QA for High pT

Pedro Podesta ICN-UNAM

Sample Description

Software Version:

- Aliroot head
- Root v5-13-04
- Geant v1-6

Generation:

- AliGen Box
- Flat Distribution in Total Momentum
- 300 Kaon, pion, protons per event
- 900 events
- gener->SetOrigin(0.0, 0.0, 0.0) ;
- gener->SetSigma(0.01, 0.01, 5.3) ;
- Force no decay
- Phi range (0,360)
- Eta (-0.9,0.9)
- Magnetic field k5kG;

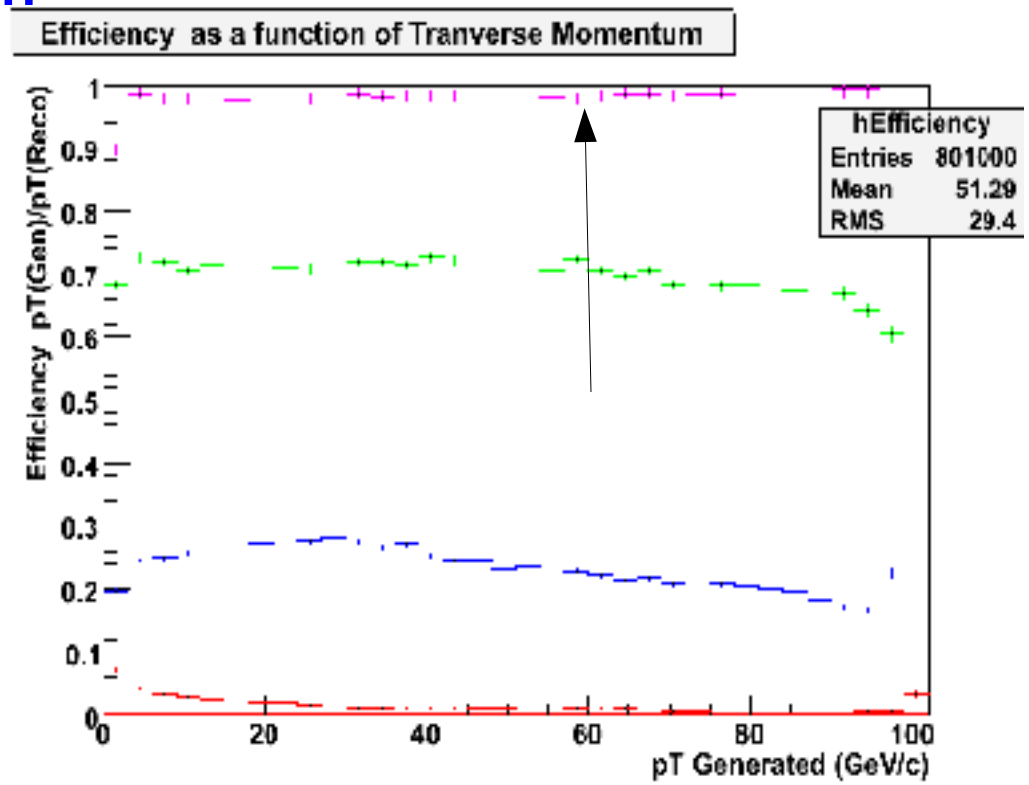
Recontruction:

