sPHENIX TPC software meeting 17th November 2016

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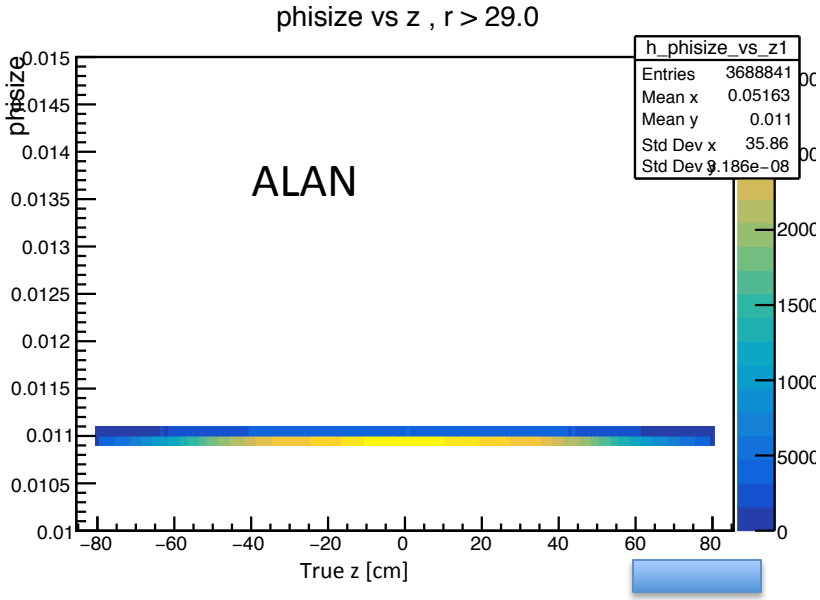
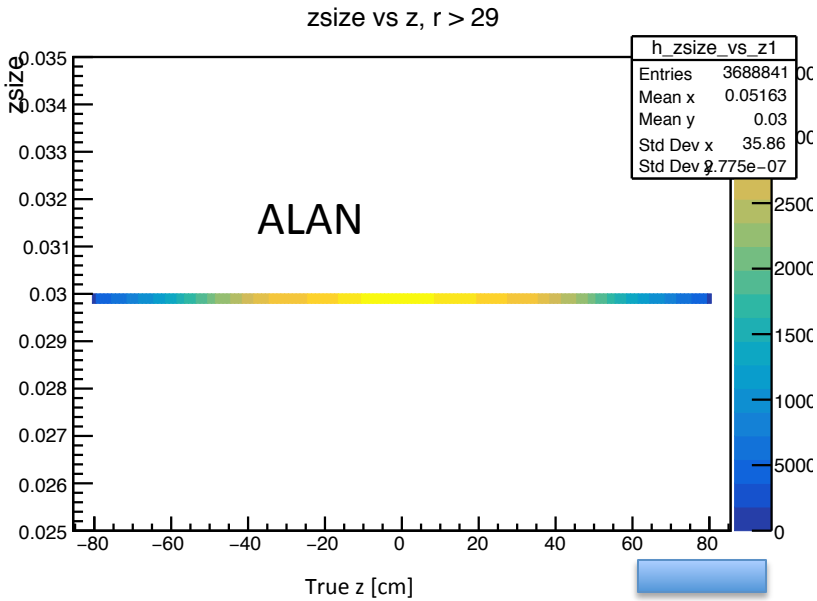
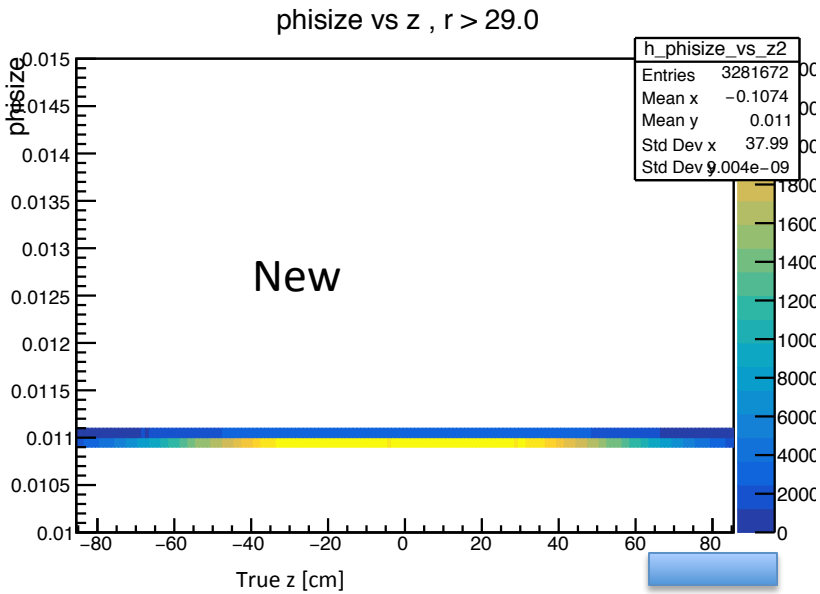
