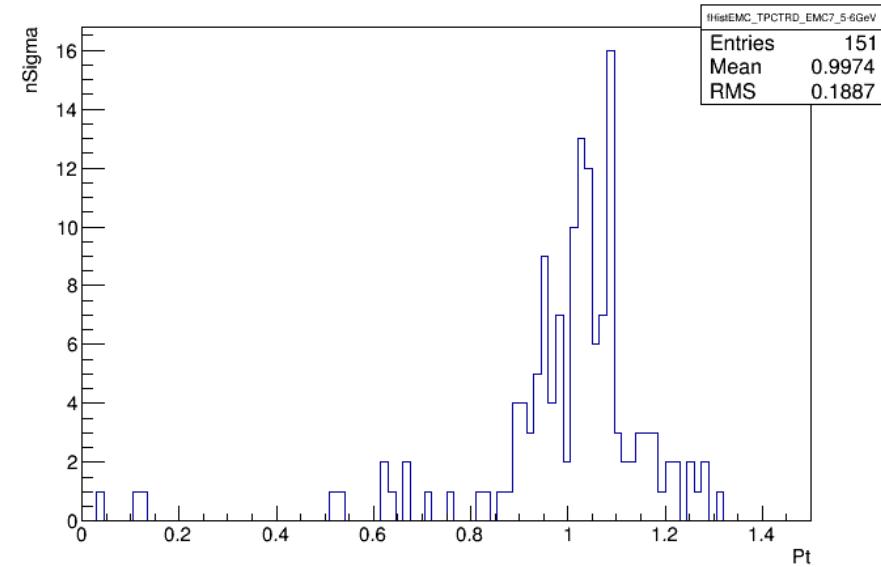
5-6Gev

cut

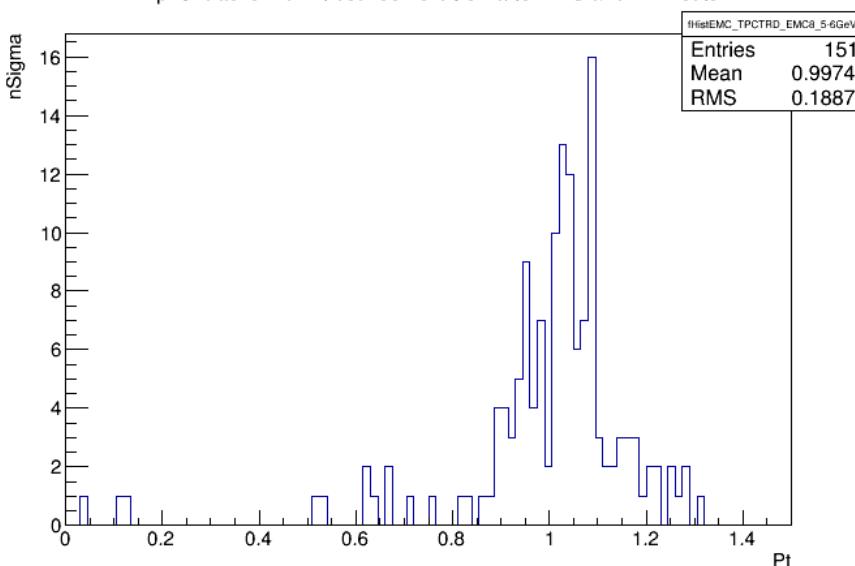
E/p for tracks with Pt between 5-6GeV after TPC and TRD cuts



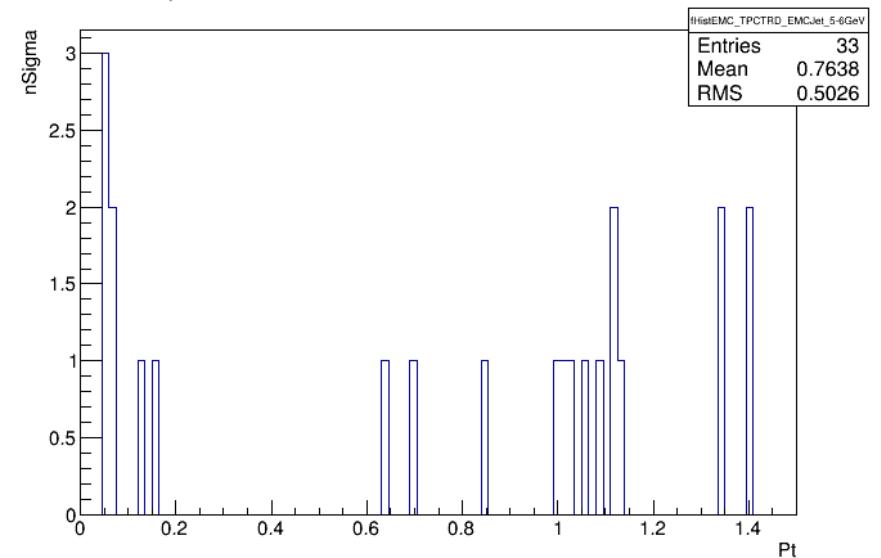
E/p for tracks with Pt between 5-6GeV after TPC and TRD cuts



E/p for tracks with Pt between 5-6GeV after TPC and TRD cuts

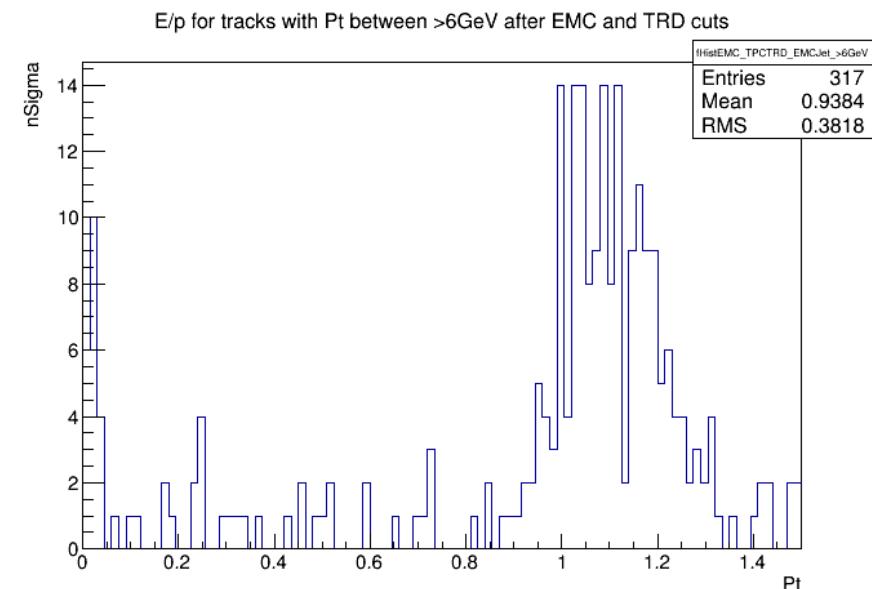
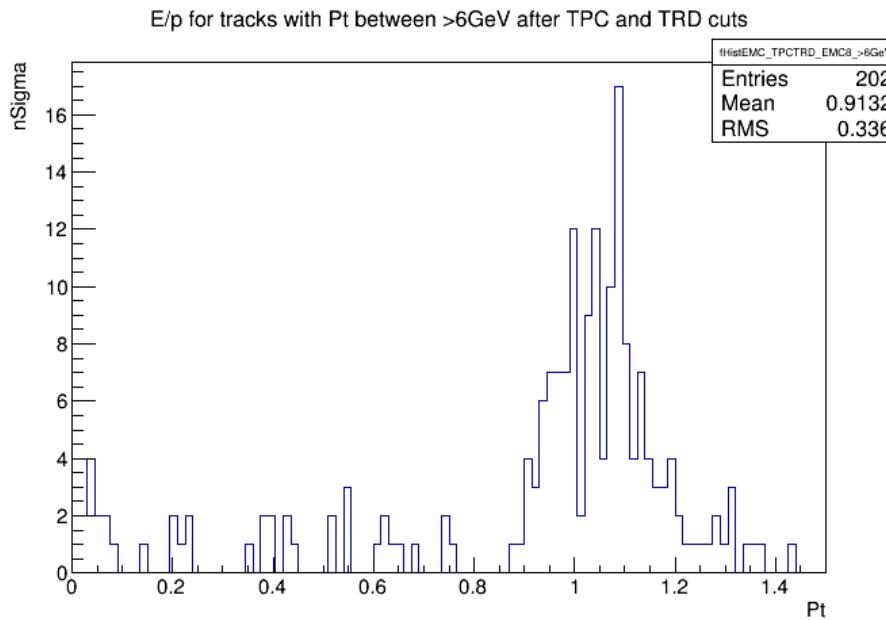
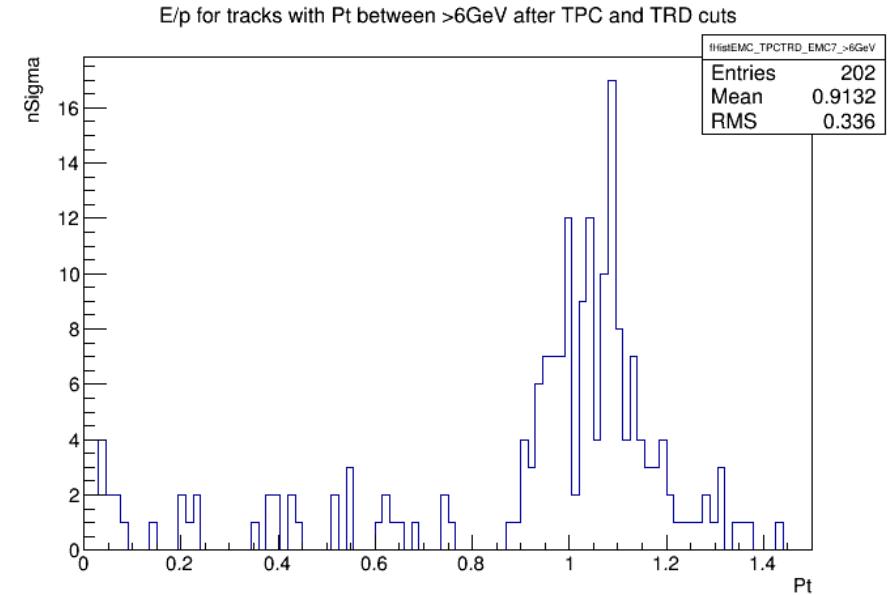
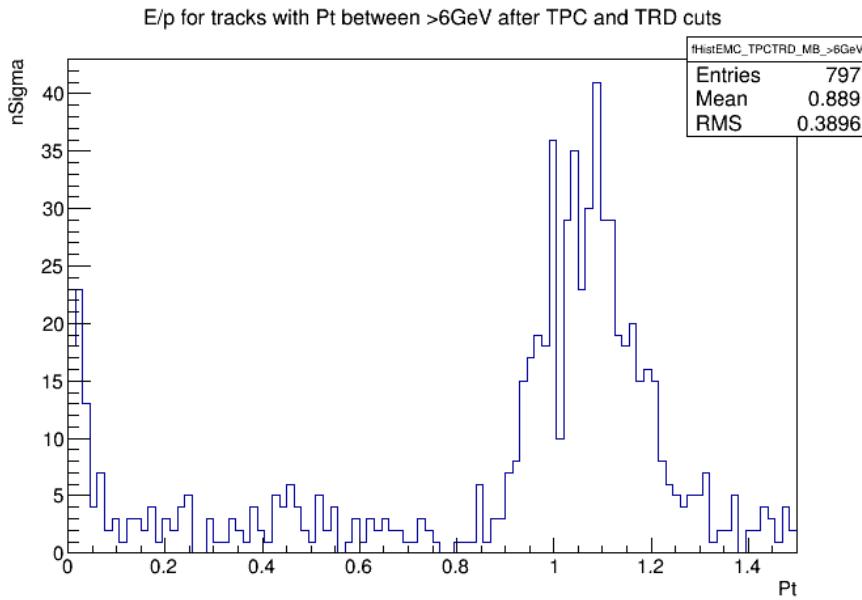


E/p for tracks with Pt between 5-6GeV after EMC and TRD cuts



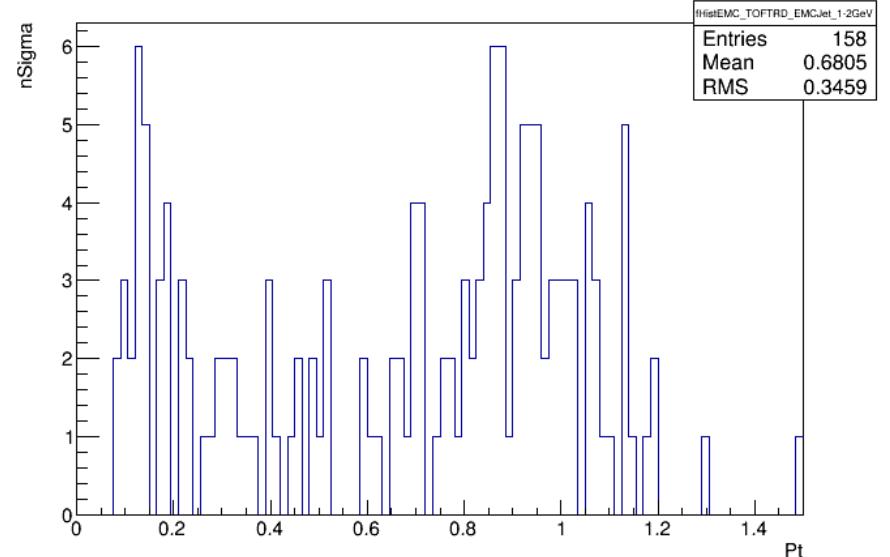
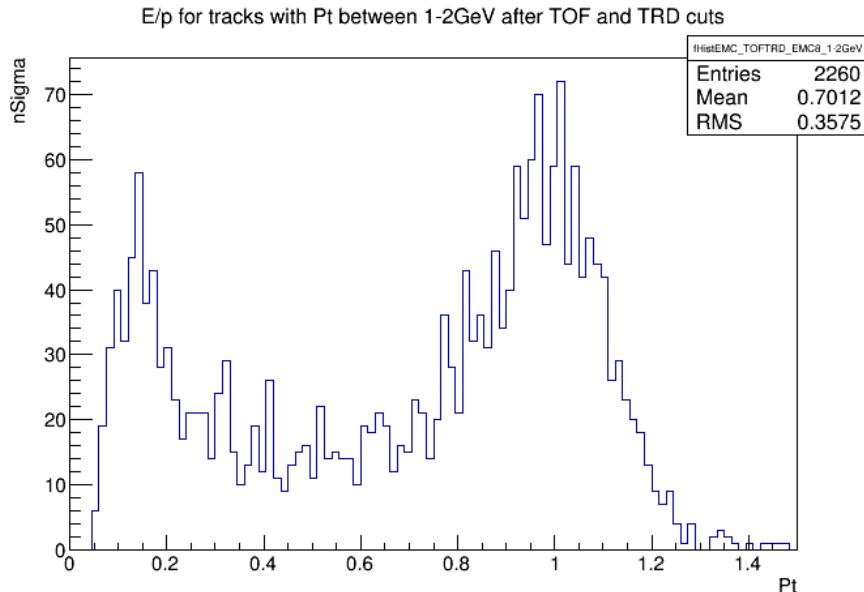
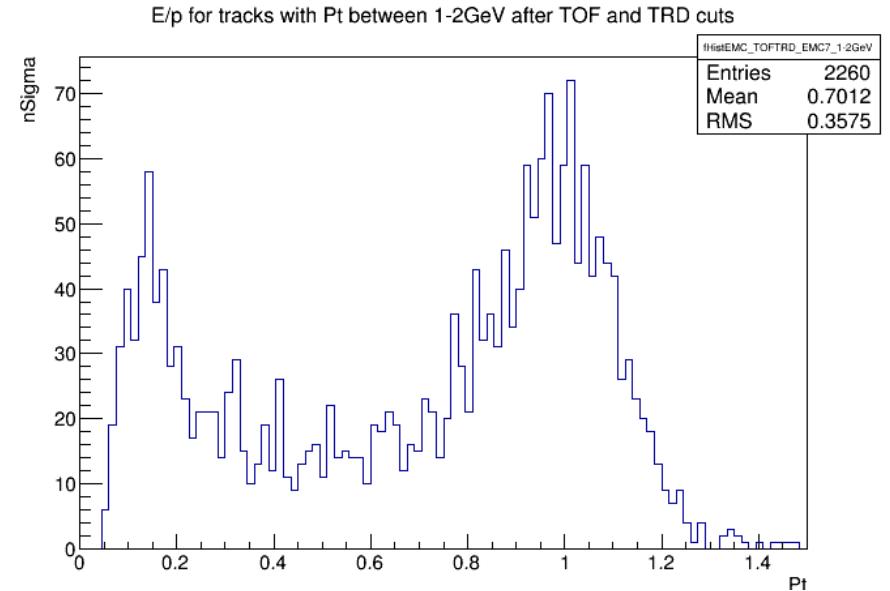
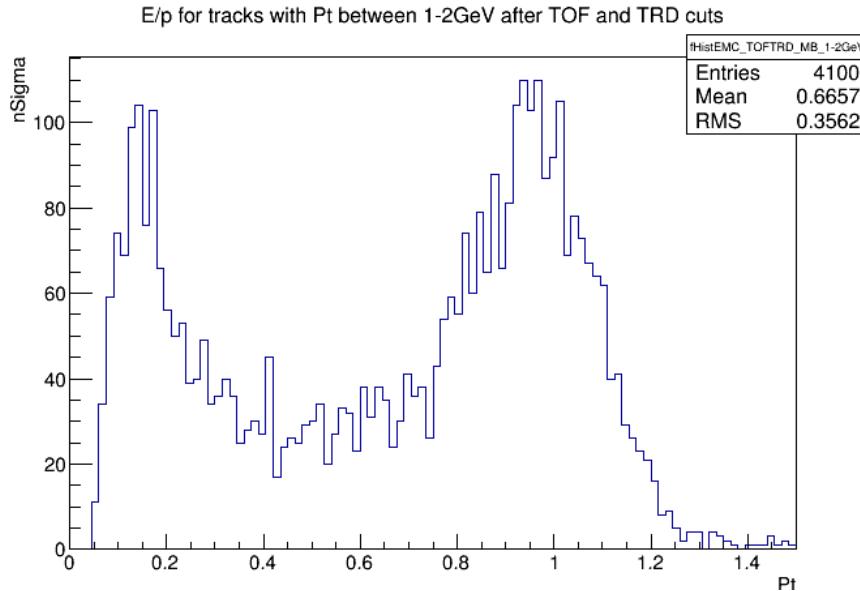
# E/p after 2Sig TPC cut and >.9 TRD cut

>6Gev



# E/p after 2Sig TOF Cut and >.9 TRD cut

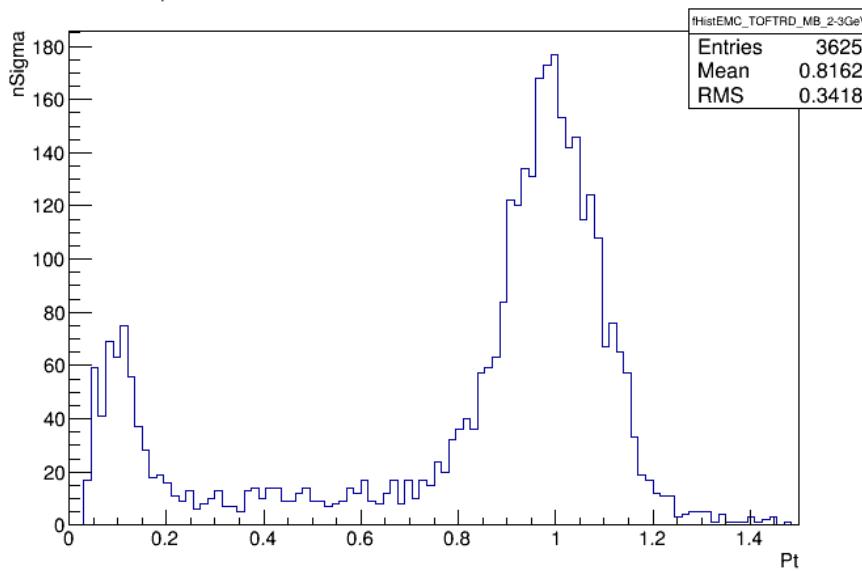
## 1-2Gev



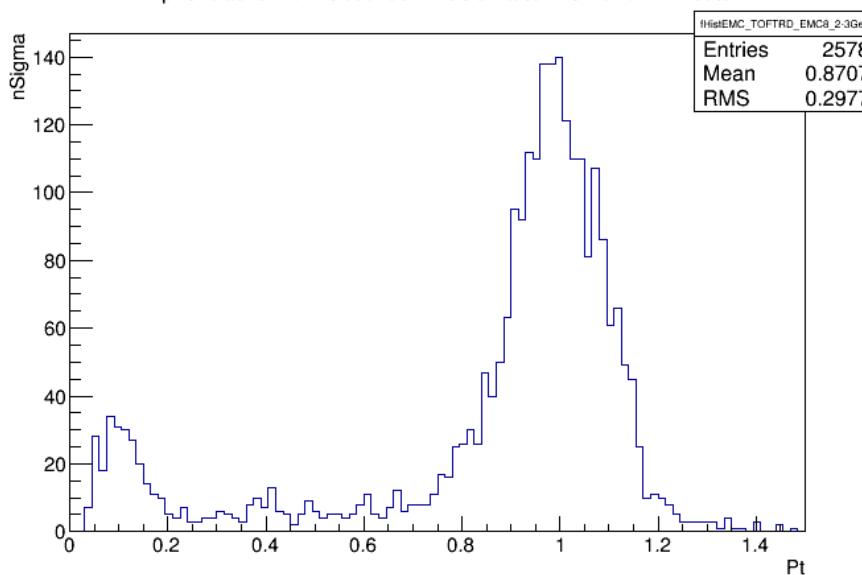
# E/p after 2Sig TOF cut and >.9 TRD cut

## 2-3Gev

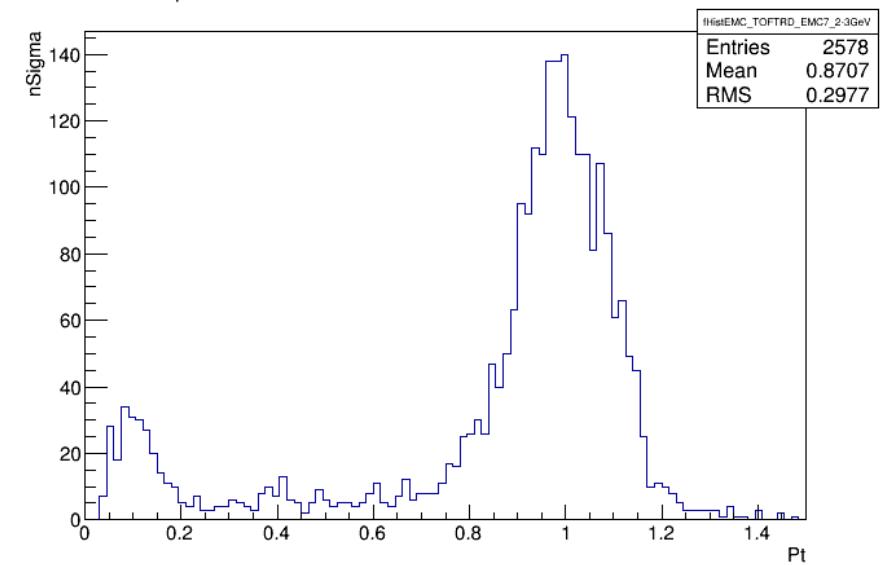
E/p for tracks with Pt between 2-3GeV after TOF and TRD cuts



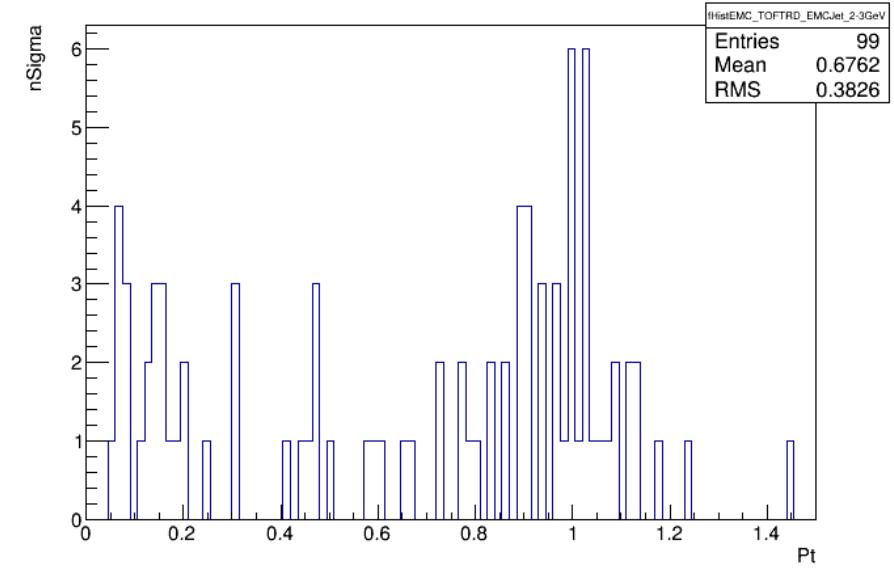
E/p for tracks with Pt between 2-3GeV after TOF and TRD cuts



E/p for tracks with Pt between 2-3GeV after TOF and TRD cuts



E/p for tracks with Pt between 2-3GeV after TOF and TRD cuts

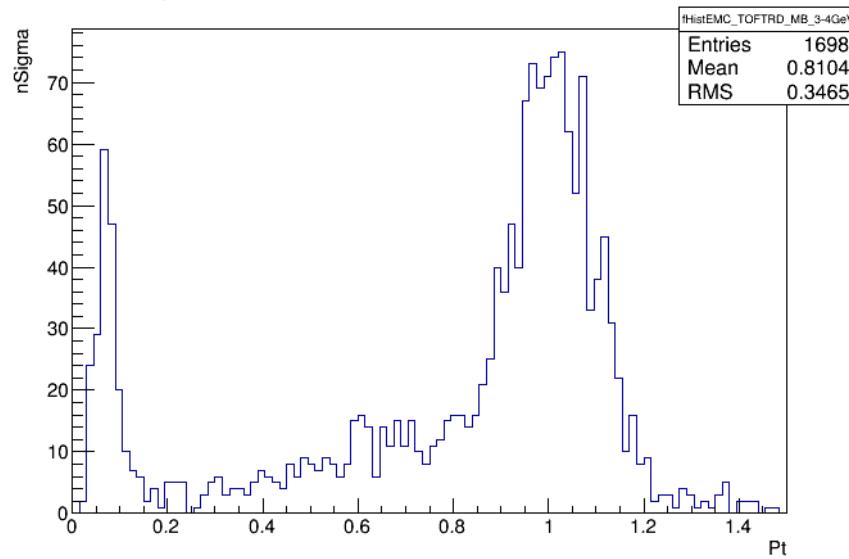


# E/p after 2Sig TOF cut and >.9 TRD

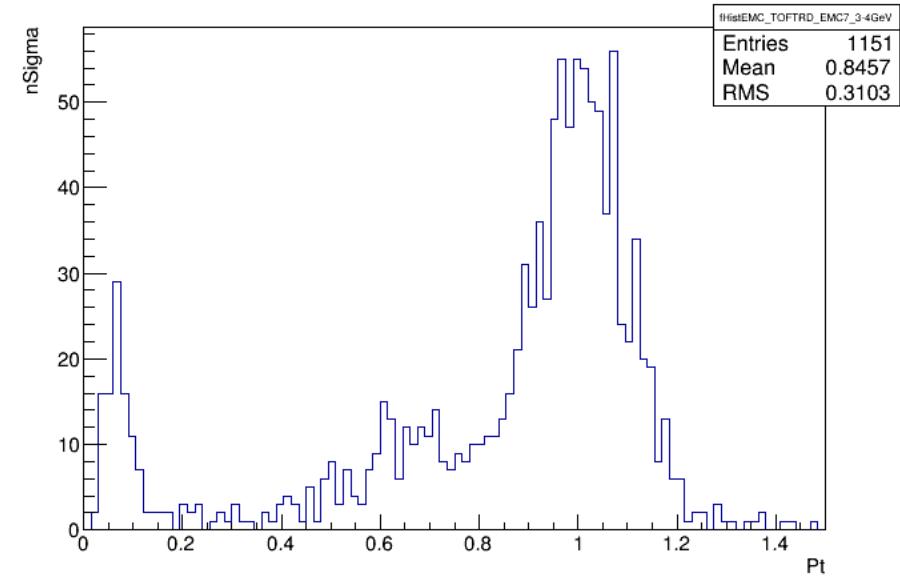
3-4Gev

cut

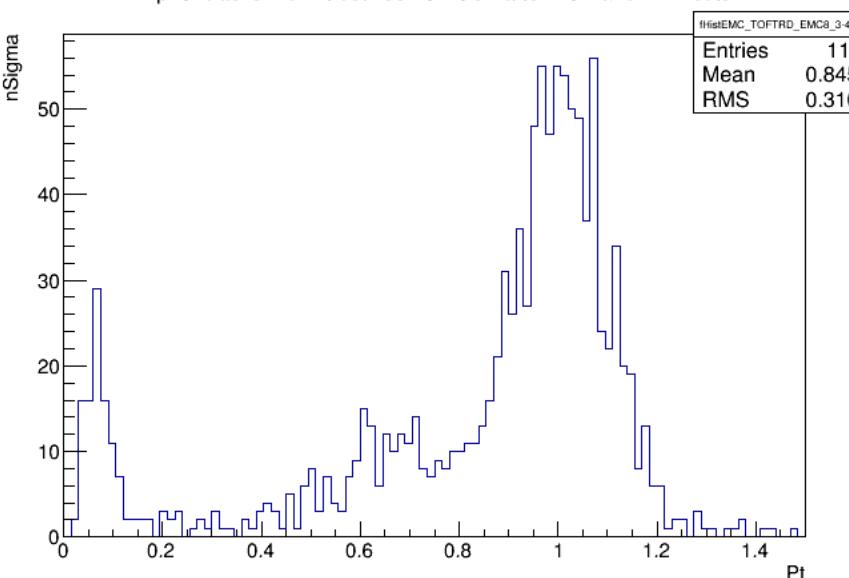
E/p for tracks with Pt between 3-4GeV after TOF and TRD cuts



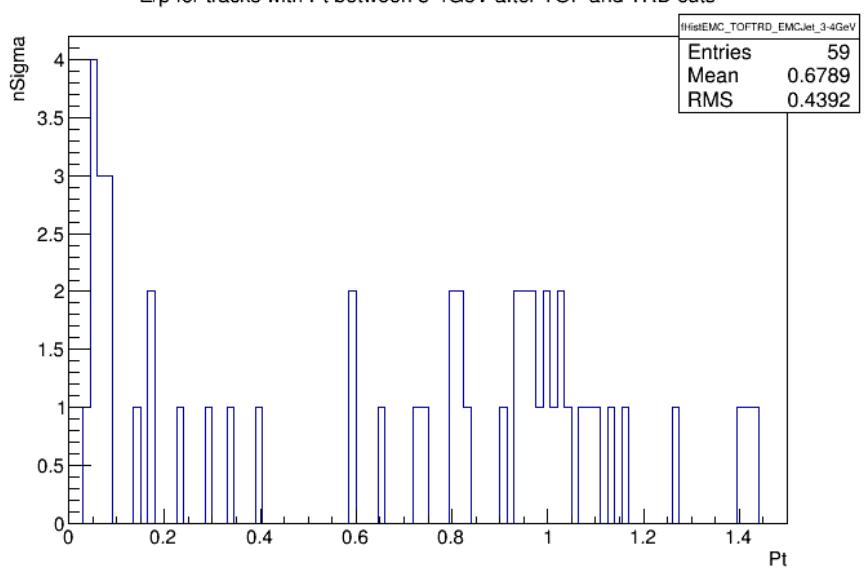
E/p for tracks with Pt between 3-4GeV after TOF and TRD cuts



E/p for tracks with Pt between 3-4GeV after TOF and TRD cuts

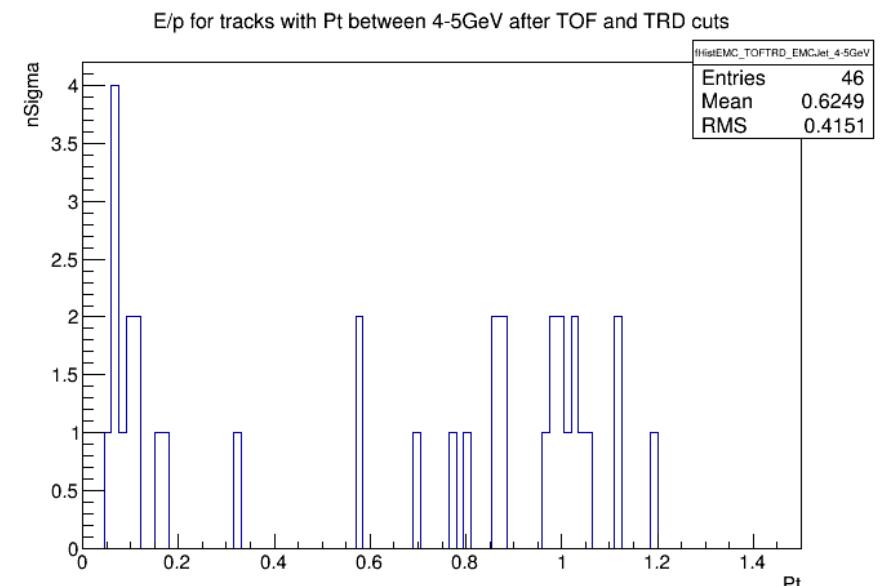
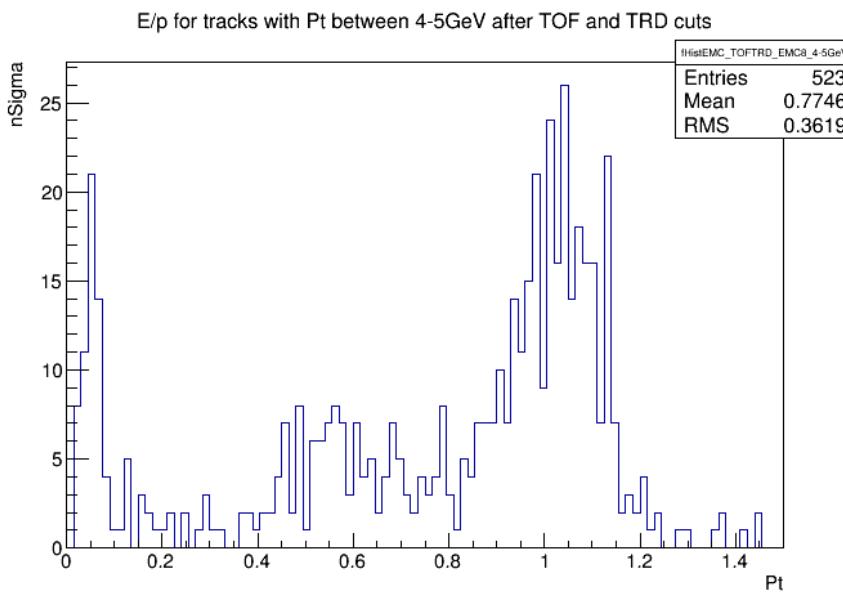
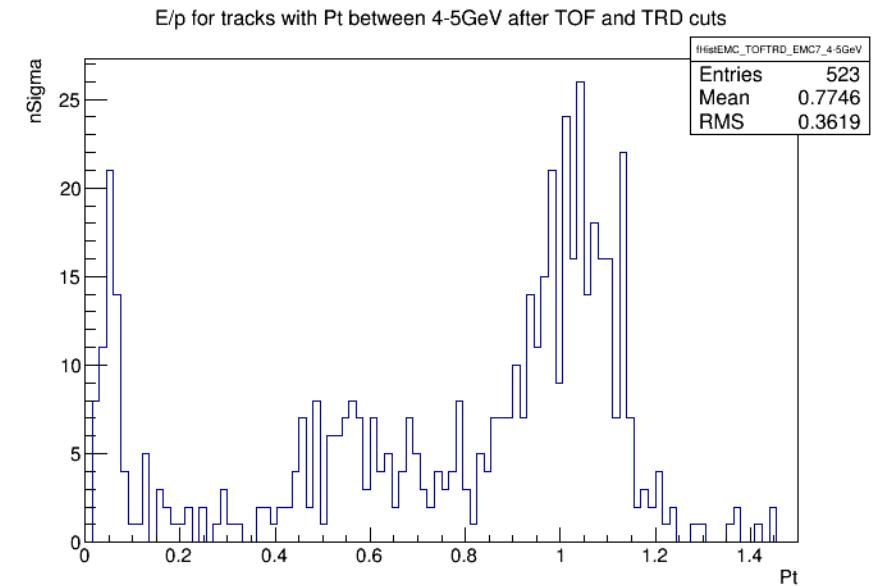
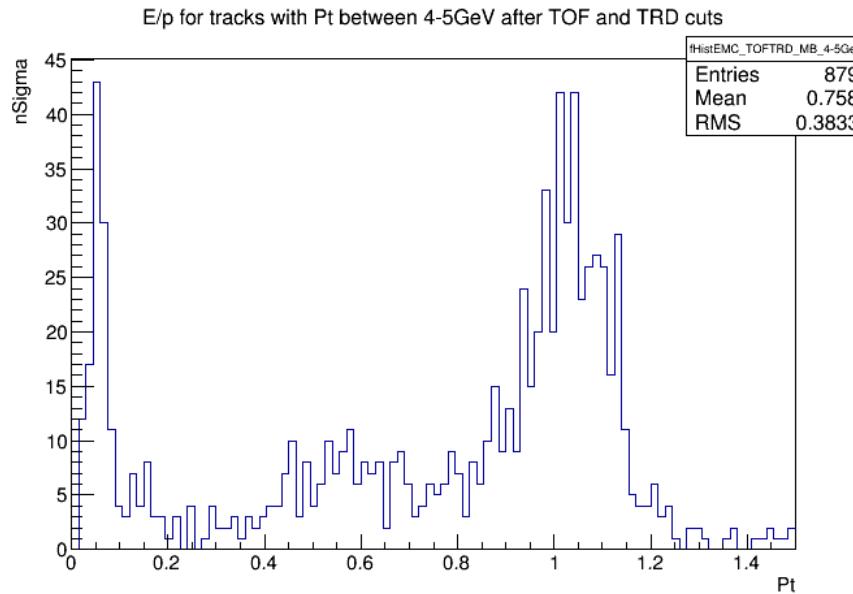


E/p for tracks with Pt between 3-4GeV after TOF and TRD cuts



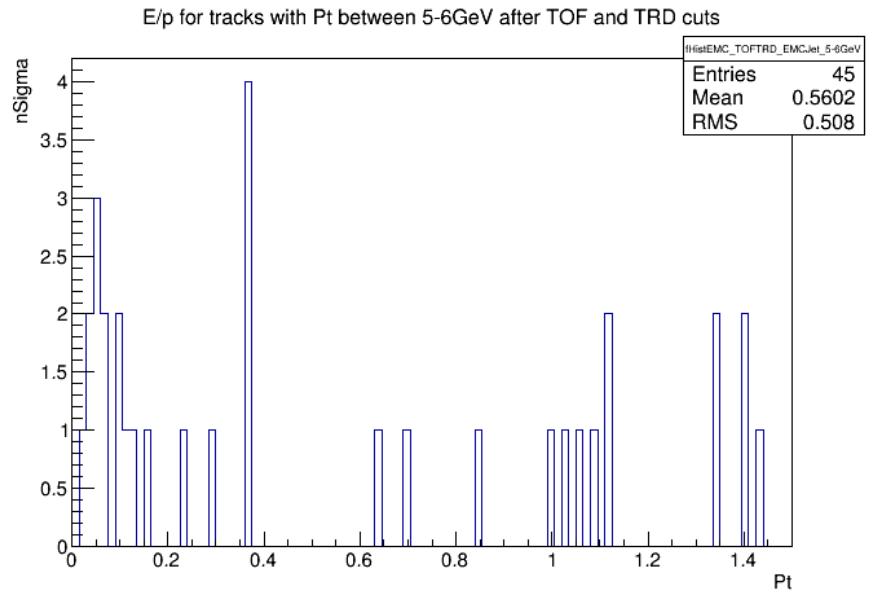
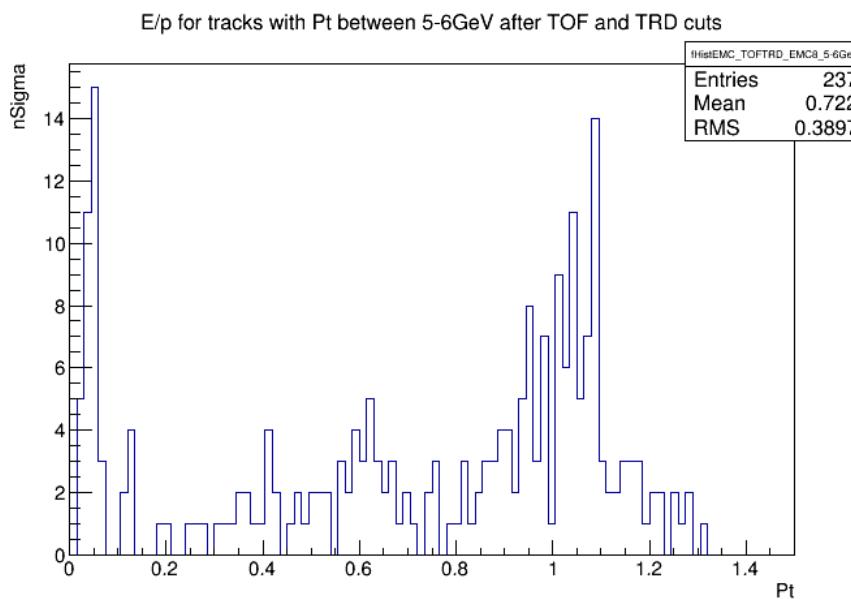
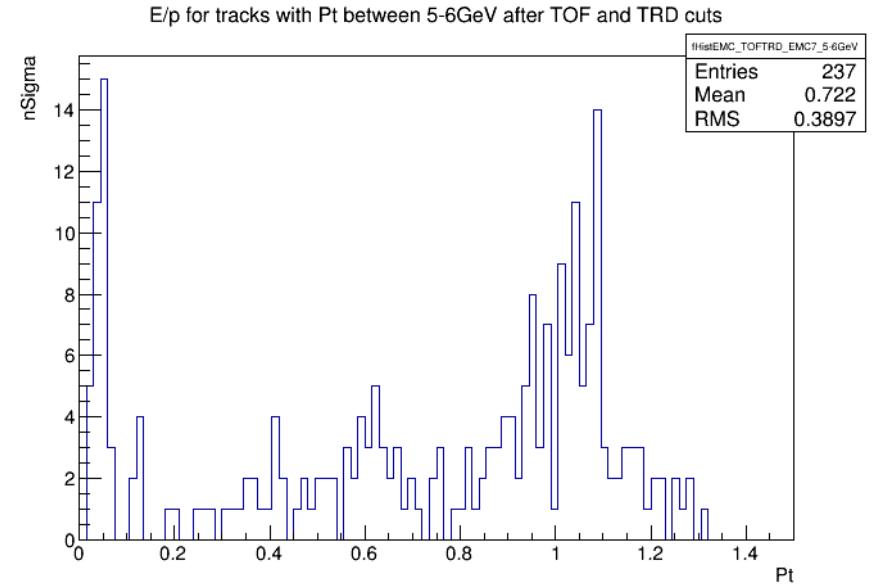
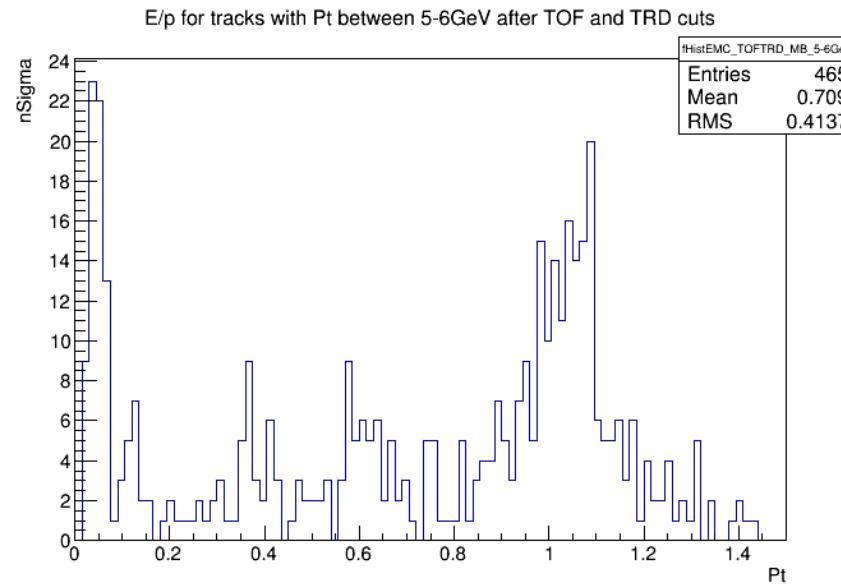
# E/p after 2Sig TOF cut and >.9 TRD cut

4-5Gev



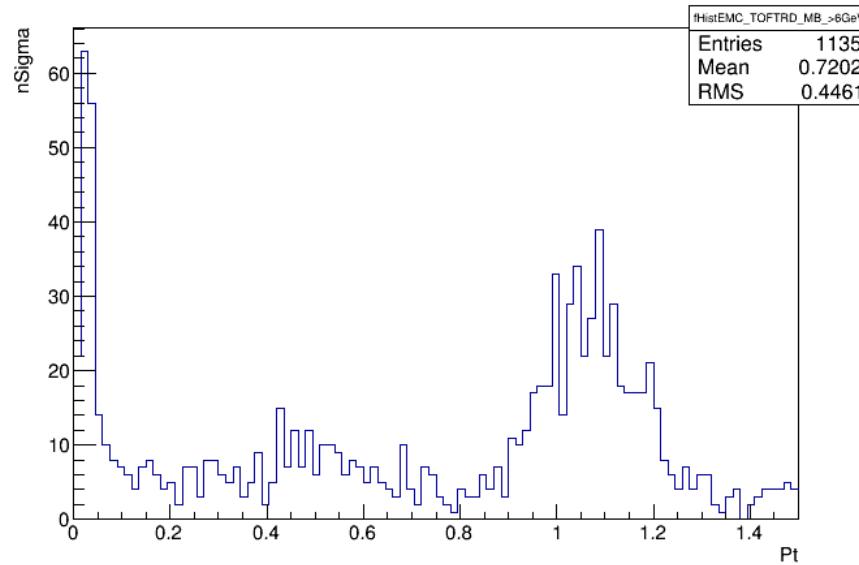
# E/p after 2Sig TOF cut and >.9 TRD cut

5-6Gev

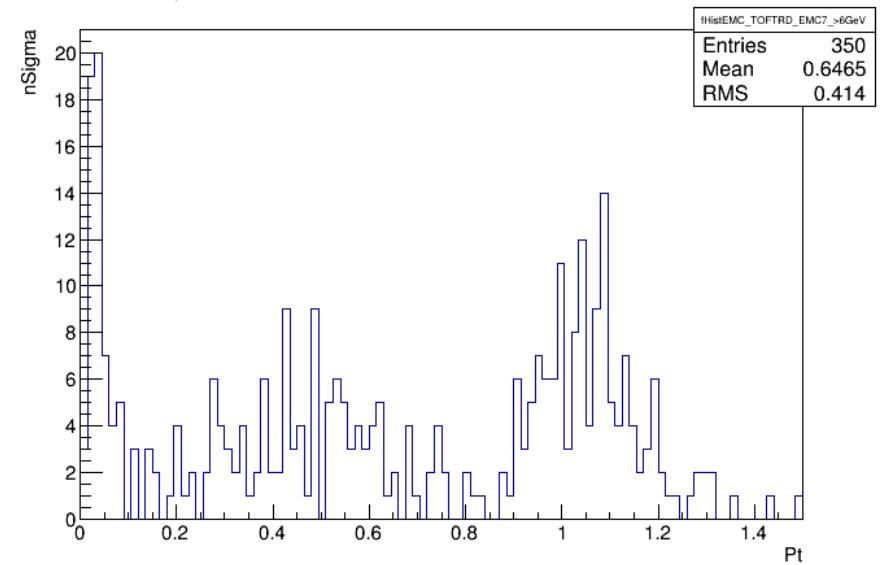


# E/p after 2Sig TOF cut and >.9 TRD cut

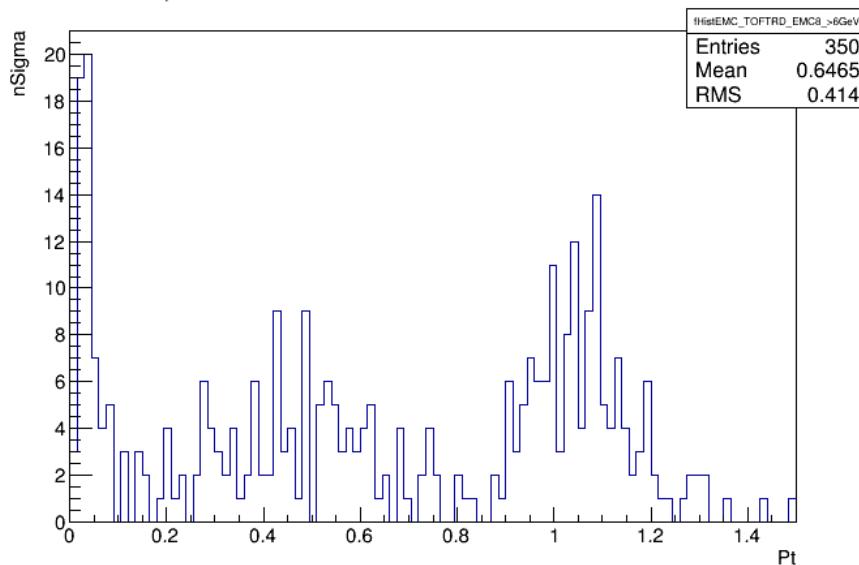
E/p for tracks with Pt between >6GeV after TOF and TRD cuts



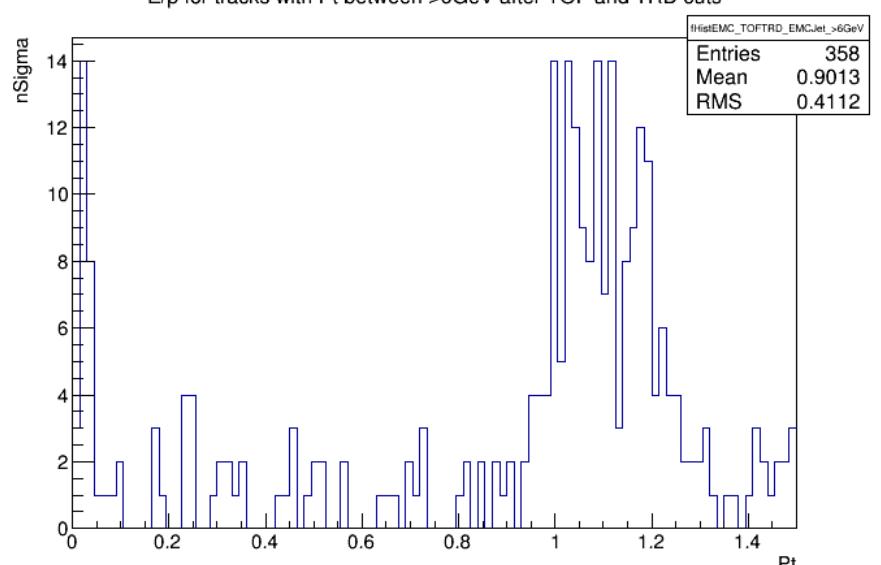
E/p for tracks with Pt between >6GeV after TOF and TRD cuts



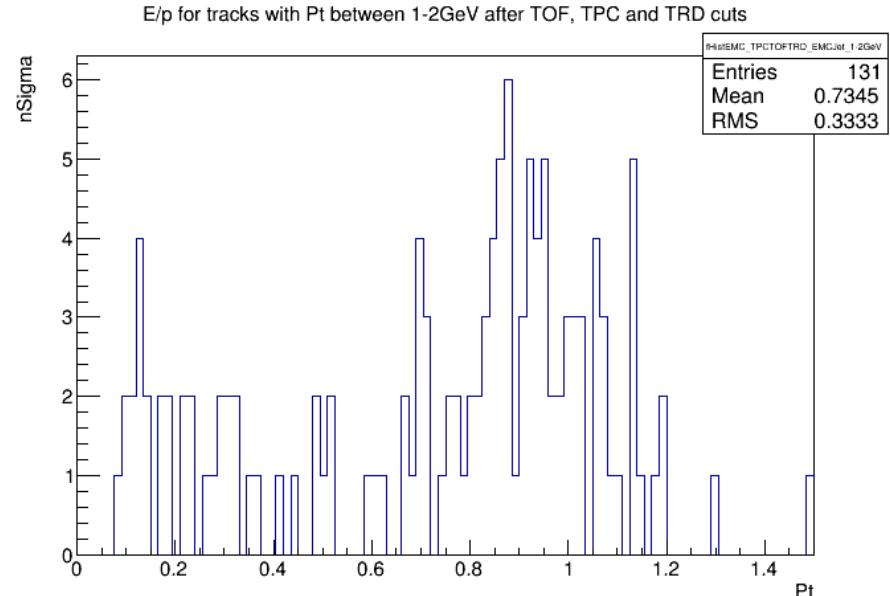
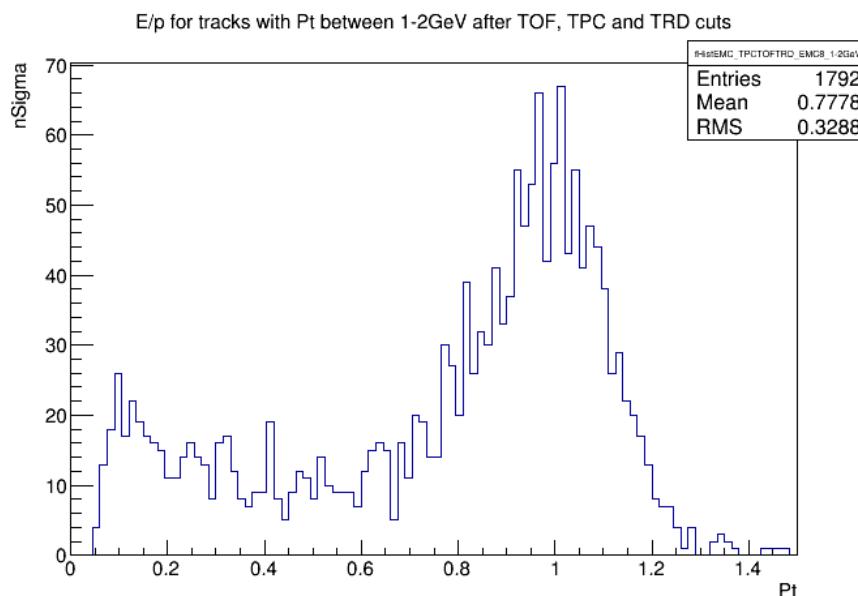
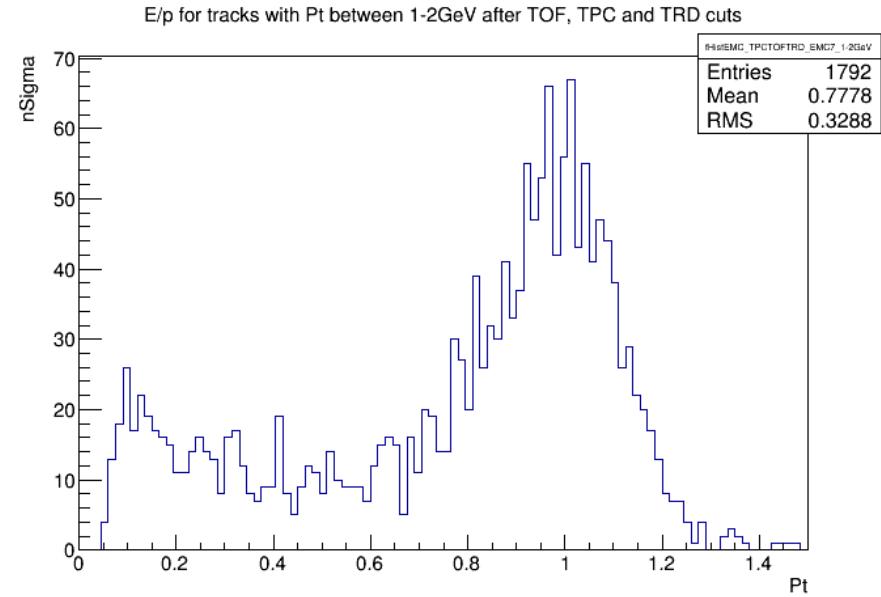
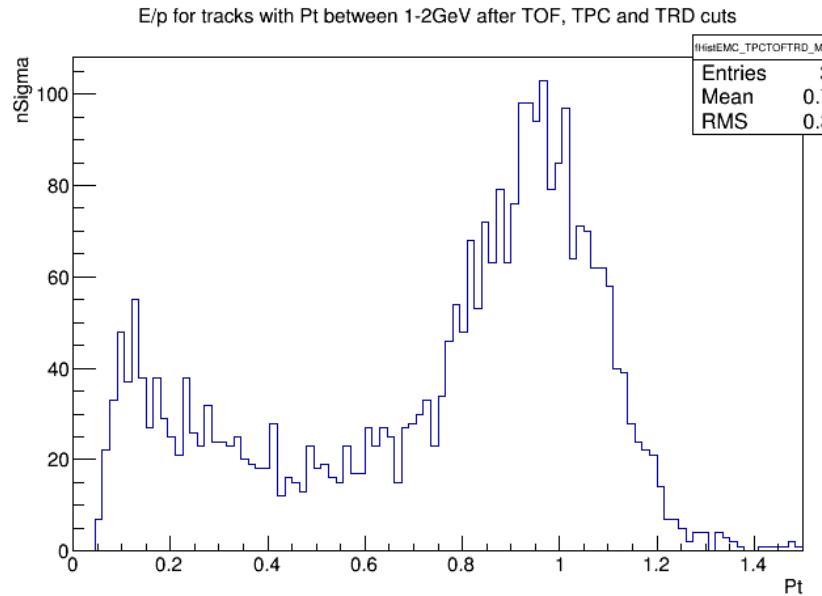
E/p for tracks with Pt between >6GeV after TOF and TRD cuts



E/p for tracks with Pt between >6GeV after TOF and TRD cuts

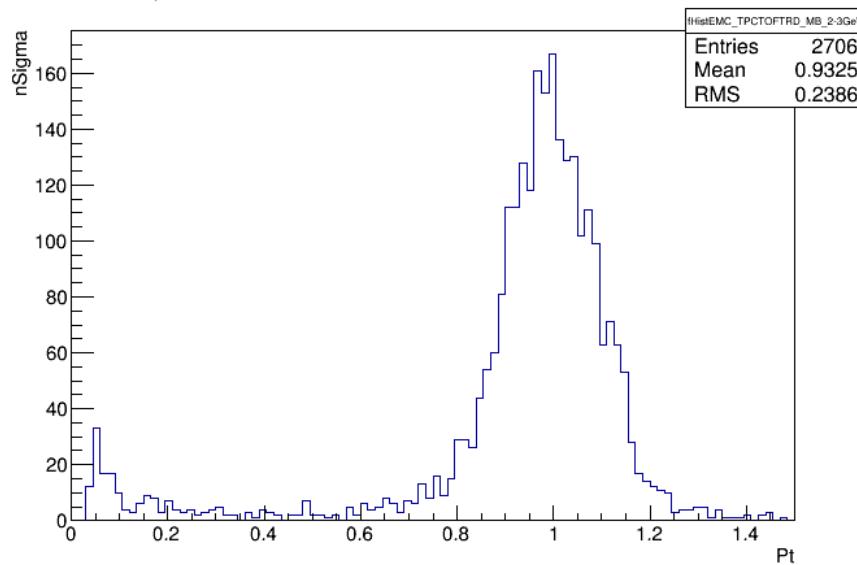


# E/p after 2Sig TPC Cut, 2Sig TOF 1-2Gev cut and >.9 TRD cut

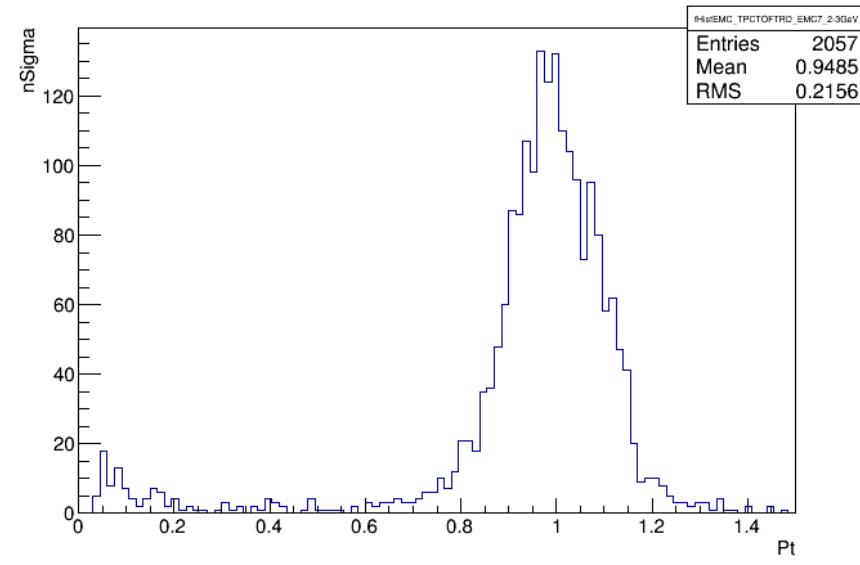


# E/p after 2Sig TPC cut, 2Sig TOF 2-3Gev cut and >.9 TRD cut

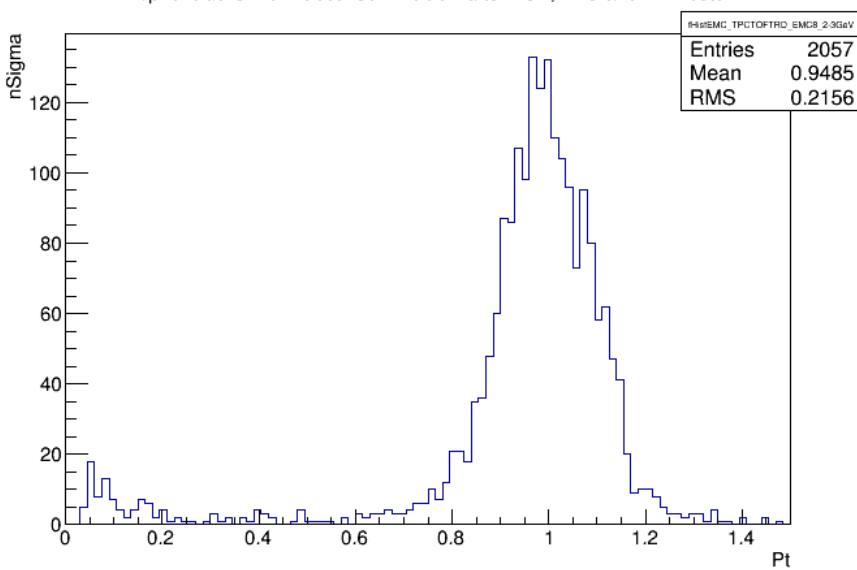
E/p for tracks with Pt between 2-3GeV after TOF, TPC and TRD cuts



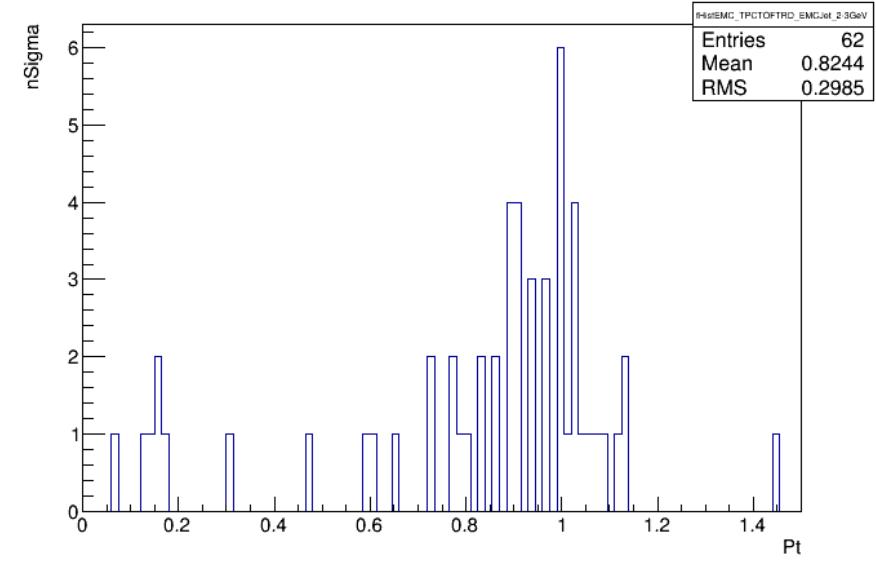
E/p for tracks with Pt between 2-3GeV after TOF, TPC and TRD cuts



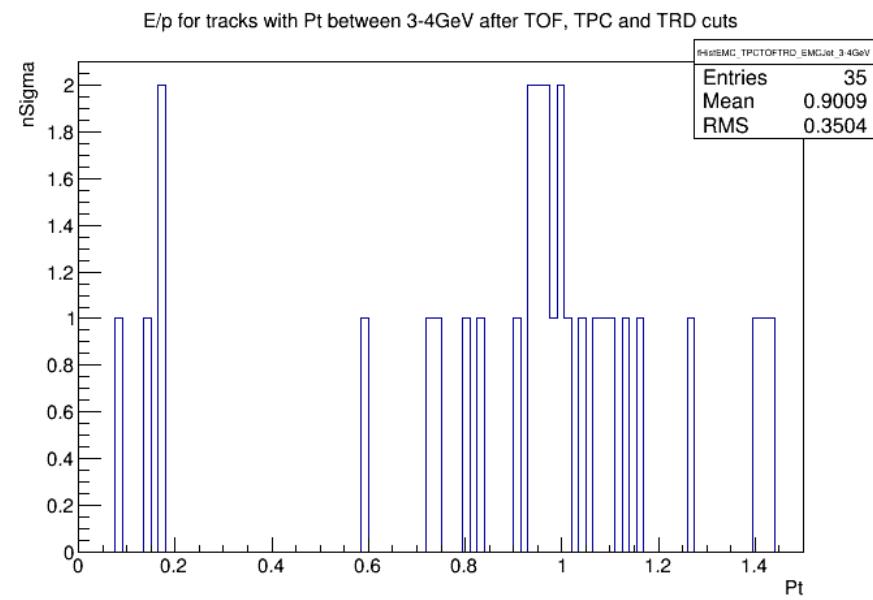
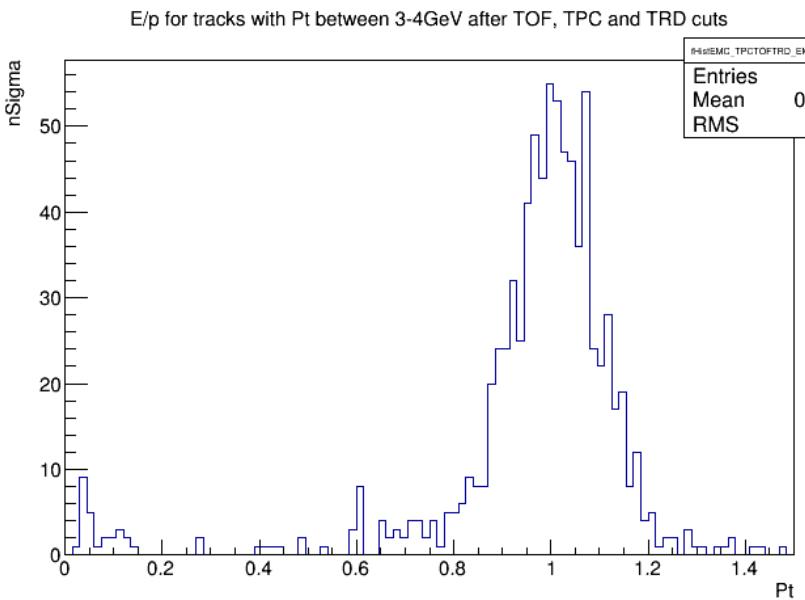
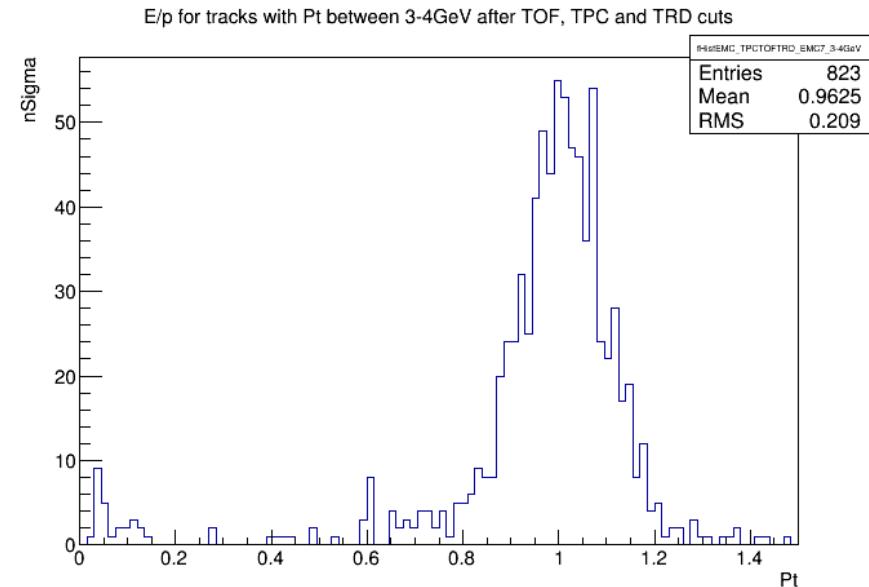
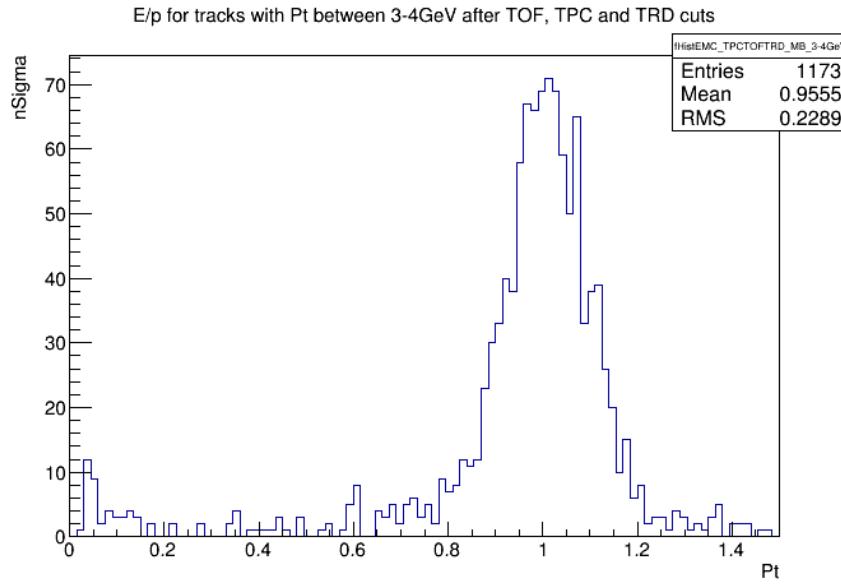
E/p for tracks with Pt between 2-3GeV after TOF, TPC and TRD cuts



E/p for tracks with Pt between 2-3GeV after TOF, TPC and TRD cuts

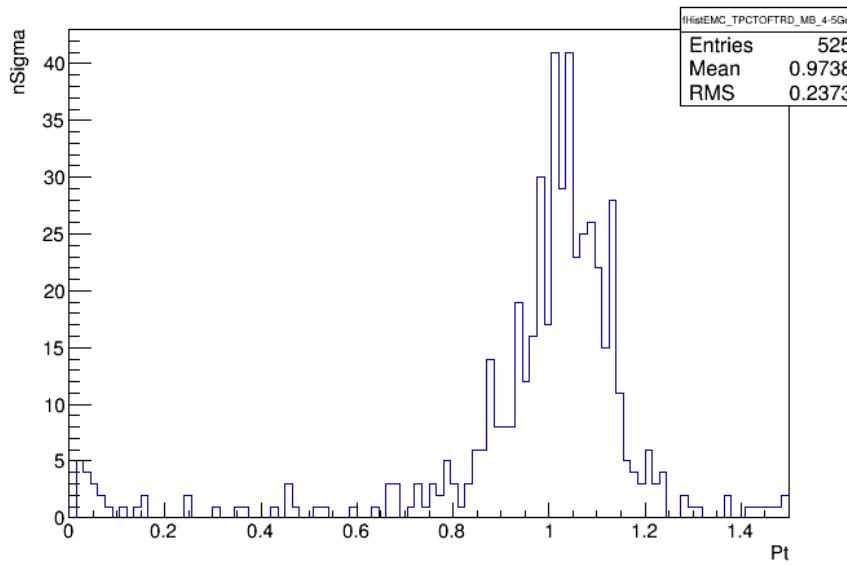


# E/p after 2Sig TPC cut, 2Sig TOF 3-4Gev cut and >.9 TRD cut

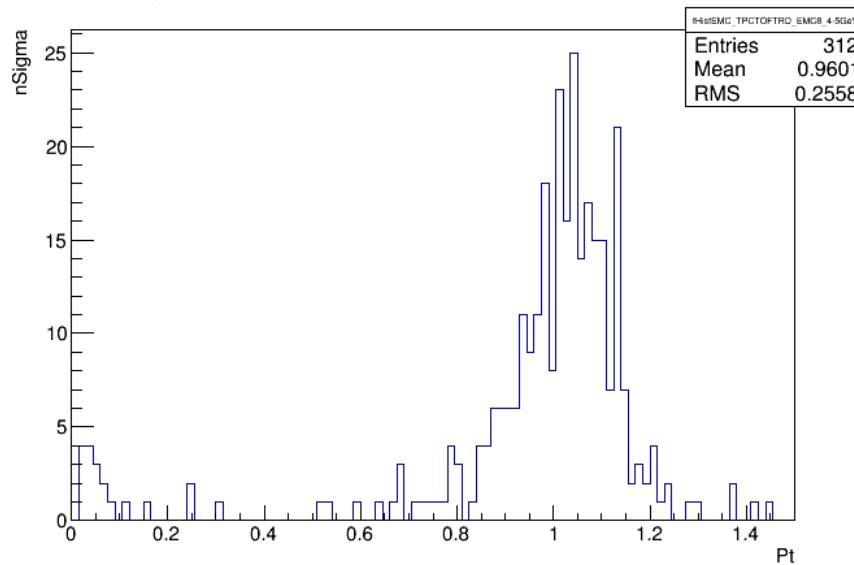


# E/p after 2Sig TPC cut, 2Sig TOF 4-5Gev cut and >.9 TRD cut

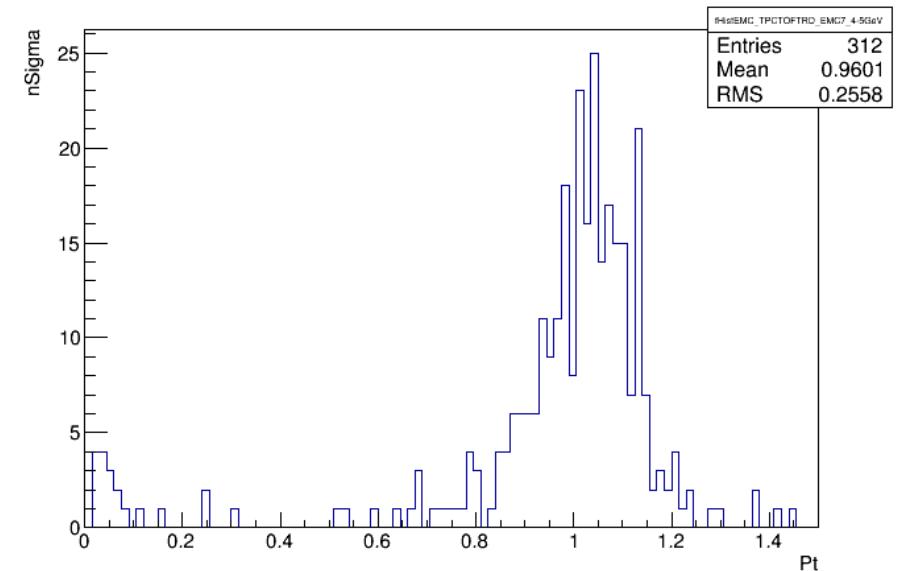
E/p for tracks with Pt between 4-5GeV after TOF, TPC and TRD cuts



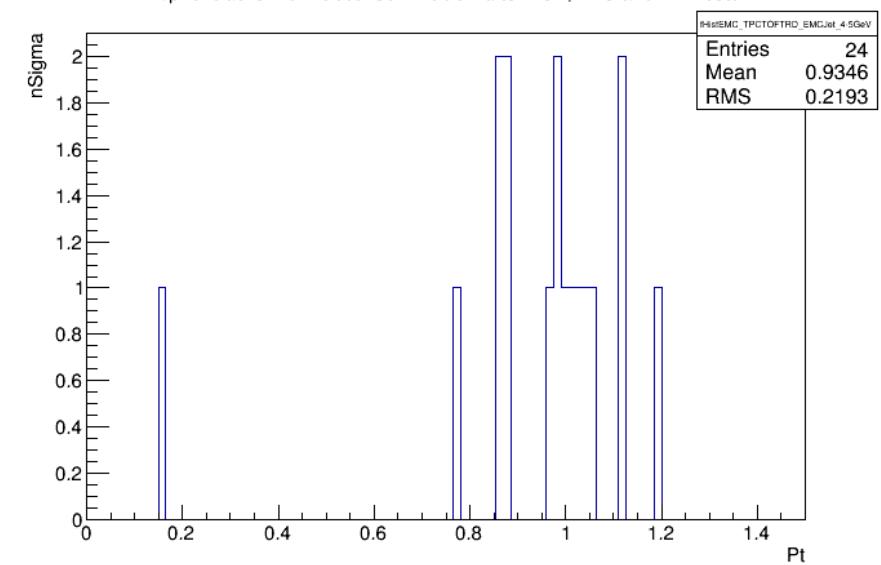
E/p for tracks with Pt between 4-5GeV after TOF, TPC and TRD cuts



E/p for tracks with Pt between 4-5GeV after TOF, TPC and TRD cuts

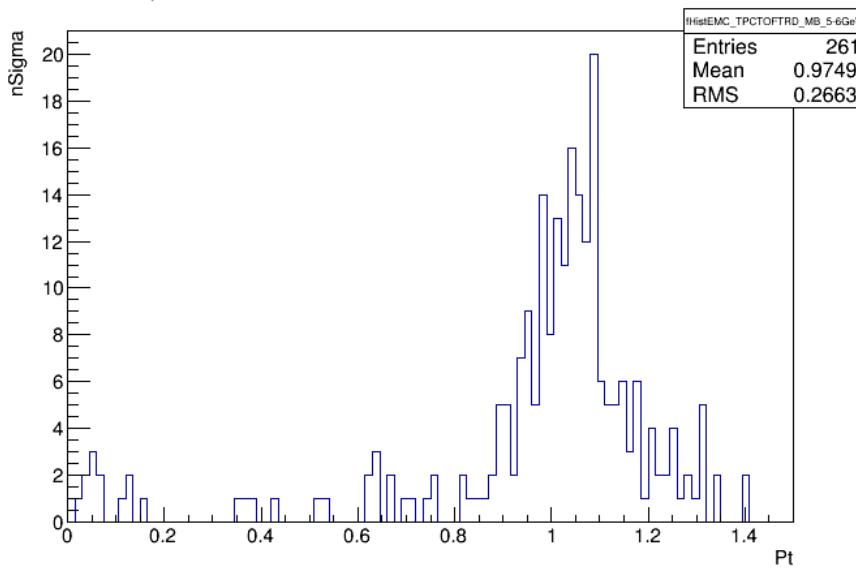


E/p for tracks with Pt between 4-5GeV after TOF, TPC and TRD cuts



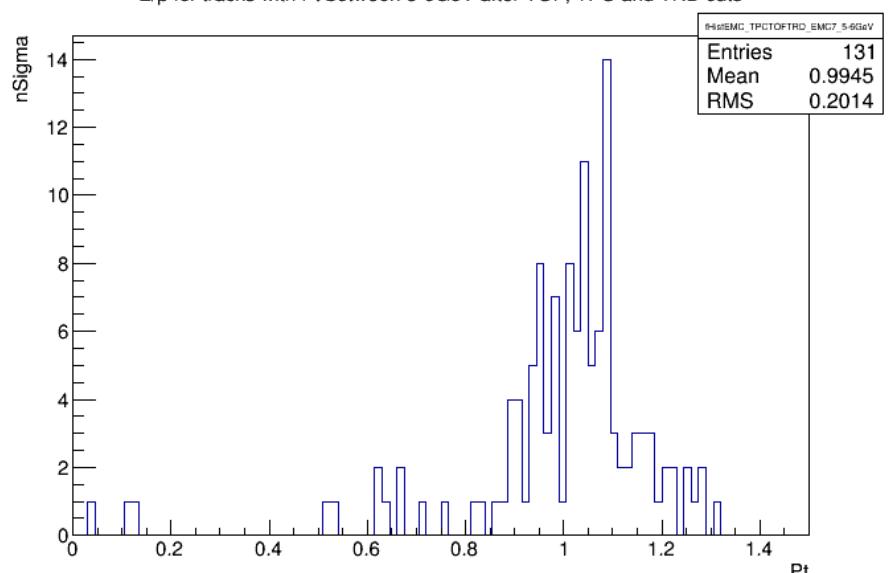
# E/p after 2Sig TPC cut, 2Sig TOF 5-6Gev cut and >.9 TRD cut

E/p for tracks with Pt between 5-6GeV after TOF, TPC and TRD cuts

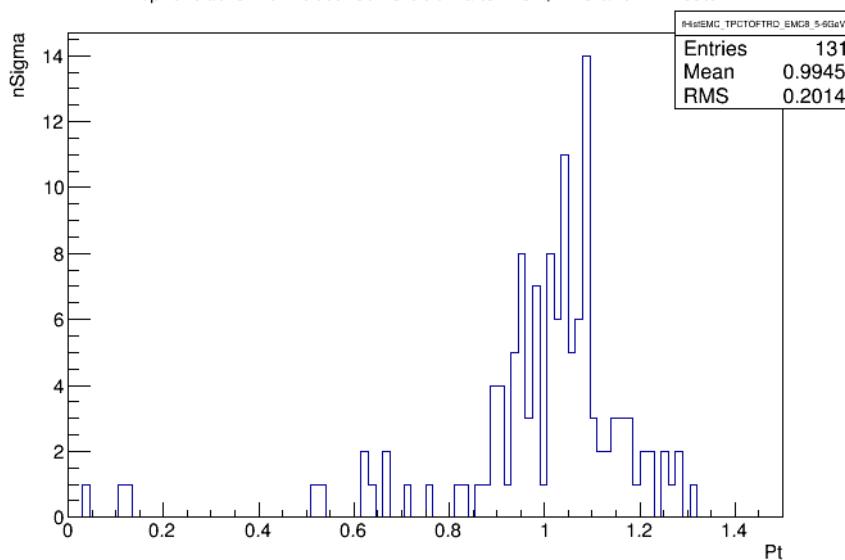


E/p for tracks with Pt between 5-6GeV after TOF, TPC and TRD cuts

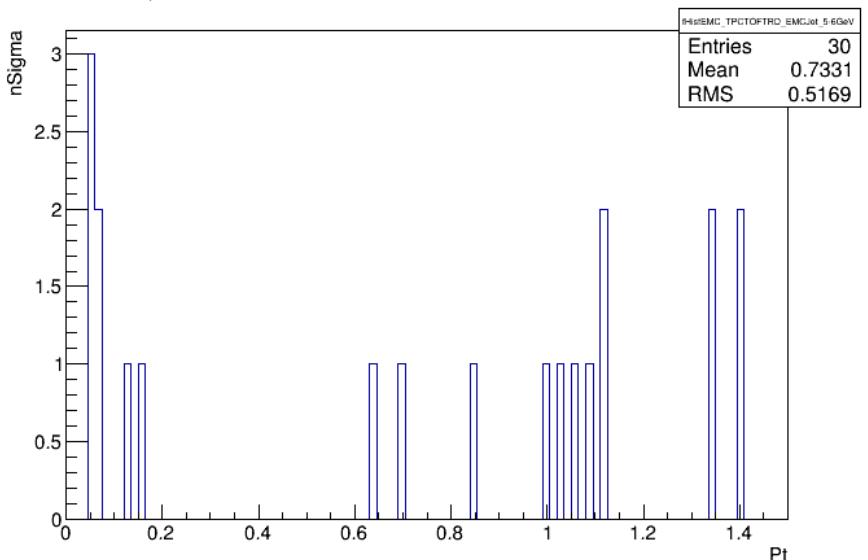
E/p for tracks with Pt between 5-6GeV after TOF, TPC and TRD cuts



E/p for tracks with Pt between 5-6GeV after TOF, TPC and TRD cuts

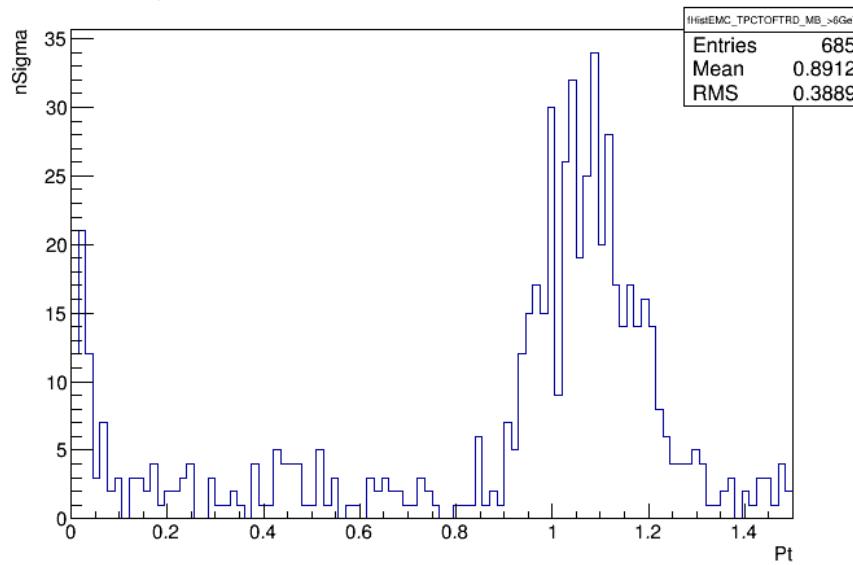


E/p for tracks with Pt between 5-6GeV after TOF, TPC and TRD cuts

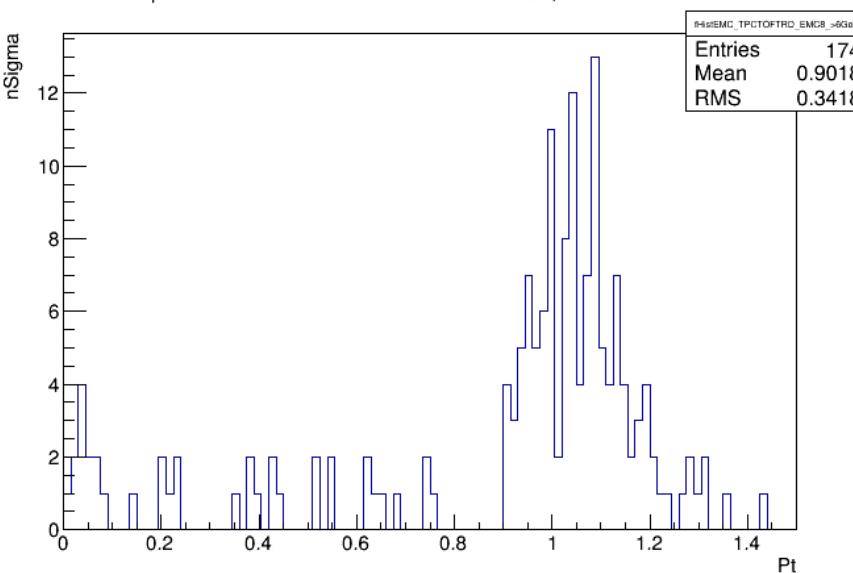


# E/p after 2Sig TPC cut, 2Sig TOF >6Gev cut and >.9 TRD cut

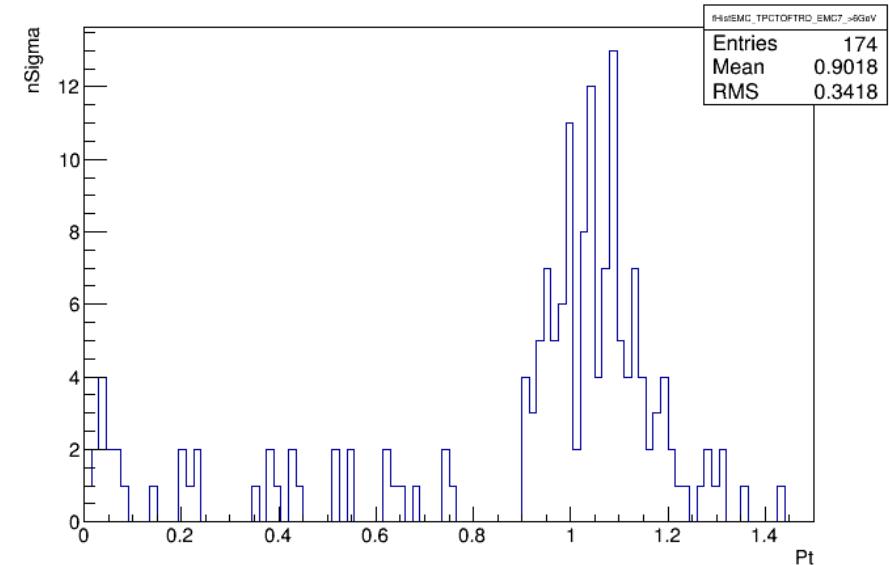
E/p for tracks with Pt between >6GeV after TOF, TPC and TRD cuts



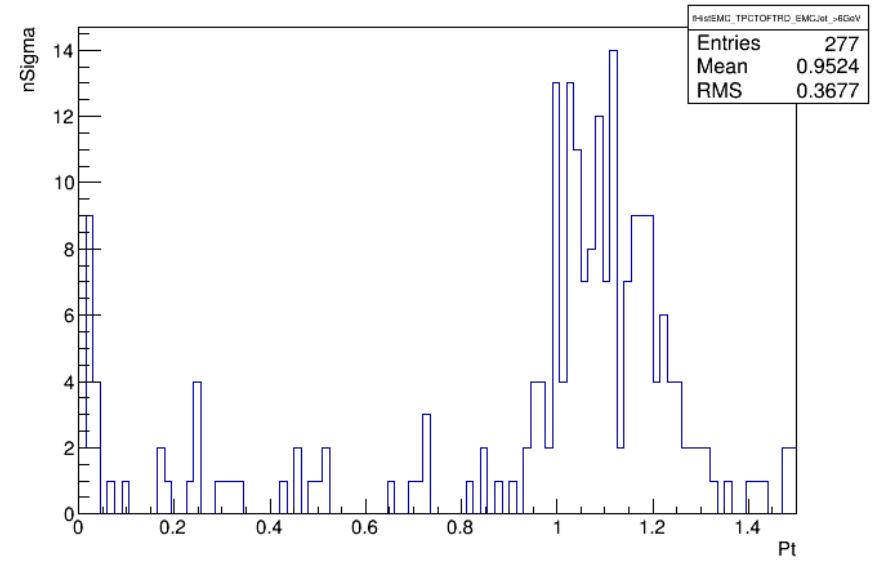
E/p for tracks with Pt between >6GeV after TOF, TPC and TRD cuts



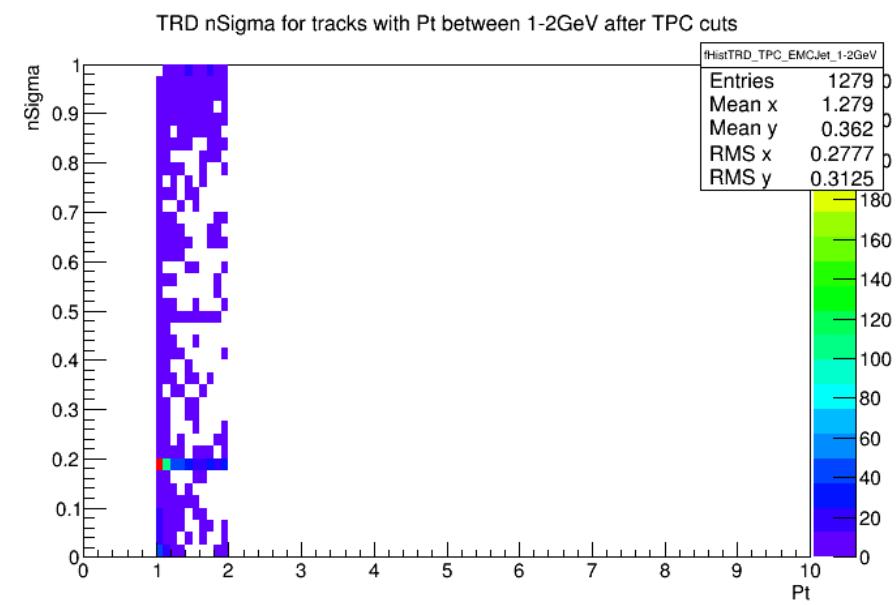
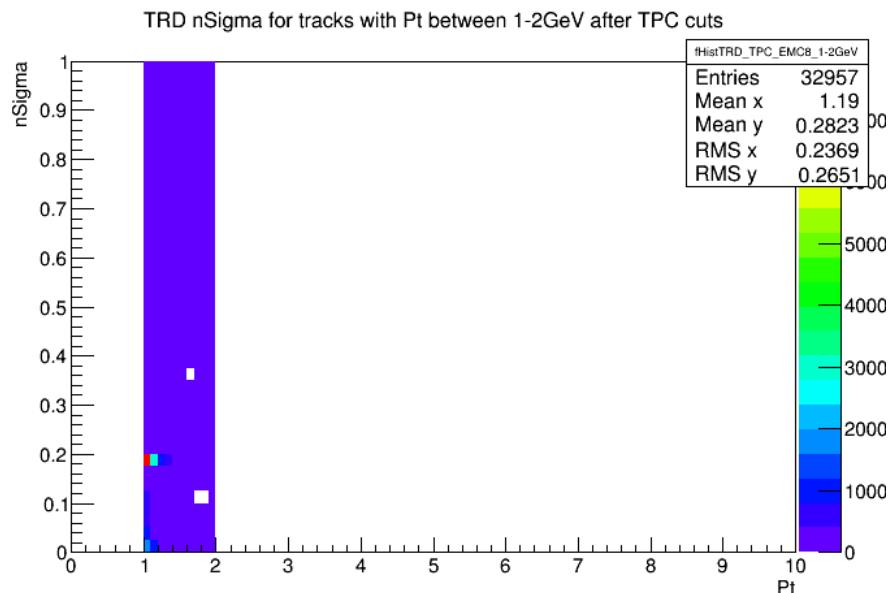
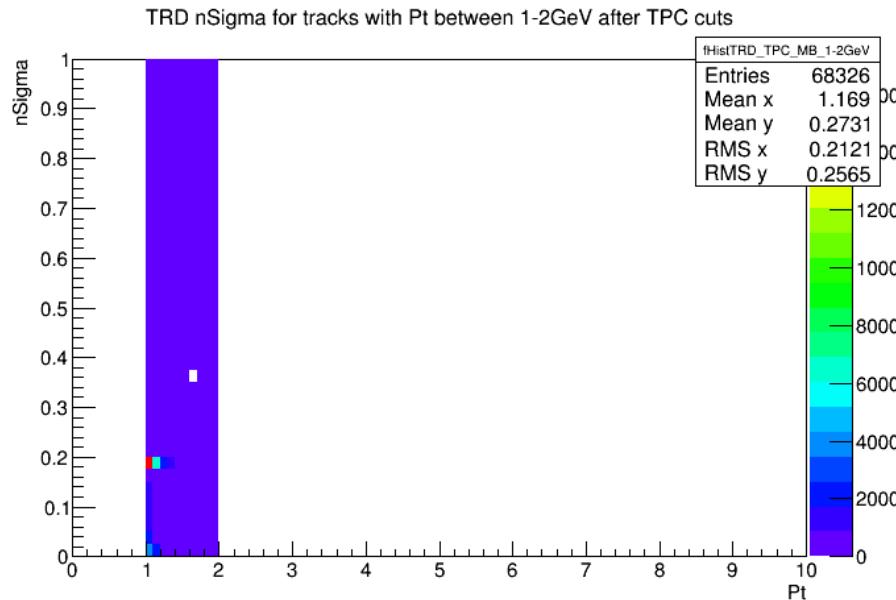
E/p for tracks with Pt between >6GeV after TOF, TPC and TRD cuts



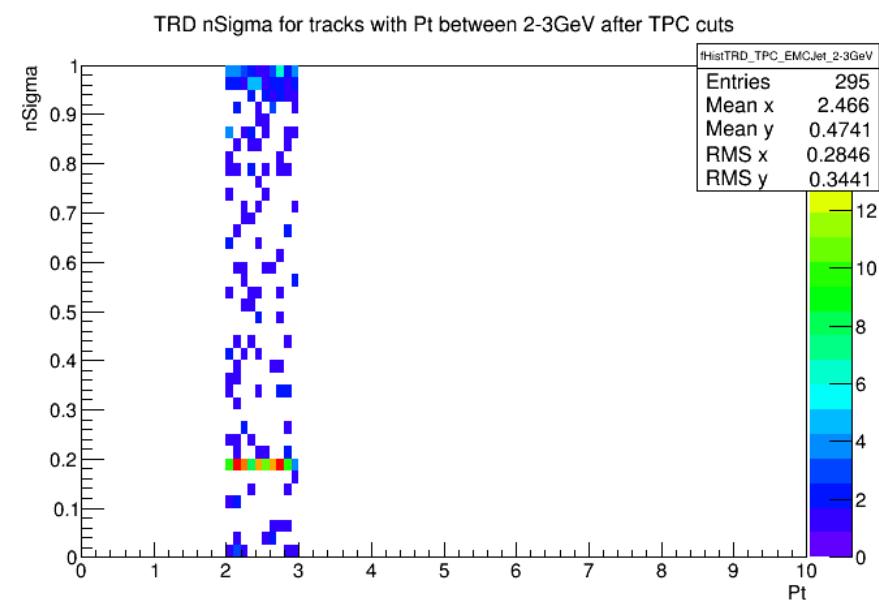
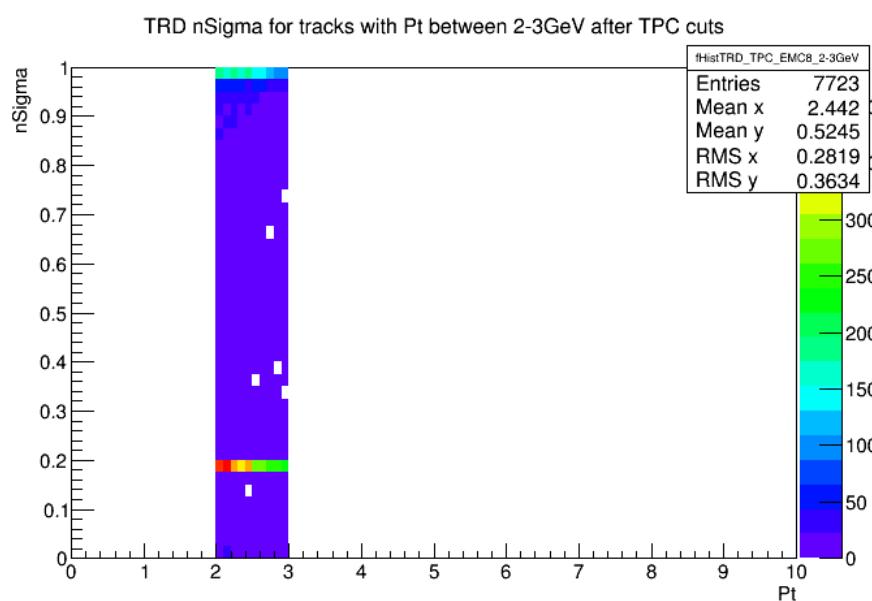
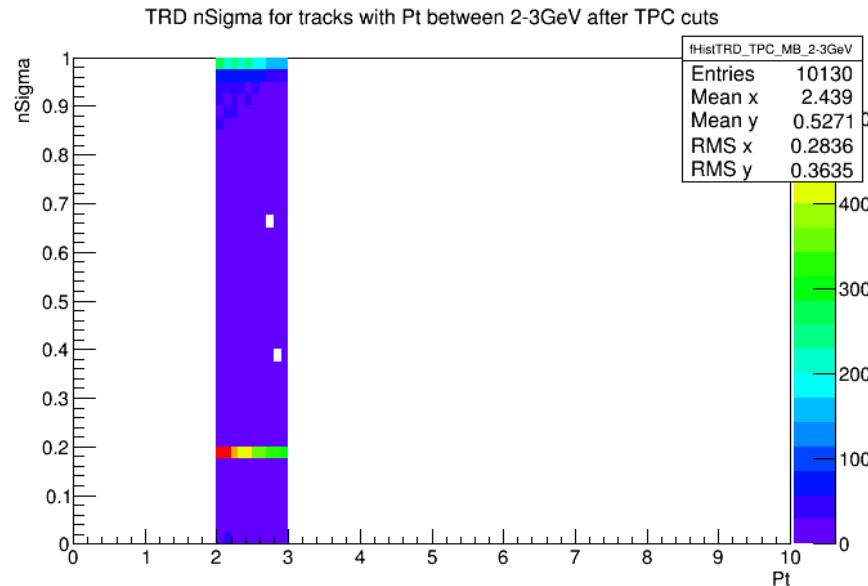
E/p for tracks with Pt between >6GeV after TOF, TPC and TRD cuts



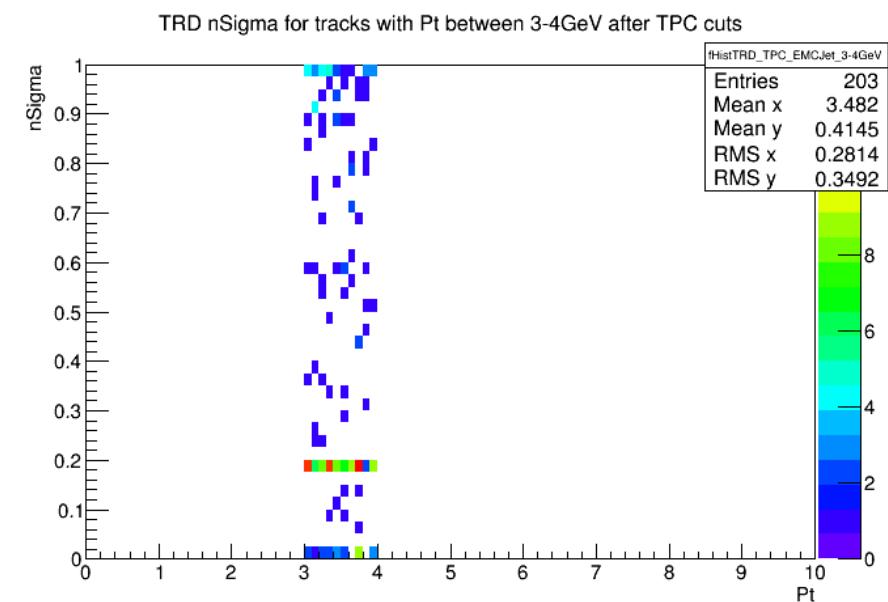
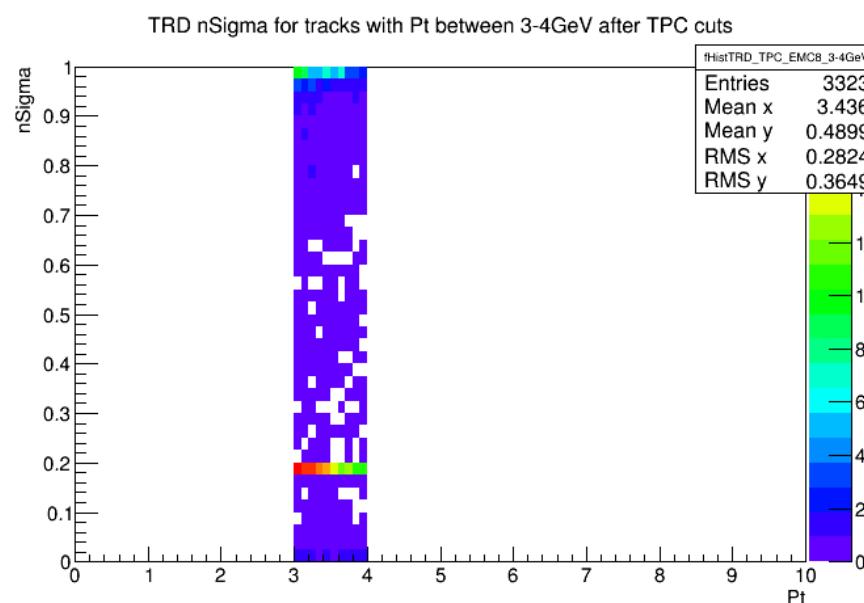
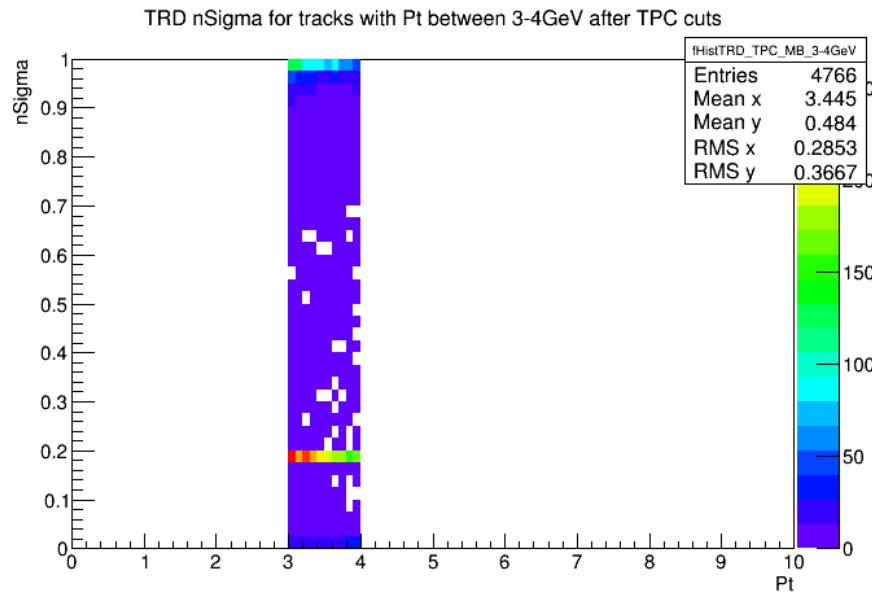
# TRD electron likelihood after 2Sig 1-2Gev TPC Cut