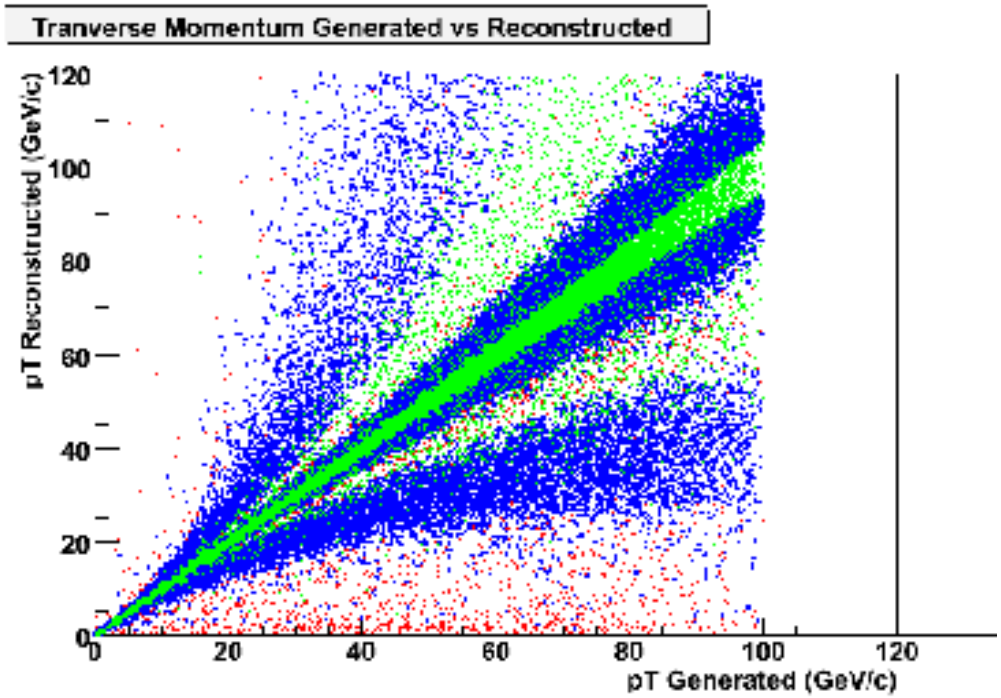
ITS and TPC to save time.

Defaults cuts:

- ITSRefit
- TPCRefit
- No kink particles

No cuts





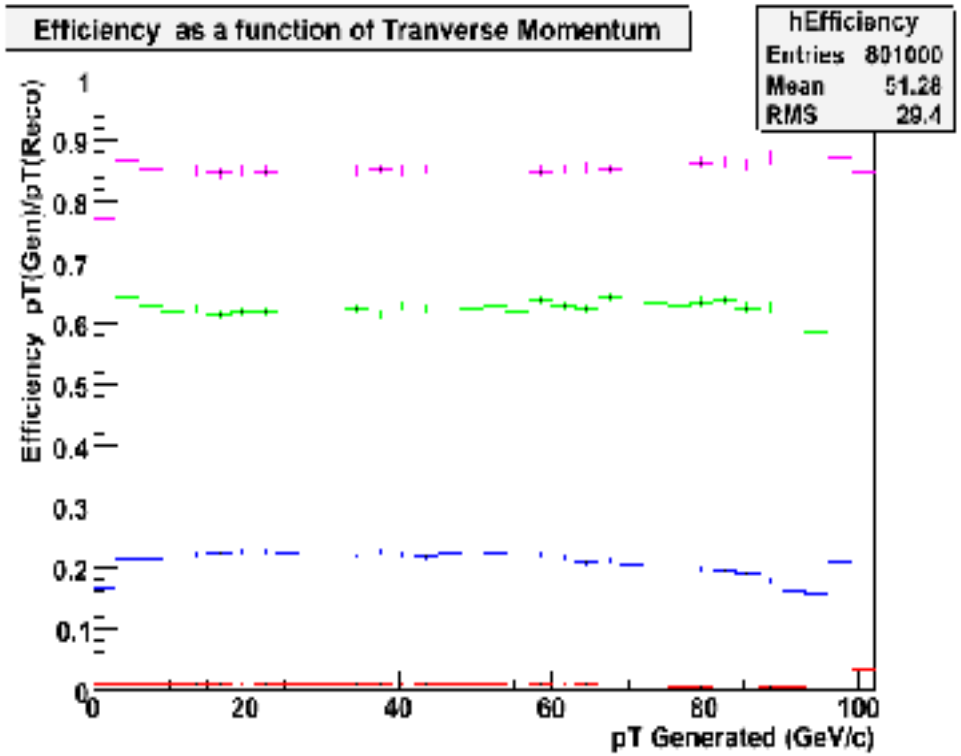
Efficiency and pT recontructed vs generated, Separation based in pulls of Pull = (1/pT(Reco)- 1/pT(Gen)/Err (1/pT))