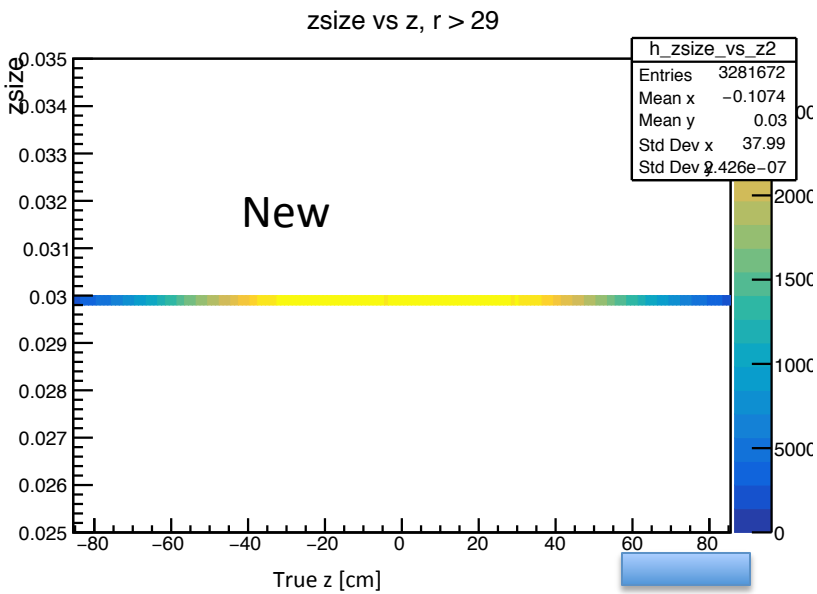
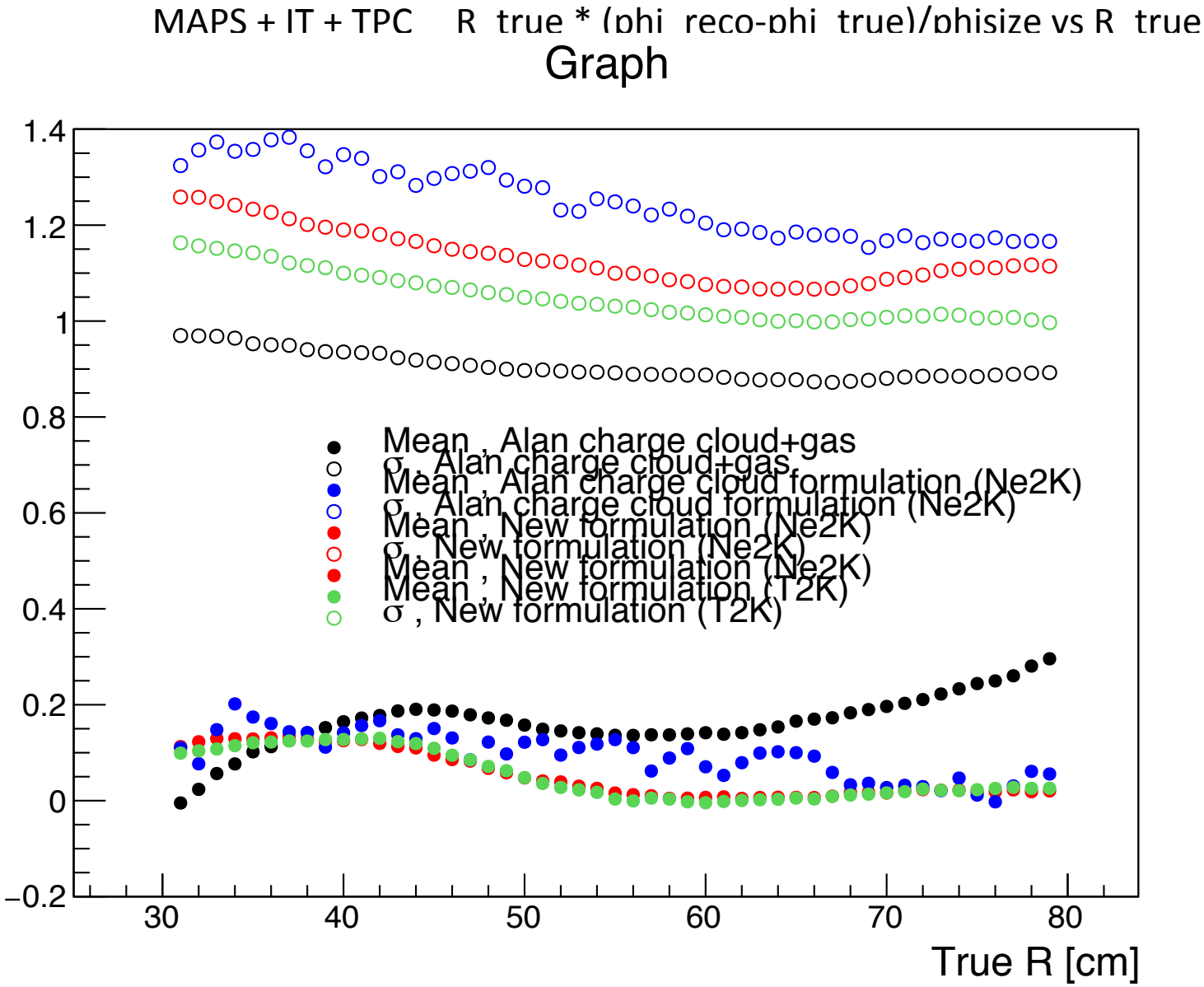
MAPS+IT+TPC


phisize vs z , r > 29.0
h_phisize_vs_z1
Entries 3688841
Mean x 0.05163
Mean y 0.011
Std Dev x 35.86
Std Dev y 3.186e−08
ALAN
phisize
True z [cm]