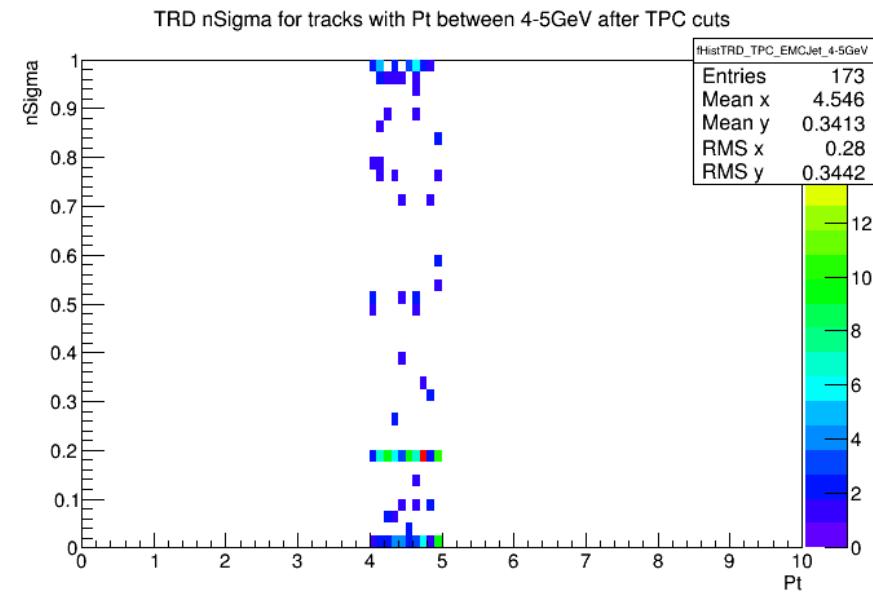
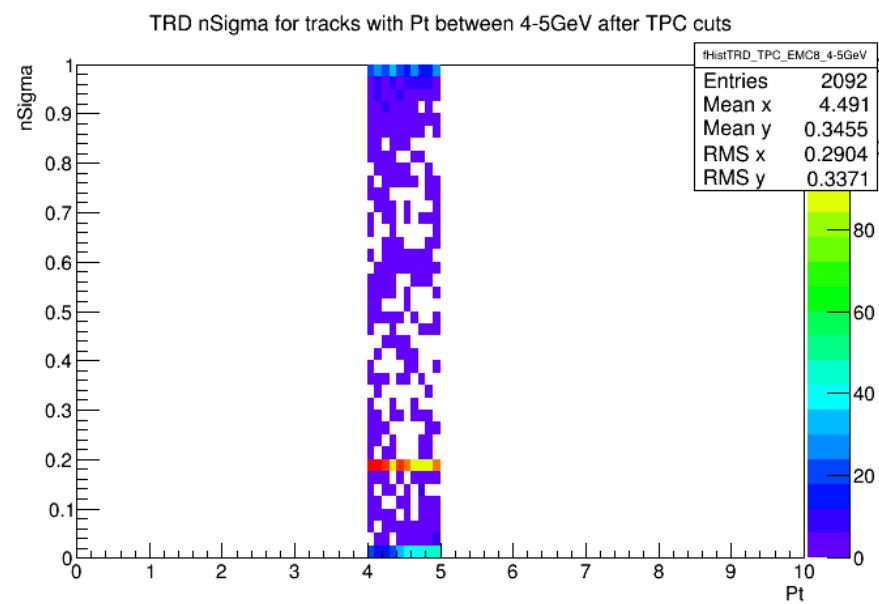
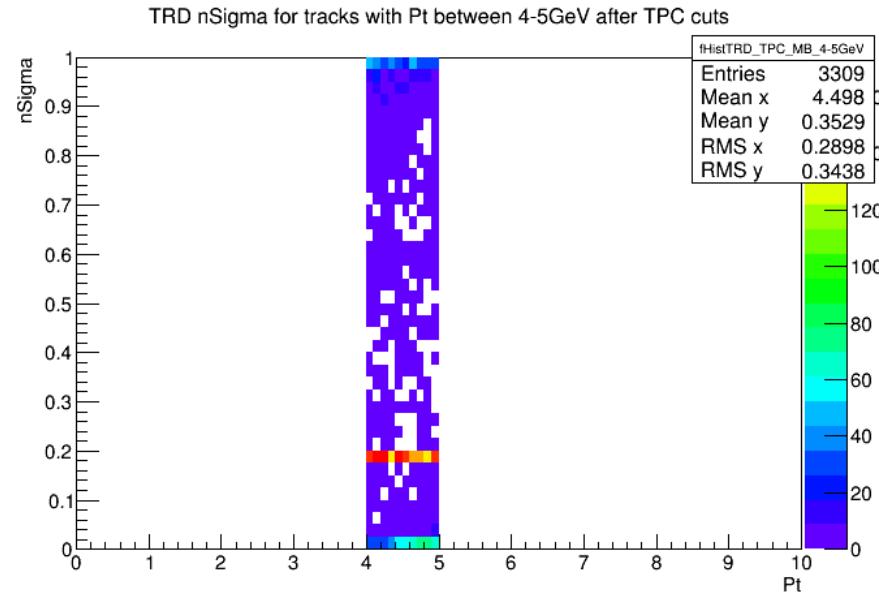
# TRD electron likelihood after 2Sig 2-3Gev TPC cut



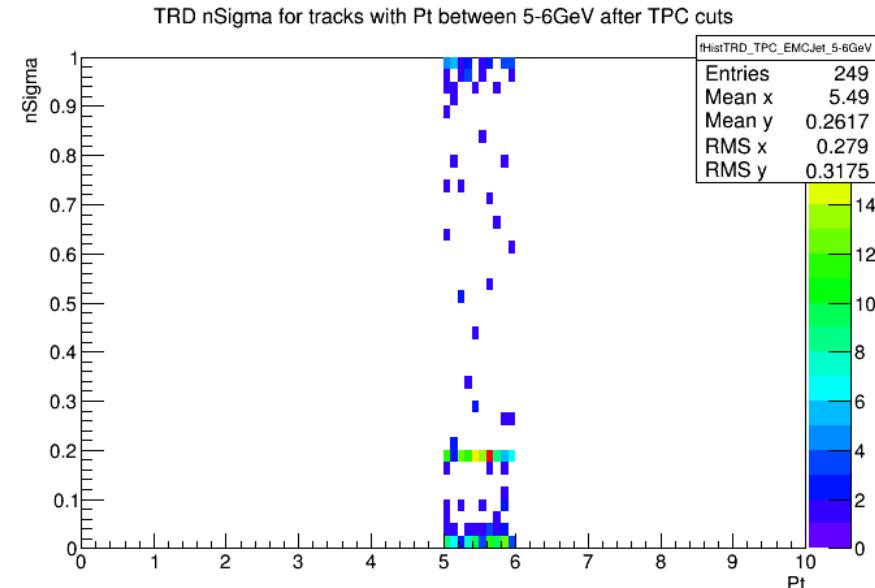
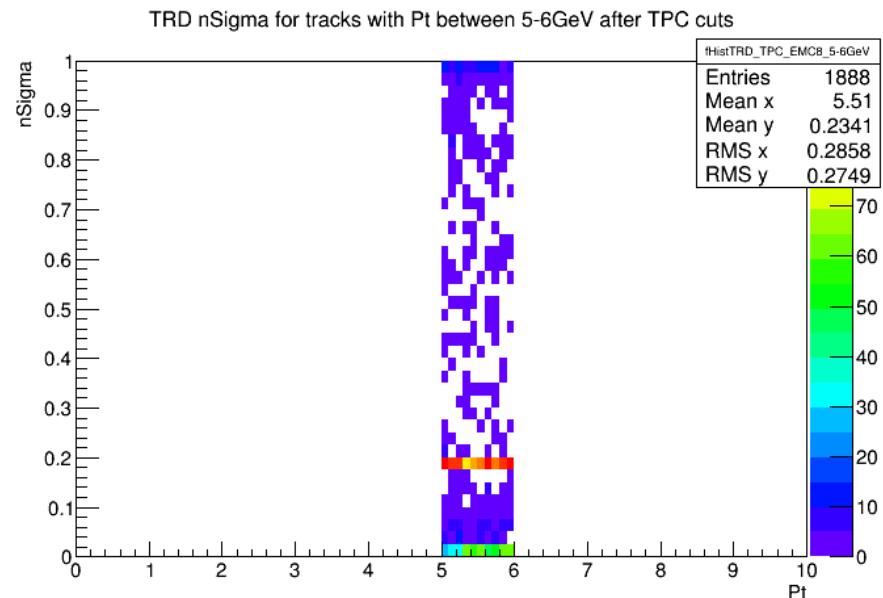
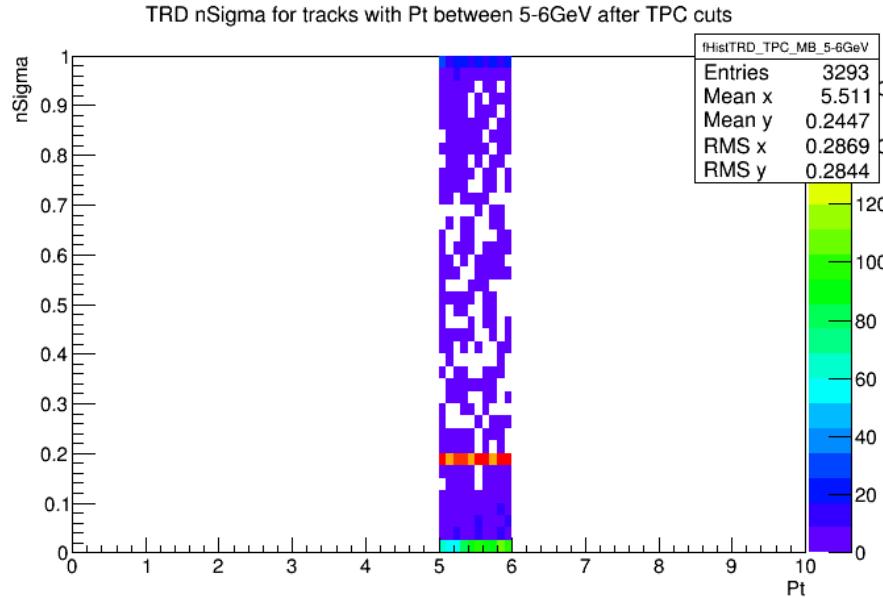
# TRD electron likelihood after 2Sig 3-4Gev TPC cut



# TRD electron likelihood after 2Sig 4-5Gev TPC cut

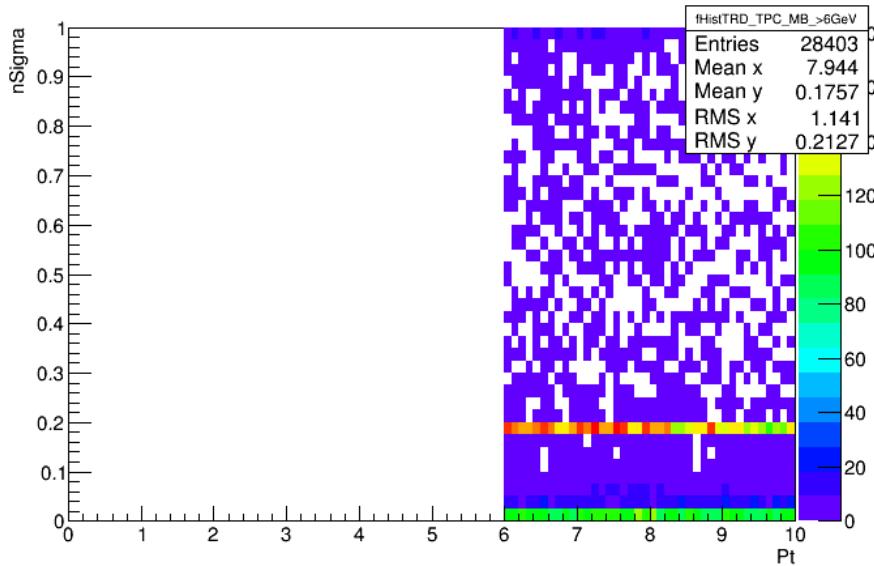


# TRD electron likelihood after 2Sig 5-6Gev TPC cut

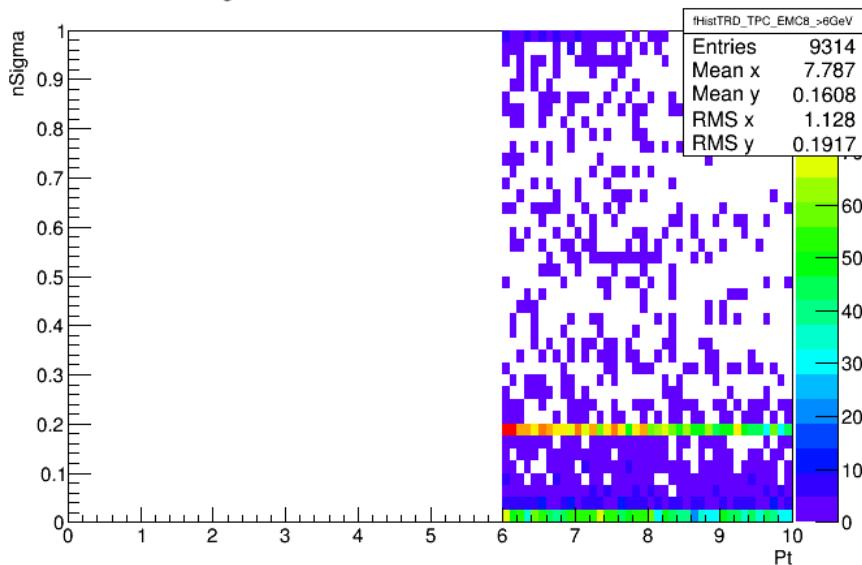


# TRD electron likelihood after 2Sig >6Gev TPC cut

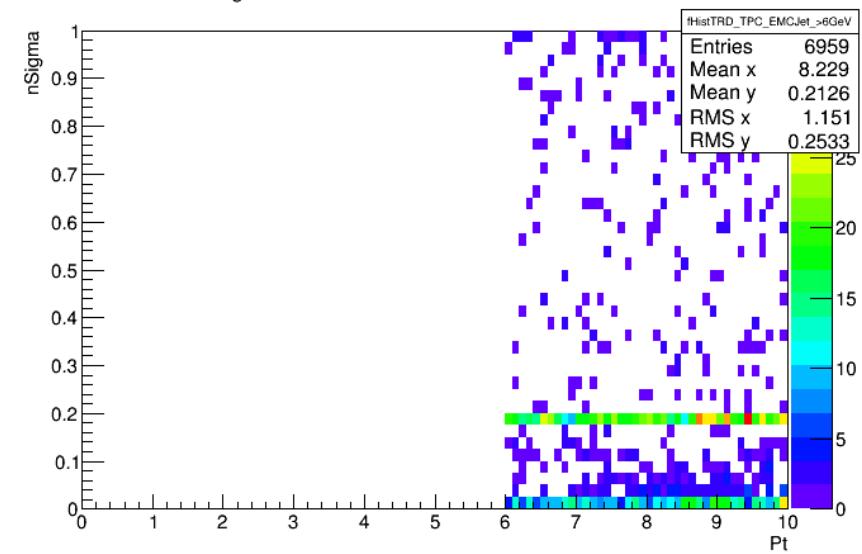
TRD nSigma for tracks with Pt between >6GeV after TPC cuts



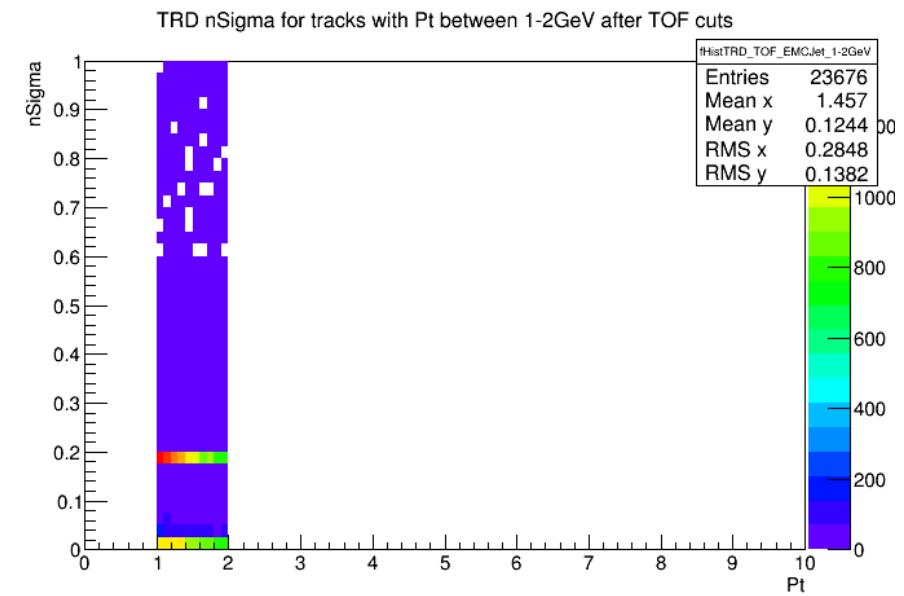
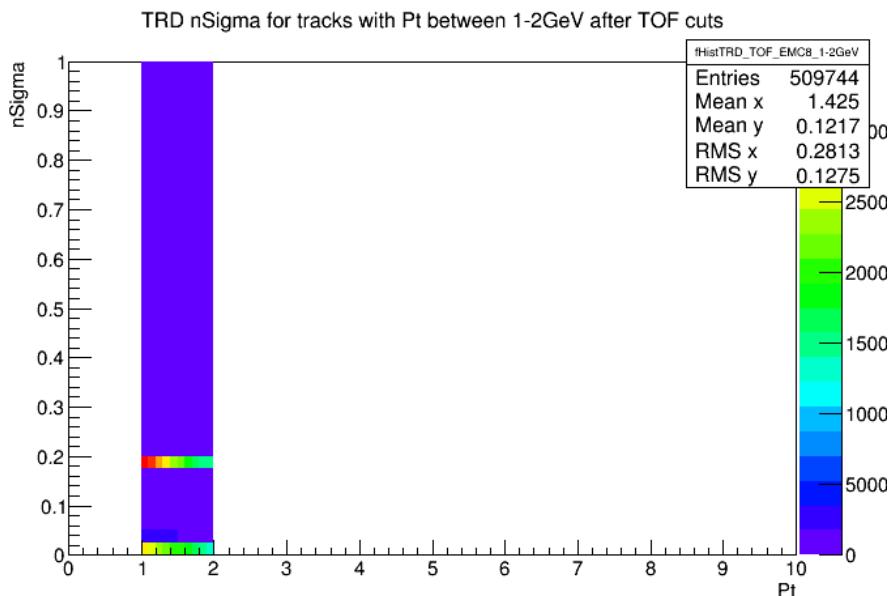
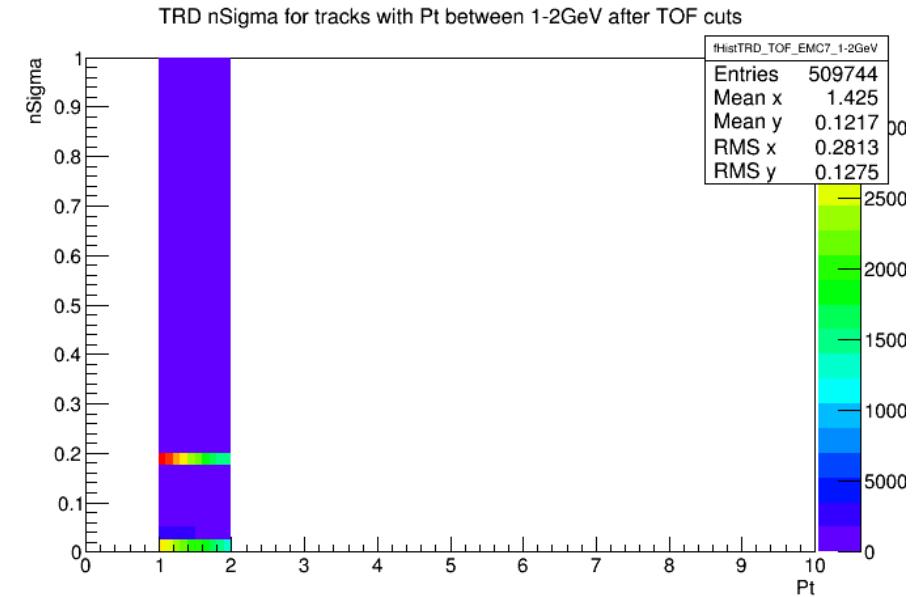
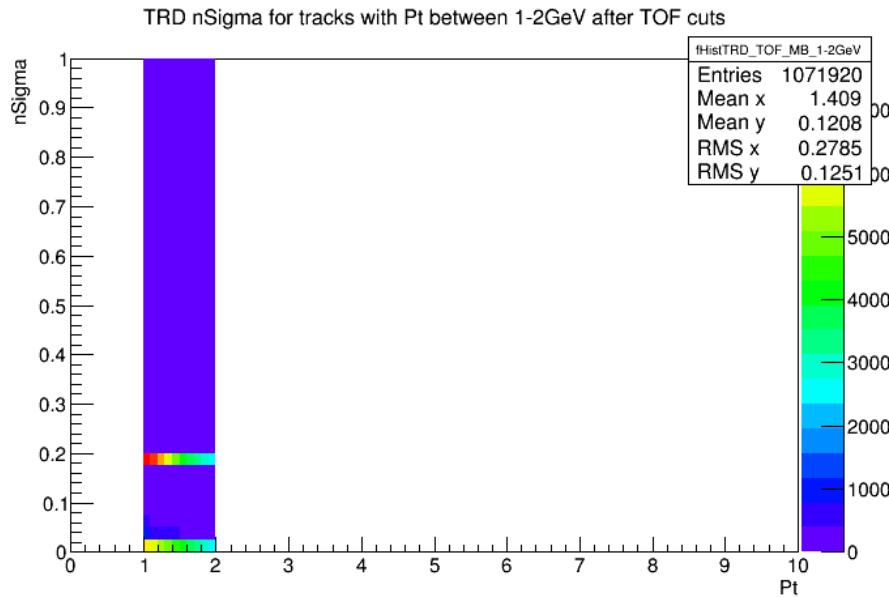
TRD nSigma for tracks with Pt between >6GeV after TPC cuts



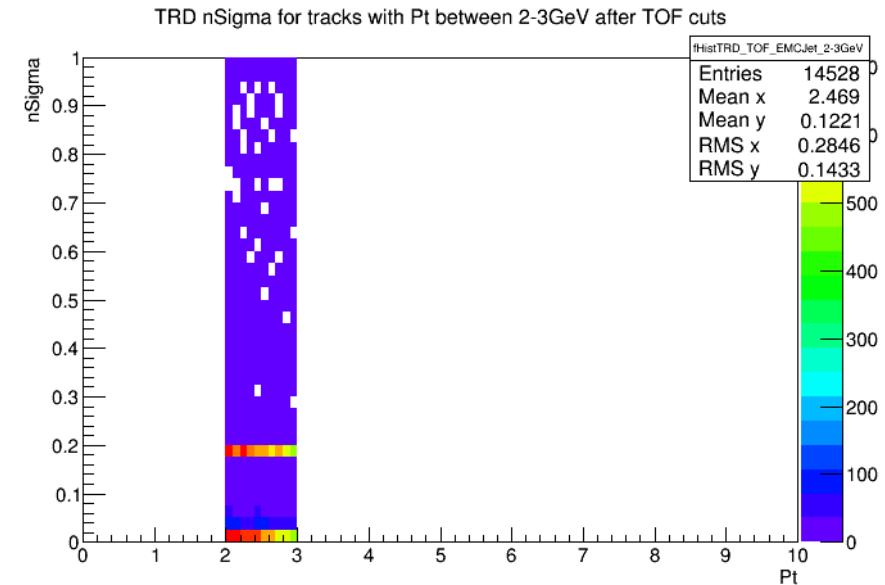
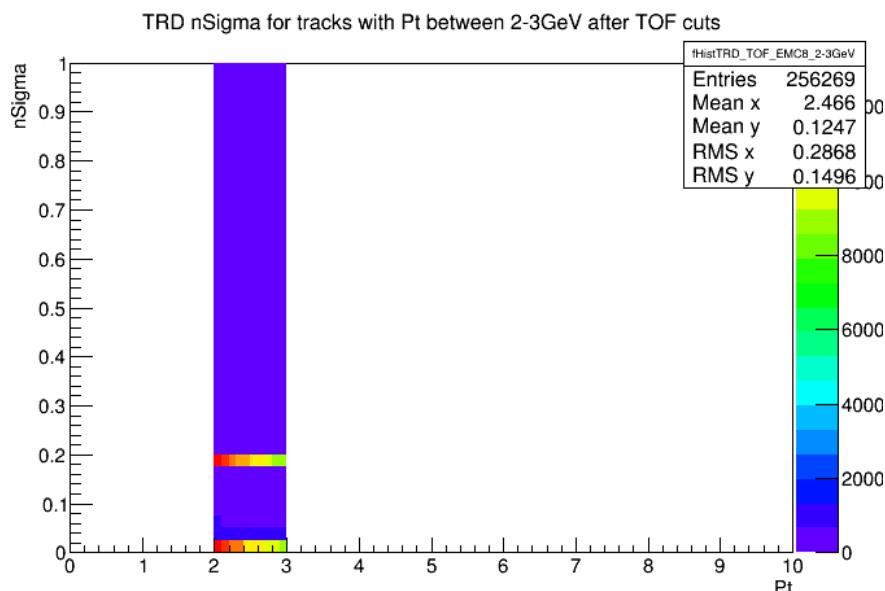
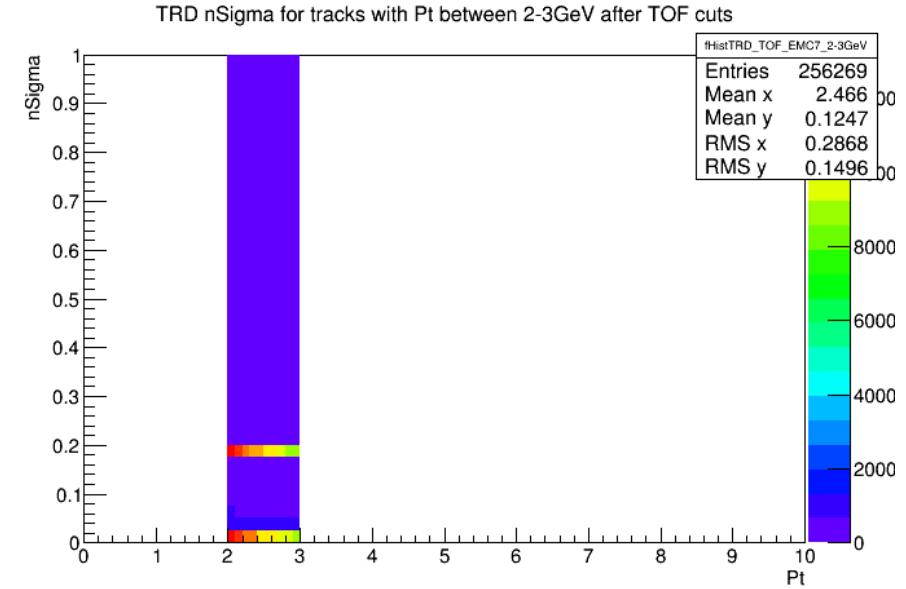
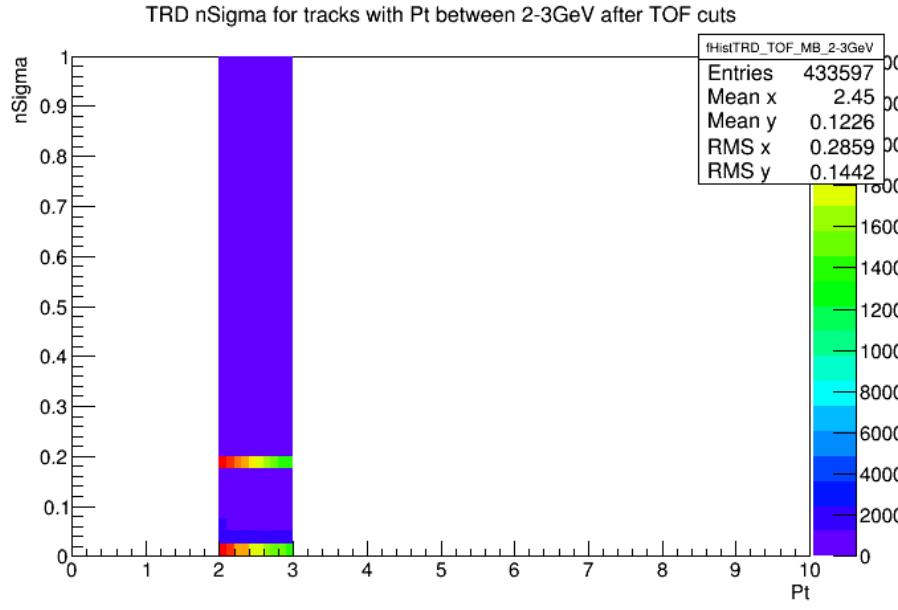
TRD nSigma for tracks with Pt between >6GeV after TPC cuts



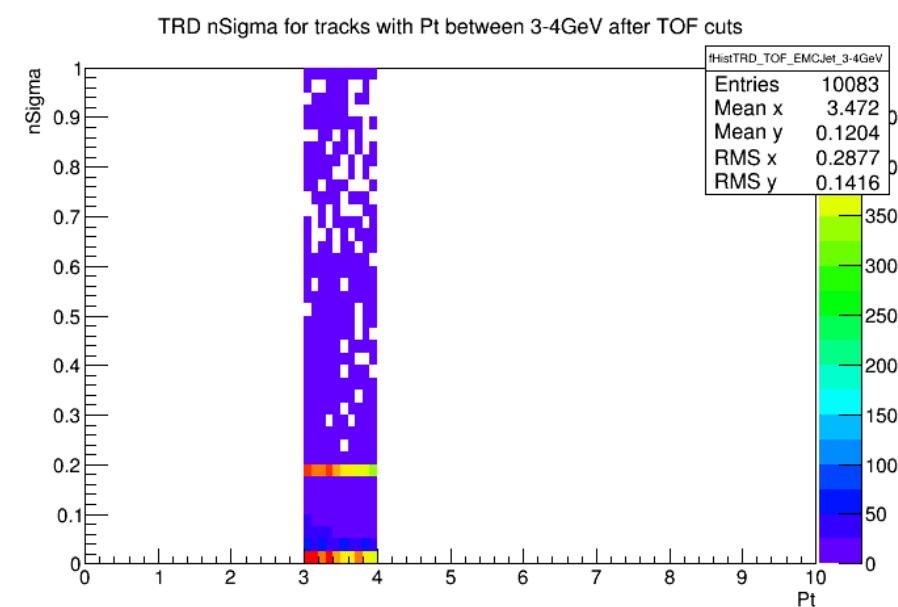
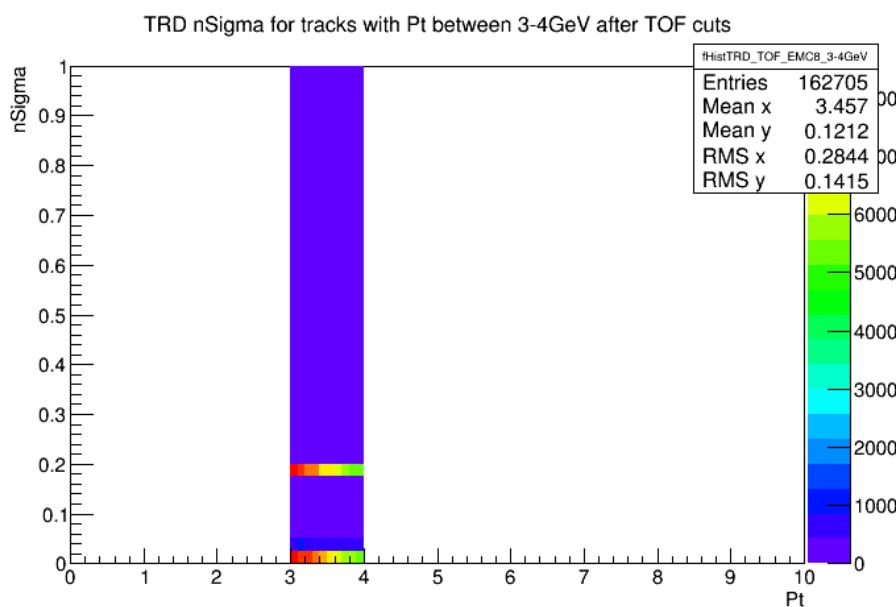
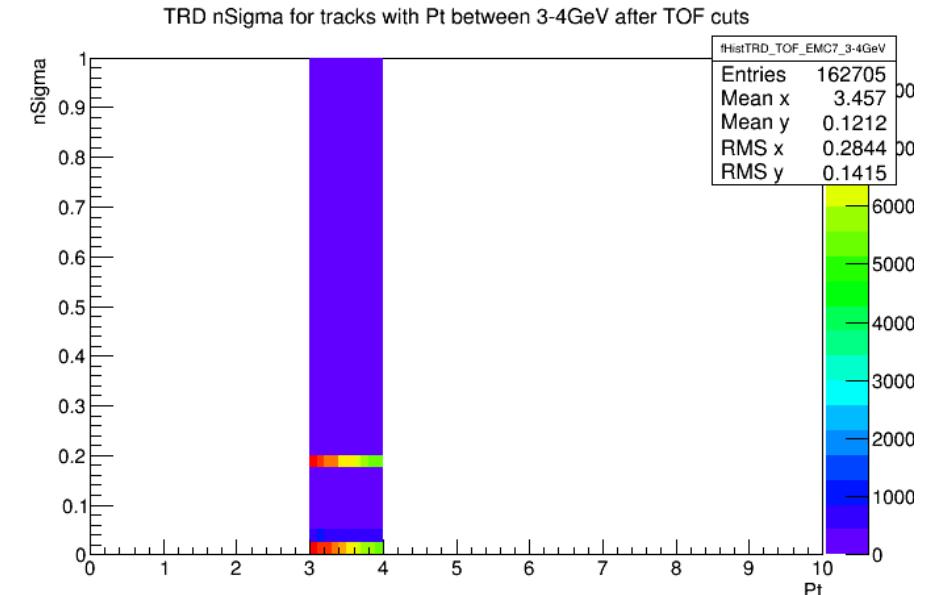
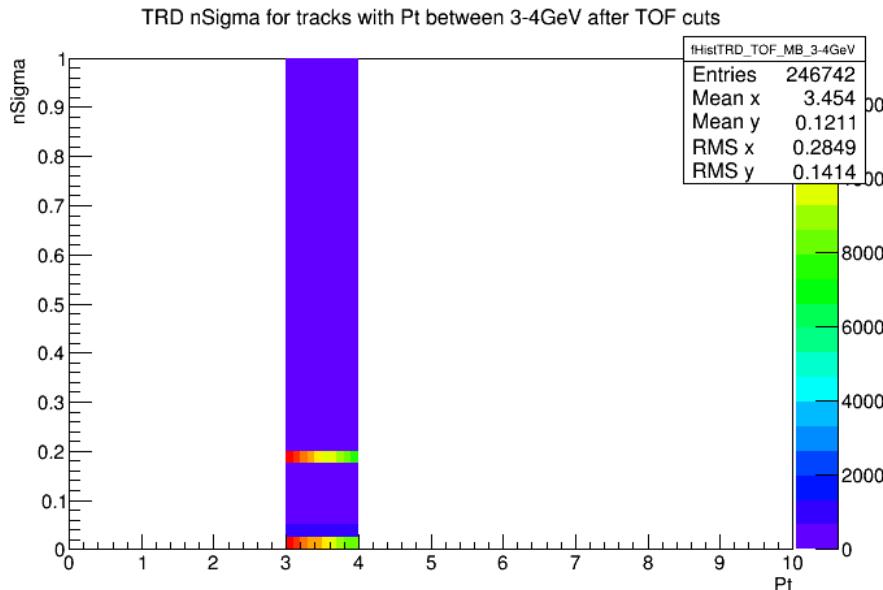
# TRD electron likelihood after 2Sig 1-2Gev TOF Cut



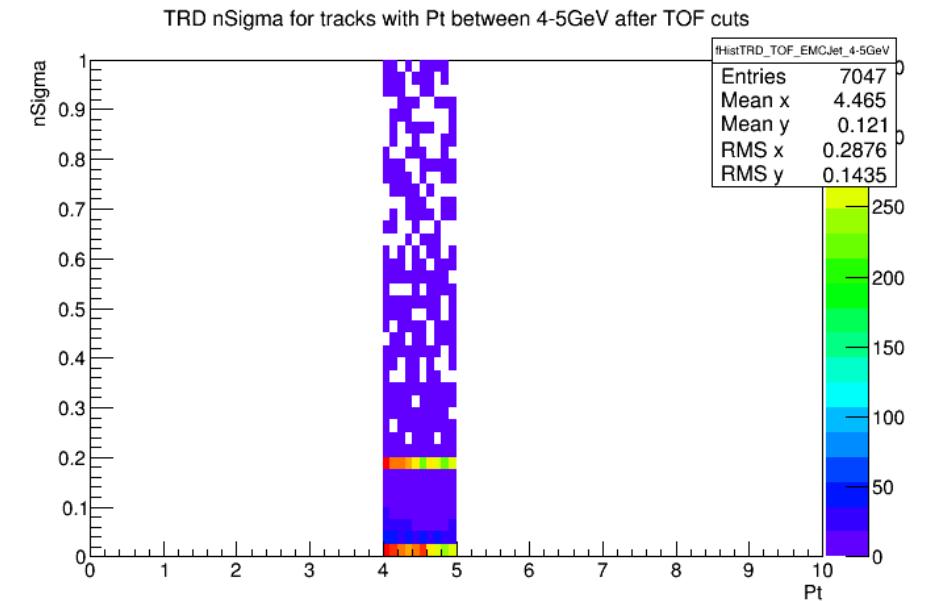
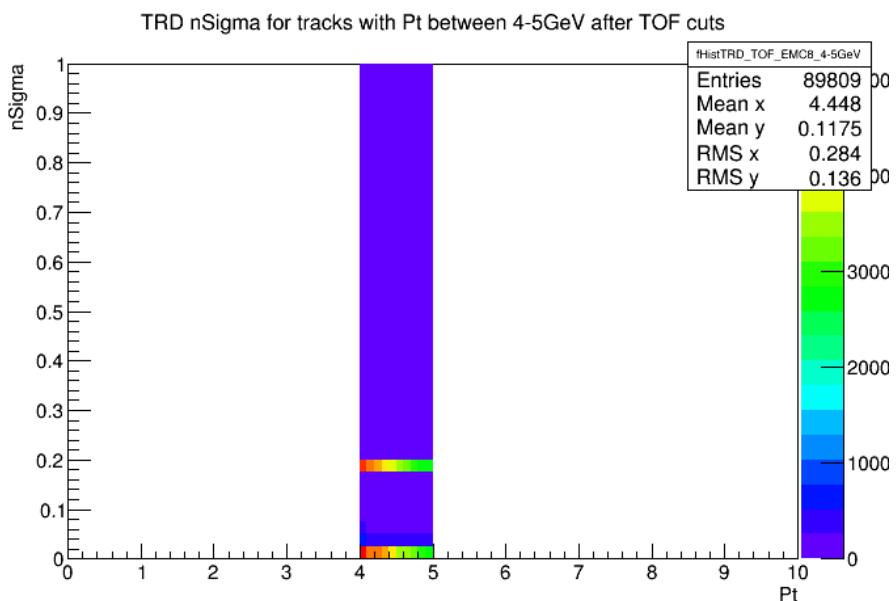
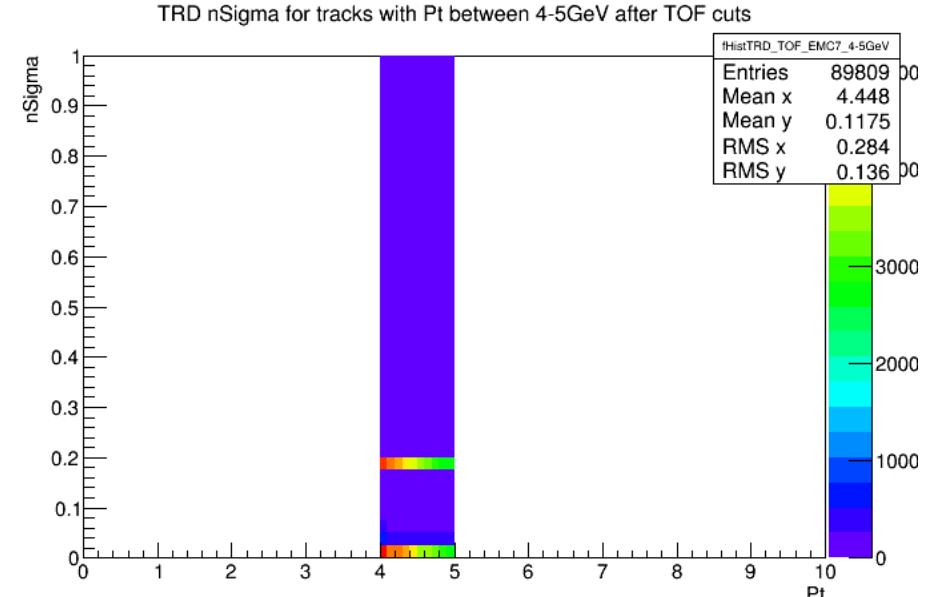
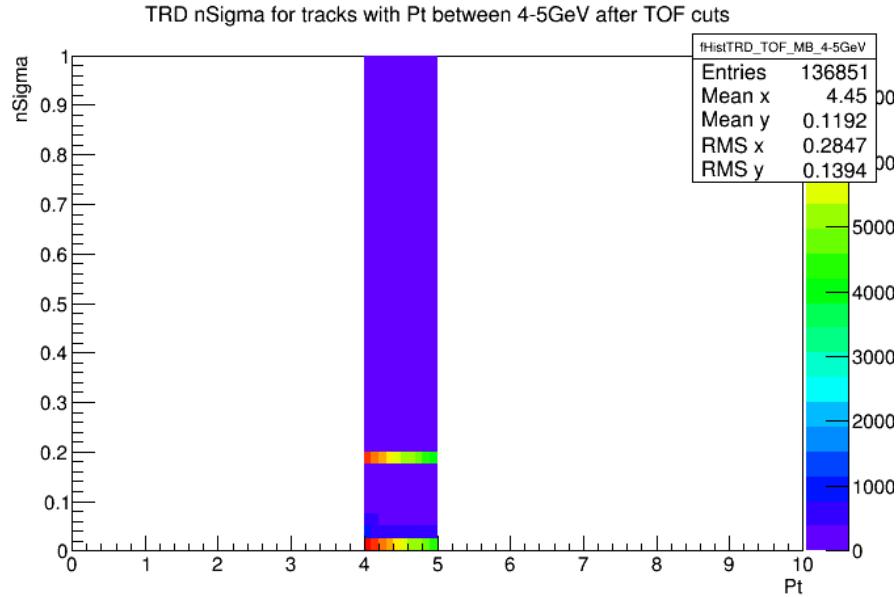
# TRD electron likelihood after 2Sig 2-3Gev TOF cut



# TRD electron likelihood after 2Sig 3-4Gev TOF cut

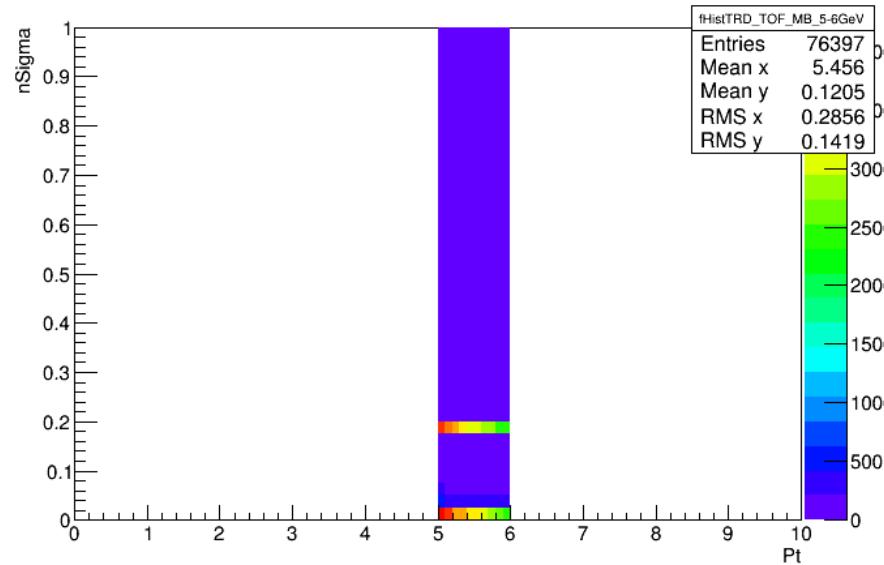


# TRD electron likelihood after 2Sig 4-5Gev TOF cut

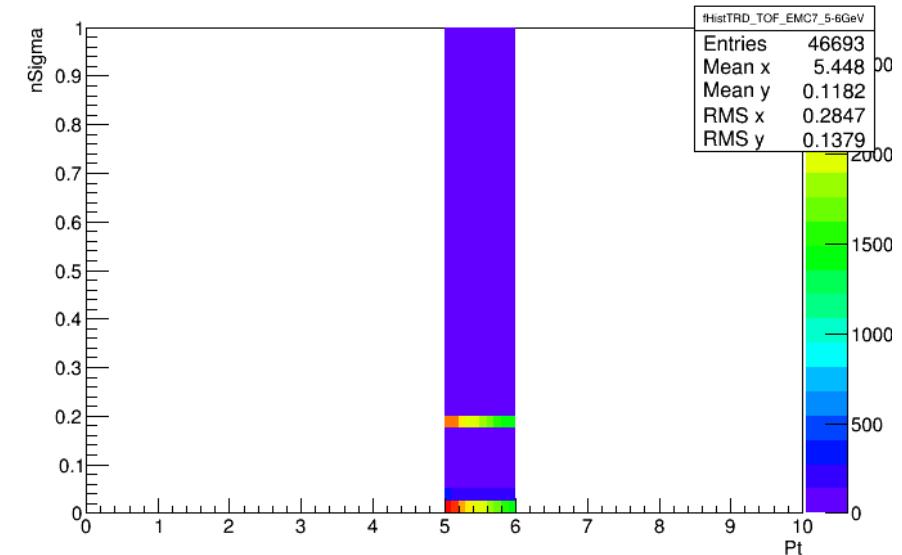


# TRD electron likelihood after 2Sig TOF cut

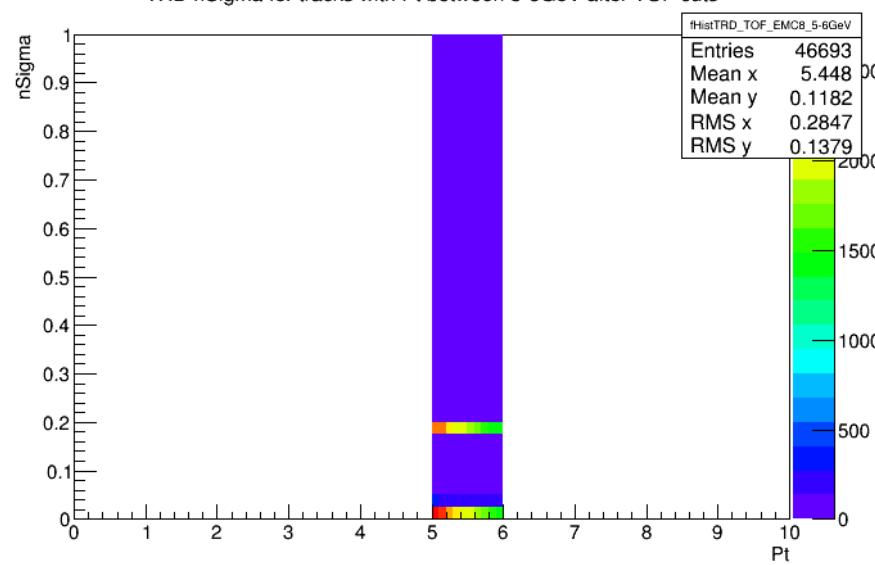
TRD nSigma for tracks with Pt between 5-6GeV after TOF cuts



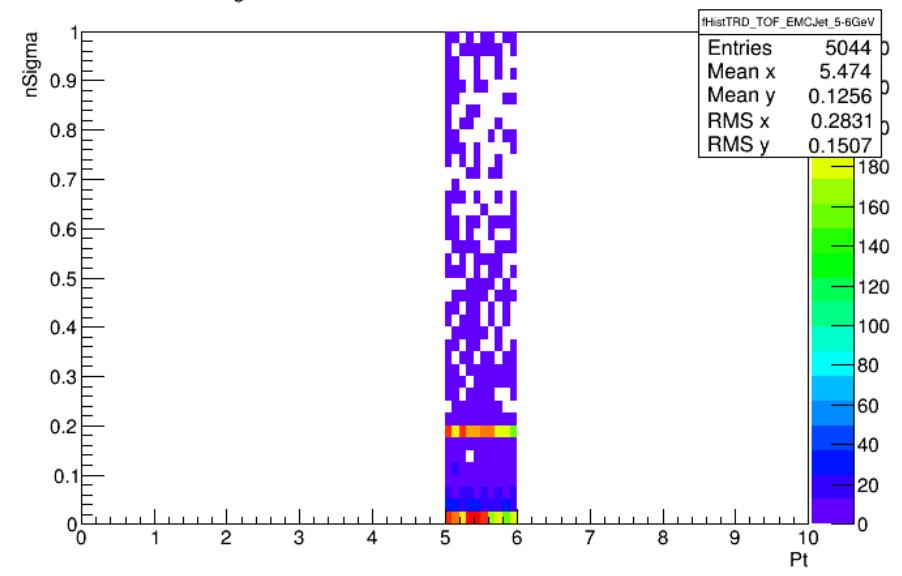
TRD nSigma for tracks with Pt between 5-6GeV after TOF cuts



TRD nSigma for tracks with Pt between 5-6GeV after TOF cuts

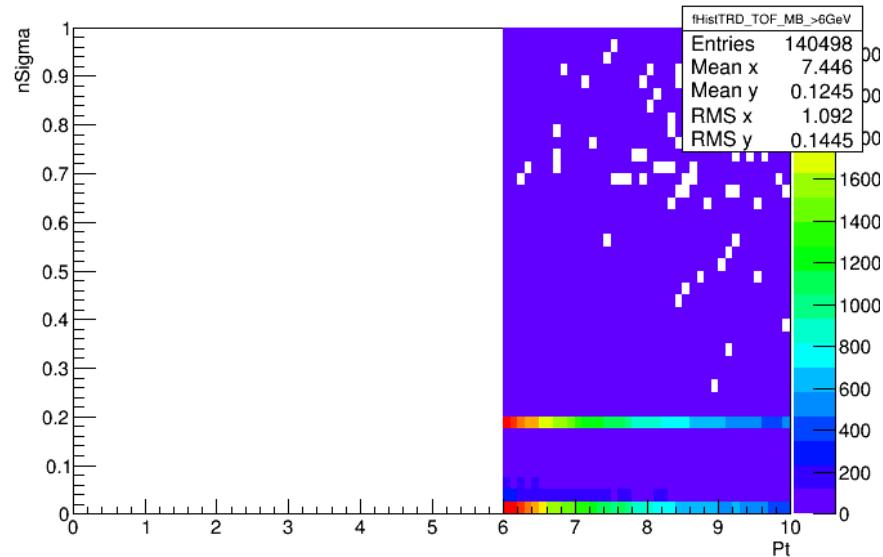


TRD nSigma for tracks with Pt between 5-6GeV after TOF cuts

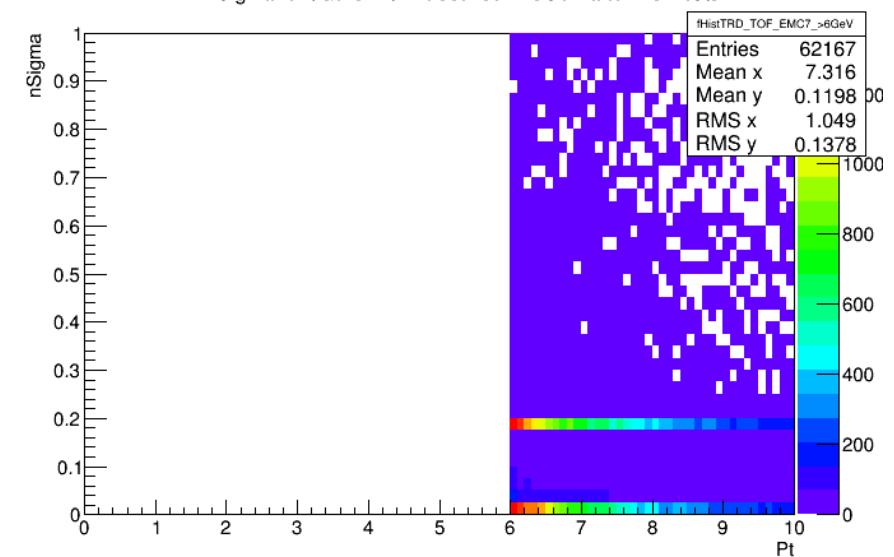


# TRD electron likelihood after 2Sig >6Gev TOF cut

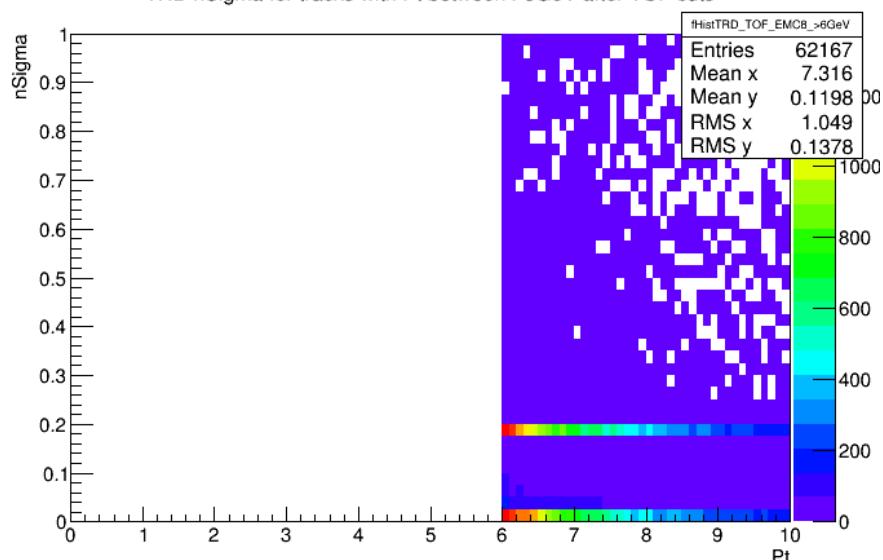
TRD nSigma for tracks with Pt between >6GeV after TOF cuts



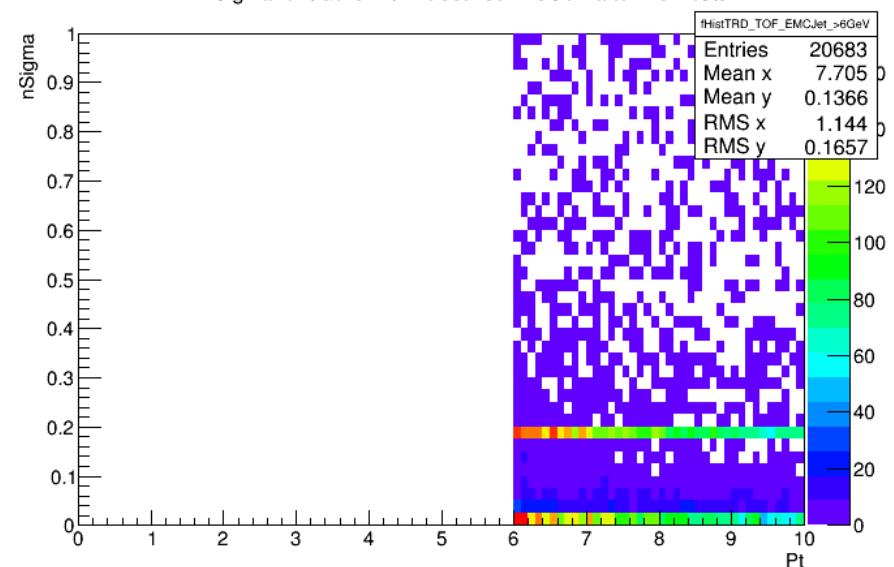
TRD nSigma for tracks with Pt between >6GeV after TOF cuts



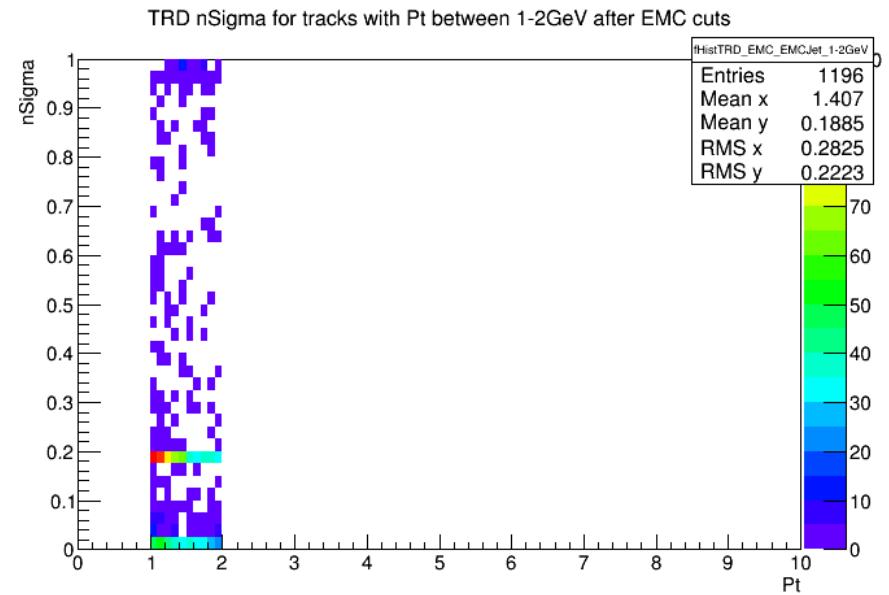
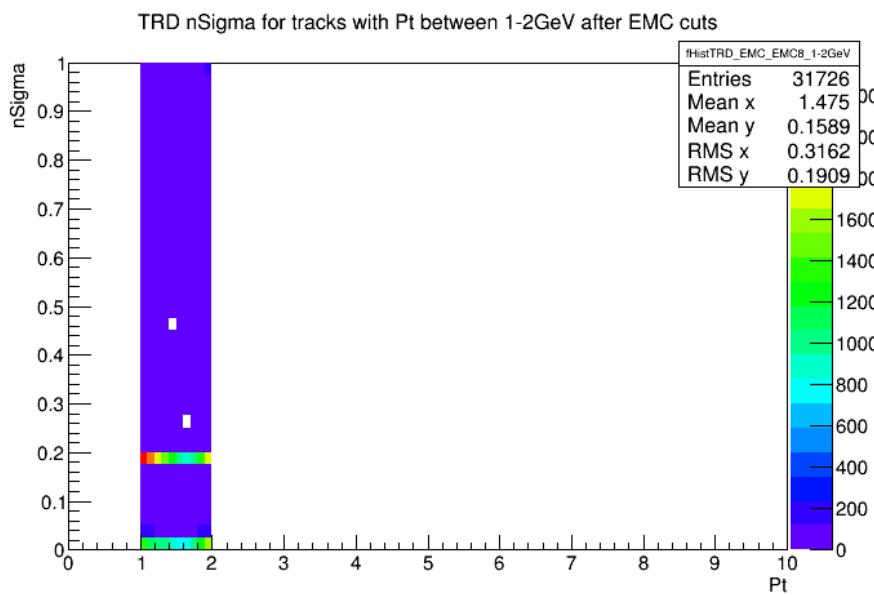
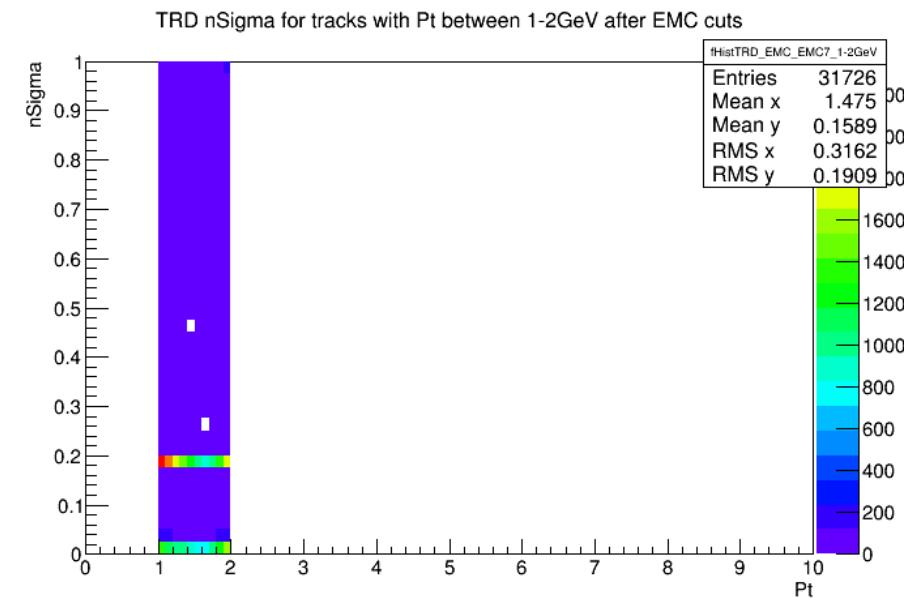
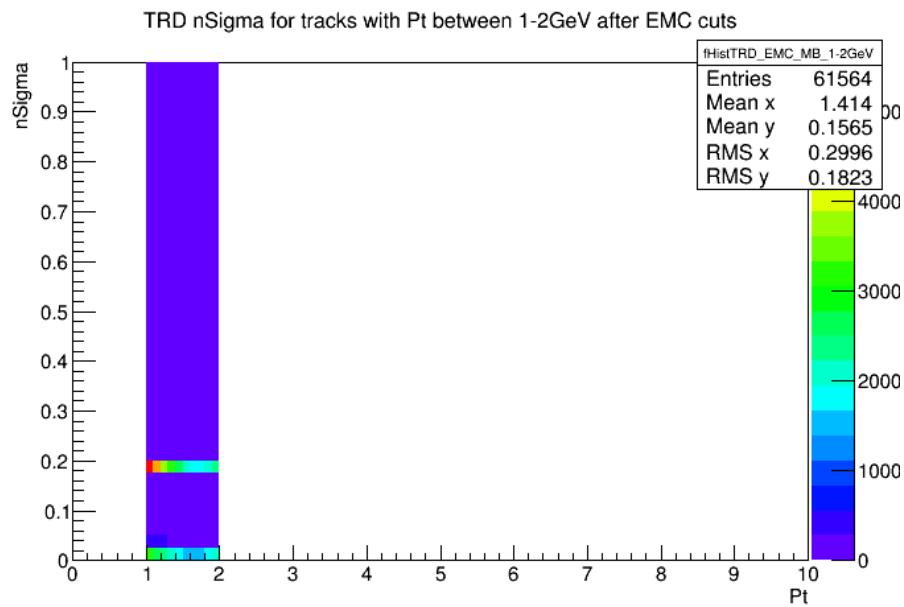
TRD nSigma for tracks with Pt between >6GeV after TOF cuts



TRD nSigma for tracks with Pt between >6GeV after TOF cuts

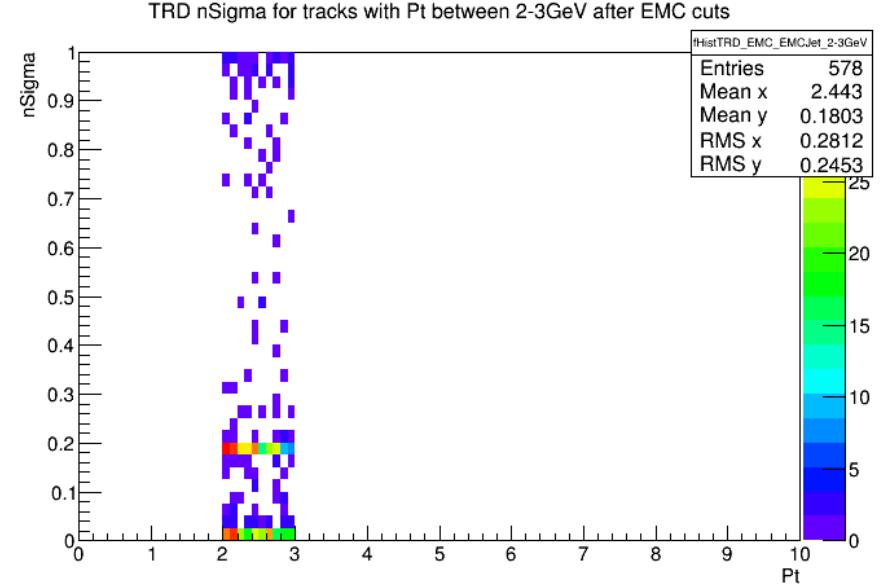
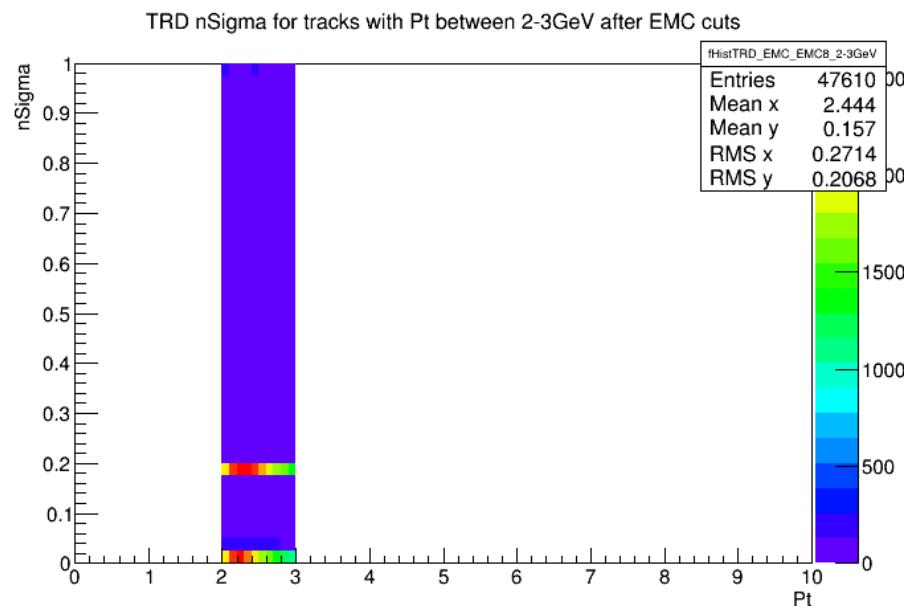
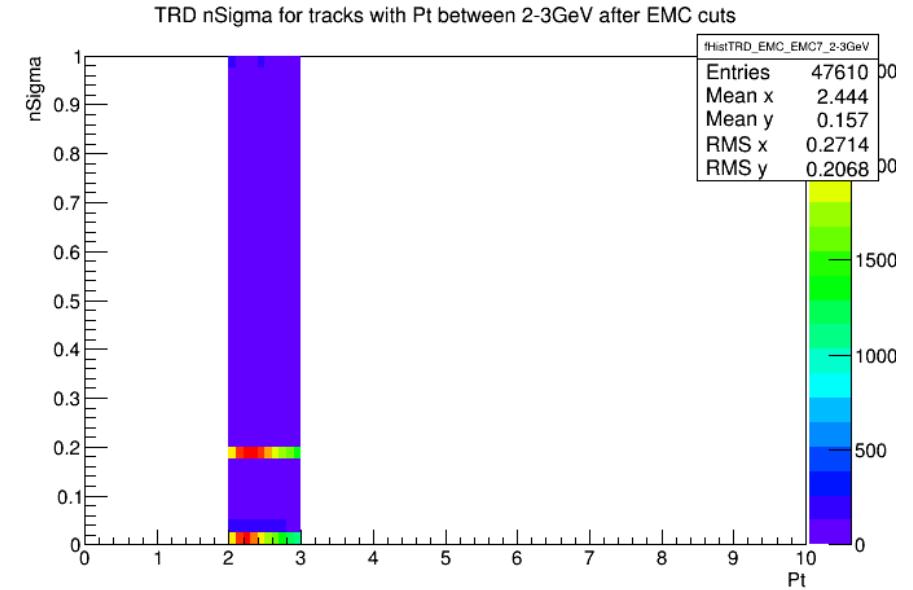
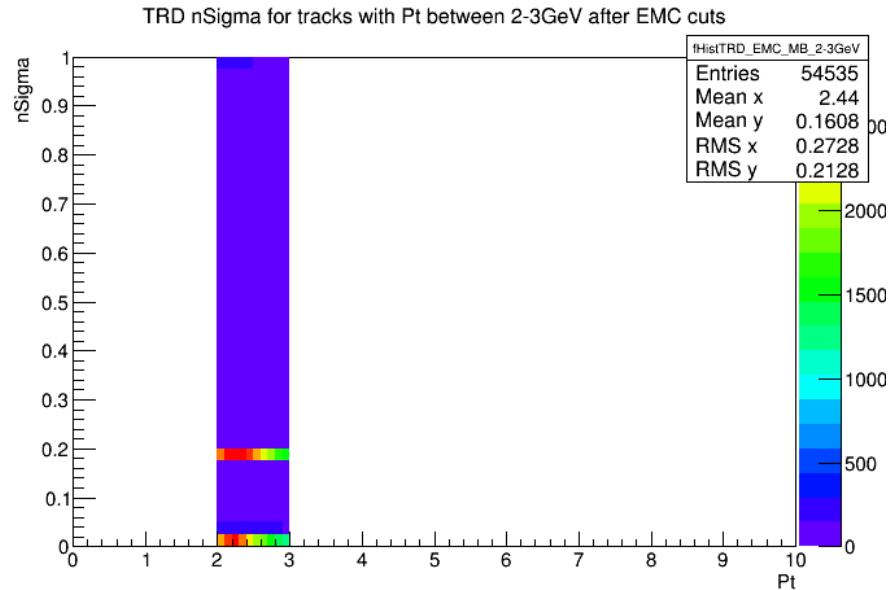


# TRD electron likelihood after 1+-0.1 1-2Gev E/p Cut



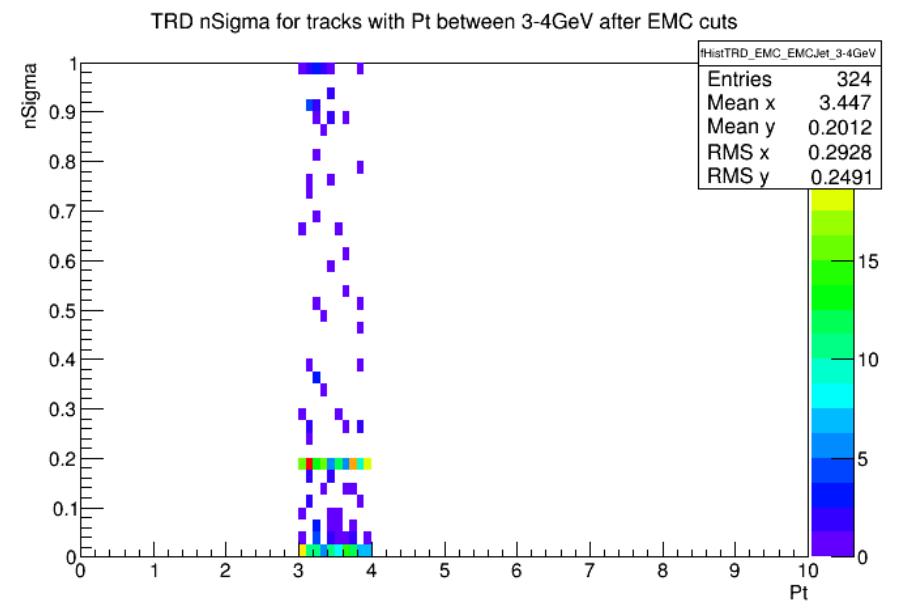
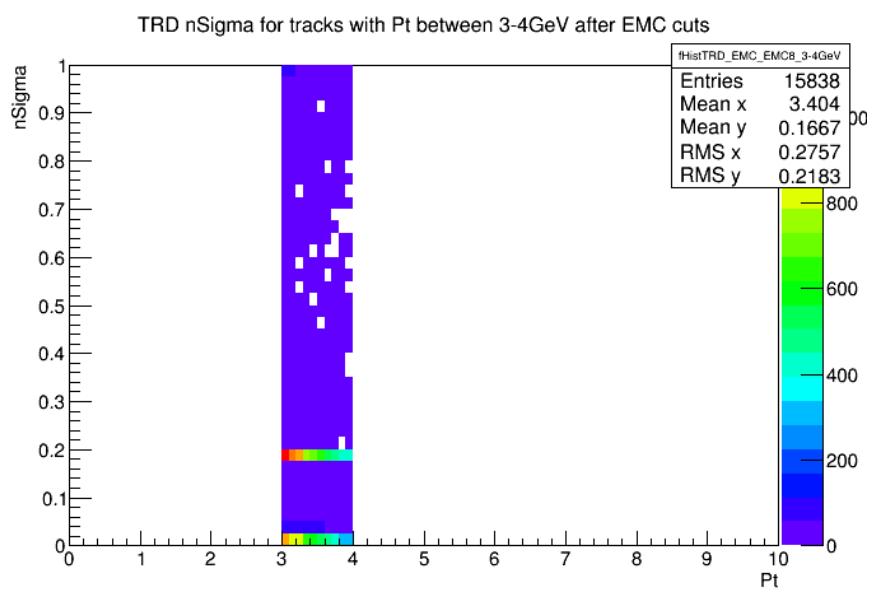
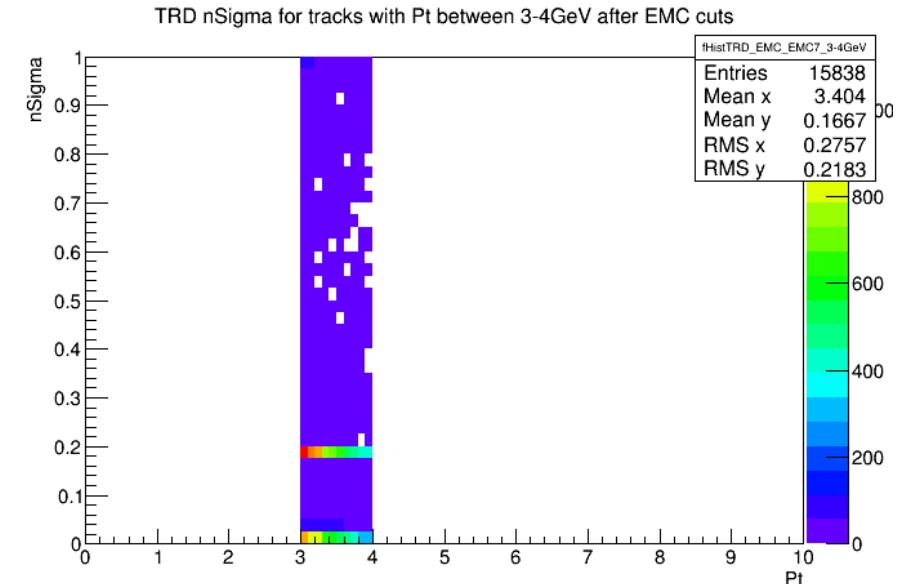
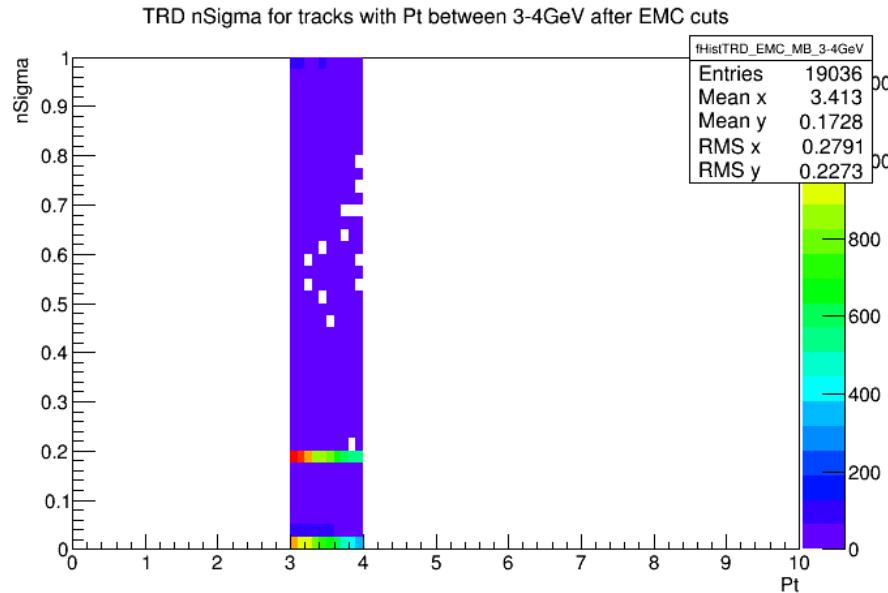
# TRD electron likelihood after 1+-0.1

## 2-3Gev E/p cut



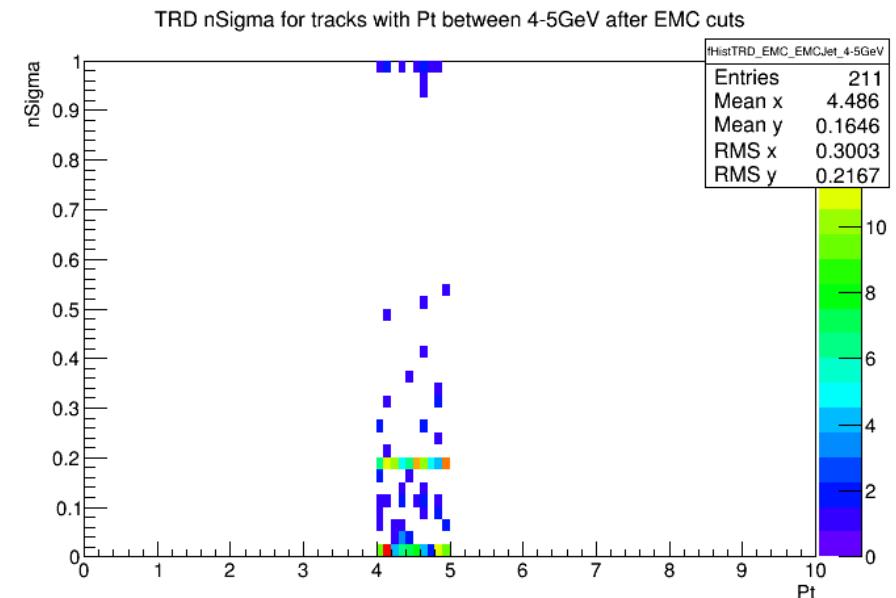
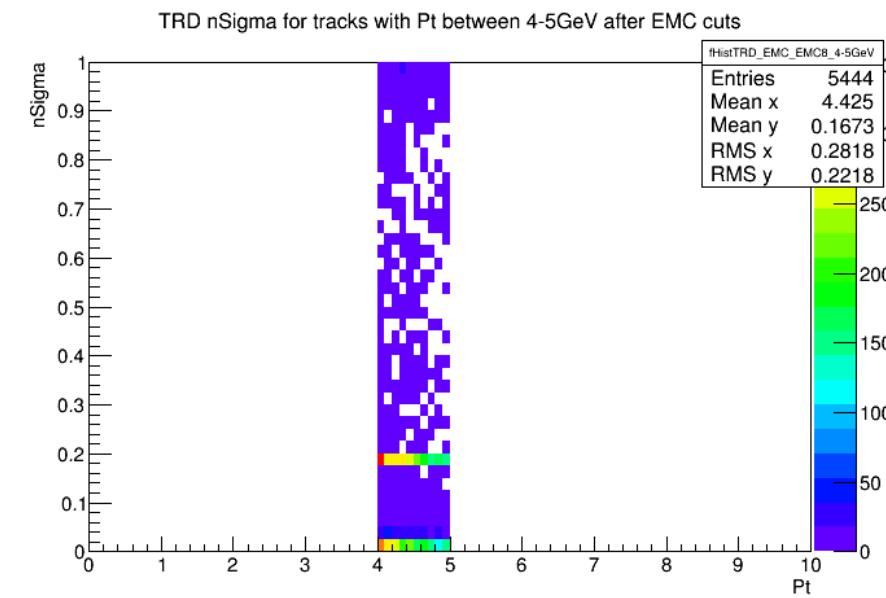
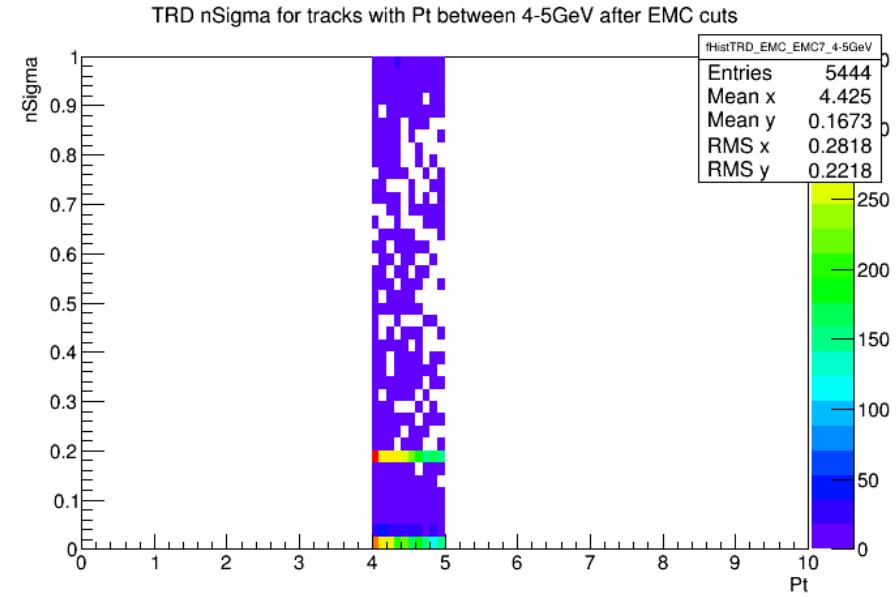
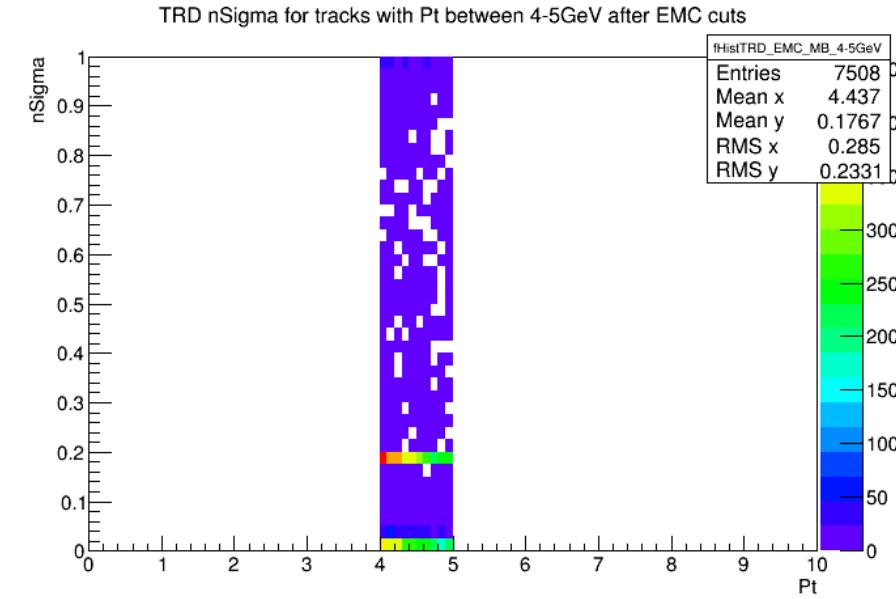
# TRD electron likelihood after 1+-0.1

## 3-4Gev E/p cut



# TRD electron likelihood after 1+-0.1

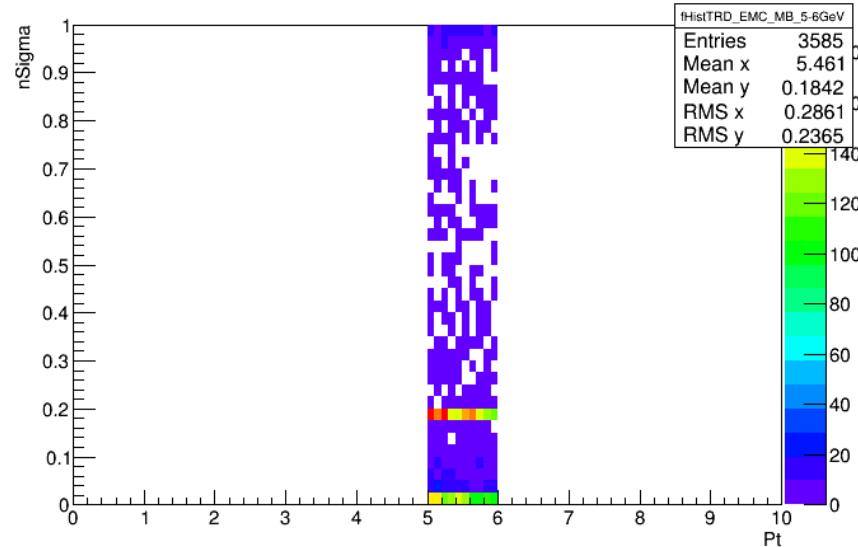
## 4-5Gev E/p cut



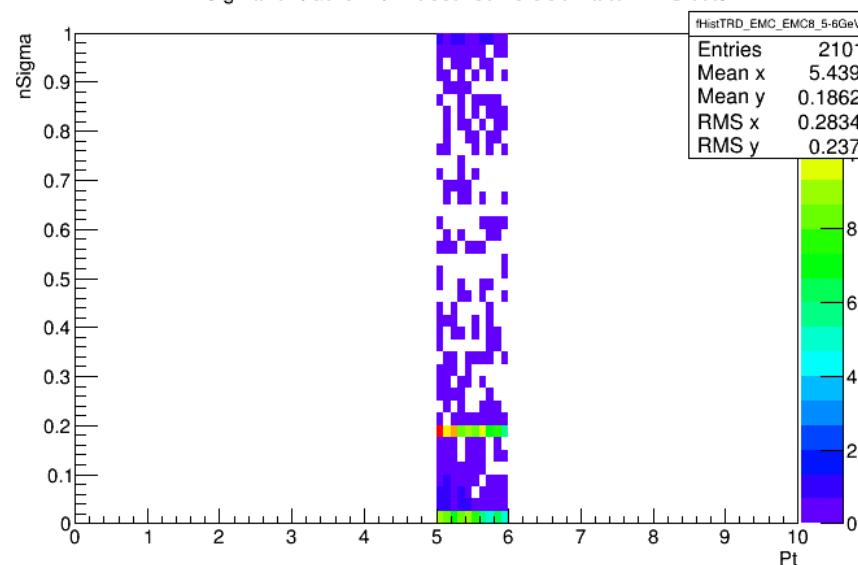
# TRD electron likelihood after 1+-0.1

## 5-6Gev E/p cut

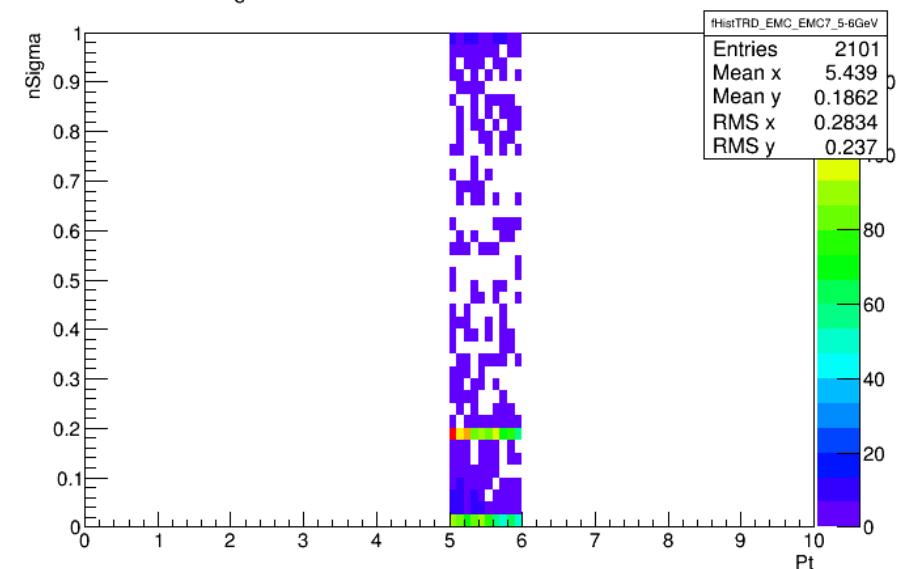
TRD nSigma for tracks with Pt between 5-6GeV after EMC cuts



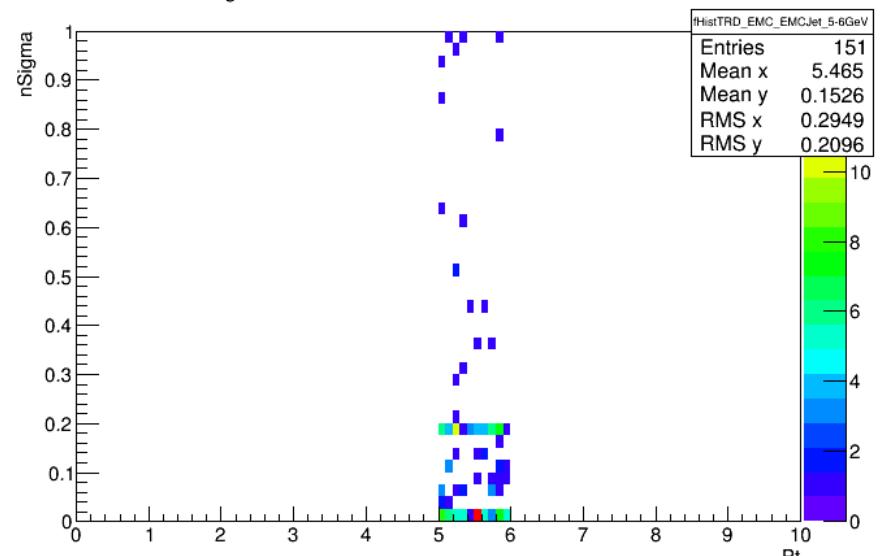
TRD nSigma for tracks with Pt between 5-6GeV after EMC cuts



TRD nSigma for tracks with Pt between 5-6GeV after EMC cuts



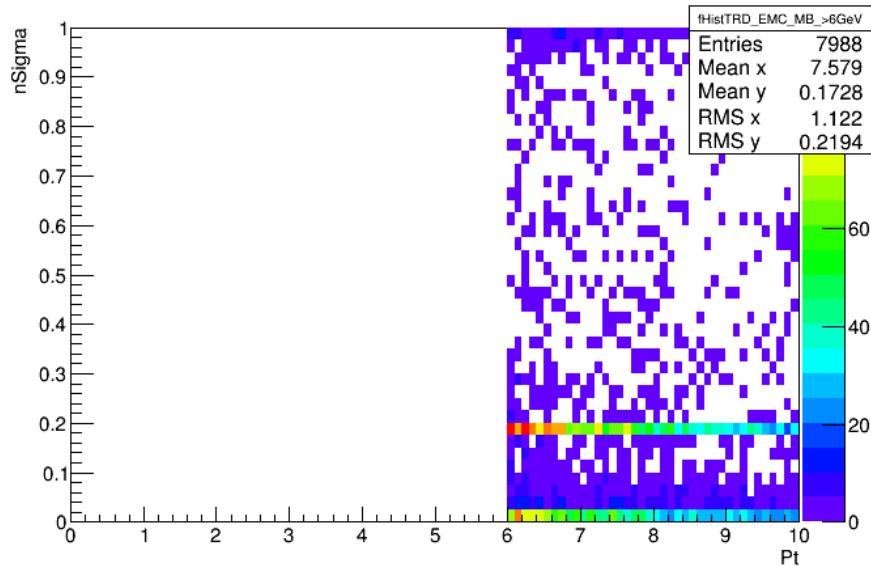
TRD nSigma for tracks with Pt between 5-6GeV after EMC cuts



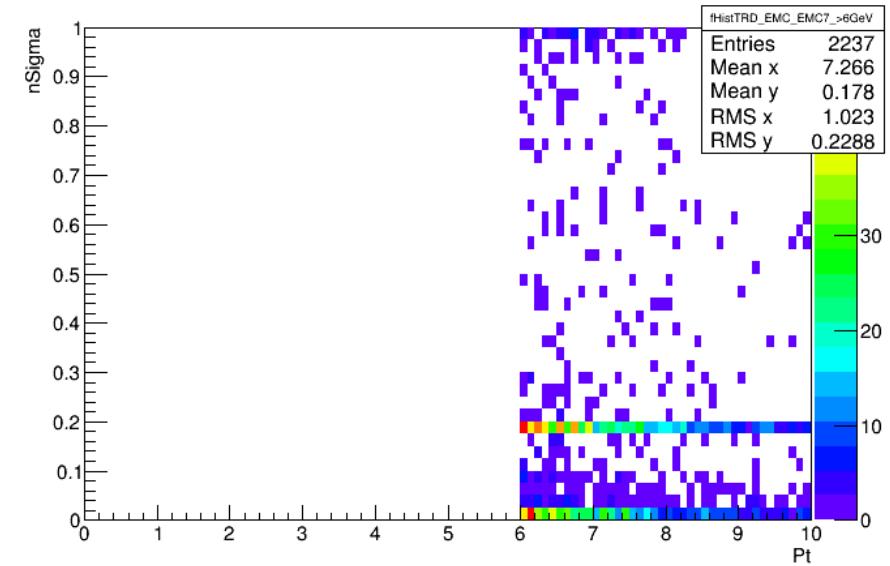
# TRD electron likelihood after 1+-0.1

## >6Gev      E/p cut

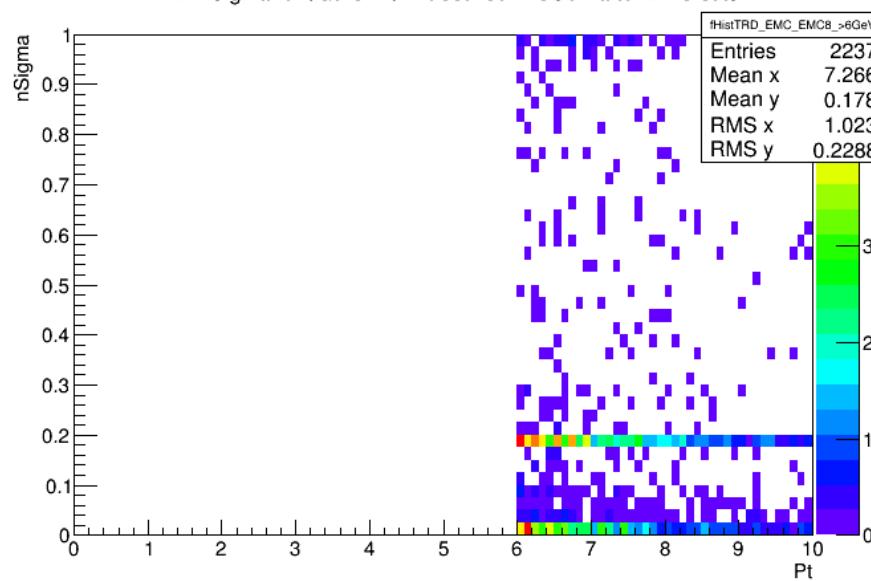
TRD nSigma for tracks with Pt between >6GeV after EMC cuts



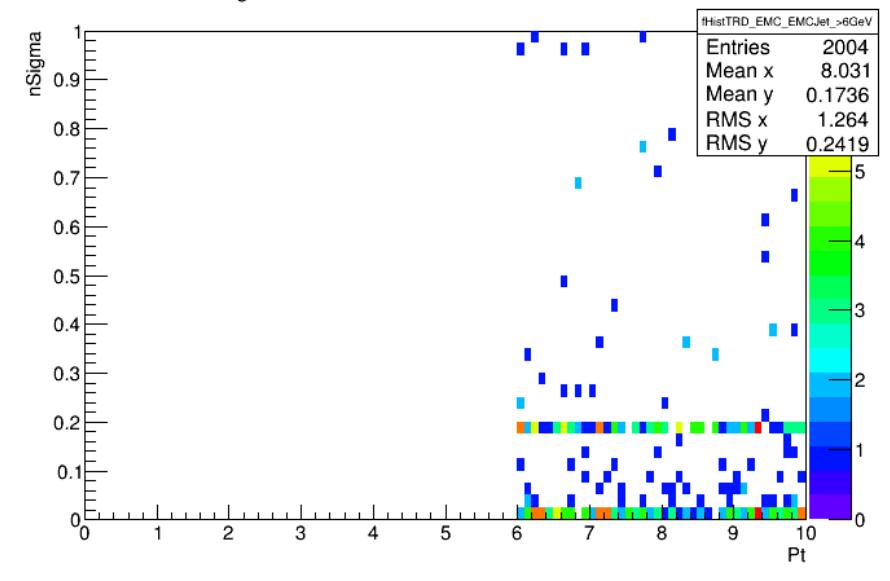
TRD nSigma for tracks with Pt between >6GeV after EMC cuts



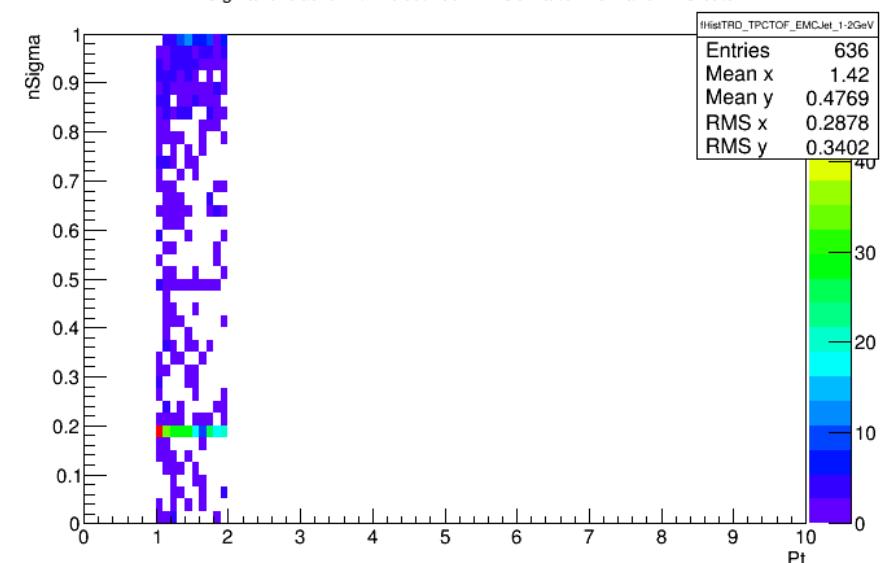
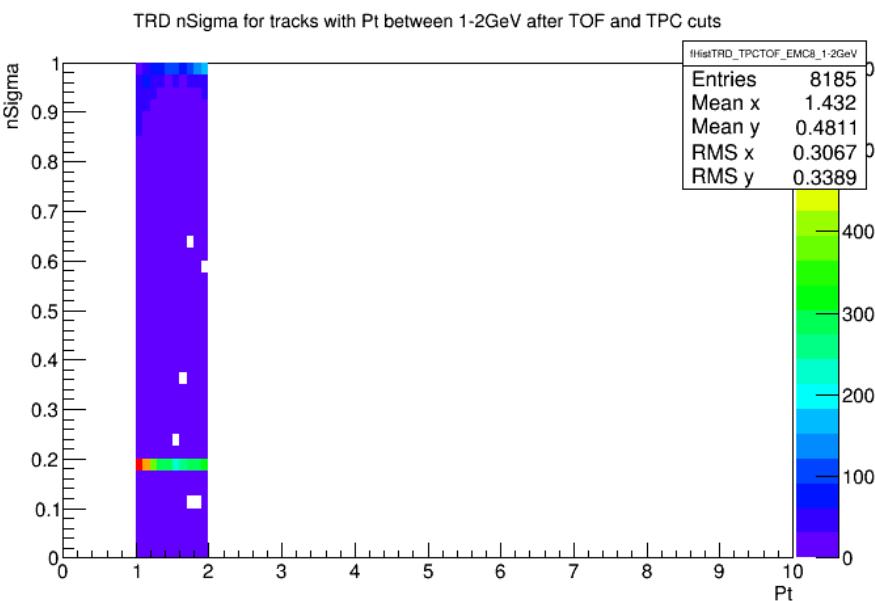
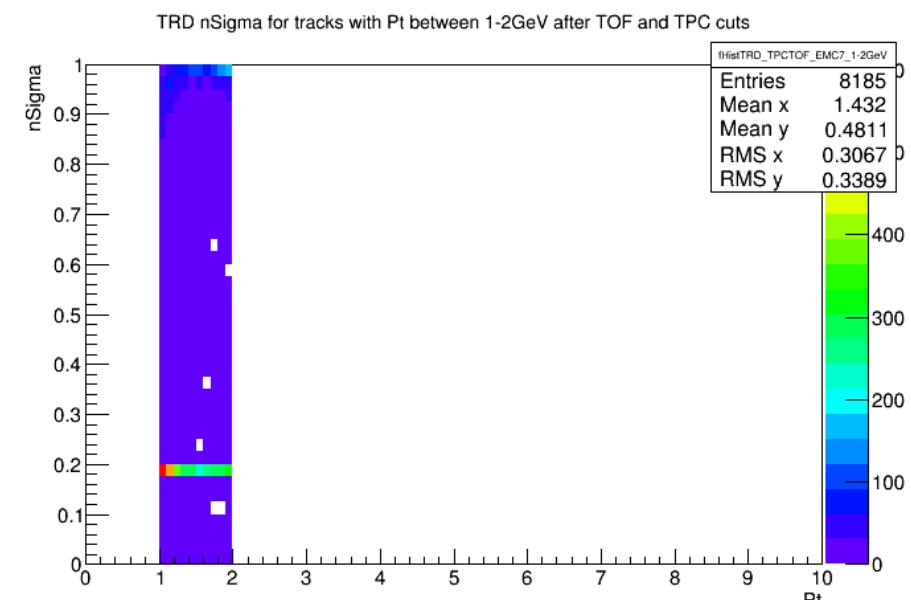
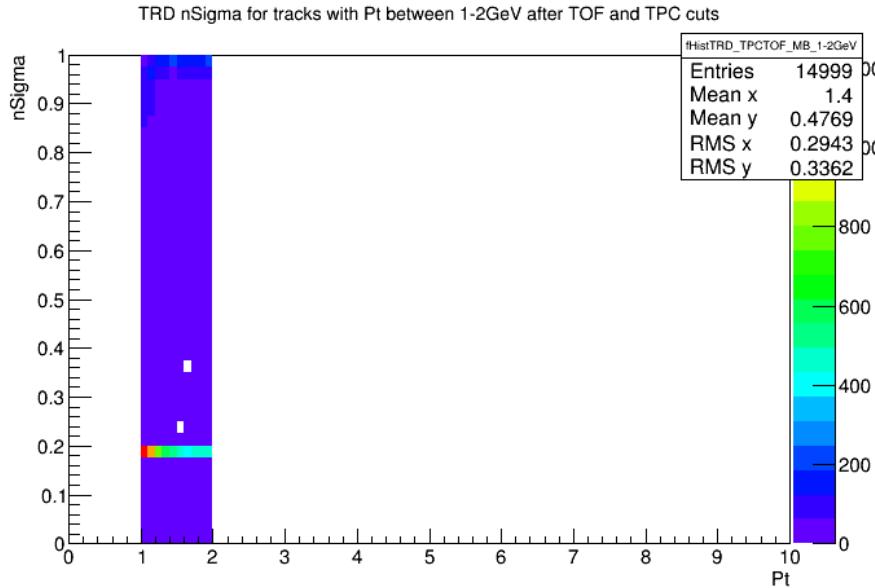
TRD nSigma for tracks with Pt between >6GeV after EMC cuts