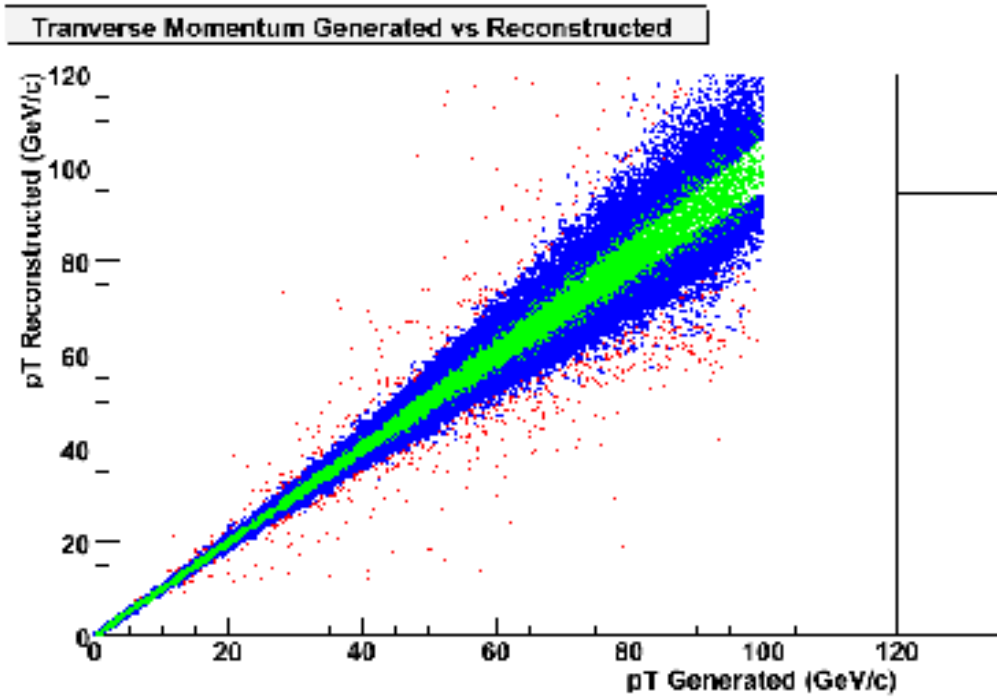
Green : Pull < 1.0

Blue : Pull < 3.0

Red ones : Pull >3.0

ITS TPC and 1/pT(REC)/ Err(1/ptRec) < 3*F(1/pT)