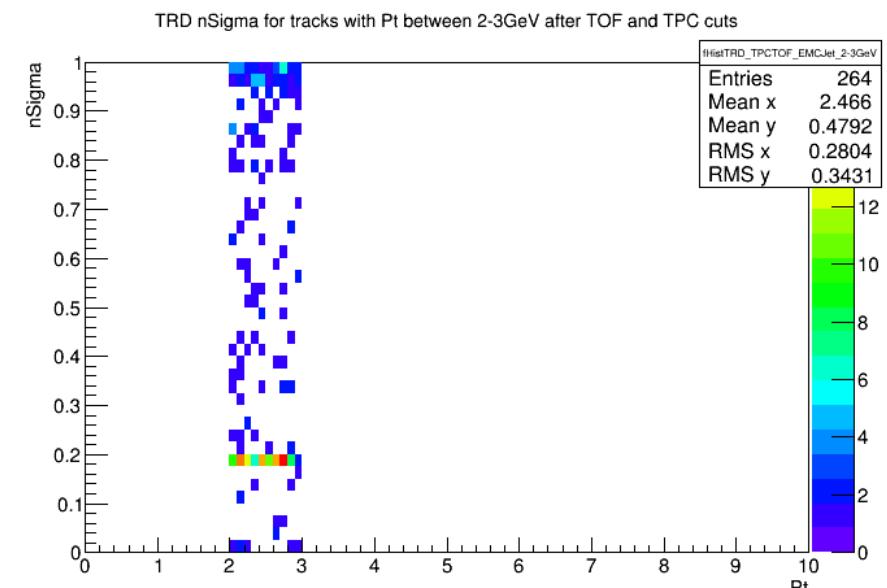
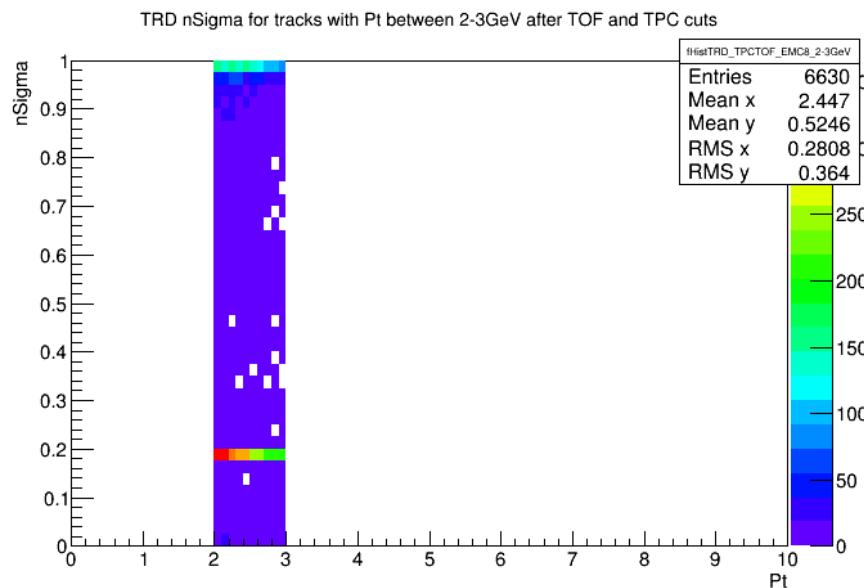
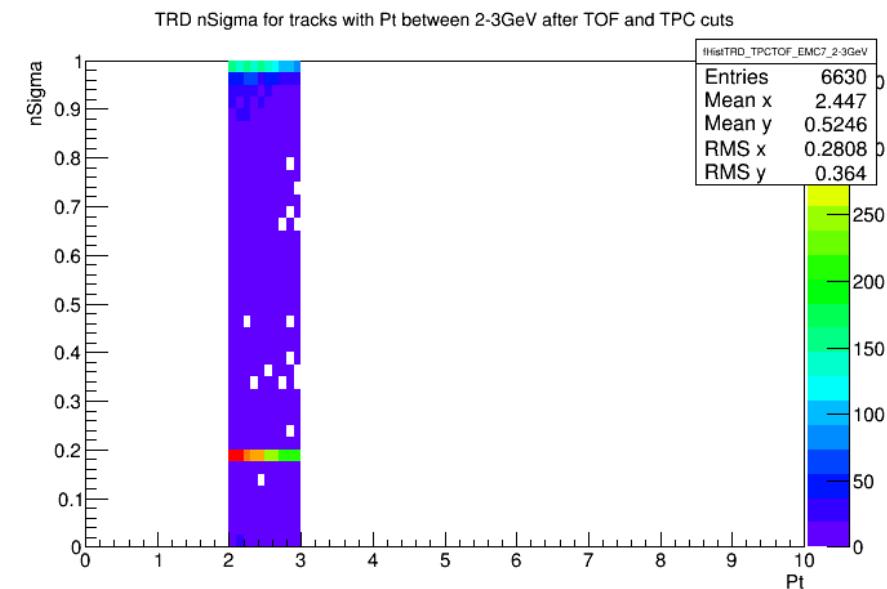
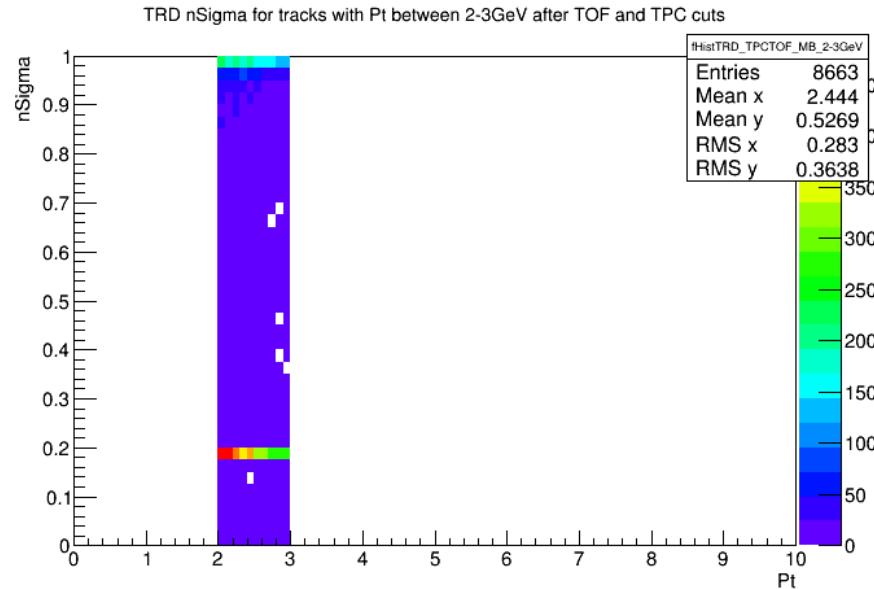
TRD nSigma for tracks with Pt between >6GeV after EMC cuts



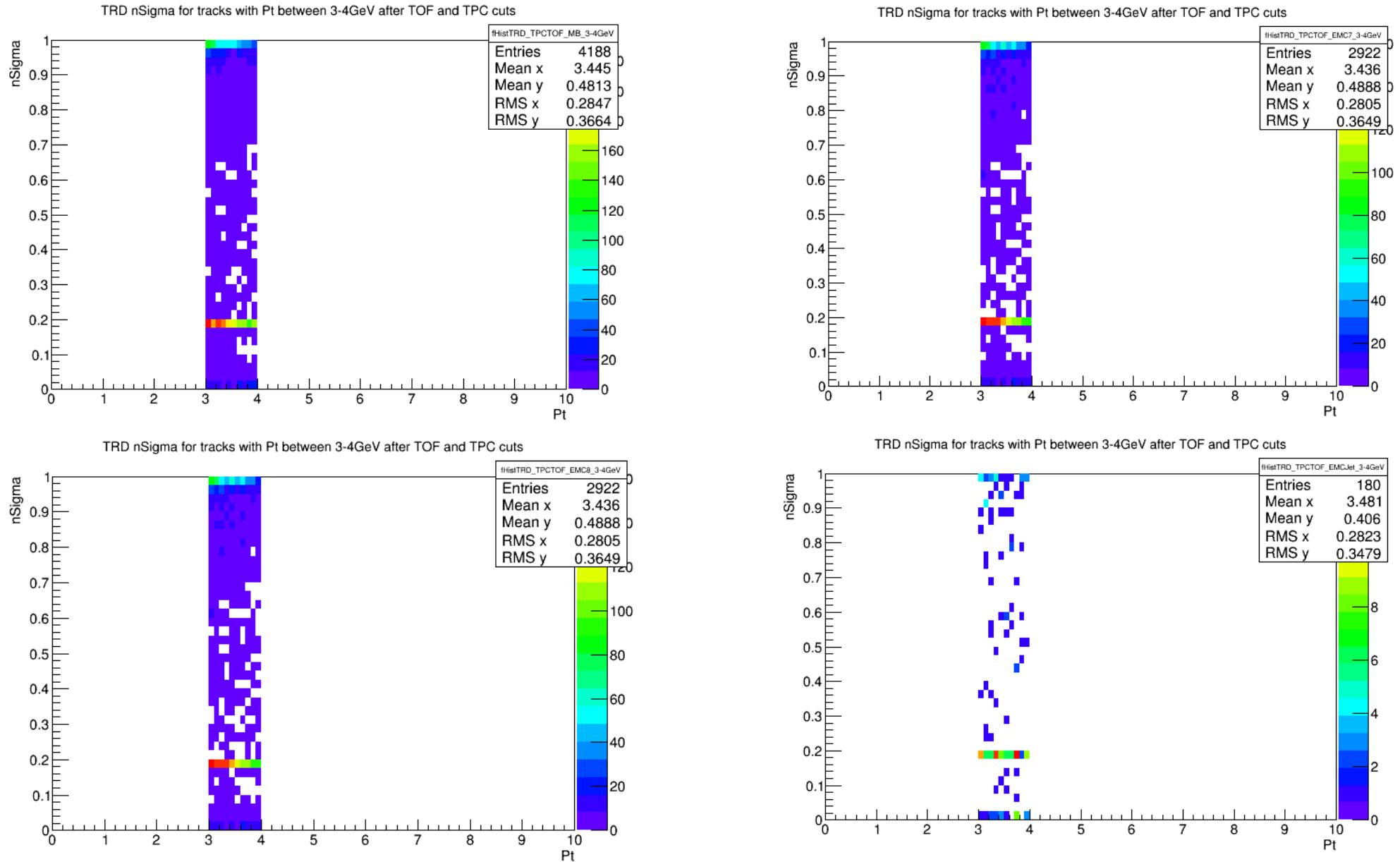
# TRD electron likelihood after 2Sig 1-2Gev TPC Cut and 2Sig TOF cut



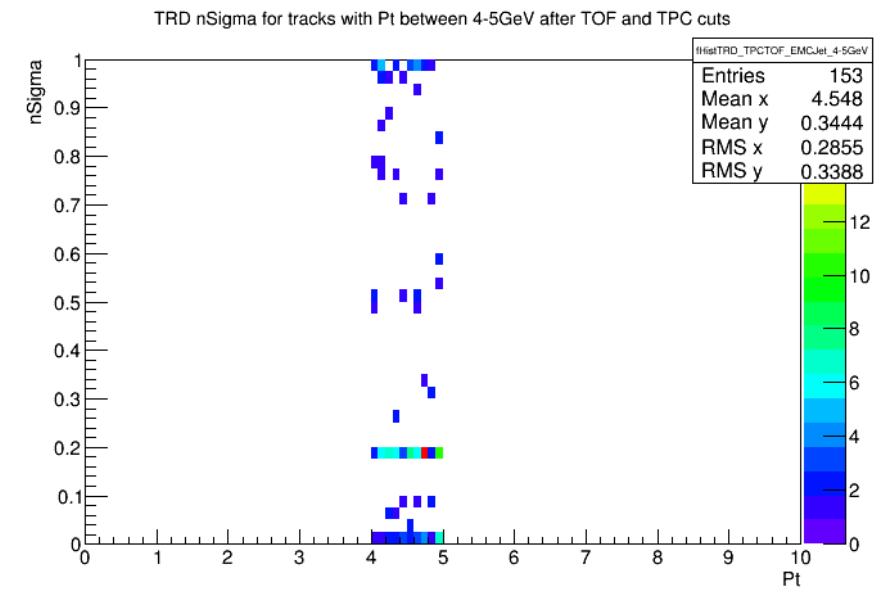
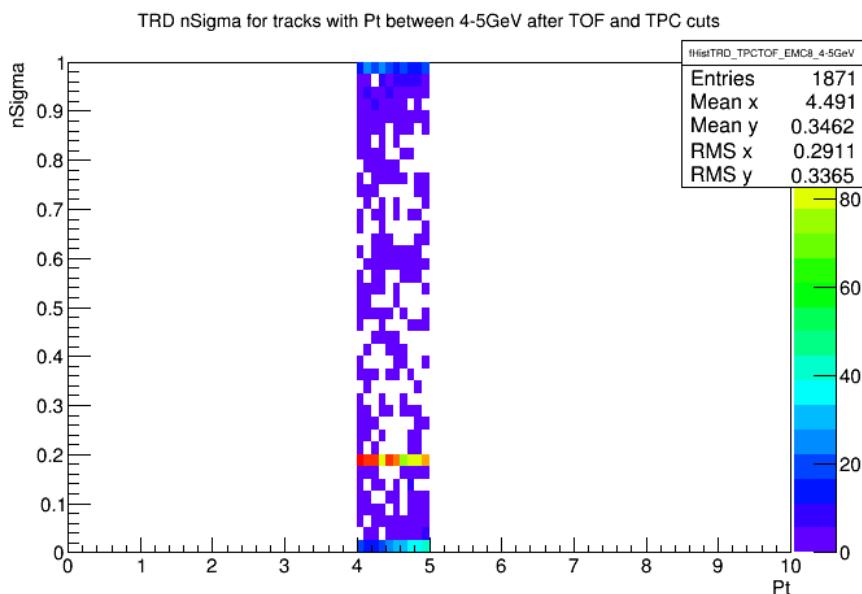
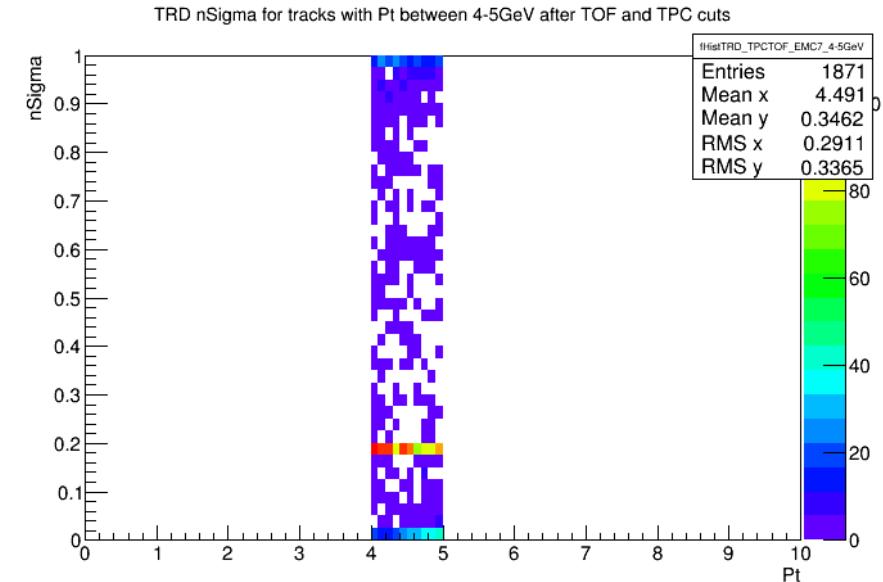
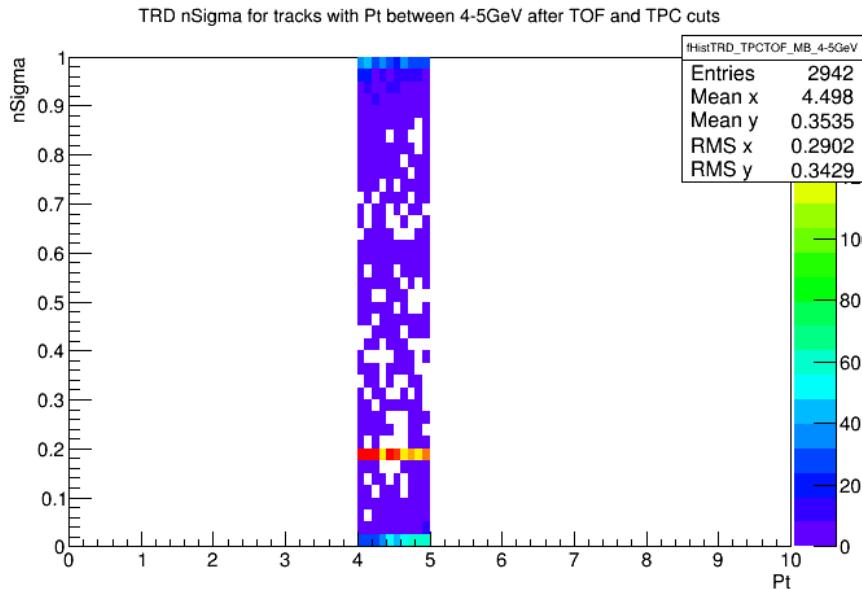
# TRD electron likelihood after 2Sig 2-3Gev TPC cut and 2Sig TOF cut



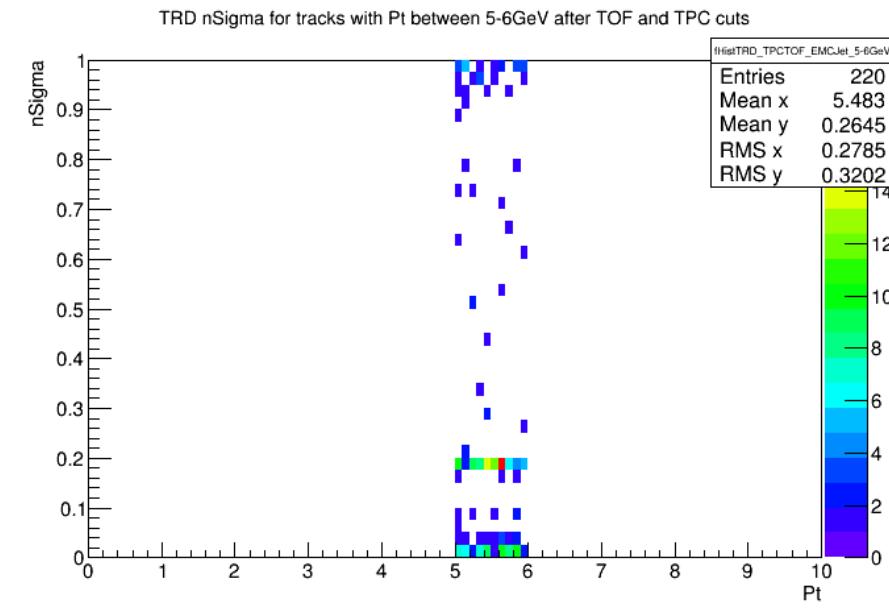
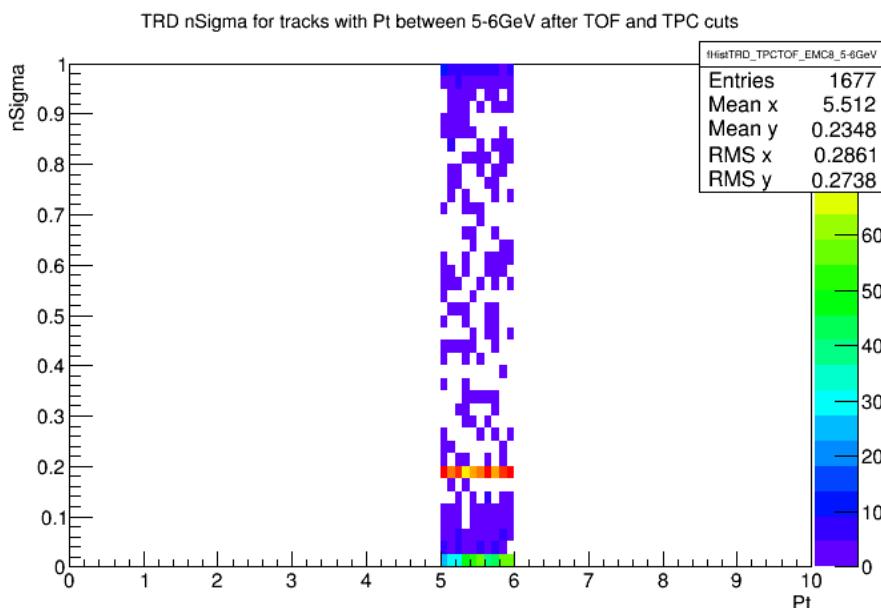
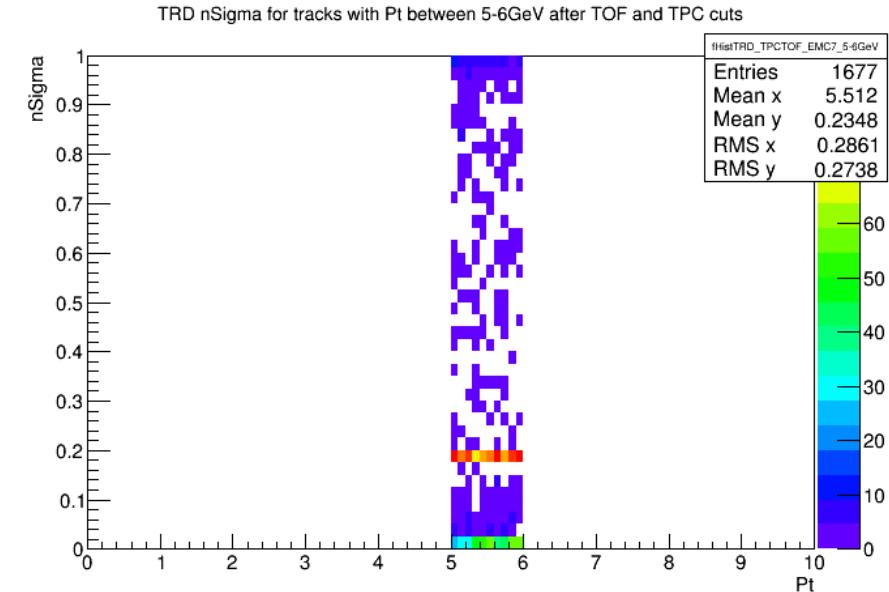
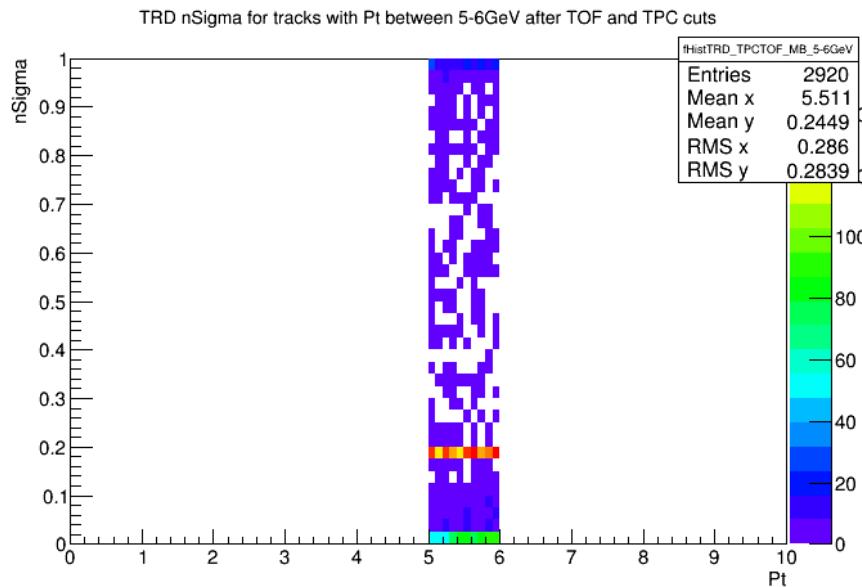
# TRD electron likelihood after 2Sig 3-4Gev TPC cut and 2Sig TOF cut



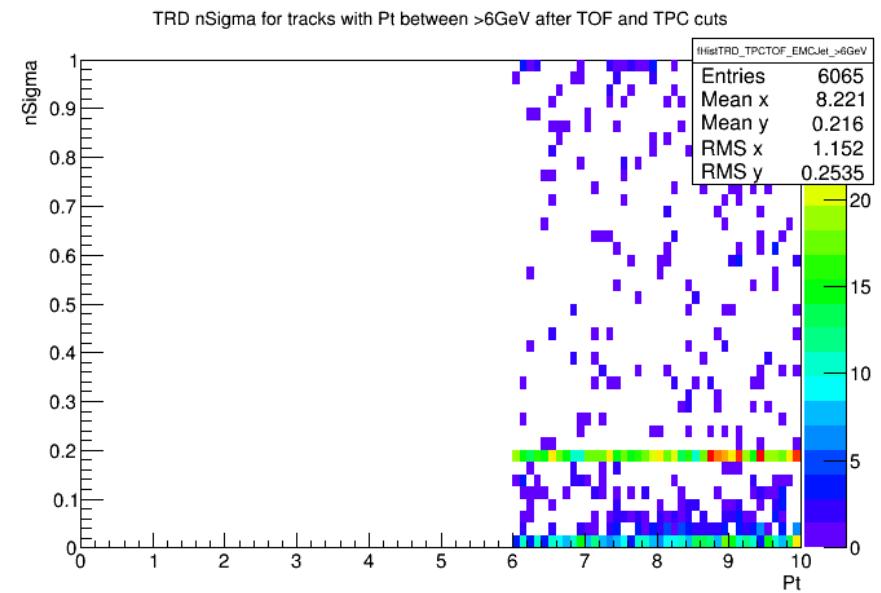
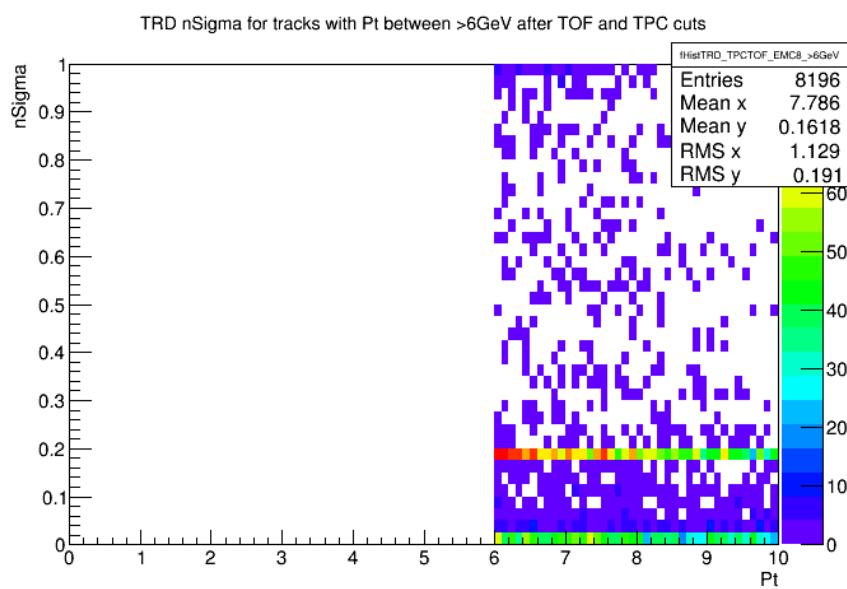
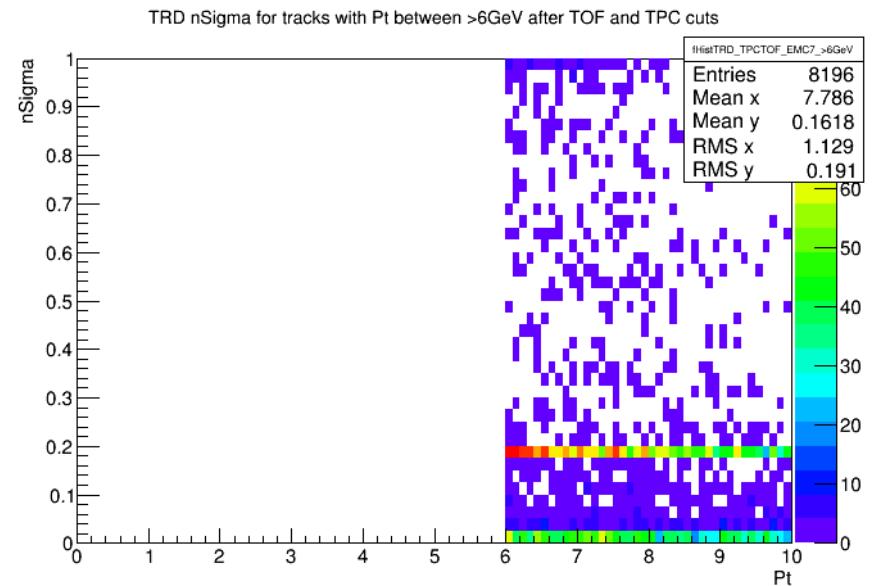
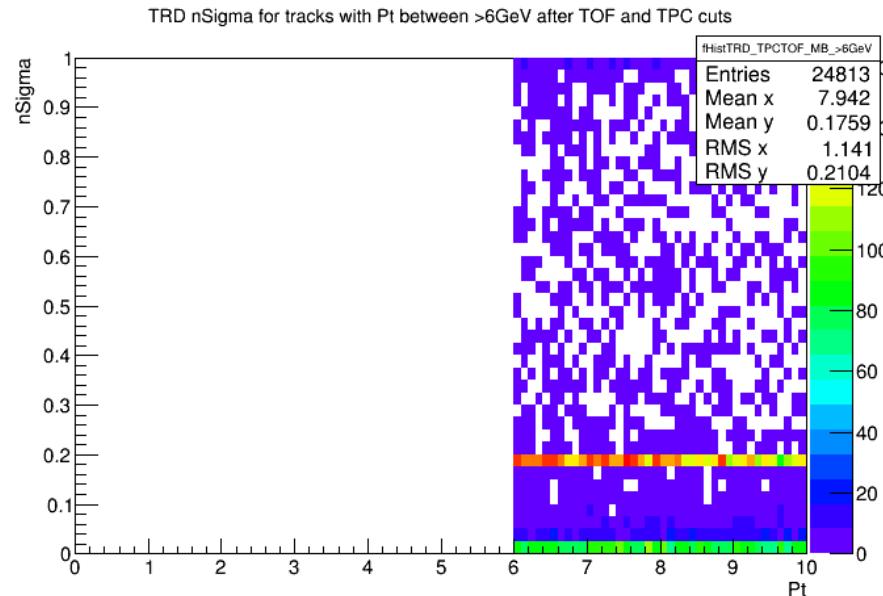
# TRD electron likelihood after 2Sig 4-5Gev TPC cut and 2Sig TOF cut



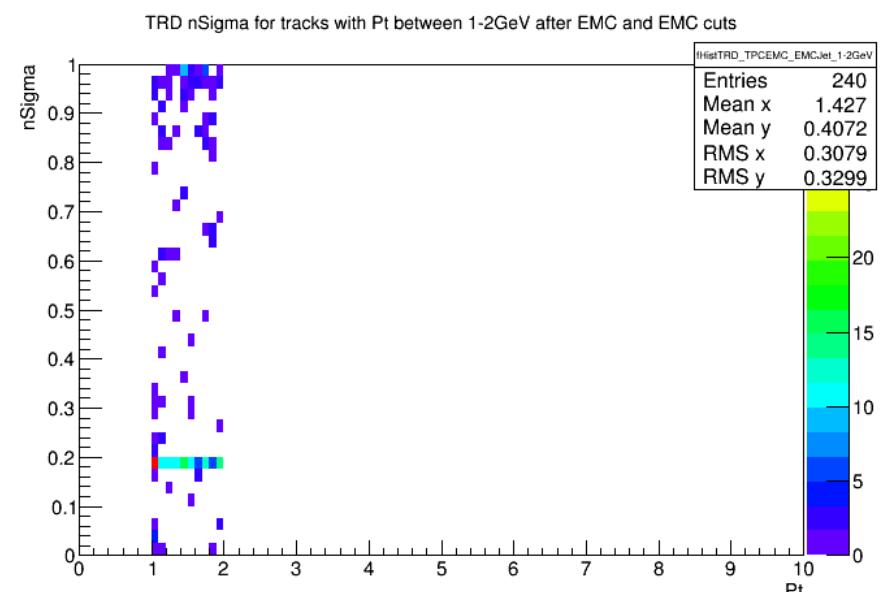
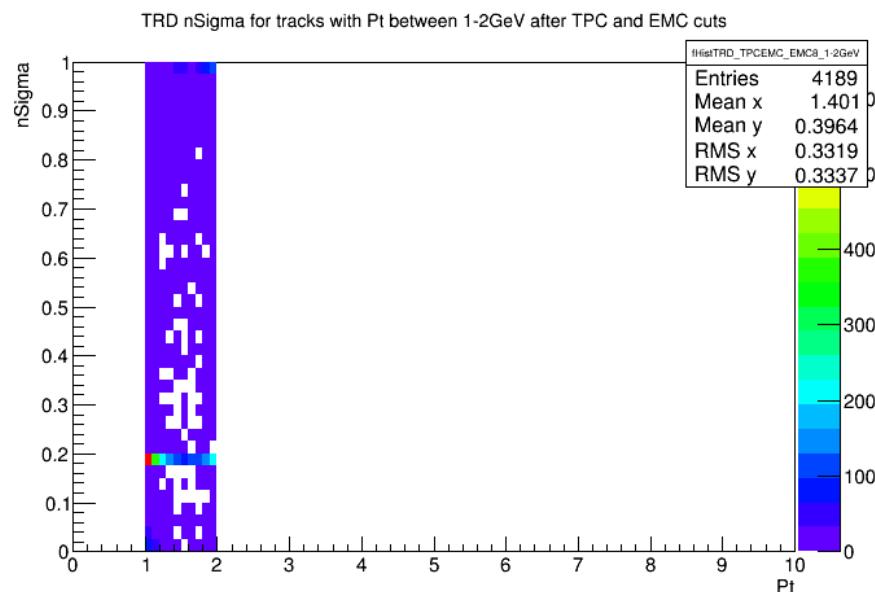
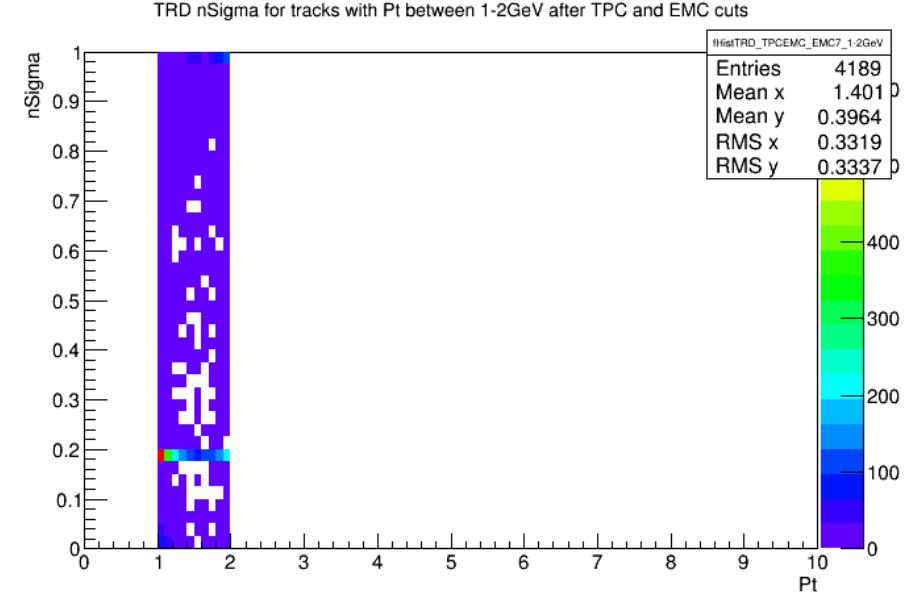
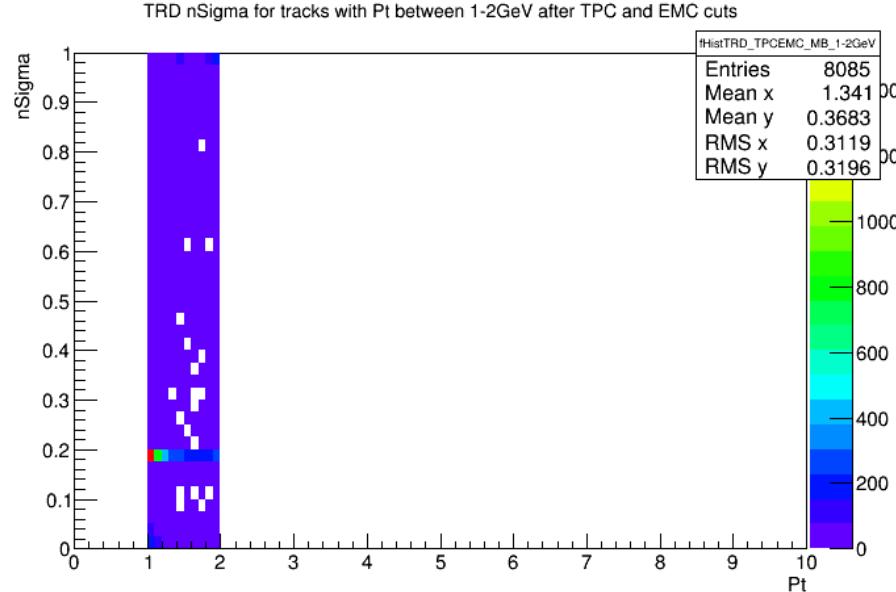
# TRD electron likelihood after 2Sig 5-6Gev TPC cut and 2Sig TOF cut



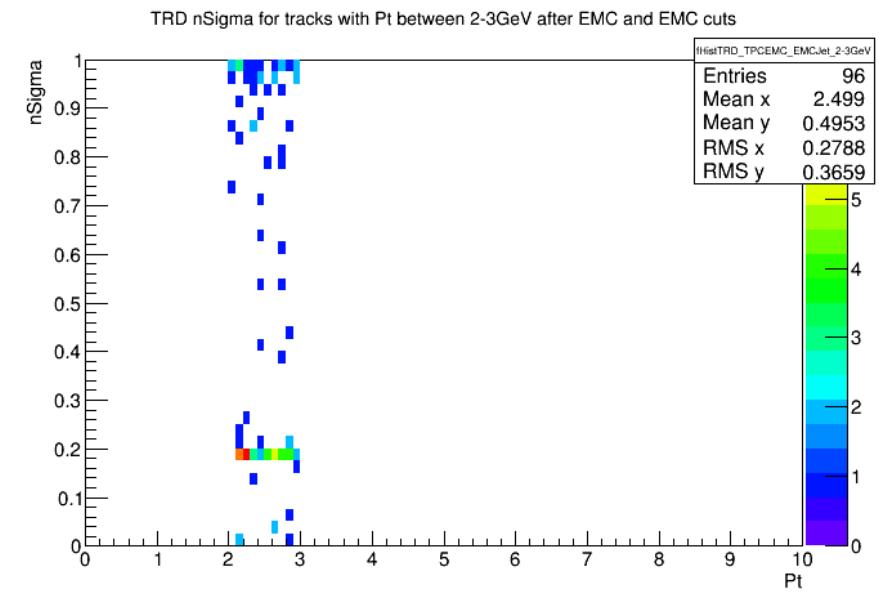
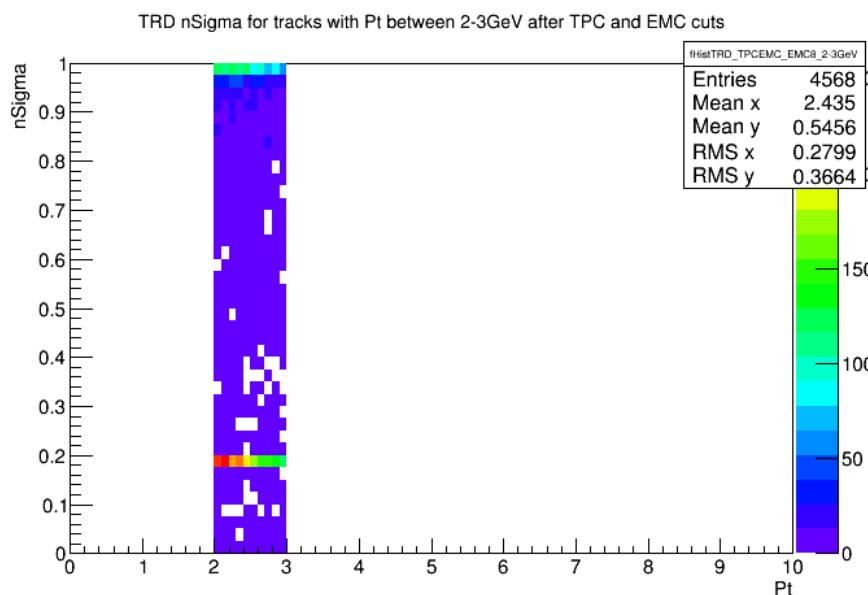
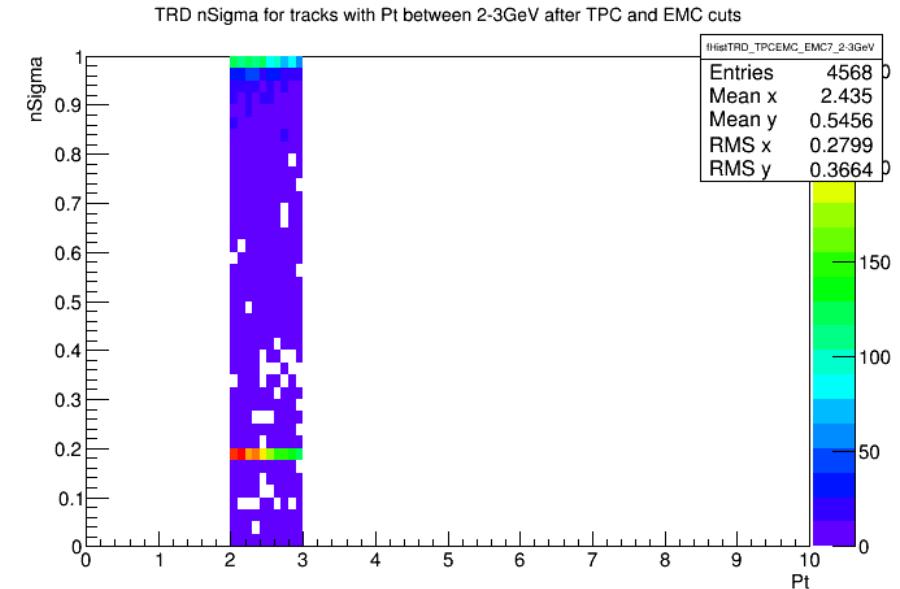
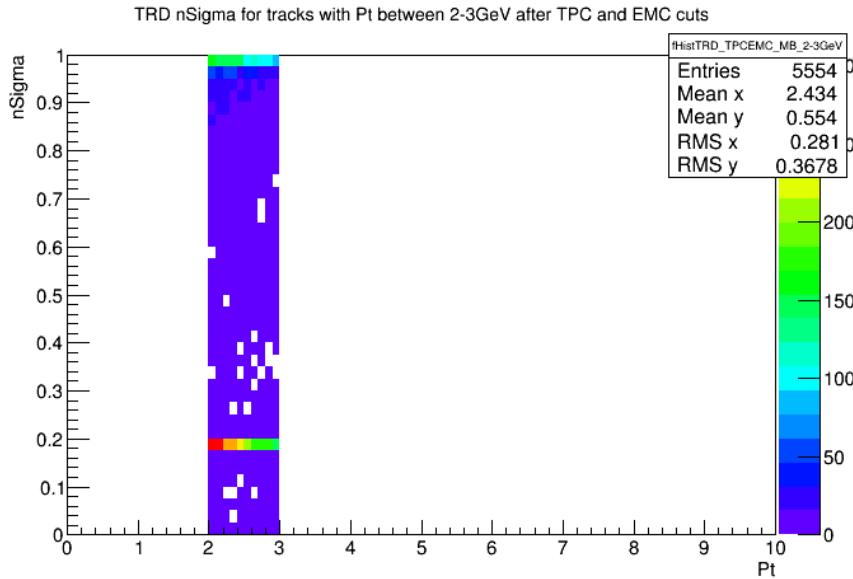
# TRD electron likelihood after 2Sig >6Gev TPC cut and 2Sig TOF cut



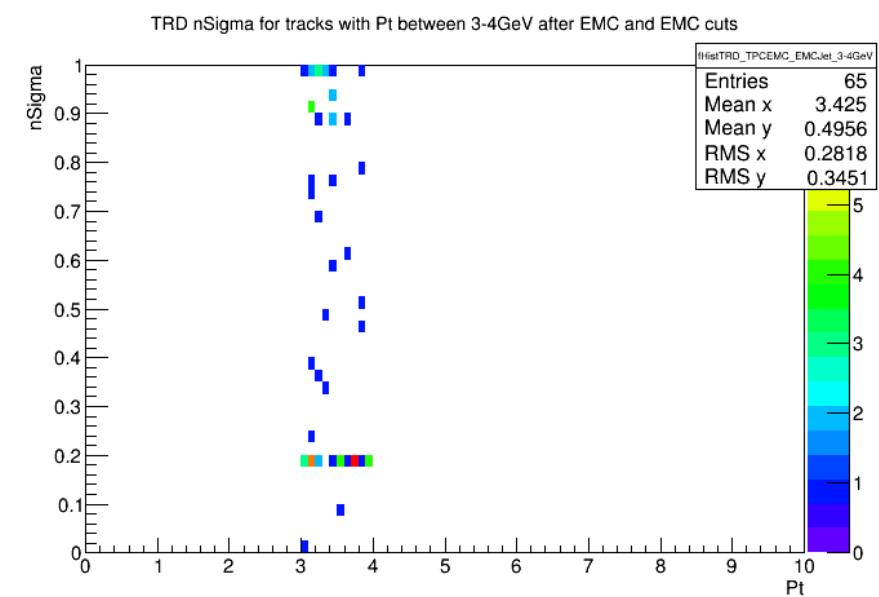
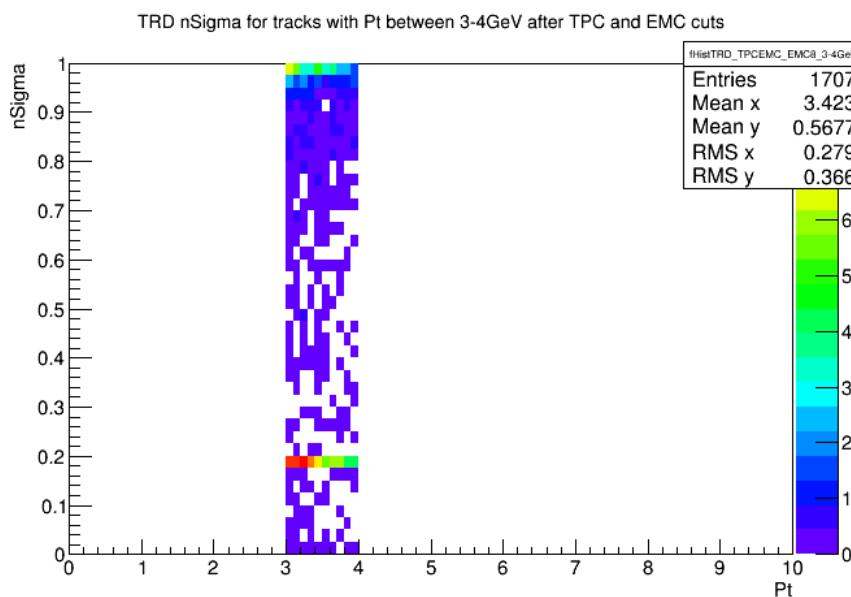
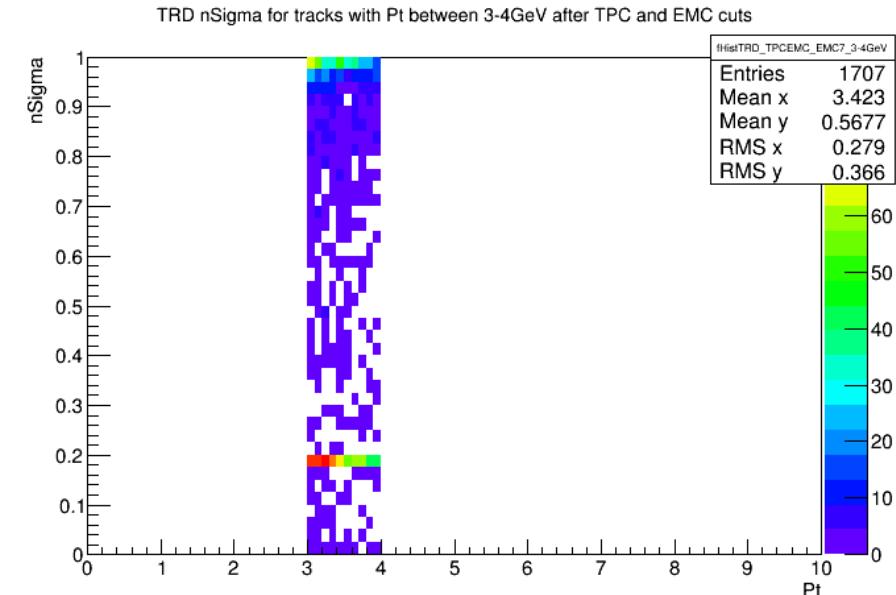
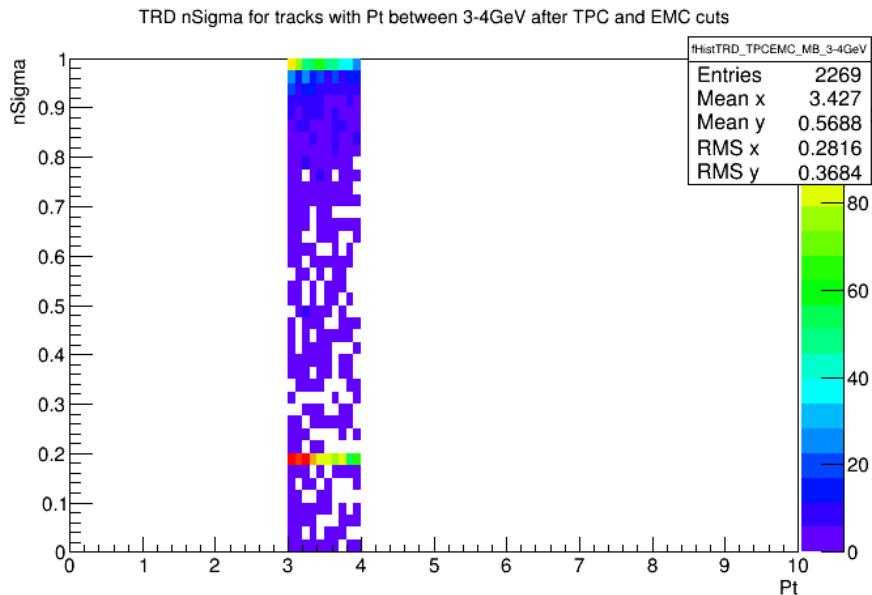
# TRD electron likelihood after 2Sig 1-2Gev TPC Cut and 1+-0.1 E/p cut



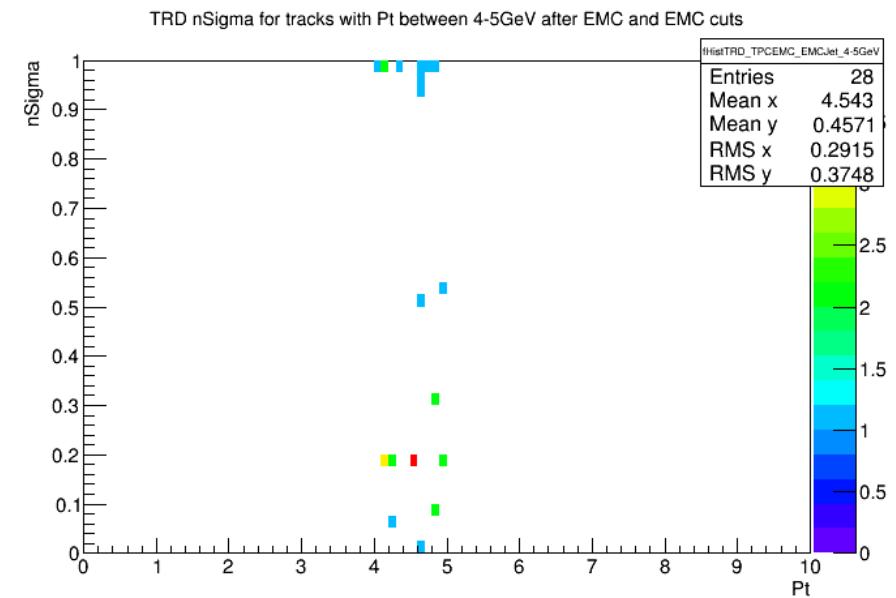
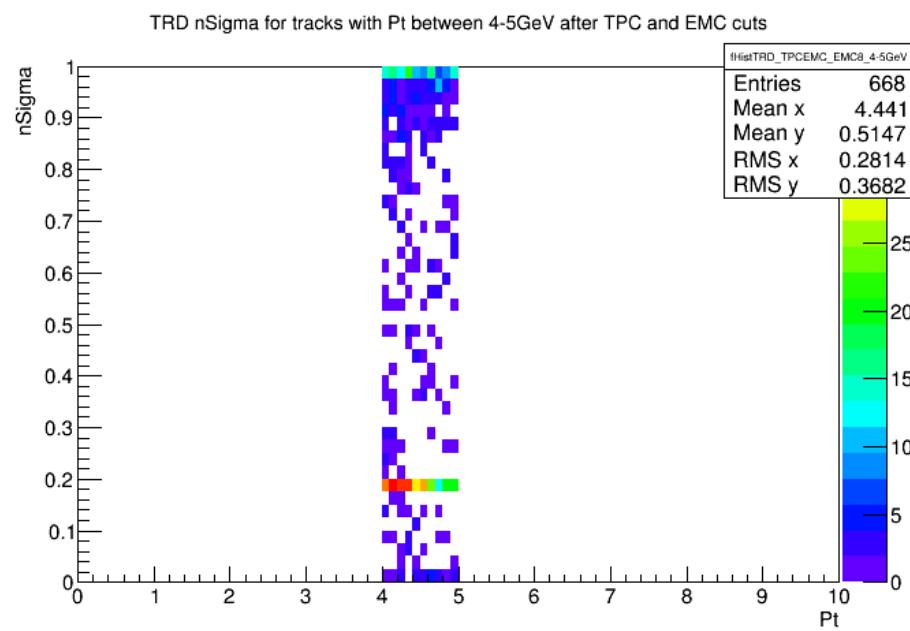
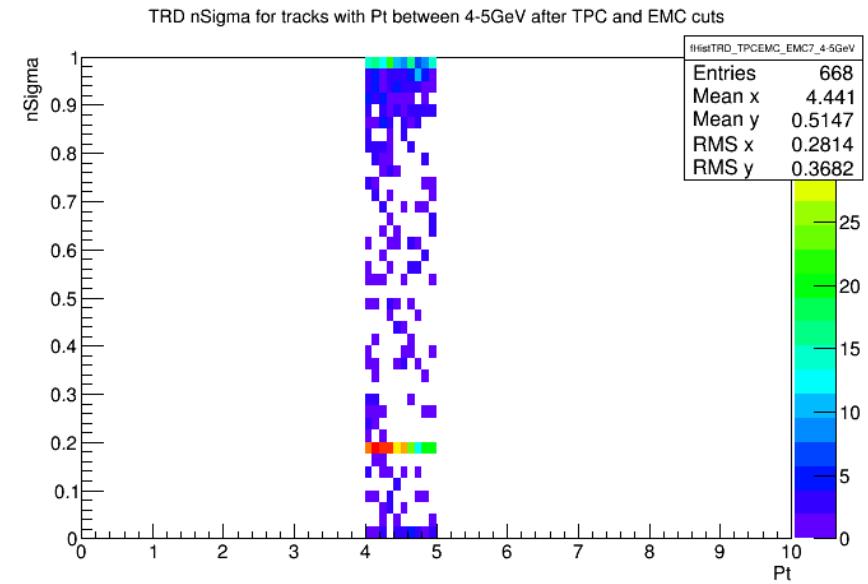
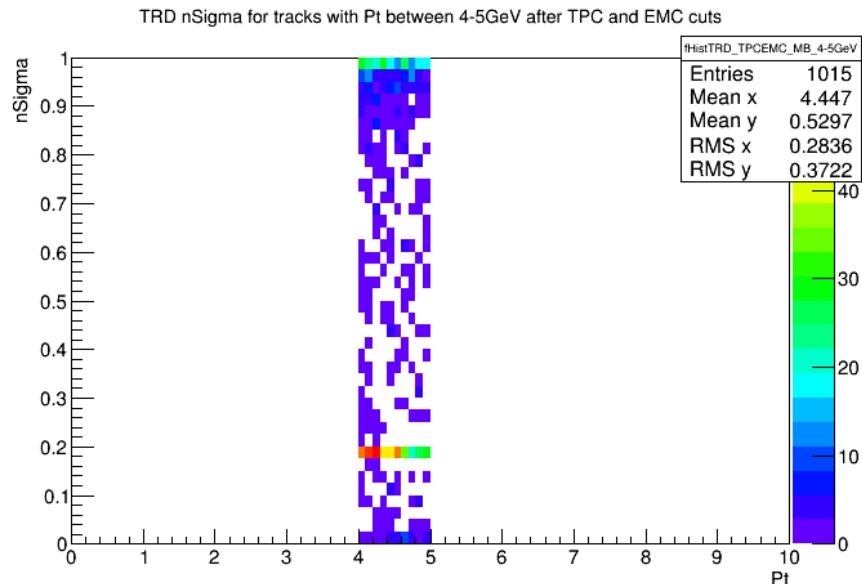
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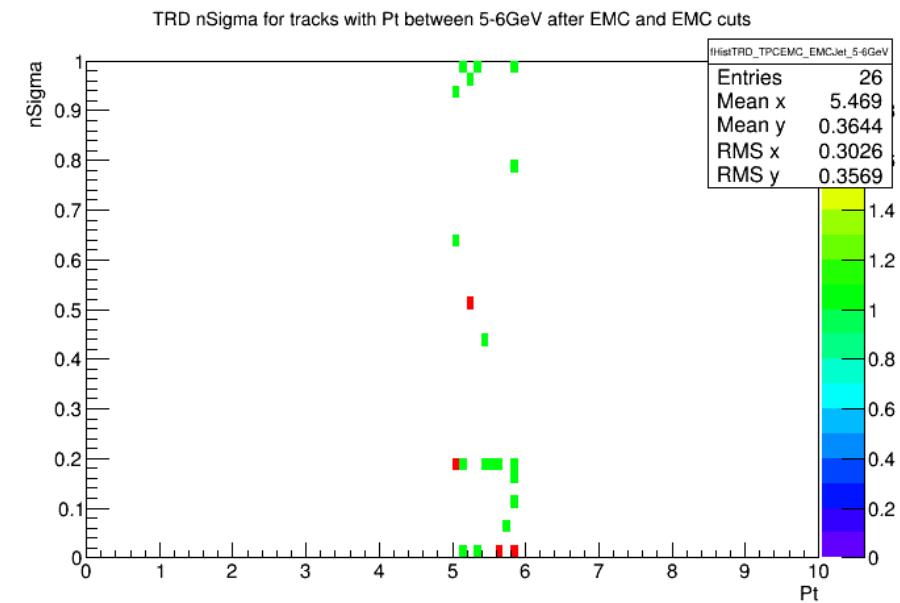
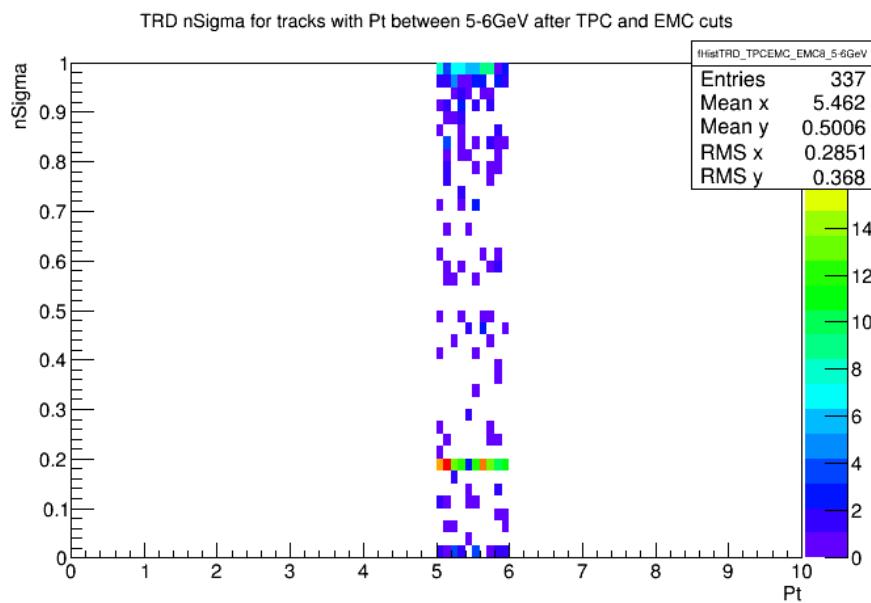
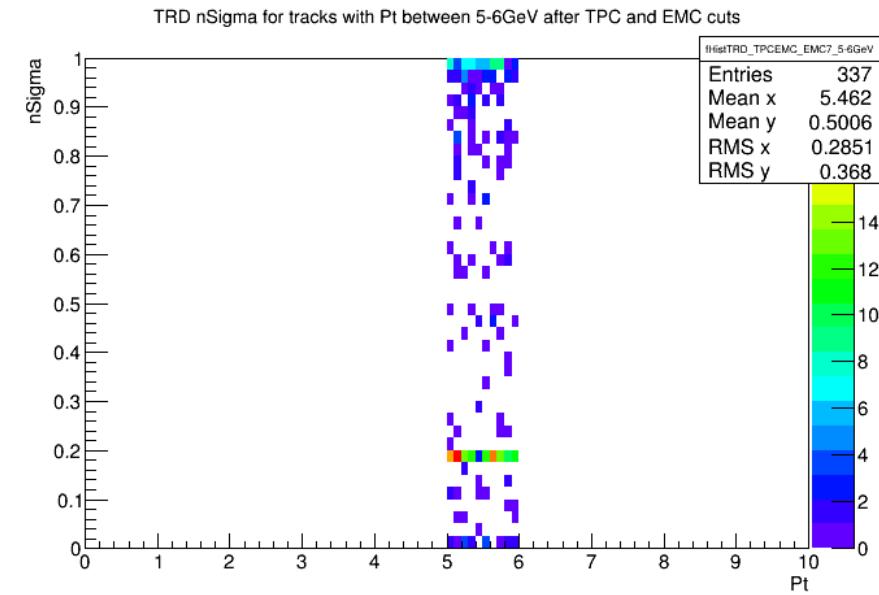
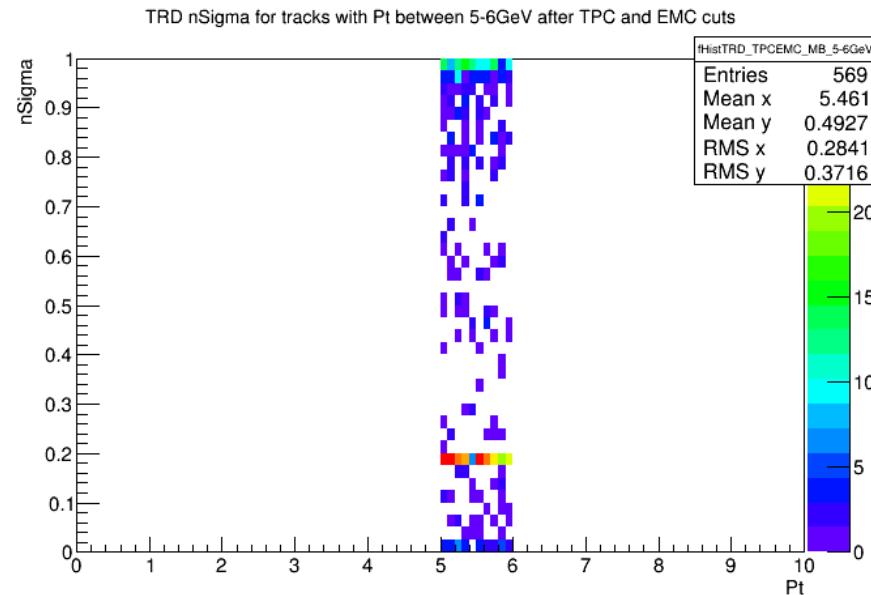
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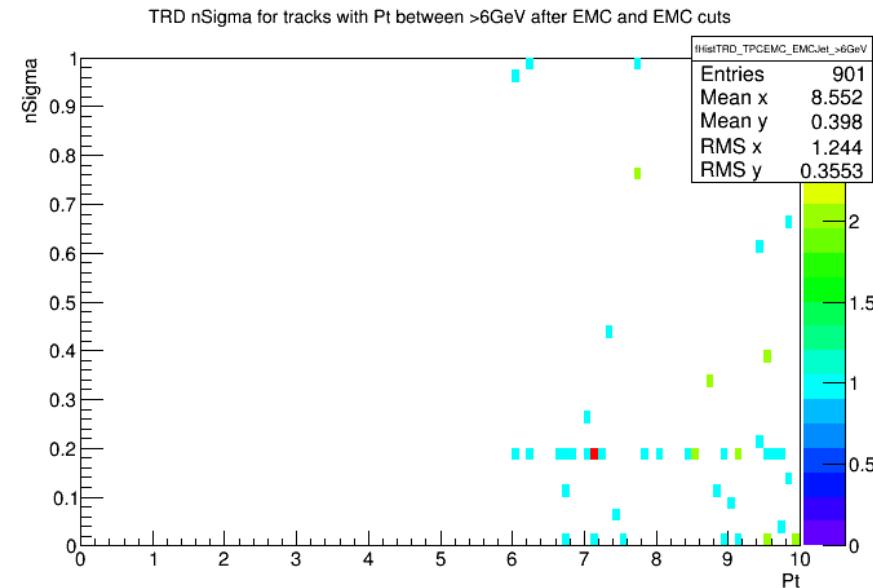
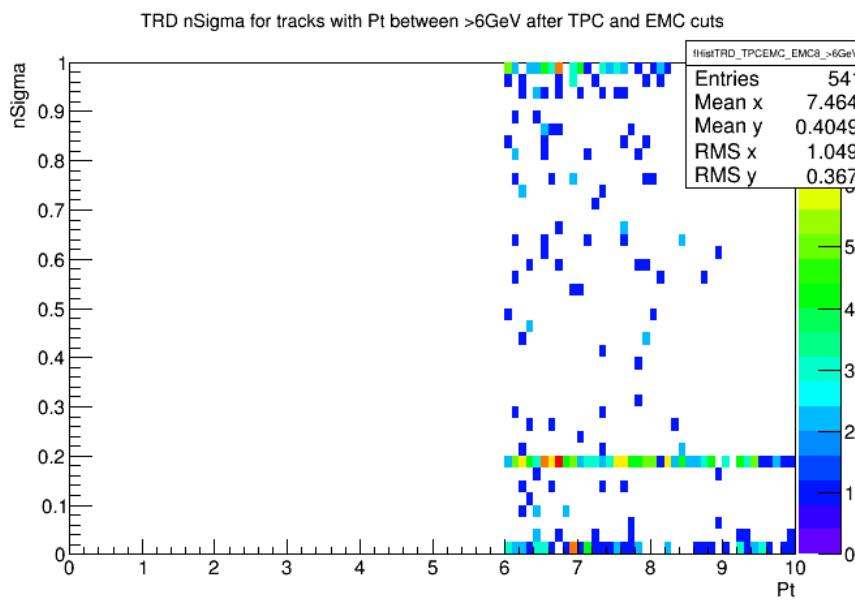
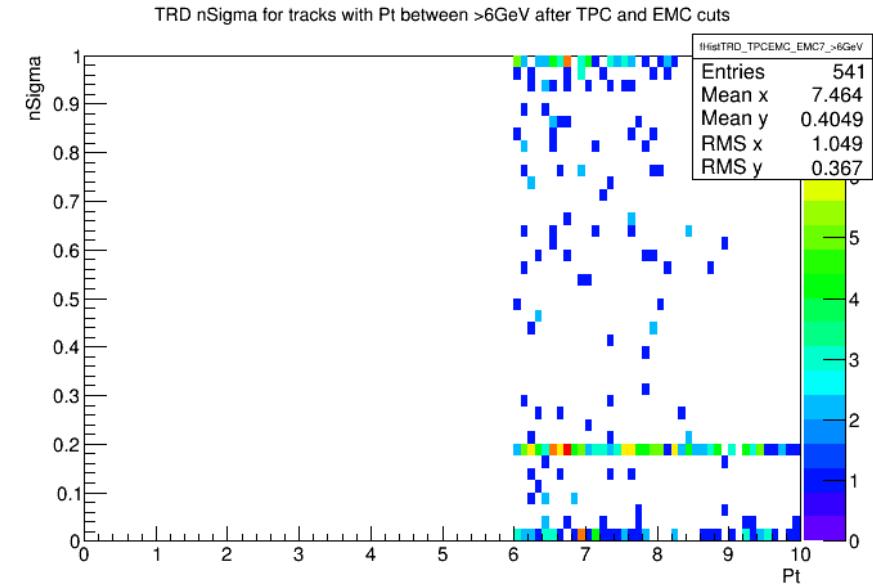
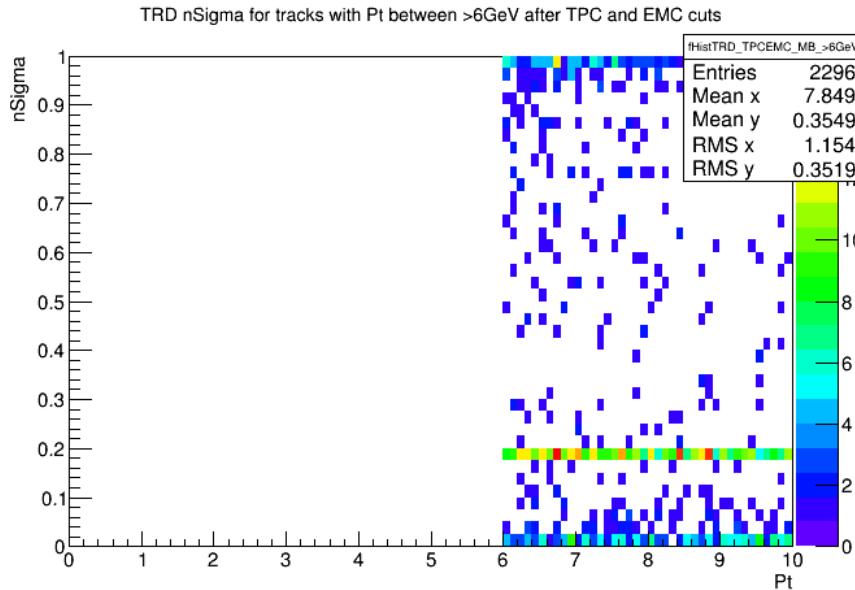
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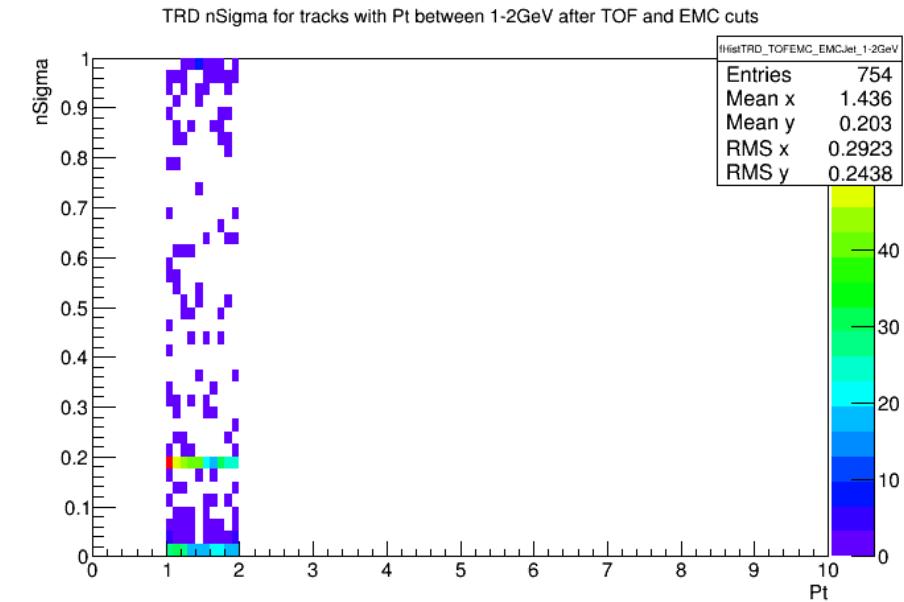
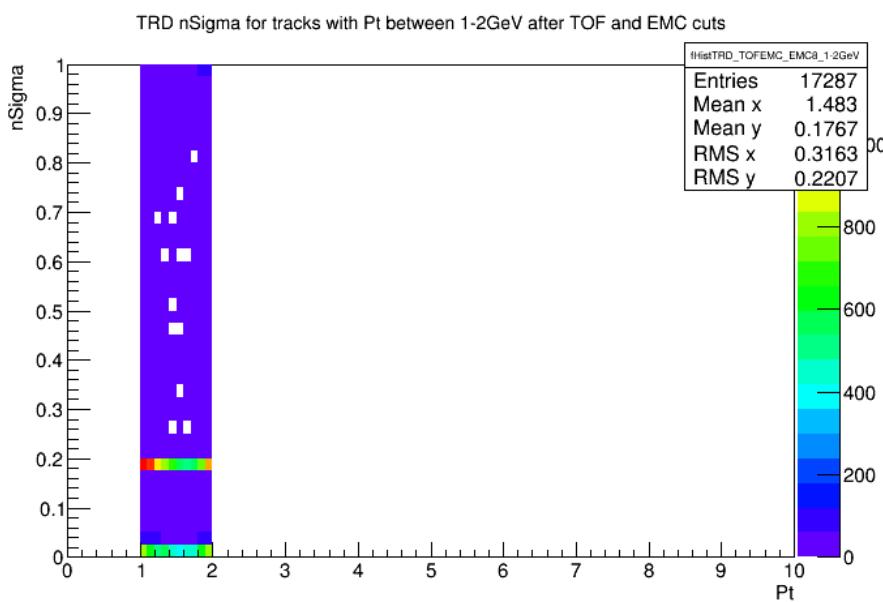
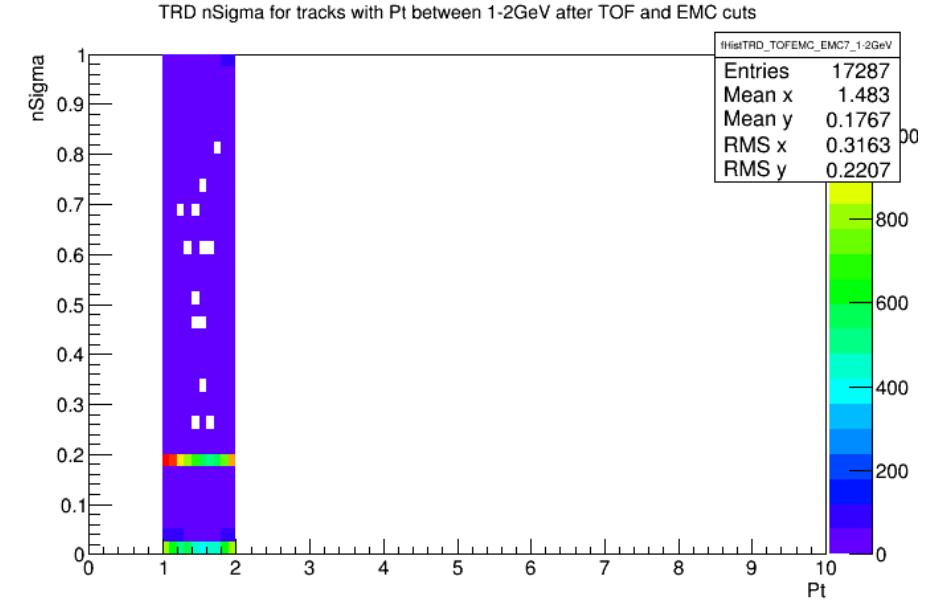
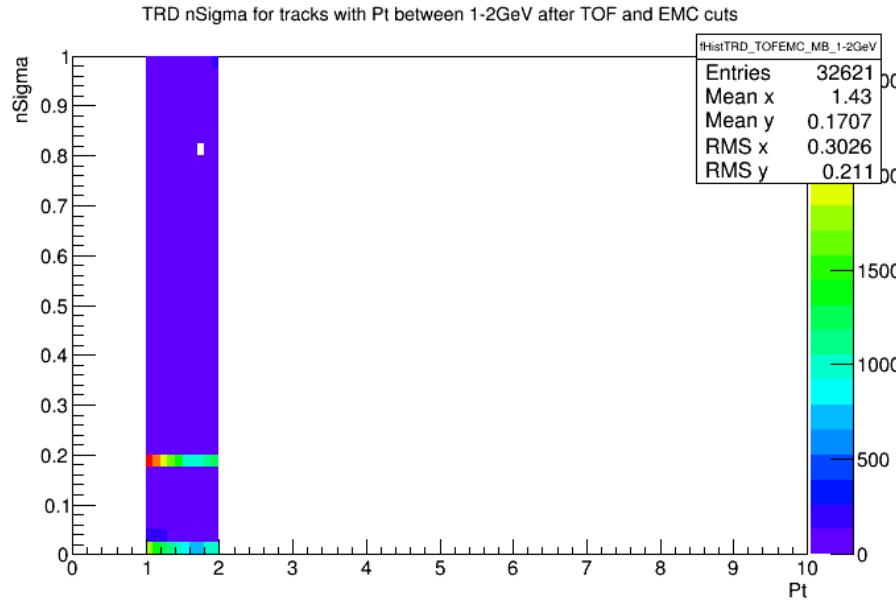
# TRD electron likelihood after 2Sig 5-6Gev TPC cut and 1+-0.1 E/p cut



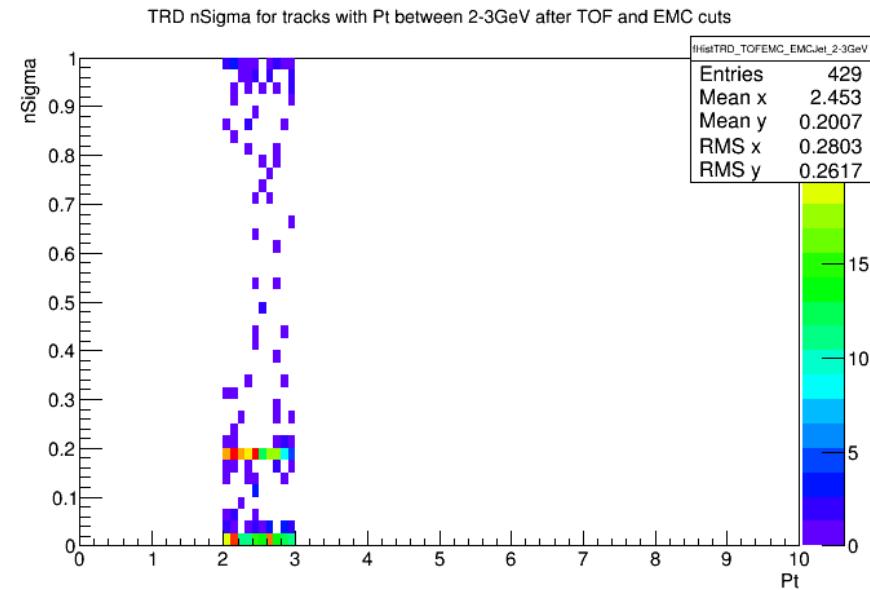
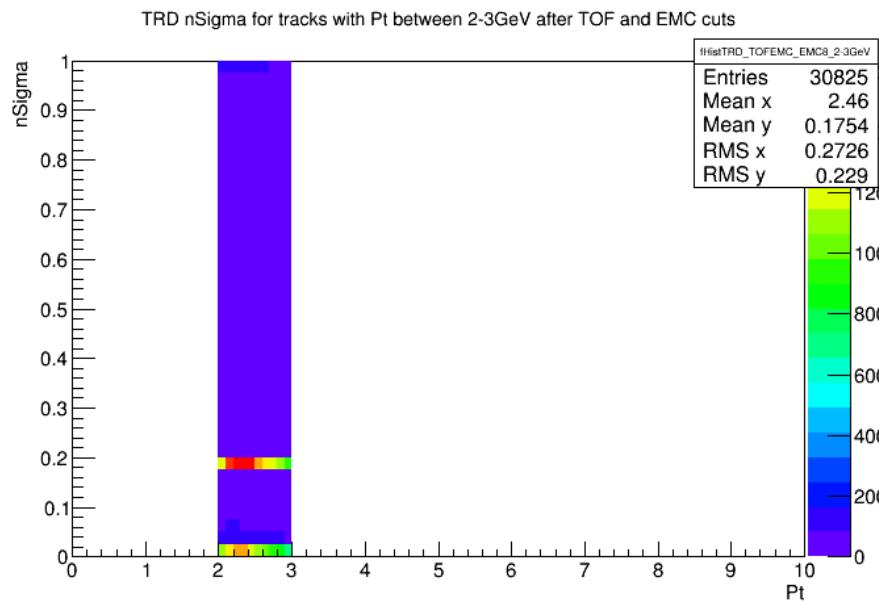
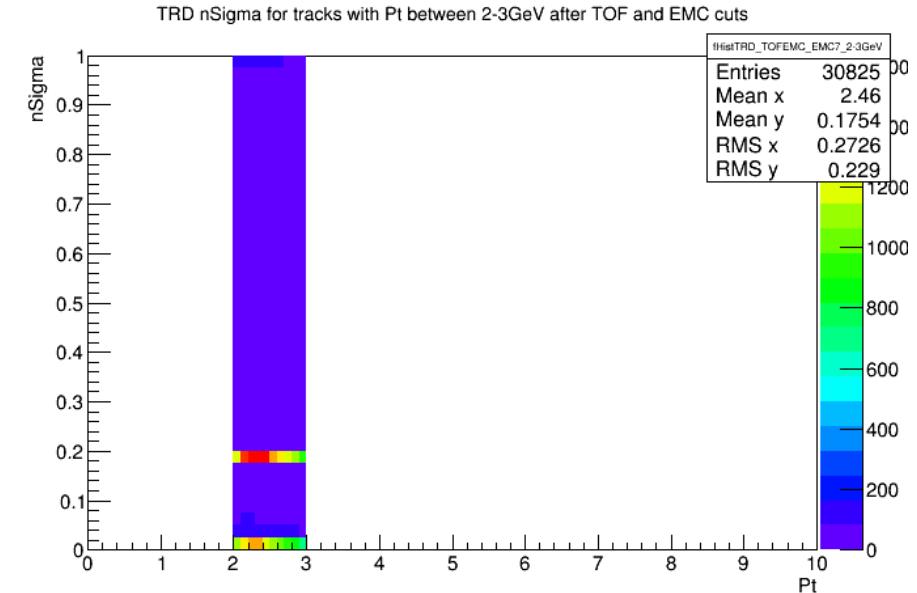
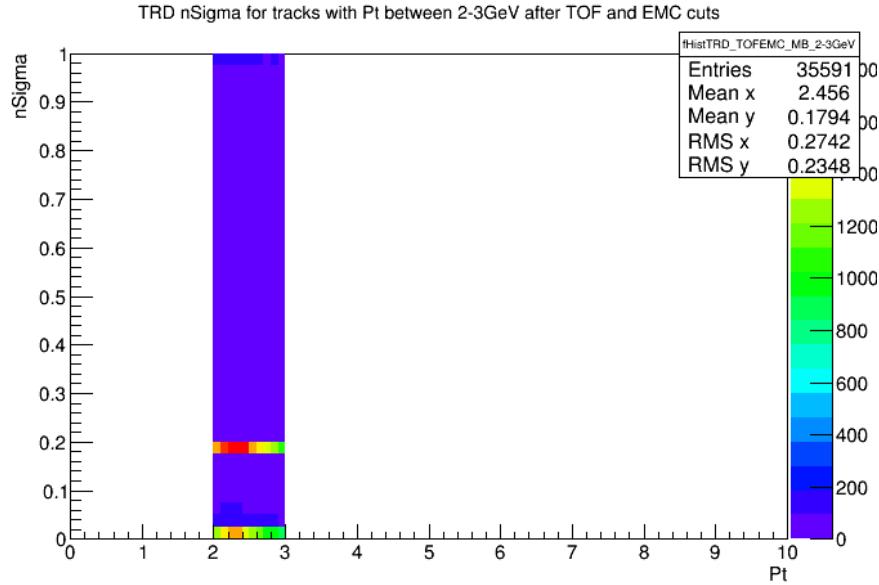
# TRD electron likelihood after 2Sig >6Gev TPC cut and 1+-0.1 E/p cut



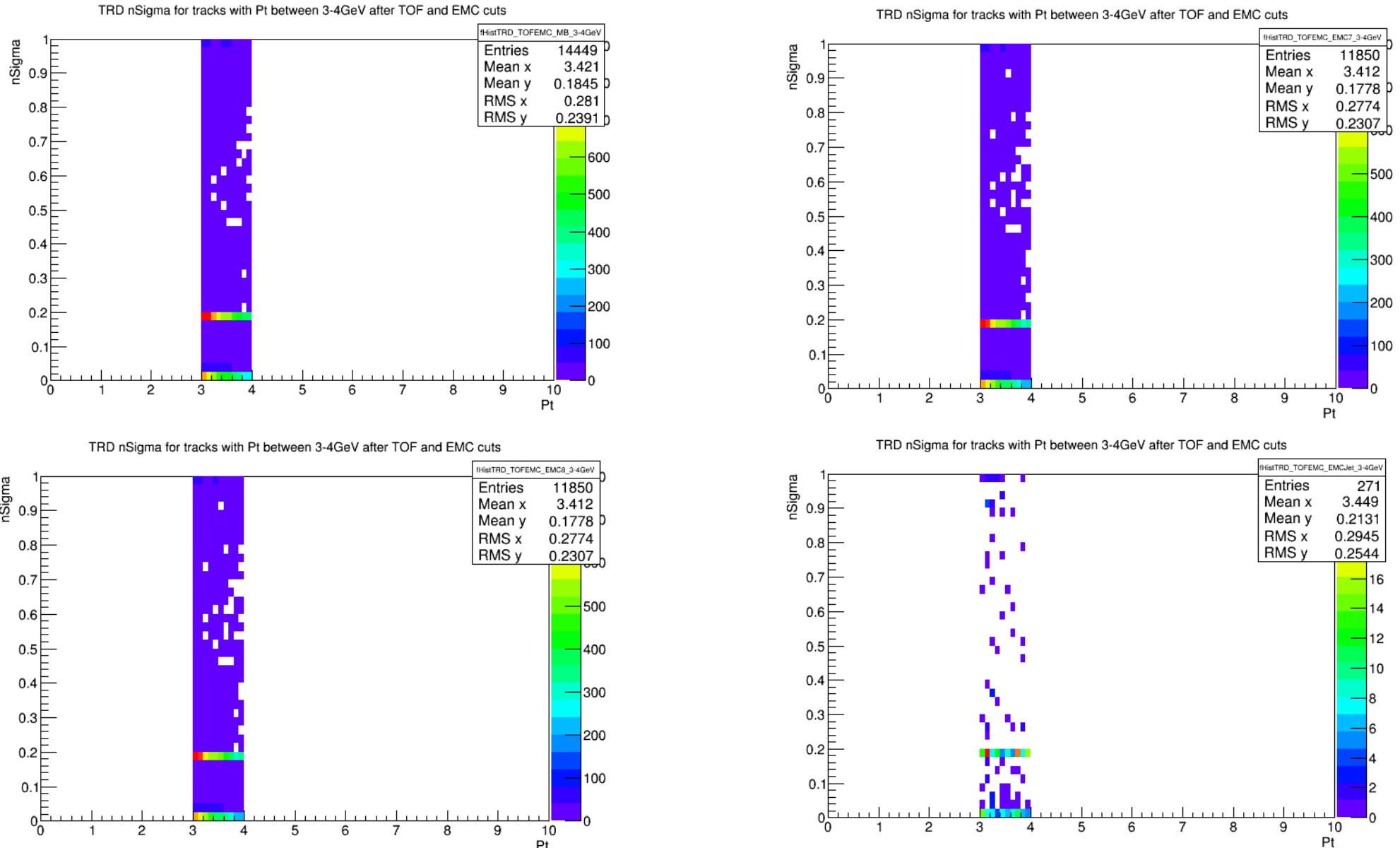
# TRD electron likelihood after 2Sig 1-2Gev TOF Cut and 1+-0.1 E/p cut



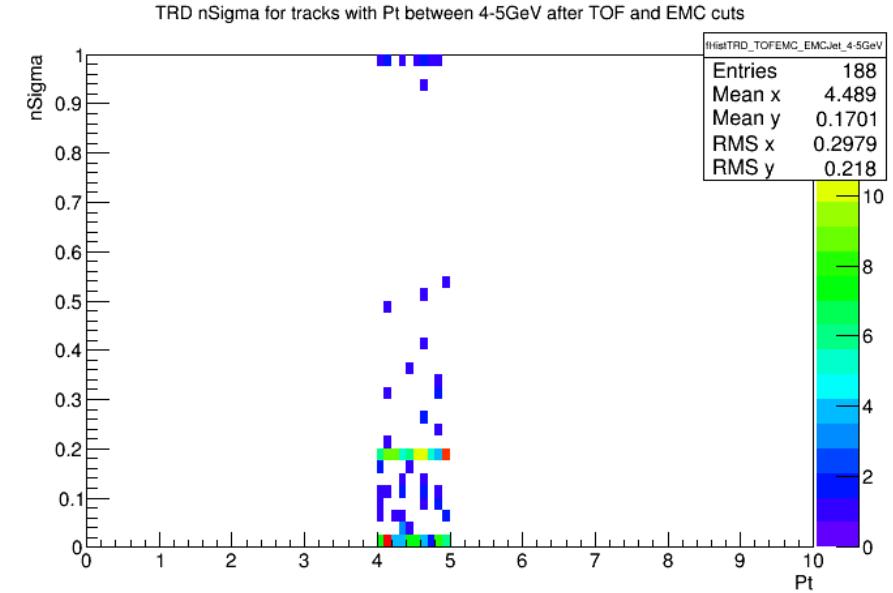
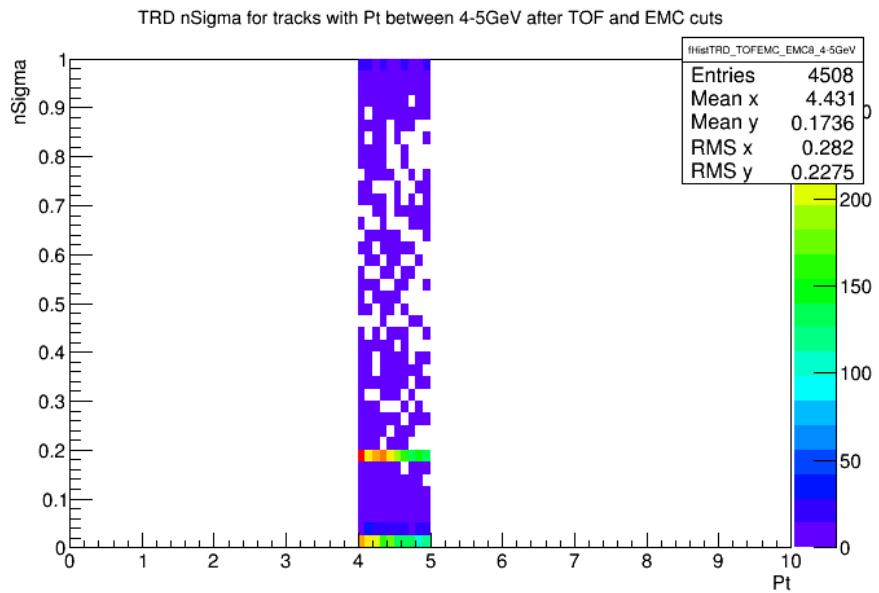
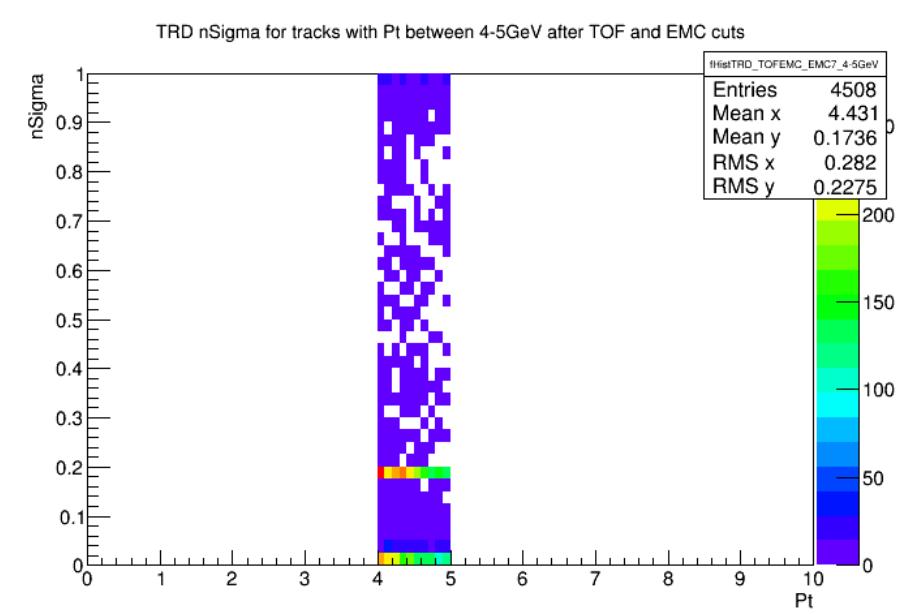
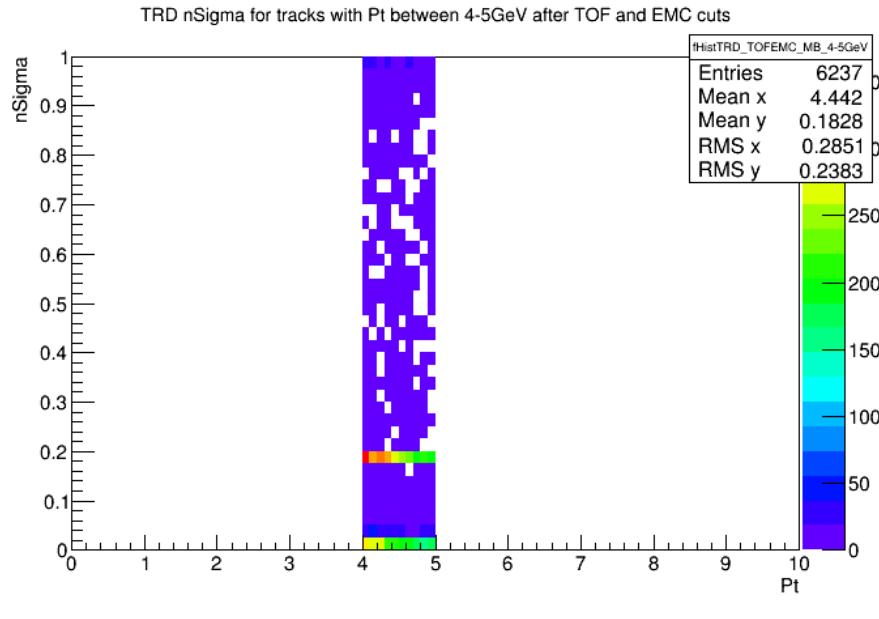
# TRD electron likelihood after 2Sig 2-3Gev TOF cut and 1+-0.1 E/p cut



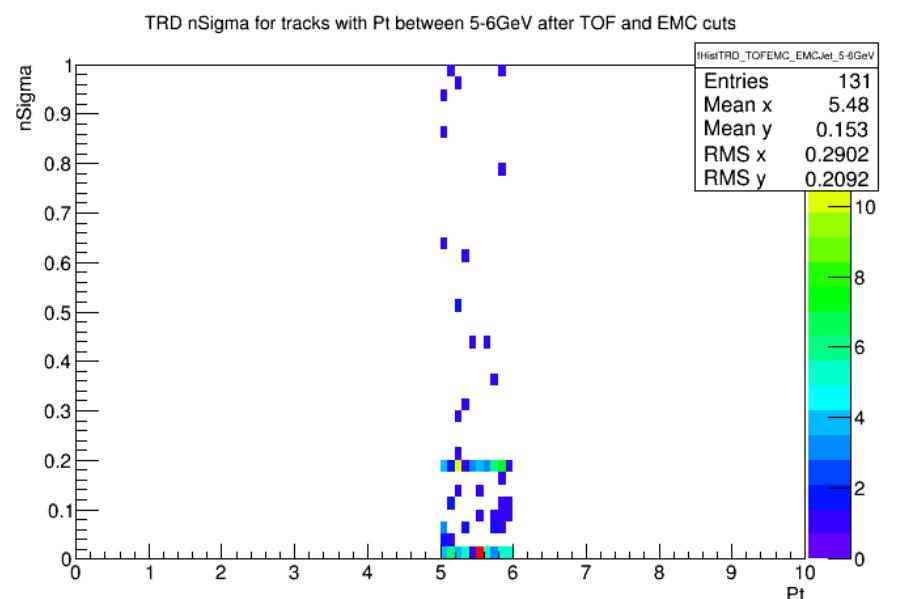
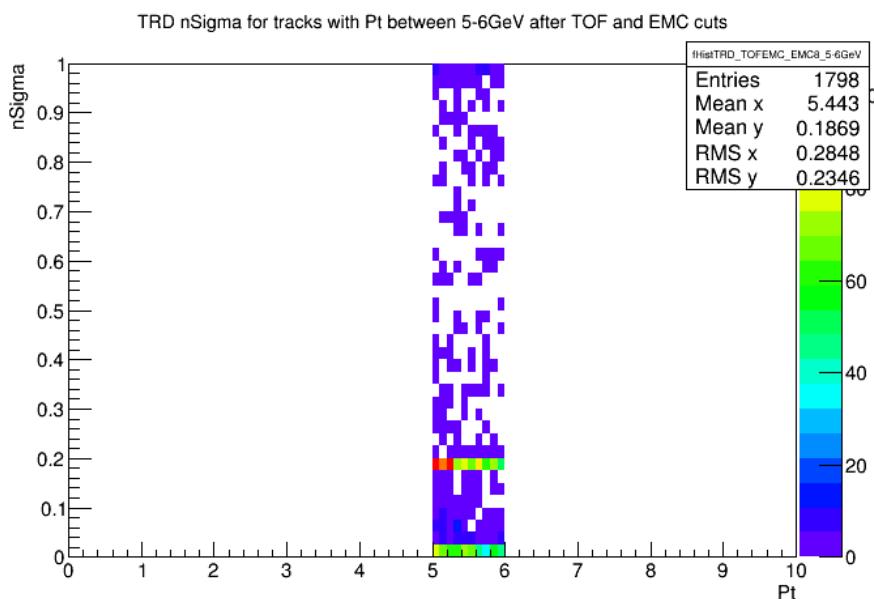
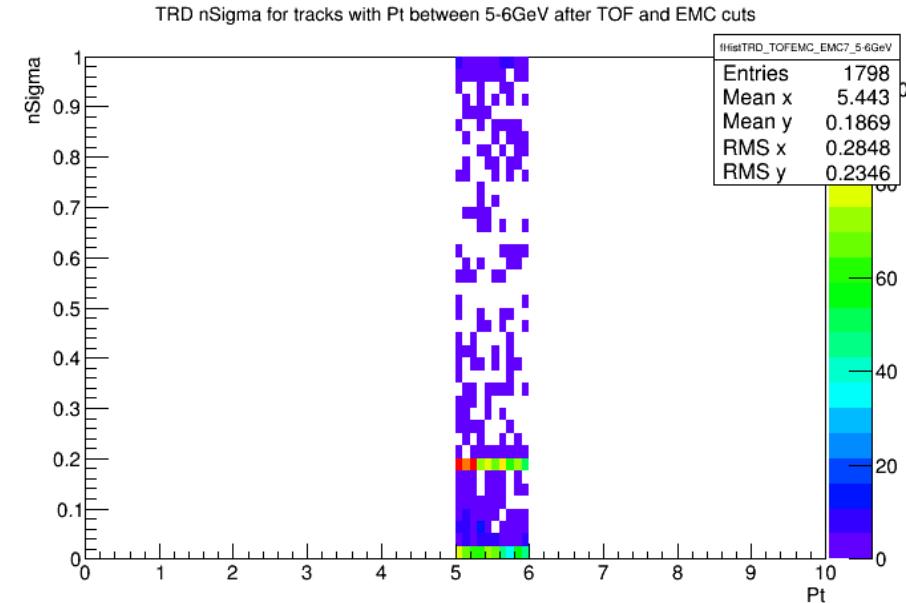
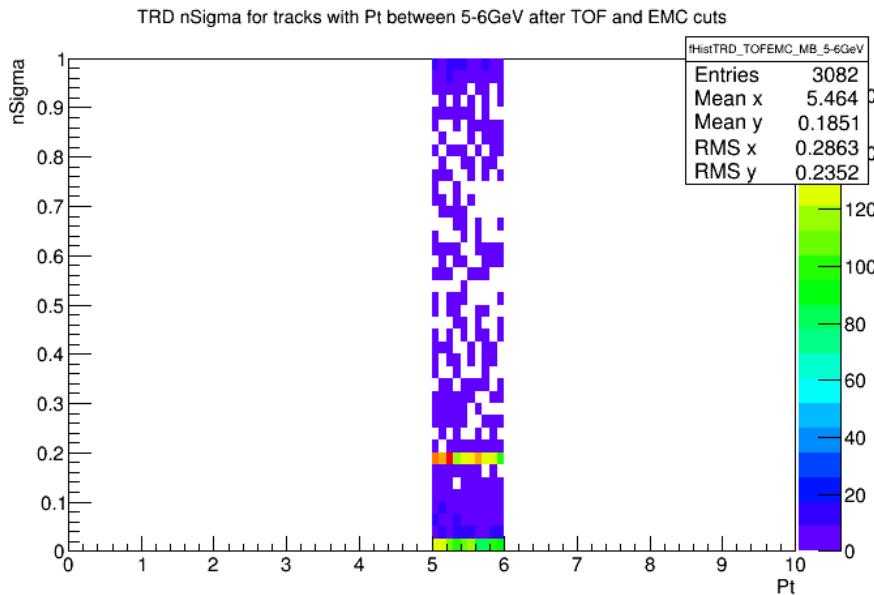
# TRD electron likelihood after 2Sig 3-4Gev TOF cut and 1+-0.1 E/p cut



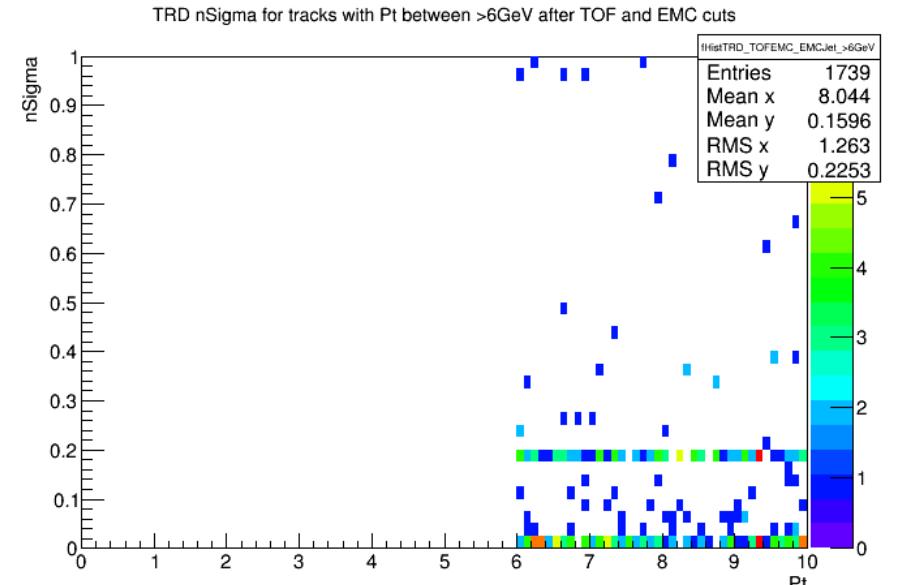
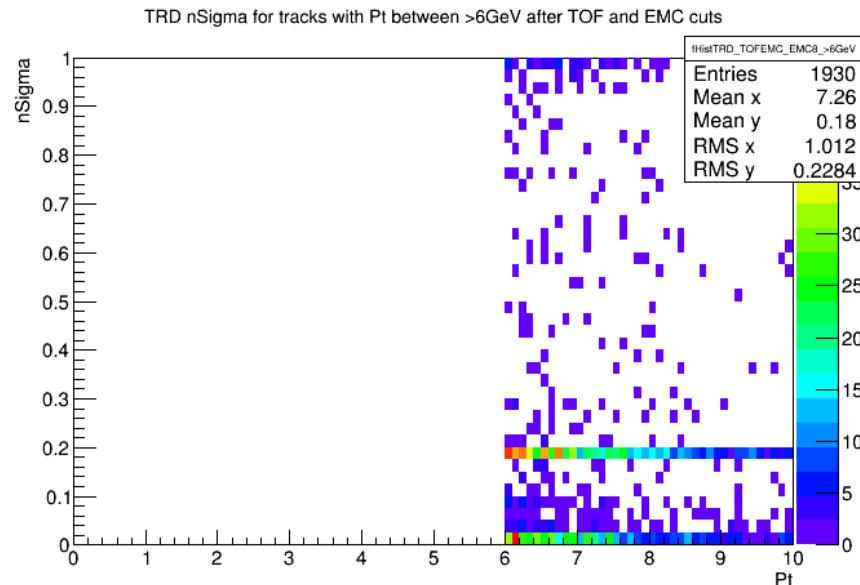
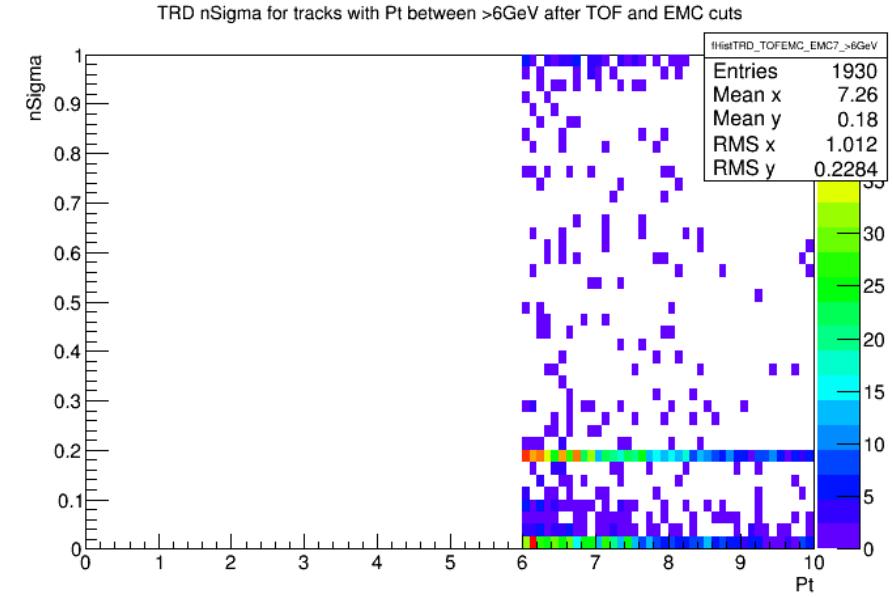
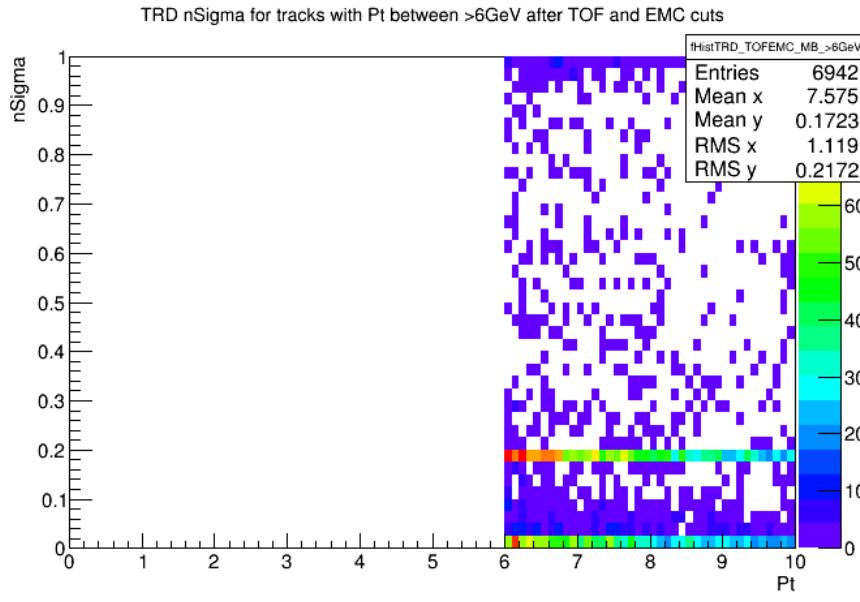
# TRD electron likelihood after 2Sig 4-5Gev TOF cut and 1+-0.1 E/p cut



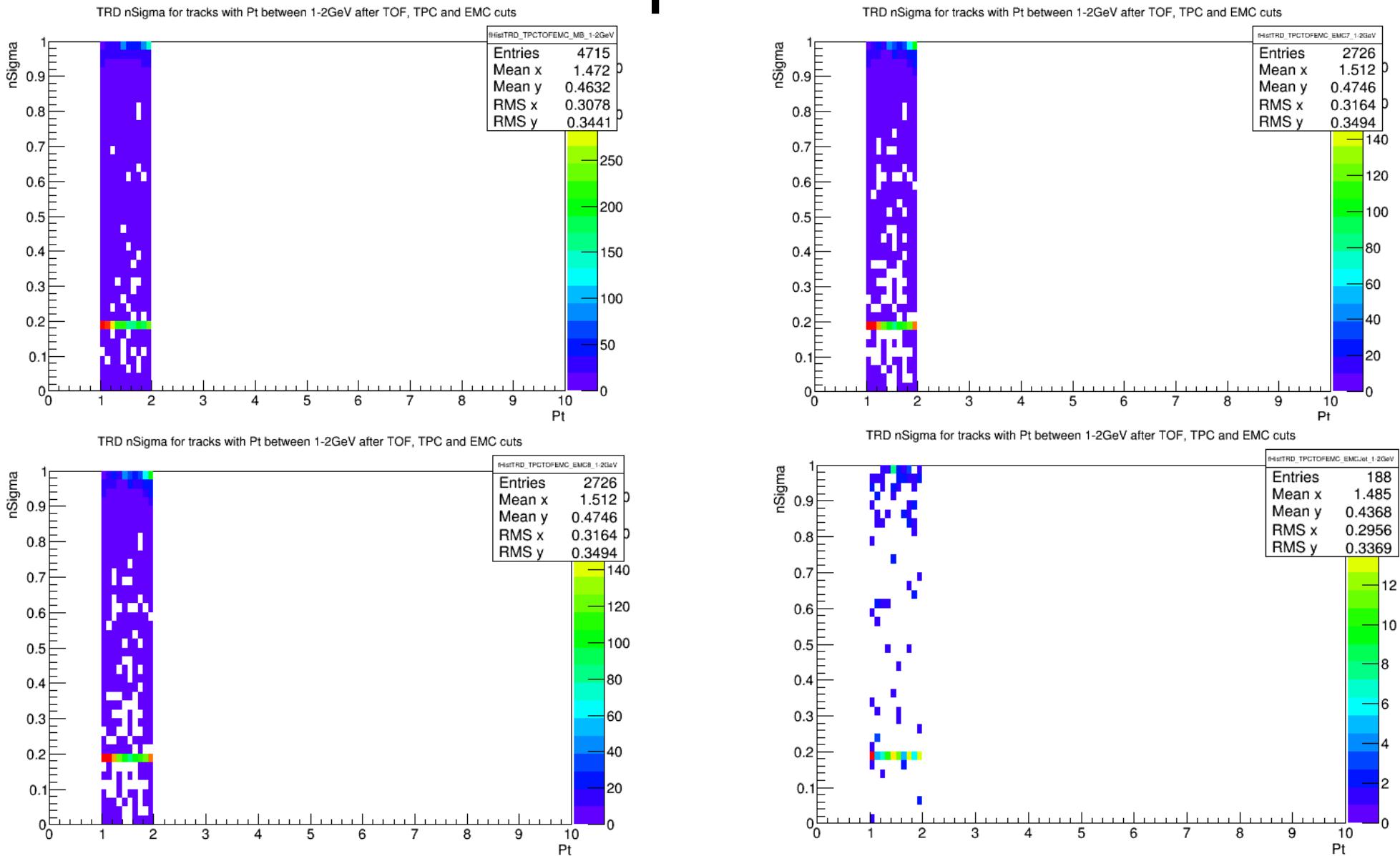
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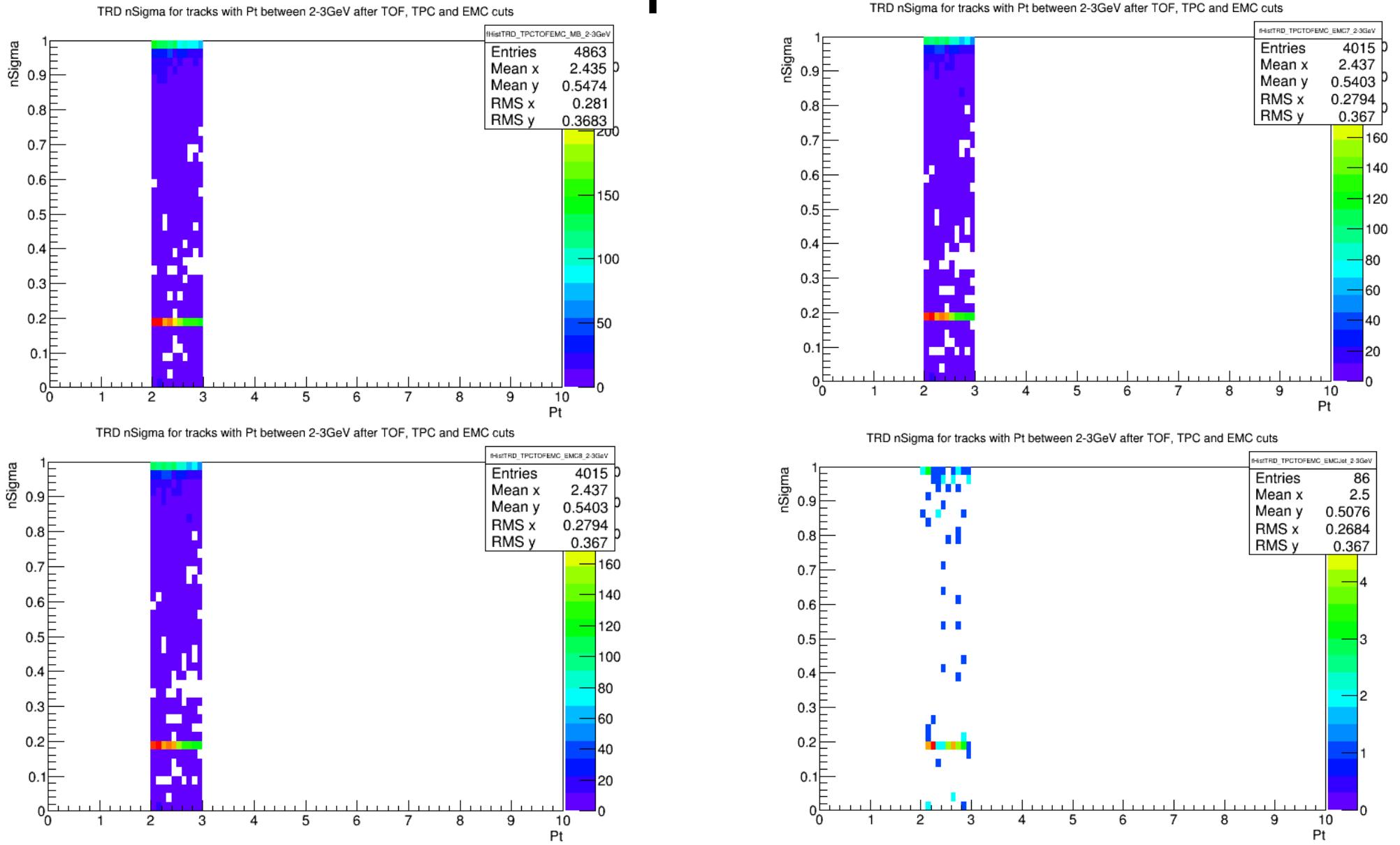
# TRD electron likelihood after 2Sig >6Gev TOF cut and 1+-0.1 E/p cut



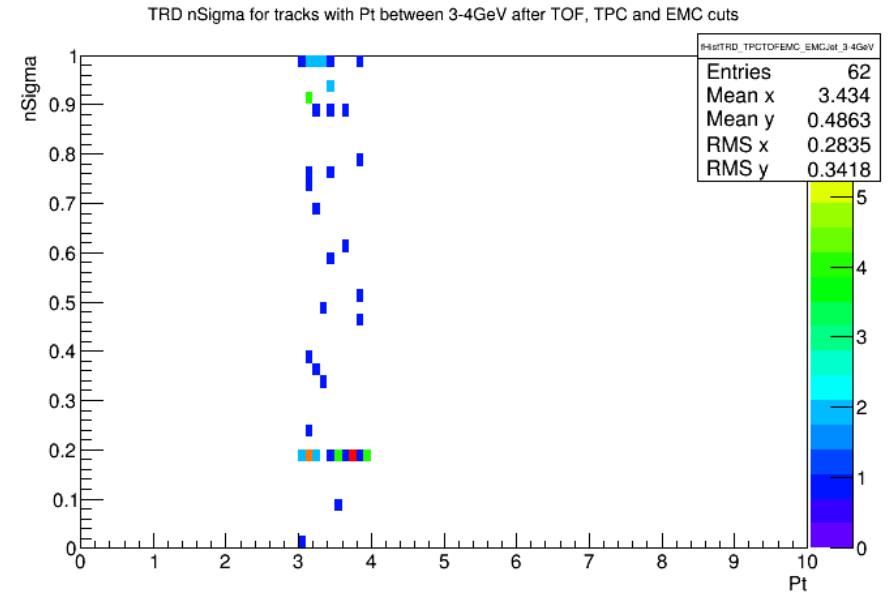
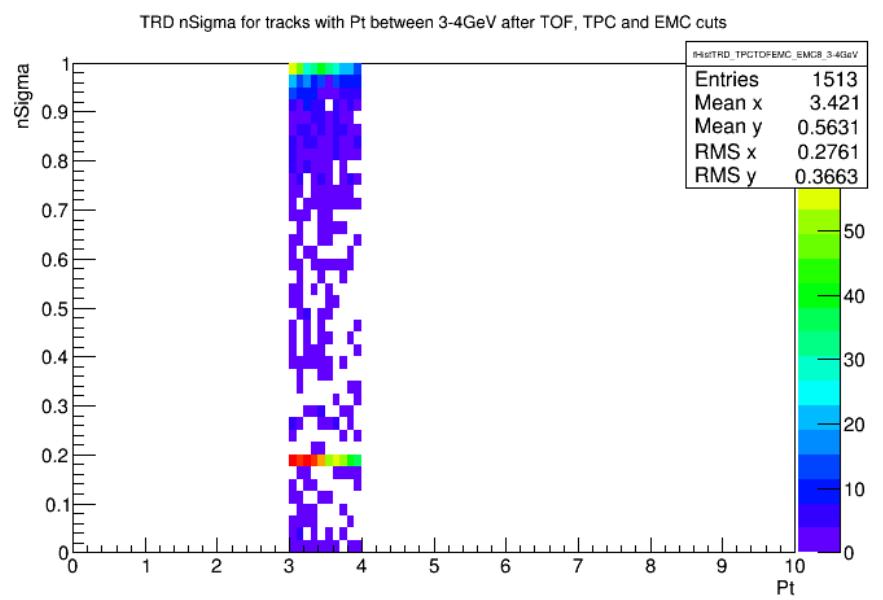
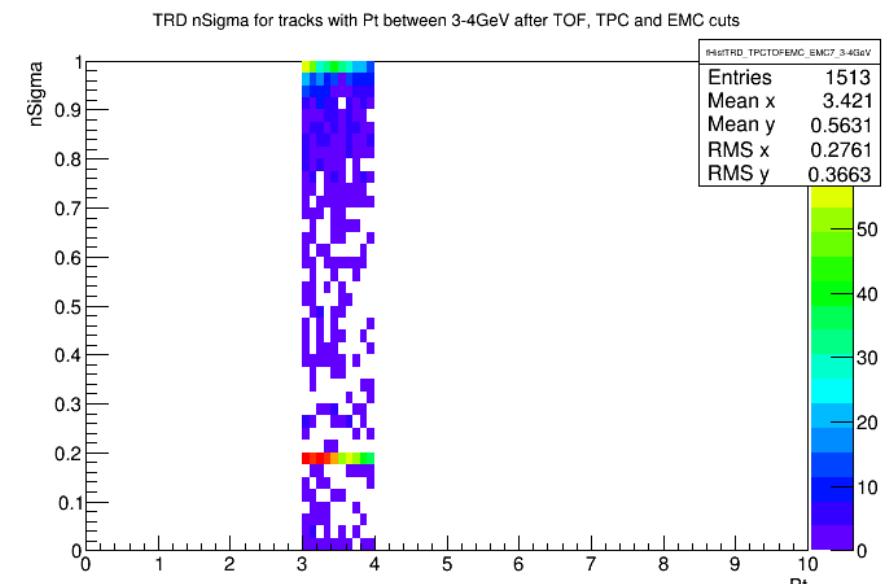
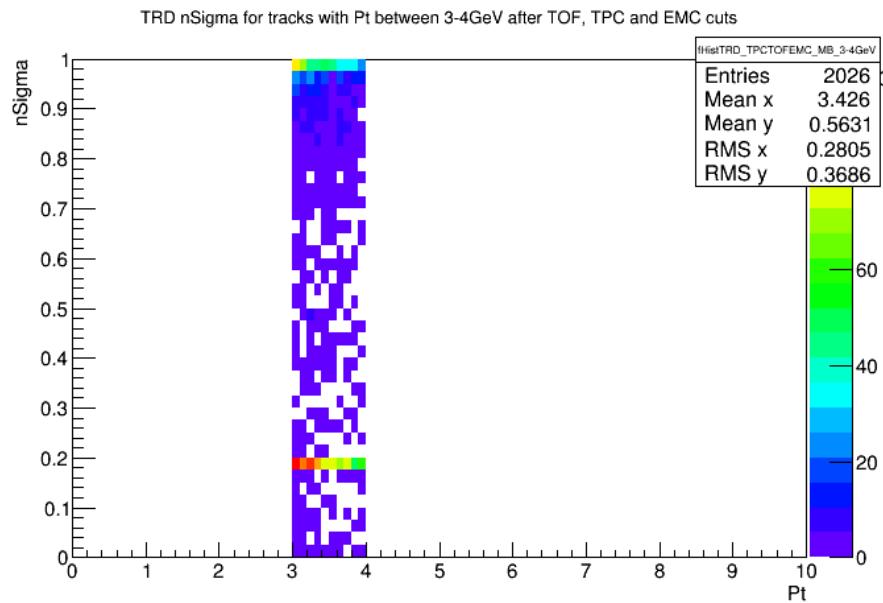
# TRD electron likelihood after 2Sig TPC Cut, 2Sig TOF cut and 1+-0.1 1-2Gev E/p cut



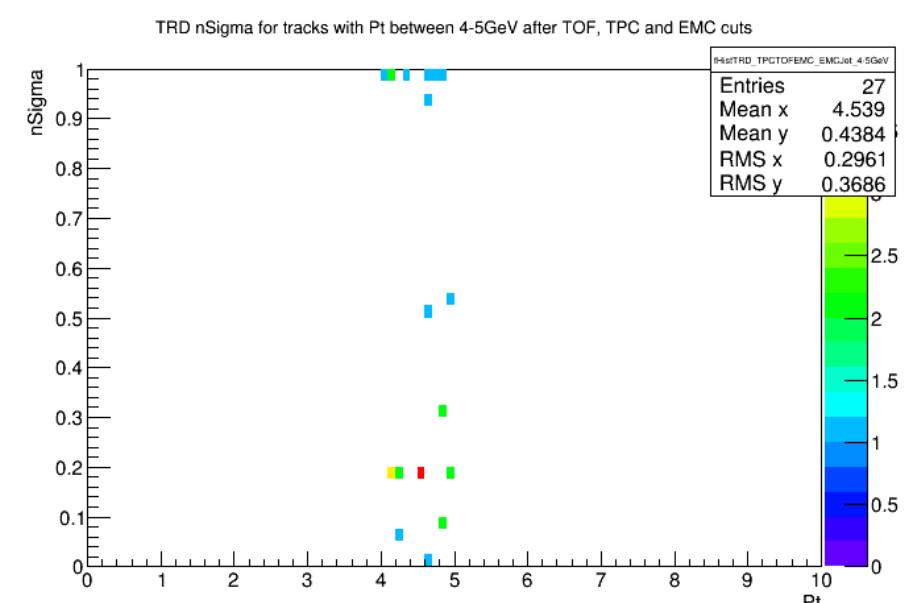
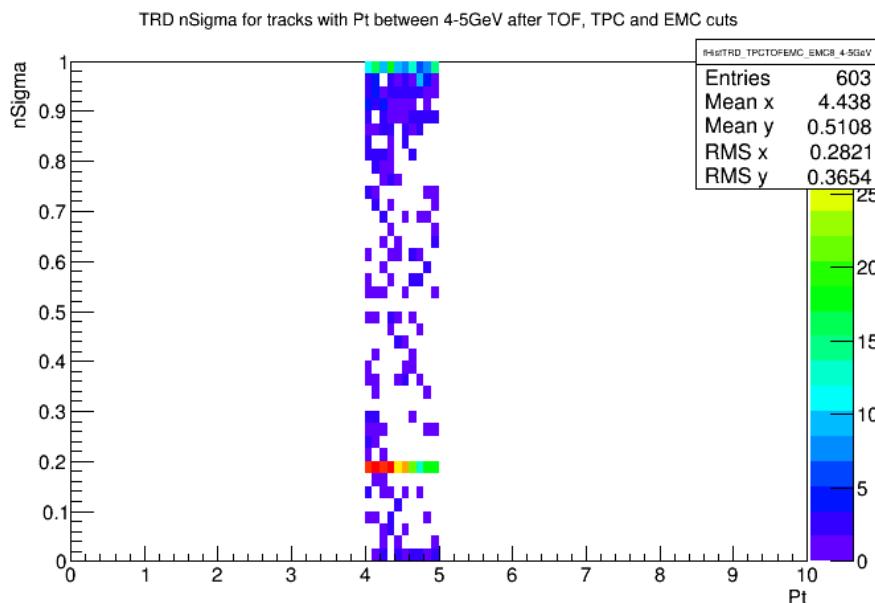
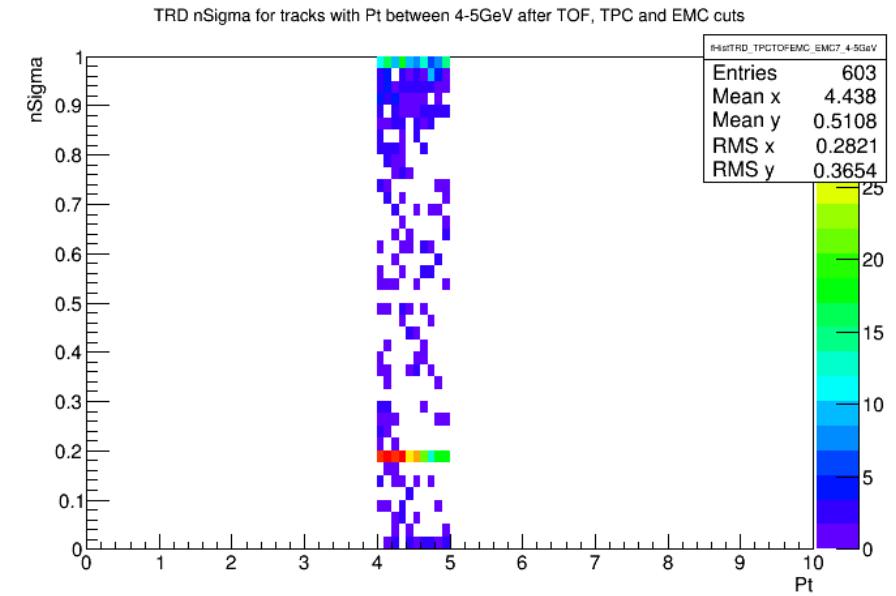
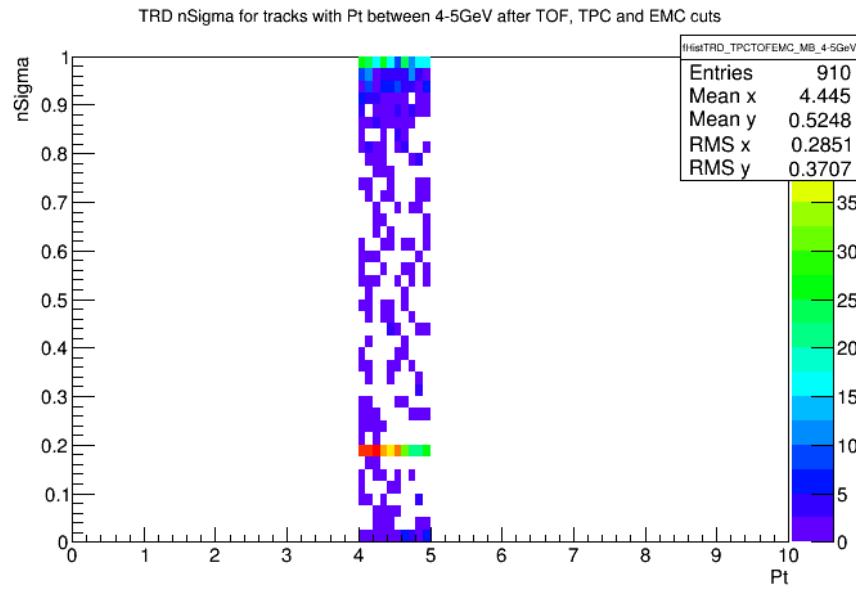
# TRD electron likelihood after 2Sig TPC cut, 2Sig TOF cut and 1+-0.1 2-3Gev E/p cut



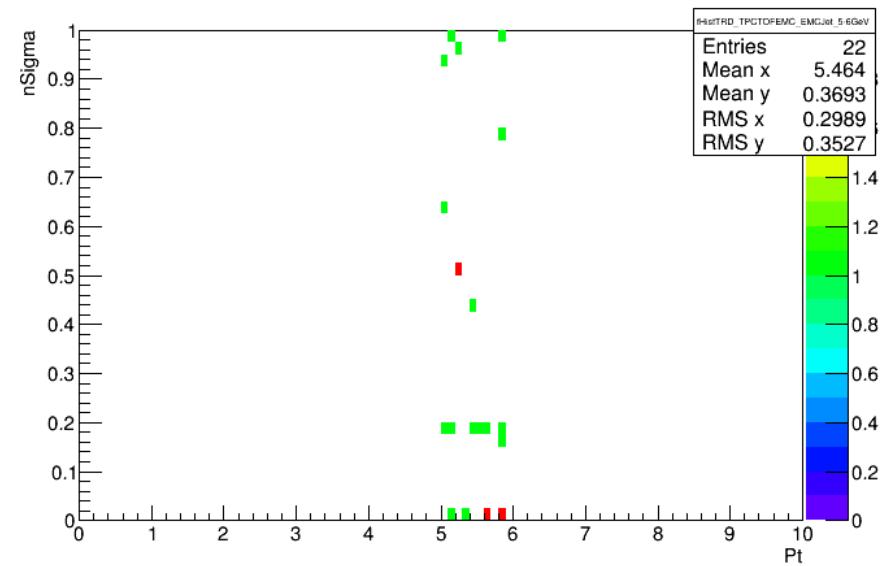
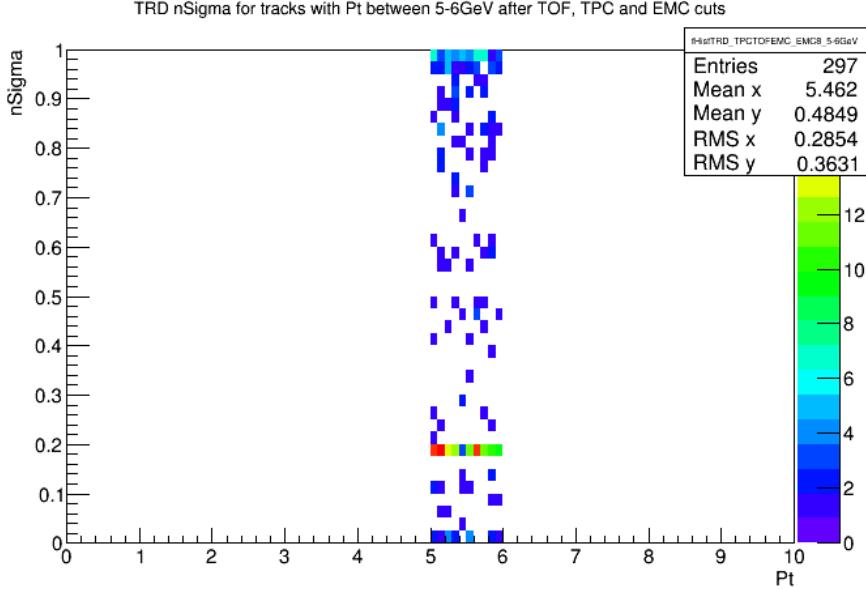
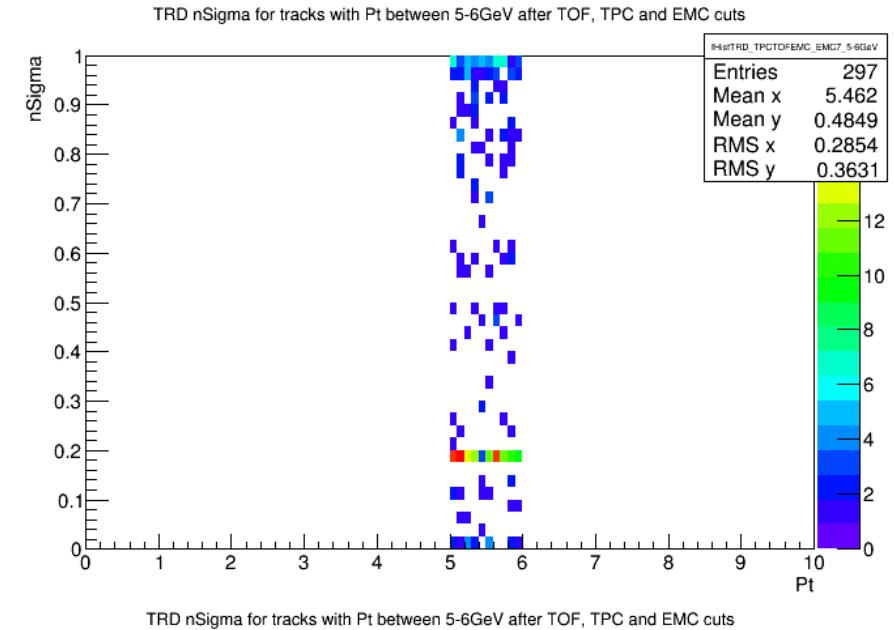
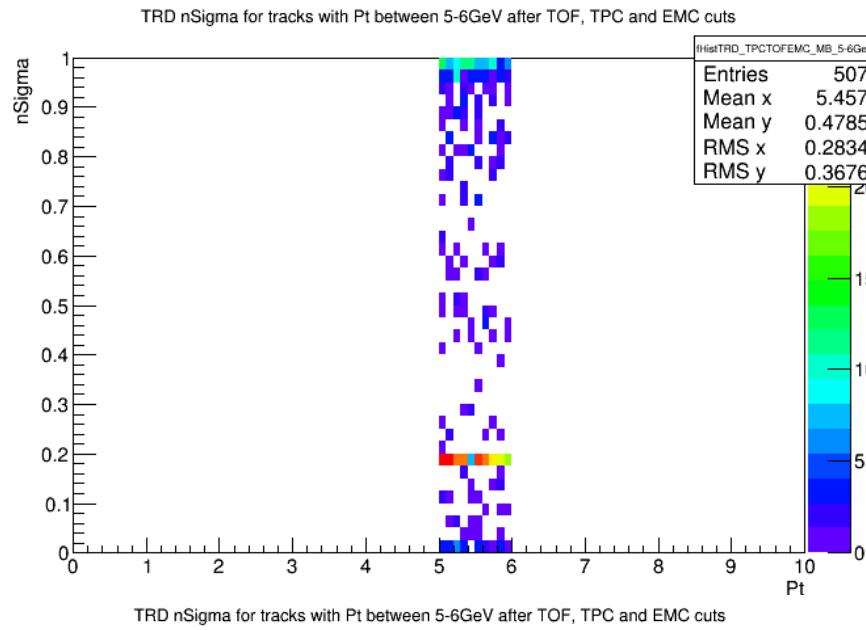
# TRD electron likelihood after 2Sig TPC cut, 2Sig TOF cut and 1+-0.1 3-4Gev E/p cut



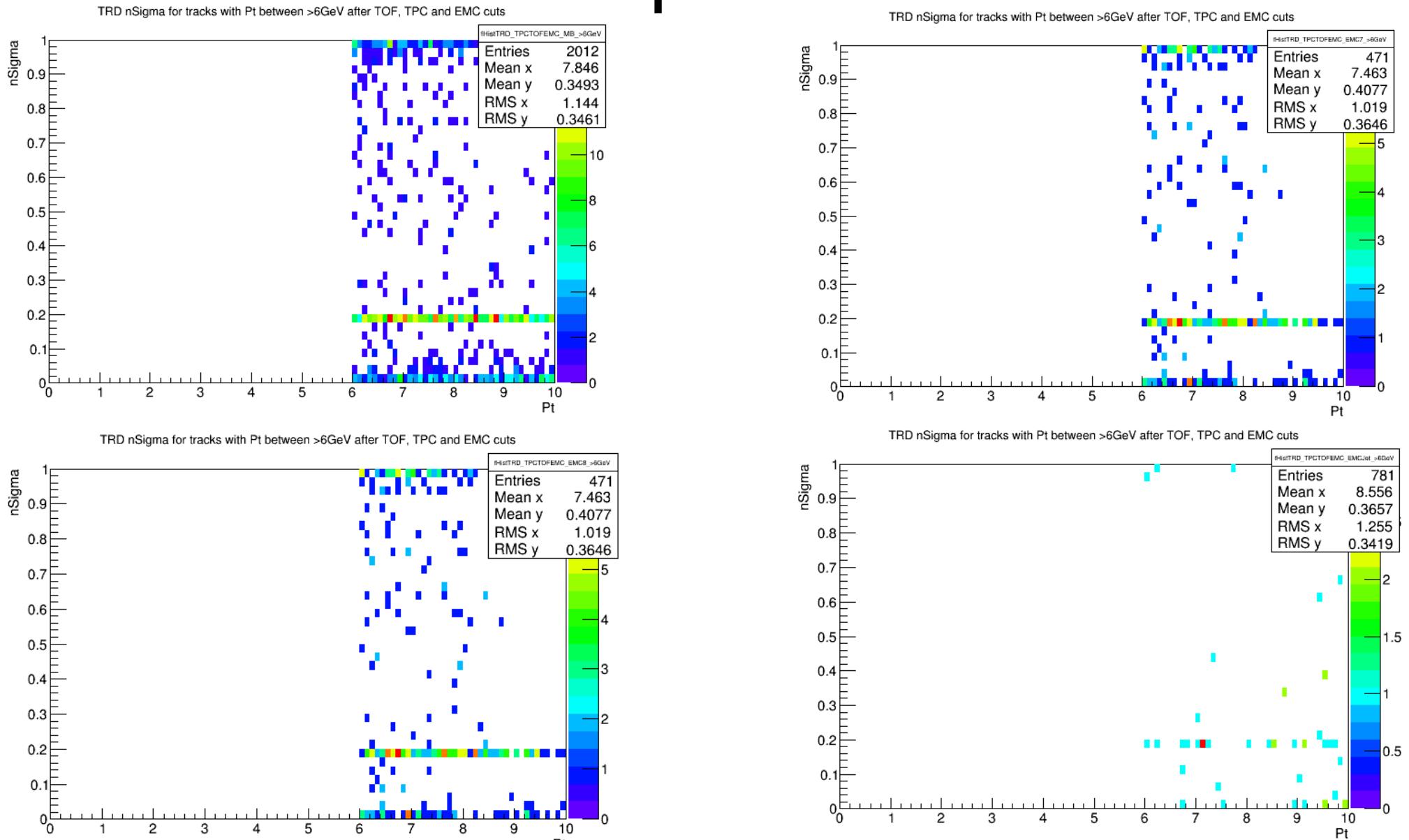
# TRD electron likelihood after 2Sig TPC cut, 2Sig TOF cut and 1+-0.1 4-5Gev E/p cut



# TRD electron likelihood after 2Sig TPC cut, 2Sig TOF cut and 1+-0.1 5-6Gev E/p cut



# TRD electron likelihood after 2Sig TPC cut, 2Sig TOF cut and 1+-0.1 >6Gev E/p cut

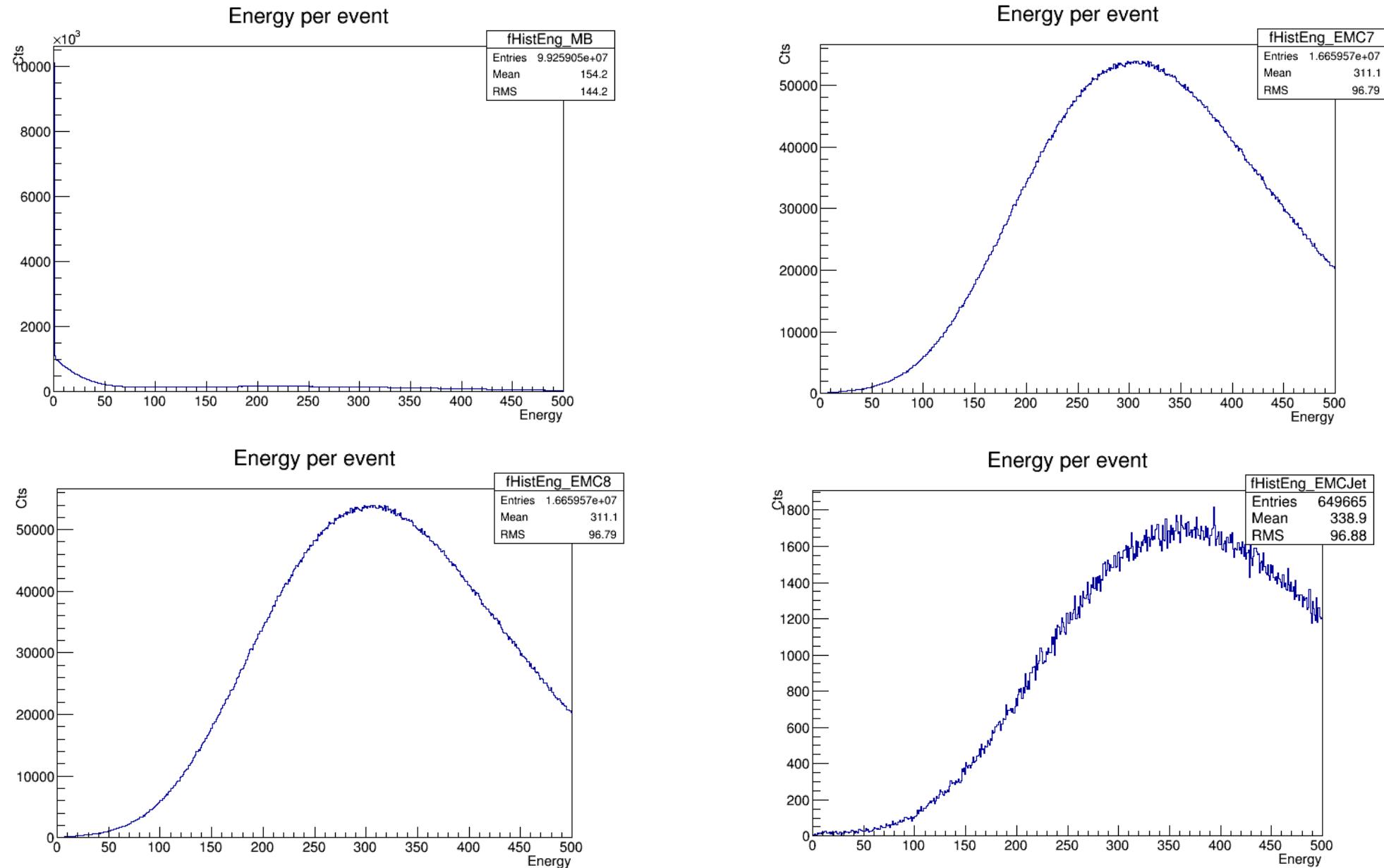


# Analysis

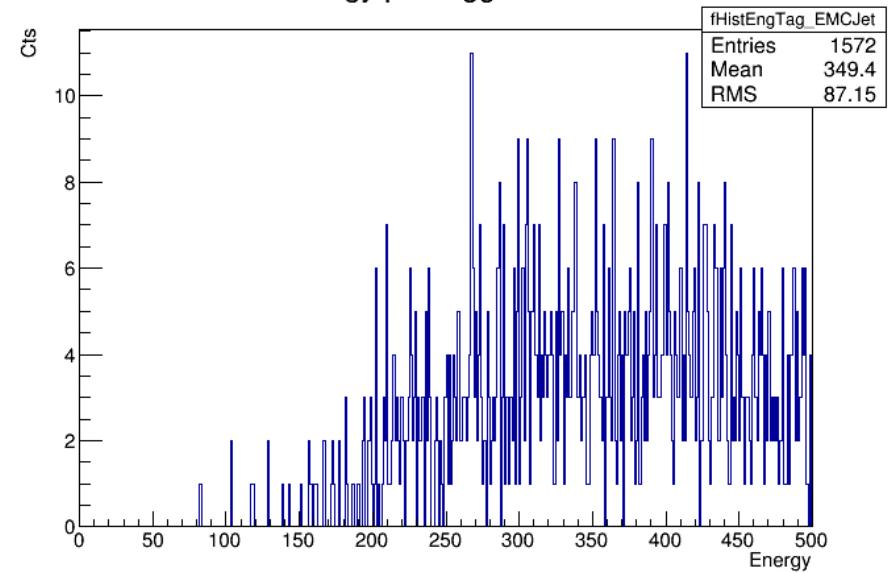
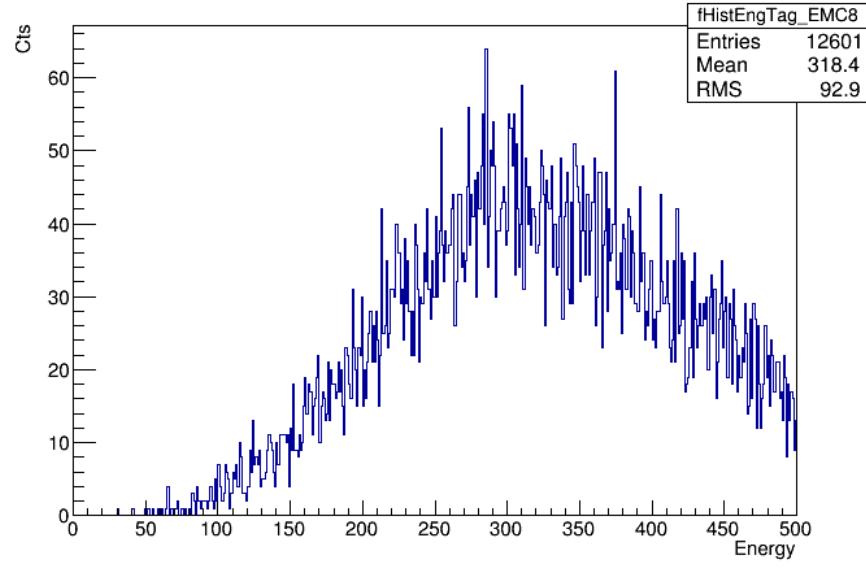
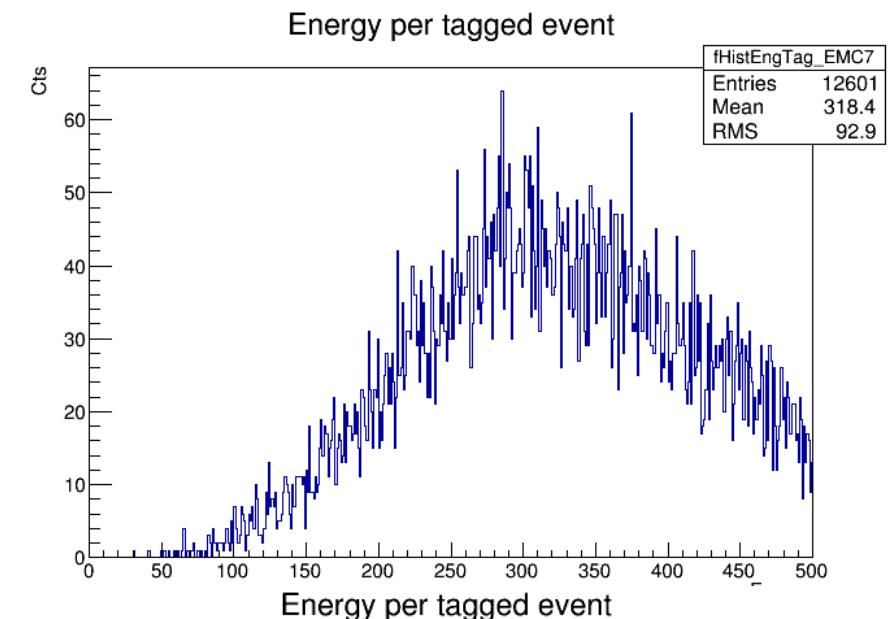
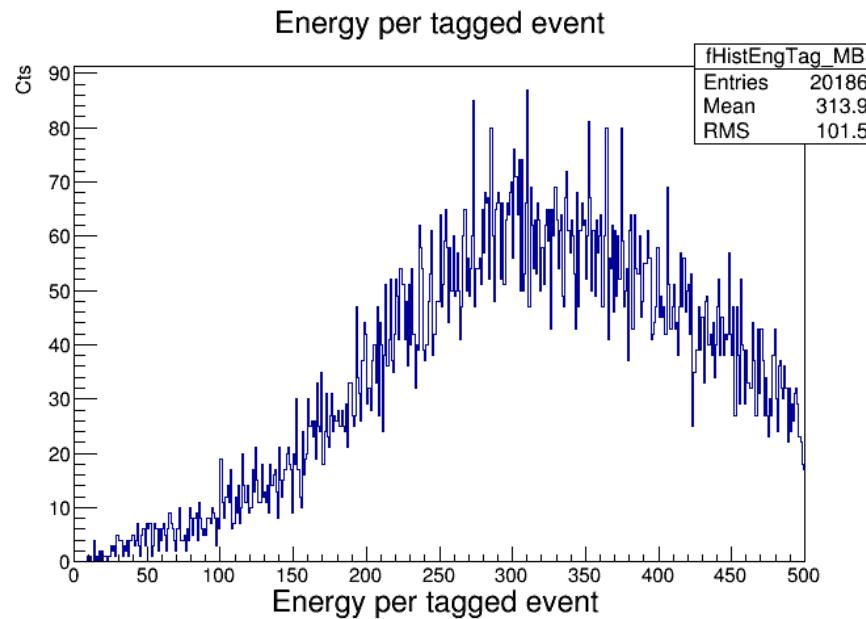
In this analysis we consider electron candidates to be those tracks that satisfy any 3 detector PID cuts with an electron hypothesis.(This should change once we see the PID plots and decide which detector cuts give the best electron sample in what Pt ranges)

To further classify the events containing these candidate electrons(from now on simply referred to as candidates or cand.), we plot the energy distribution, Eta-Phi distribution, and deltaPhi w.r.t the candidate of all tracks in the event(not including the candidate).

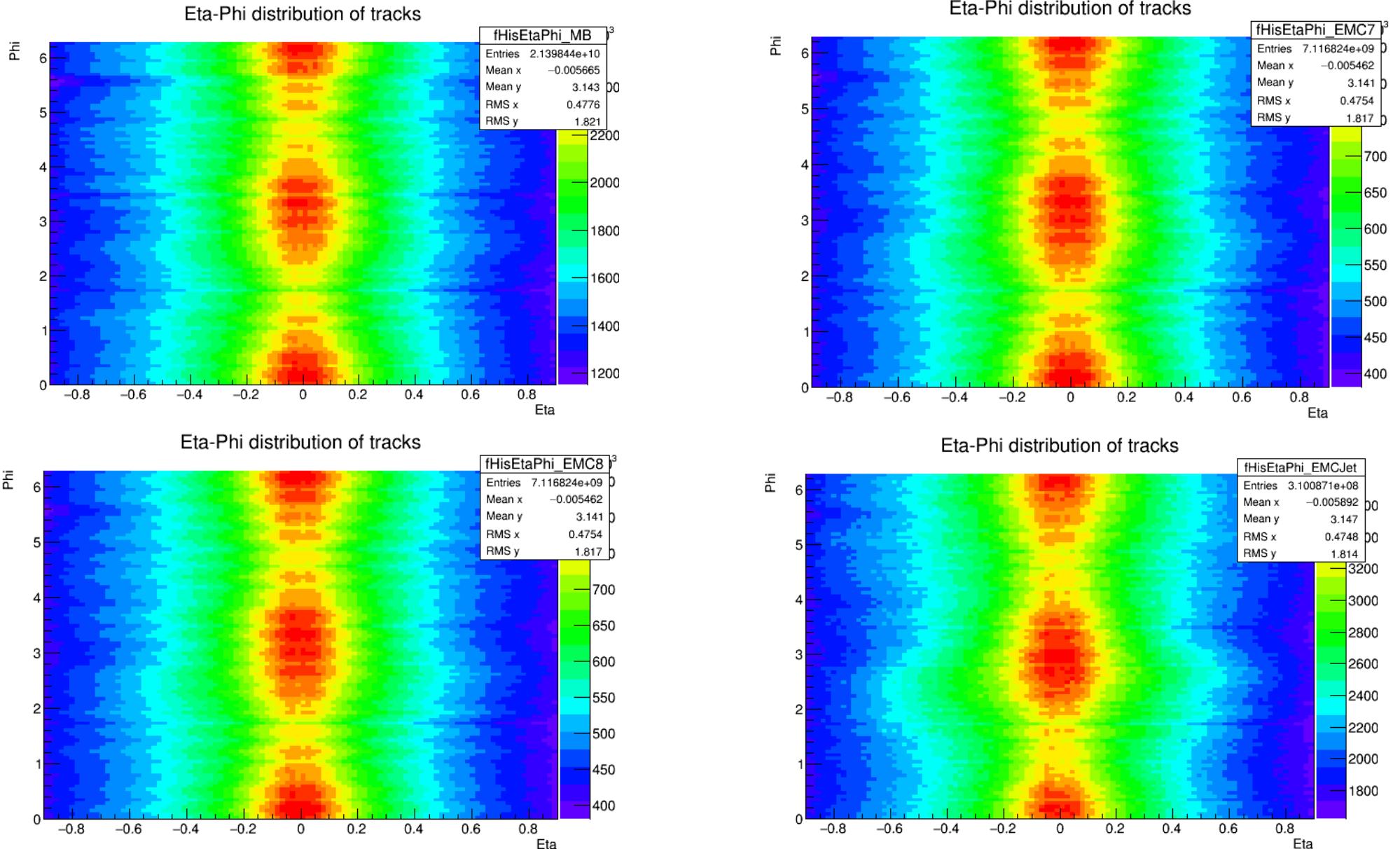
# Energy distribution for tracks in all events



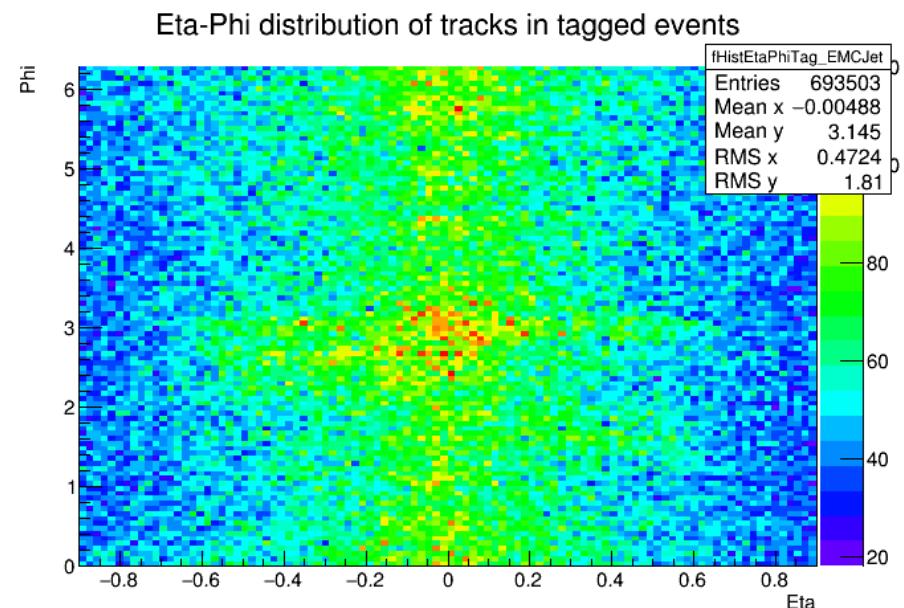
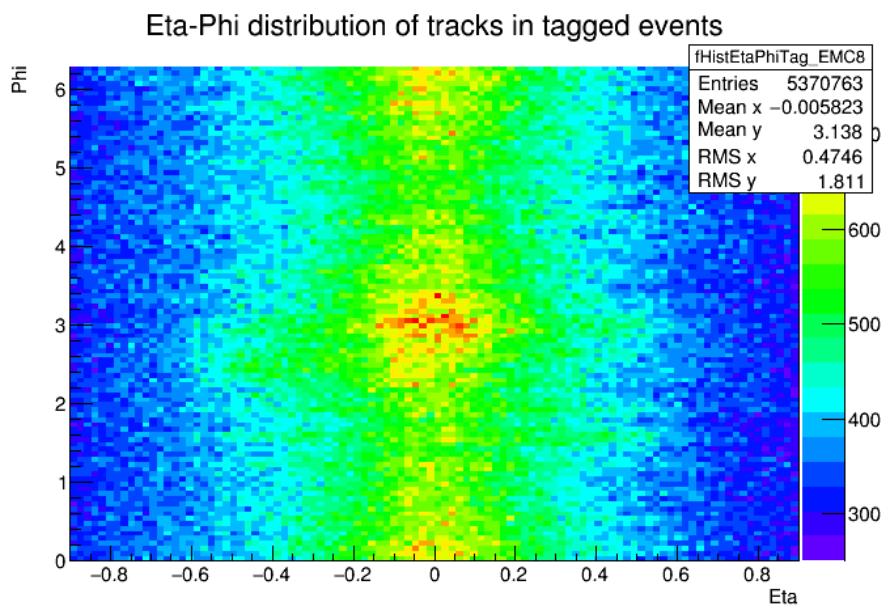
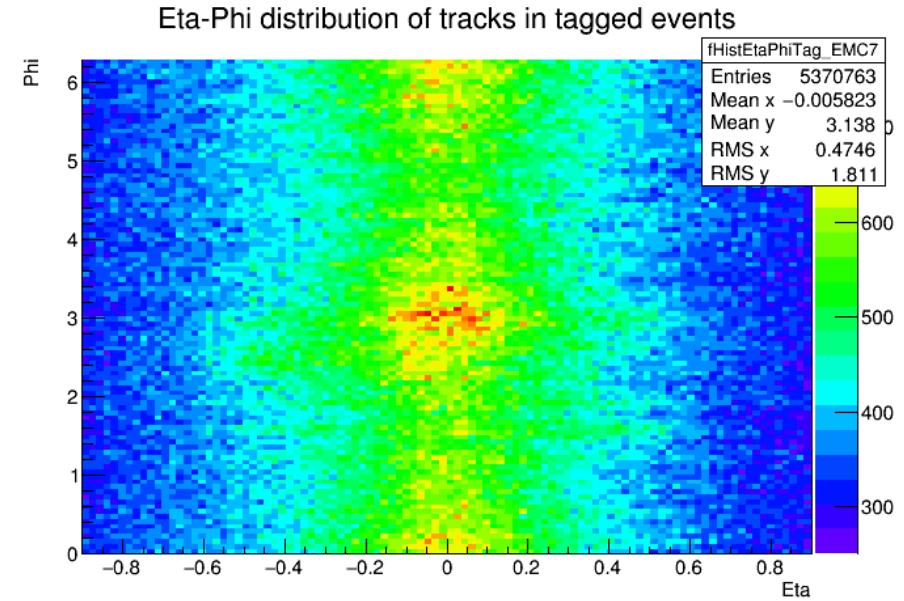
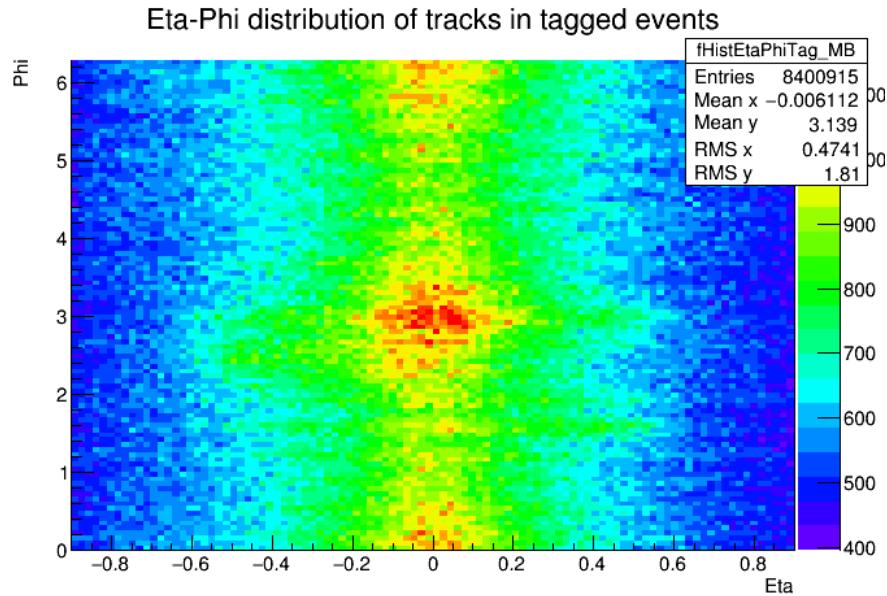
# Energy distribution for tracks in events containing a candidate



# Eta-Phi Distribution for tracks in all events



# Eta-Phi Distribution for tracks in events containing a candidate



# Delta-Phi explanation

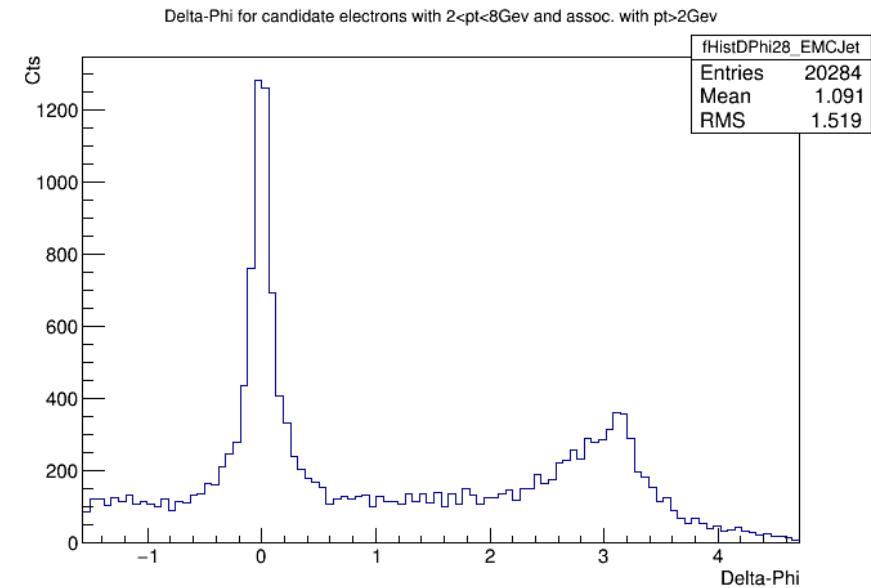
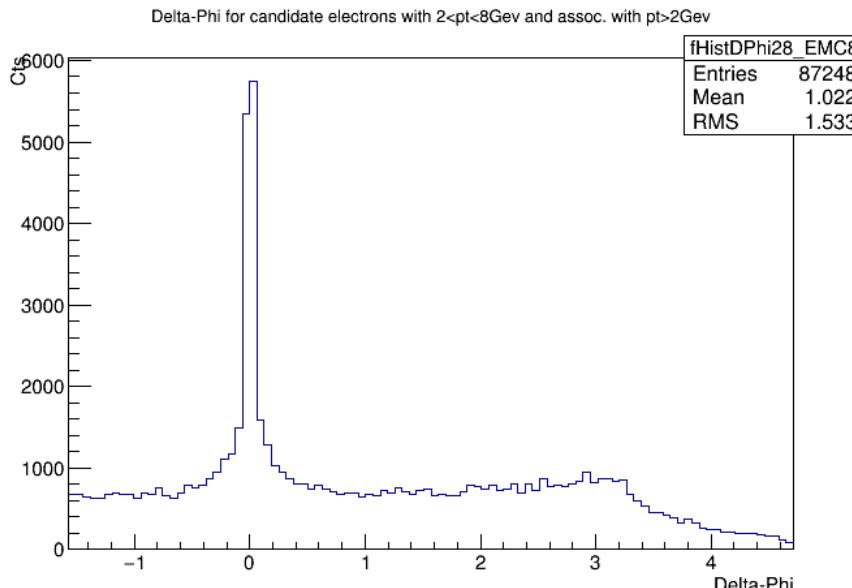
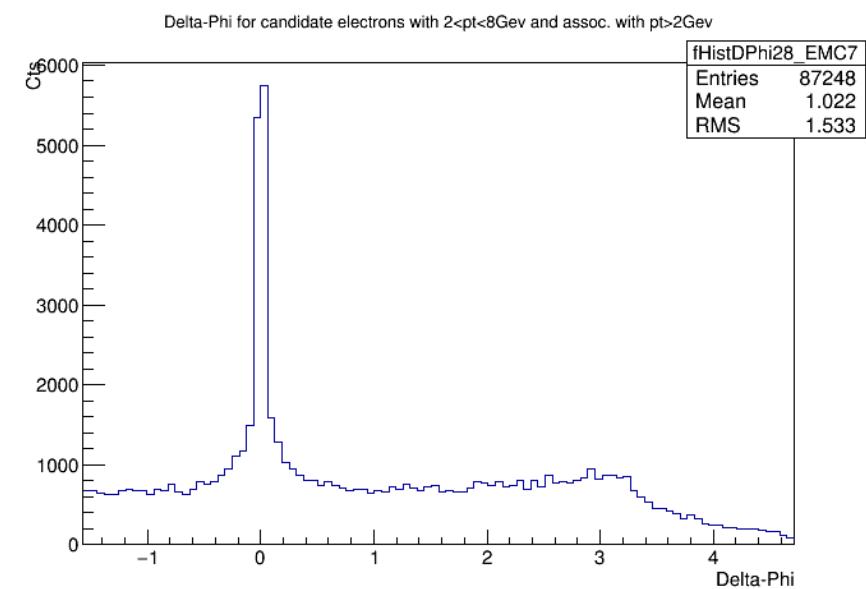
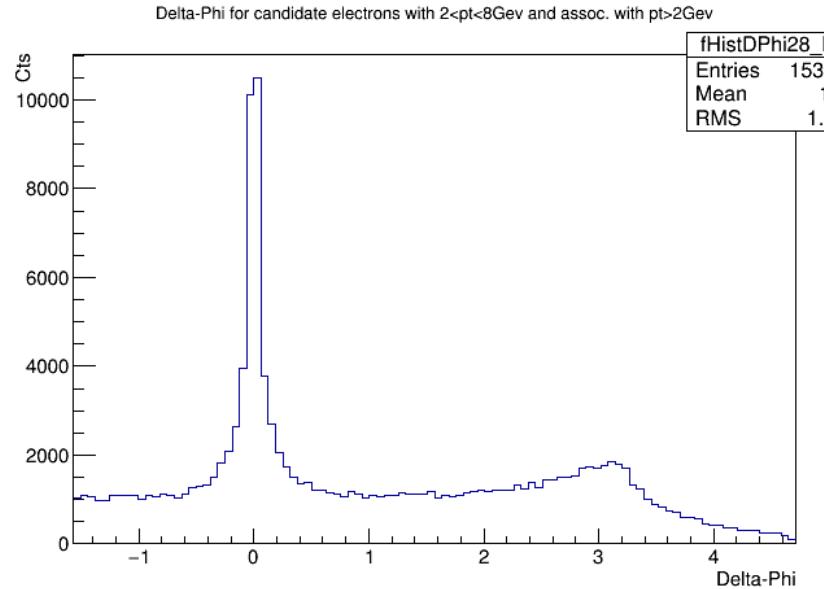
We take the Delta-Phi w.r.t the candidate in 3 candidate Pt bins: 0.5-2Gev, 2-4Gev, 4-8Gev.

For each candidate Pt bin, we consider 7 Pt cuts on associated track: >300Mev, >500Mev, >800Mev, >1Gev, >2Gev, >3Gev, >5Gev.

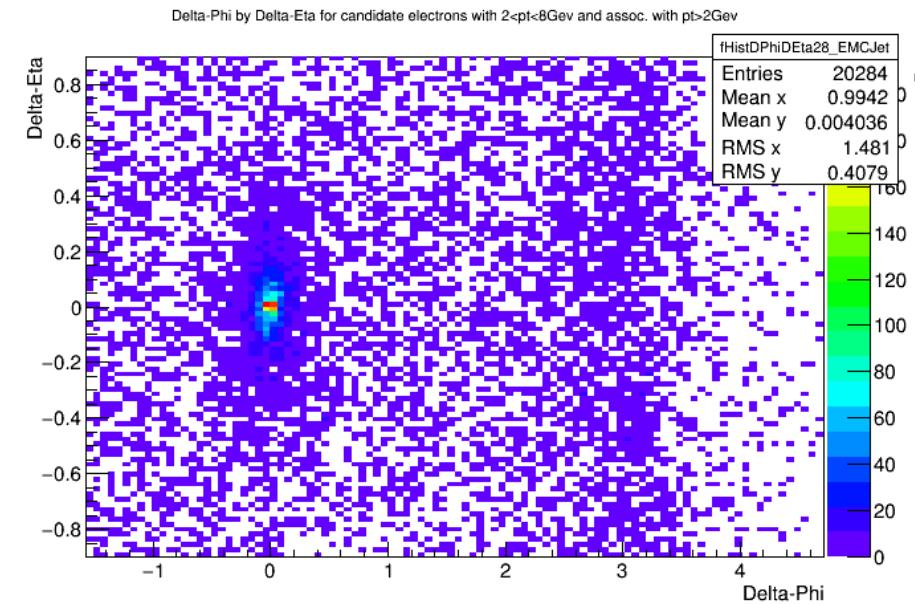
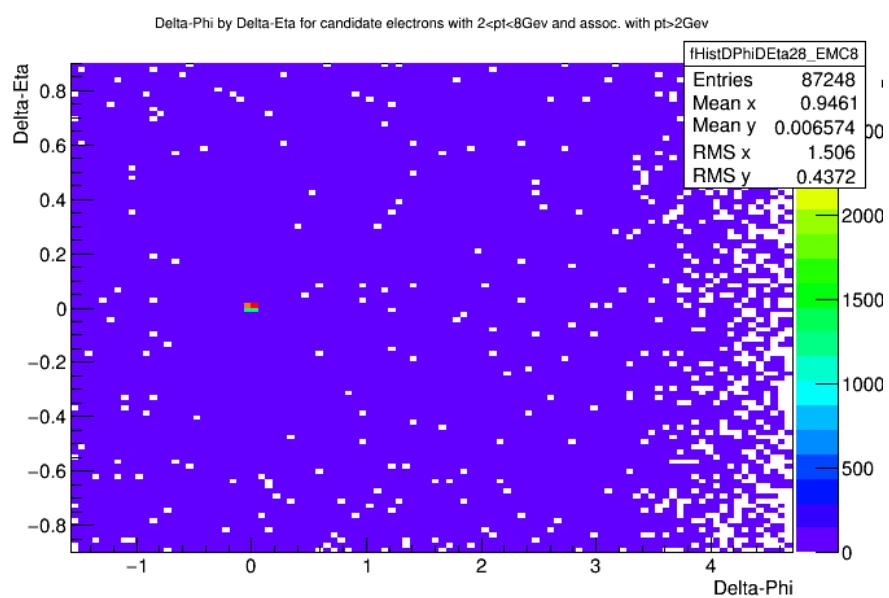
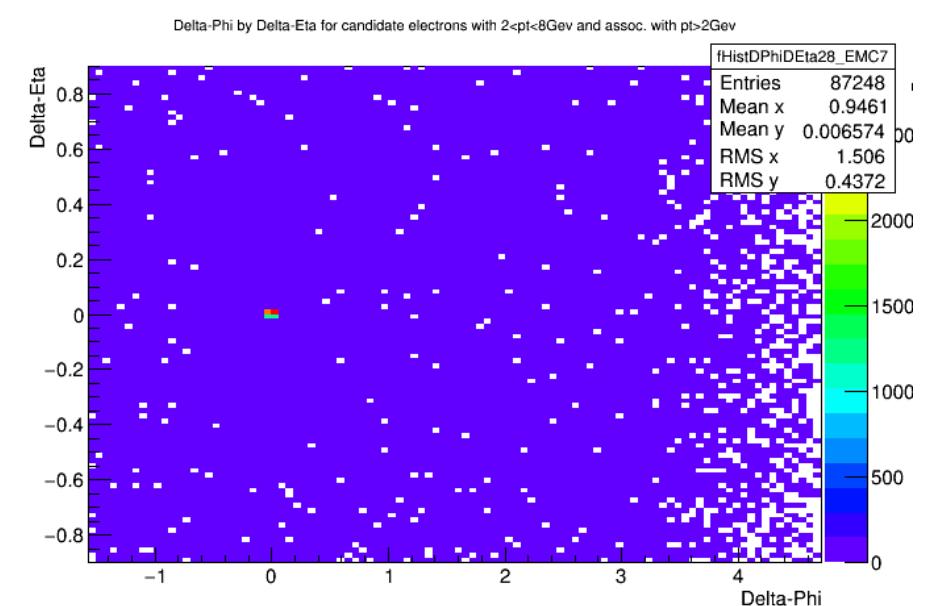
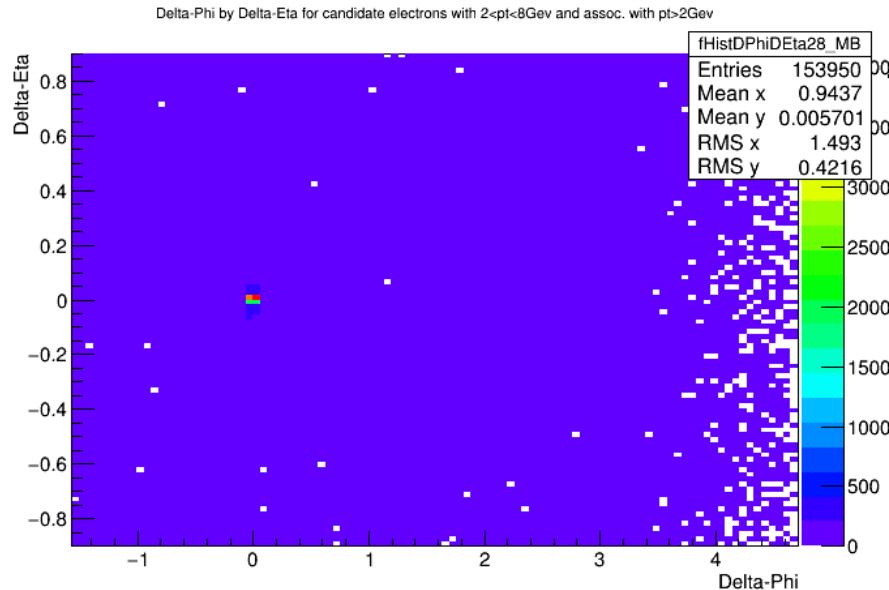
In attempts to recreate the “near-side, away-side bumps,” we plot specifically Delta-Phi with candidate Pt 2-8Gev and associated Pt >2Gev.

Along a similar vein we plot Delta-Phi by Delta-Eta for candidate Pt 2-8Gev and associated Pt>2Gev.

# Delta-Phi cand. Pt 2-8Gev, assoc. Pt>2Gev



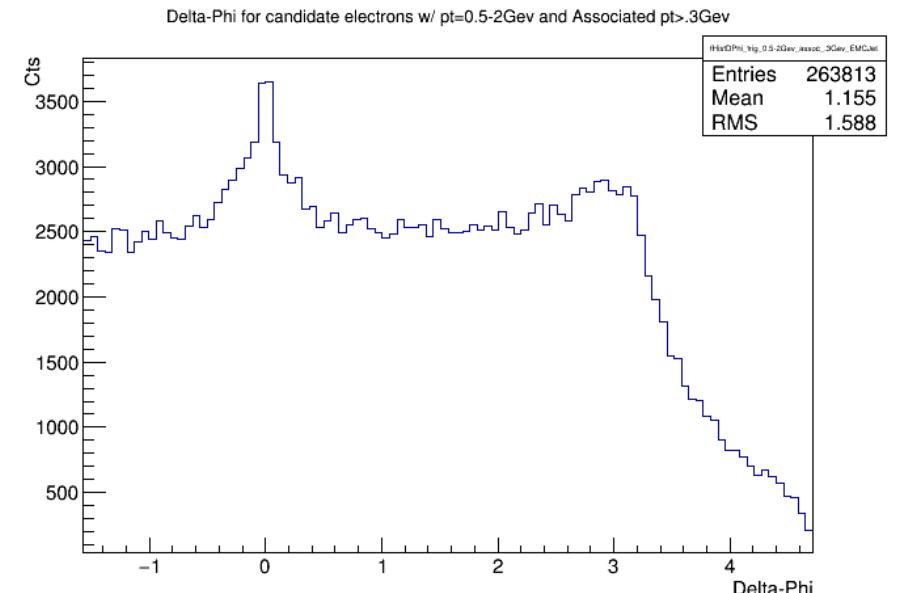
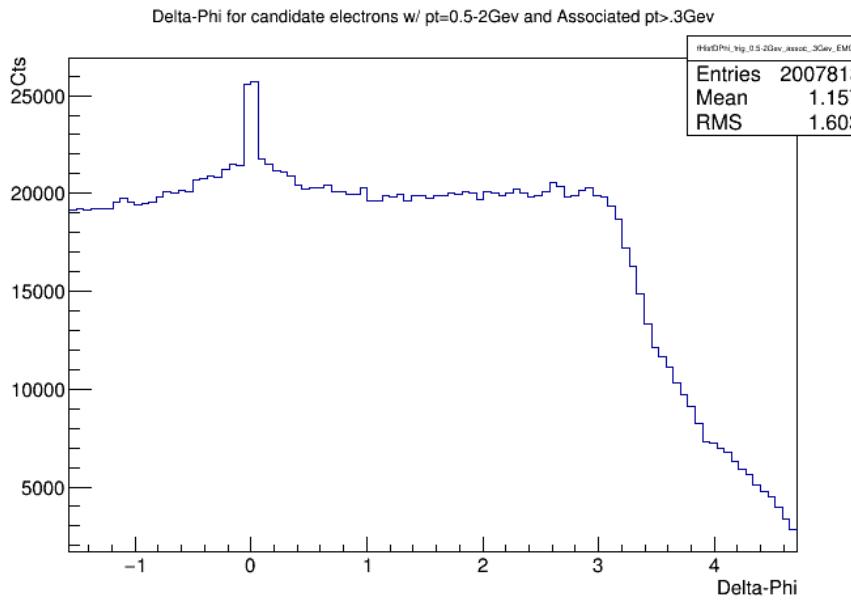
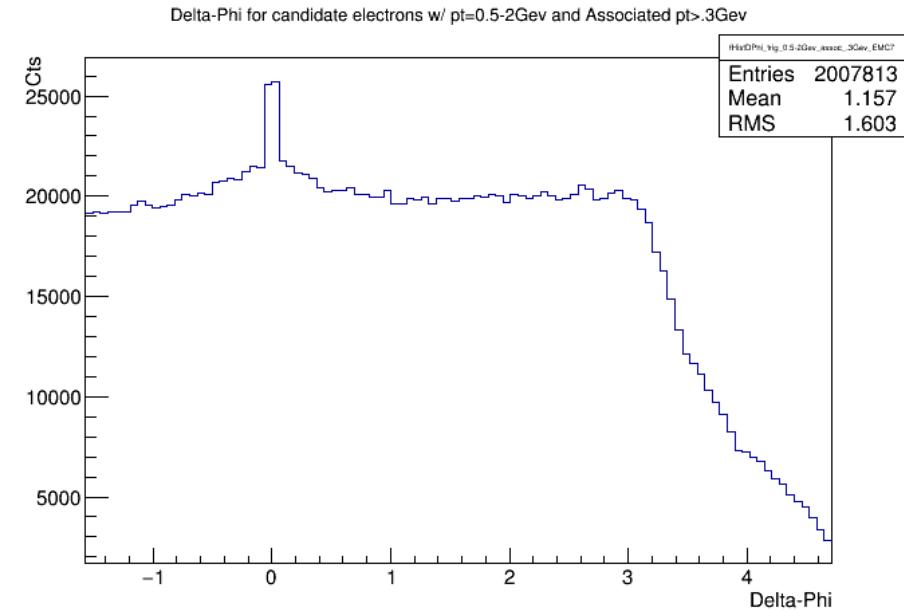
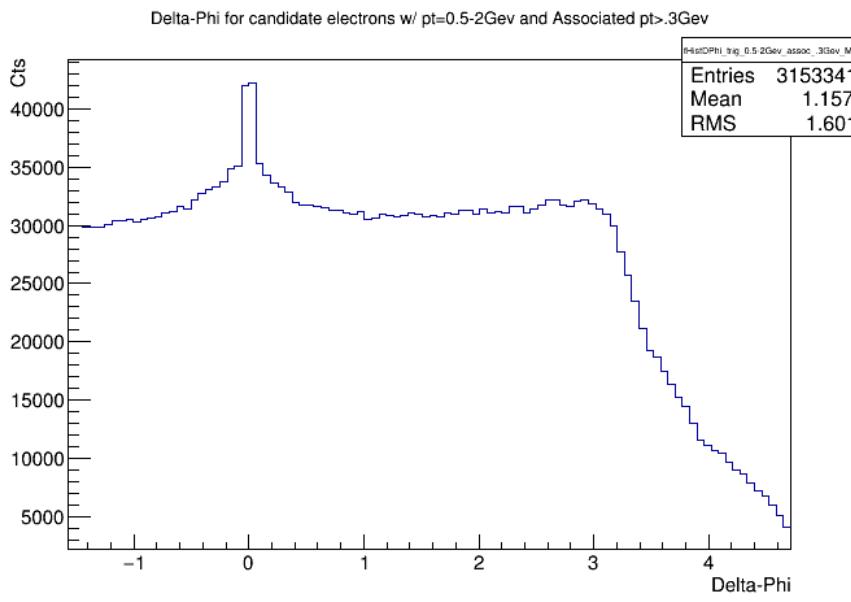
# Delta-Phi by Delta-Eta for cand. Pt 2-8Gev, assoc. Pt >2Gev



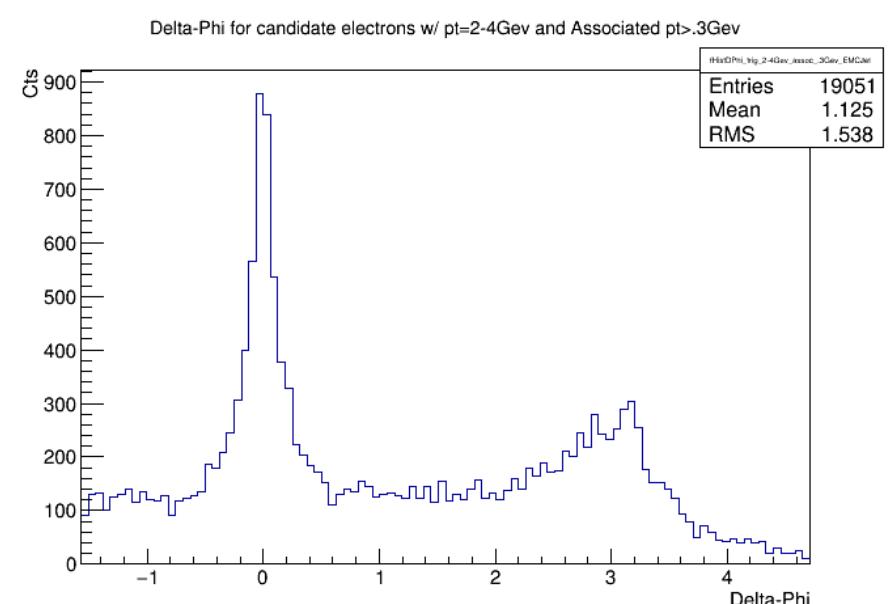
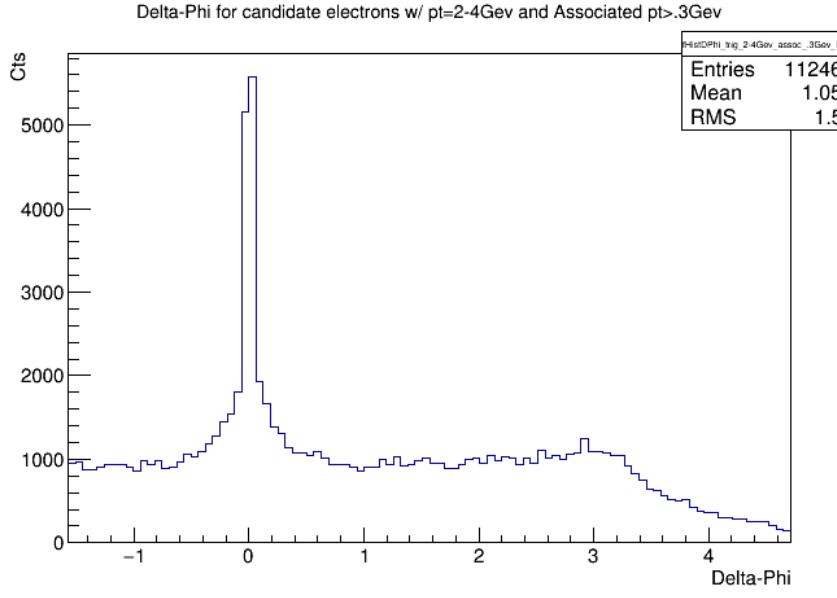
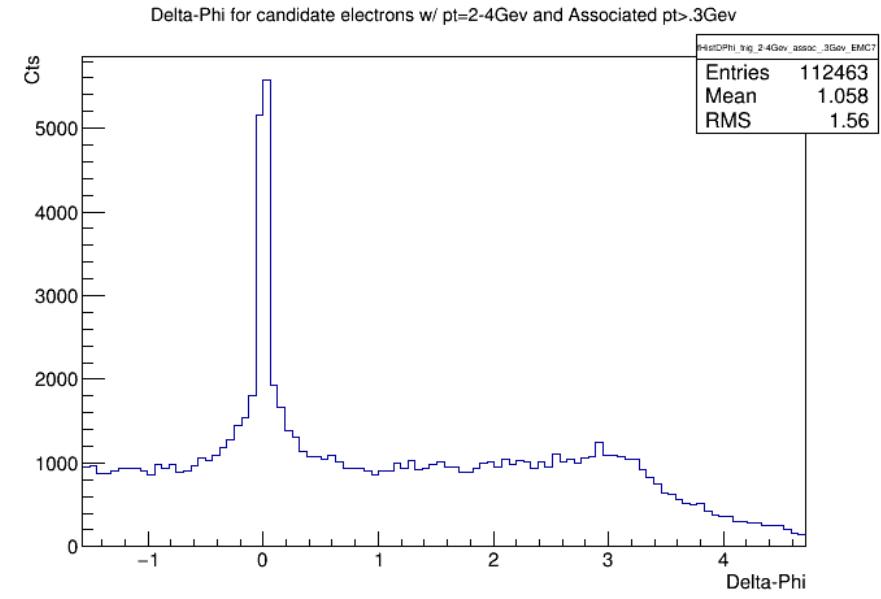
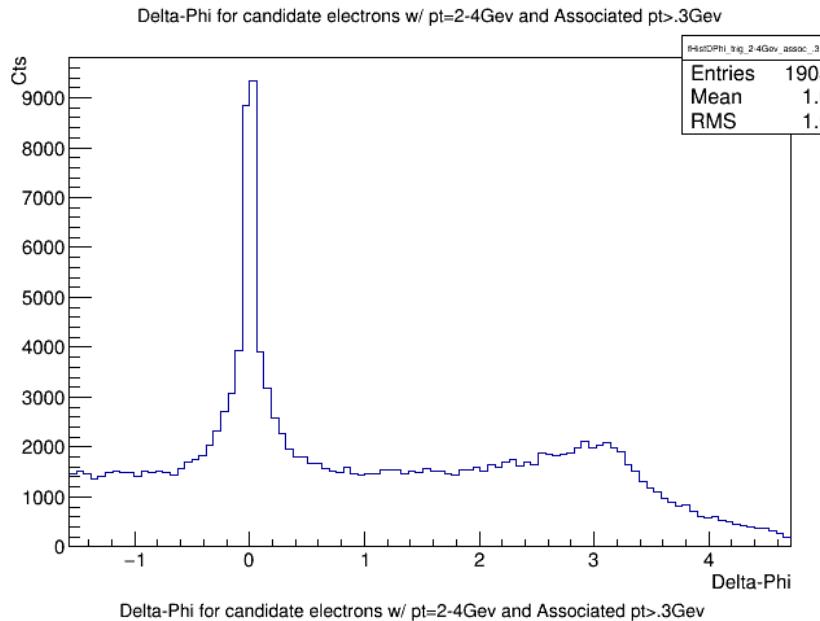
# Delta-Phi Index

- Delta-Phi w/assoc Pt>300Mev: Slides 189-191
- Delta-Phi w/assoc Pt>500Mev: Slides 192-194
- Delta-Phi w/assoc Pt>800Mev: Slides 195-197
- Delta-Phi w/assoc Pt>1Gev: Slides 198-200
- Delta-Phi w/assoc Pt>2Gev: Slides 201-203
- Delta-Phi w/assoc Pt>3Gev: Slides 204-206
- Delta-Phi w/assoc Pt>5Gev: Slides 207-209

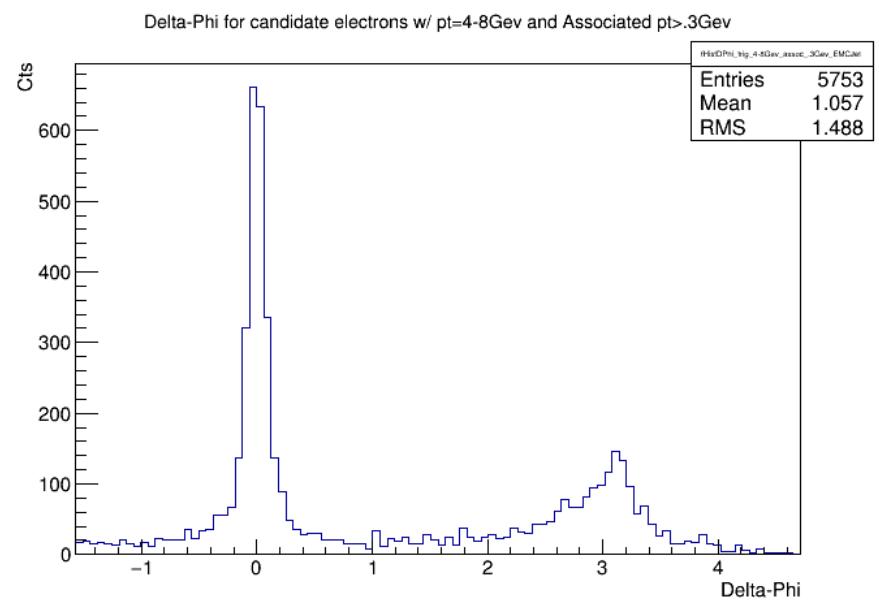
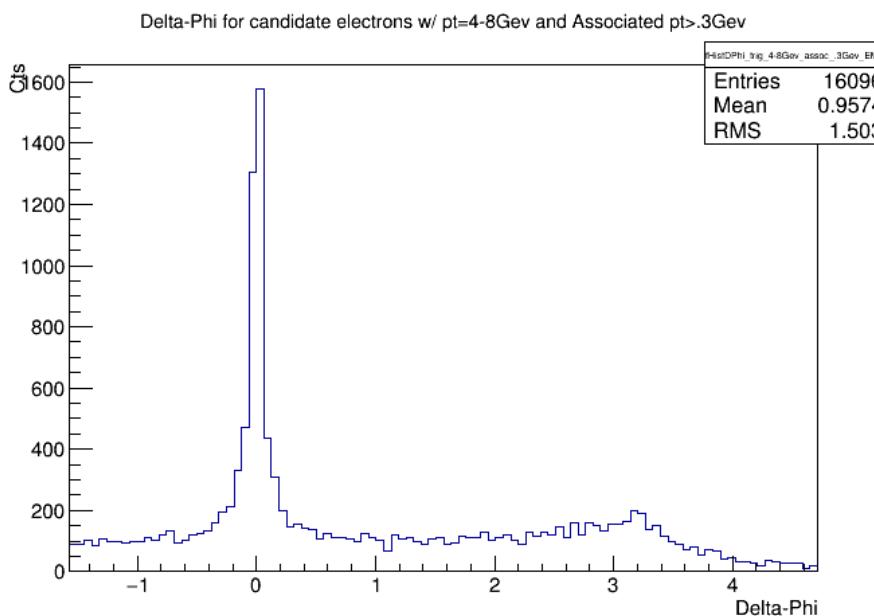
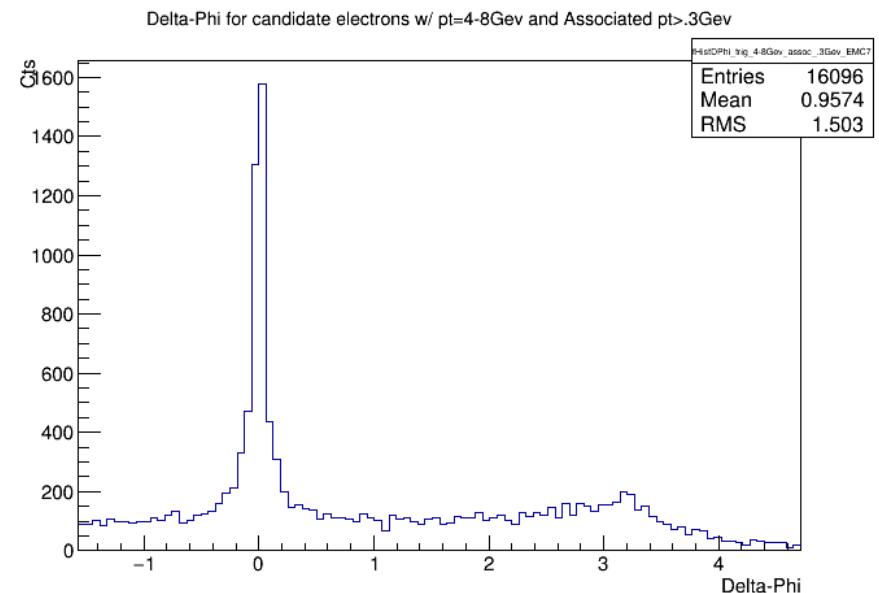
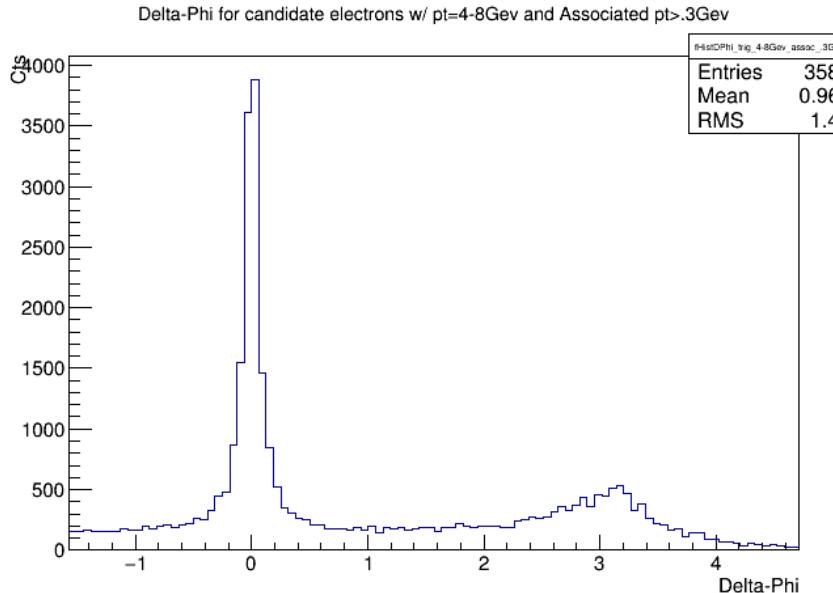
# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >300Mev



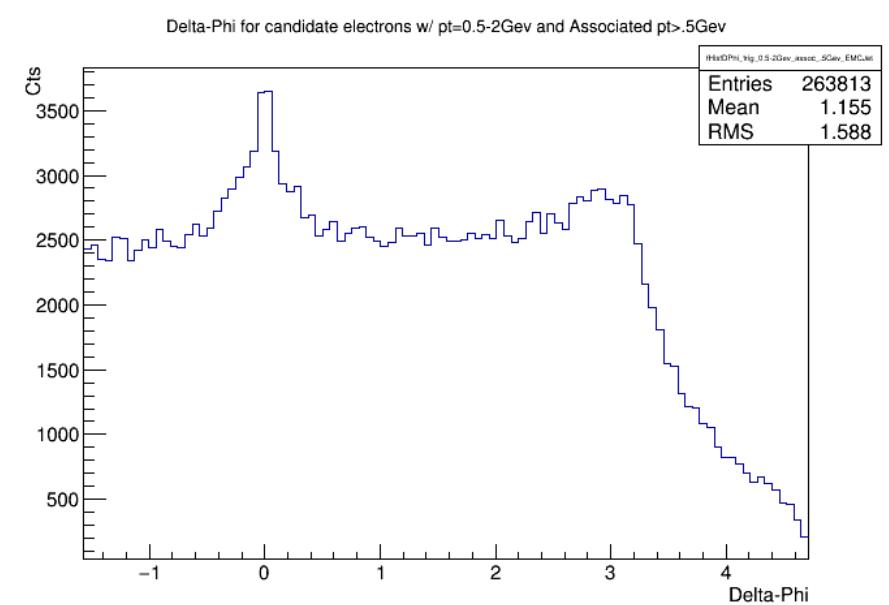
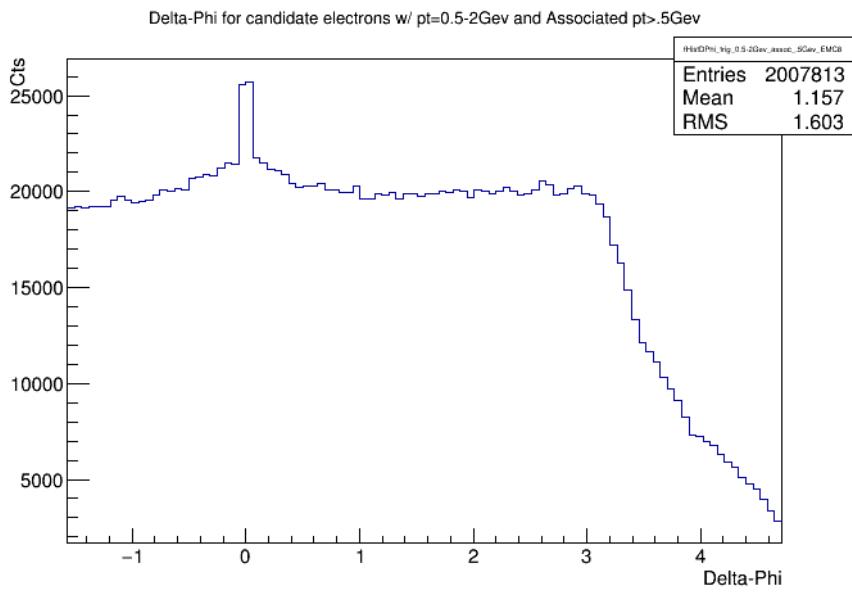
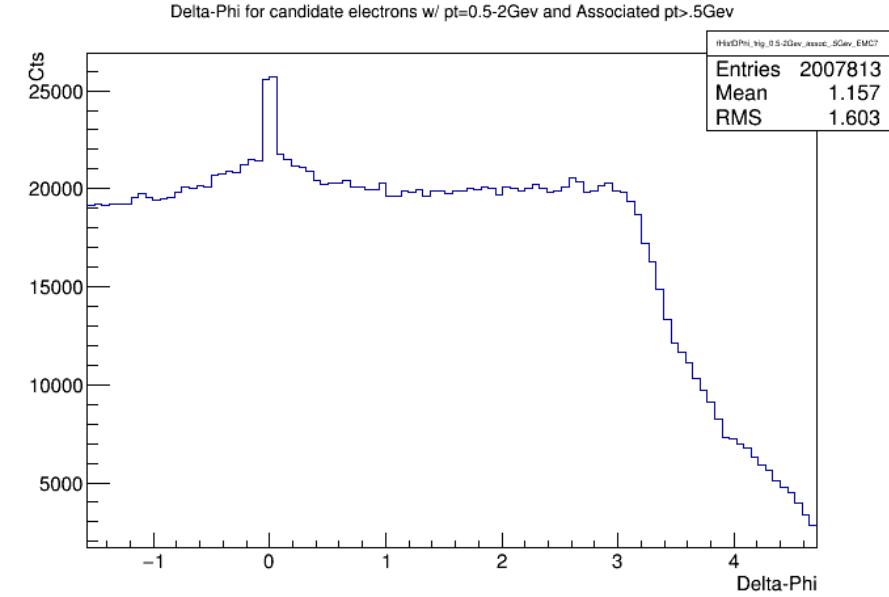
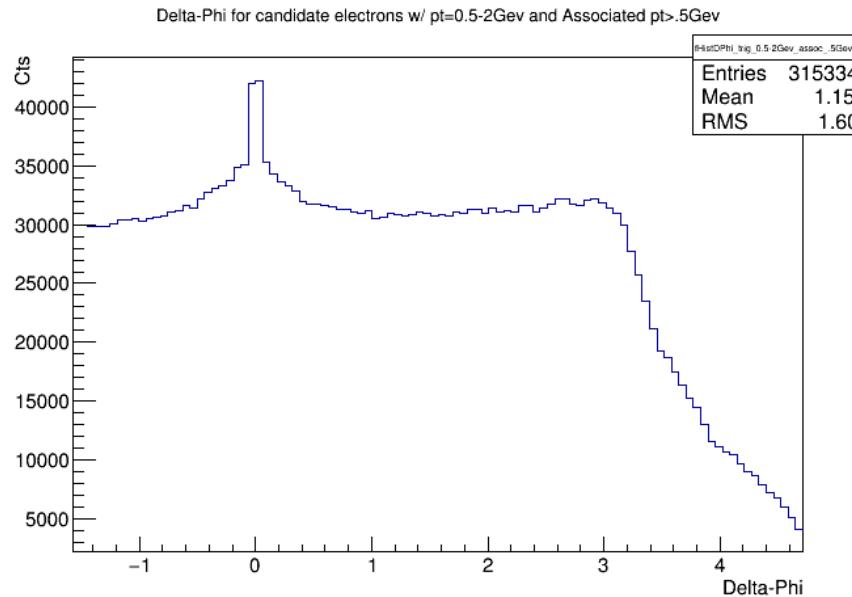
# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >300Mev



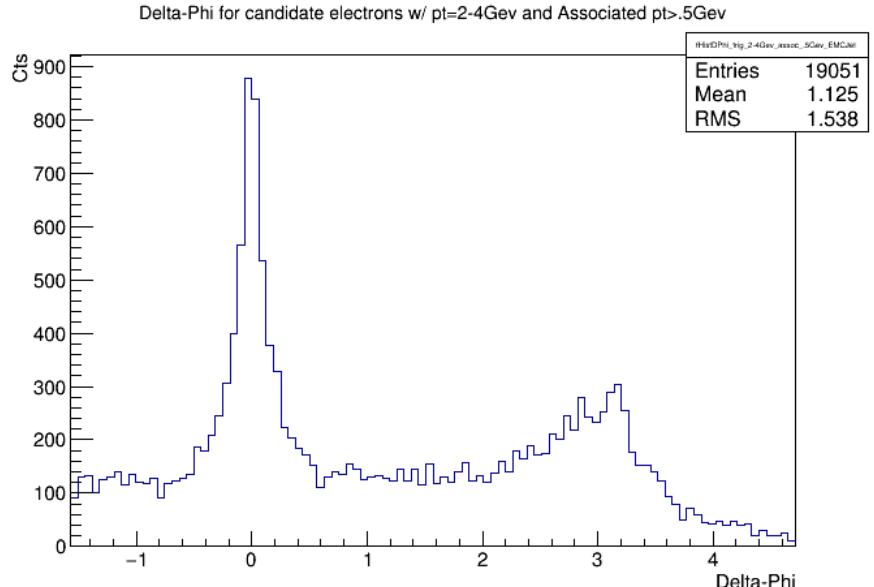
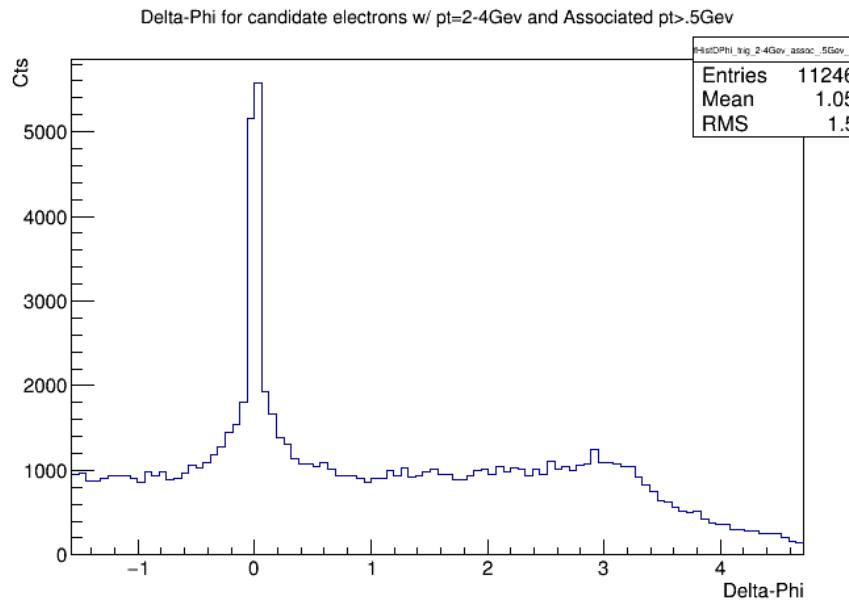
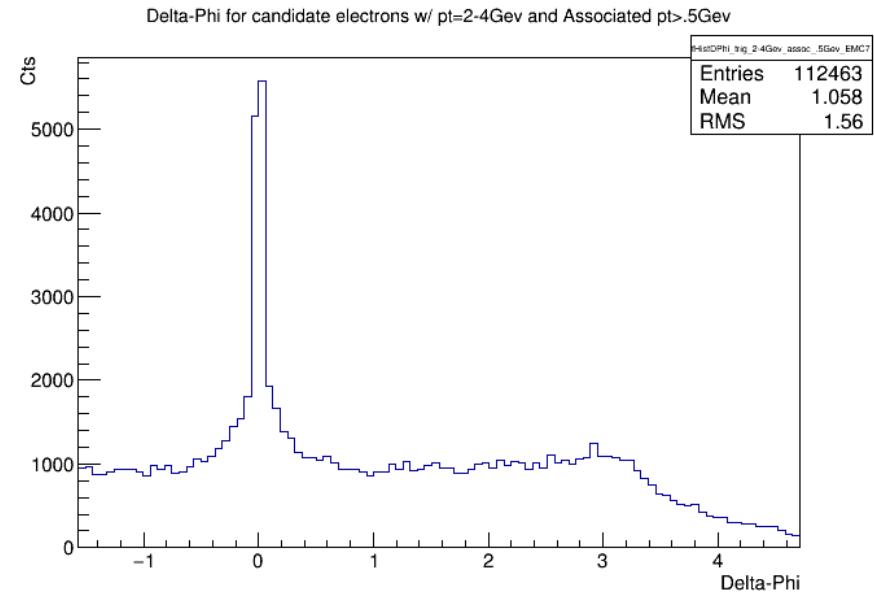
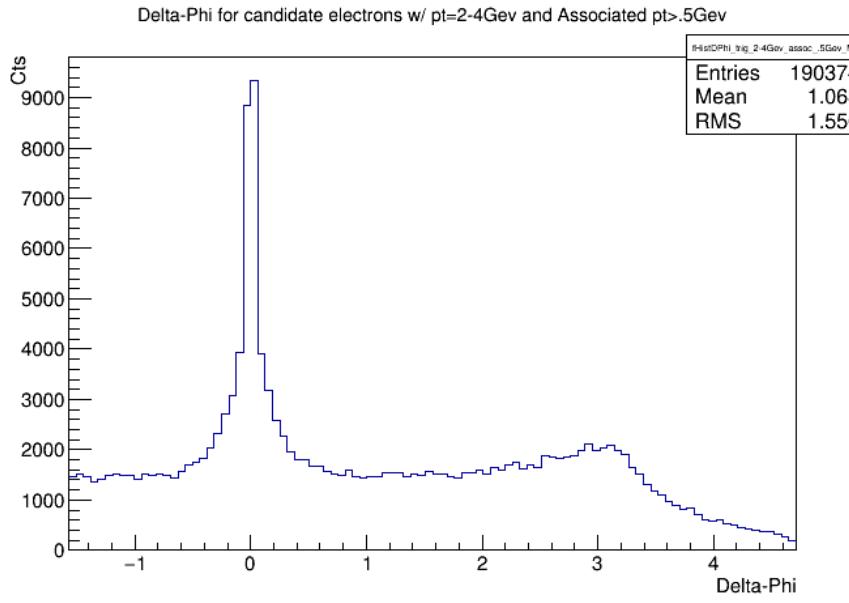
# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >300Mev



# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >500Mev

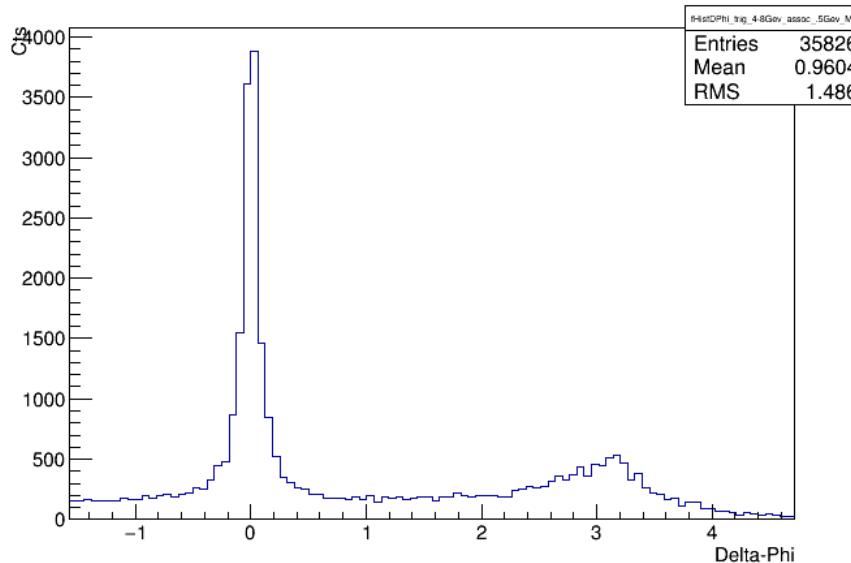


# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >500Mev

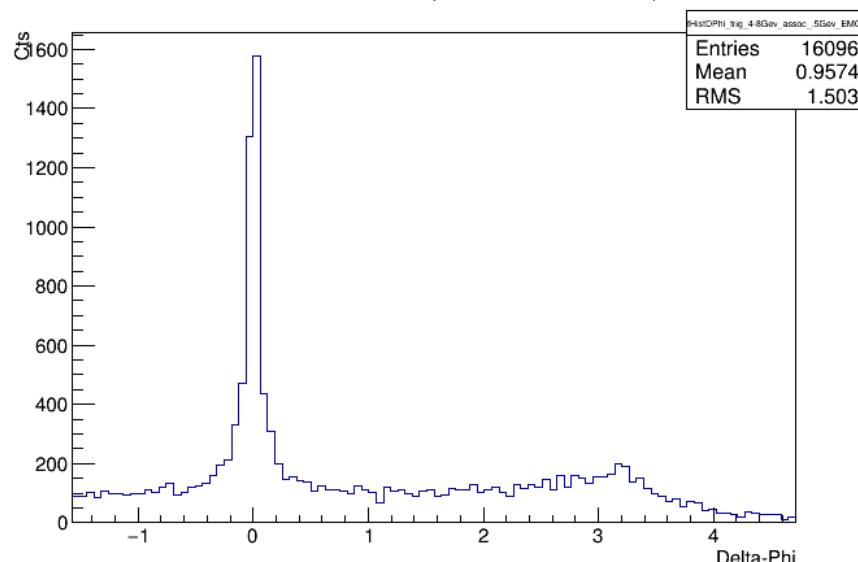


# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >500Mev

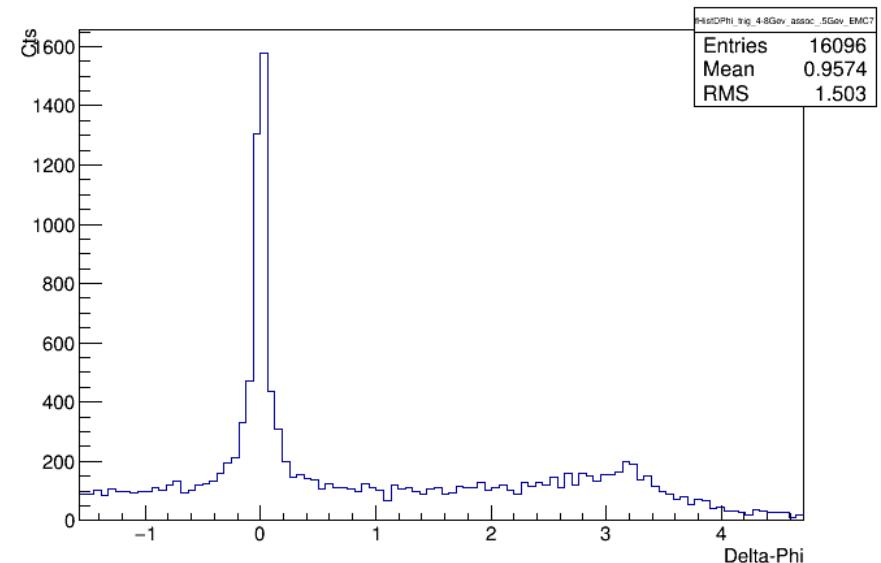
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.5Gev