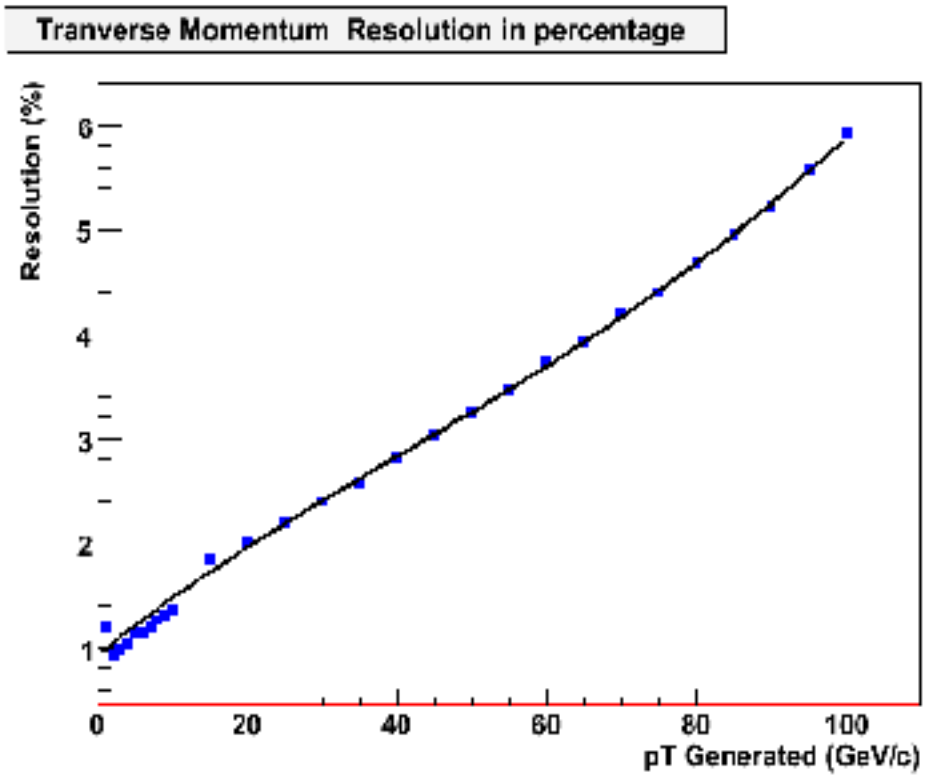
Efficiency and pT recontructed vs generated, Separation based in pulls of Pull = (1/pT(Reco)- 1/pT(Gen)/Err (1/pT))

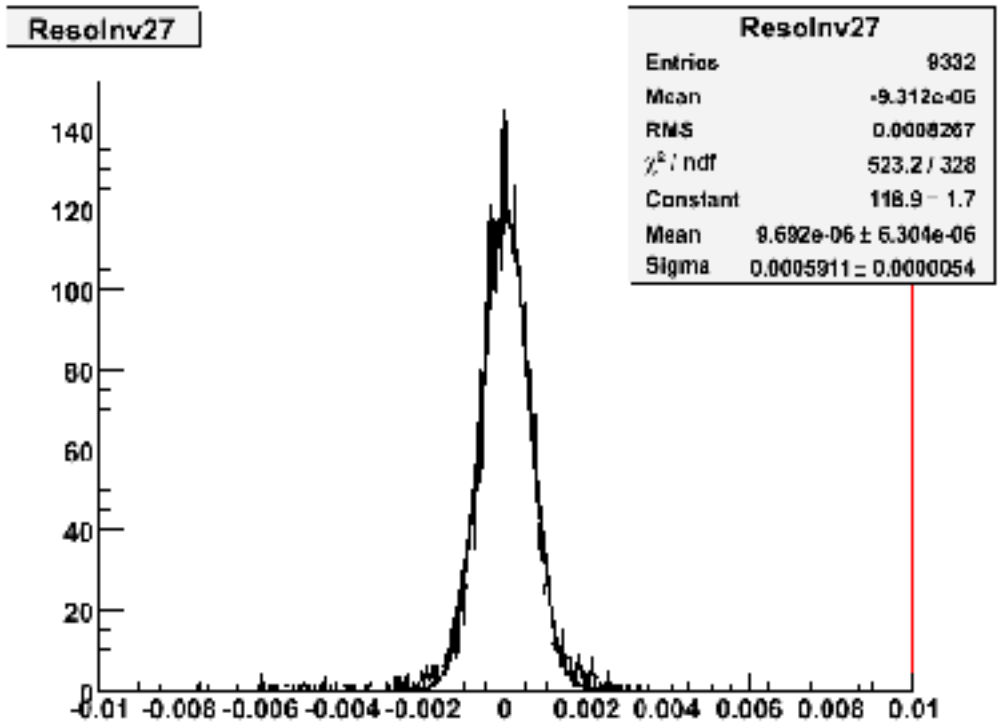
Green : Pull < 1.0

Blue : Pull < 3.0

Red ones : Pull >3.0 (This represent the problem)