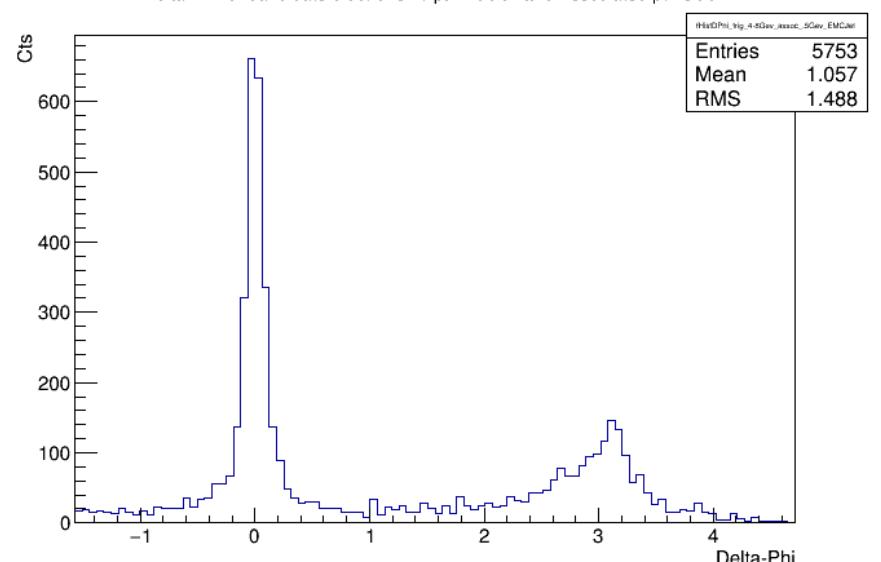
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.5Gev



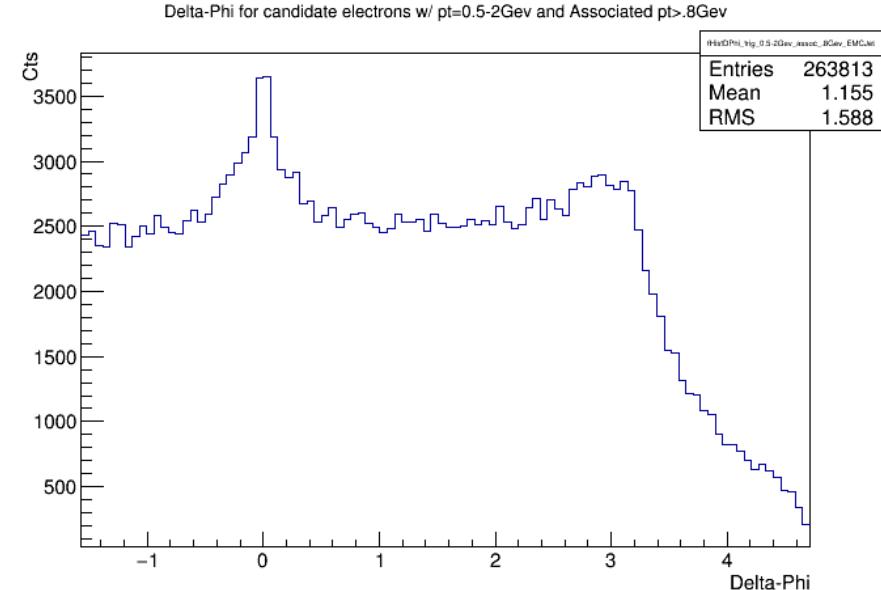
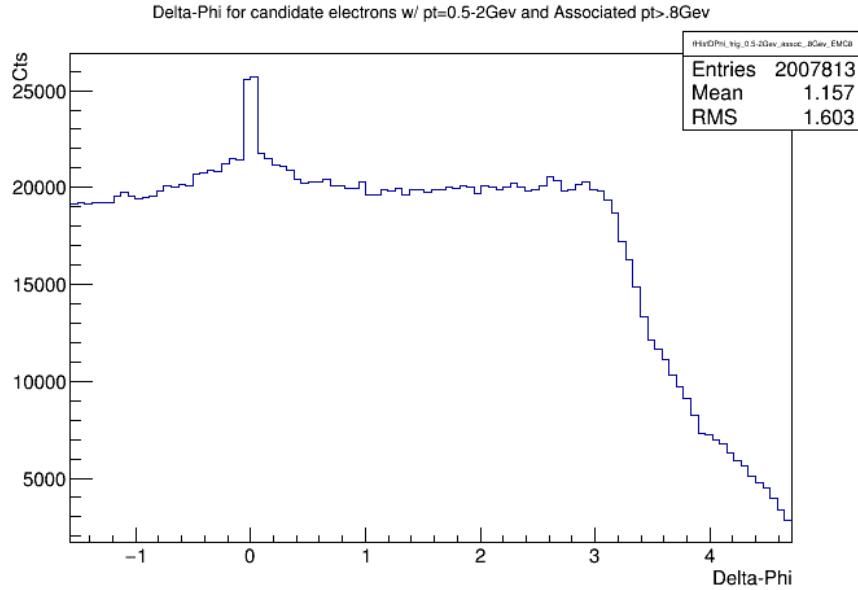
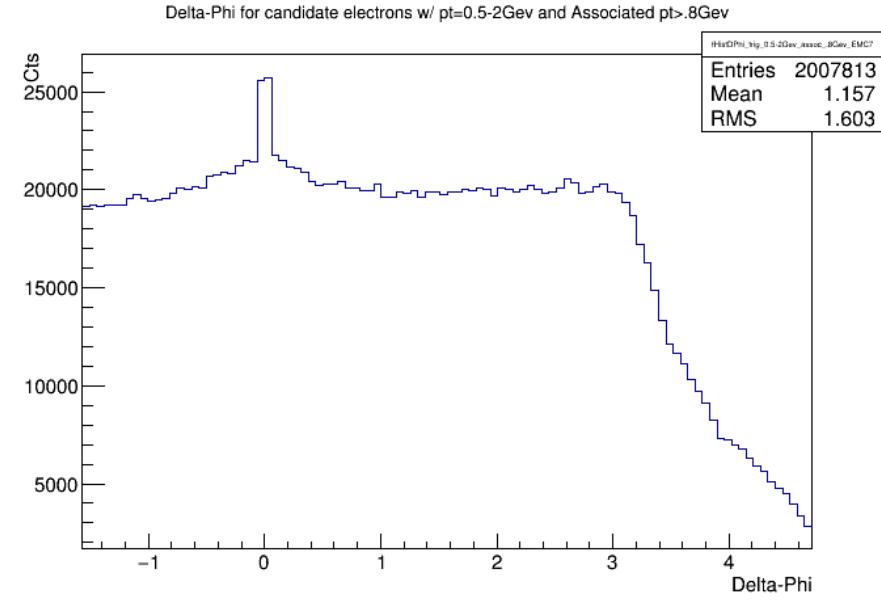
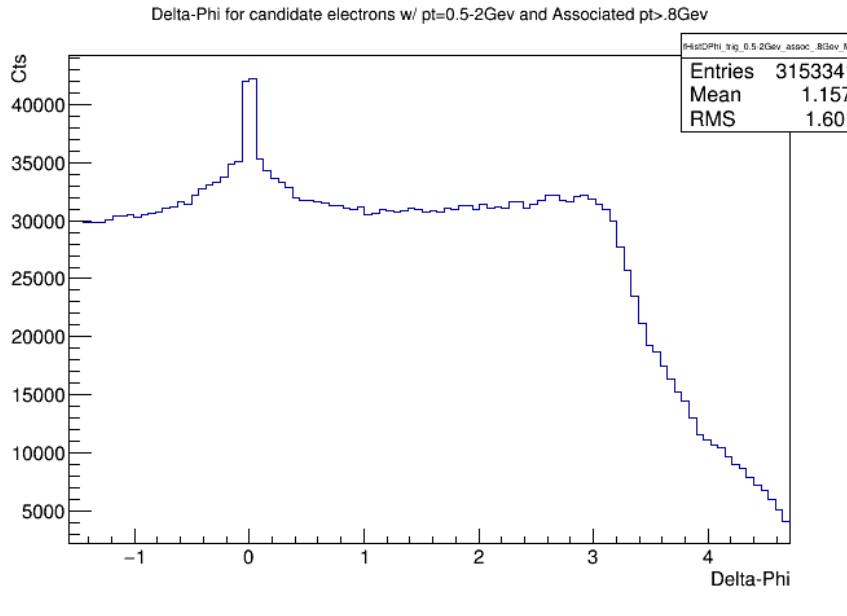
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.5Gev



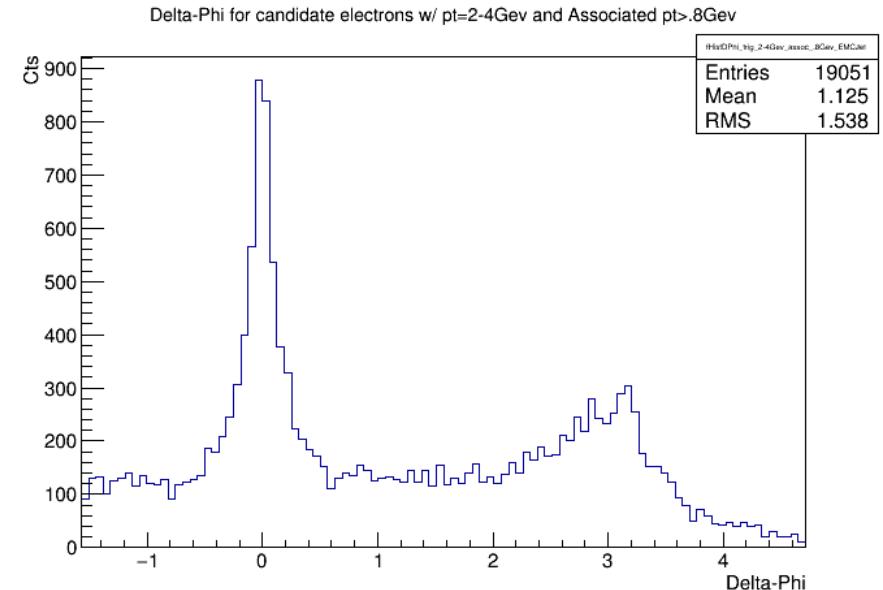
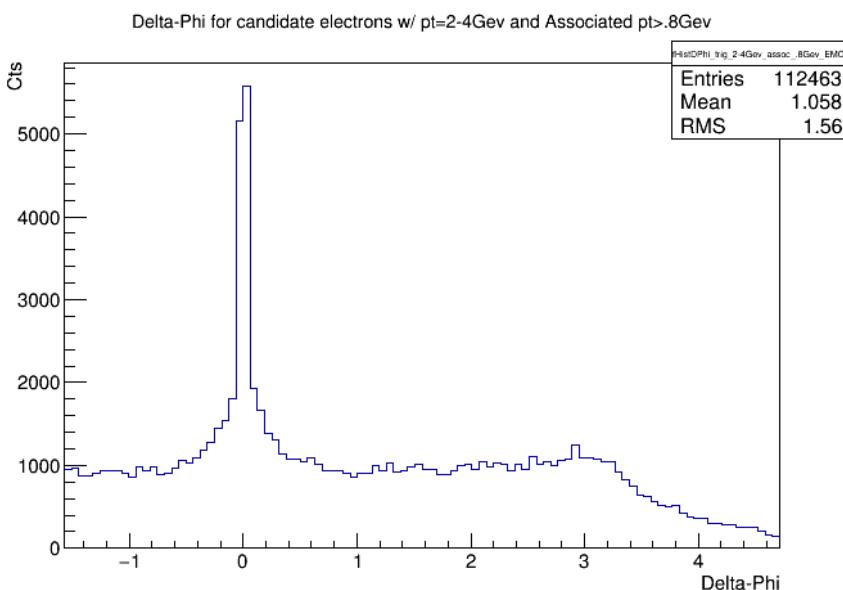
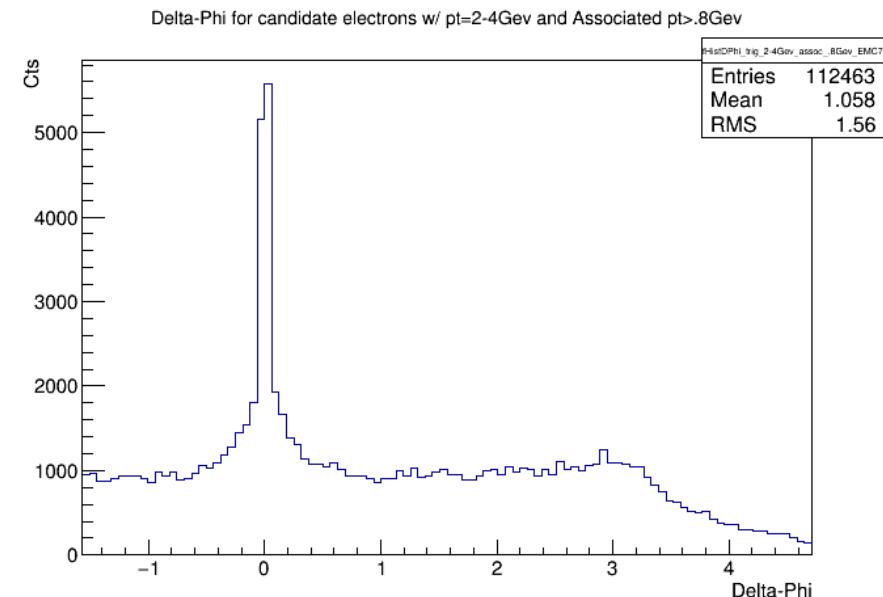
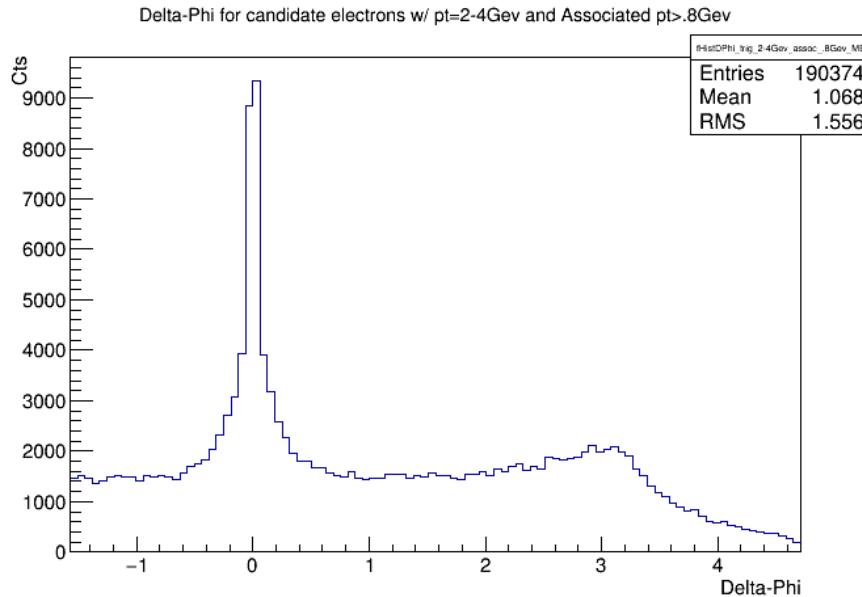
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.5Gev



# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >800Mev

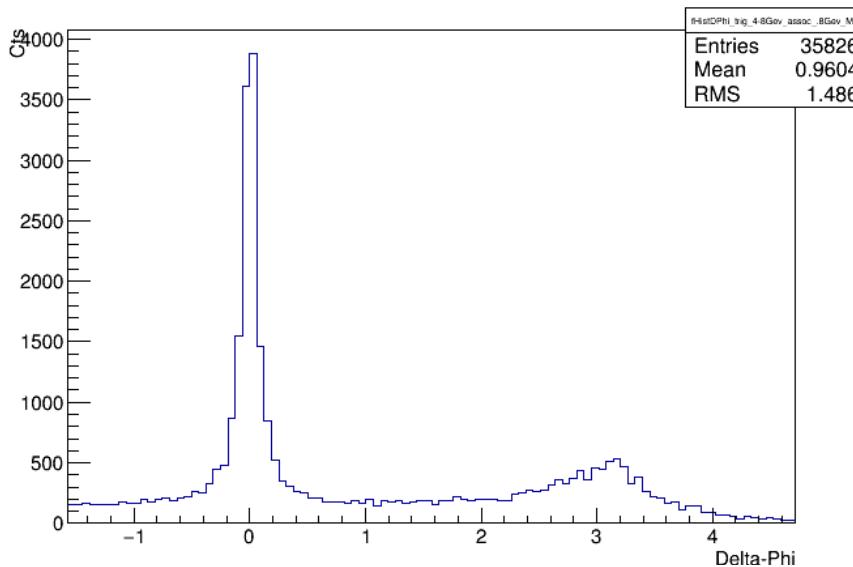


# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >800Mev

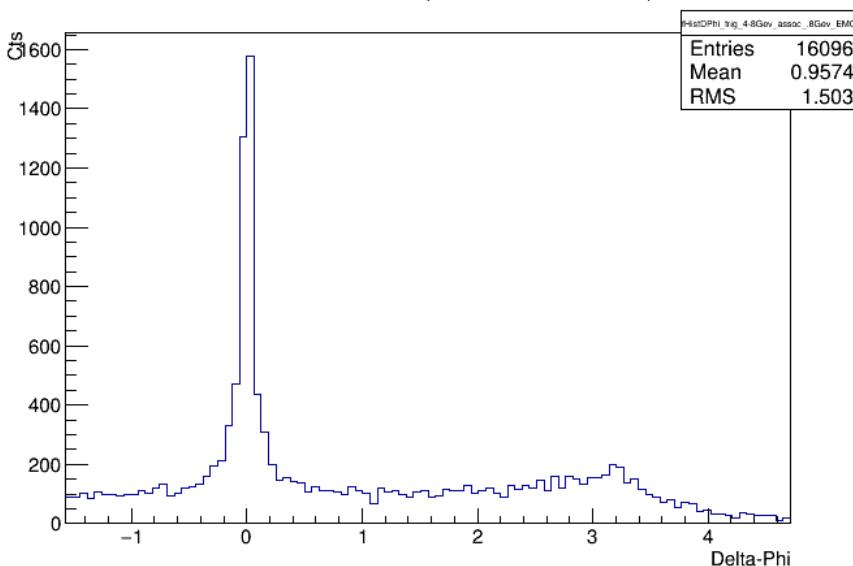


# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >800Mev

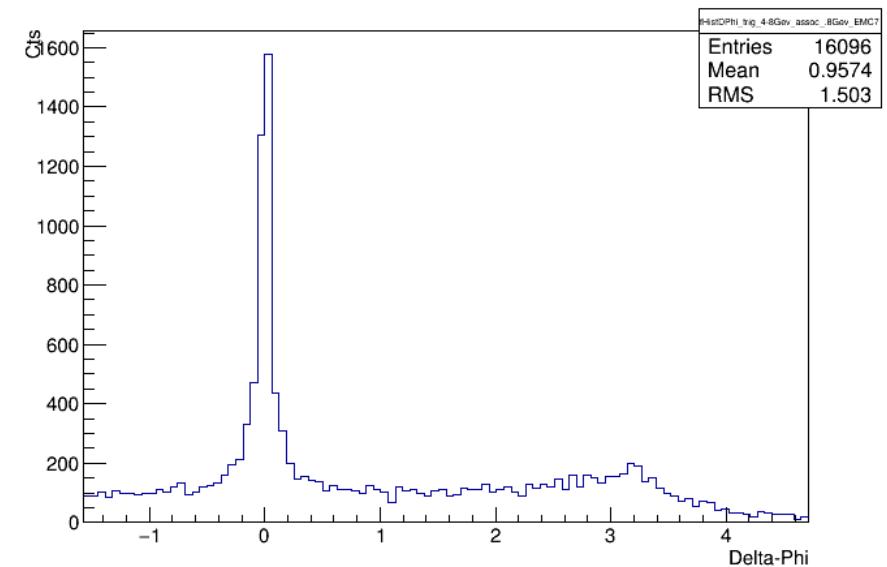
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.8Gev



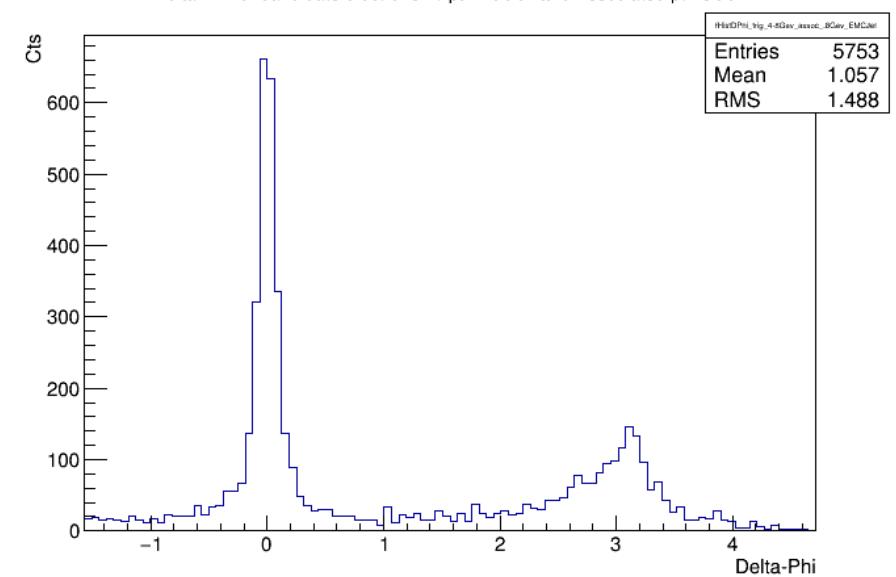
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.8Gev



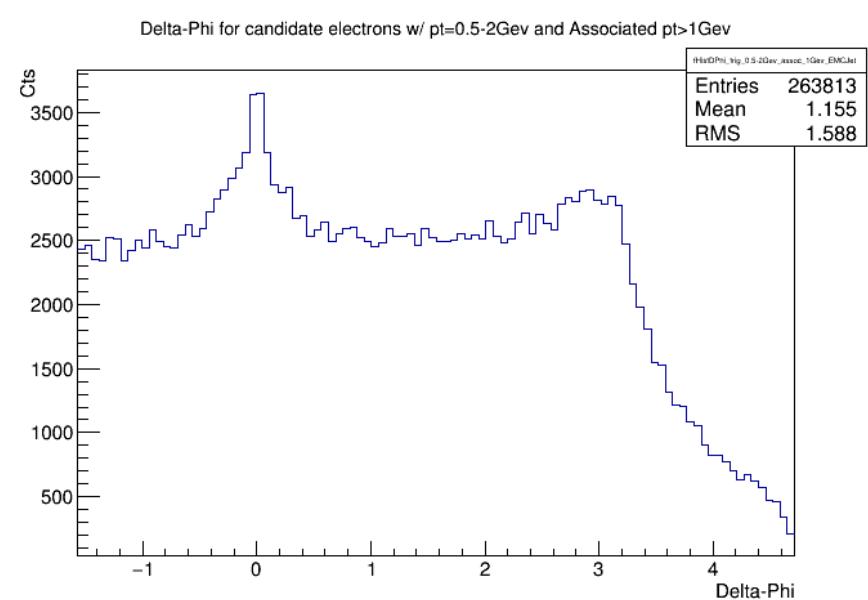
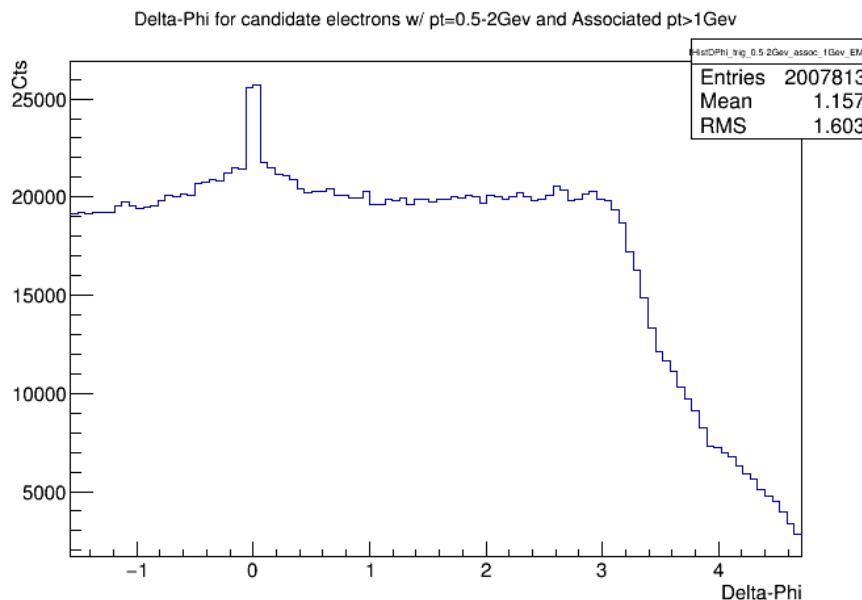
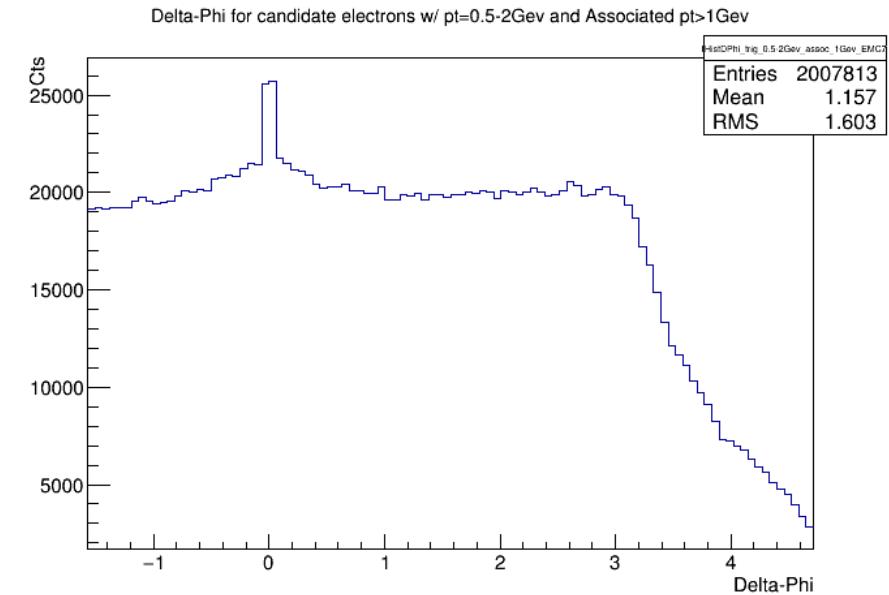
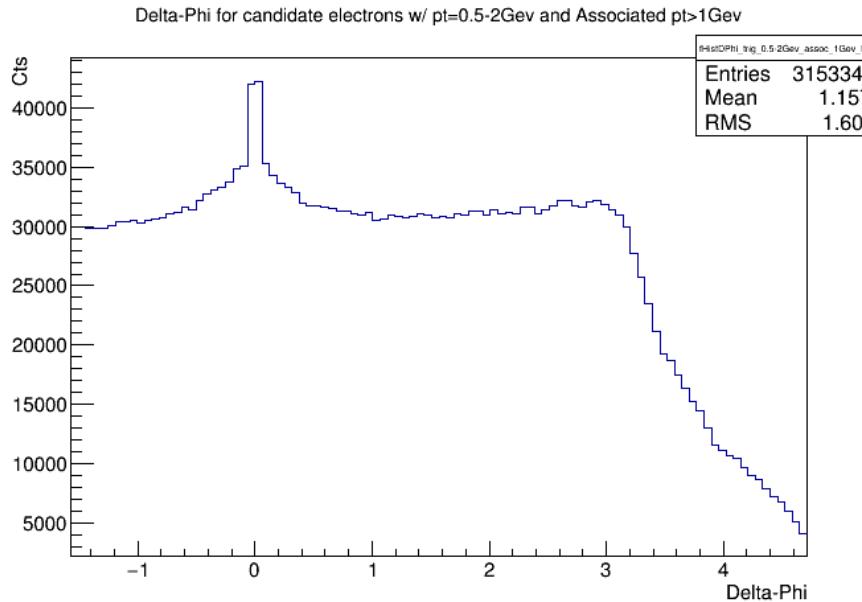
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.8Gev



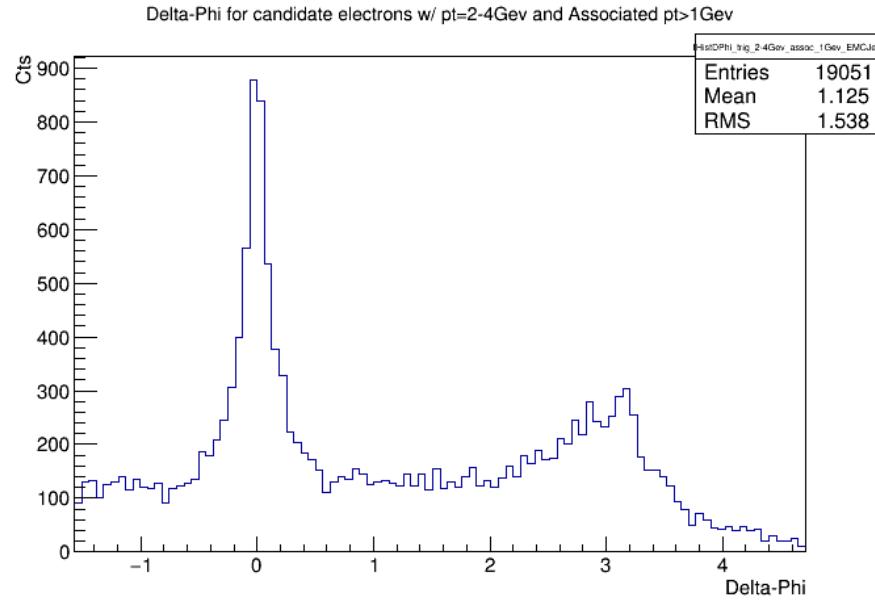
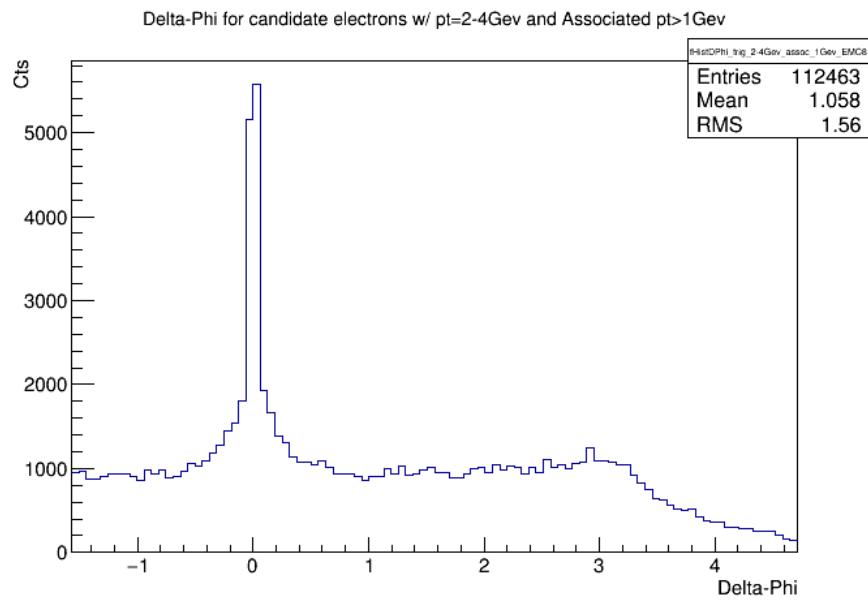
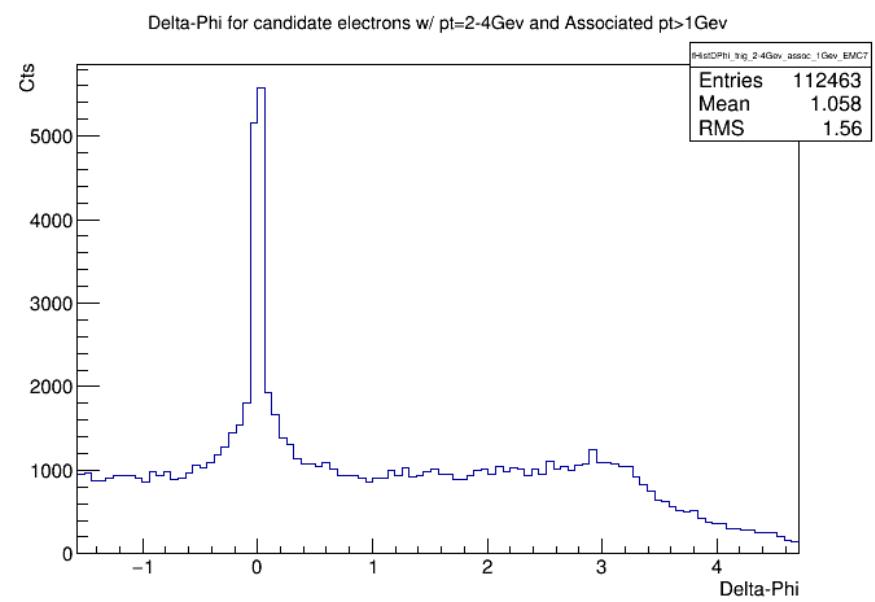
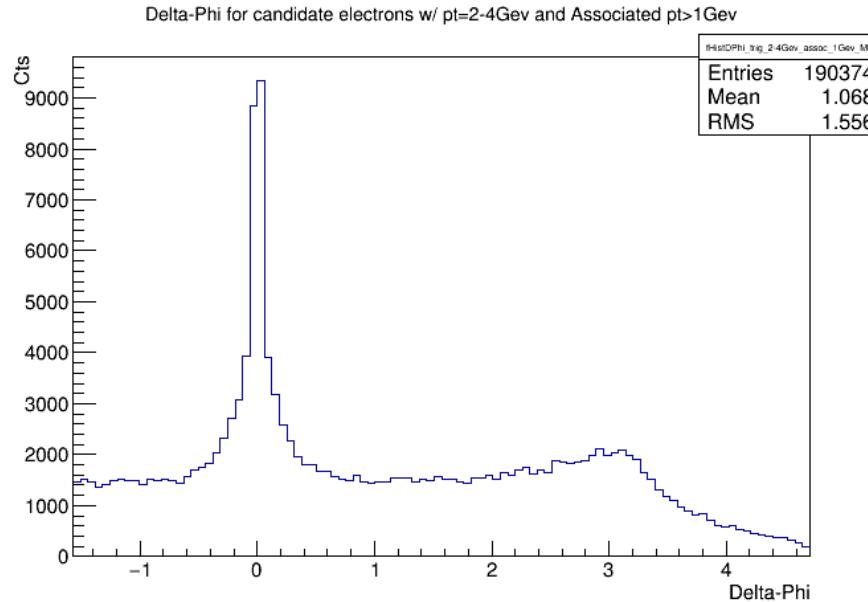
Delta-Phi for candidate electrons w/ pt=4-8Gev and Associated pt>.8Gev



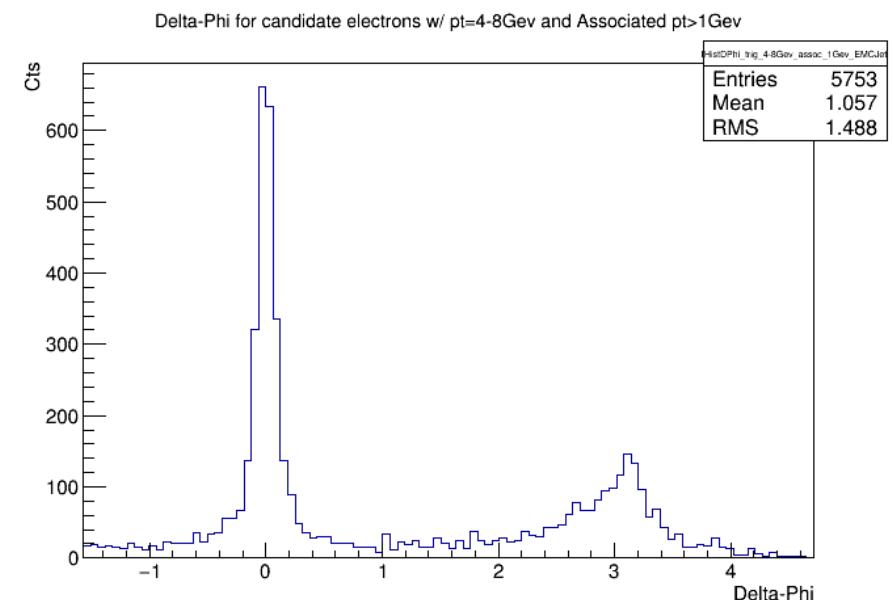
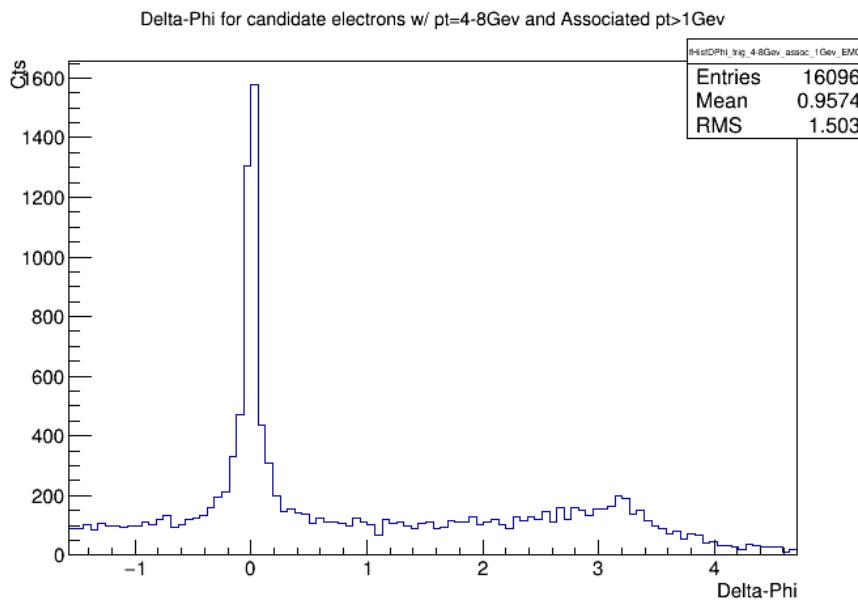
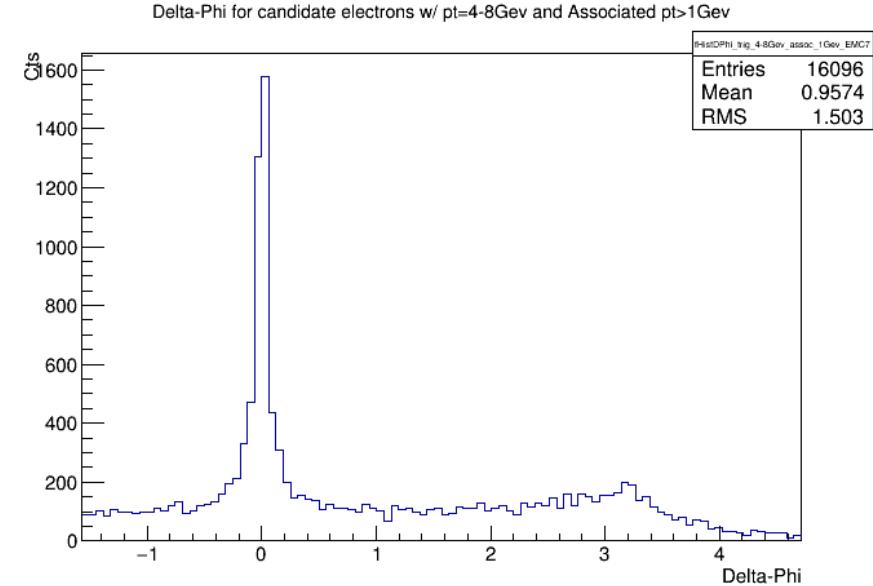
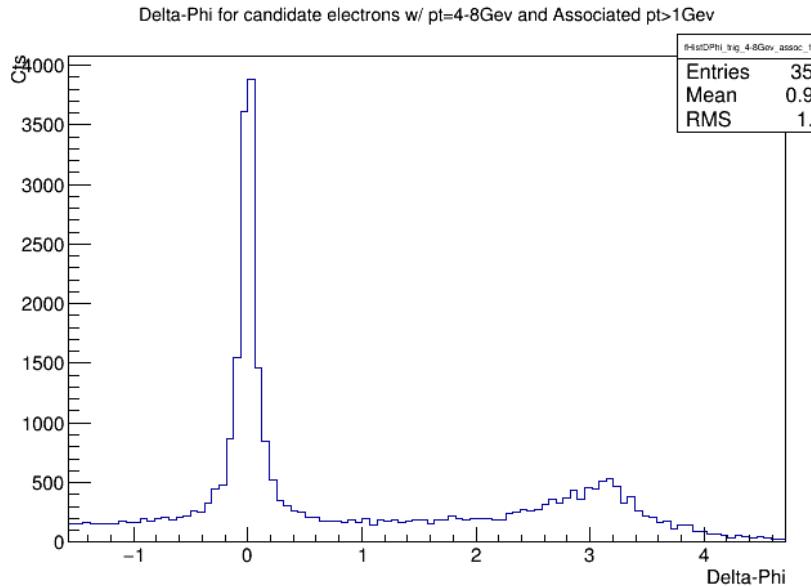
# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >1Gev



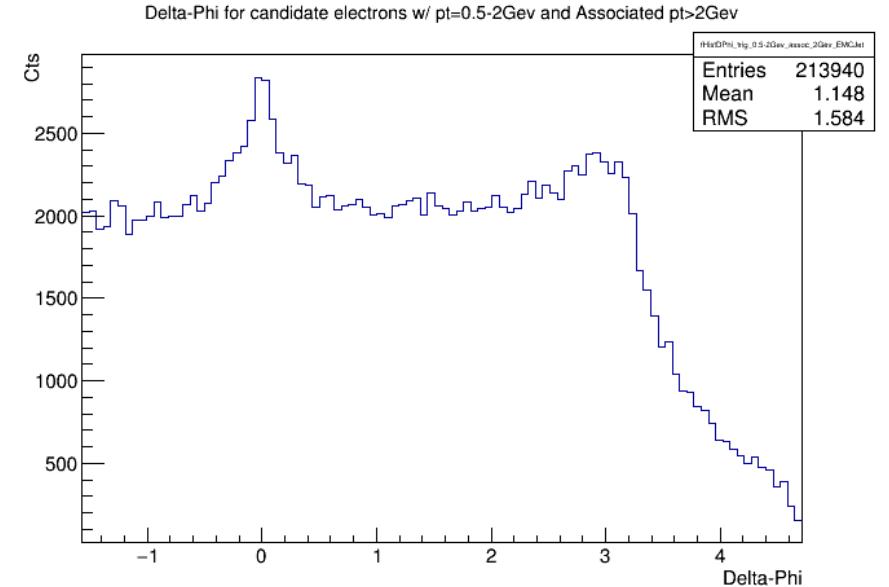
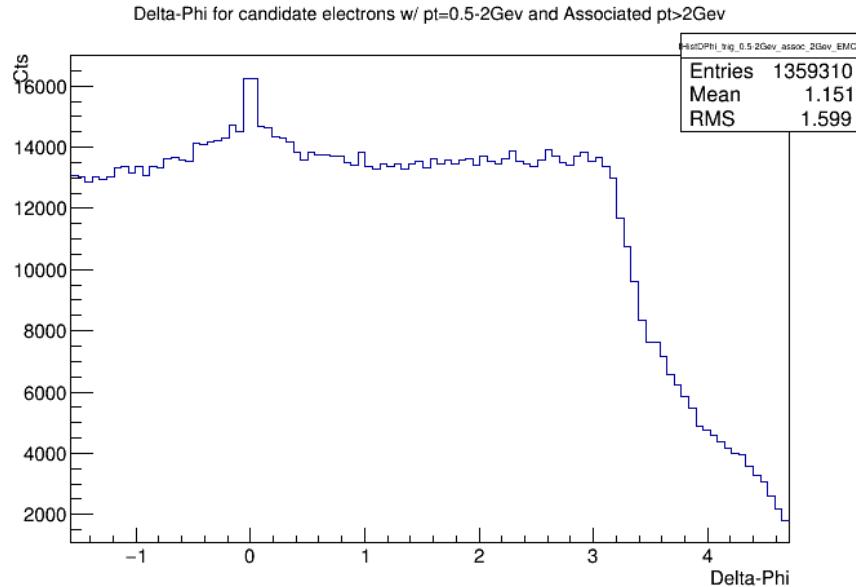
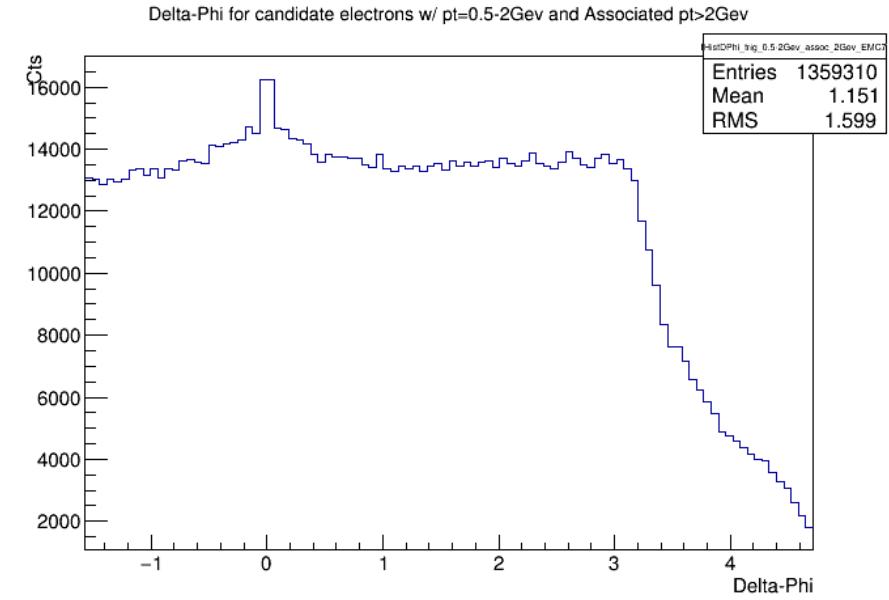
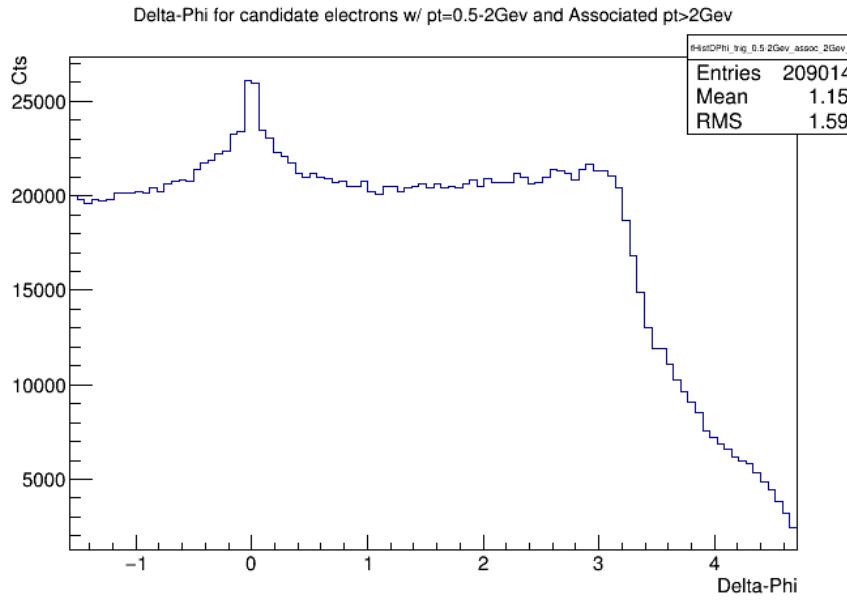
# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >1Gev



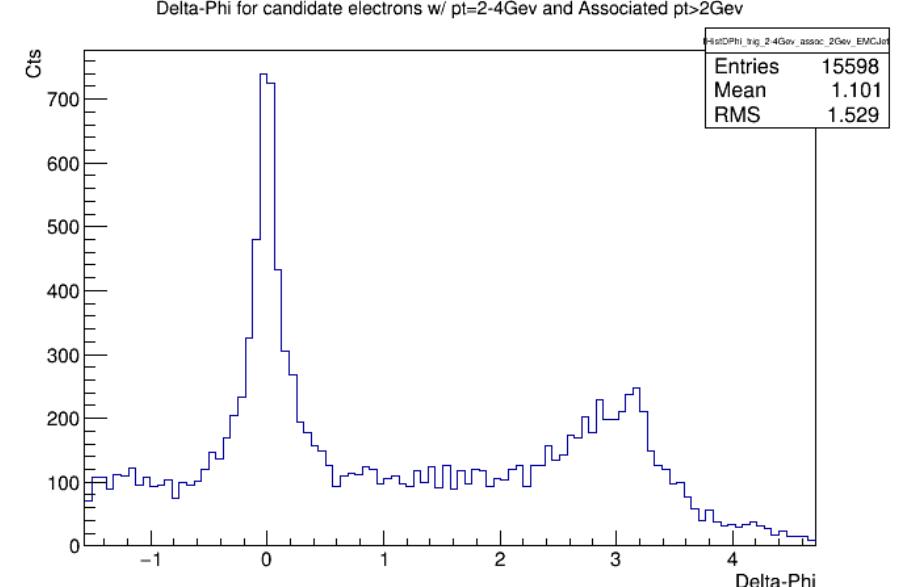
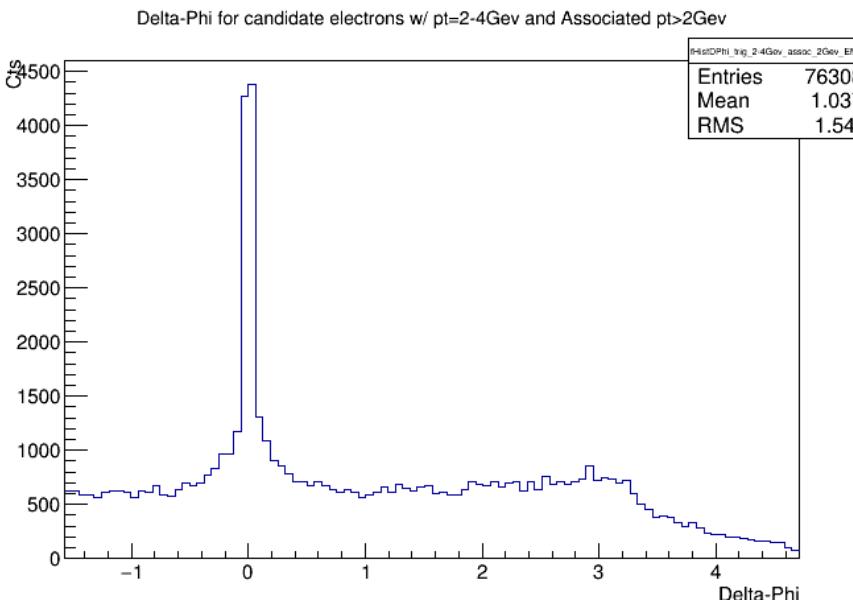
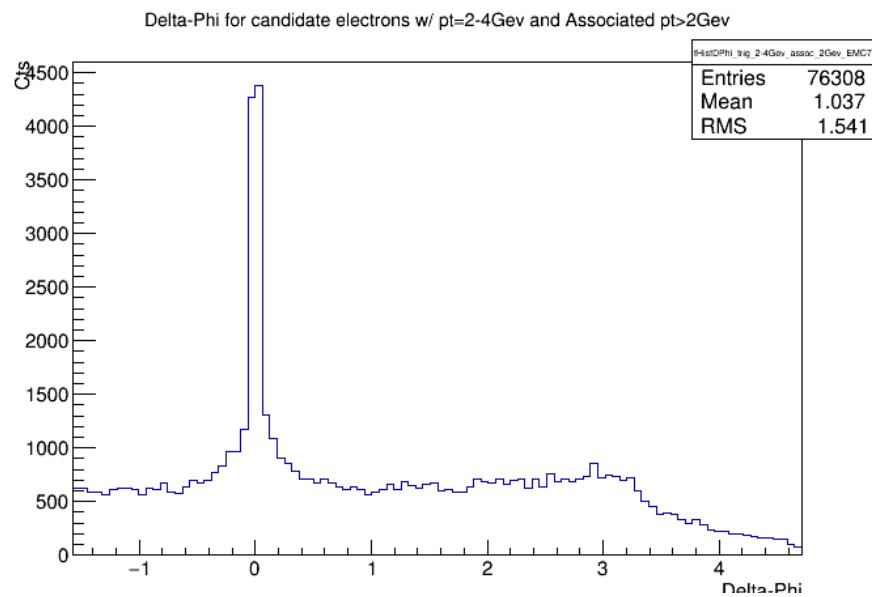
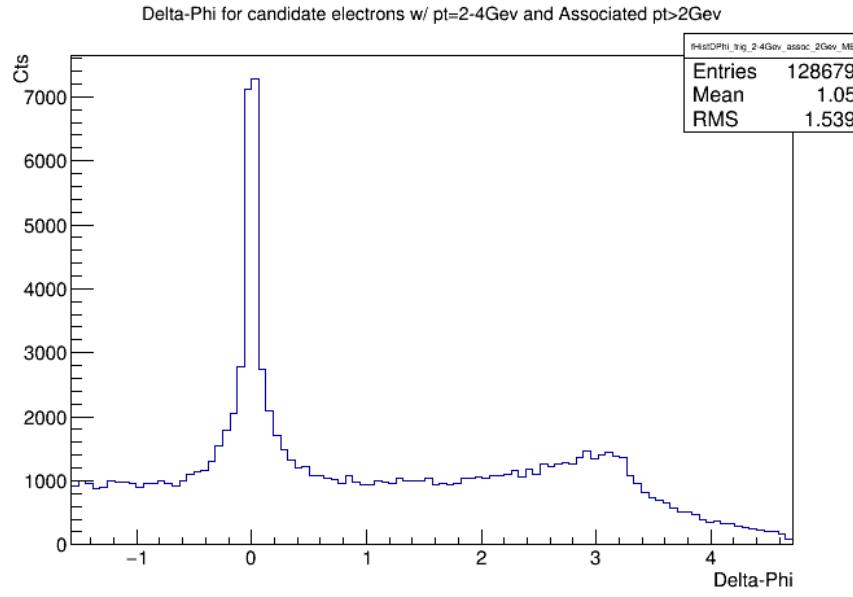
# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >1Gev



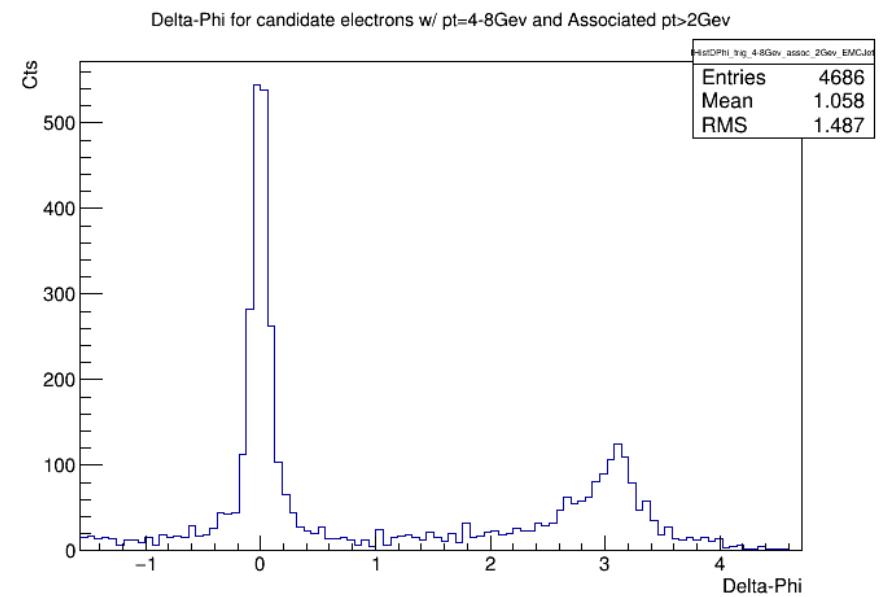
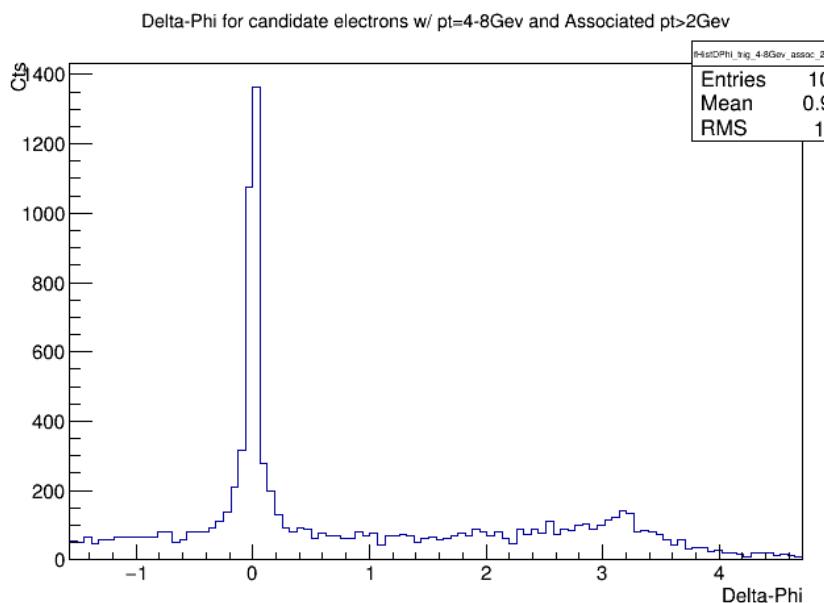
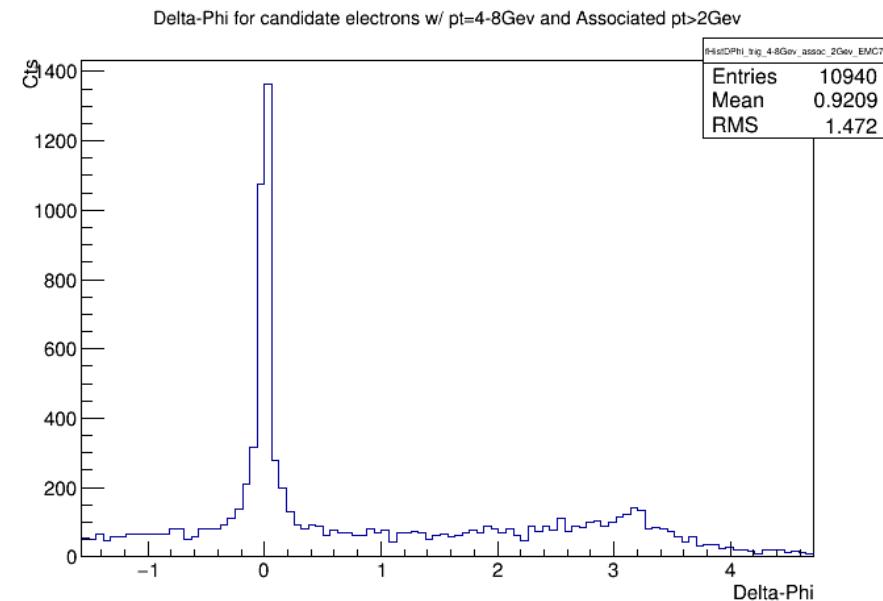
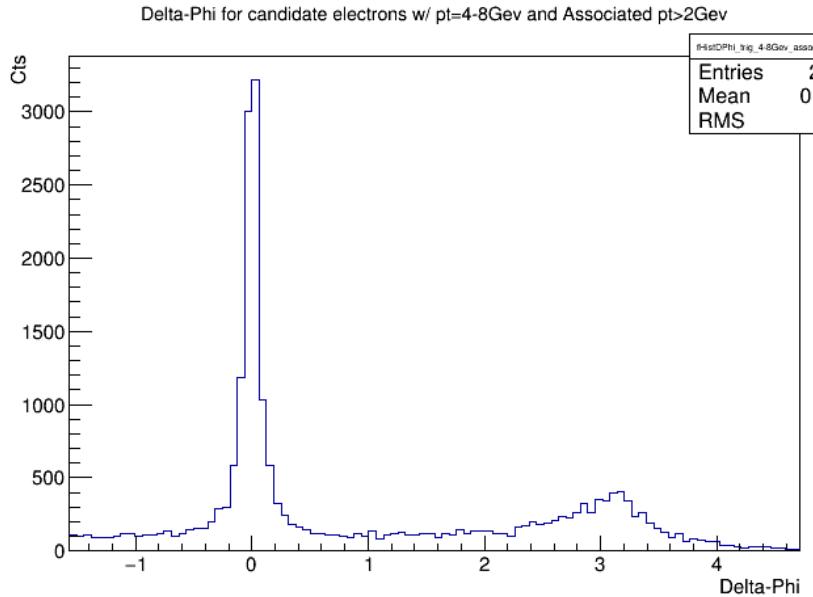
# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >2Gev



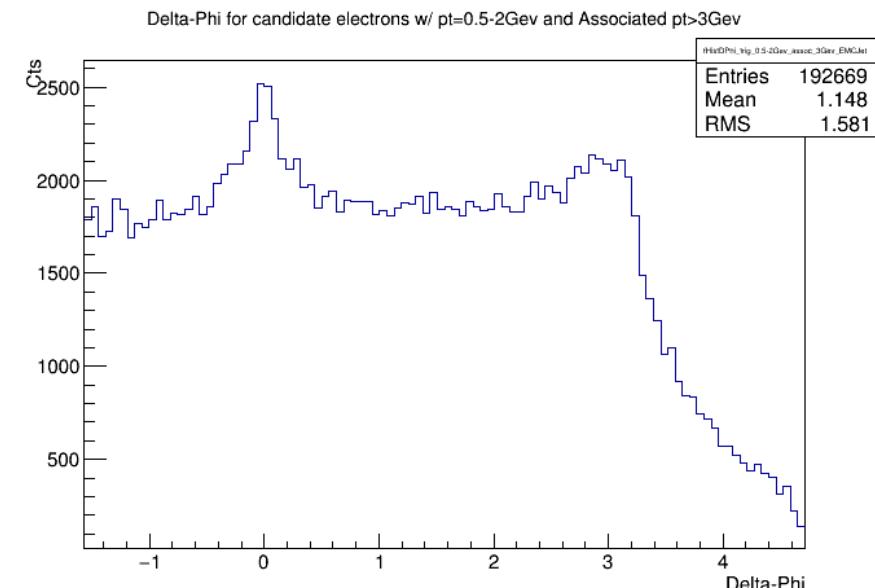
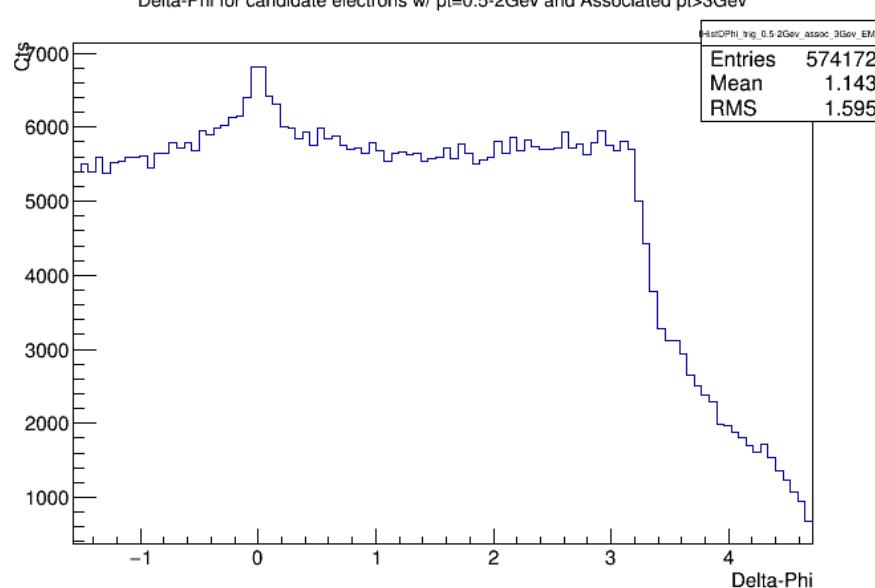
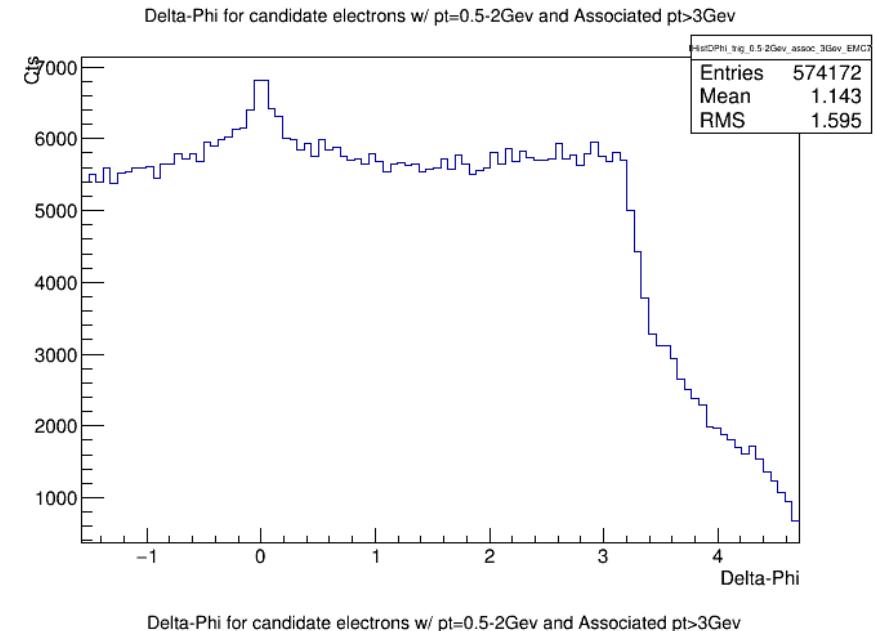
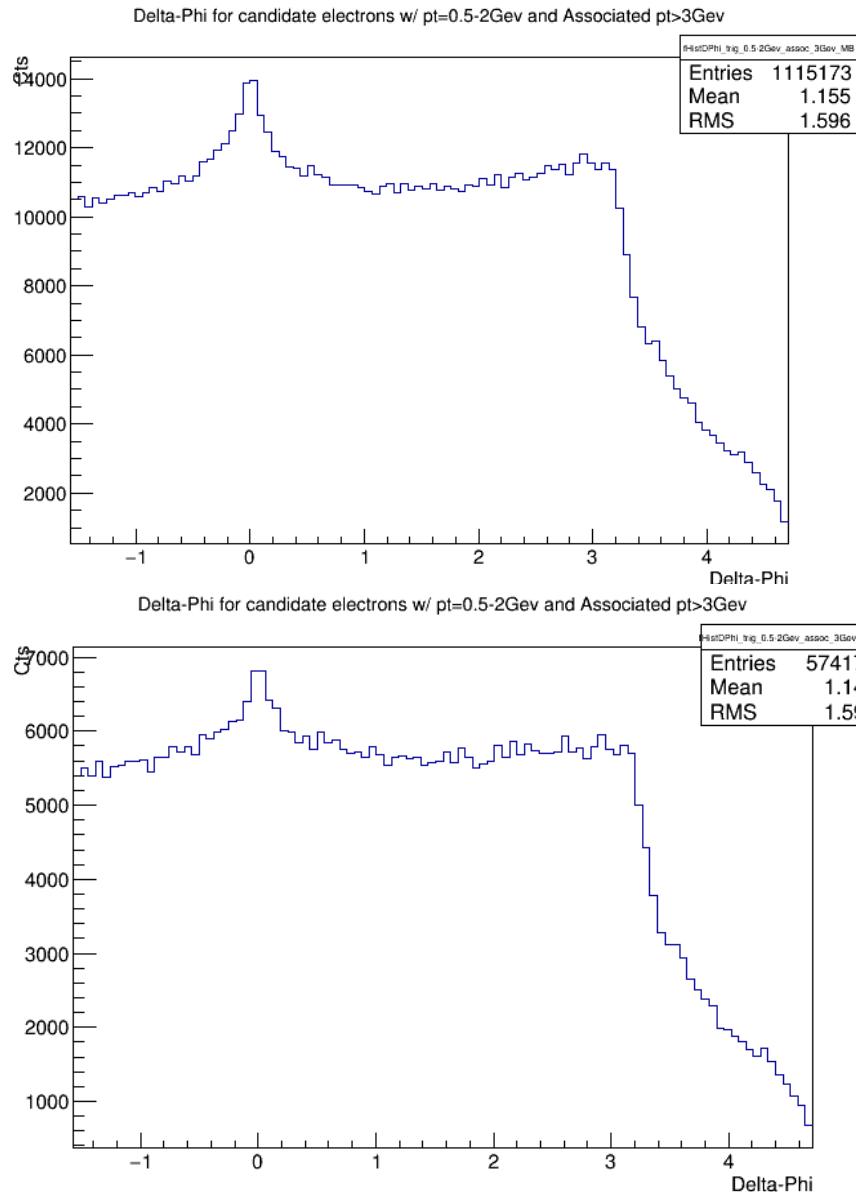
# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >2Gev



# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >2Gev

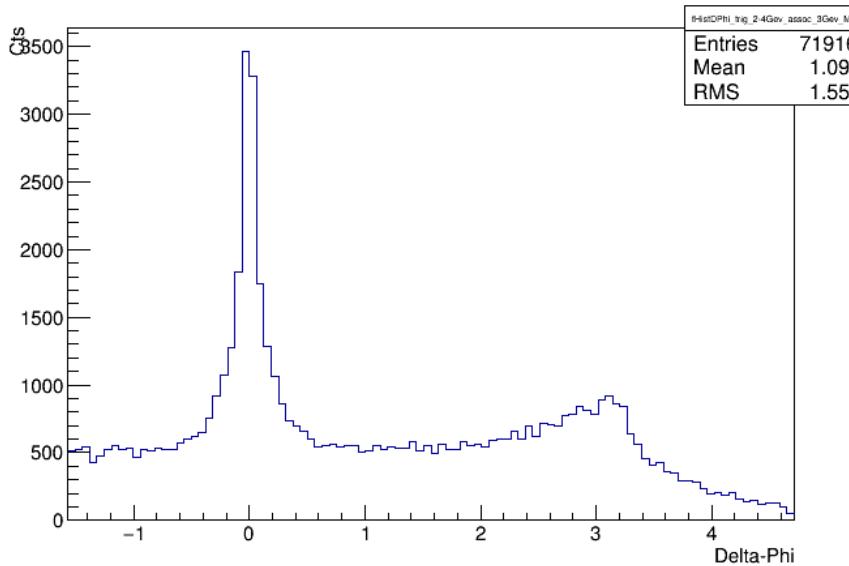


# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >3Gev

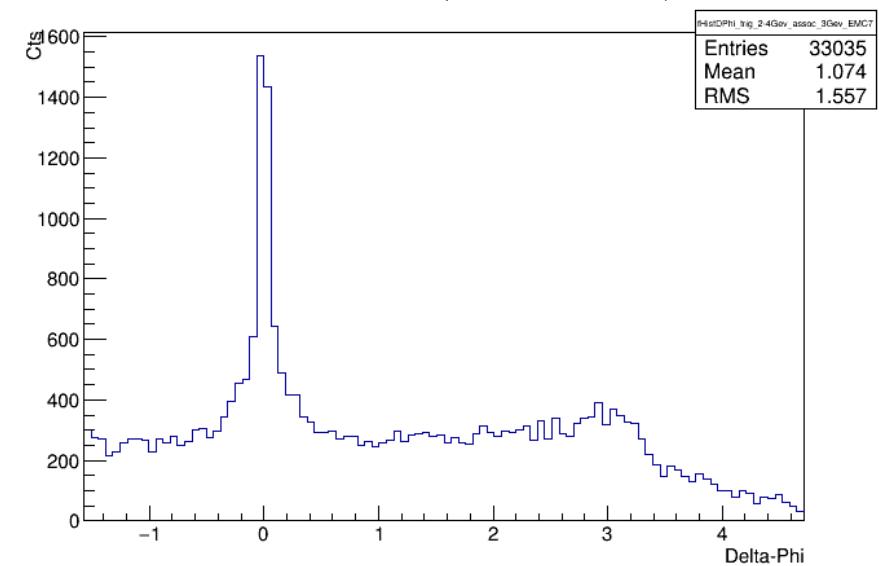


# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >3Gev

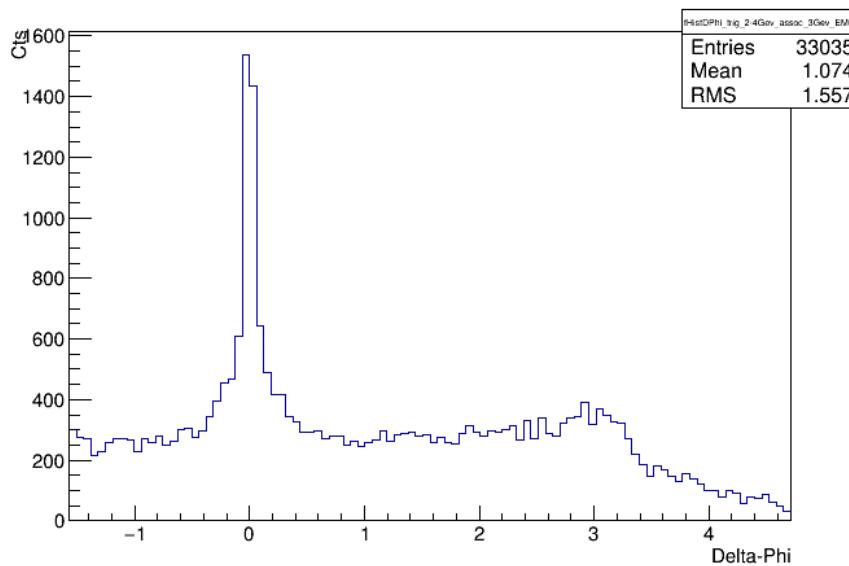
Delta-Phi for candidate electrons w/ pt=2-4Gev and Associated pt>3Gev



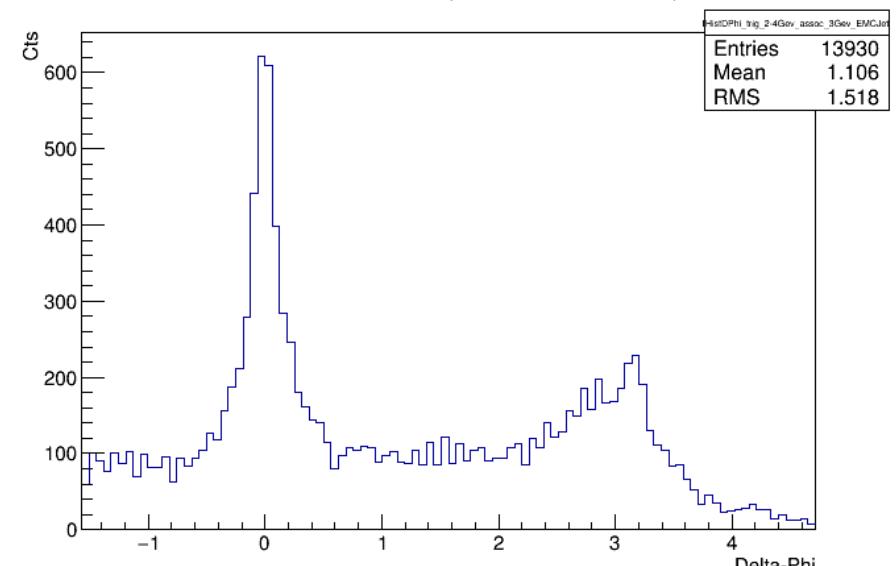
Delta-Phi for candidate electrons w/ pt=2-4Gev and Associated pt>3Gev



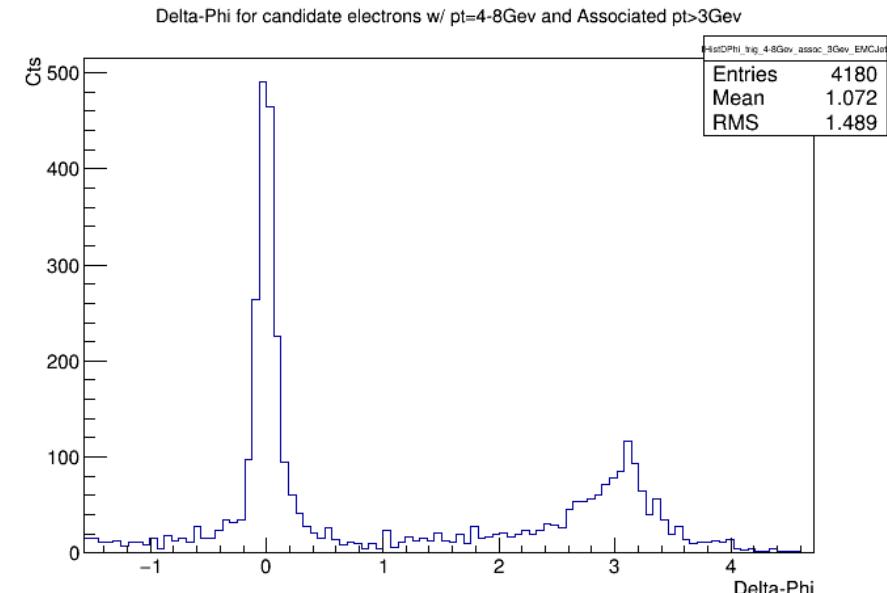
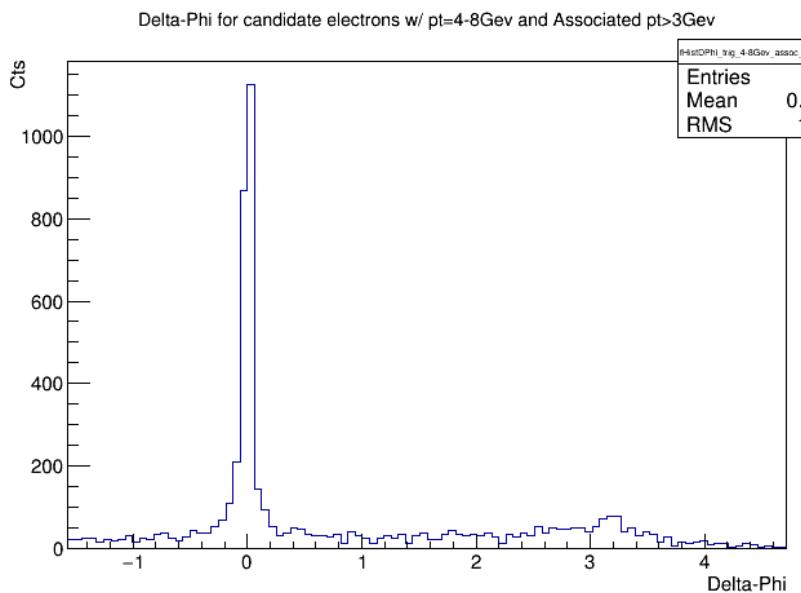
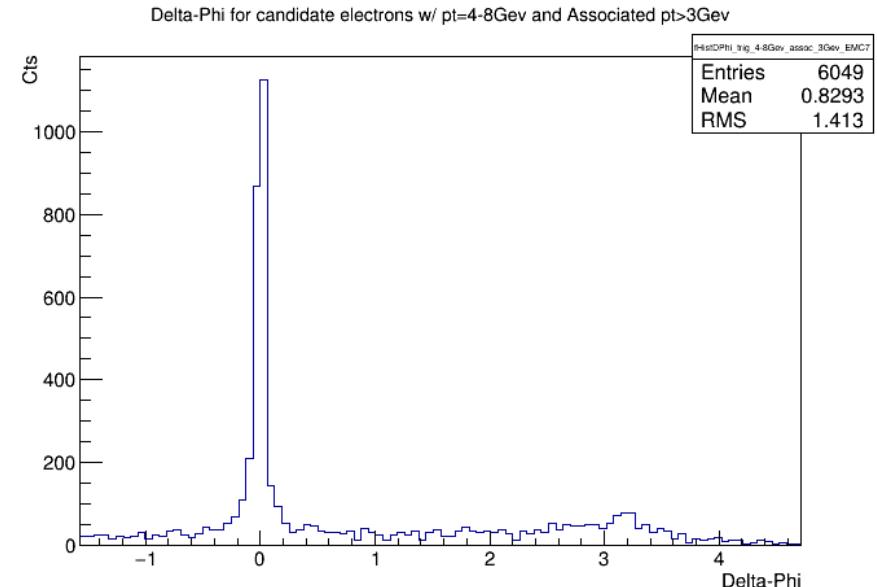
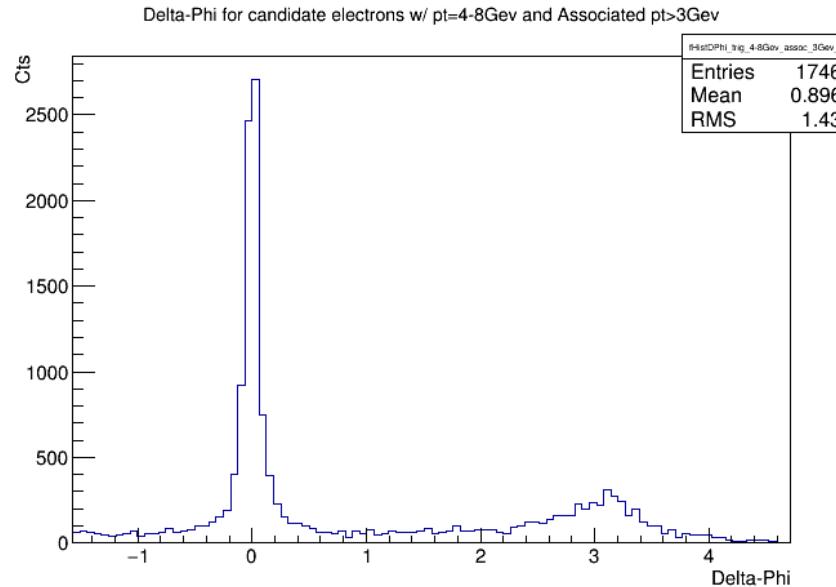
Delta-Phi for candidate electrons w/ pt=2-4Gev and Associated pt>3Gev



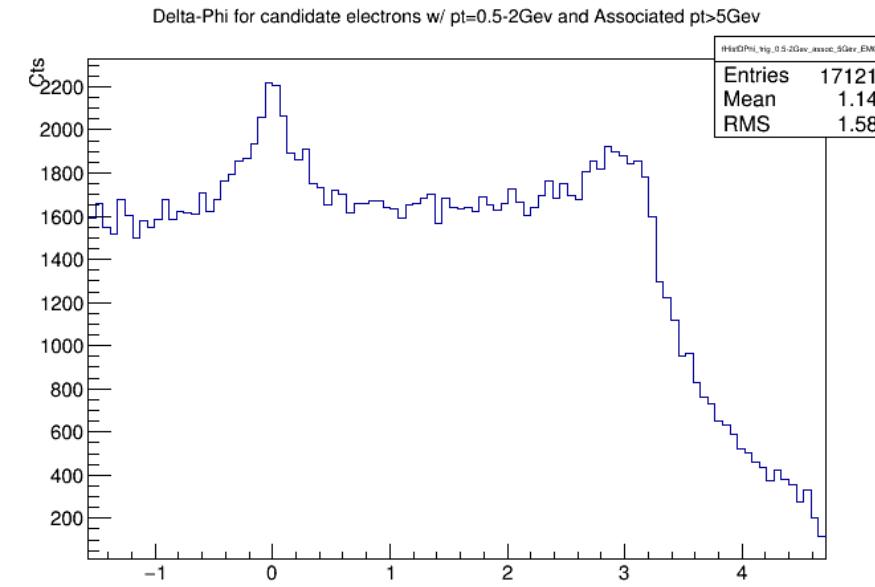
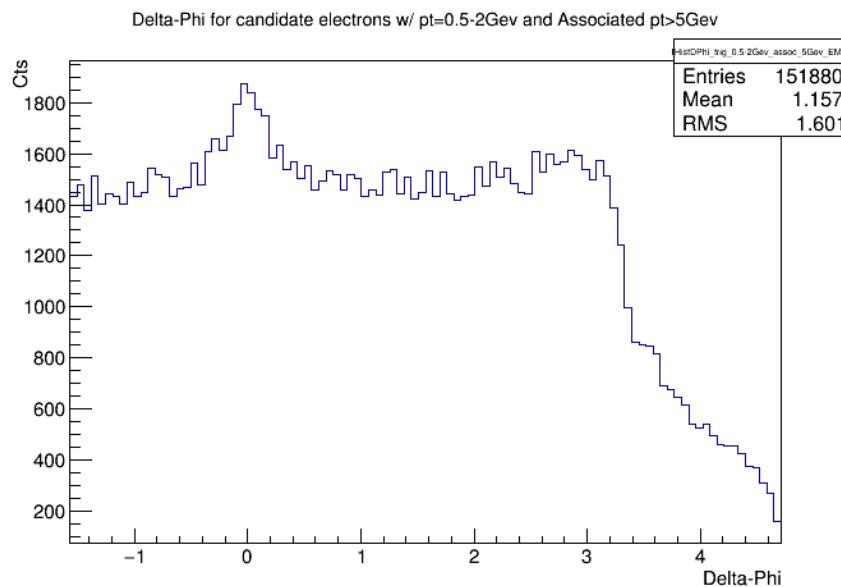
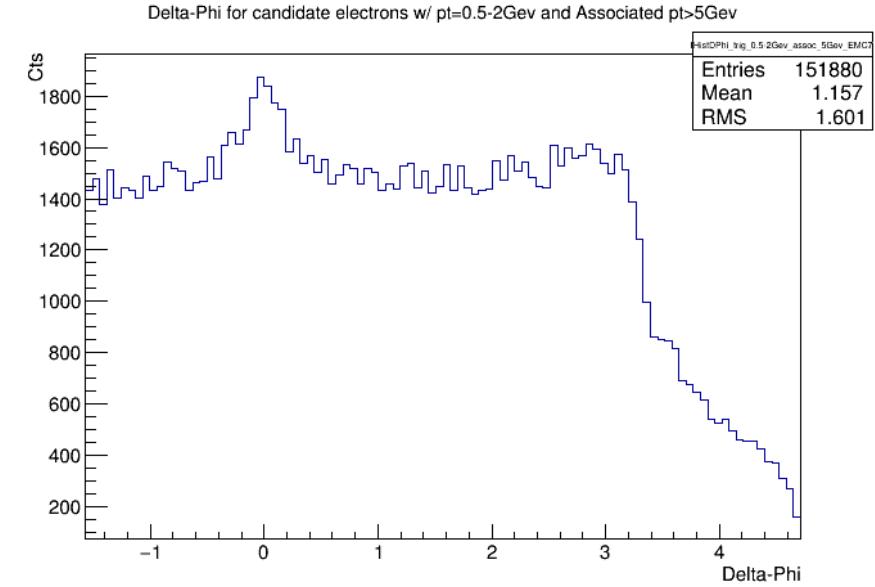
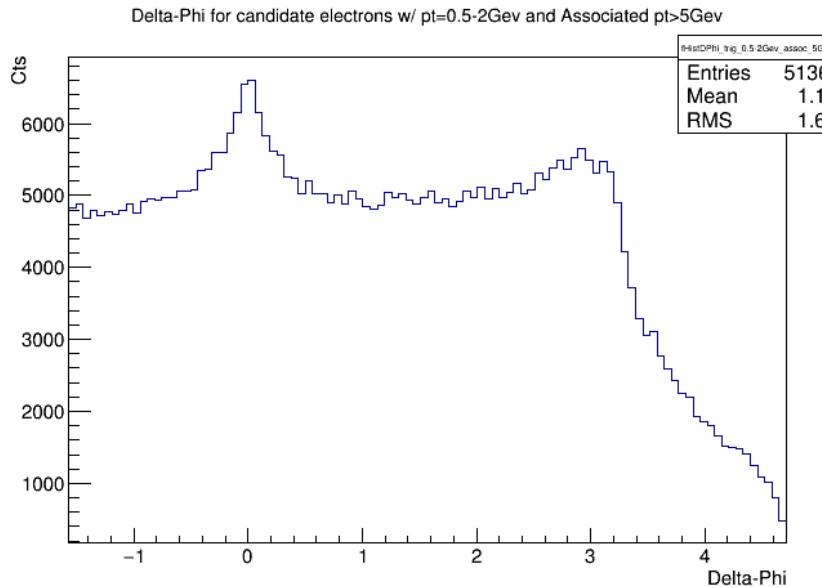
Delta-Phi for candidate electrons w/ pt=2-4Gev and Associated pt>3Gev



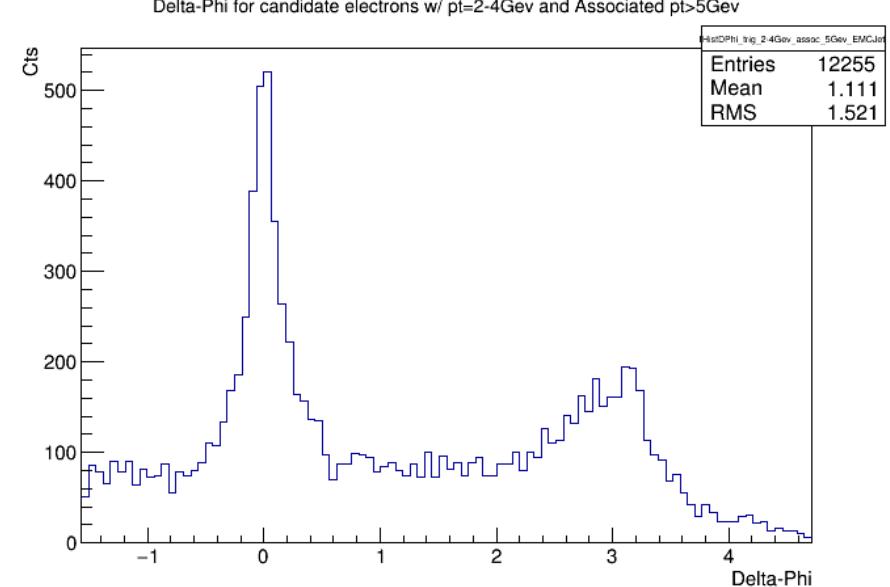
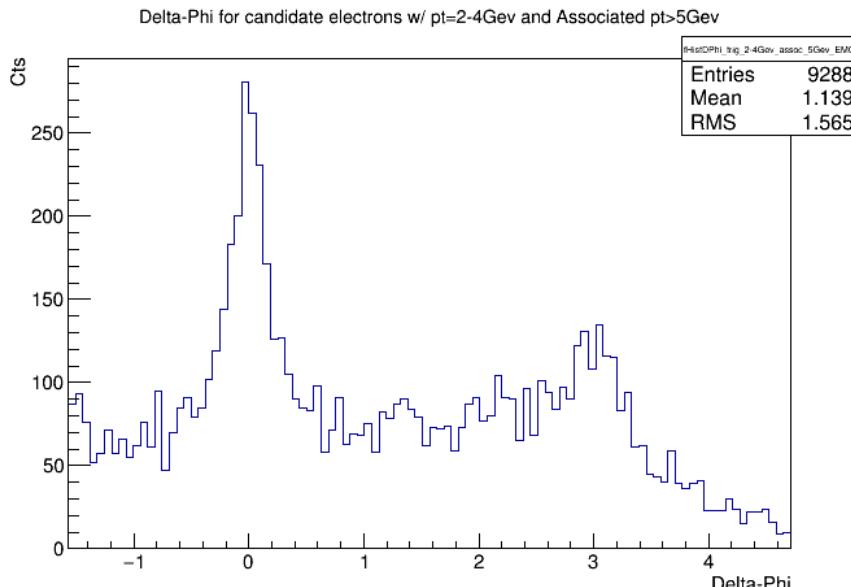
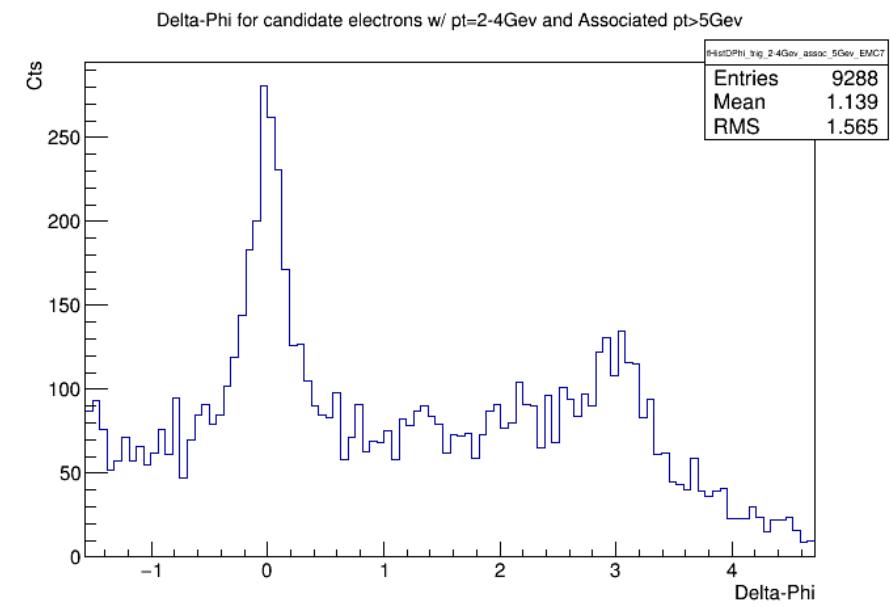
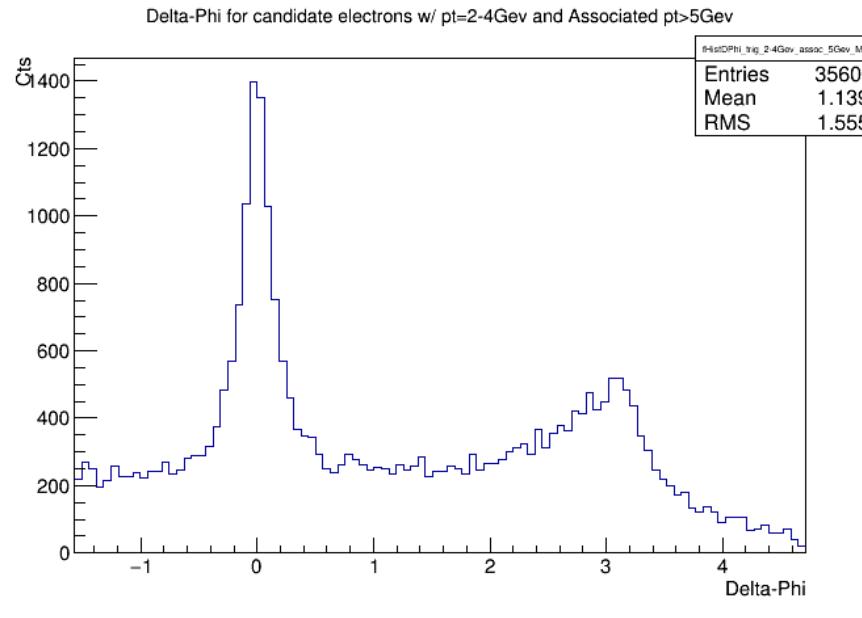
# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >3Gev



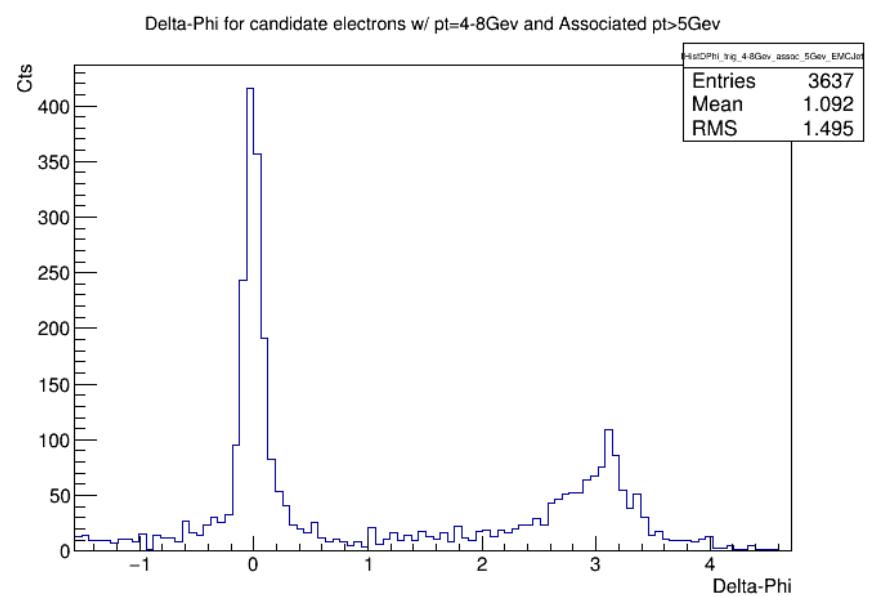
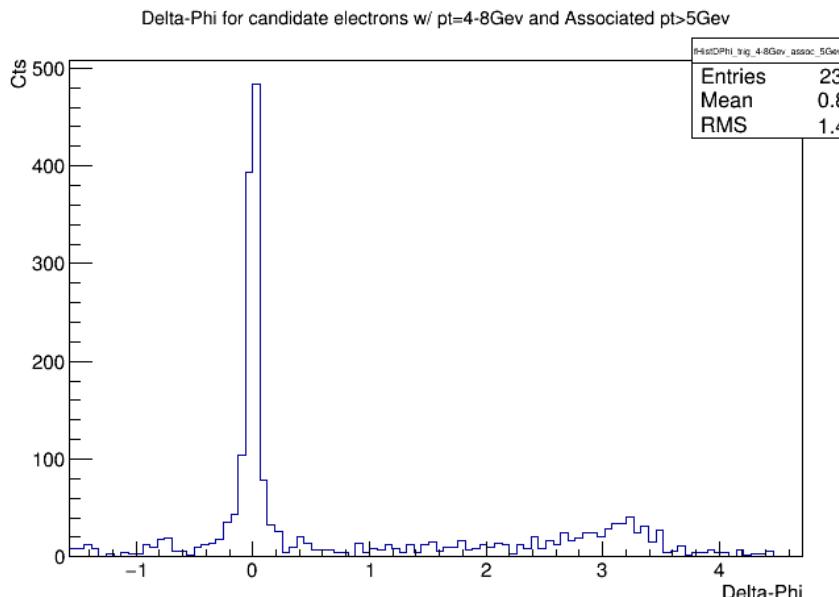
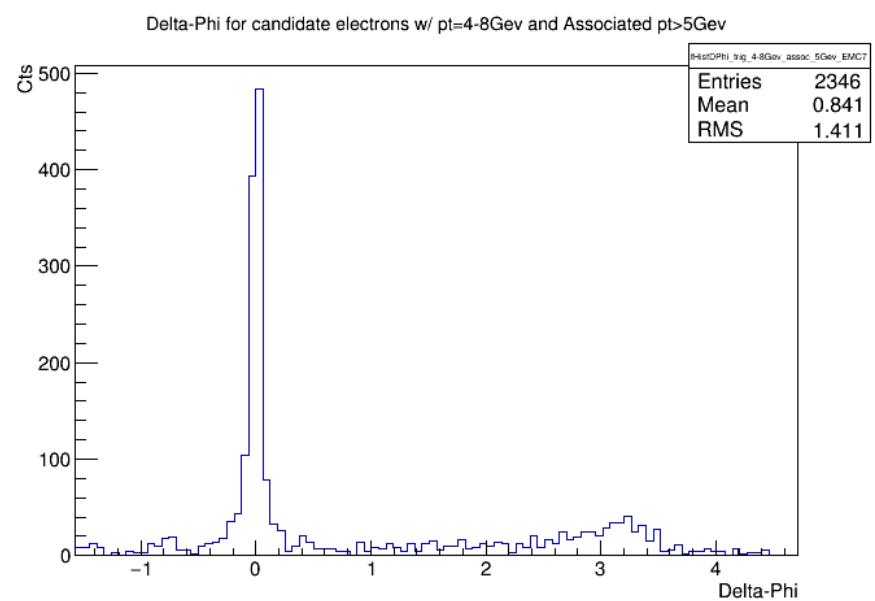
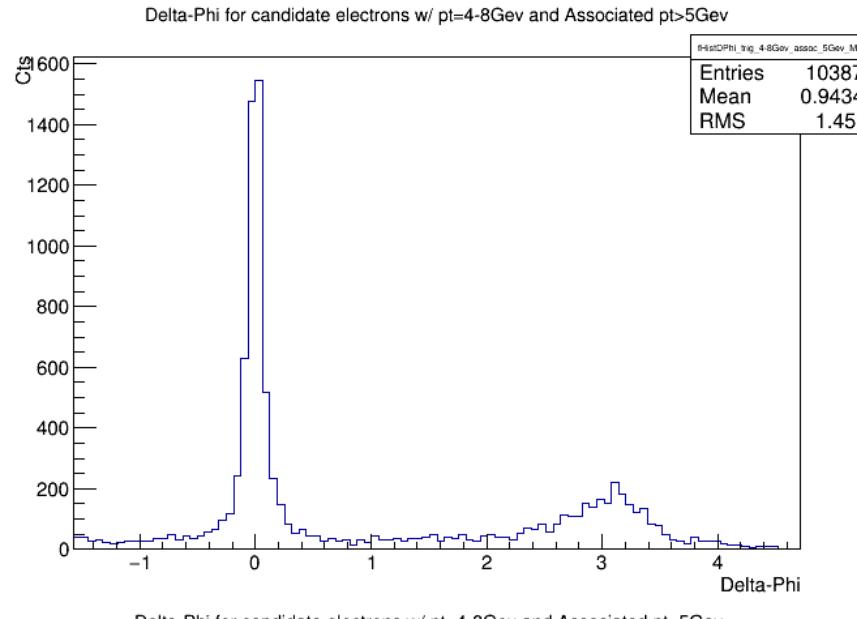
# Delta-Phi for cand. Pt 0.5-2Gev, assoc. Pt >5Gev



# Delta-Phi for cand. Pt 2-4Gev, assoc. Pt >5Gev



# Delta-Phi for cand. Pt 4-8Gev, assoc. Pt >5Gev



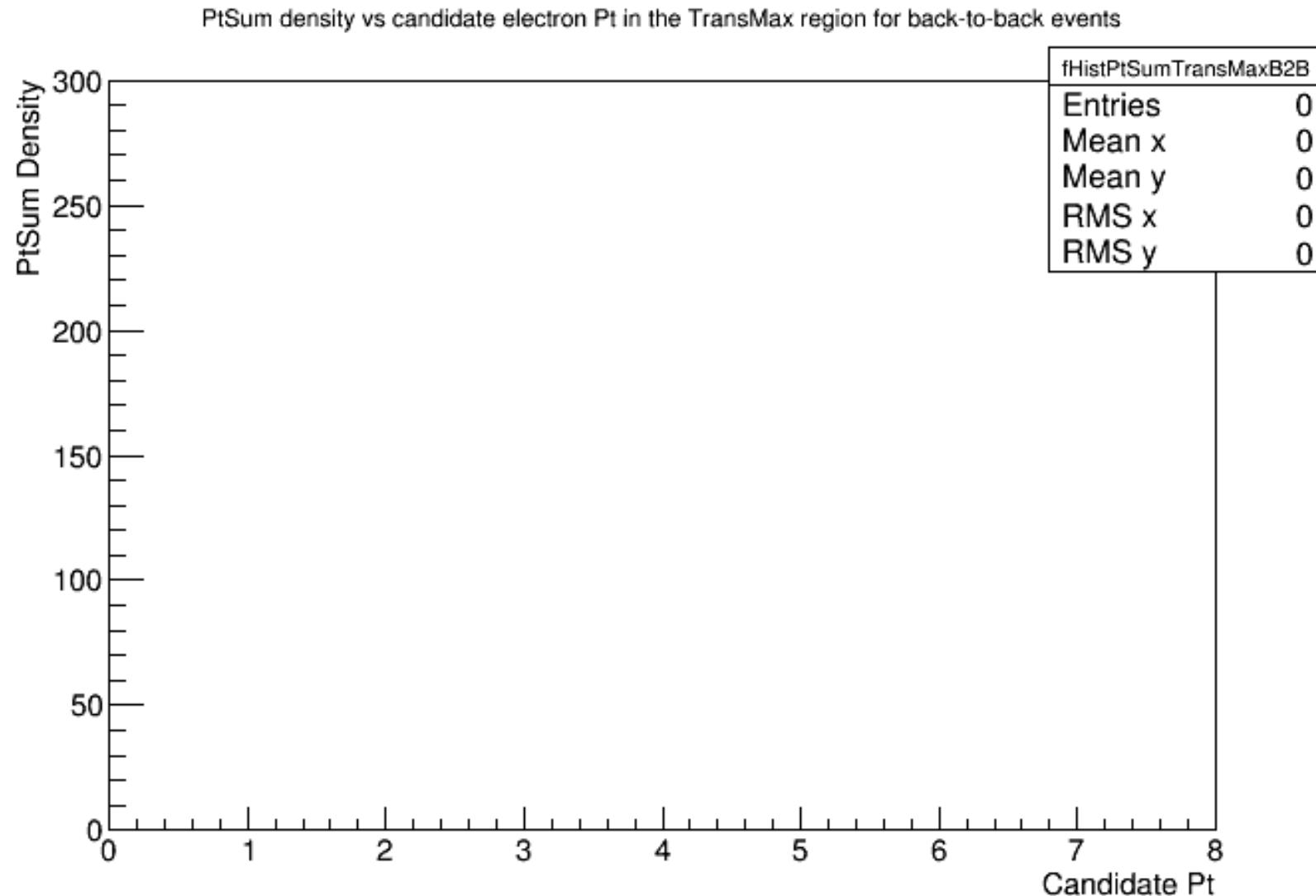
# Analysis

In [Cite Tevatron paper] events with b-jets are split in 4 regions in Phi. We label these the “tag-side,”  $-\pi/4$  around the candidate track's phi, “away-side,” the region directly opposing the “tag-side” containing  $\pi/2$  in Phi, then “transMax” and “transMin.” Where “transMax” is the background region having the highest PtSum Density in the event and “transMin” is the region directly opposing that one.