Calculation F(1/pT)





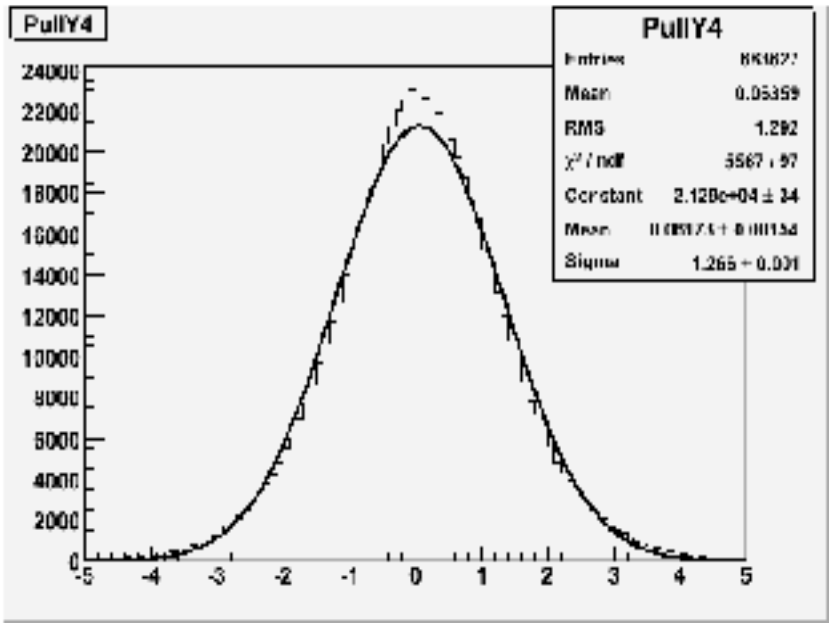
Make the resolution function in bin of pT but using the 1/pT

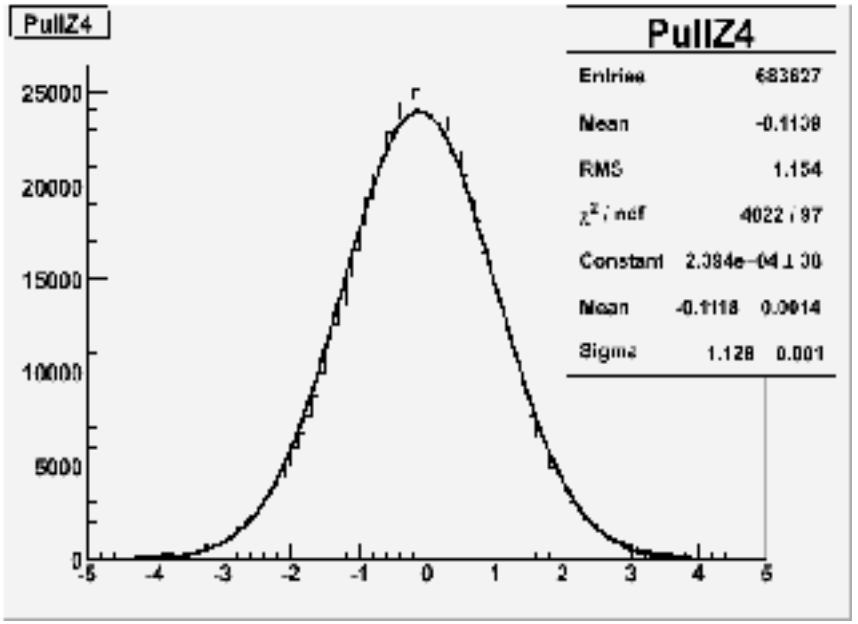
Res = (1/pT(Gen)- 1/pT(Rec))