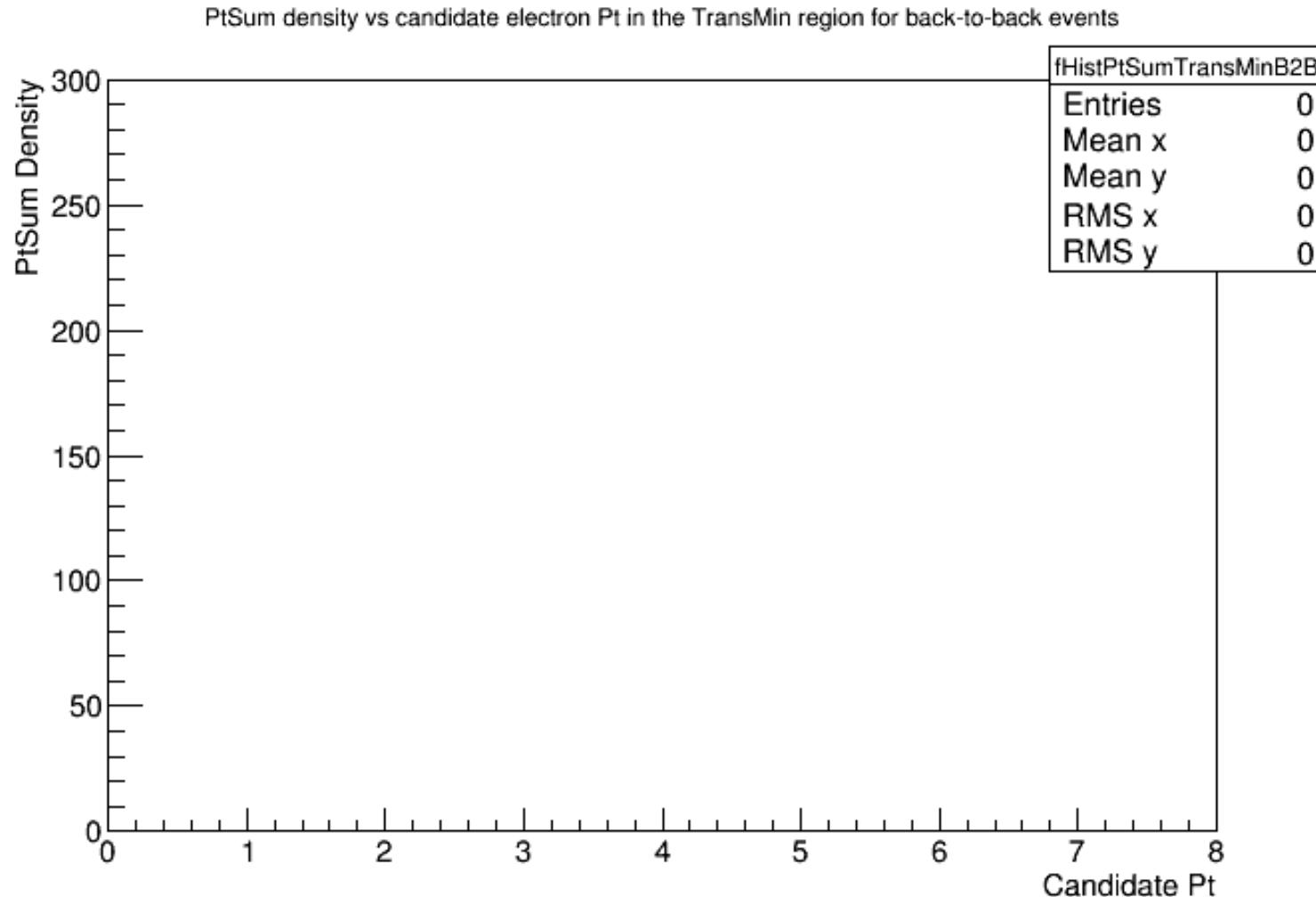
We plot track multiplicity, track Pt, and dEdx by Pt for each region in 4 Pt bins: 1-2Gev, 2-4Gev, 4-6Gev, >6Gev.

Additionally, motivated by [cite Tevatron paper] we plot the PtSum density(the sum of all track Pt in a region divided by the area in eta-phi) by candidate Pt in the left and transMin regions for events with a candidate in the “tag-side” region and a candidate in the “away-side” region(referred to from now on as back-to-back events) as well as for events with only a candidate in the “tag-side” region(referred to from now on as leading candidate events).

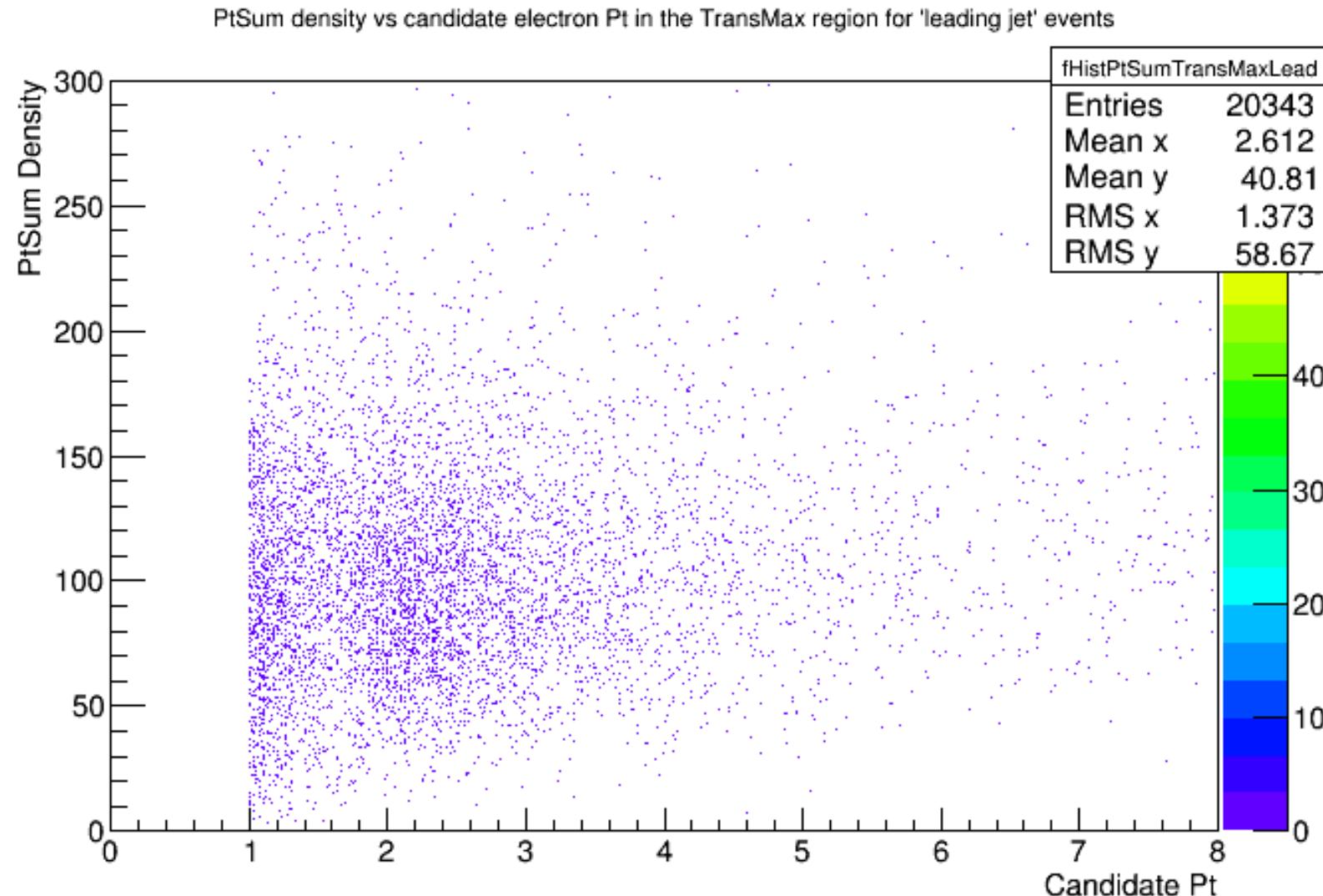
# PtSum density by cand. Pt in “transMax” region for back-to-back events



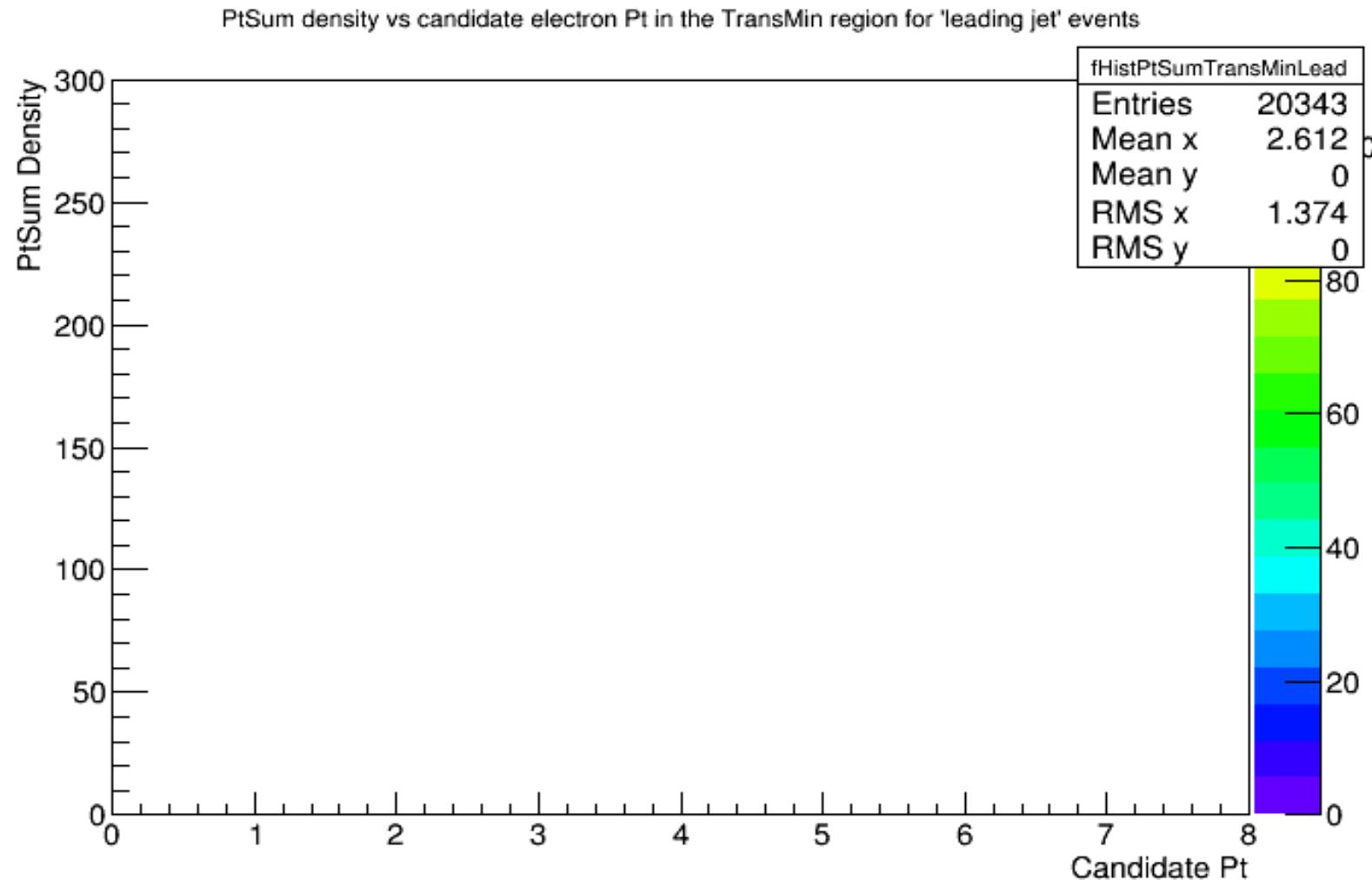
# PtSum density by cand. Pt in “transMin” region for back-to-back events



# PtSum density by cand. Pt in “transMax” region for leading cand. events



# PtSum density by cand. Pt in “transMin” region for leading cand. events

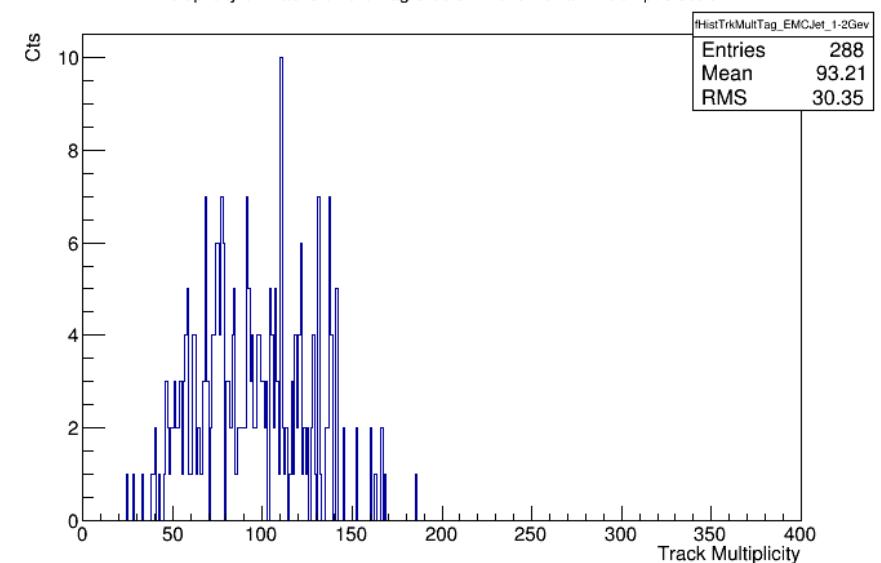
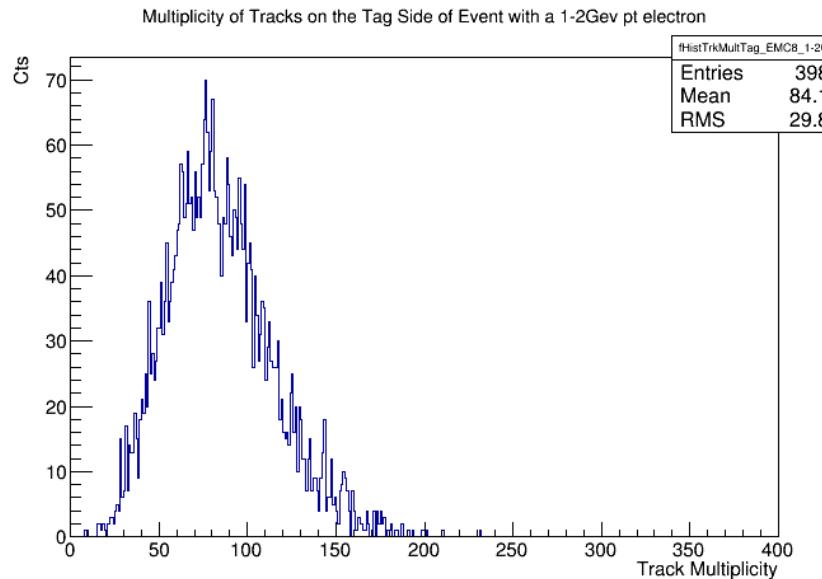
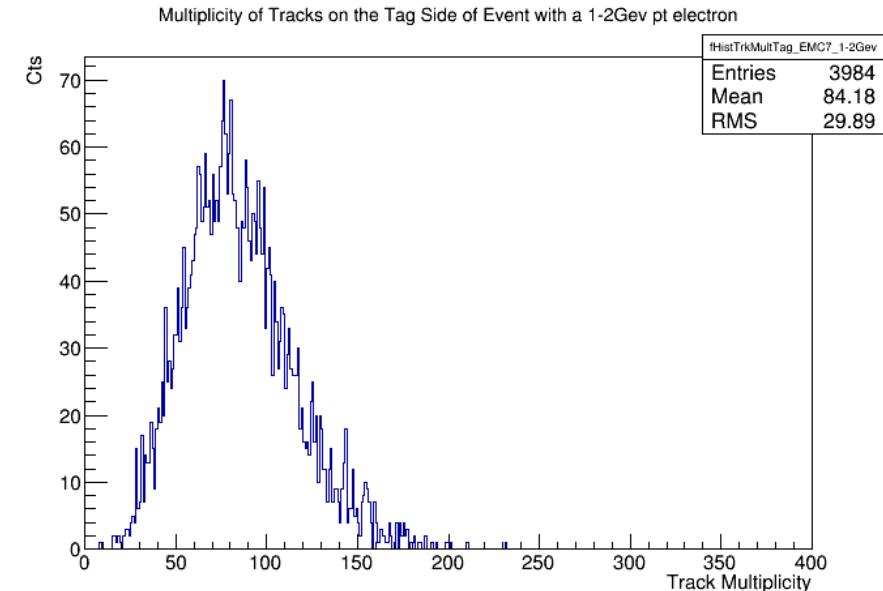
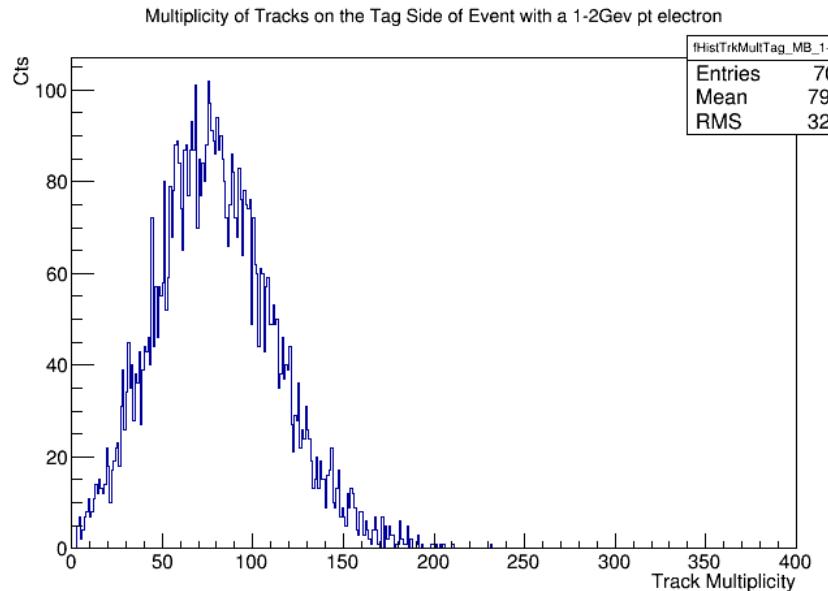


# Region Plots index

- “Tag-Side”: Slides 216-227
  - Track multiplicity: Slides 216-219
  - Track Pt distribution: Slides 220-223
  - dEdx by Pt: Slides 223-227
- “Away-Side”: Slides 228-239
  - Track multiplicity: Slides 228-231
  - Track Pt distribution: Slides 232-235
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- “TransMin”: Slides 240-251
  - Track multiplicity: Slides 240-243
  - Track Pt distribution: Slides 244-247
  - dEdx by Pt: Slides 248-251
- “TransMax”: Slides 252-263
  - Track multiplicity: Slides 252-255
  - Track Pt: Slides 256-259
  - dEdx by Pt: Slides 260-263

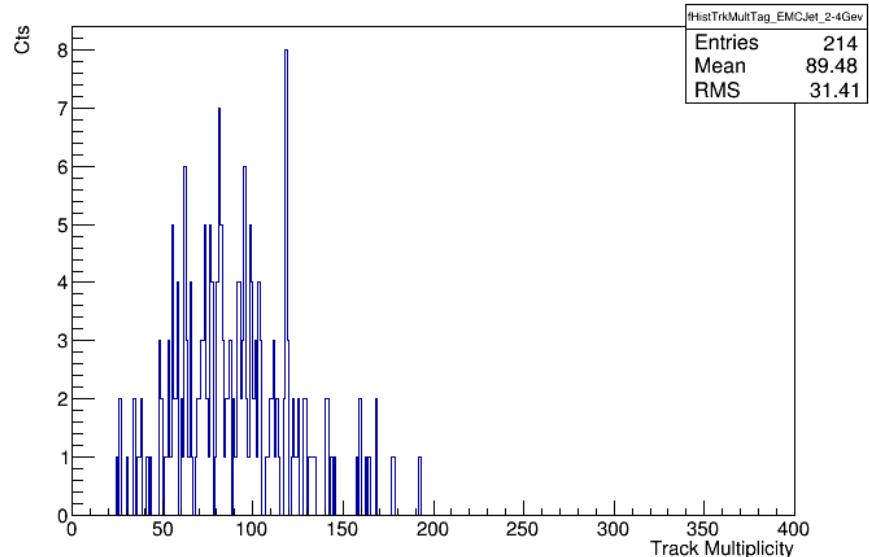
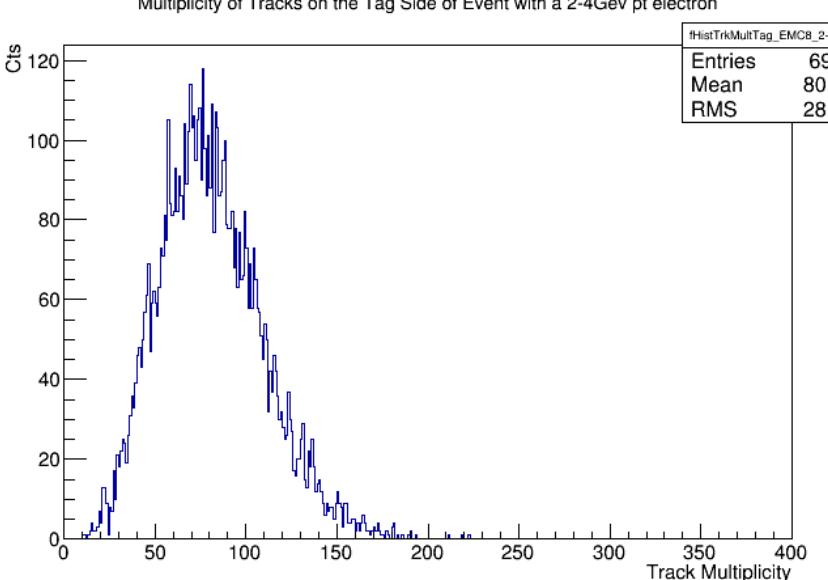
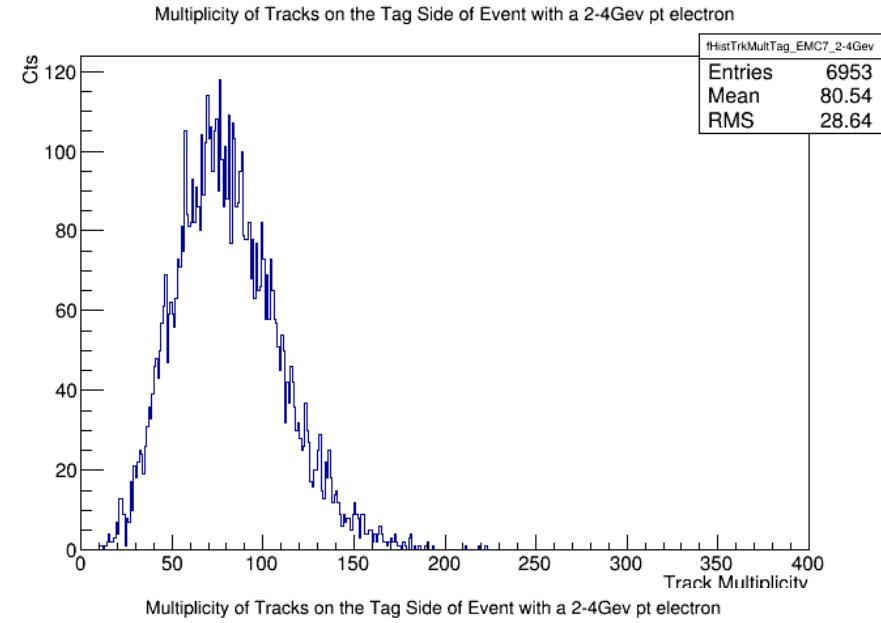
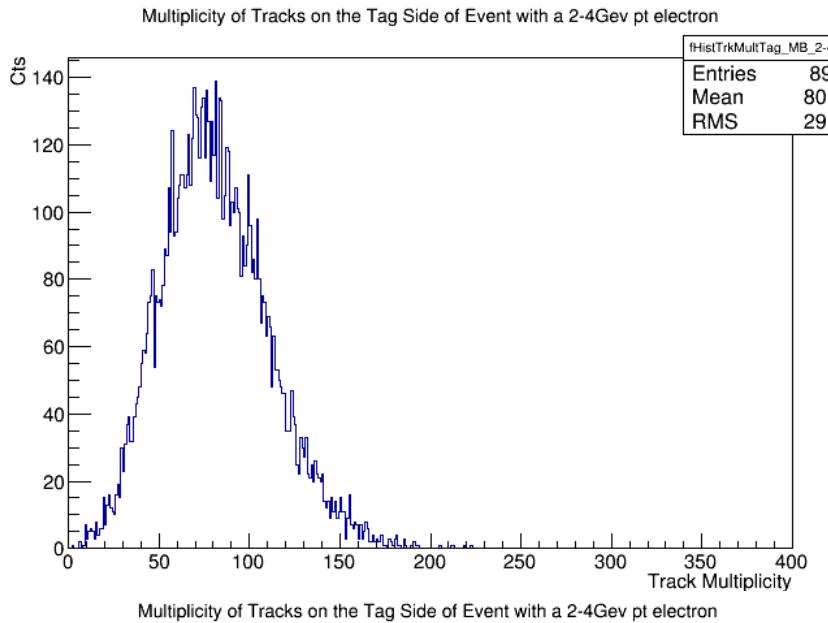
# Track multiplicity in “tag-side” region

## Cand. Pt 1-2Gev



# Track multiplicity in “tag-side” region

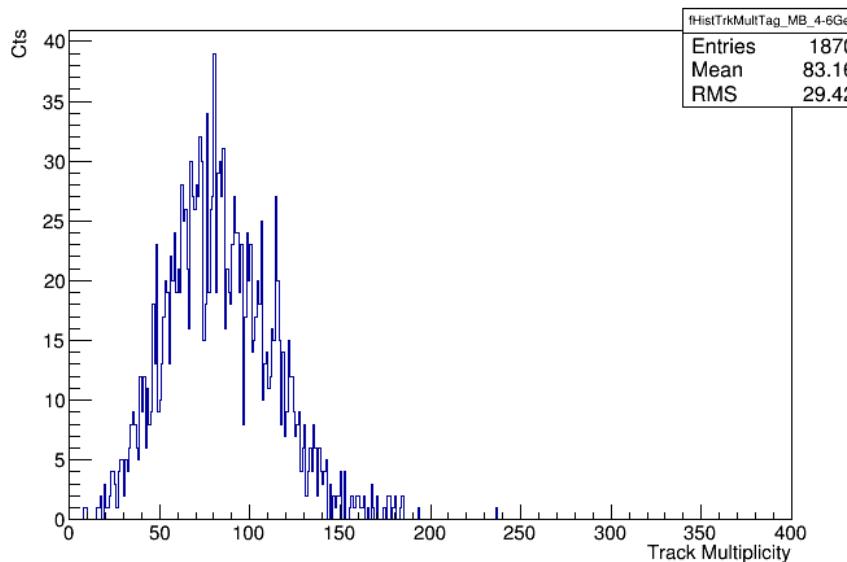
## Cand. Pt 2-4Gev



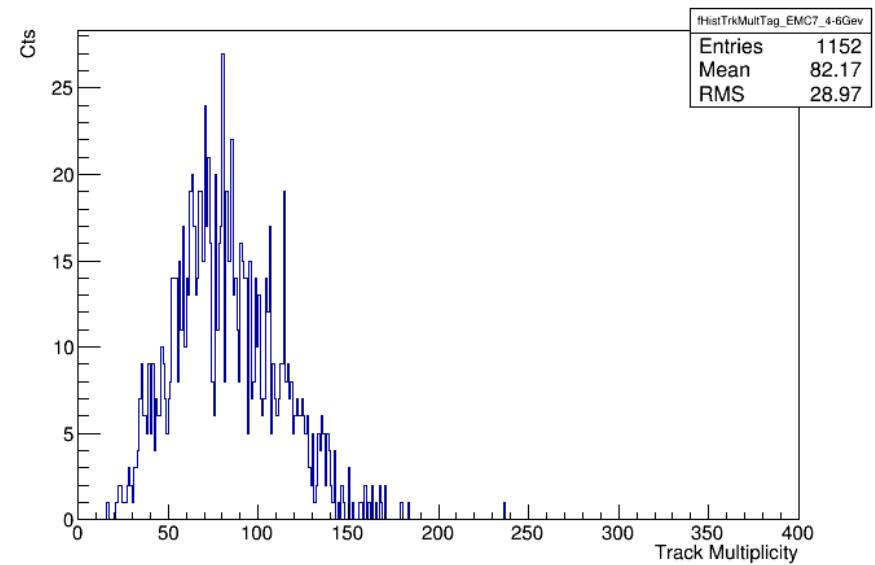
# Track multiplicity in “tag-side” region

Cand. Pt 4-6Gev

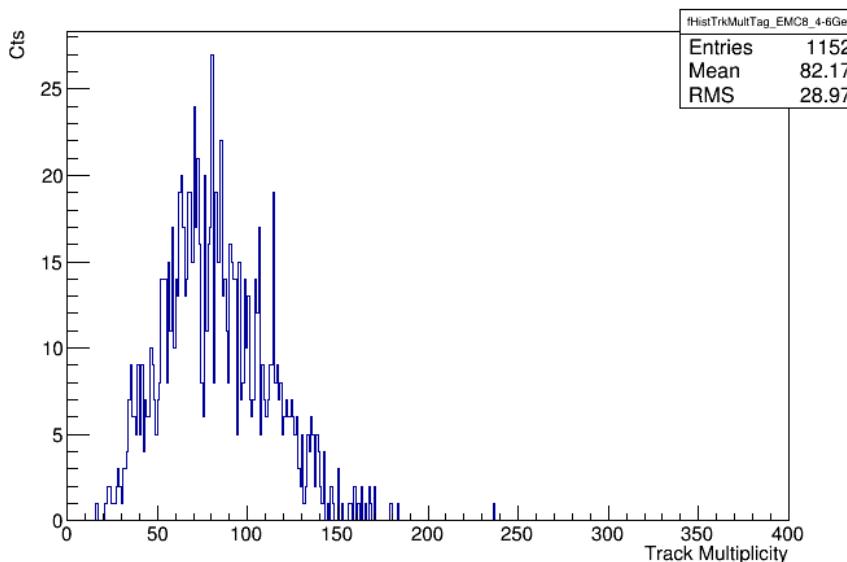
Multiplicity of Tracks on the Tag Side of Event with a 4-6Gev pt electron



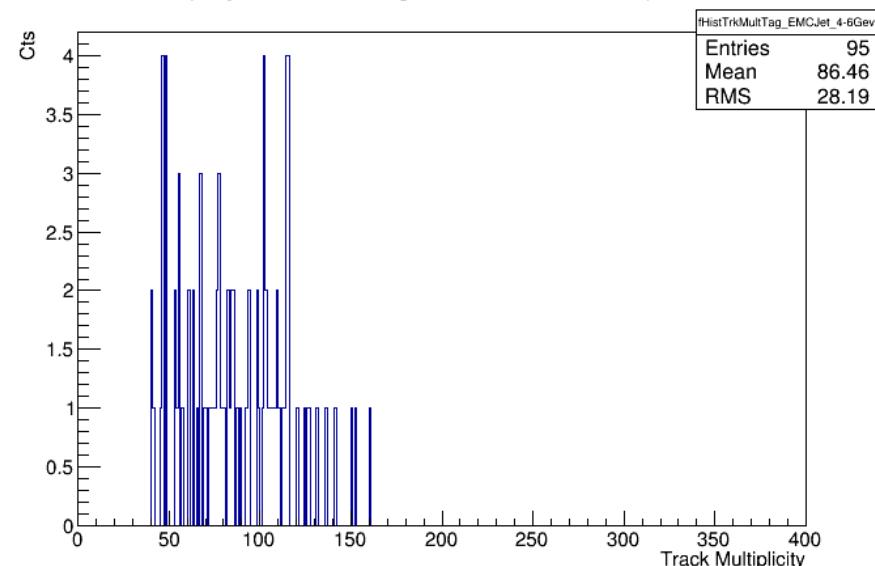
Multiplicity of Tracks on the Tag Side of Event with a 4-6Gev pt electron



Multiplicity of Tracks on the Tag Side of Event with a 4-6Gev pt electron



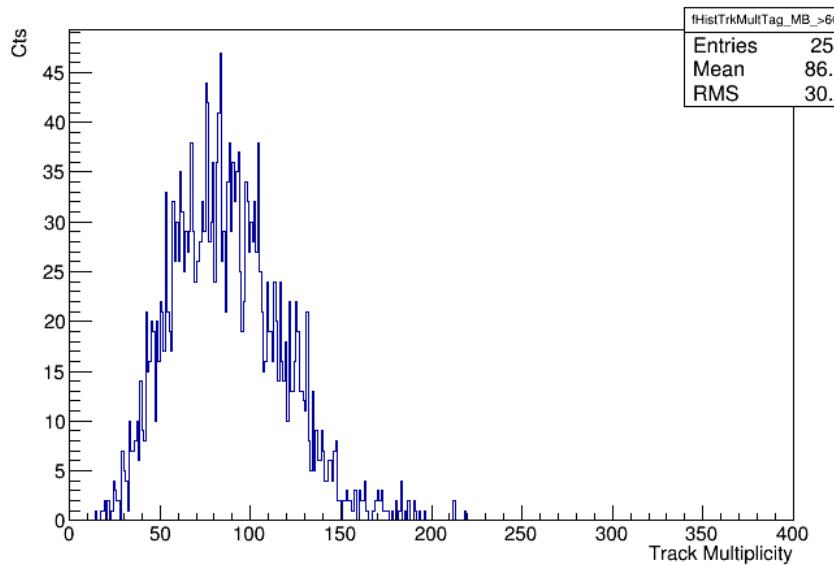
Multiplicity of Tracks on the Tag Side of Event with a 4-6Gev pt electron



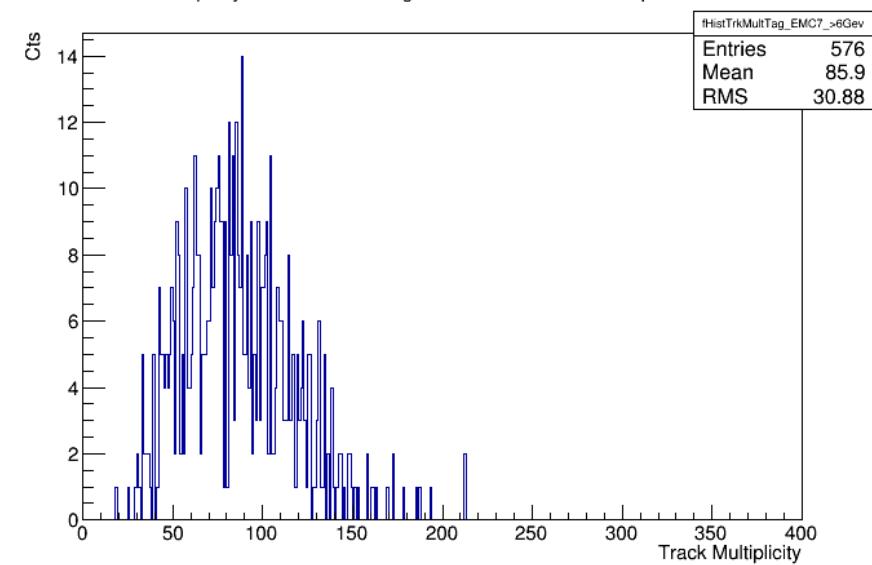
# Track multiplicity in “tag-side” region

## Cand. Pt >6Gev

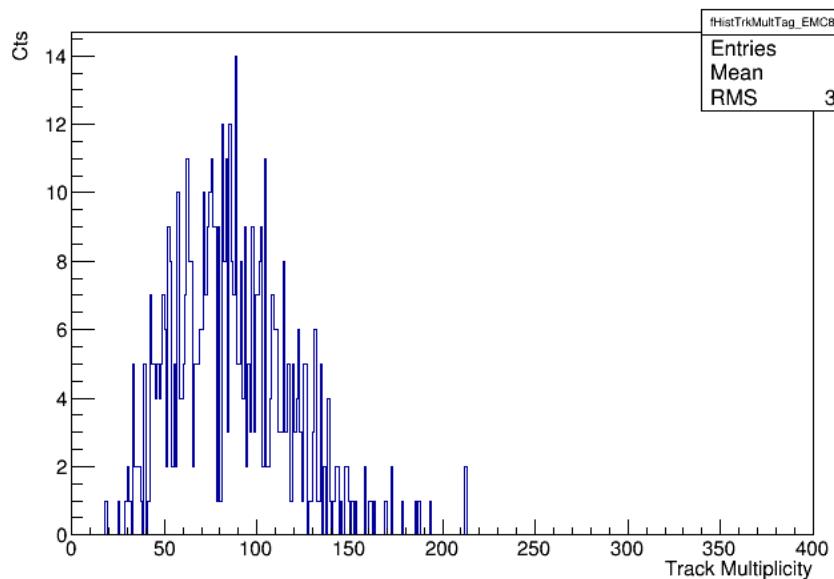
Multiplicity of Tracks on the Tag Side of Event with a >6Gev pt electron



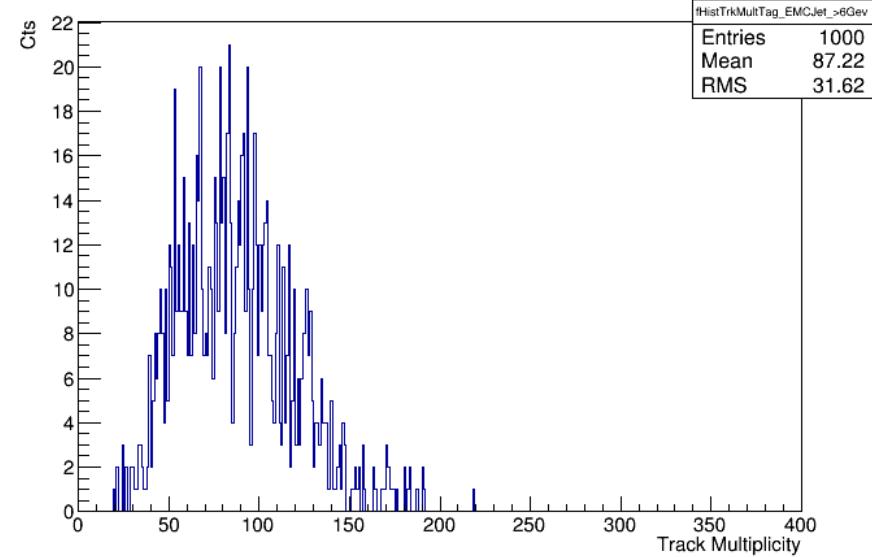
Multiplicity of Tracks on the Tag Side of Event with a >6Gev pt electron



Multiplicity of Tracks on the Tag Side of Event with a >6Gev pt electron

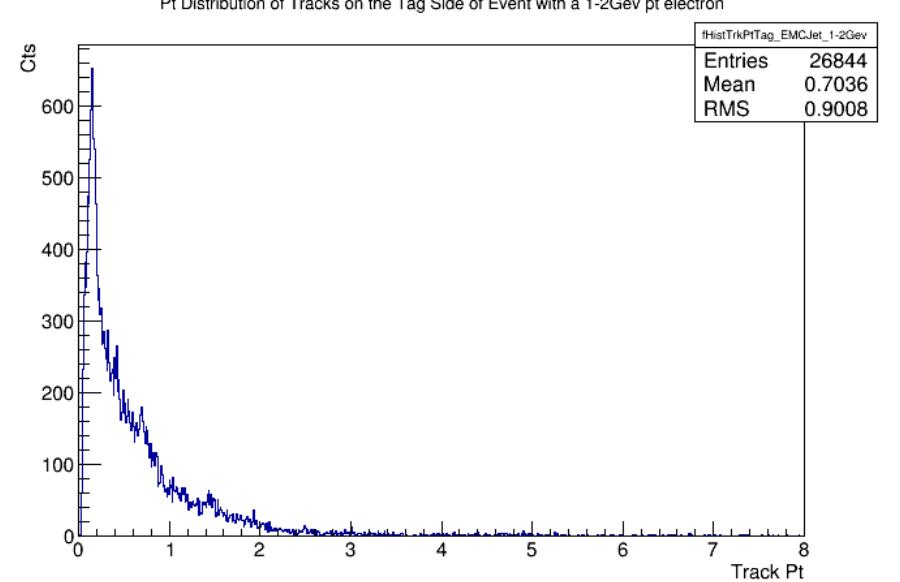
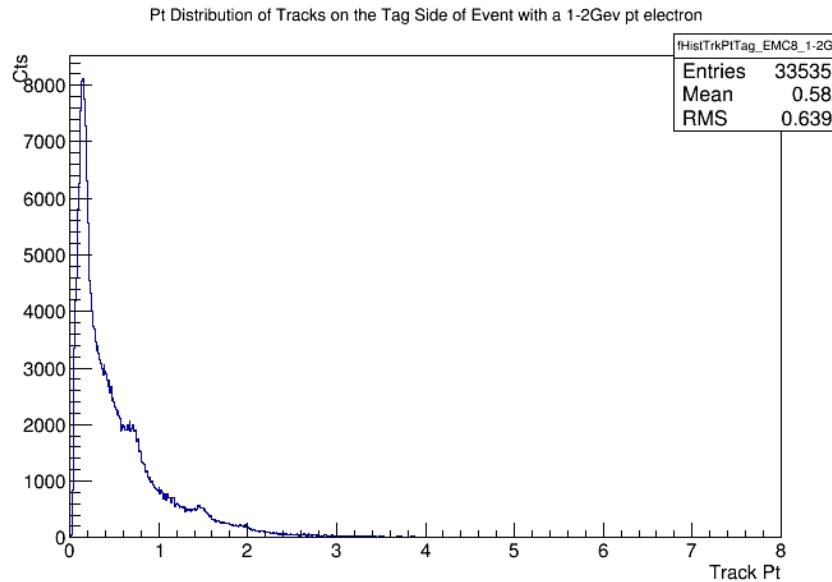
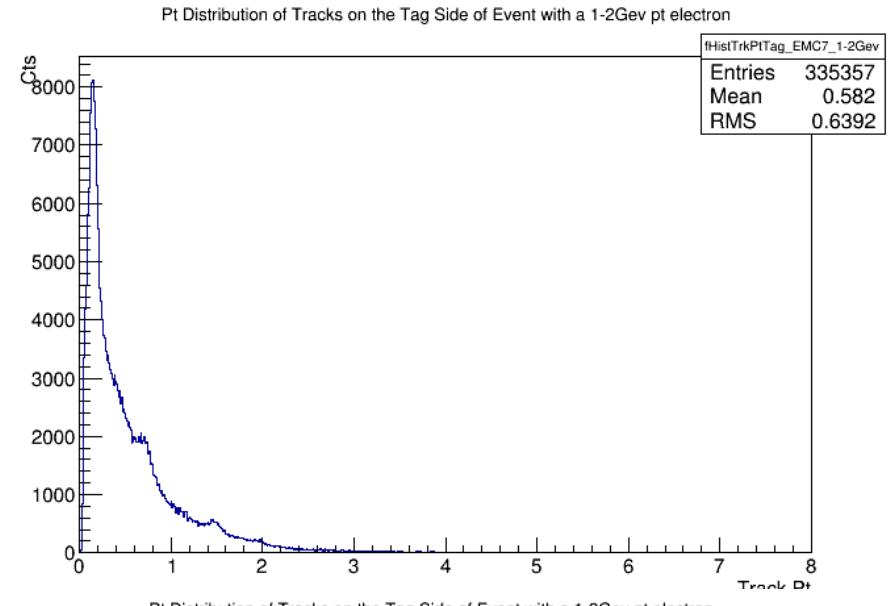
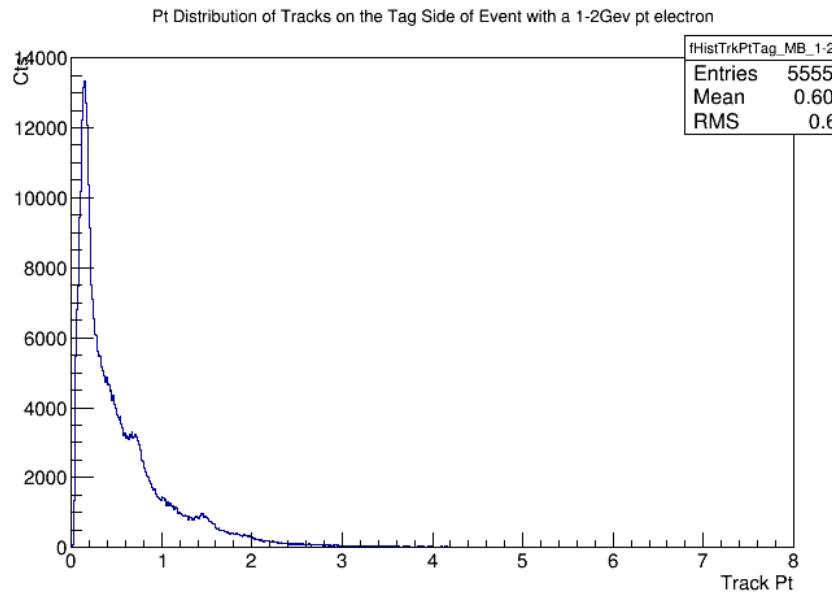


Multiplicity of Tracks on the Tag Side of Event with a >6Gev pt electron



# Track Pt in “tag-side” region

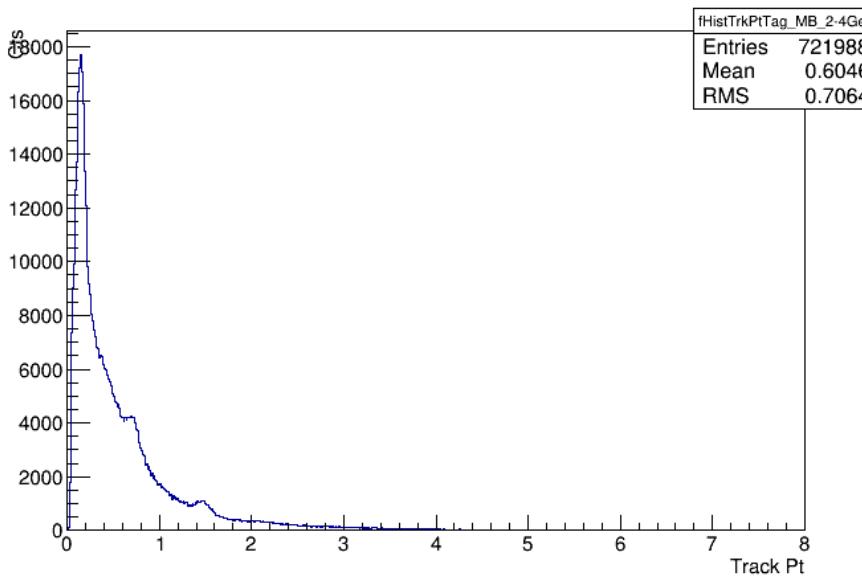
## Cand. Pt 1-2Gev



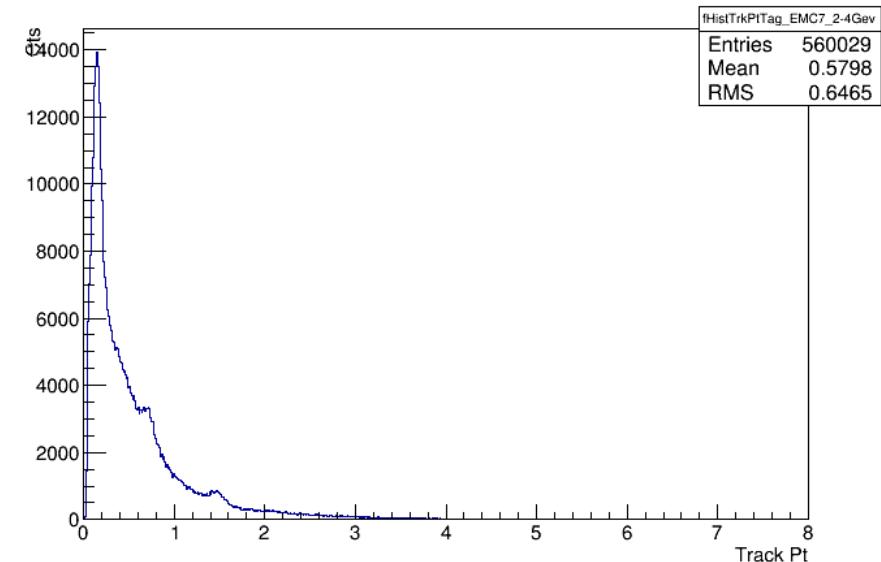
# Track Pt in “tag-side” region

## Cand. Pt 2-4Gev

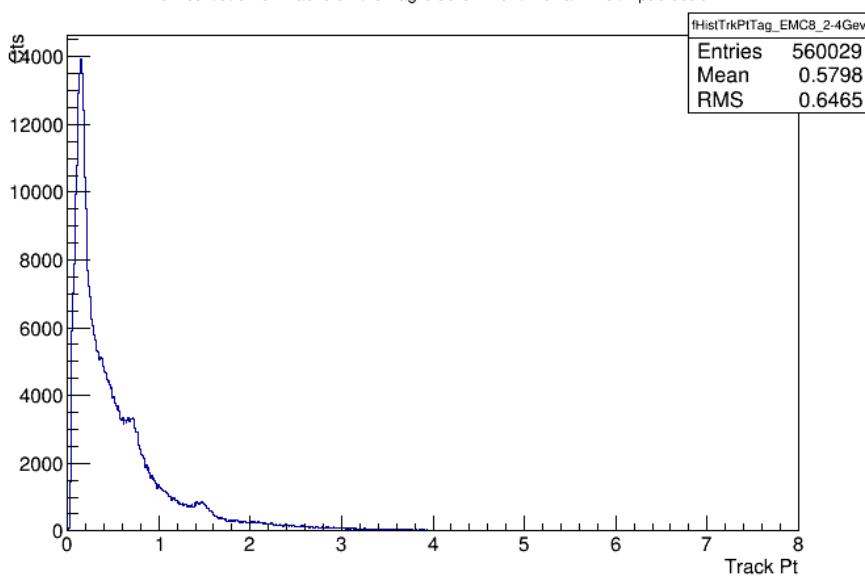
Pt Distribution of Tracks on the Tag Side of Event with a 2-4Gev pt electron



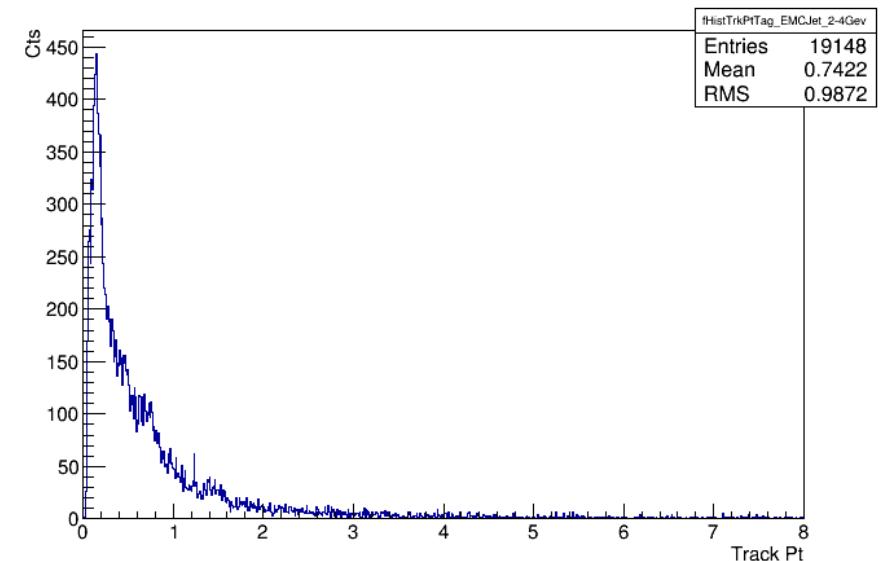
Pt Distribution of Tracks on the Tag Side of Event with a 2-4Gev pt electron



Pt Distribution of Tracks on the Tag Side of Event with a 2-4Gev pt electron

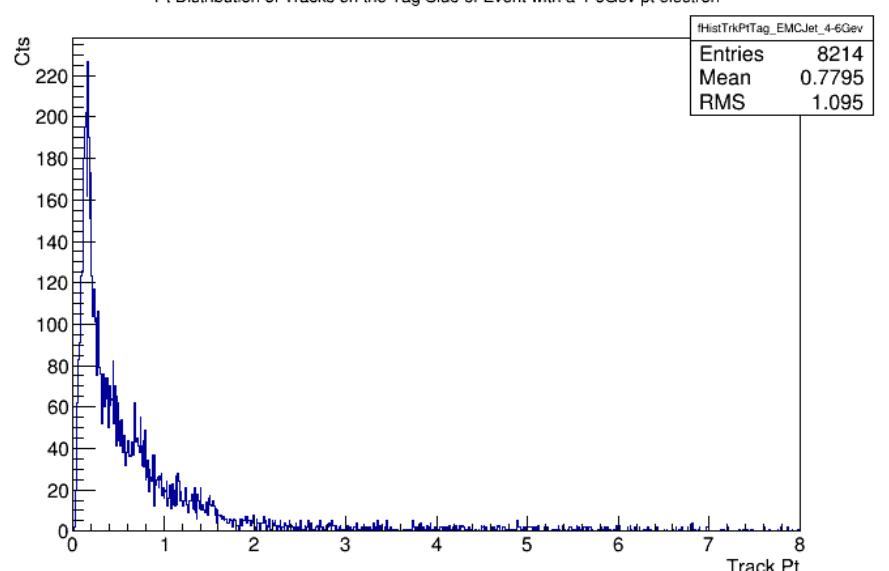
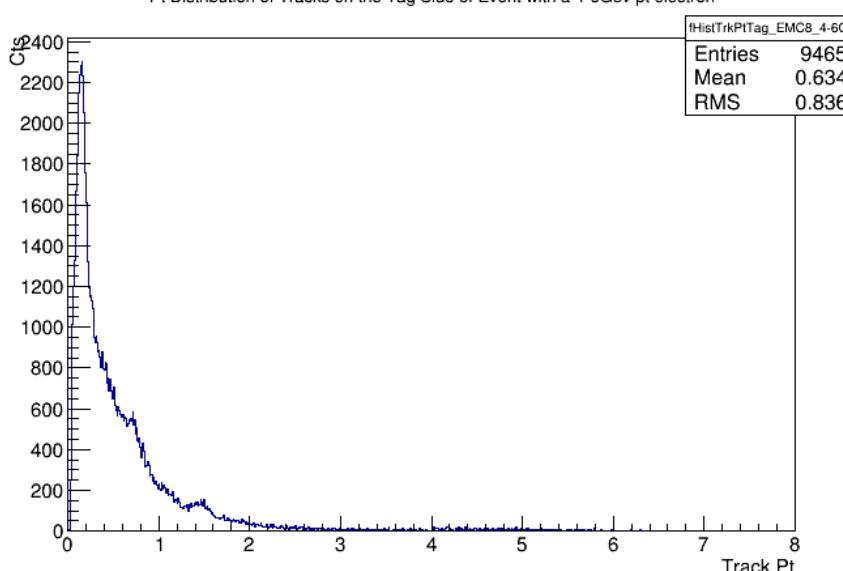
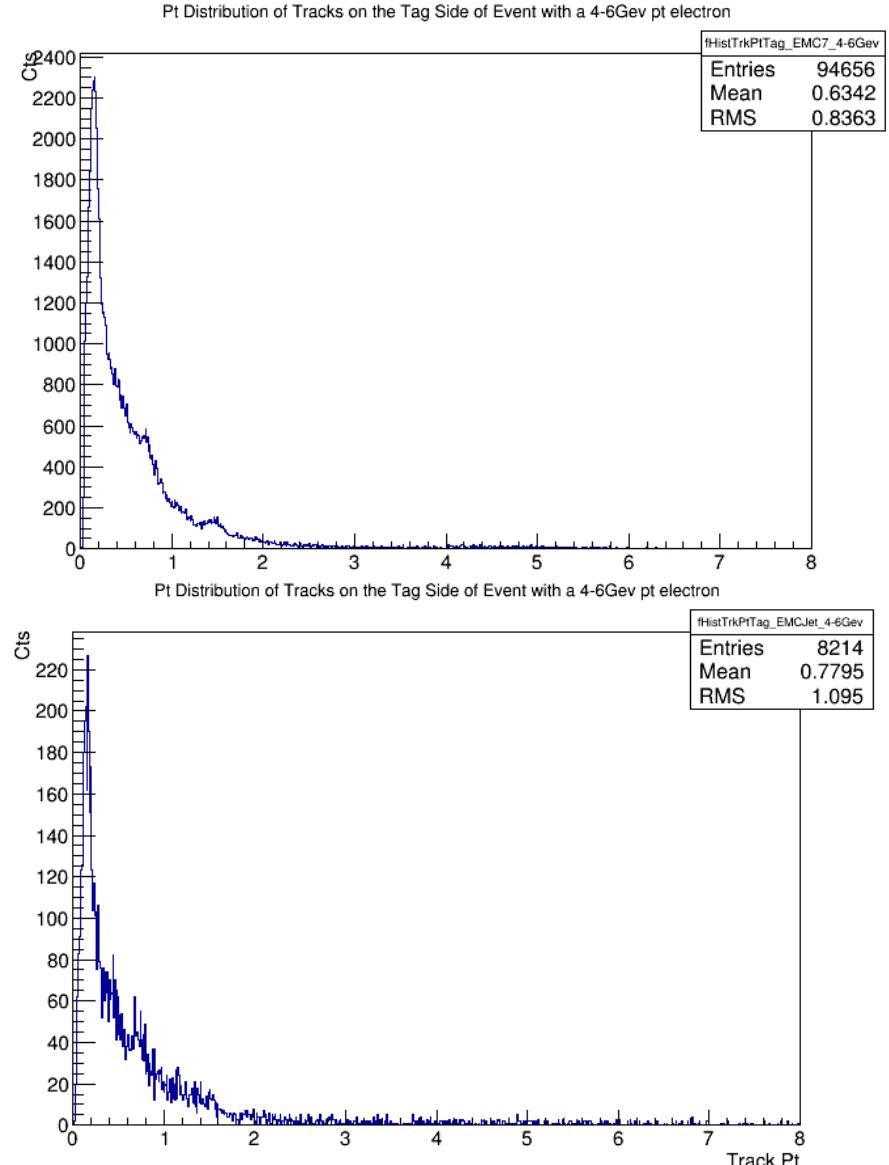
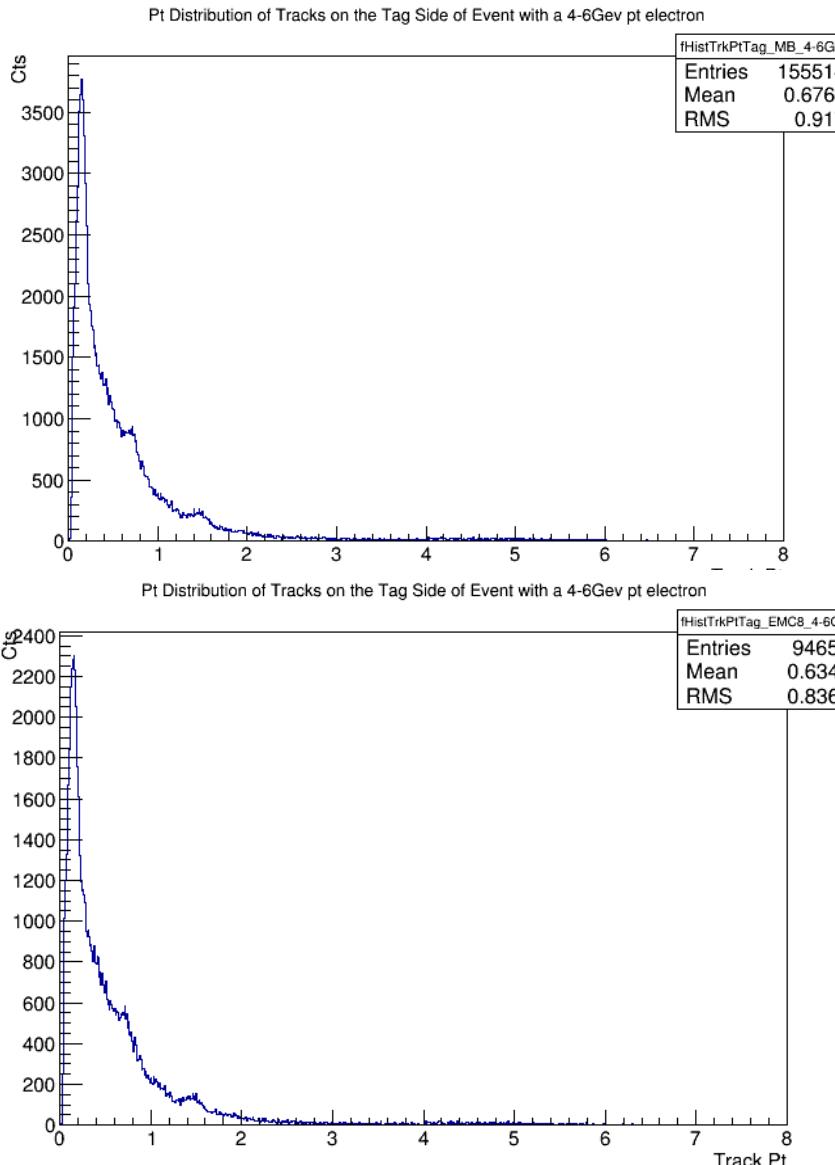


Pt Distribution of Tracks on the Tag Side of Event with a 2-4Gev pt electron



# Track Pt in “tag-side” region

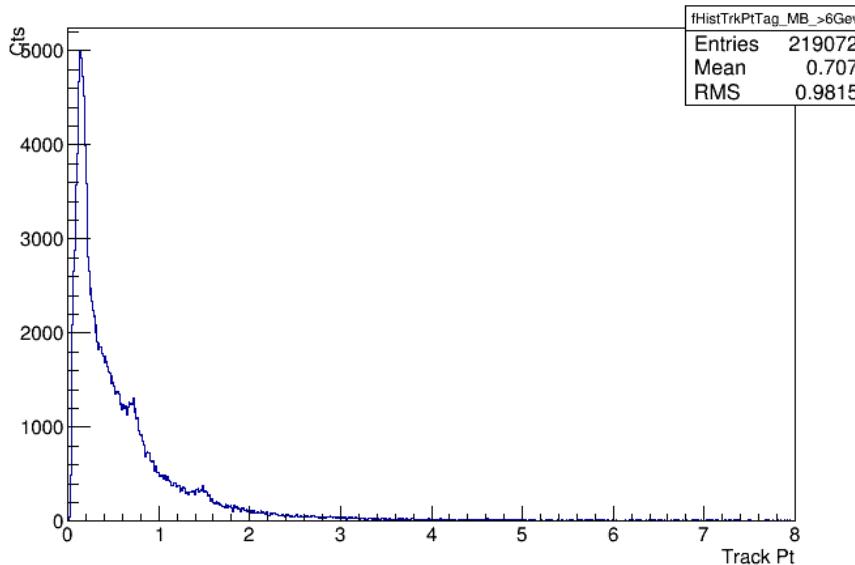
## Cand. Pt 4-6Gev



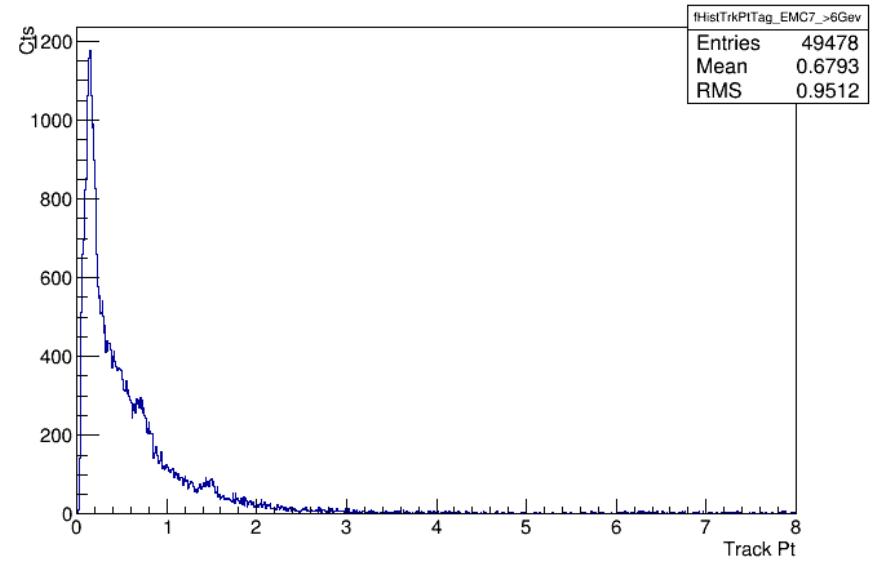
# Track Pt in “tag-side” region

## Cand. Pt >6Gev

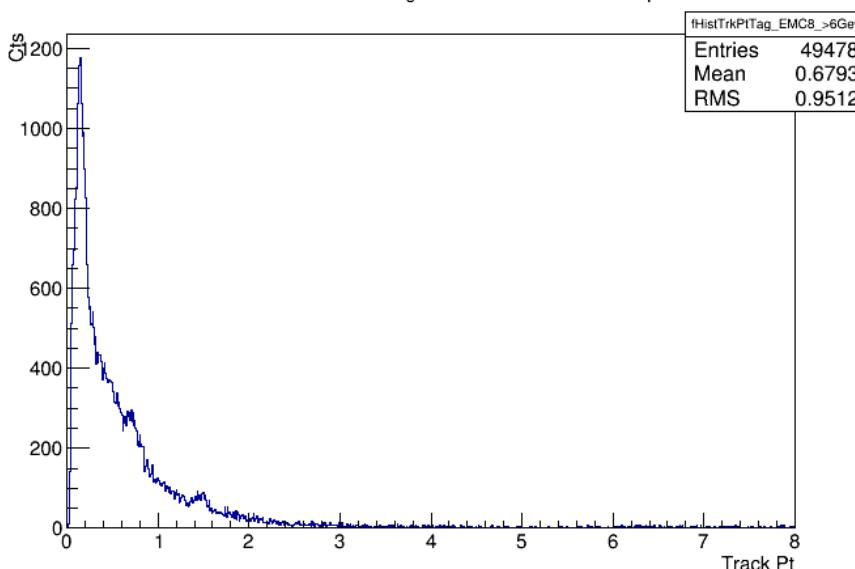
Pt Distribution of Tracks on the Tag Side of Event with a >6Gev pt electron



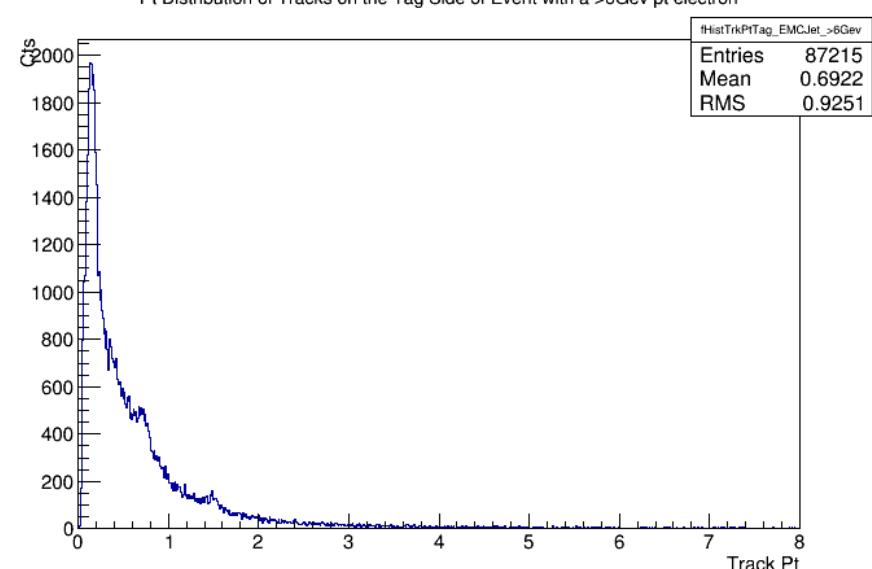
Pt Distribution of Tracks on the Tag Side of Event with a >6Gev pt electron



Pt Distribution of Tracks on the Tag Side of Event with a >6Gev pt electron

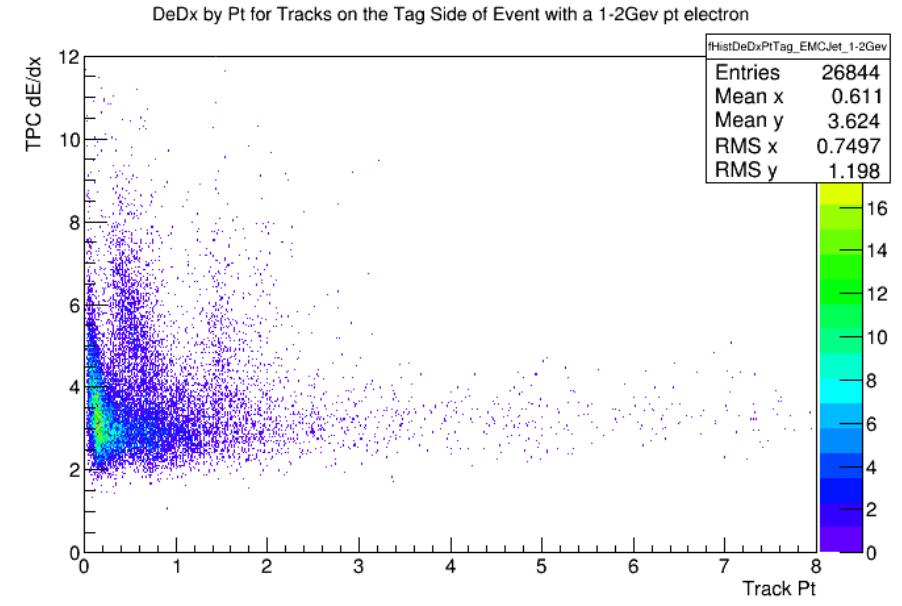
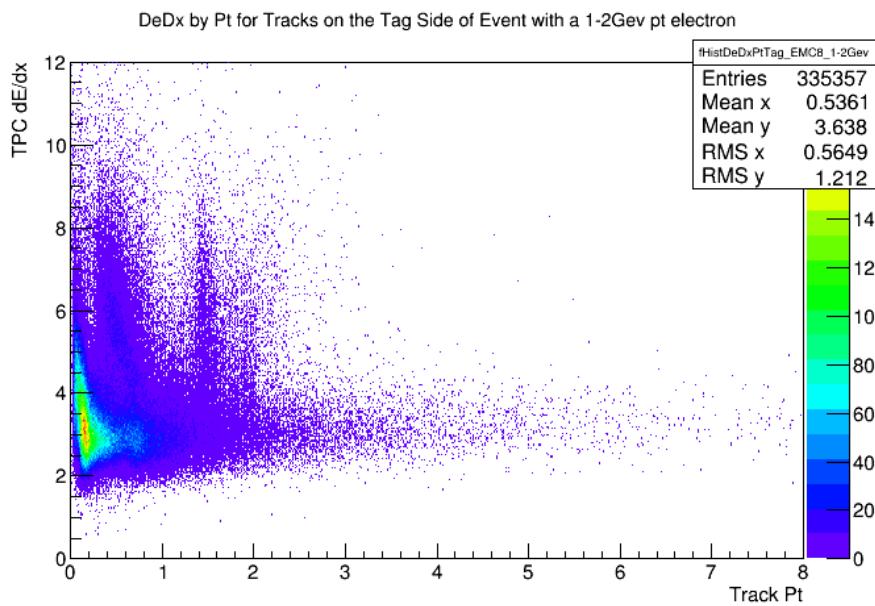
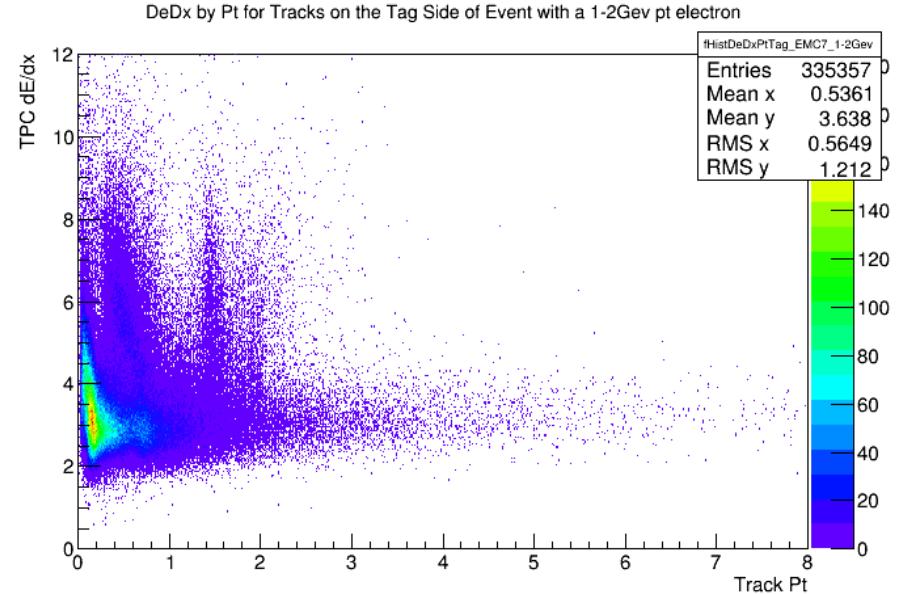
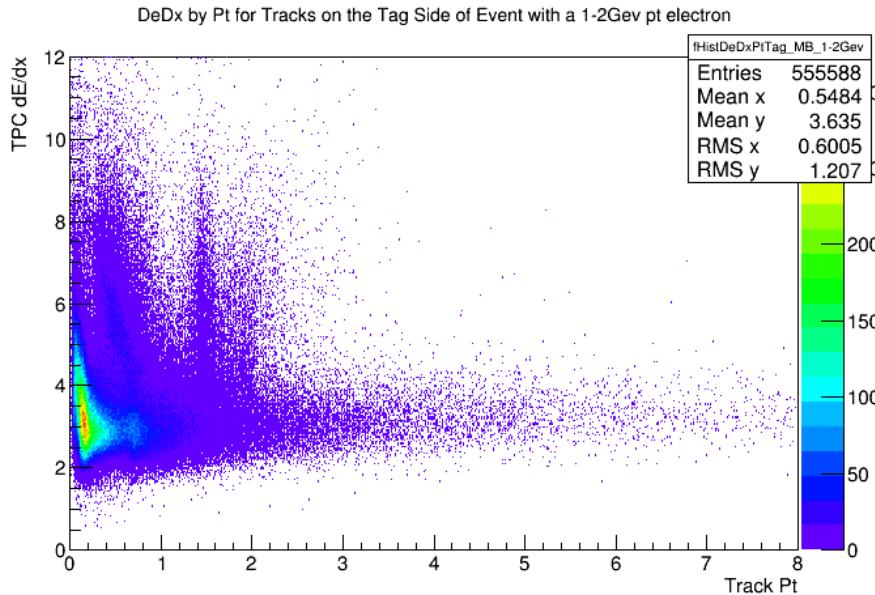


Pt Distribution of Tracks on the Tag Side of Event with a >6Gev pt electron



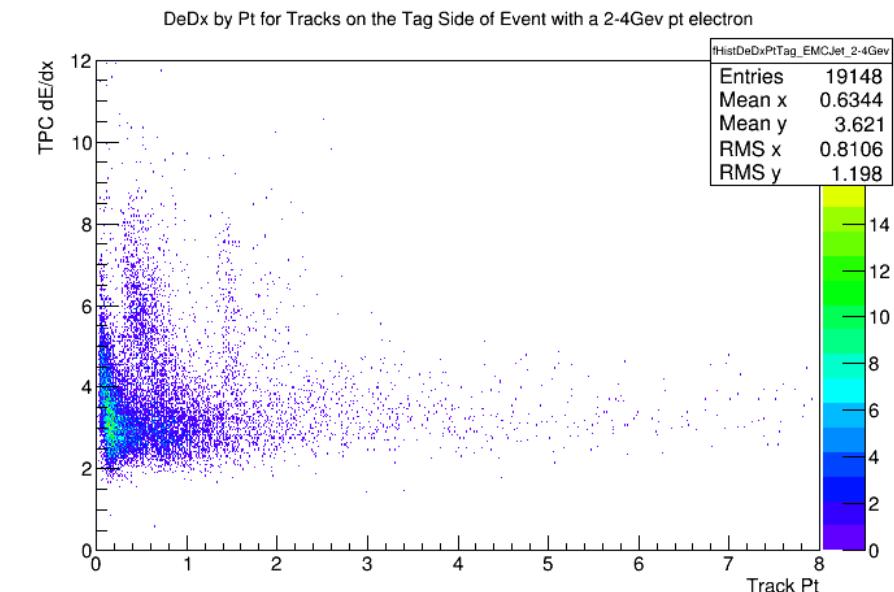
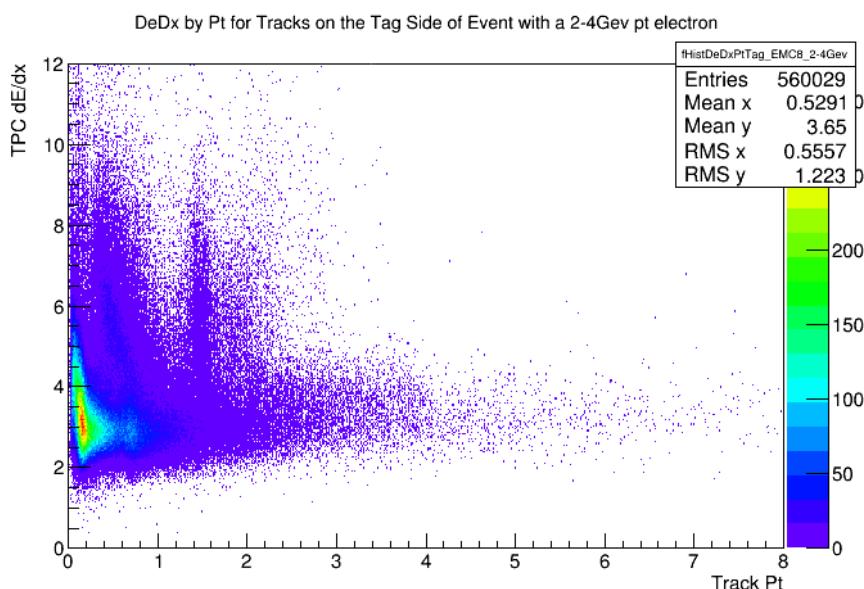
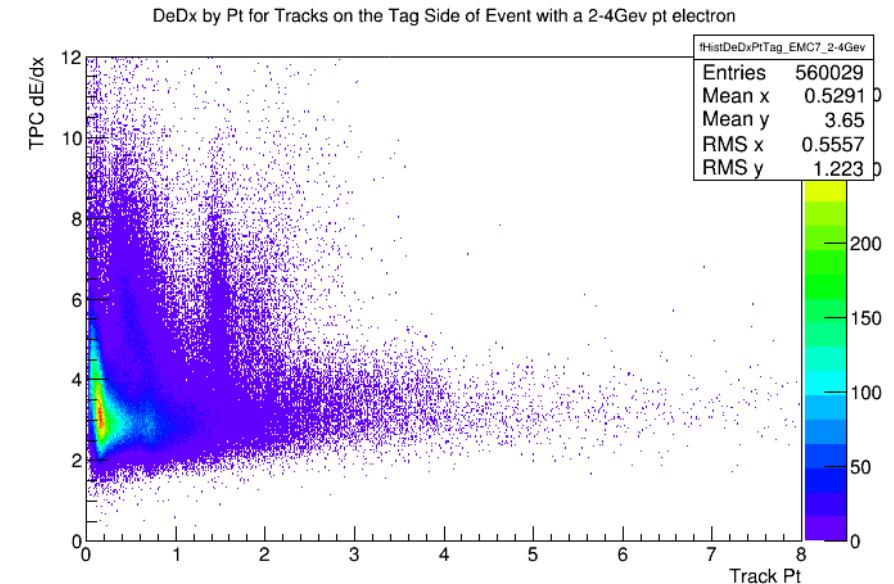
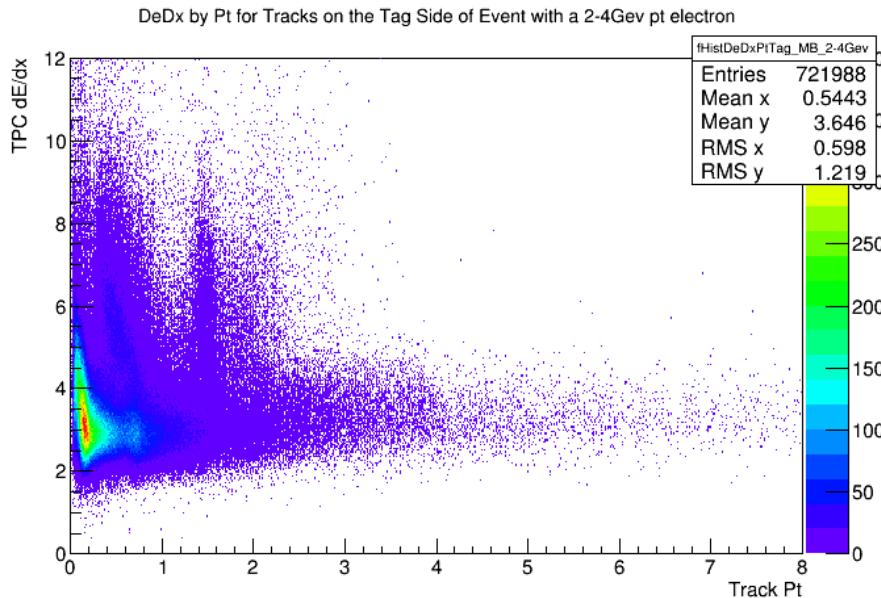
# dEdx by Pt in “tag-side” region

## Cand. Pt 1-2Gev



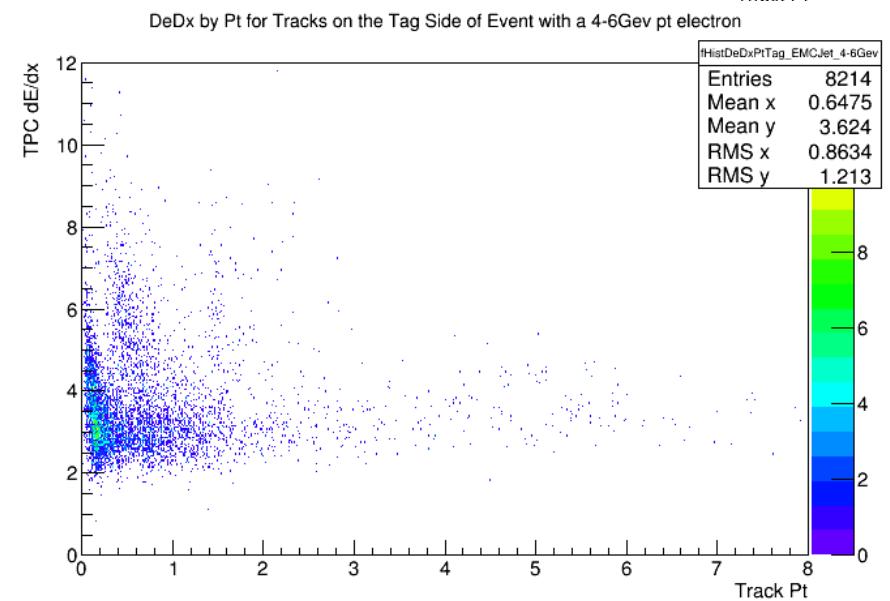
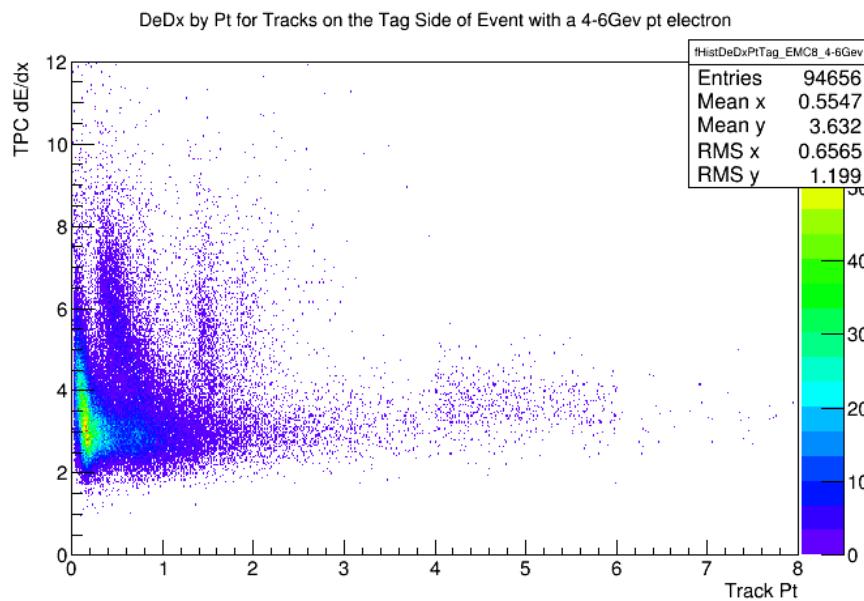
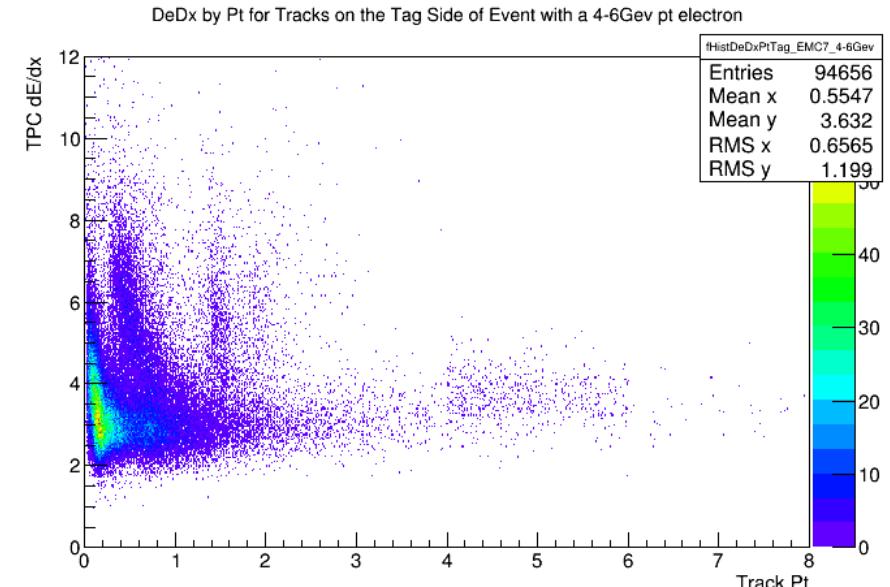
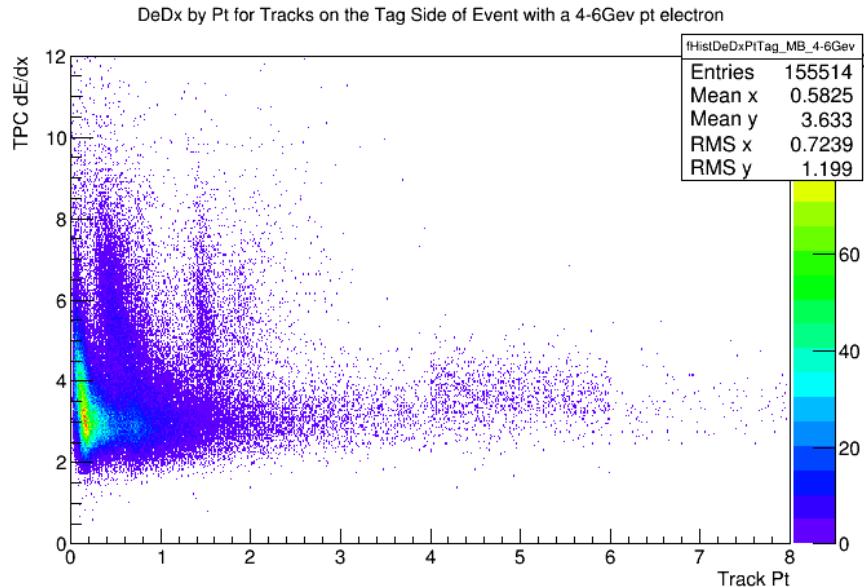
# dEdx by Pt in “tag-side” region

## Cand. Pt 2-4Gev



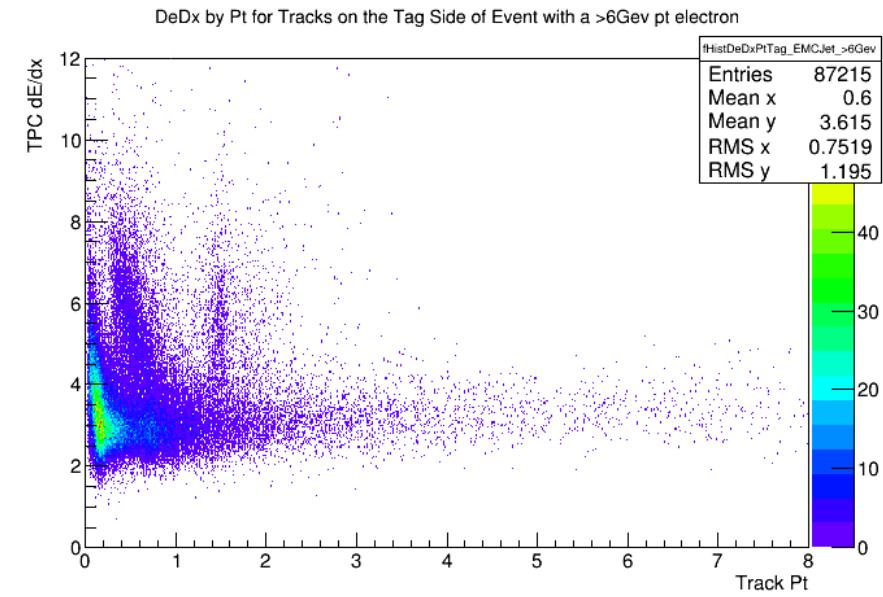
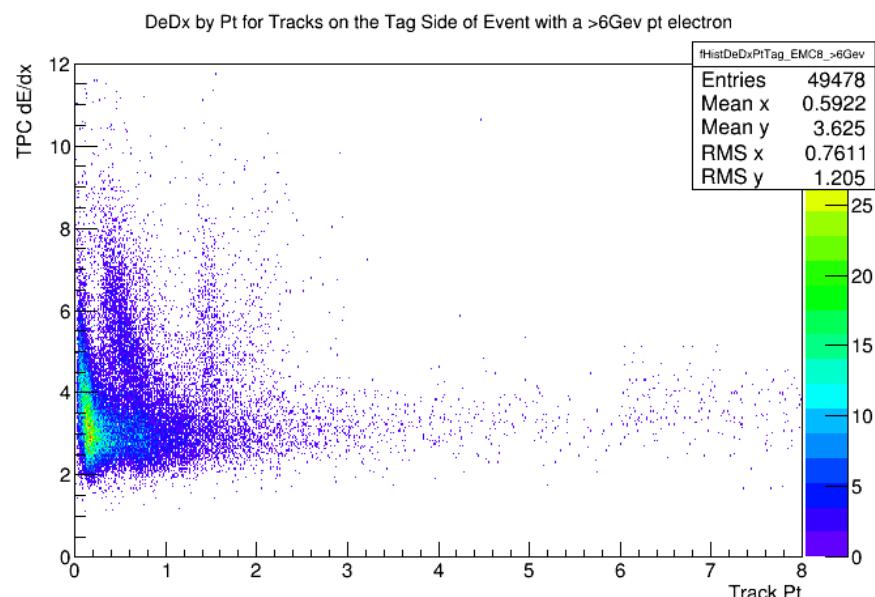
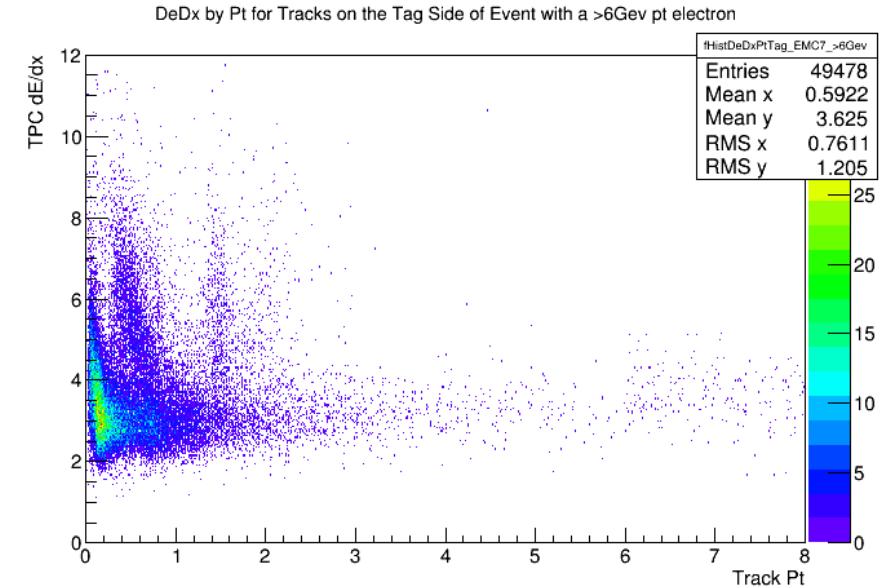
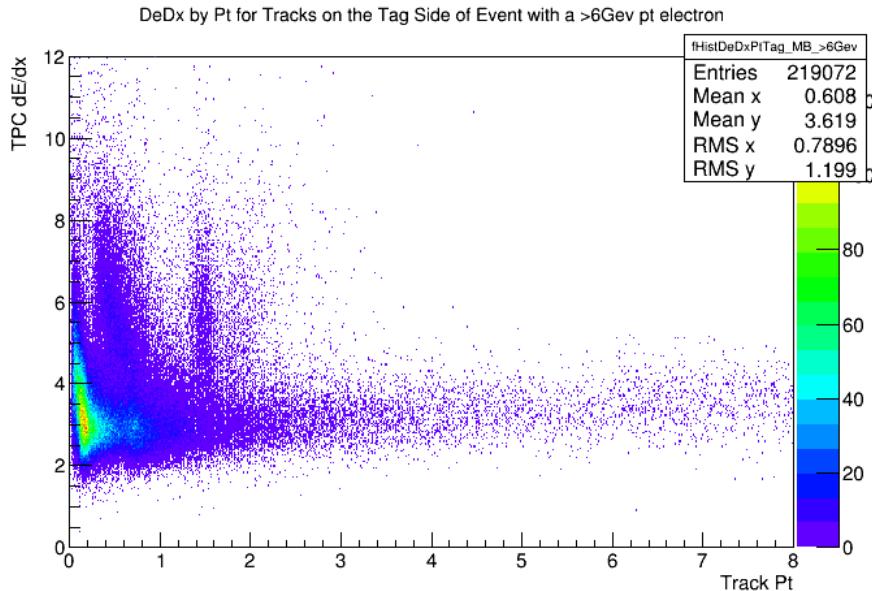
# dEdx by Pt in “tag-side” region

## Cand. Pt 4-6Gev



# dEdx by Pt in “tag-side” region

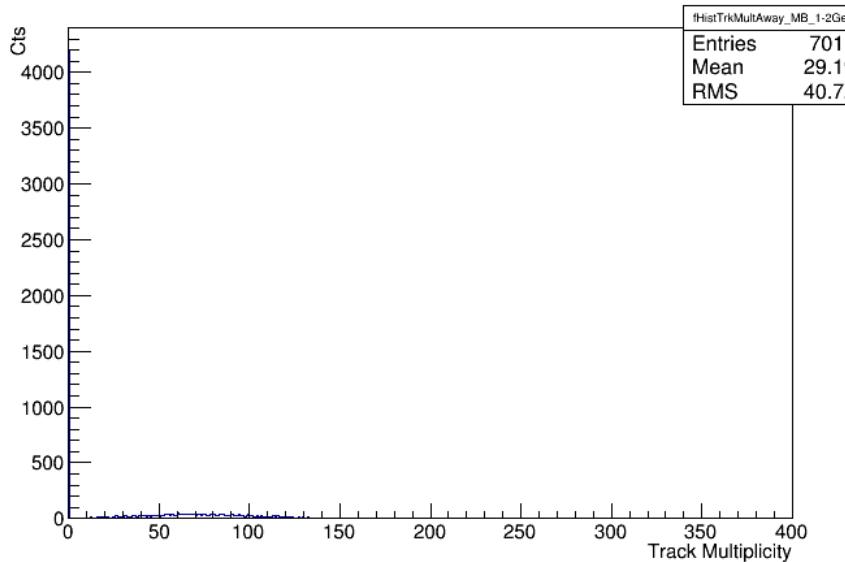
## Cand. Pt >6Gev



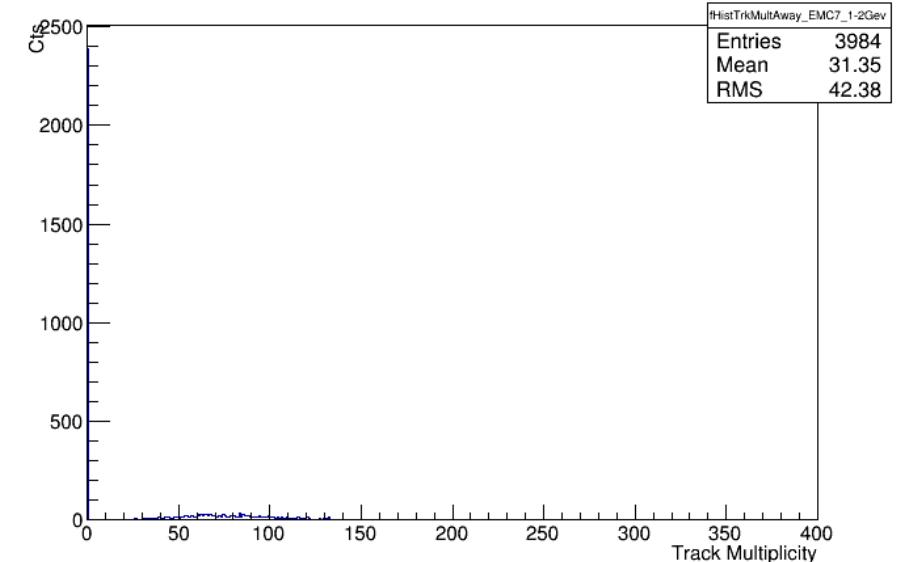
# Track multiplicity in “away-side” region

## Cand. Pt 1-2Gev

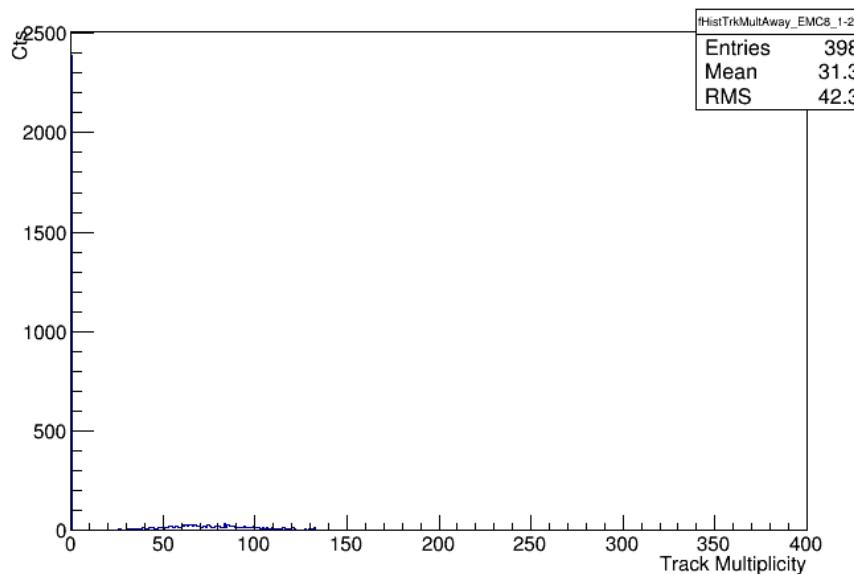
Multiplicity of Tracks on the Away Side of Event with a 1-2Gev pt electron



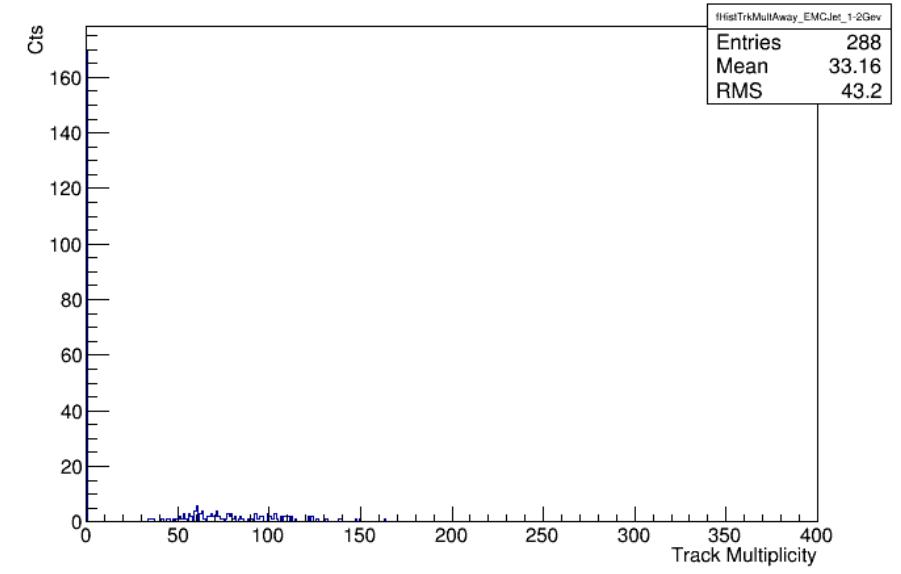
Multiplicity of Tracks on the Away Side of Event with a 1-2Gev pt electron



Multiplicity of Tracks on the Away Side of Event with a 1-2Gev pt electron

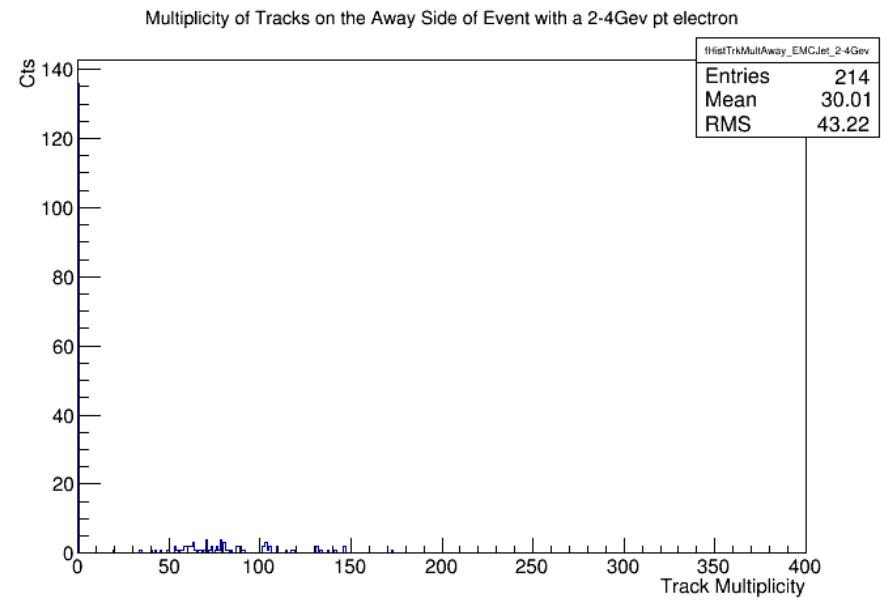
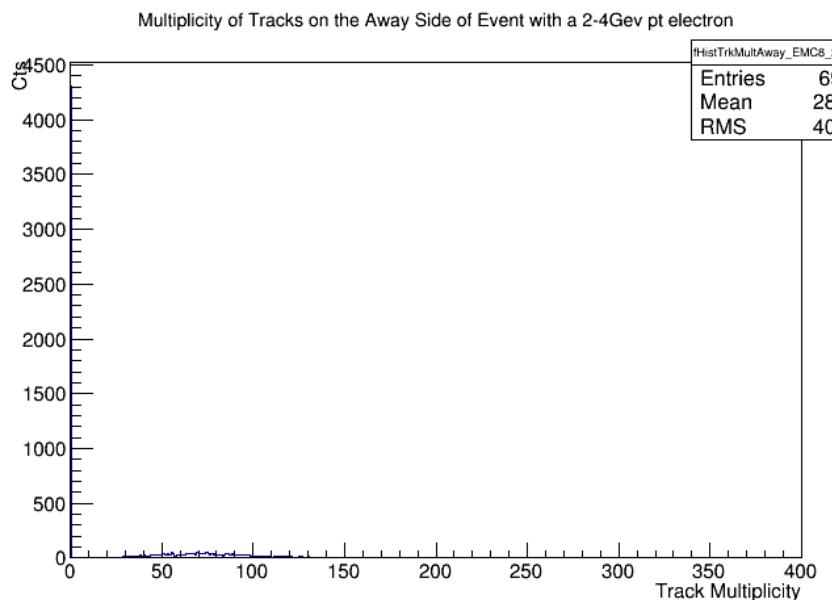
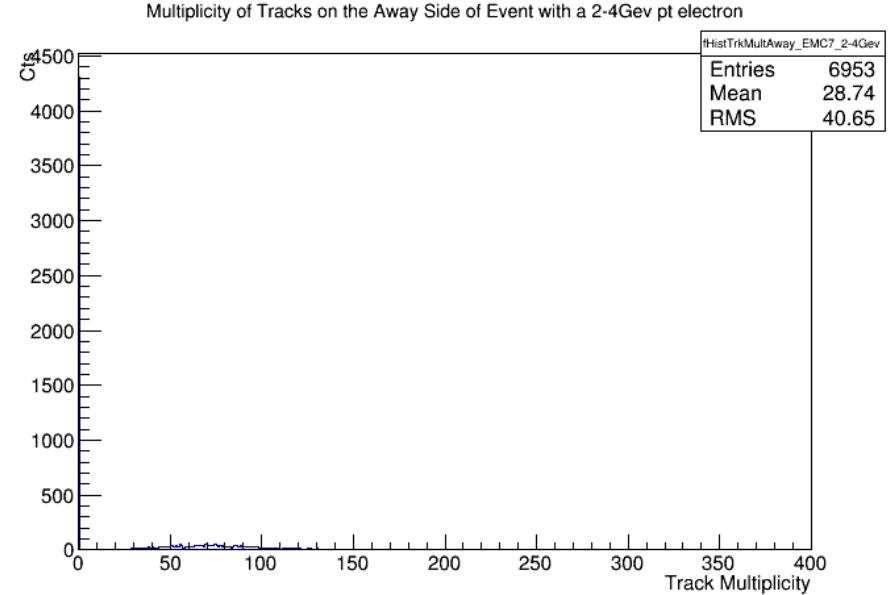
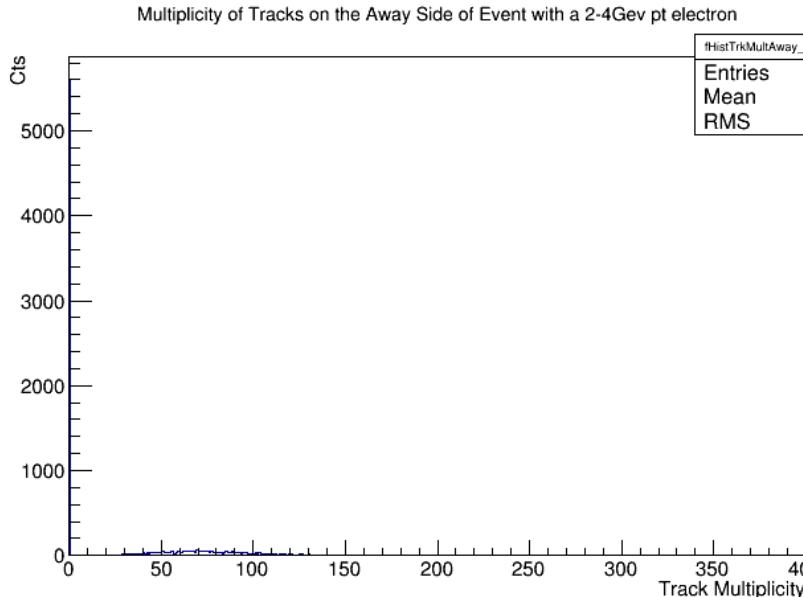


Multiplicity of Tracks on the Away Side of Event with a 1-2Gev pt electron



# Track multiplicity in “away-side” region

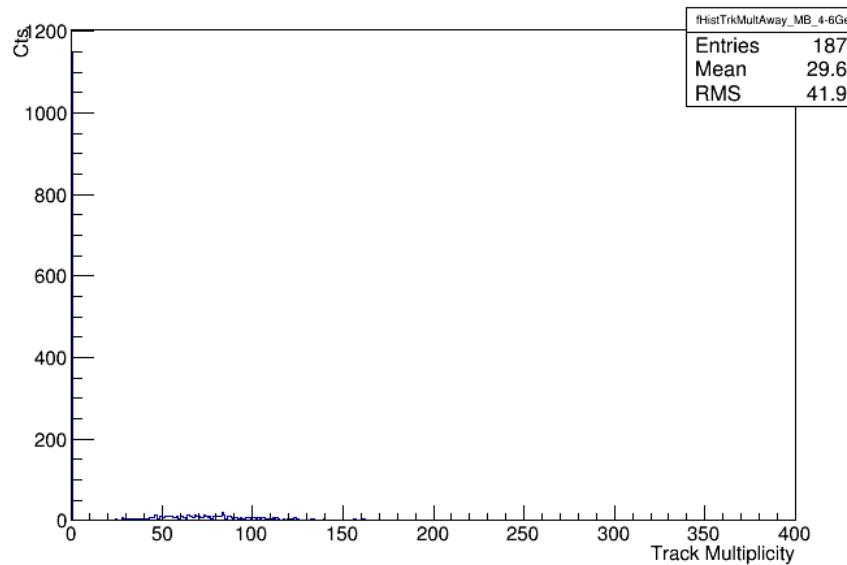
## Cand. Pt 2-4Gev



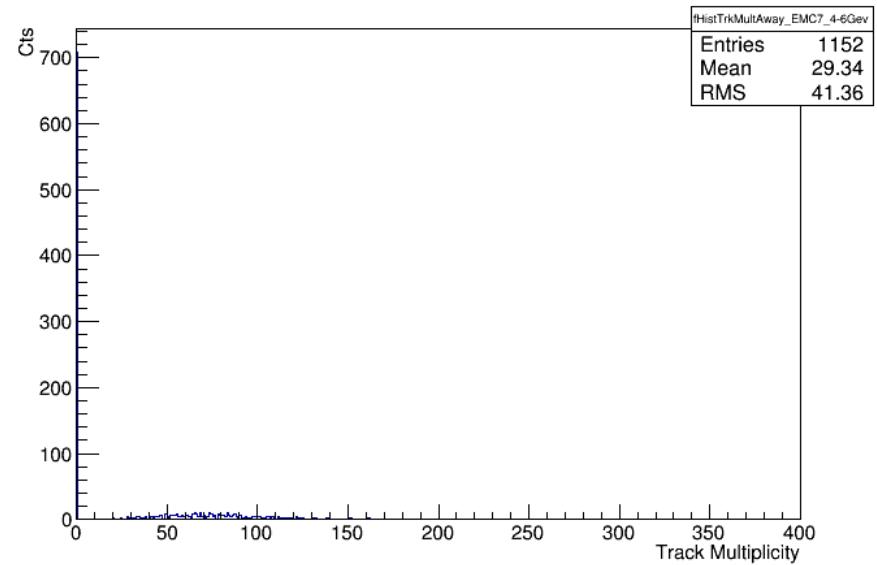
# Track multiplicity in “away-side” region

## Cand. Pt 4-6Gev

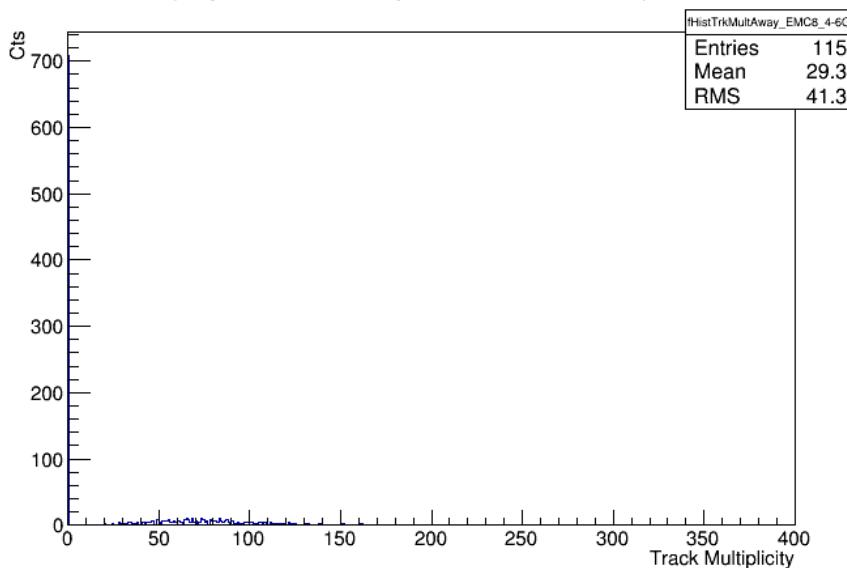
Multiplicity of Tracks on the Away Side of Event with a 4-6Gev pt electron



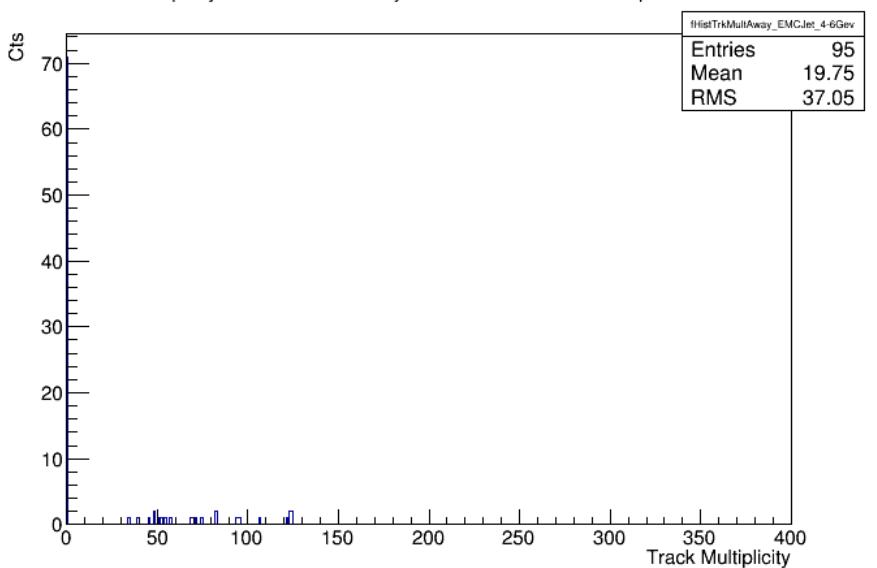
Multiplicity of Tracks on the Away Side of Event with a 4-6Gev pt electron



Multiplicity of Tracks on the Away Side of Event with a 4-6Gev pt electron



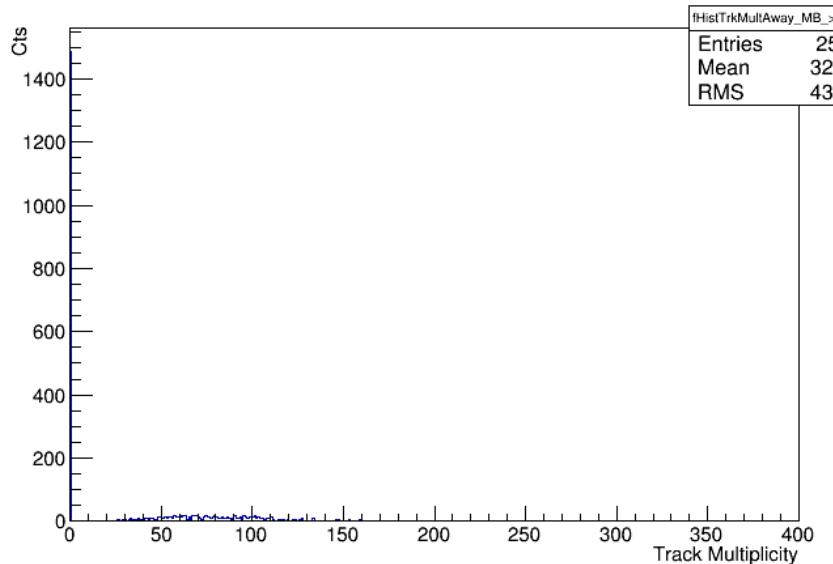
Multiplicity of Tracks on the Away Side of Event with a 4-6Gev pt electron



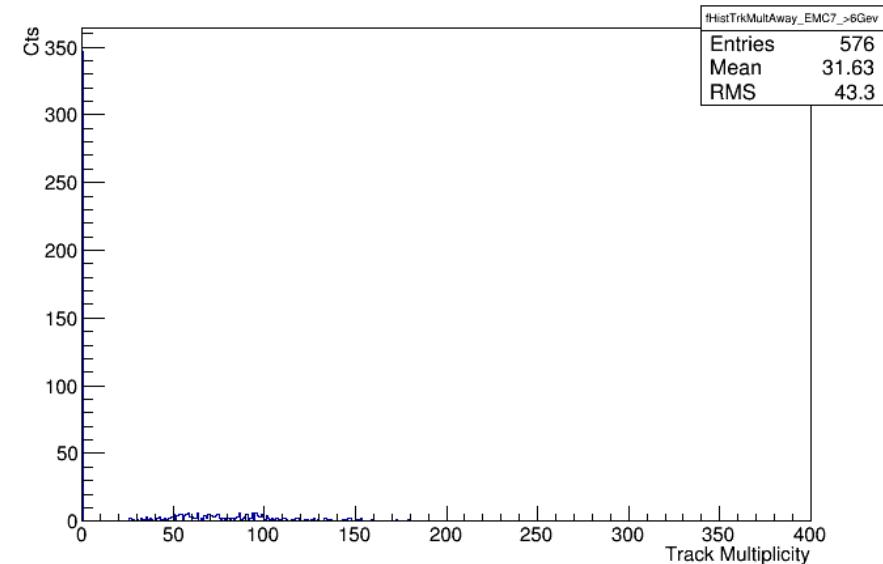
# Track multiplicity in “away-side” region

Cand. Pt >6Gev

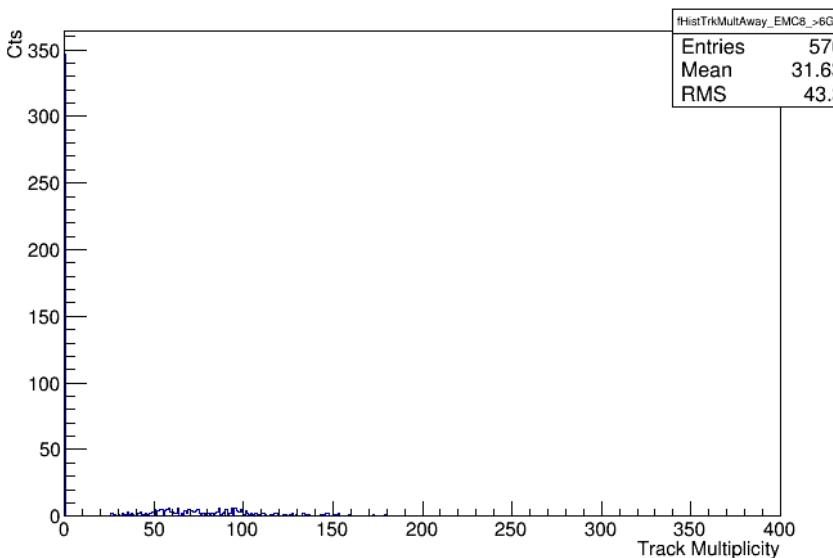
Multiplicity of Tracks on the Away Side of Event with a >6Gev pt electron



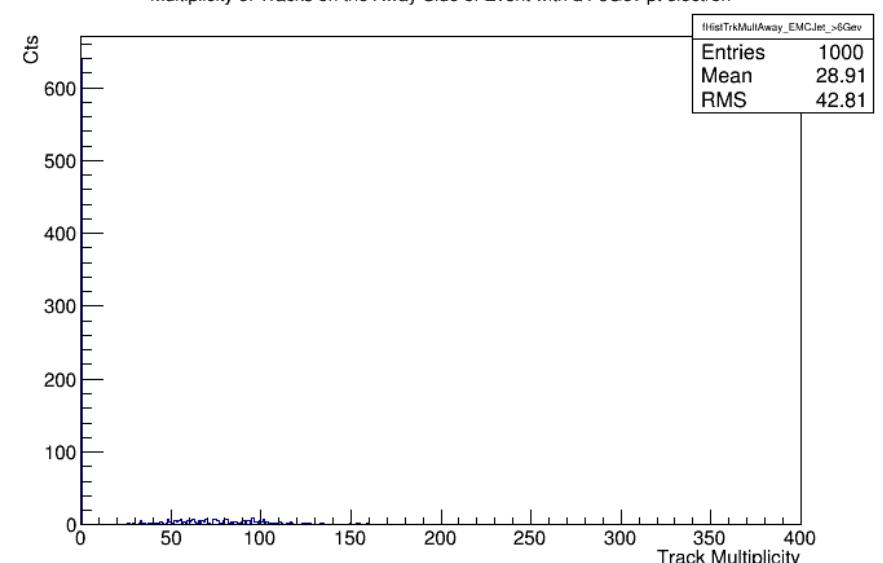
Multiplicity of Tracks on the Away Side of Event with a >6Gev pt electron



Multiplicity of Tracks on the Away Side of Event with a >6Gev pt electron



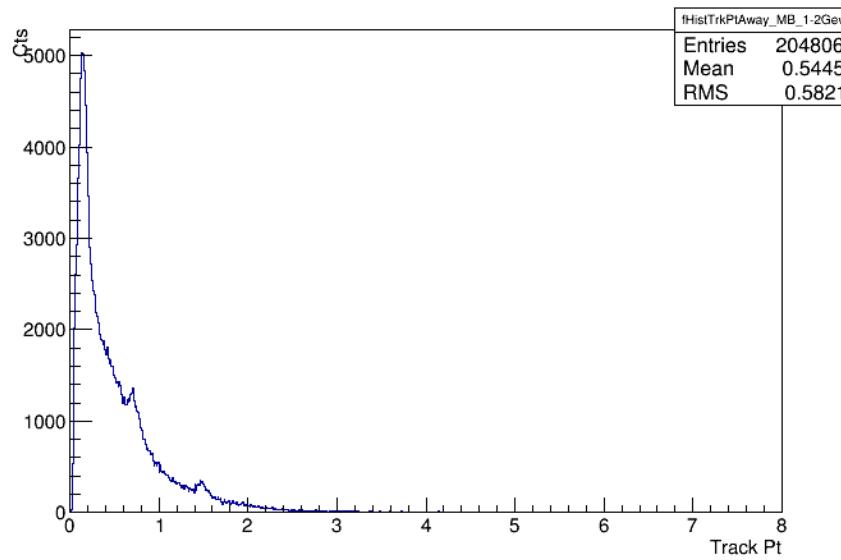
Multiplicity of Tracks on the Away Side of Event with a >6Gev pt electron



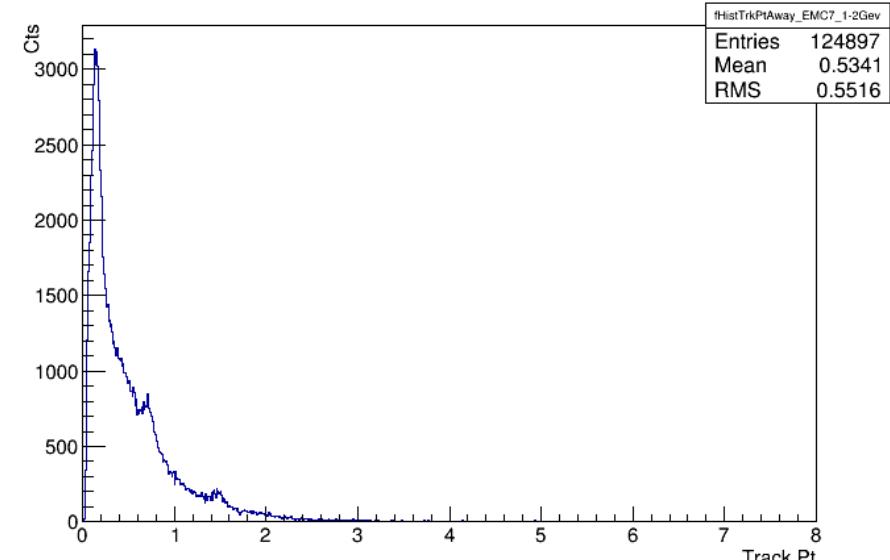
# Track Pt in “away-side” region

## Cand. Pt 1-2Gev

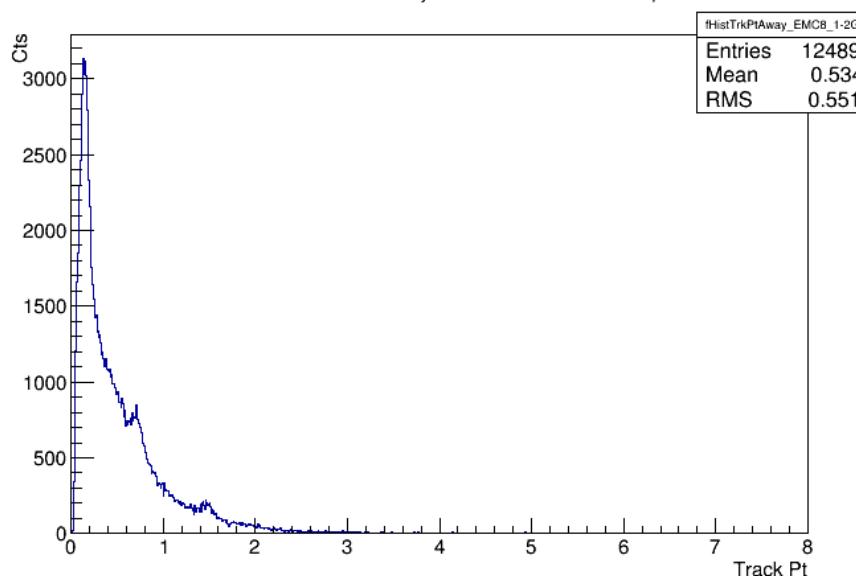
Pt Distribution of Tracks on the Away Side of Event with a 1-2Gev pt electron



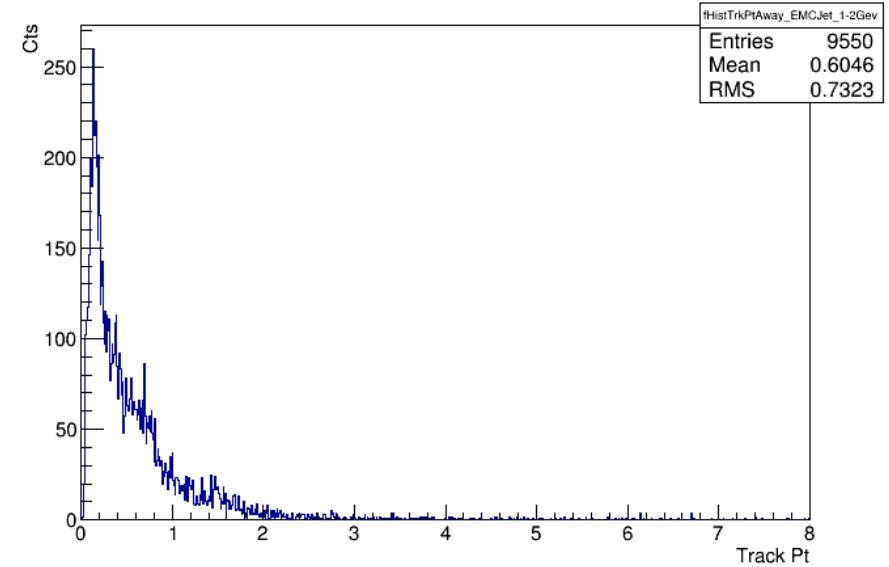
Pt Distribution of Tracks on the Away Side of Event with a 1-2Gev pt electron



Pt Distribution of Tracks on the Away Side of Event with a 1-2Gev pt electron



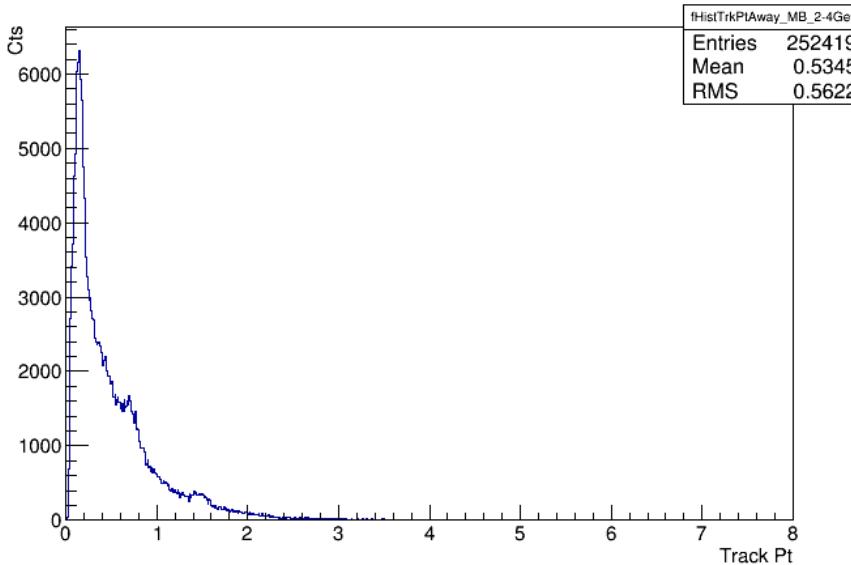
Pt Distribution of Tracks on the Away Side of Event with a 1-2Gev pt electron



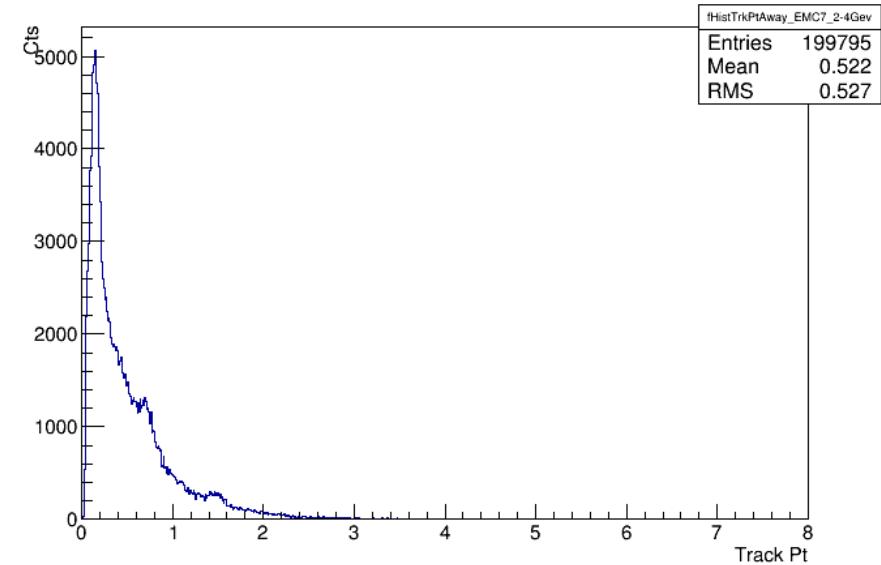
# Track Pt in “away-side” region

## Cand. Pt 2-4Gev

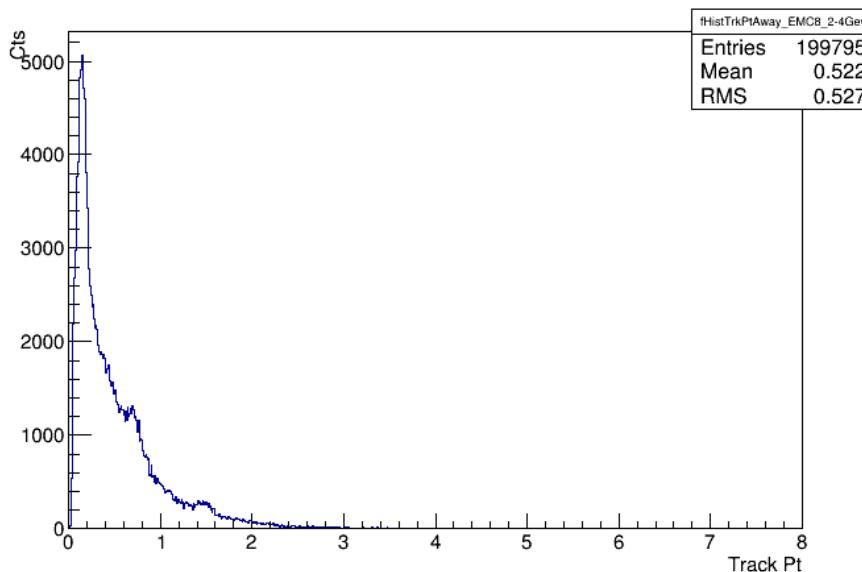
Pt Distribution of Tracks on the Away Side of Event with a 2-4Gev pt electron



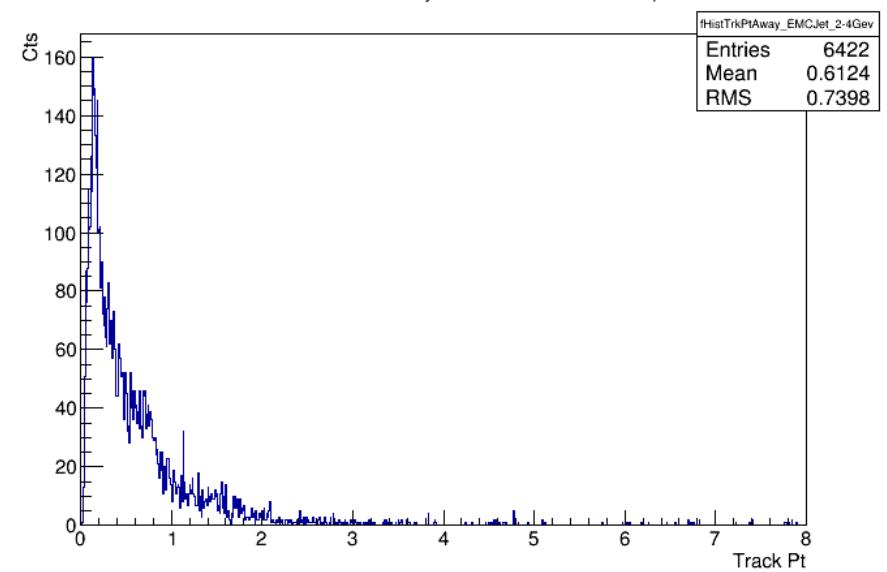
Pt Distribution of Tracks on the Away Side of Event with a 2-4Gev pt electron



Pt Distribution of Tracks on the Away Side of Event with a 2-4Gev pt electron



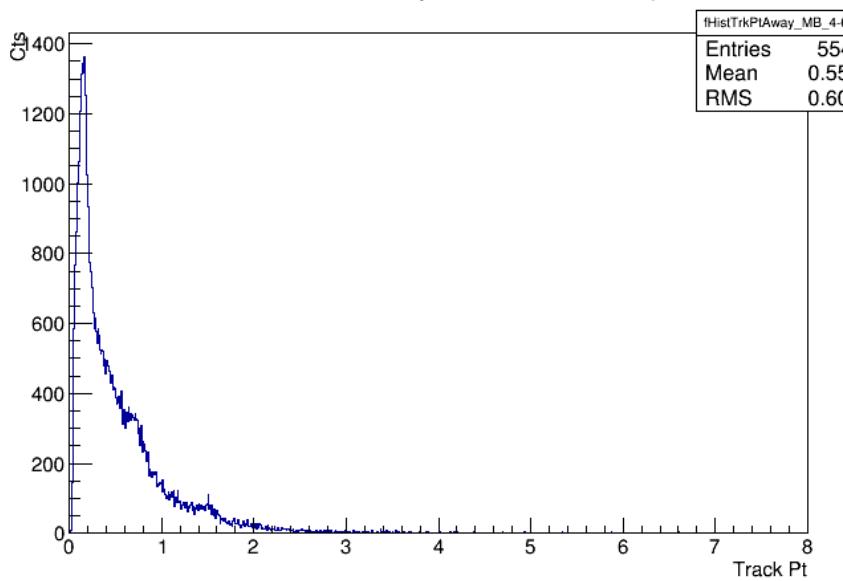
Pt Distribution of Tracks on the Away Side of Event with a 2-4Gev pt electron



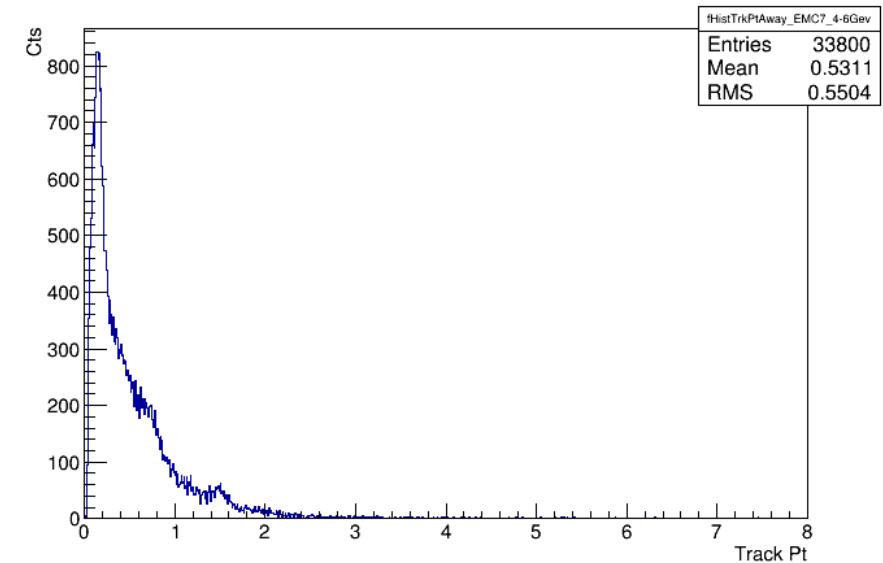
# Track Pt in “away-side” region

## Cand. Pt 4-6Gev

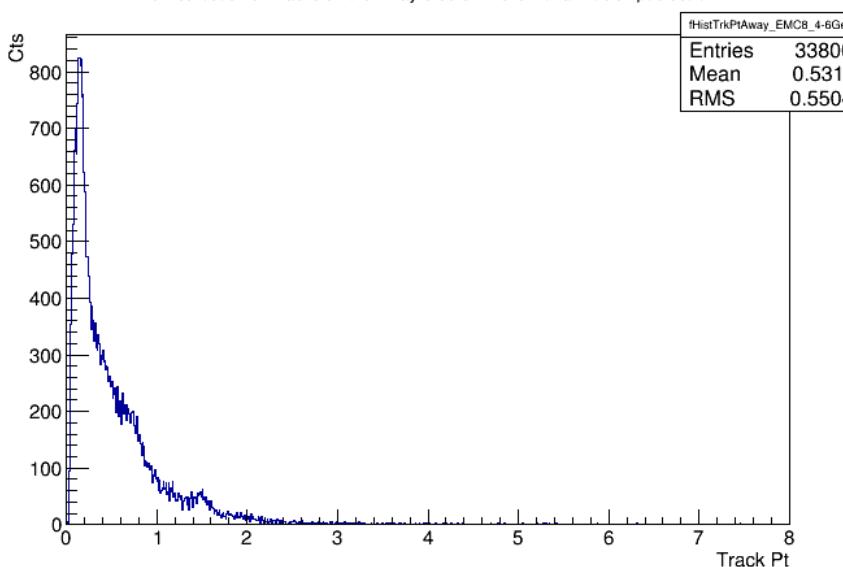
Pt Distribution of Tracks on the Away Side of Event with a 4-6Gev pt electron



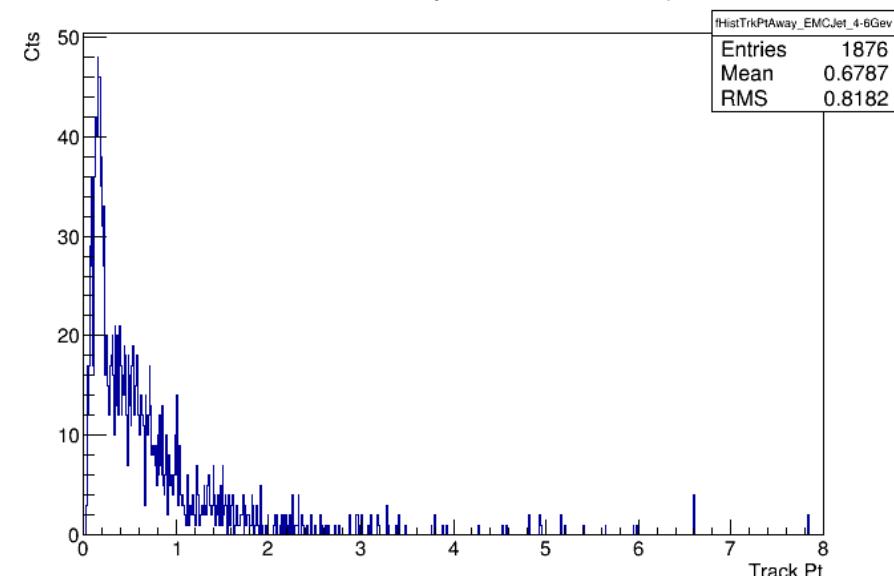
Pt Distribution of Tracks on the Away Side of Event with a 4-6Gev pt electron



Pt Distribution of Tracks on the Away Side of Event with a 4-6Gev pt electron



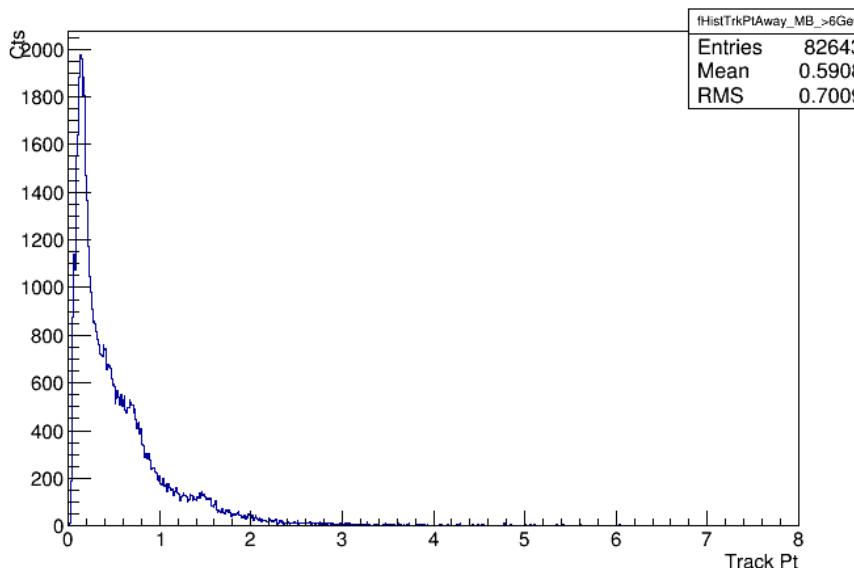
Pt Distribution of Tracks on the Away Side of Event with a 4-6Gev pt electron



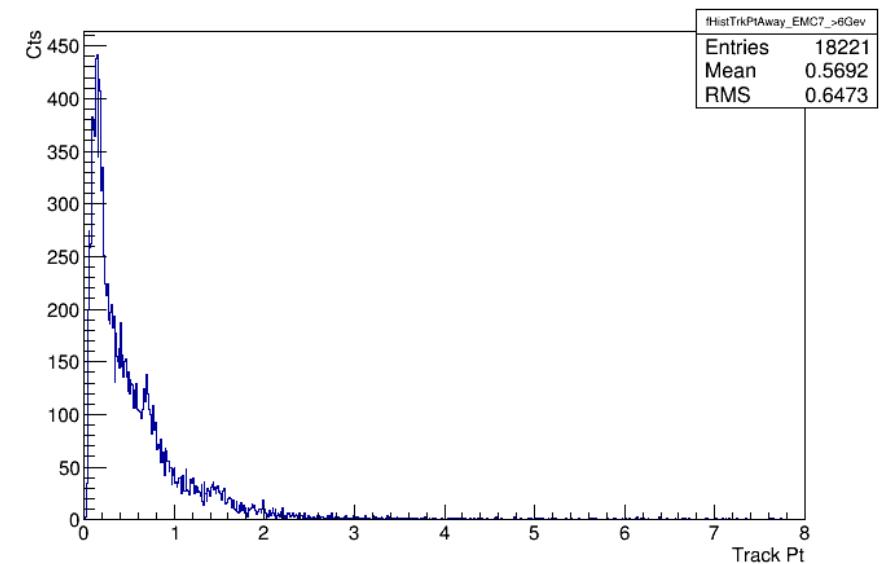
# Track Pt in “away-side” region

## Cand. Pt >6Gev

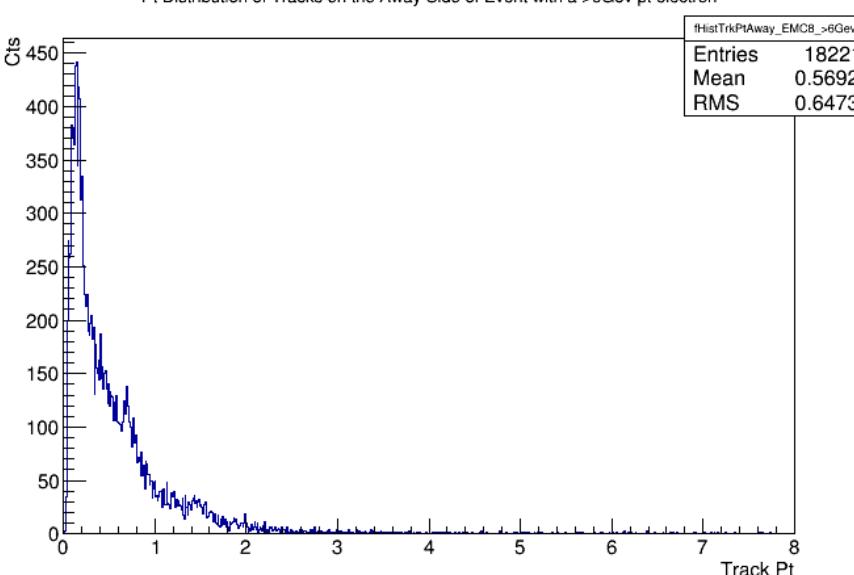
Pt Distribution of Tracks on the Away Side of Event with a >6Gev pt electron



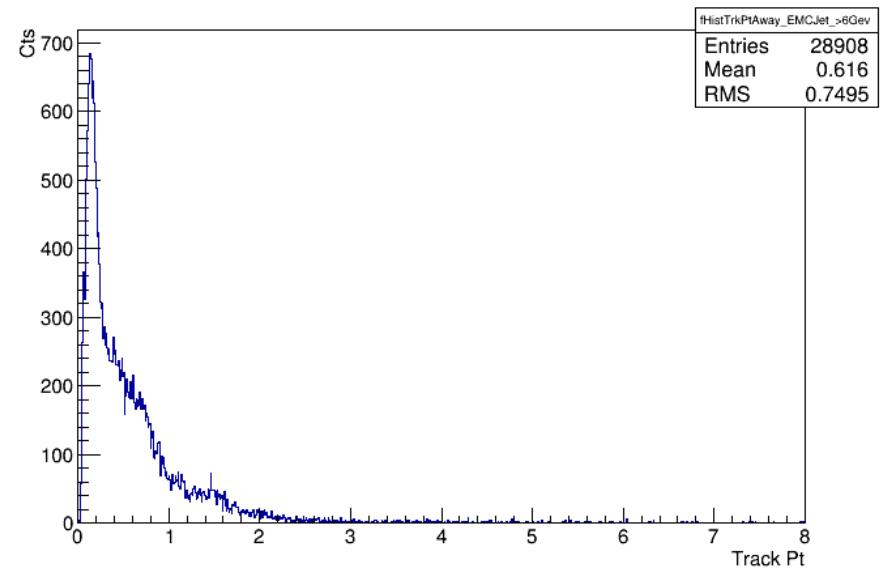
Pt Distribution of Tracks on the Away Side of Event with a >6Gev pt electron



Pt Distribution of Tracks on the Away Side of Event with a >6Gev pt electron

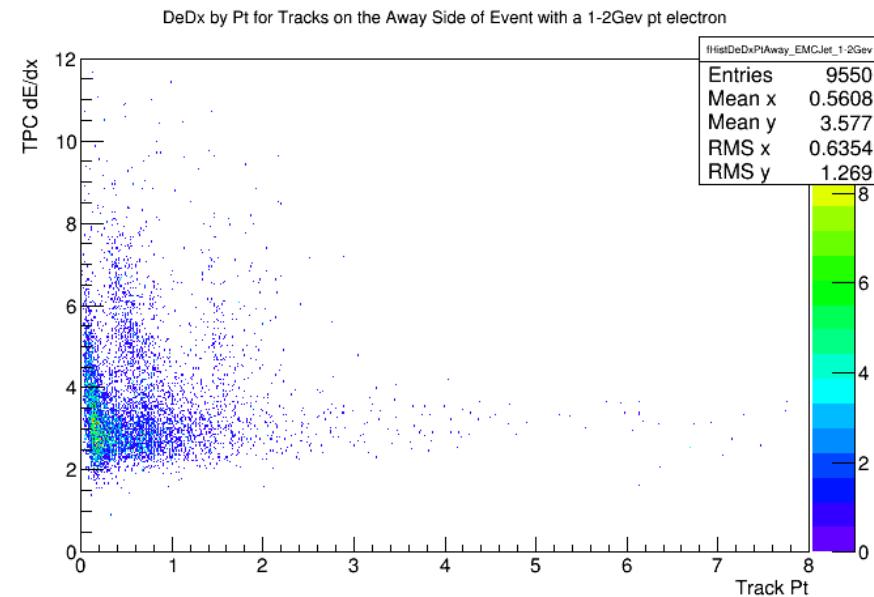
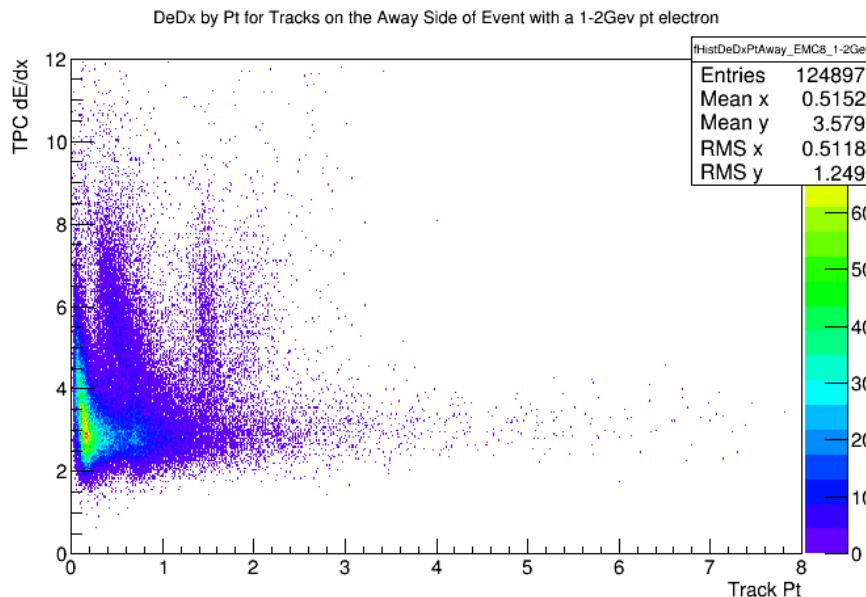
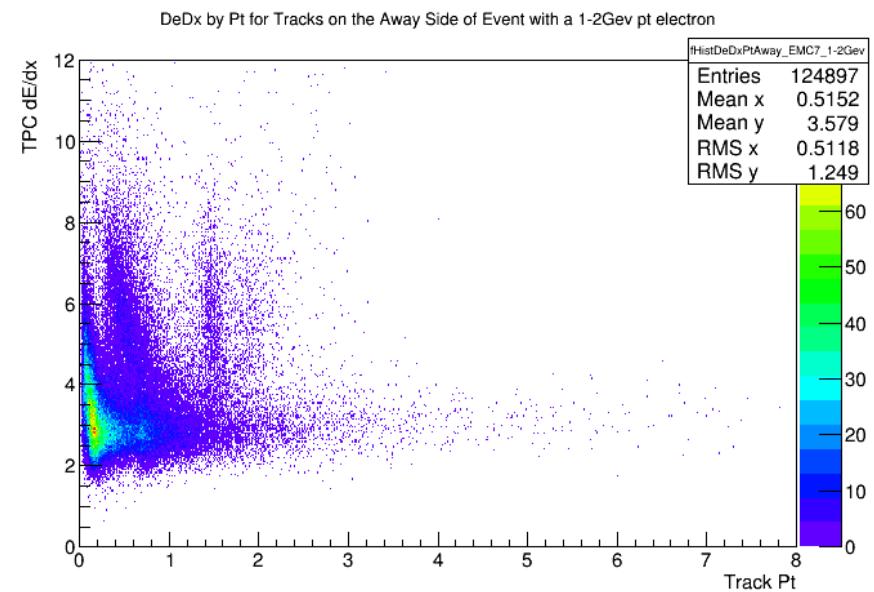
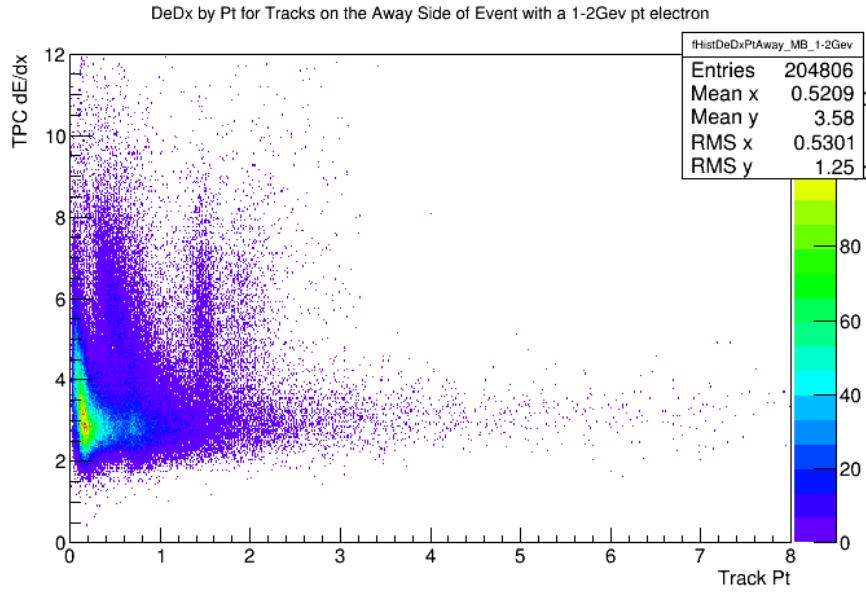


Pt Distribution of Tracks on the Away Side of Event with a >6Gev pt electron



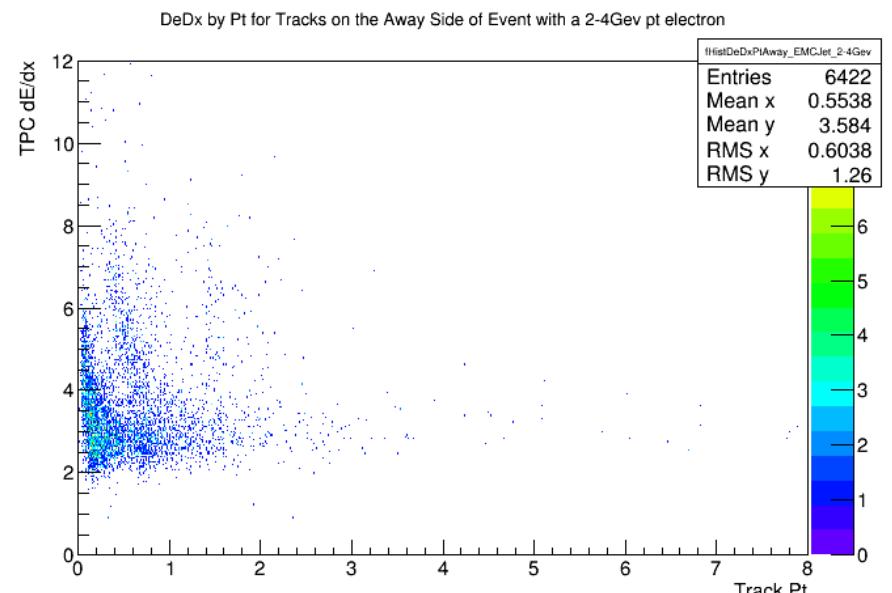
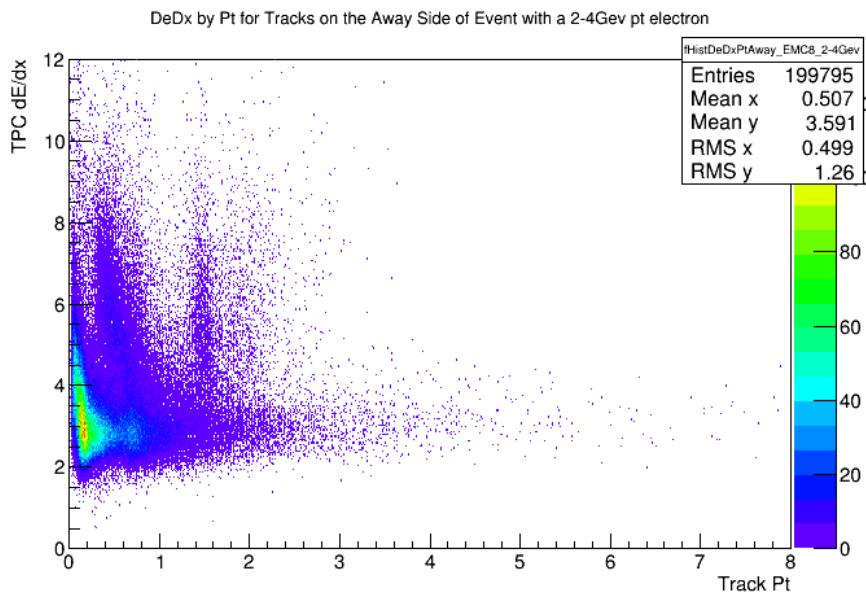
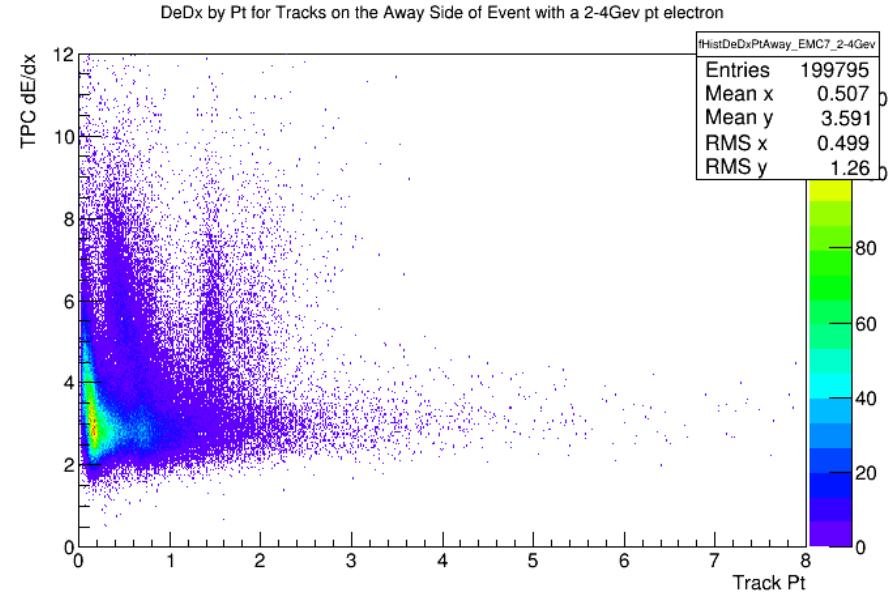
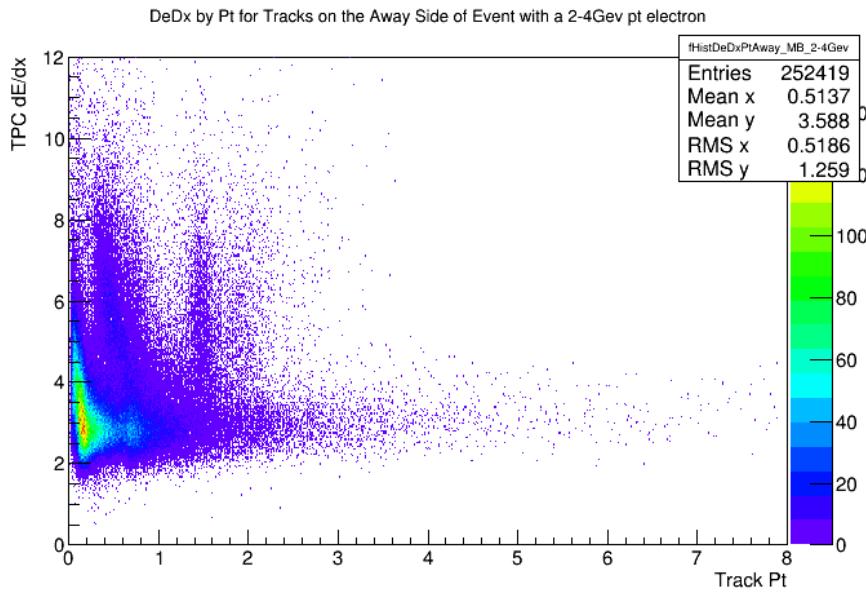
# dEdx by Pt in “away-side” region

## Cand. Pt 1-2Gev



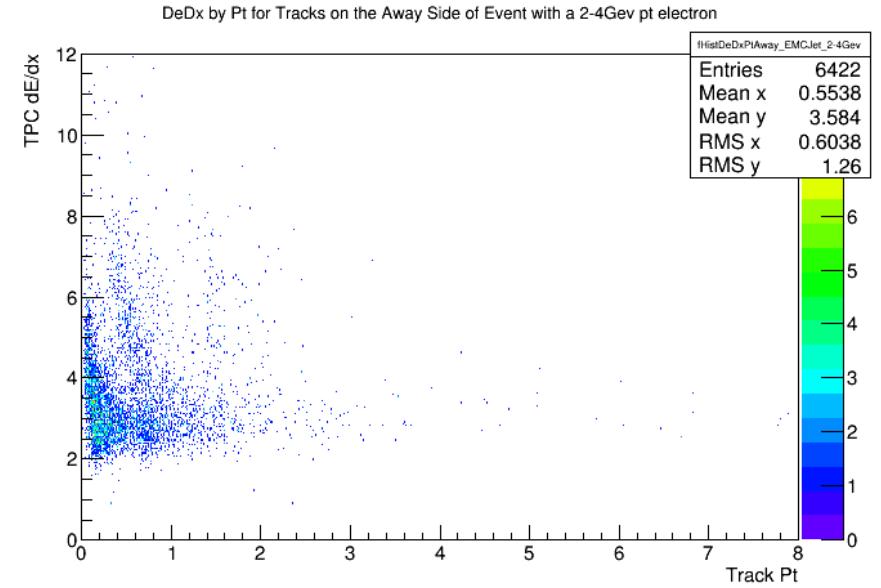
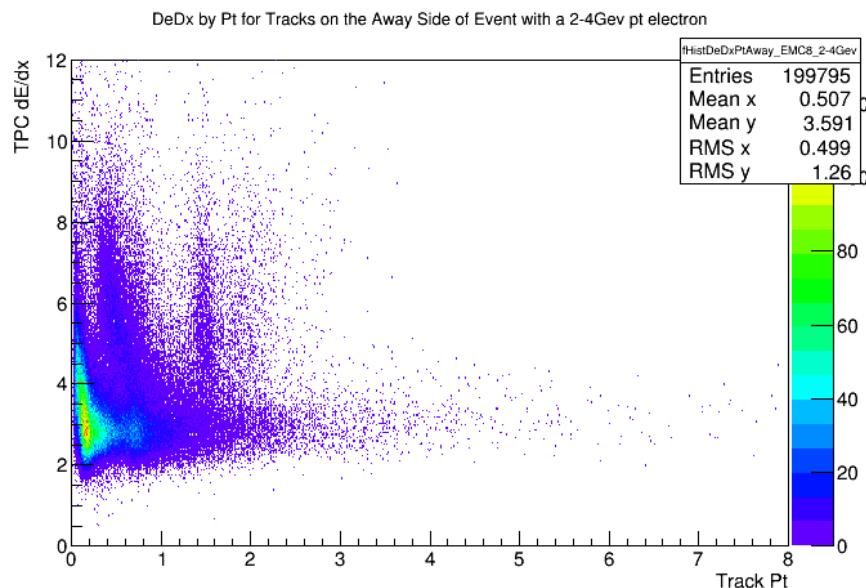
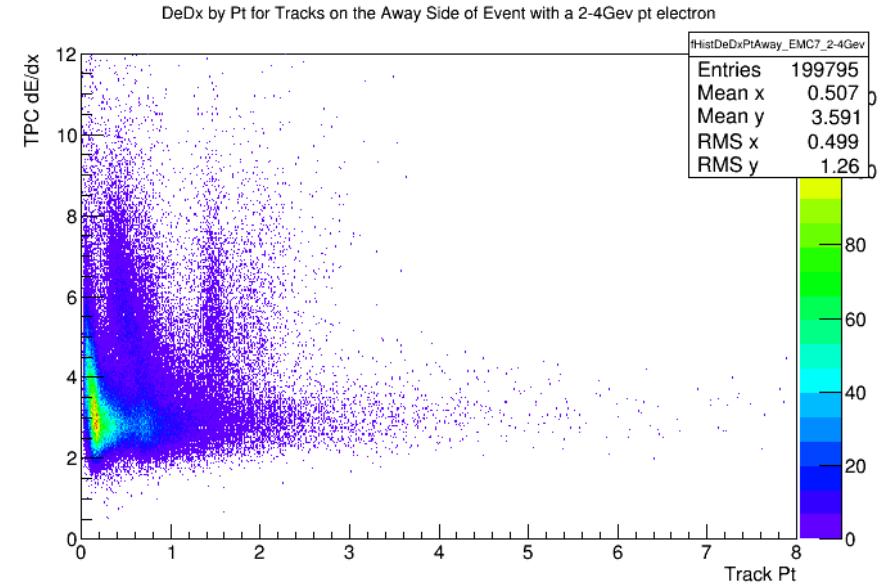
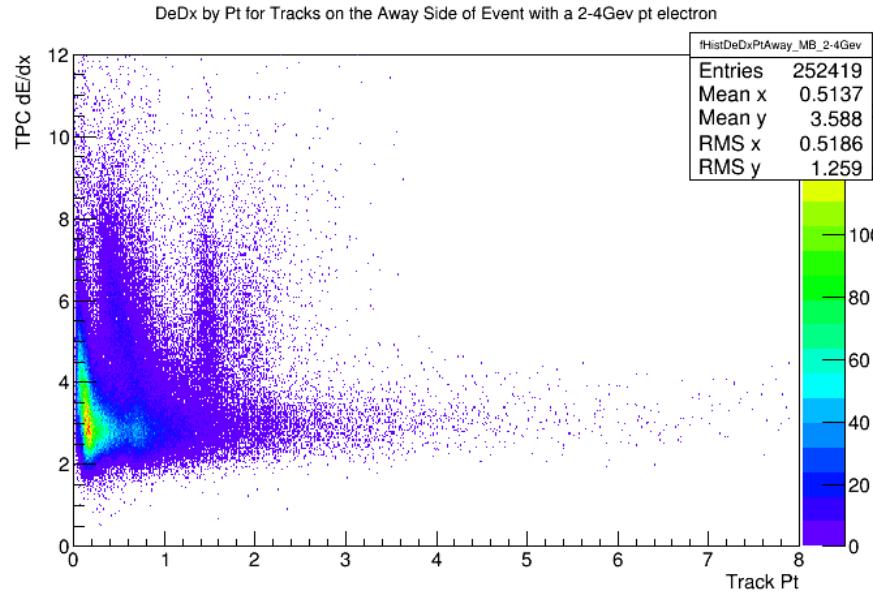
# dEdx by Pt in “away-side” region

## Cand. Pt 2-4Gev



# dEdx by Pt in “away-side” region

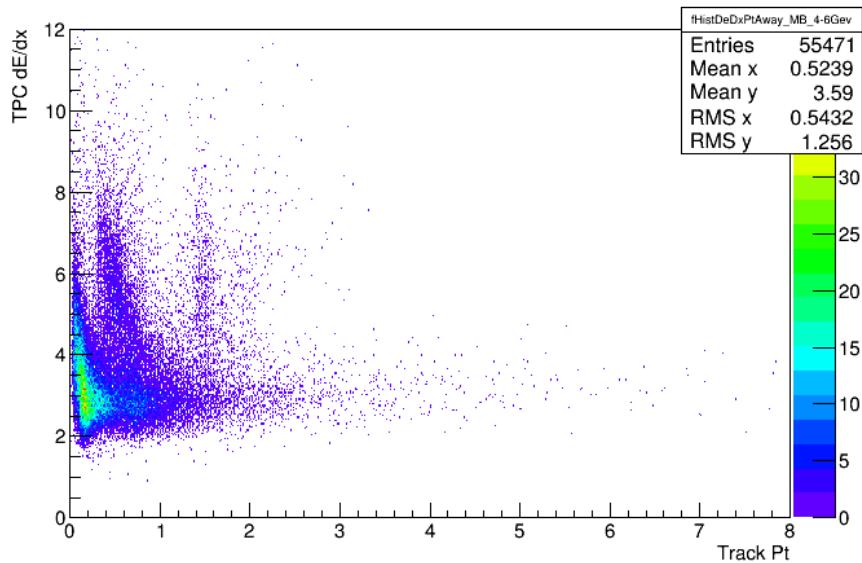
## Cand. Pt 2-4Gev



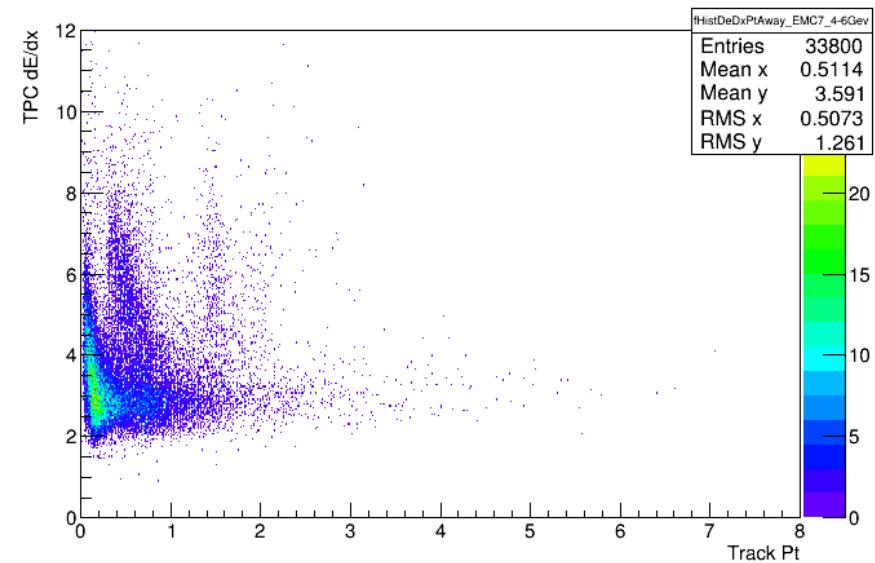
# dEdx by Pt in “away-side” region

## Cand. Pt 4-6Gev

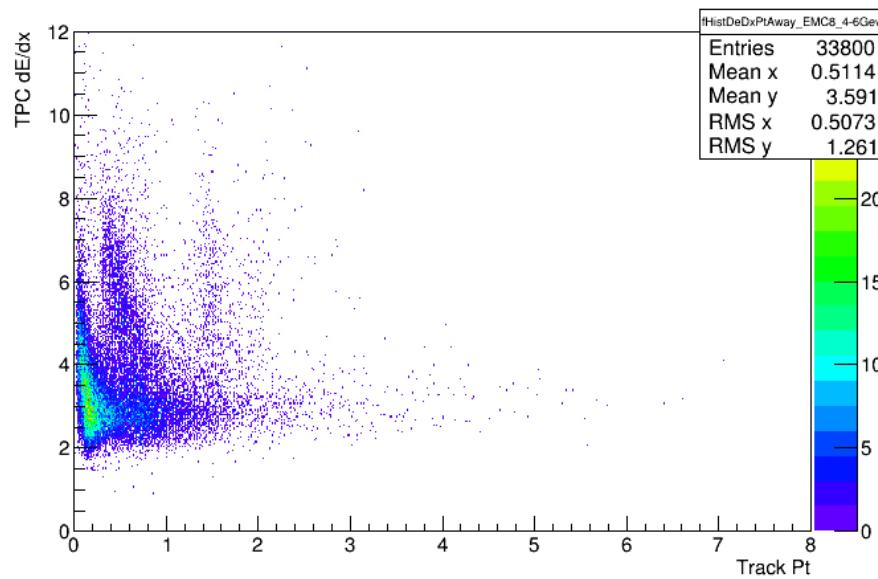
DeDx by Pt for Tracks on the Away Side of Event with a 4-6Gev pt electron



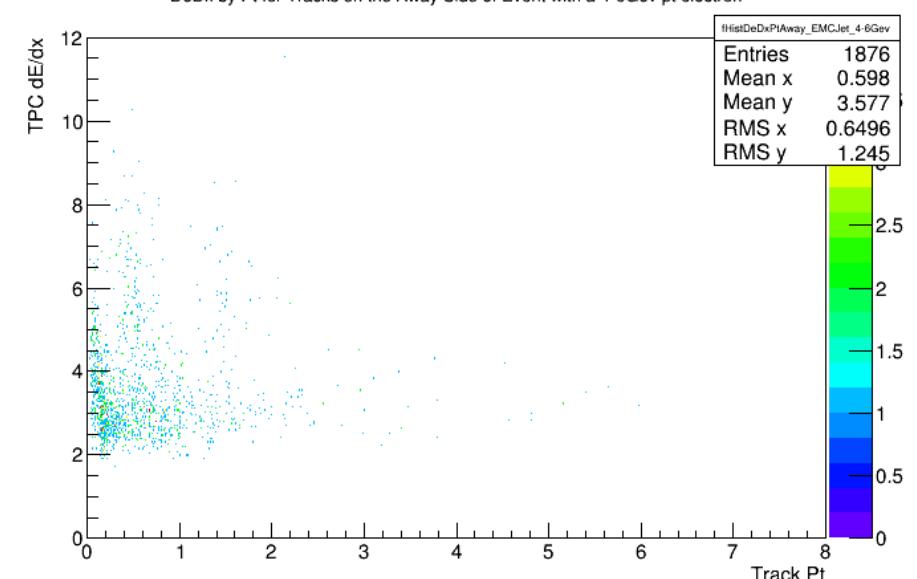
DeDx by Pt for Tracks on the Away Side of Event with a 4-6Gev pt electron



DeDx by Pt for Tracks on the Away Side of Event with a 4-6Gev pt electron



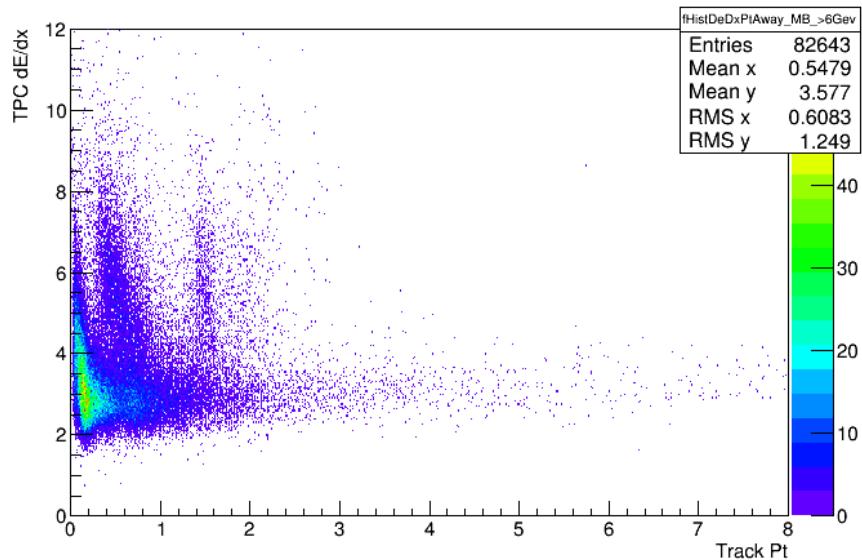
DeDx by Pt for Tracks on the Away Side of Event with a 4-6Gev pt electron



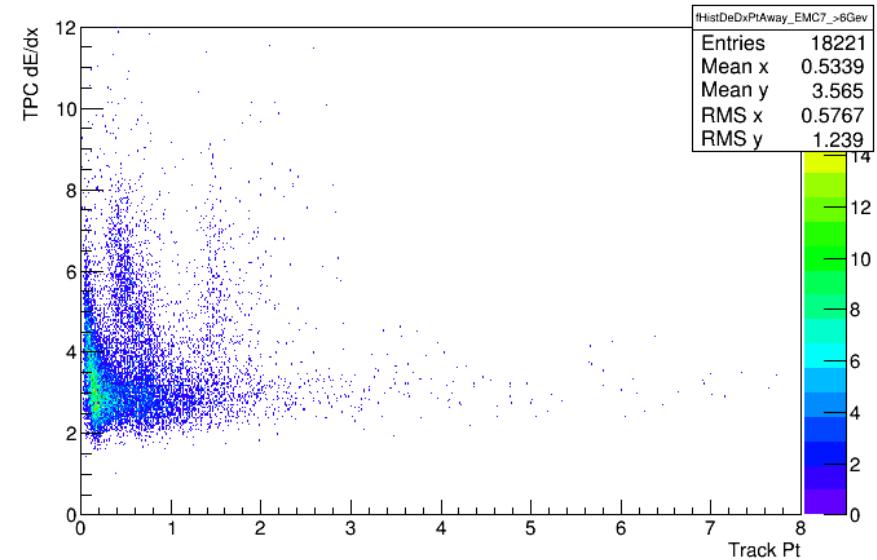
# dEdx by Pt in “away-side” region

## Cand. Pt >6Gev

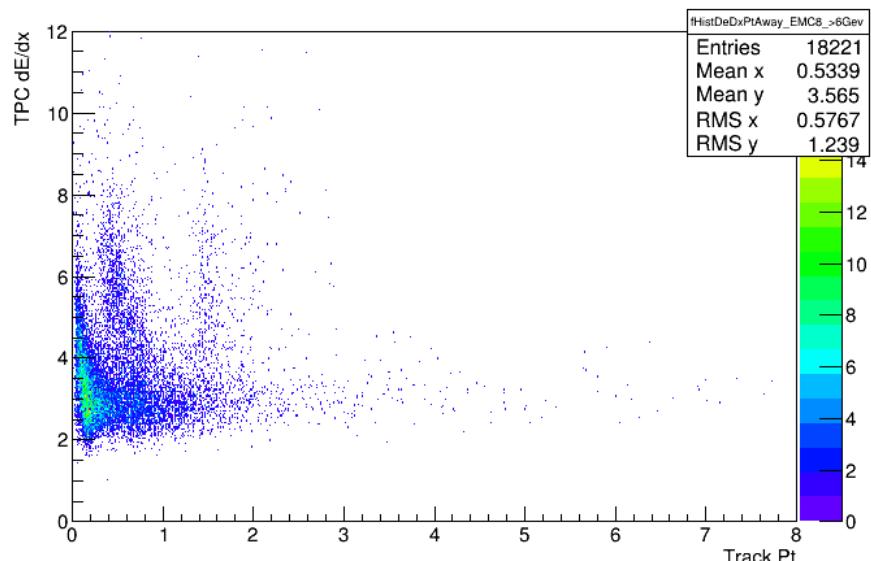
DeDx by Pt for Tracks on the Away Side of Event with a >6Gev pt electron



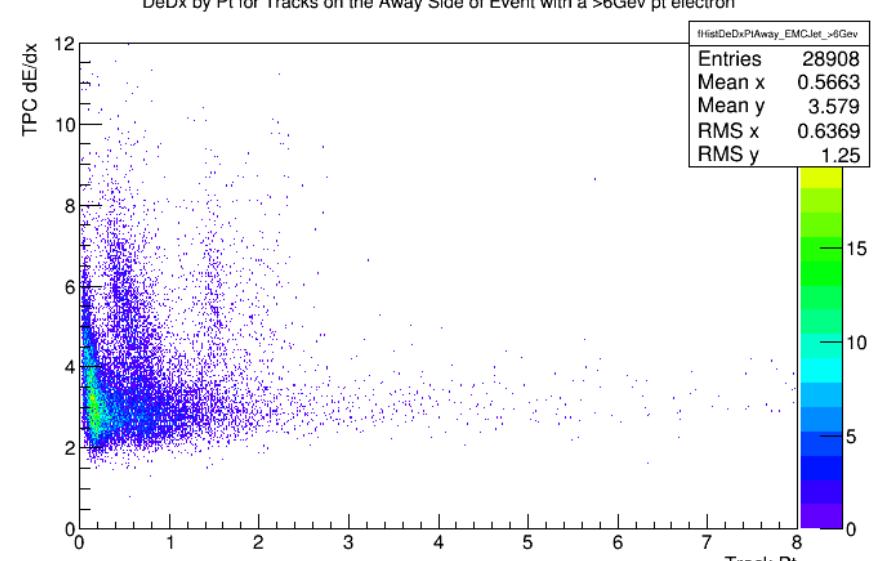
DeDx by Pt for Tracks on the Away Side of Event with a >6Gev pt electron



DeDx by Pt for Tracks on the Away Side of Event with a >6Gev pt electron



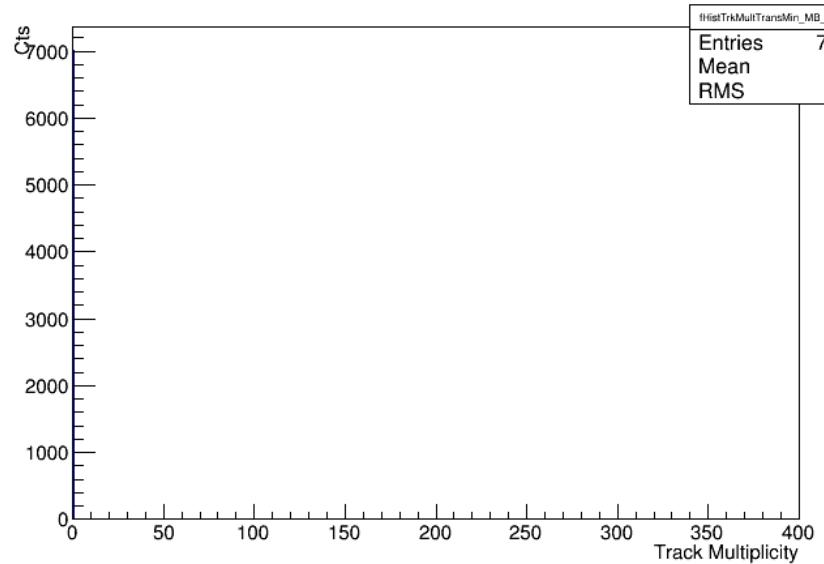
DeDx by Pt for Tracks on the Away Side of Event with a >6Gev pt electron



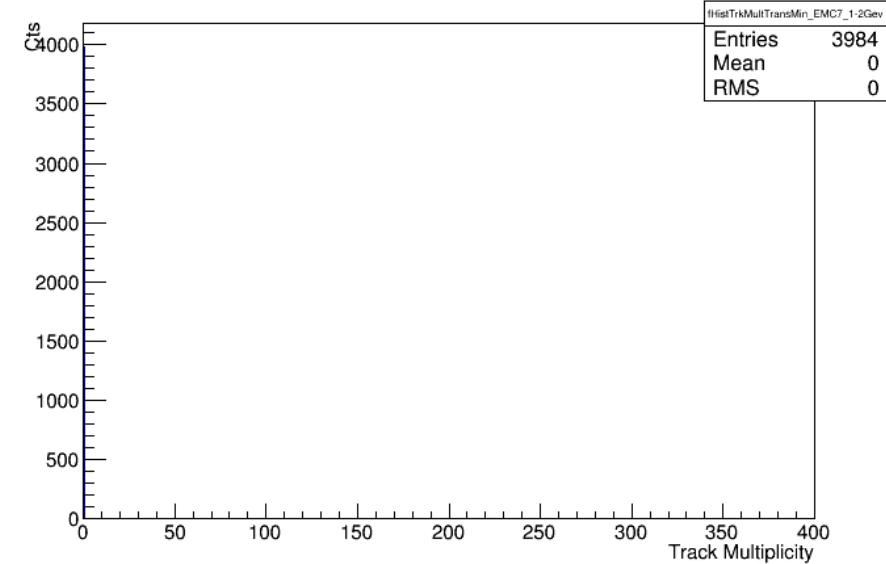
# Track multiplicity in “transMin”

## Cand. Pt 1-2Gev region

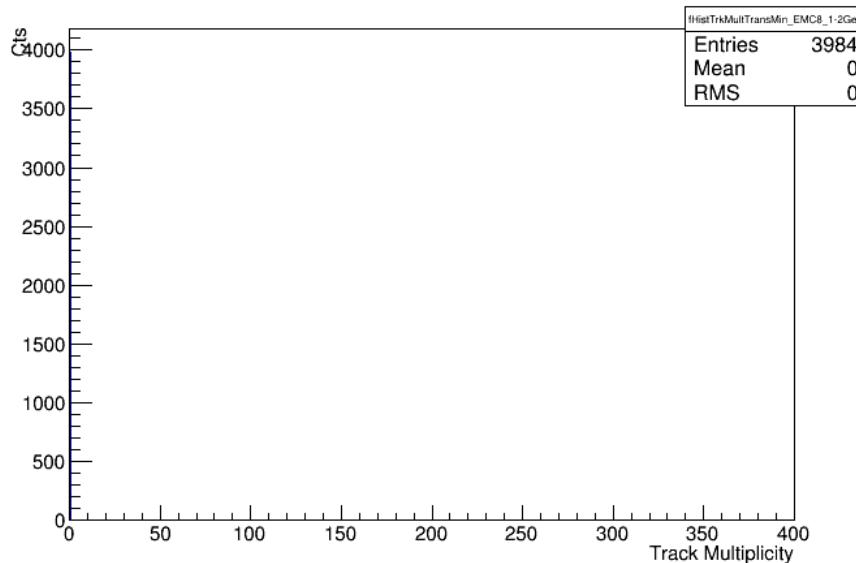
Multiplicity of Tracks on the TransMin Side of Event with a 1-2Gev pt electron



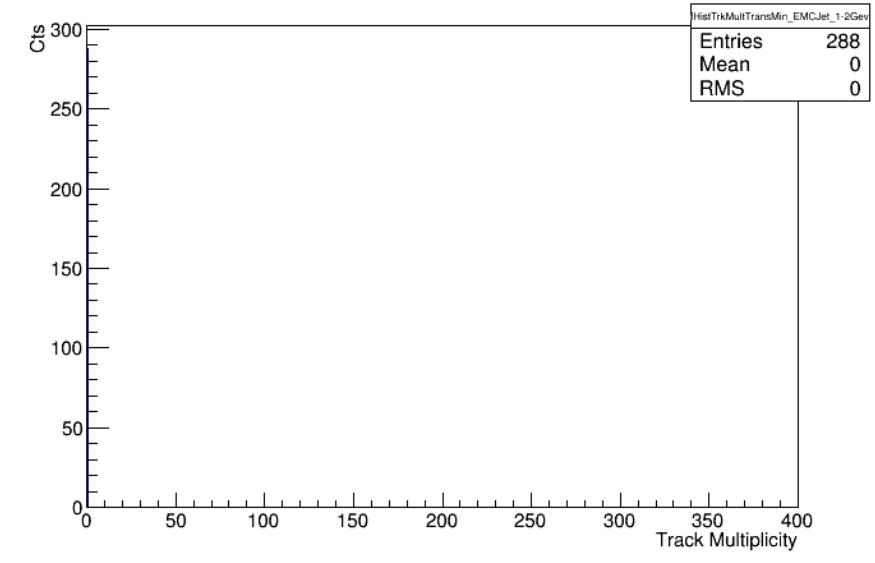
Multiplicity of Tracks on the TransMin Side of Event with a 1-2Gev pt electron



Multiplicity of Tracks on the TransMin Side of Event with a 1-2Gev pt electron



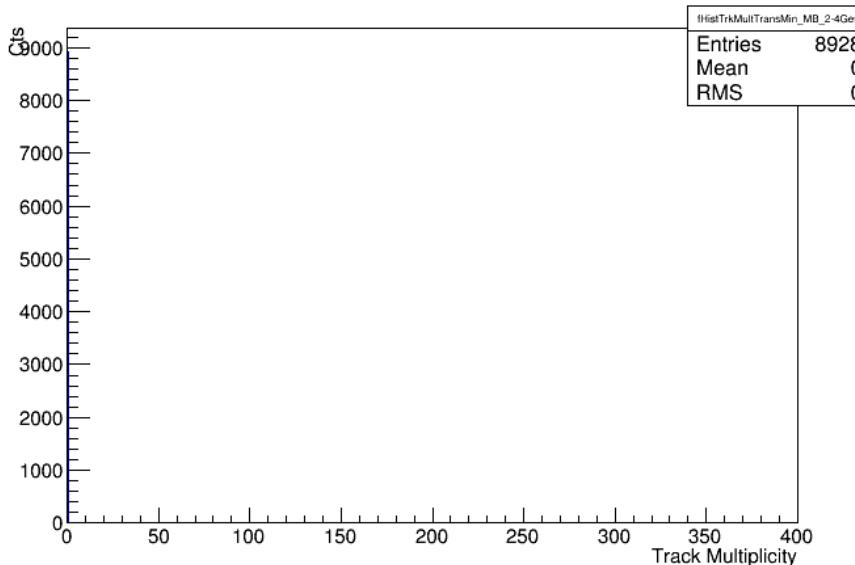
Multiplicity of Tracks on the TransMin Side of Event with a 1-2Gev pt electron



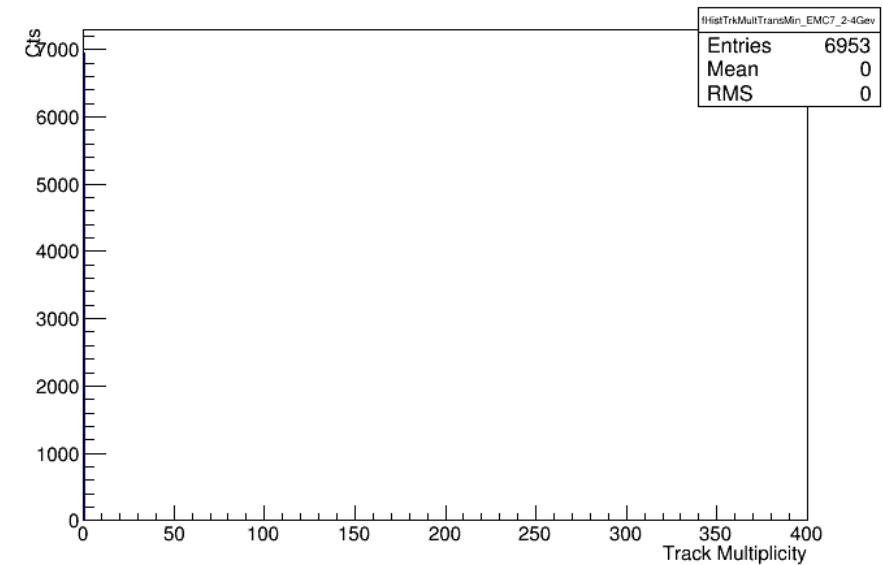
# Track multiplicity in “transMin” region

## Cand. Pt 2-4Gev

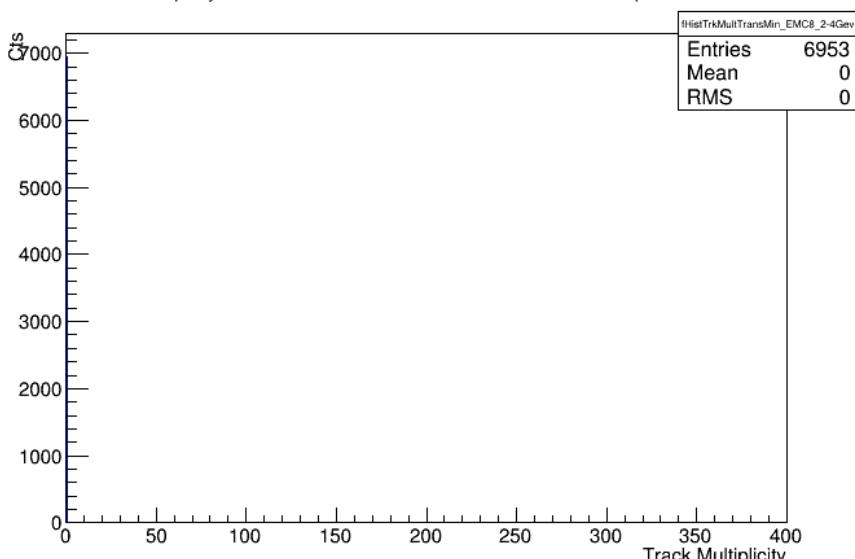
Multiplicity of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



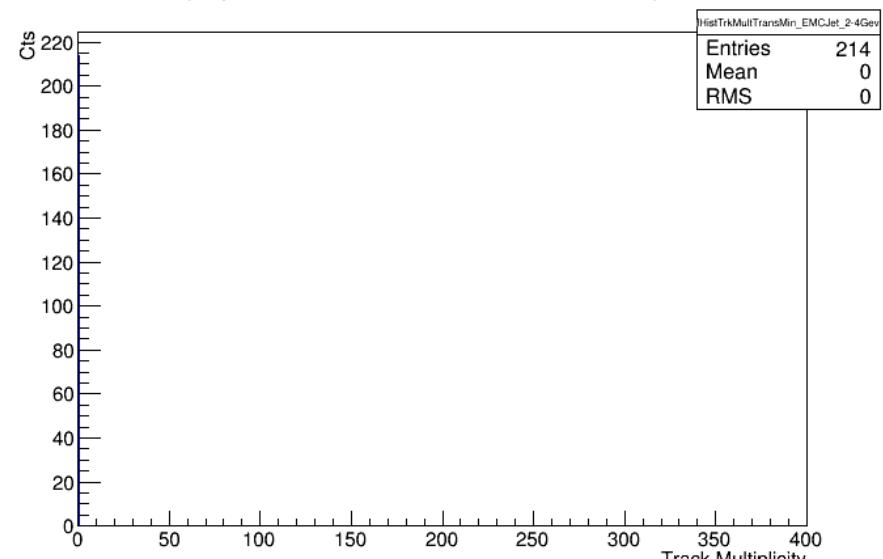
Multiplicity of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



Multiplicity of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



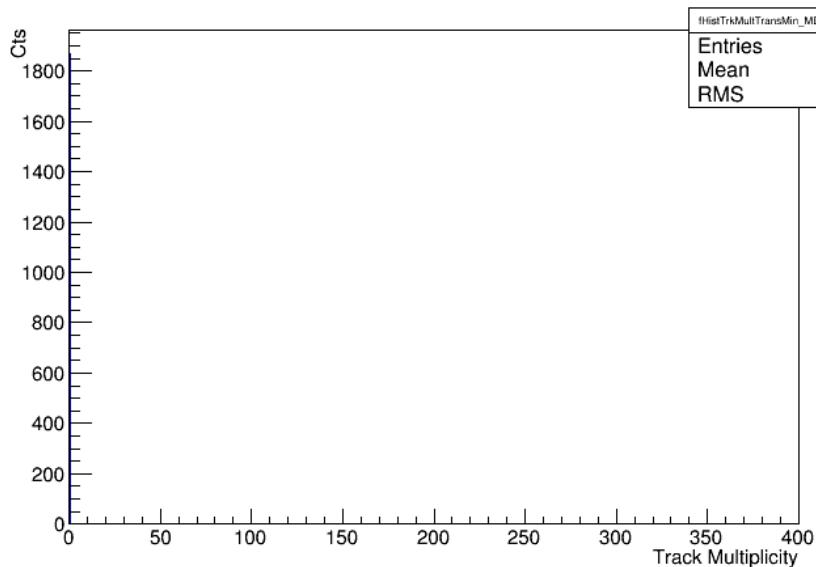
Multiplicity of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



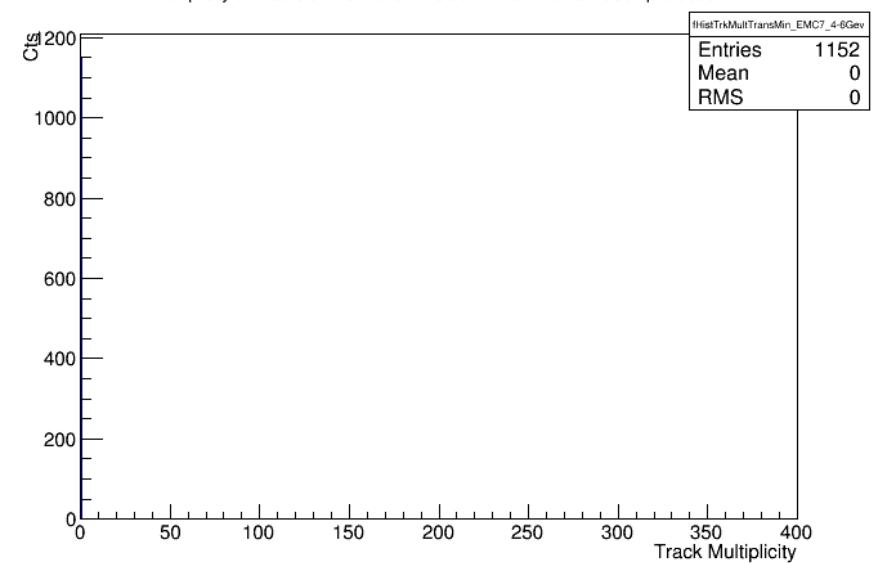
# Track multiplicity in “transMin” region

## Cand. Pt 4-6Gev

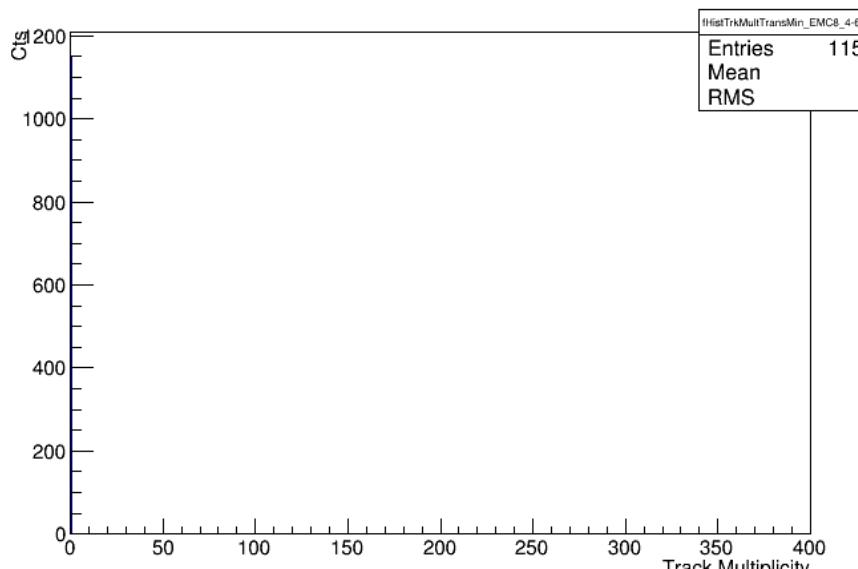
Multiplicity of Tracks on the TransMin Side of Event with a 4-6Gev pt electron



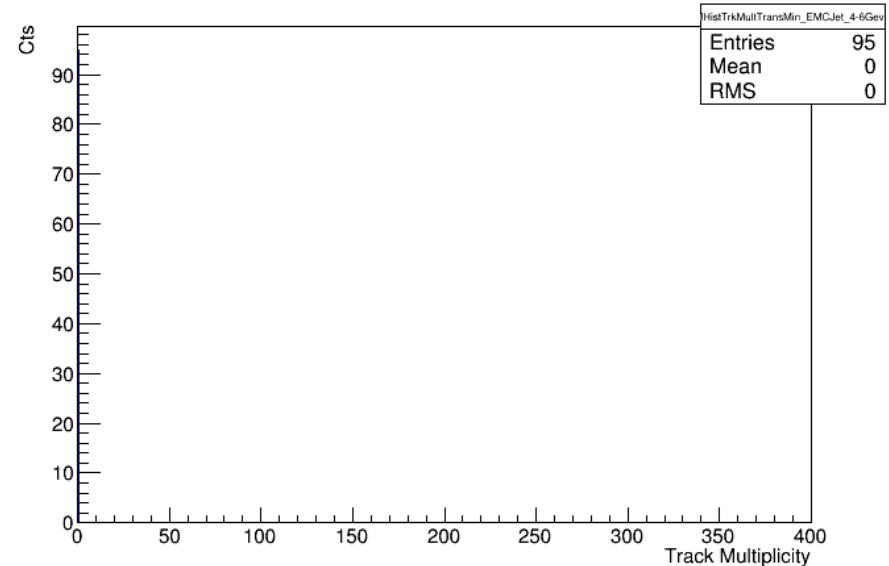
Multiplicity of Tracks on the TransMin Side of Event with a 4-6Gev pt electron



Multiplicity of Tracks on the TransMin Side of Event with a 4-6Gev pt electron



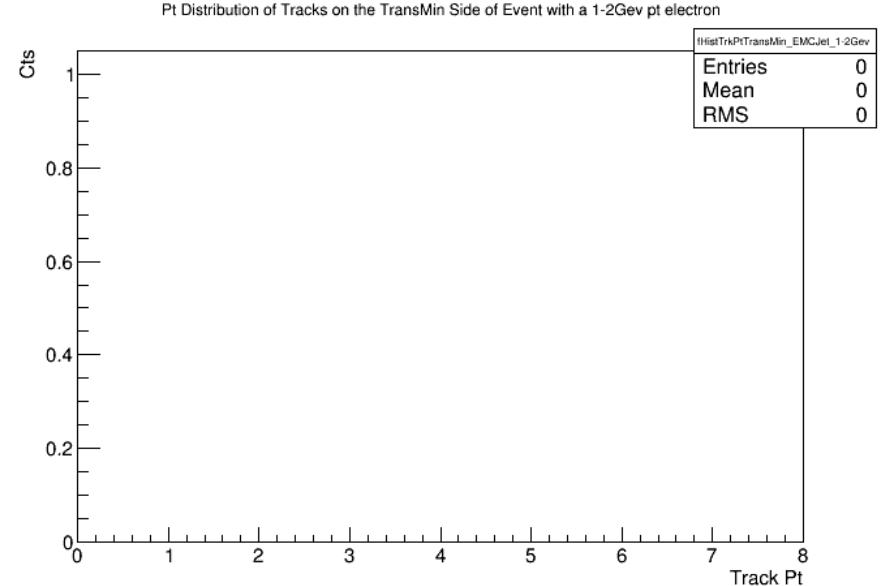
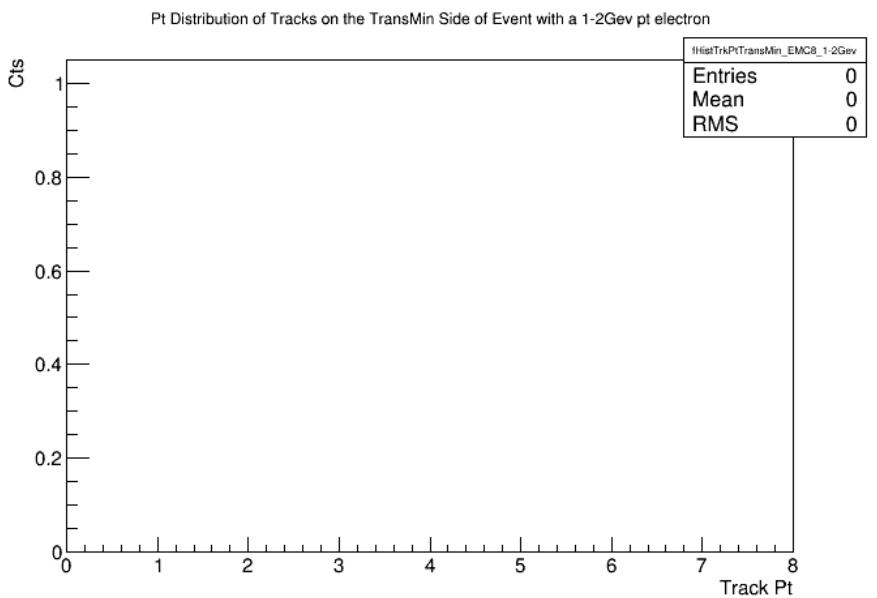
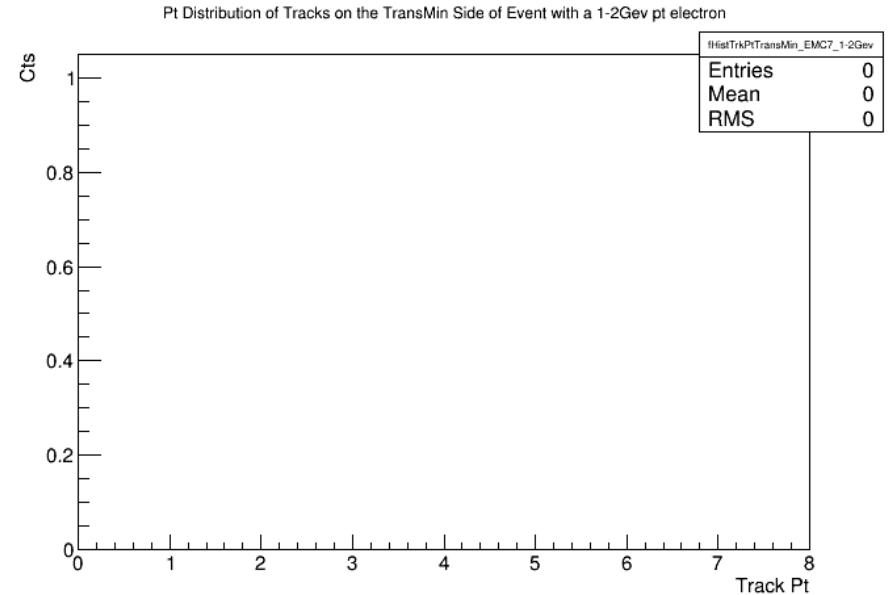
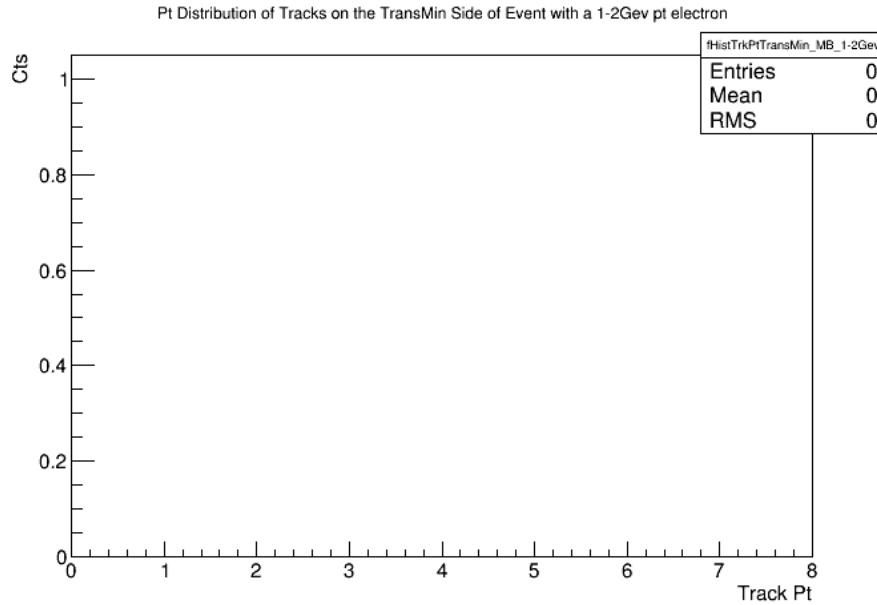
Multiplicity of Tracks on the TransMin Side of Event with a 4-6Gev pt electron



Track multiplicity in “transMin”  
Cand. Pt >6Gev    region

# Track Pt in “transMin” region

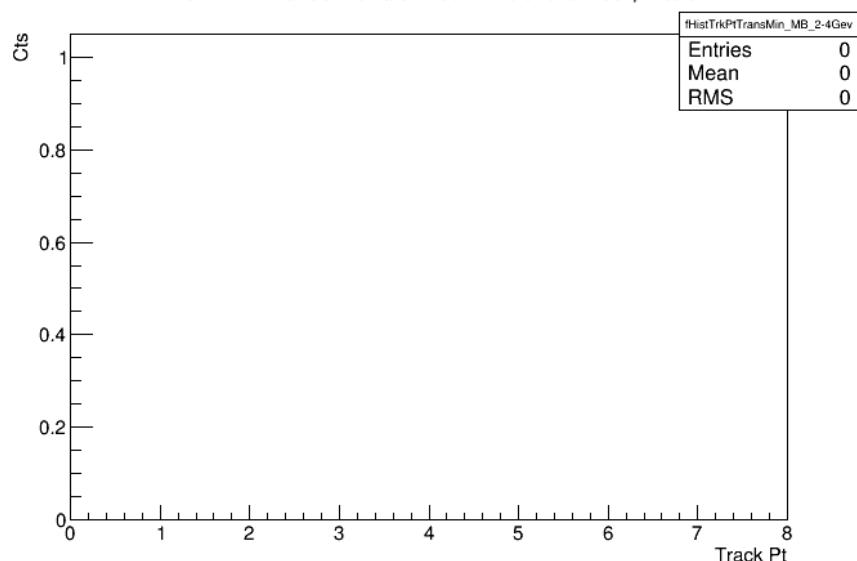
## Cand. Pt 1-2Gev



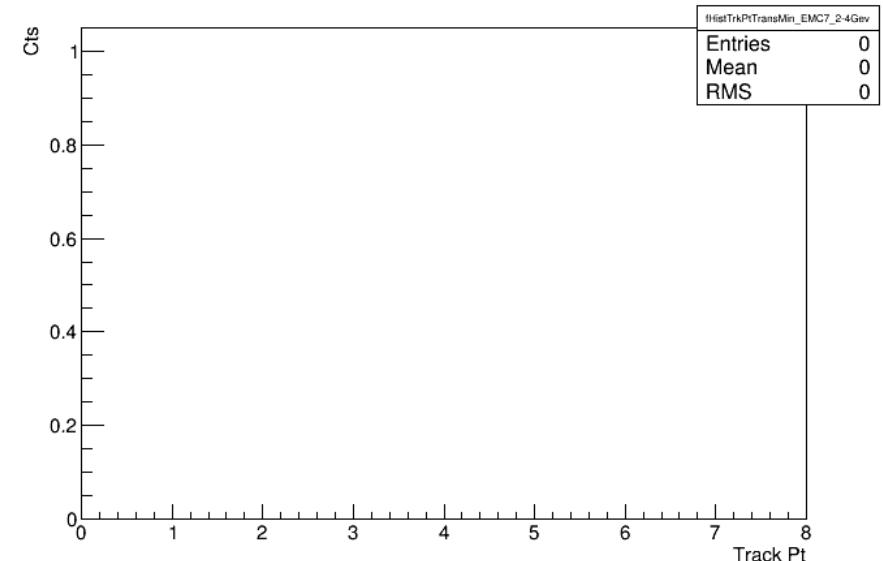
# Track Pt in “transMin” region

## Cand. Pt 2-4Gev

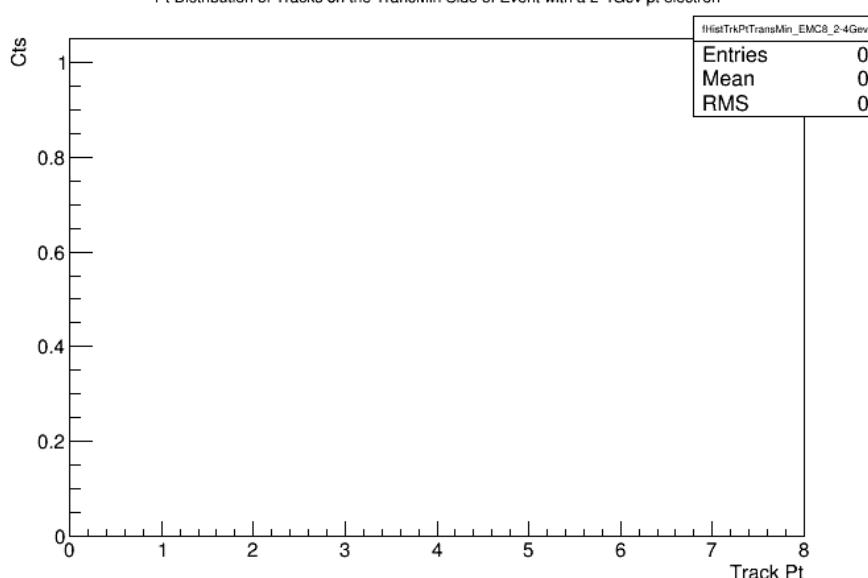
Pt Distribution of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