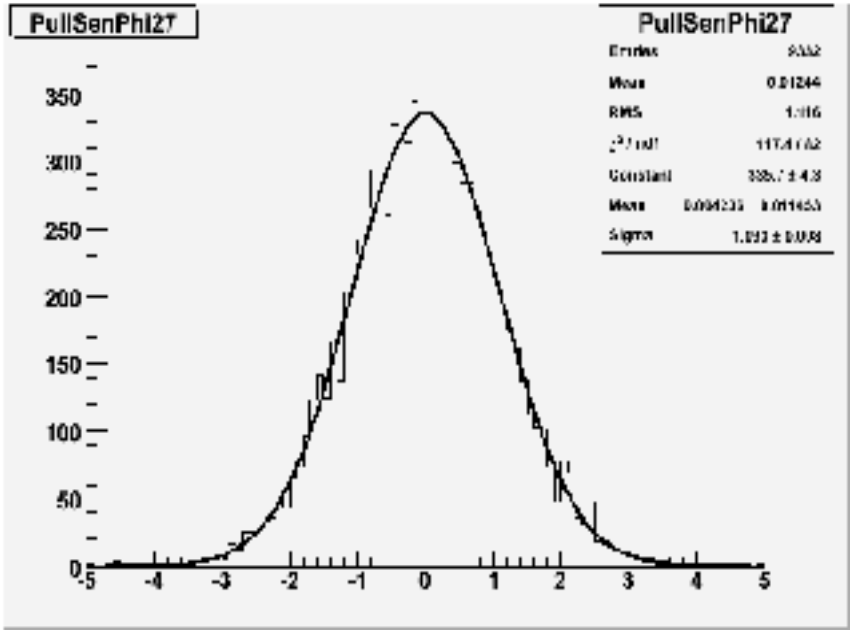
pT= 95 ; 1/pT = 0.0105263

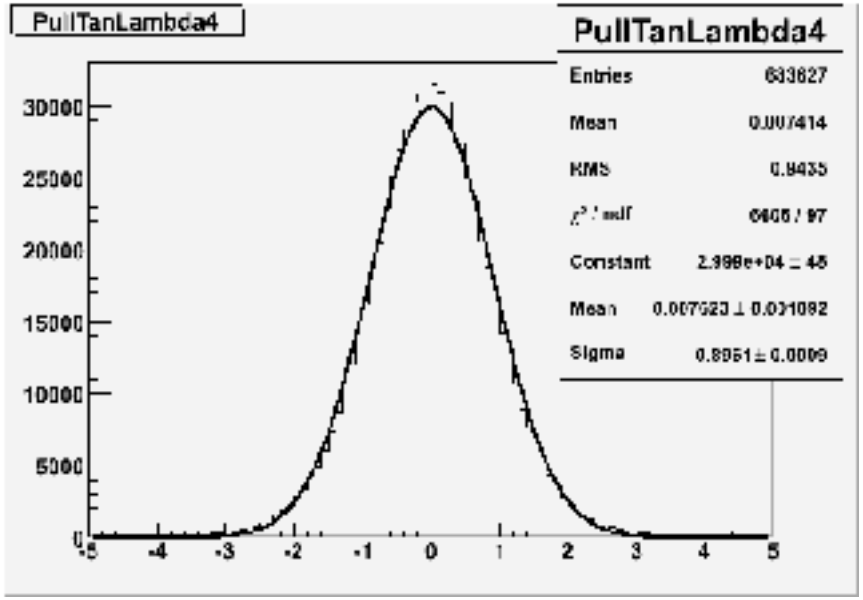
%F(pT) = sigma(1/pT)*(pT) *100 = 5.57364