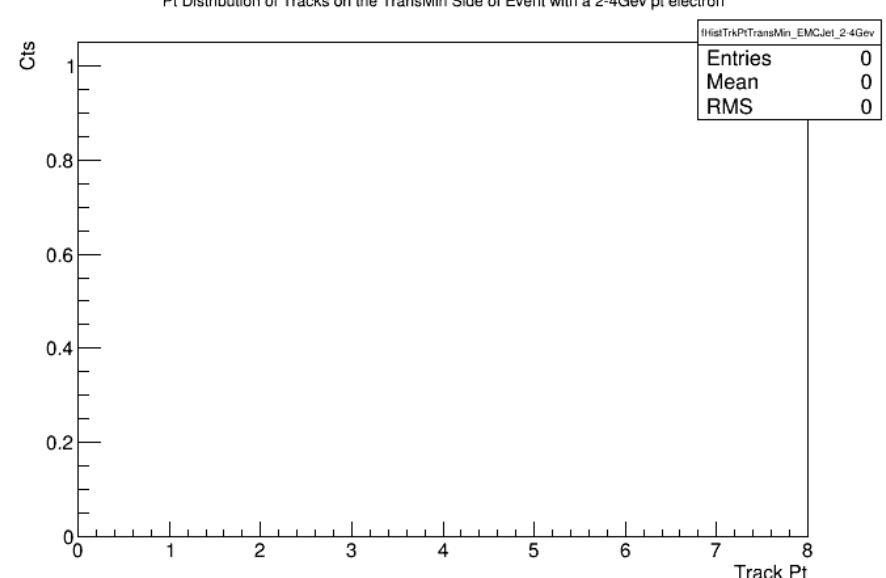
Pt Distribution of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



Pt Distribution of Tracks on the TransMin Side of Event with a 2-4Gev pt electron

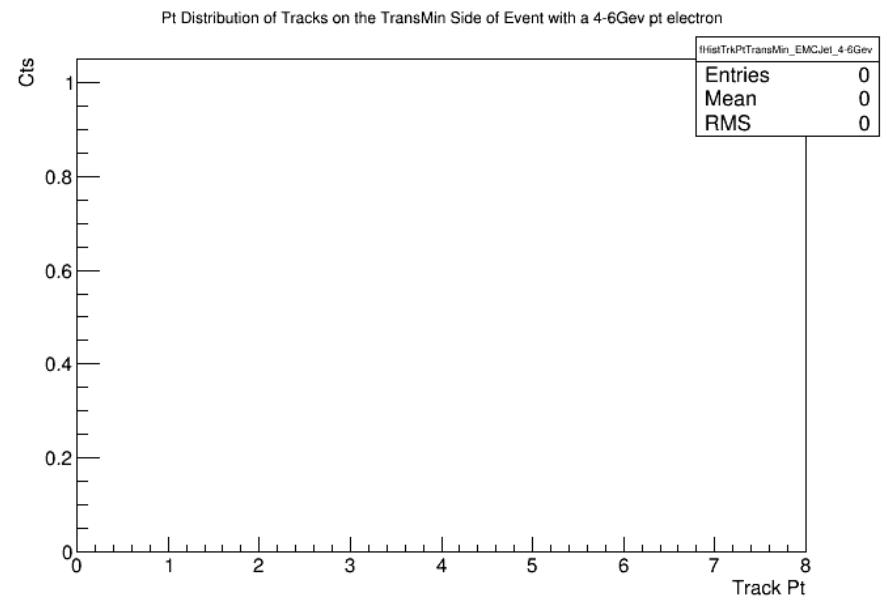
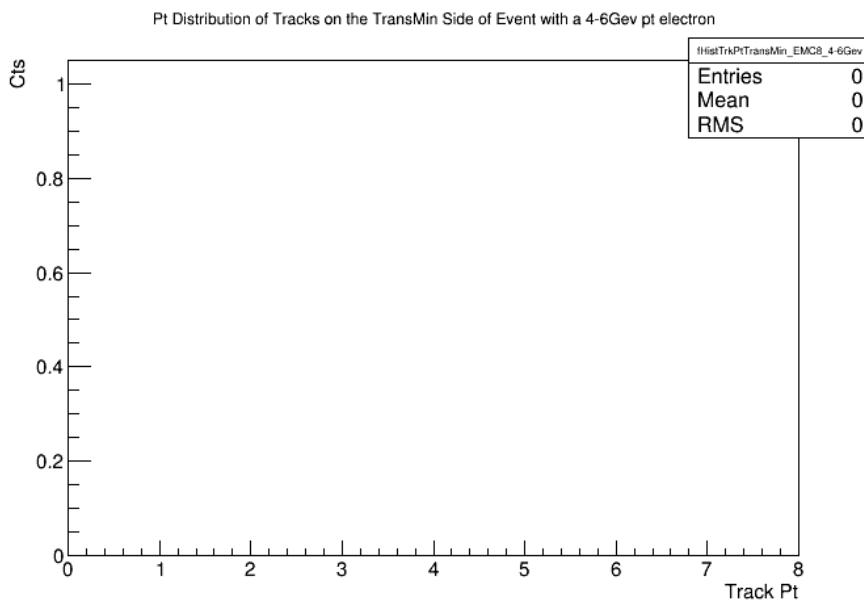
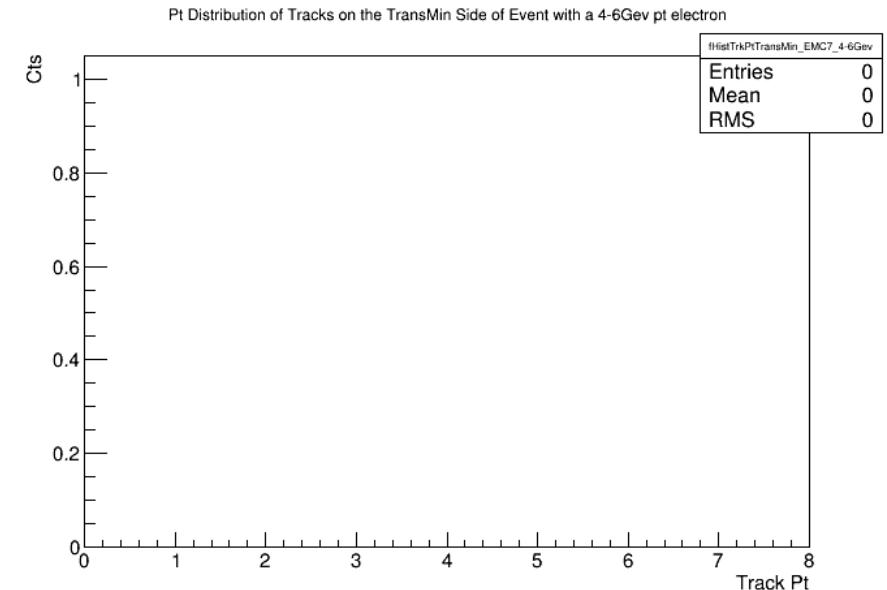
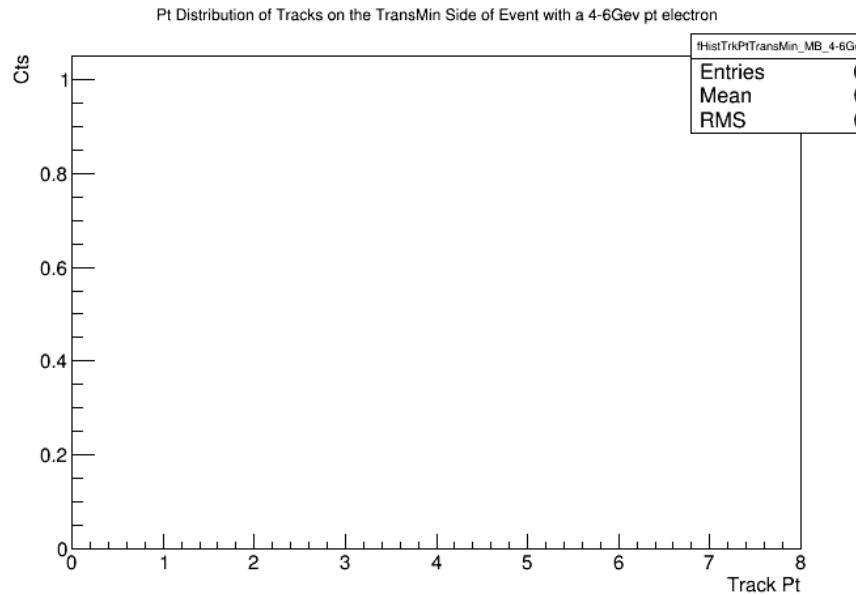


Pt Distribution of Tracks on the TransMin Side of Event with a 2-4Gev pt electron



# Track Pt in “transMin” region

## Cand. Pt 4-6Gev



# Track Pt in “transMin” region

Cand. Pt >6Gev

# dEdx by Pt in “transMin” region

Cand. Pt 1-2Gev

# dEdx by Pt in “transMin” region

Cand. Pt 2-4Gev

# dEdx by Pt in “transMin” region

Cand. Pt 4-6Gev

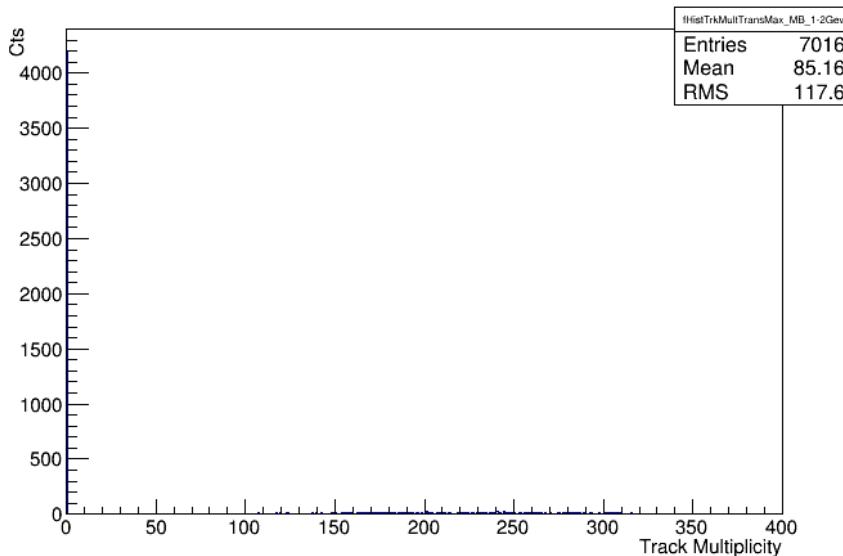
# dEdx by Pt in “transMin” region

Cand. Pt >6Gev

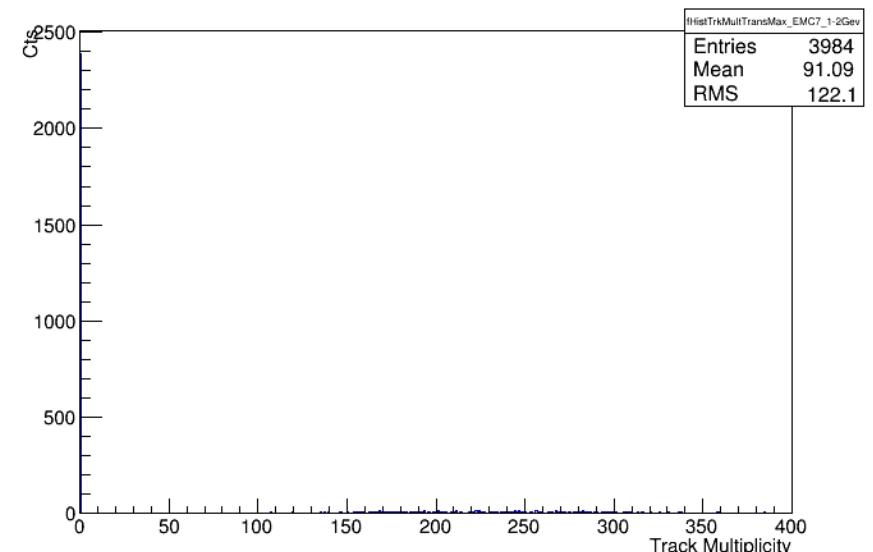
# Track multiplicity in “transMax”

## Cand. Pt 1-2Gev region

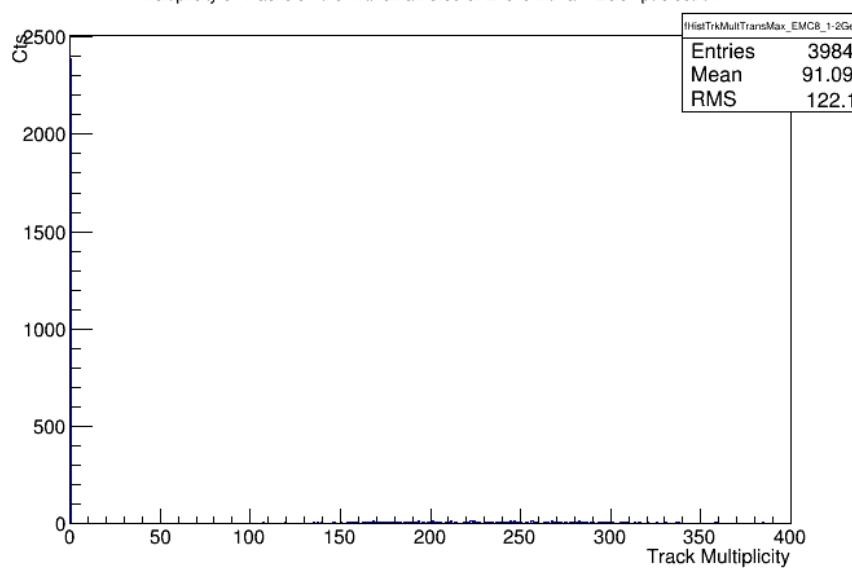
Multiplicity of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



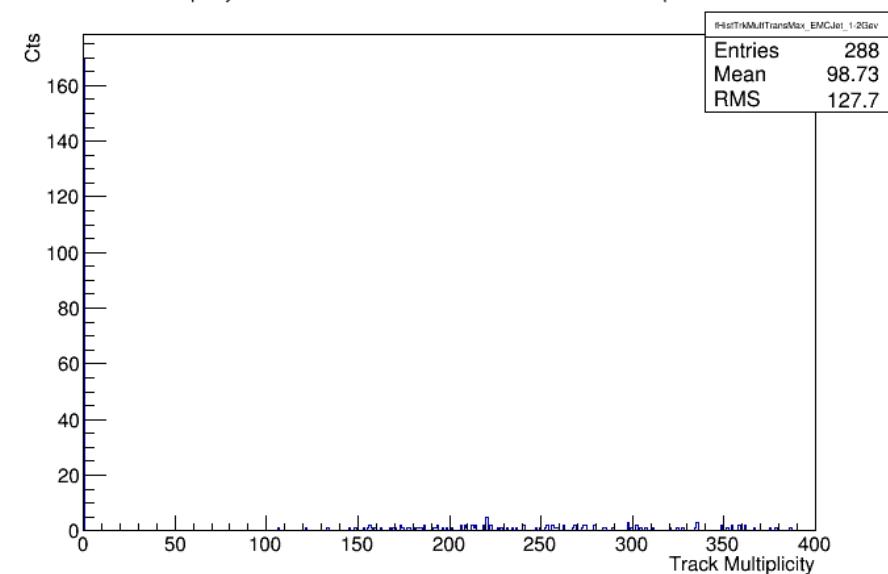
Multiplicity of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



Multiplicity of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



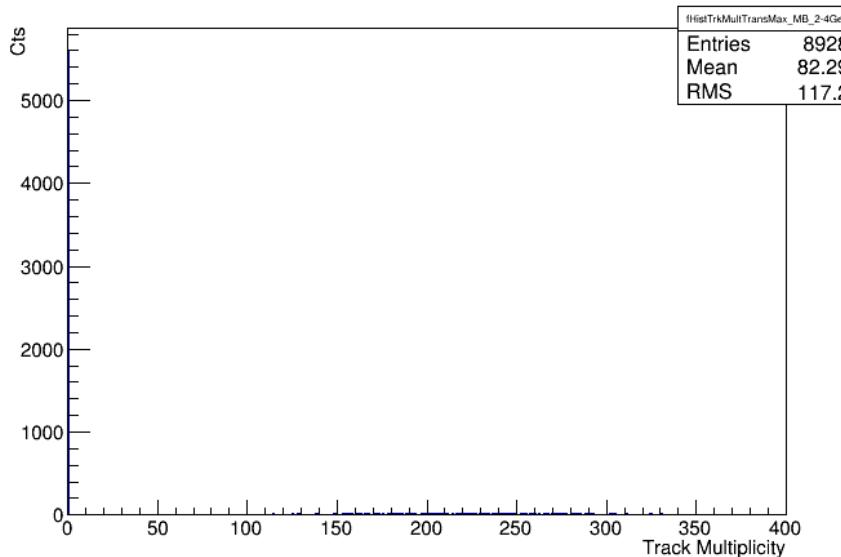
Multiplicity of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



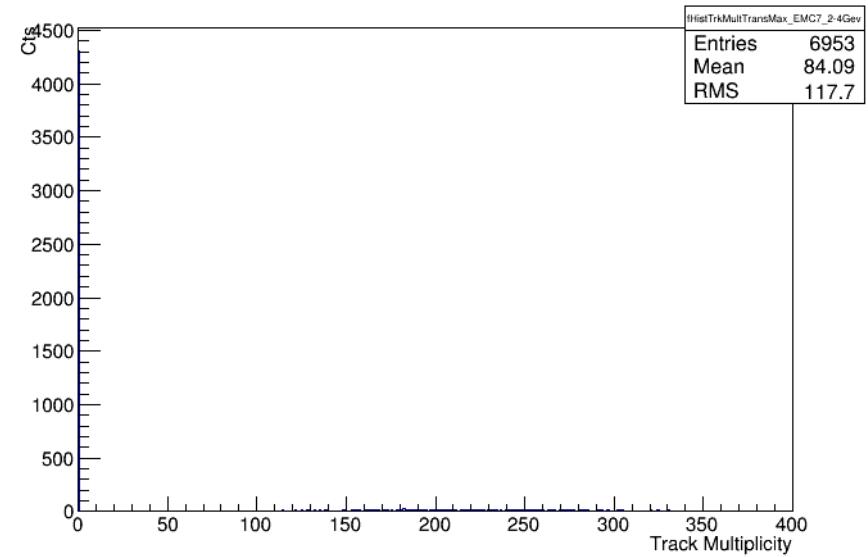
# Track multiplicity in “transMax”

## Cand. Pt 2-4Gev region

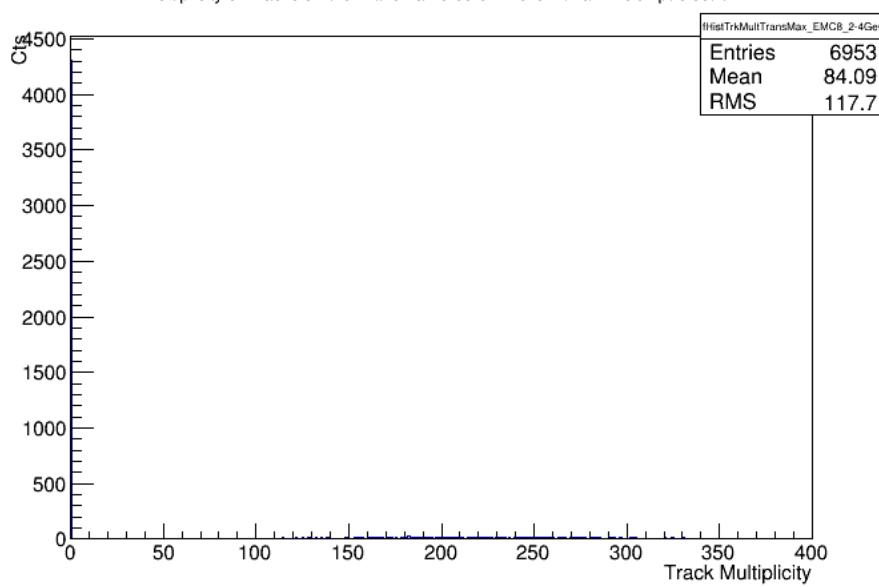
Multiplicity of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



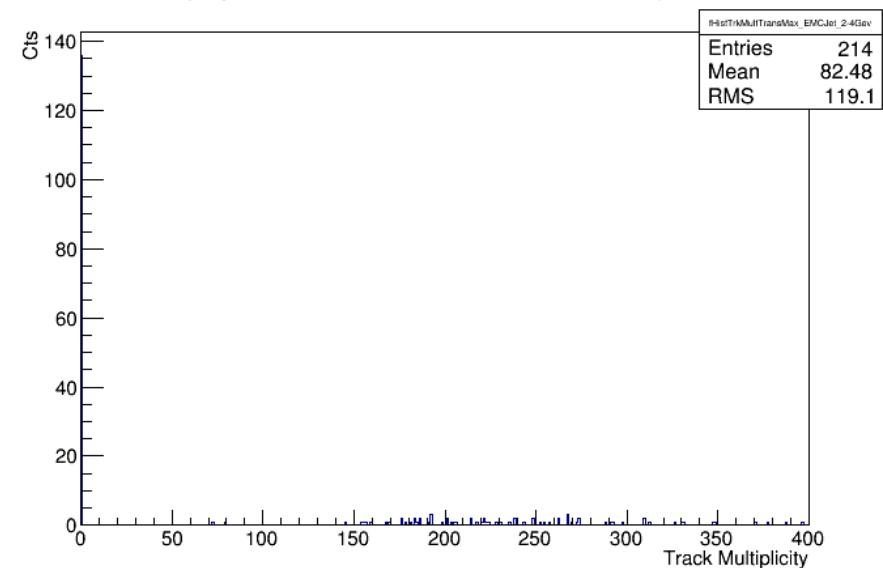
Multiplicity of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



Multiplicity of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



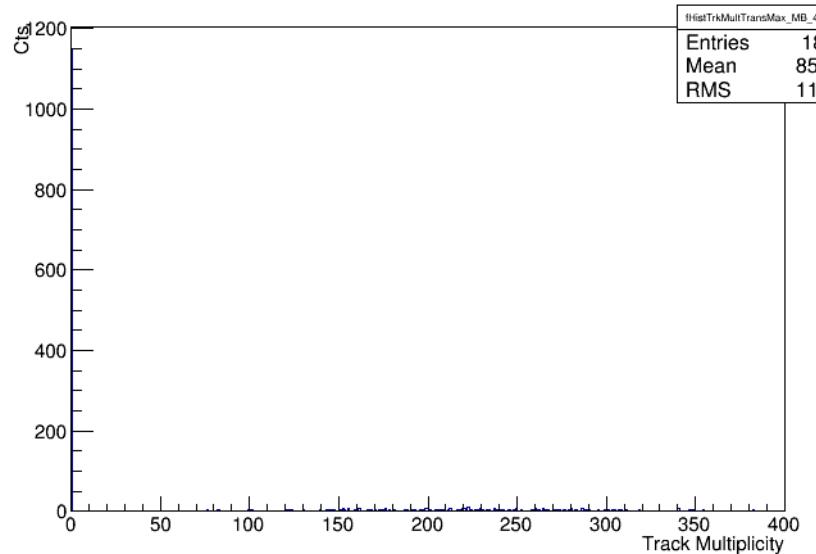
Multiplicity of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



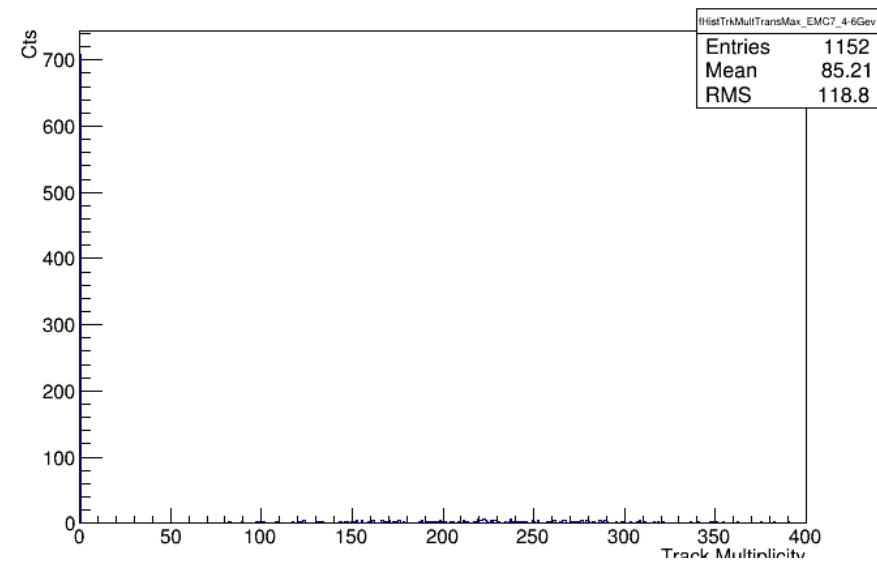
# Track multiplicity in “transMax”

## Cand. Pt 4-6Gev region

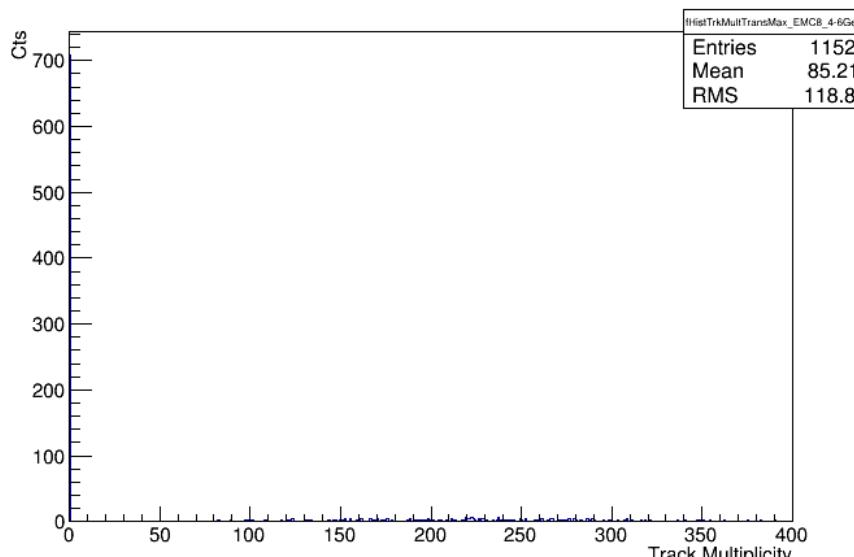
Multiplicity of Tracks on the TransMax Side of Event with a 4-6Gev pt electron



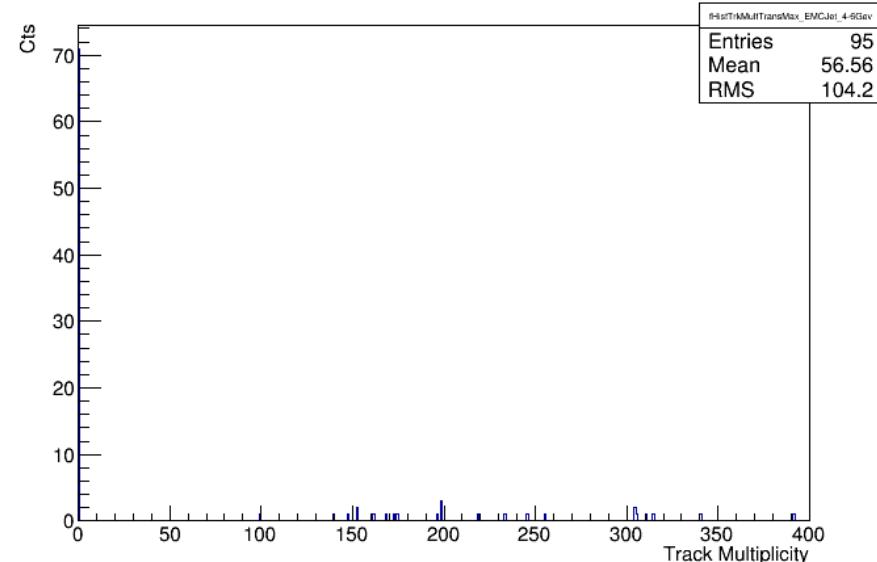
Multiplicity of Tracks on the TransMax Side of Event with a 4-6Gev pt electron



Multiplicity of Tracks on the TransMax Side of Event with a 4-6Gev pt electron



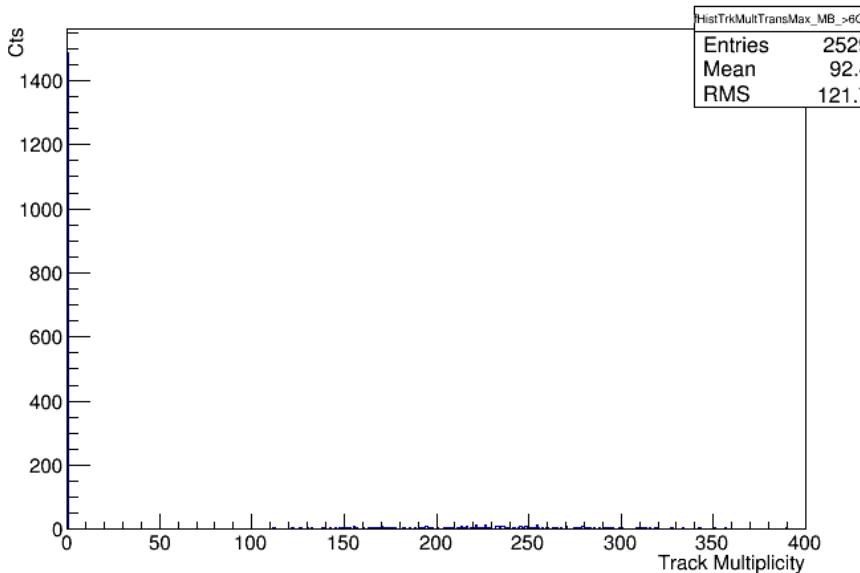
Multiplicity of Tracks on the TransMax Side of Event with a 4-6Gev pt electron



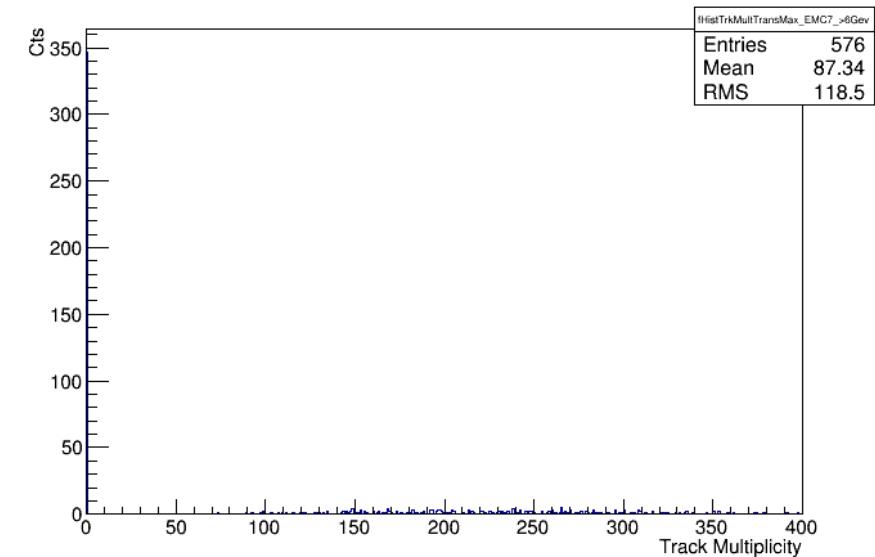
# Track multiplicity in “transMax”

## Cand. Pt >6Gev region

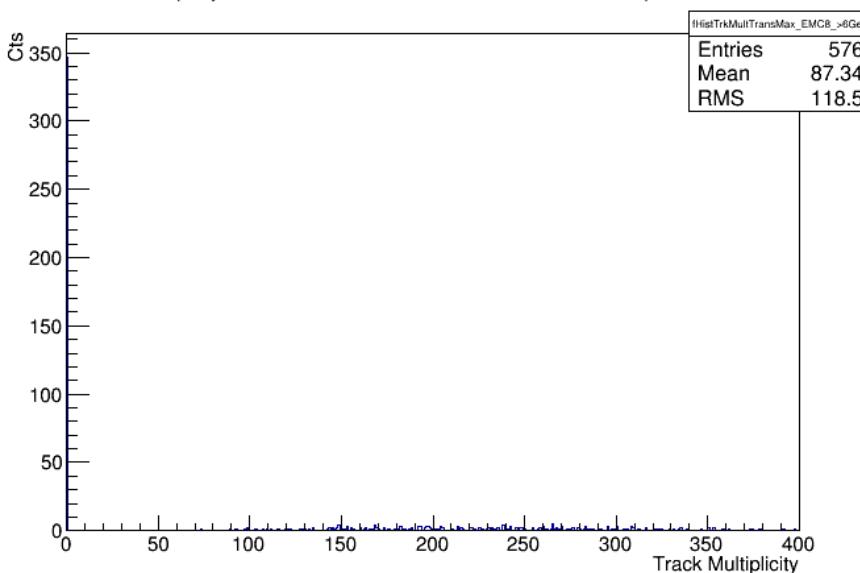
Multiplicity of Tracks on the TransMax Side of Event with a >6Gev pt electron



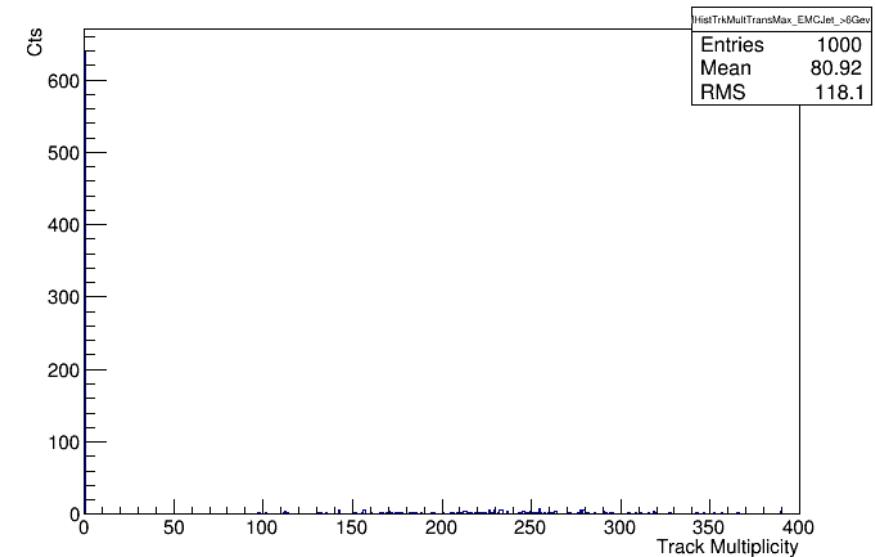
Multiplicity of Tracks on the TransMax Side of Event with a >6Gev pt electron



Multiplicity of Tracks on the TransMax Side of Event with a >6Gev pt electron



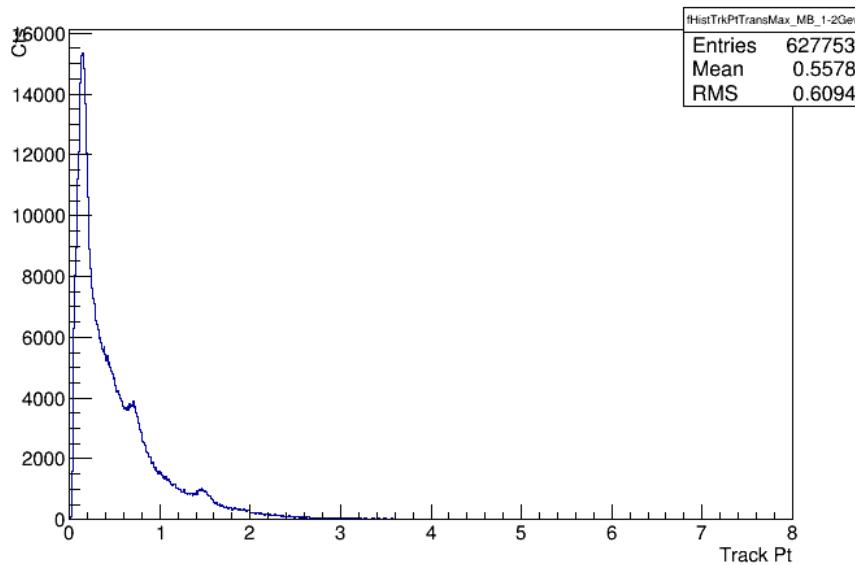
Multiplicity of Tracks on the TransMax Side of Event with a >6Gev pt electron



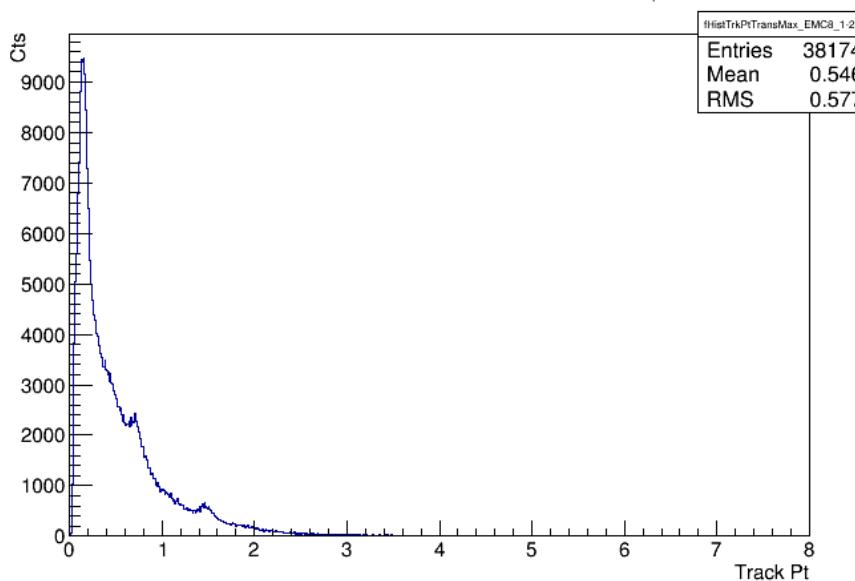
# Track Pt in “transMax” region

## Cand. Pt 1-2Gev

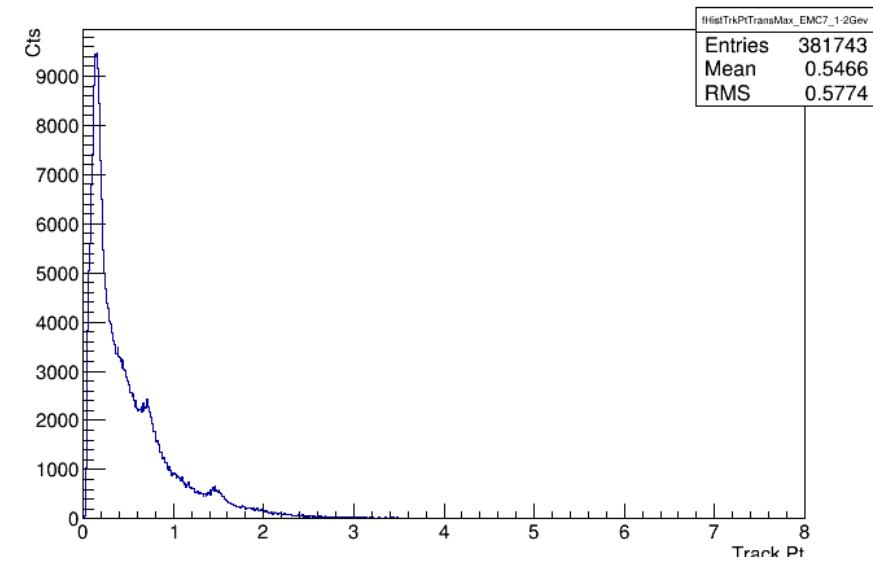
Pt Distribution of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



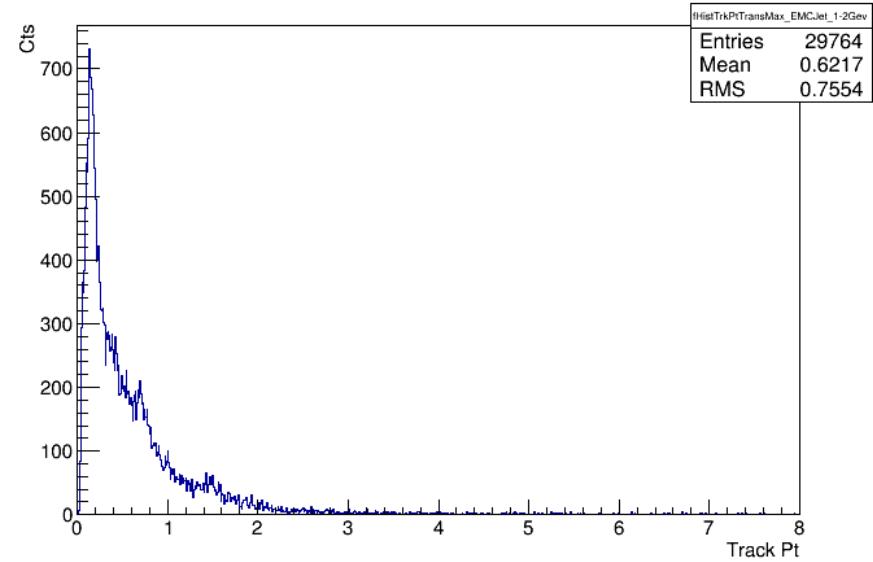
Pt Distribution of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



Pt Distribution of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



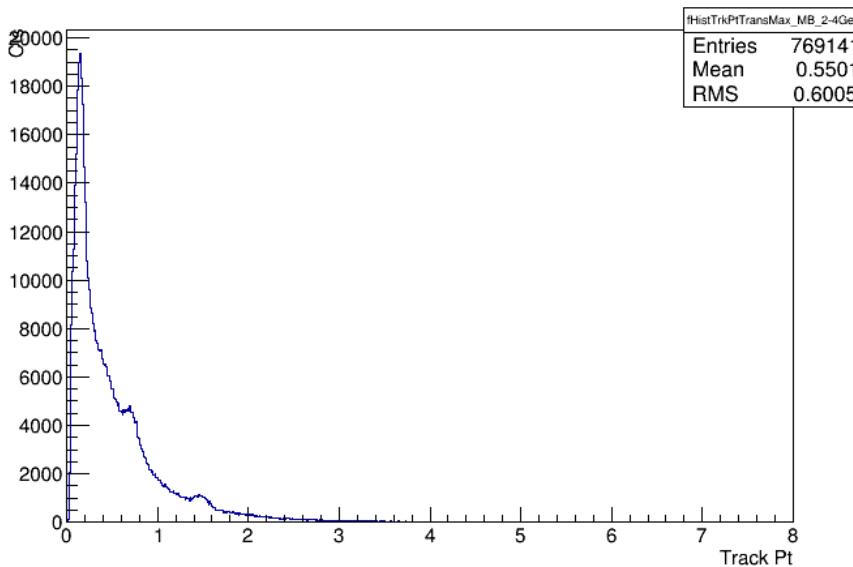
Pt Distribution of Tracks on the TransMax Side of Event with a 1-2Gev pt electron



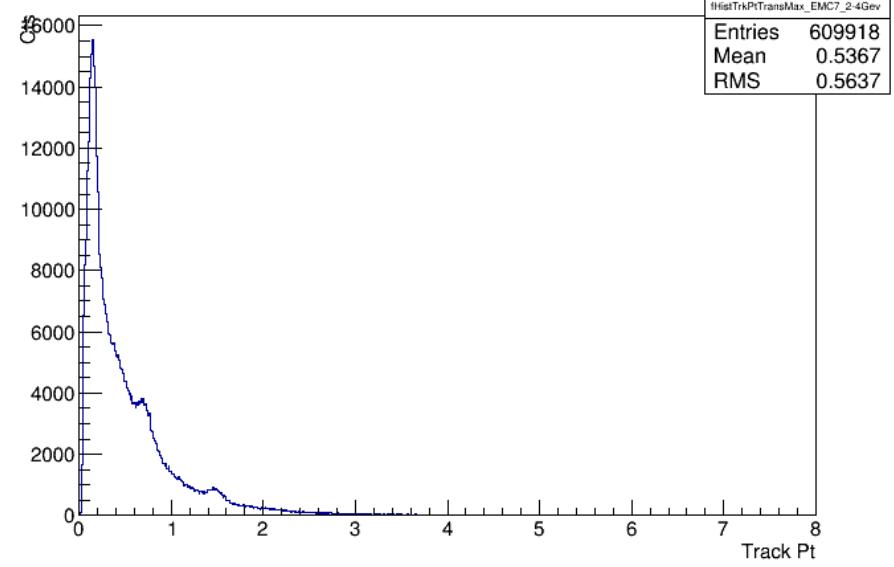
# Track Pt in “transMax” region

## Cand. Pt 2-4Gev

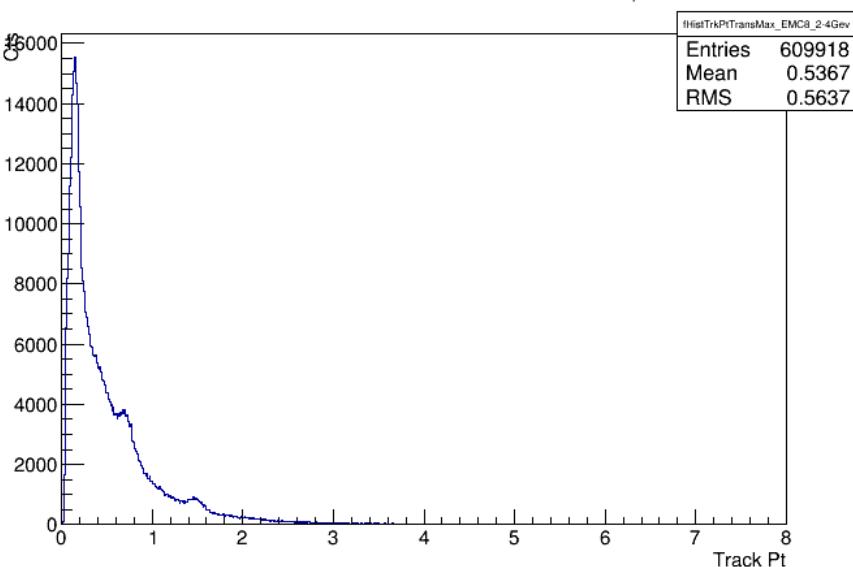
Pt Distribution of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



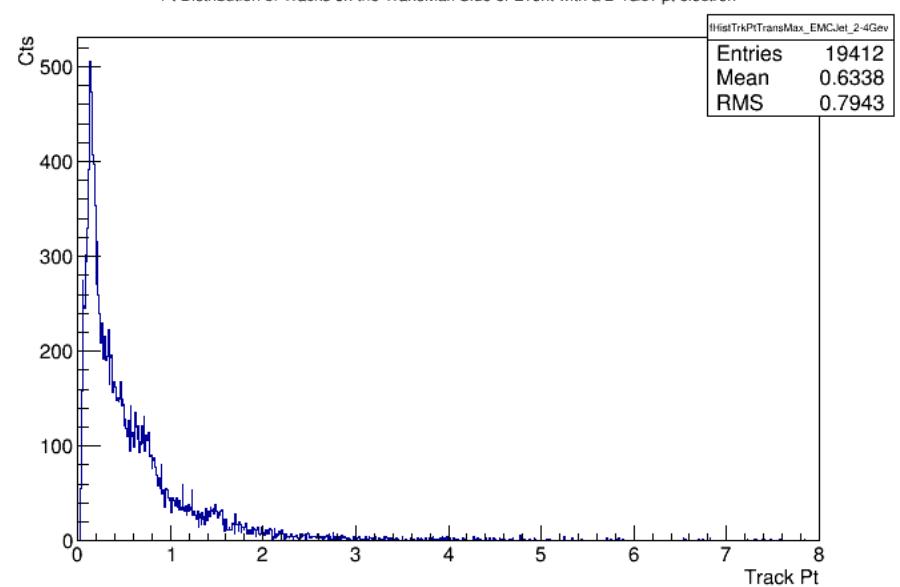
Pt Distribution of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



Pt Distribution of Tracks on the TransMax Side of Event with a 2-4Gev pt electron

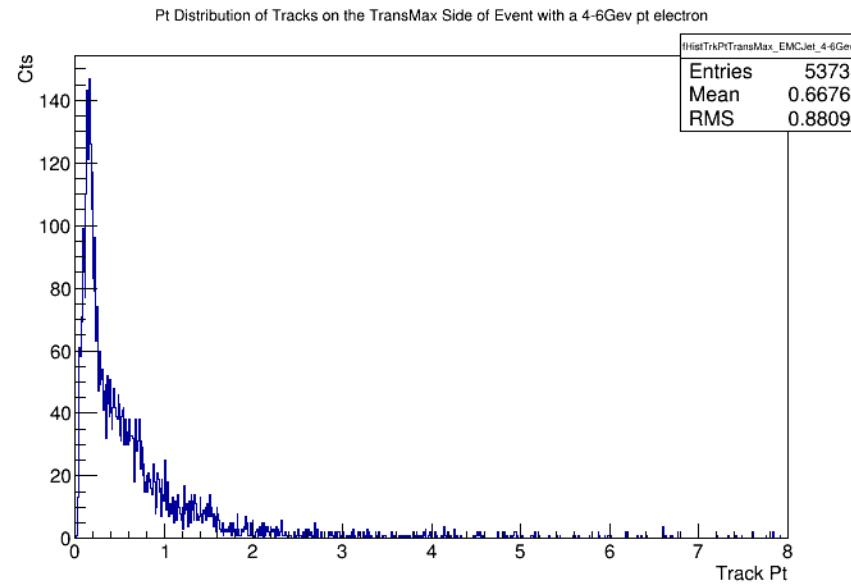
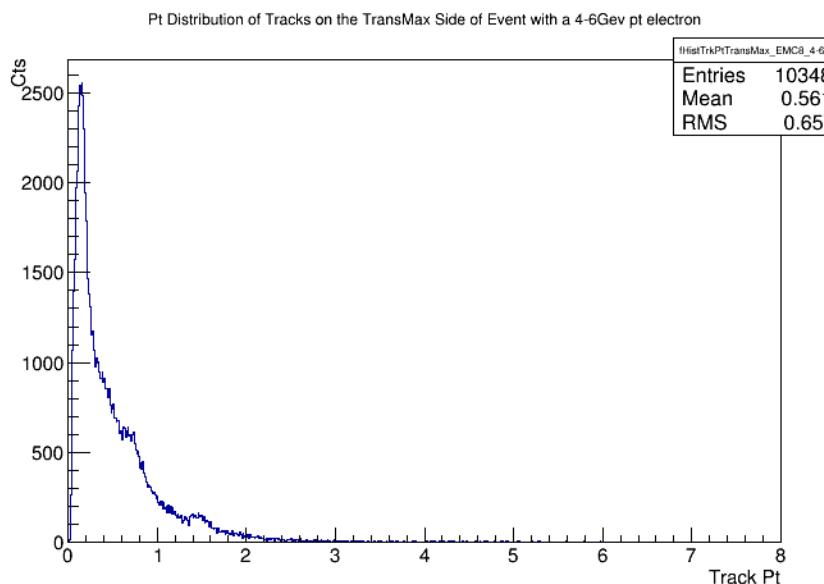
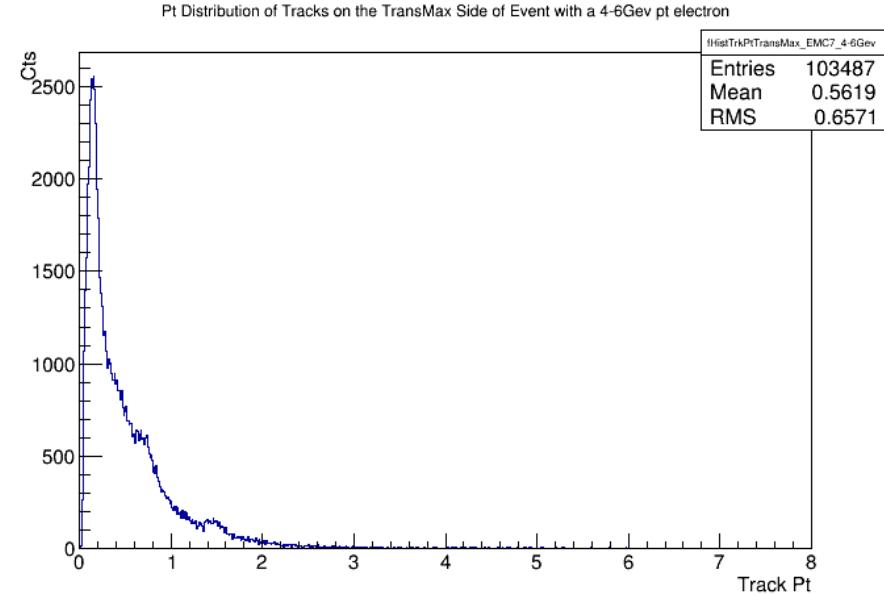
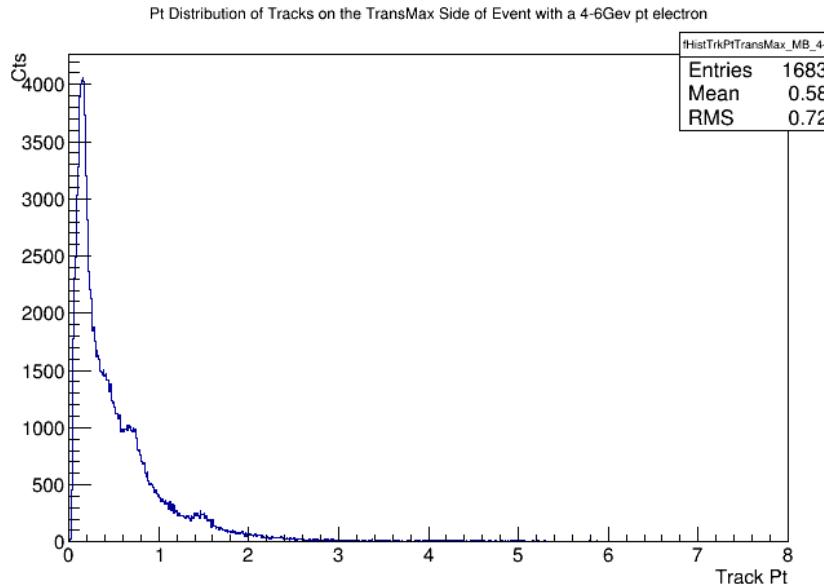


Pt Distribution of Tracks on the TransMax Side of Event with a 2-4Gev pt electron



# Track Pt in “transMax” region

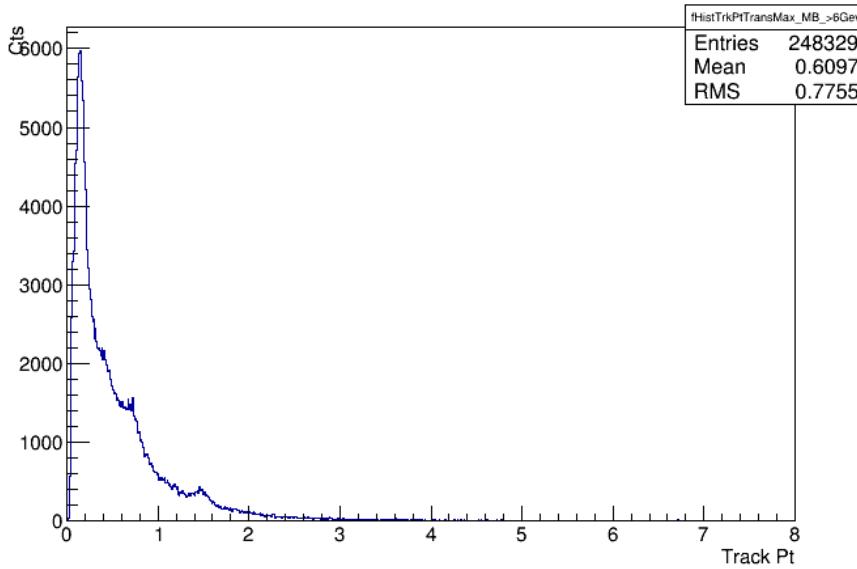
## Cand. Pt 4-6Gev



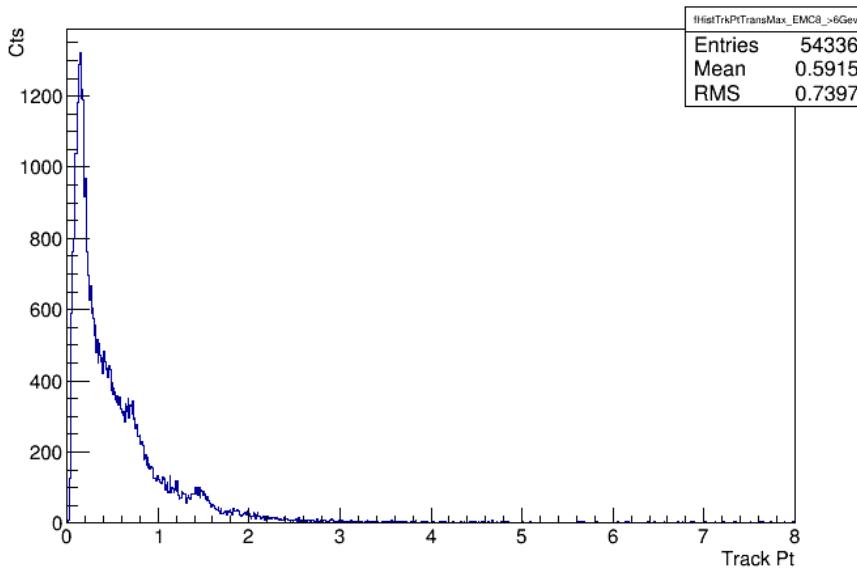
# Track Pt in “transMax” region

## Cand. Pt >6Gev

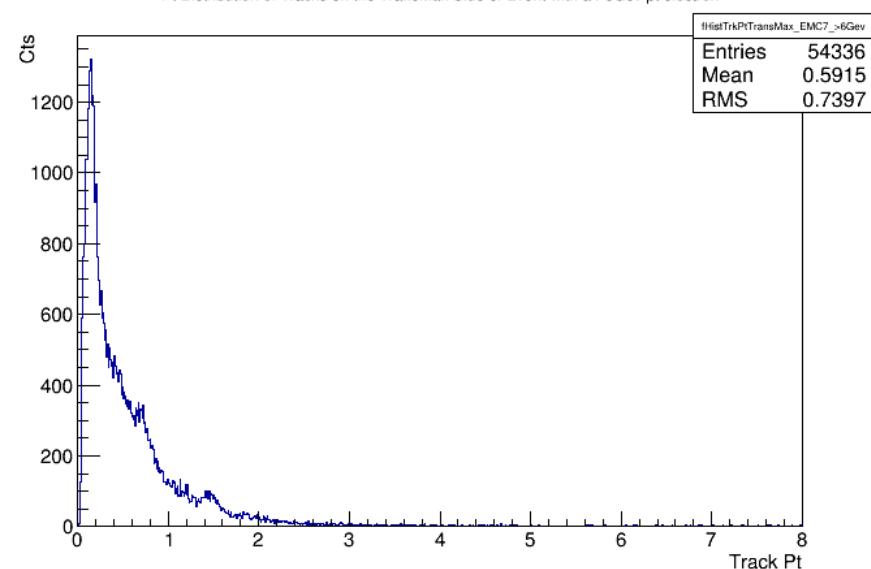
Pt Distribution of Tracks on the TransMax Side of Event with a >6Gev pt electron



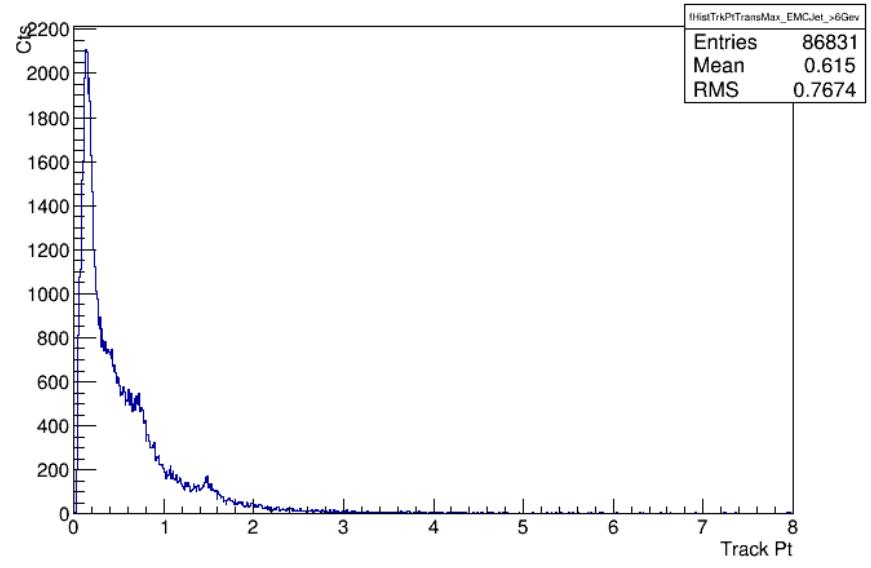
Pt Distribution of Tracks on the TransMax Side of Event with a >6Gev pt electron



Pt Distribution of Tracks on the TransMax Side of Event with a >6Gev pt electron

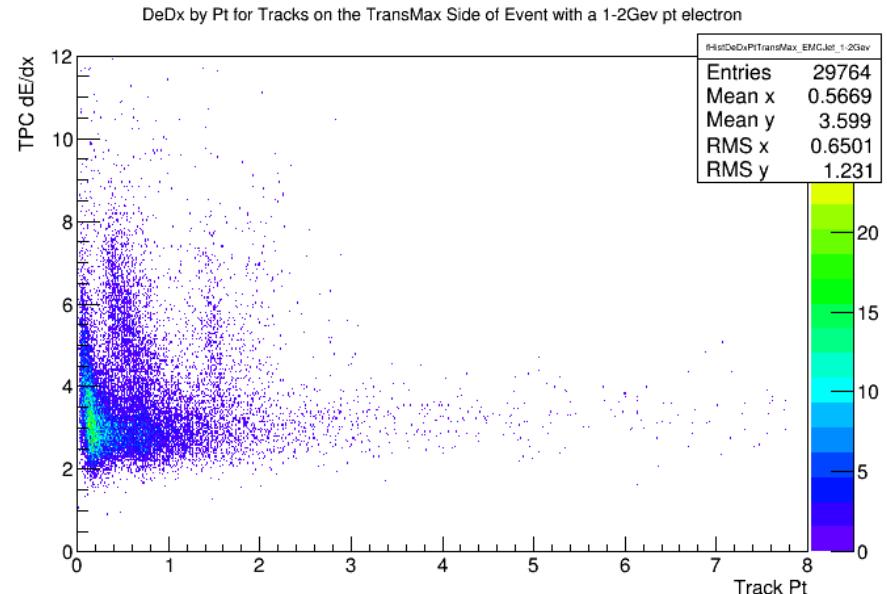
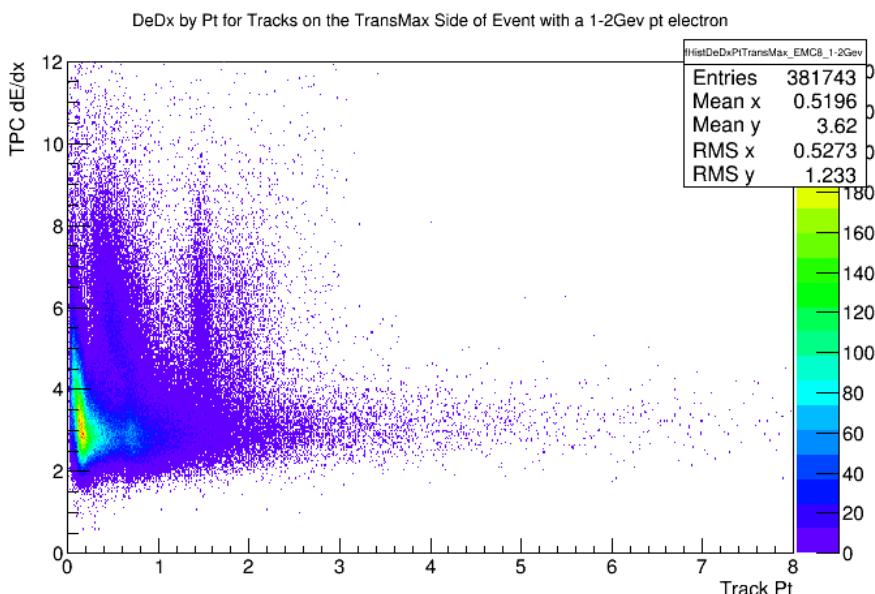
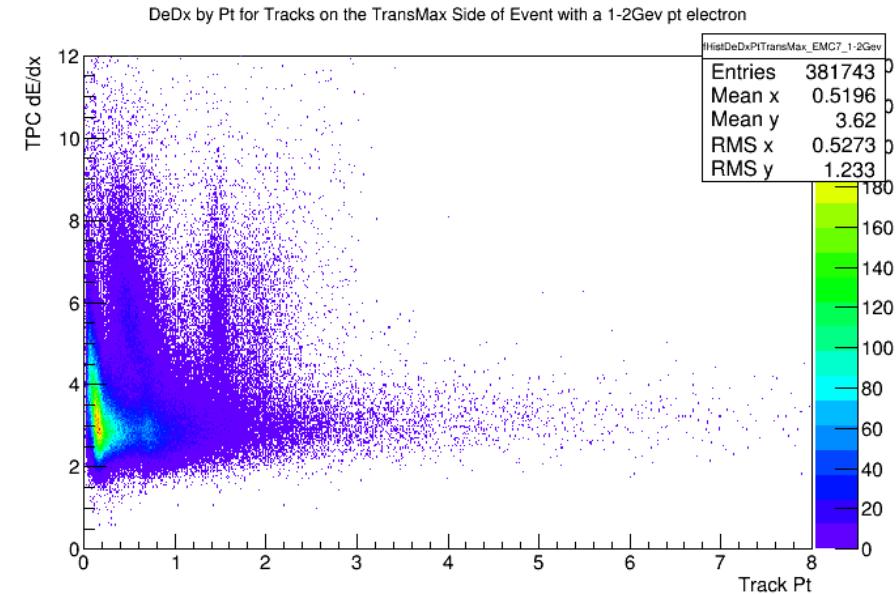
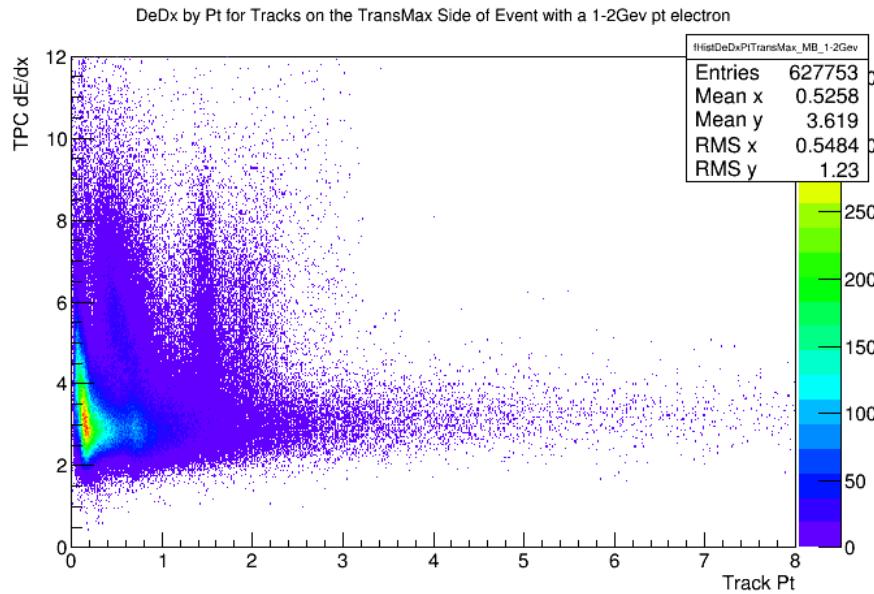


Pt Distribution of Tracks on the TransMax Side of Event with a >6Gev pt electron



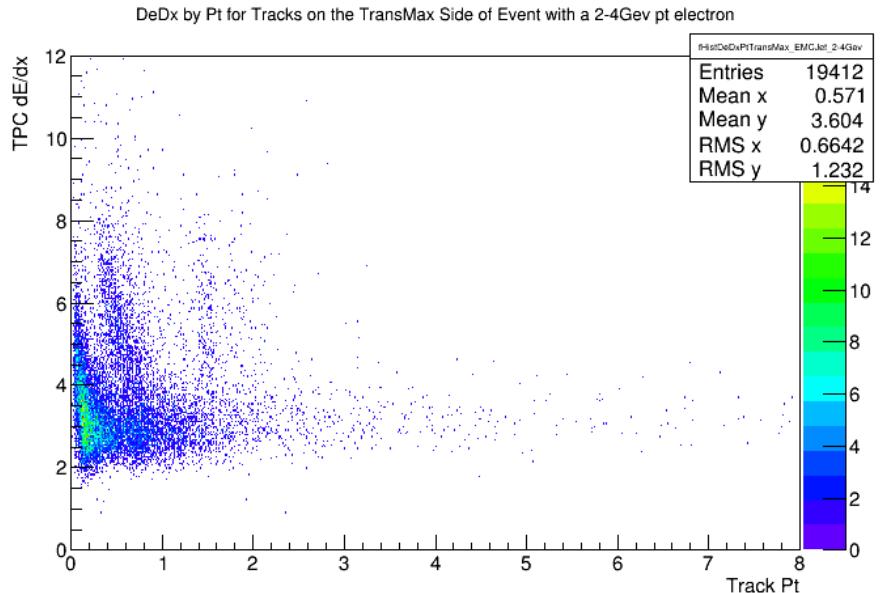
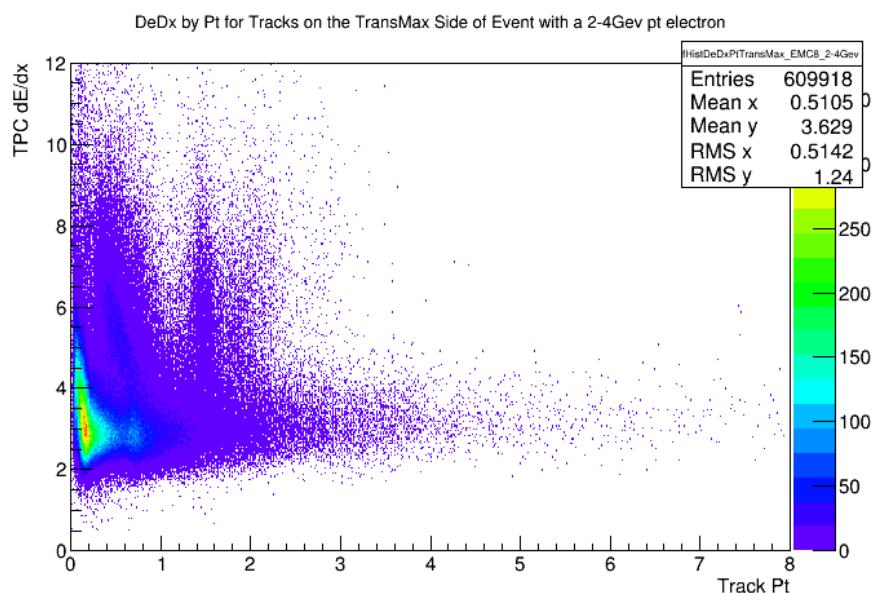
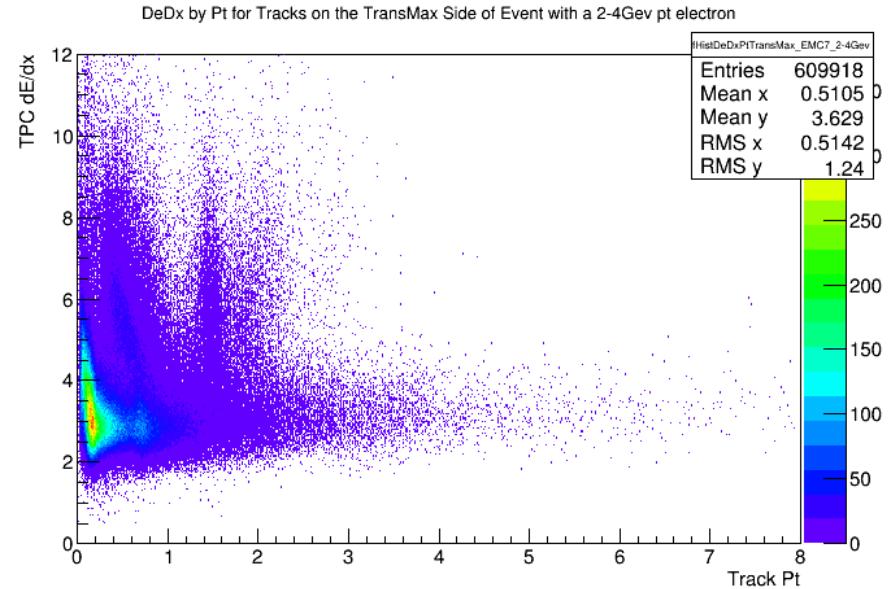
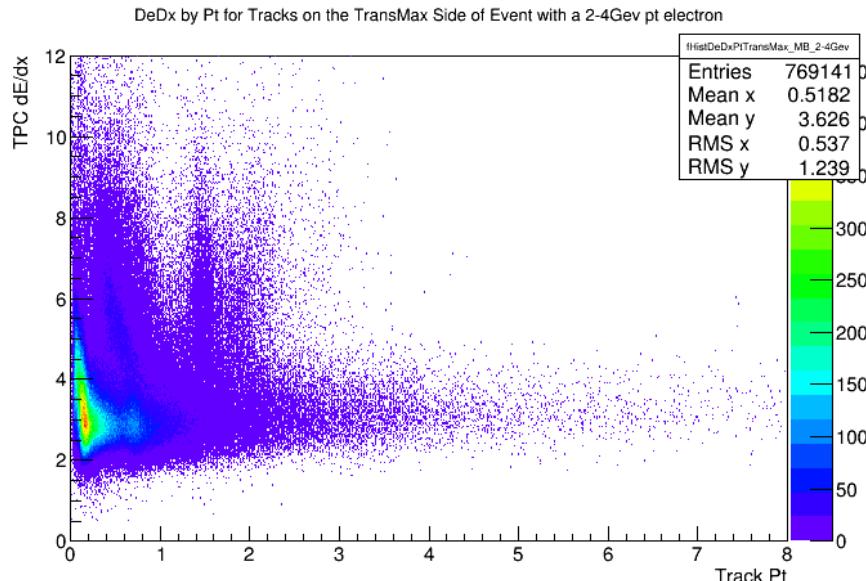
# dEdx by Pt in “transMax” region

## Cand. Pt 1-2Gev



# dEdx by Pt in “transMax” region

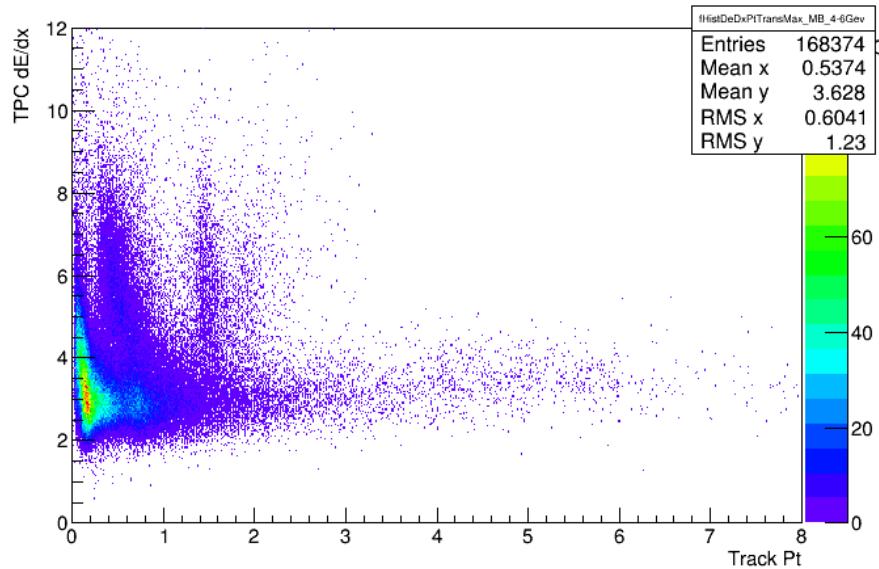
## Cand. Pt 2-4Gev



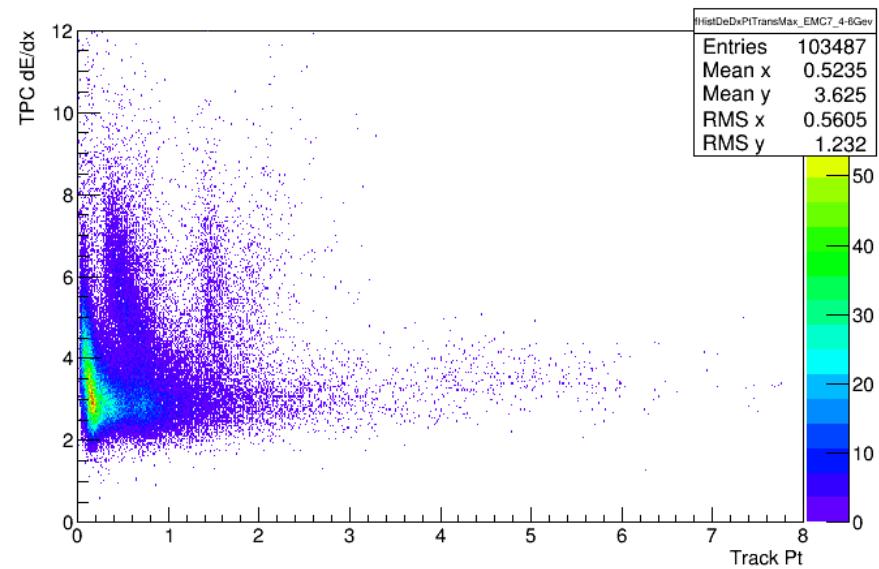
# dEdx by Pt in "transMax" region

## Cand. Pt 4-6Gev

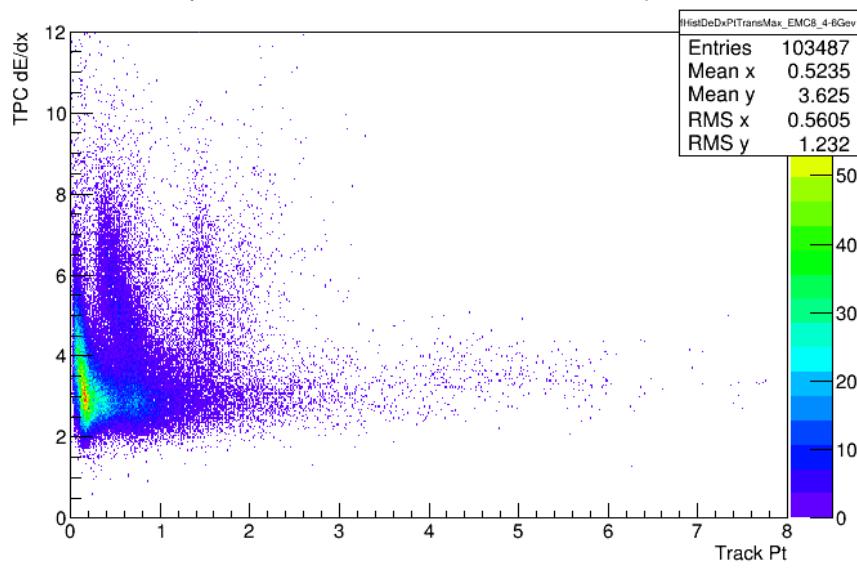
DeDx by Pt for Tracks on the TransMax Side of Event with a 4-6Gev pt electron



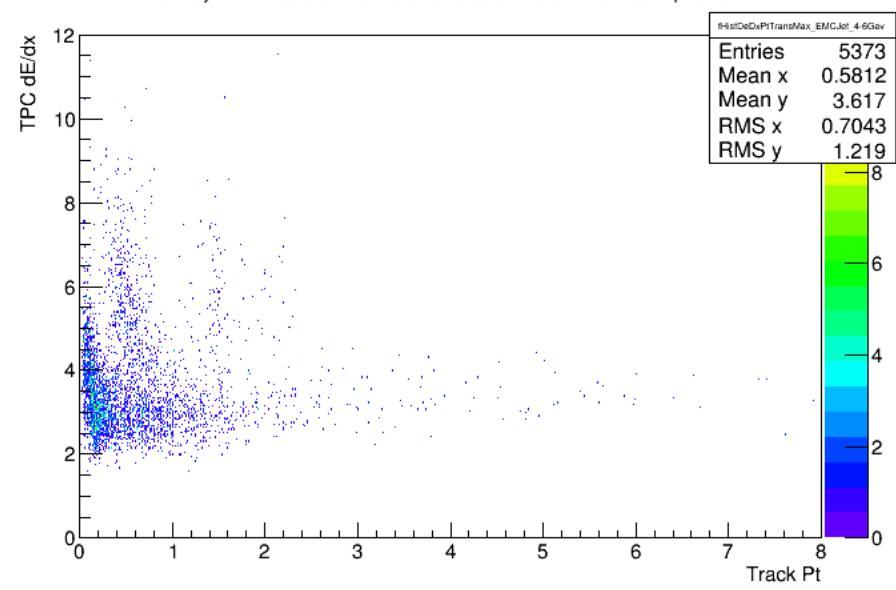
DeDx by Pt for Tracks on the TransMax Side of Event with a 4-6Gev pt electron



DeDx by Pt for Tracks on the TransMax Side of Event with a 4-6Gev pt electron



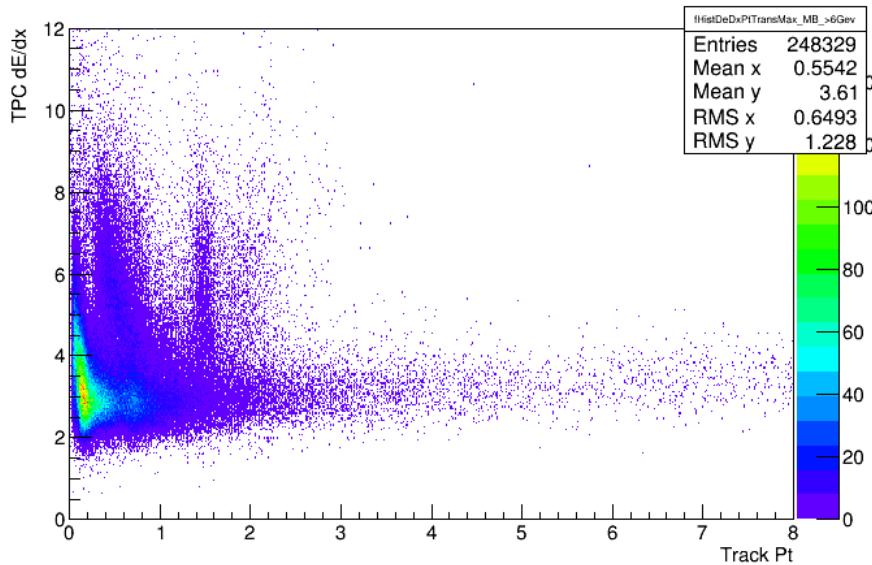
DeDx by Pt for Tracks on the TransMax Side of Event with a 4-6Gev pt electron



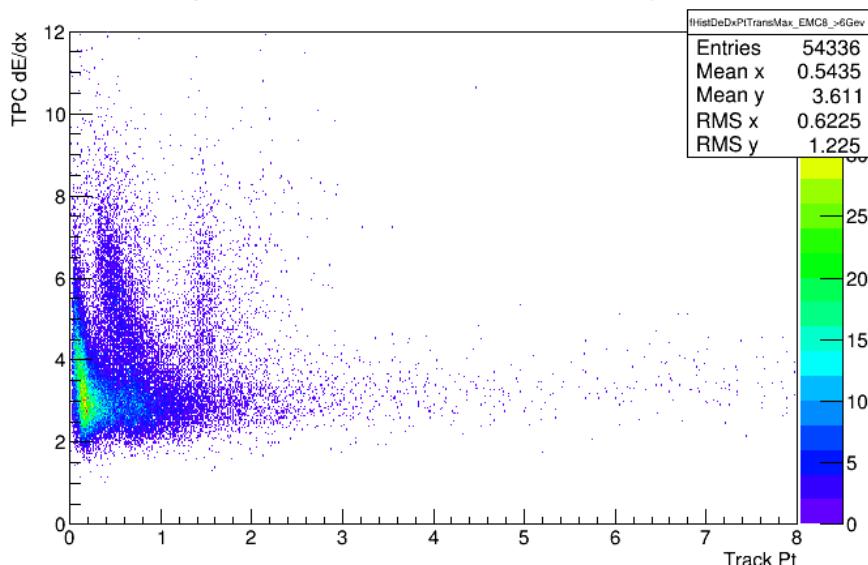
# dEdx by Pt in “transMax” region

## Cand. Pt >6Gev

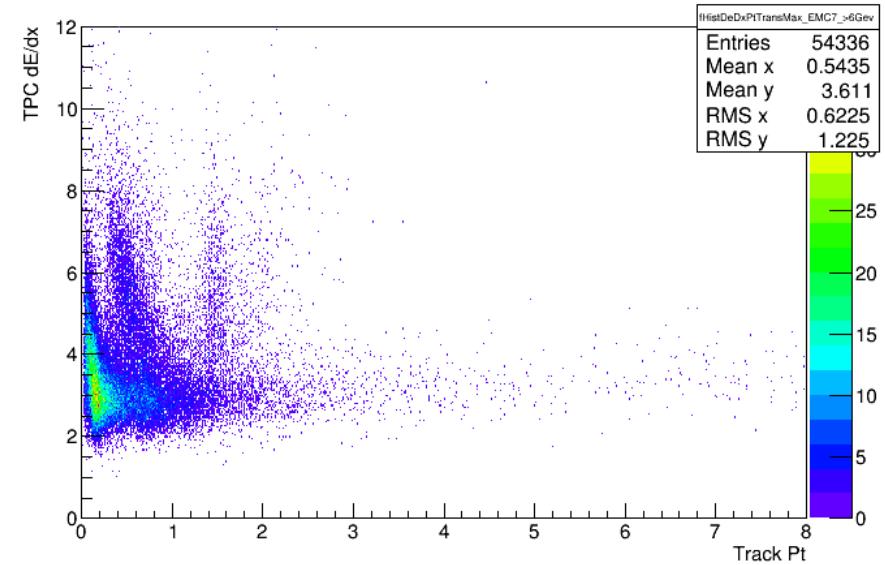
DeDx by Pt for Tracks on the TransMax Side of Event with a >6Gev pt electron



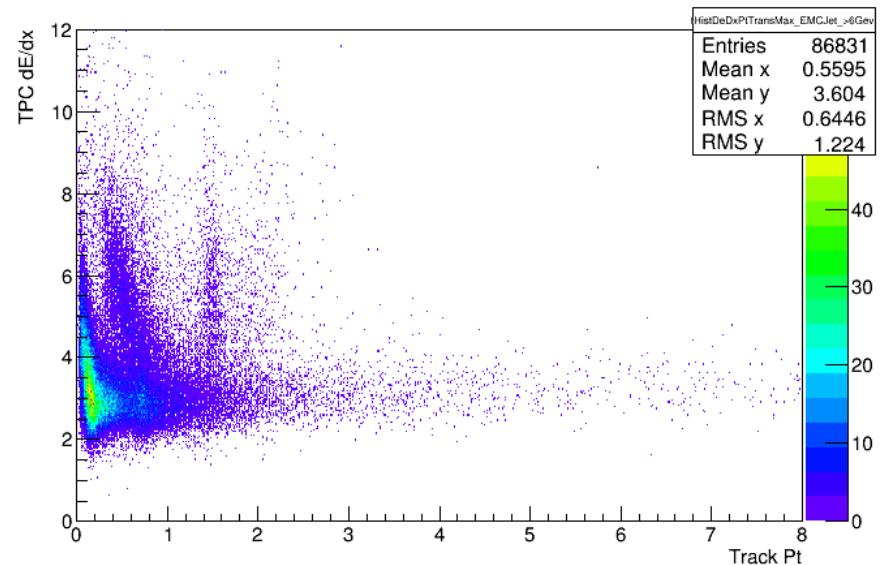
DeDx by Pt for Tracks on the TransMax Side of Event with a >6Gev pt electron



DeDx by Pt for Tracks on the TransMax Side of Event with a >6Gev pt electron



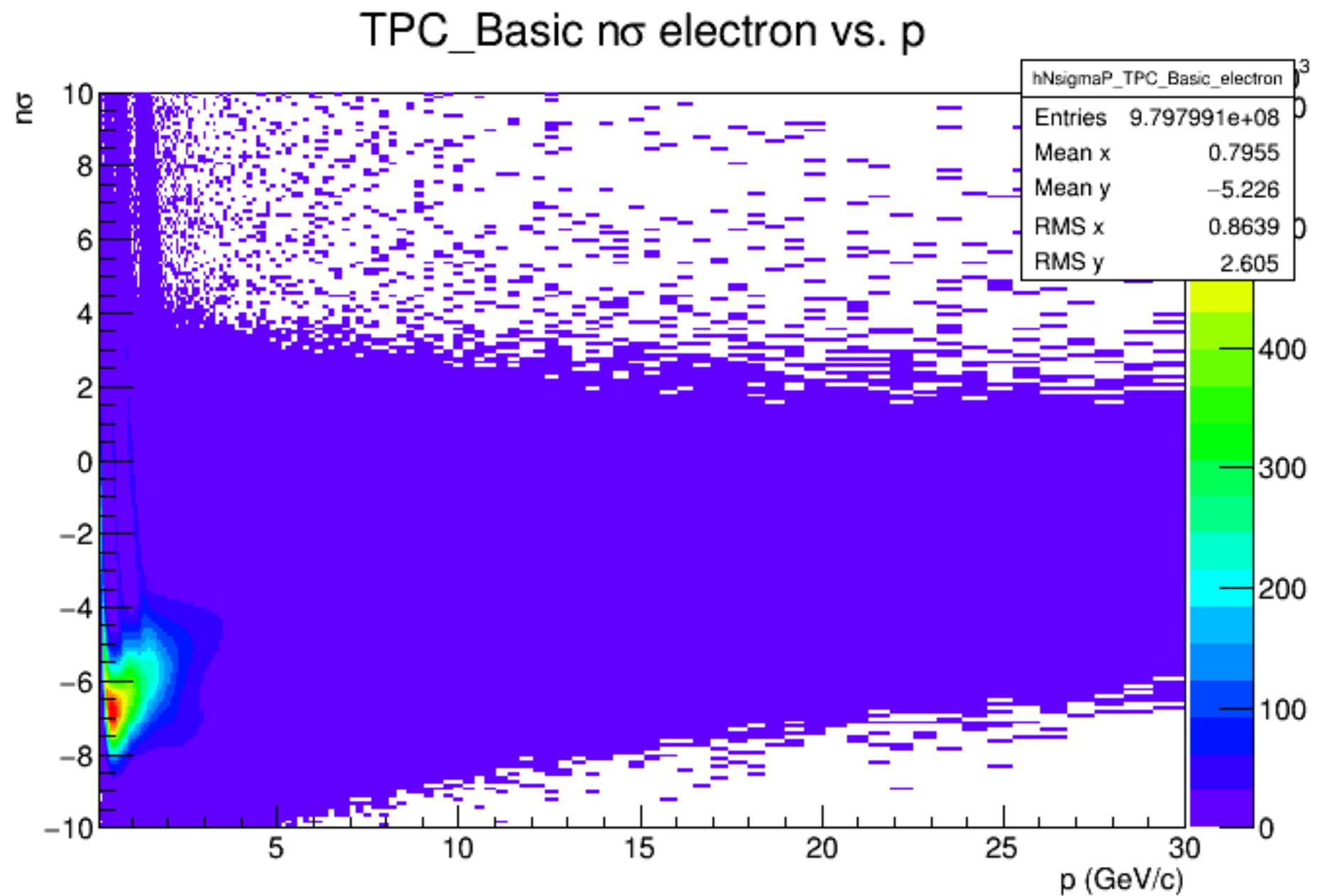
DeDx by Pt for Tracks on the TransMax Side of Event with a >6Gev pt electron



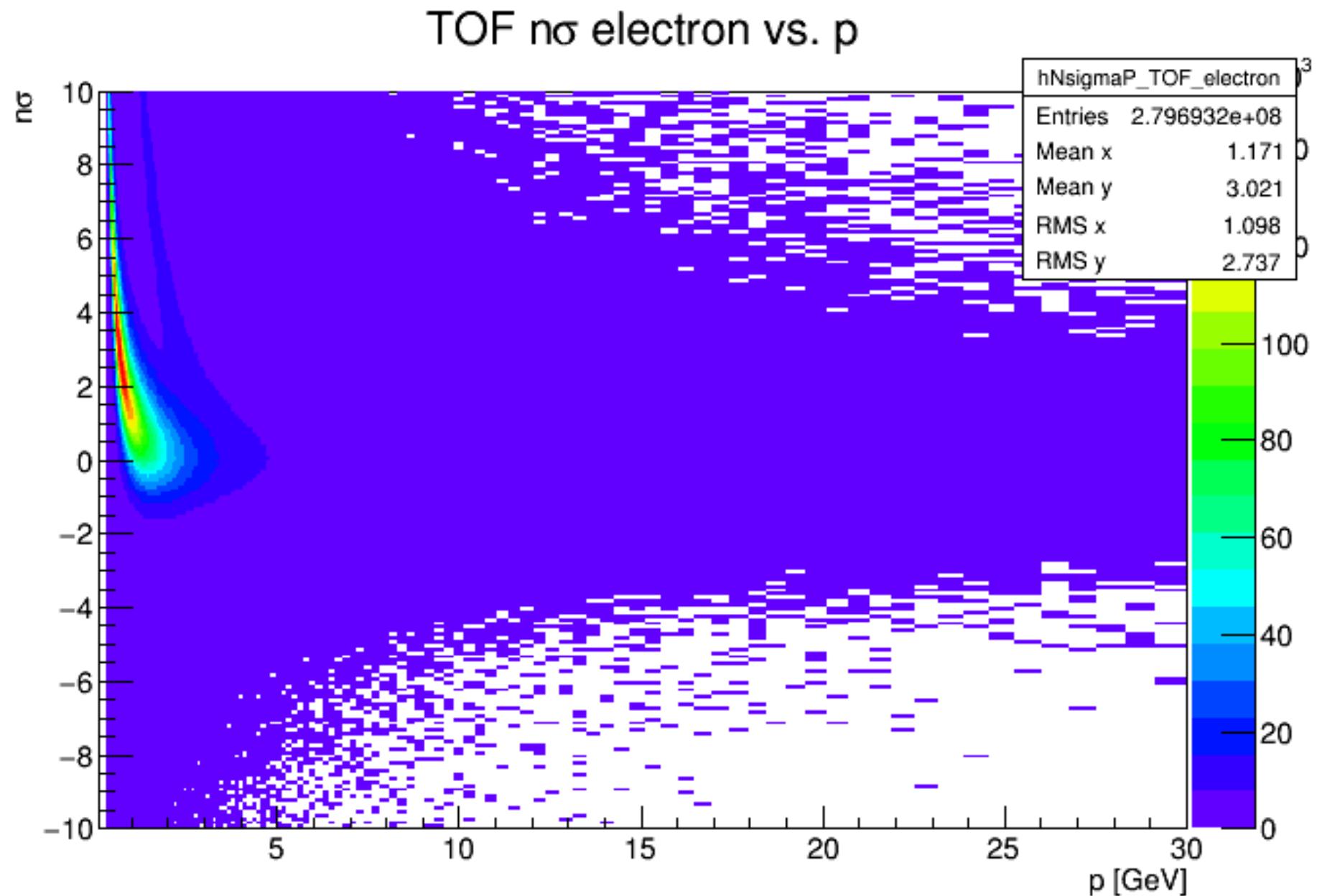
# Extras

The next few slides are the output of the PID qa task which may be useful as a baseline for the events. The reason that they are so much more full is that they represent every track in every min-bias event. The PID plots that I have created above are subject to stringent track cuts and a 1Gev Pt minimum.

# TPC PIDqa nSigma for electron

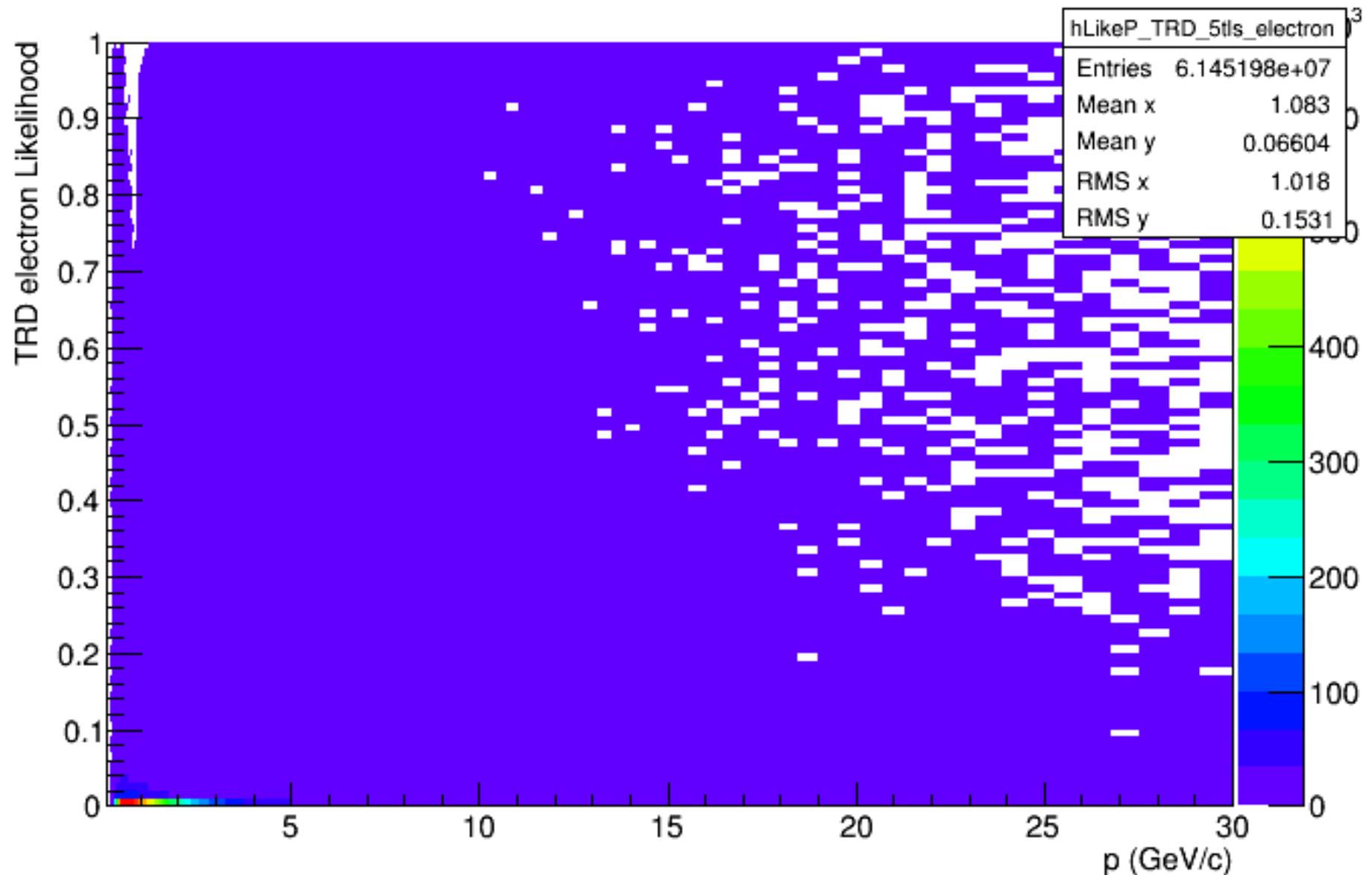


# TOF PIDqa nSigma for electrons



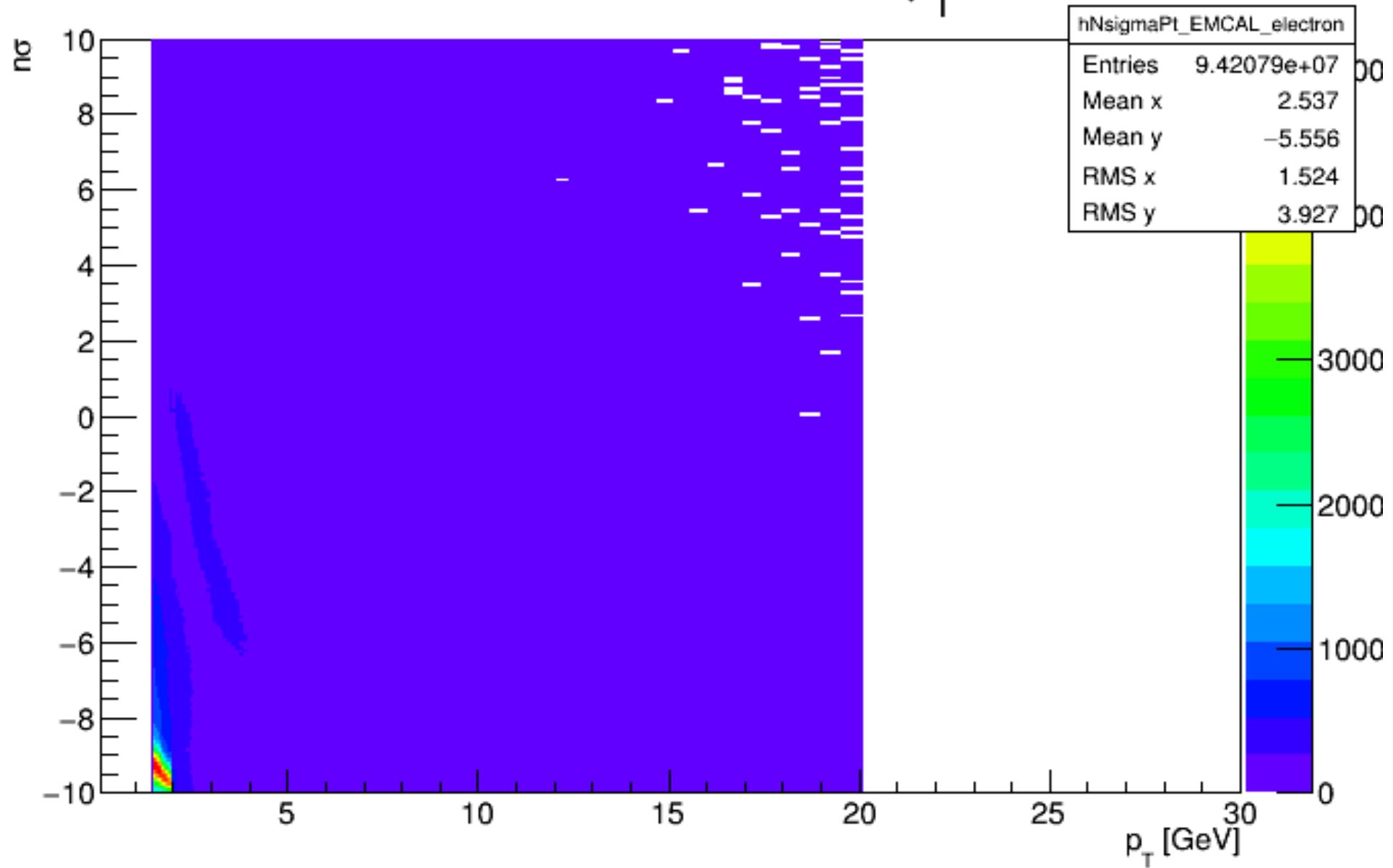
# TRD PIDqa electron likelihood

TRD Likelihood to be an electron for tracks having 6 tracklets



# EMCal PIDqa plots

EMCAL  $n\sigma$  electron vs.  $p_T$



# Number of Events with a candidate