Pull for diferents pT(Bin) 0-100 for all parameters









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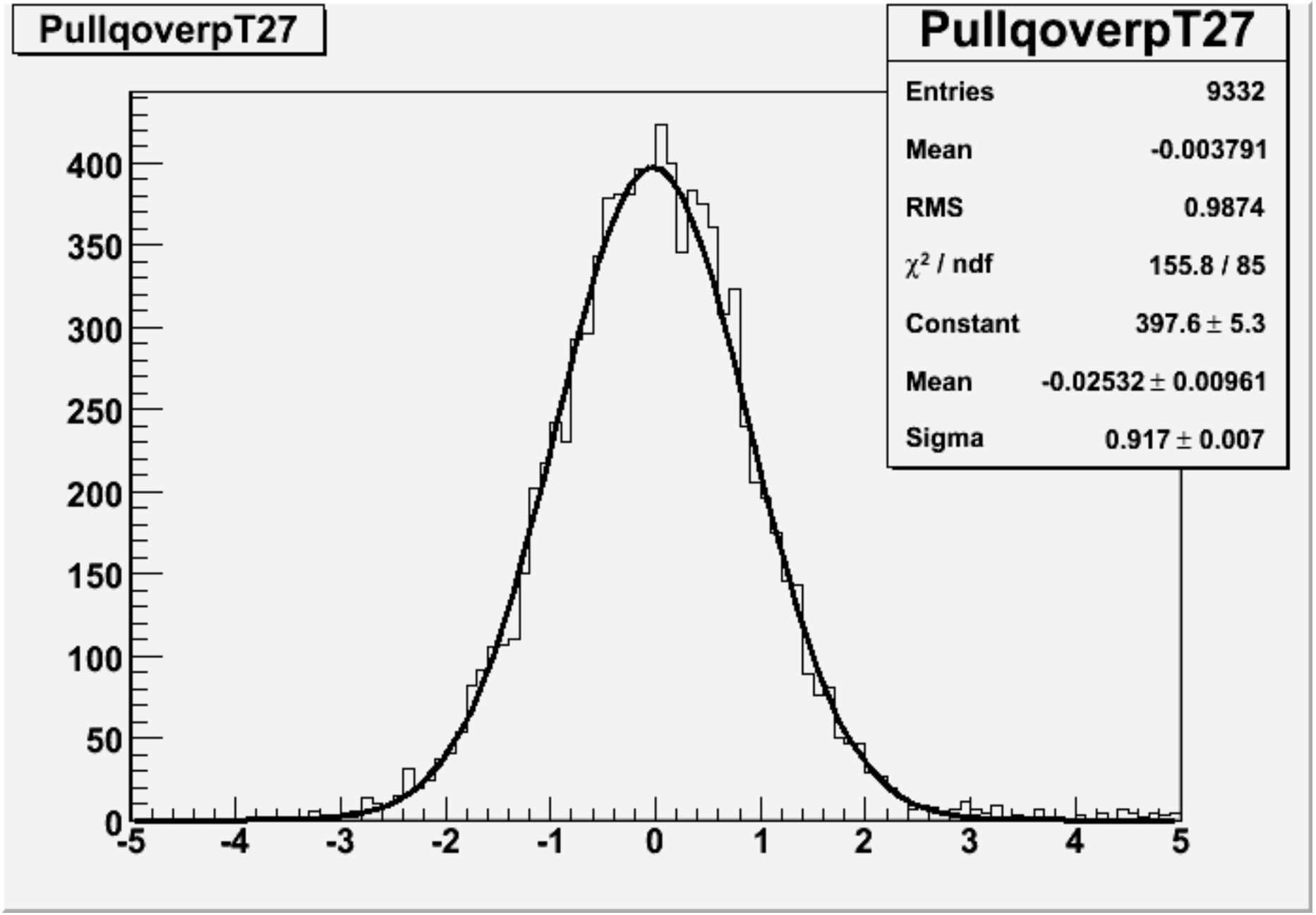

To do:

Cut in the significance for all other parameter for this make the resolution in all the other an study the correlations.

Use vertex contsraint for DCA.

Make a contamination table the idea is to measure the quantity of tracks that migrate from on pT region to other an can not be accounted for from his error in pT.

Once the table is done use a realistic pT distribution.