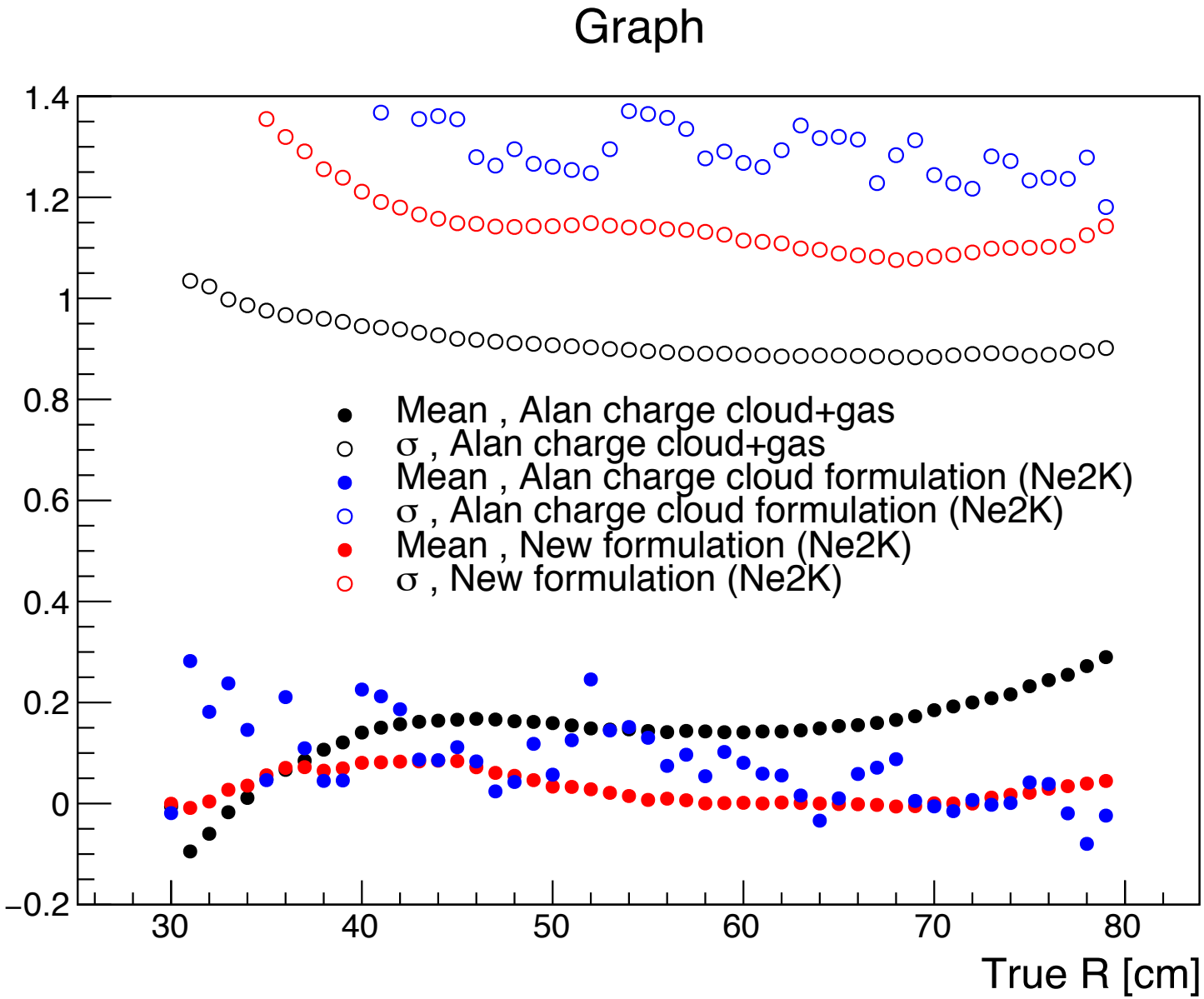

zsize vs z, r > 29
h_zsize_vs_z1
Entries 3688841
Mean x 0.05163
Mean y 0.03
Std Dev x 35.86
Std Dev y 2.775e−07
ALAN
zsize
True z [cm]


phisize vs z , r > 29.0
h_phisize_vs_z2
Entries 3281672
Mean x −0.1074
Mean y 0.011
Std Dev x 37.99
Std Dev y 9.004e−09
New
phisize
True z [cm]

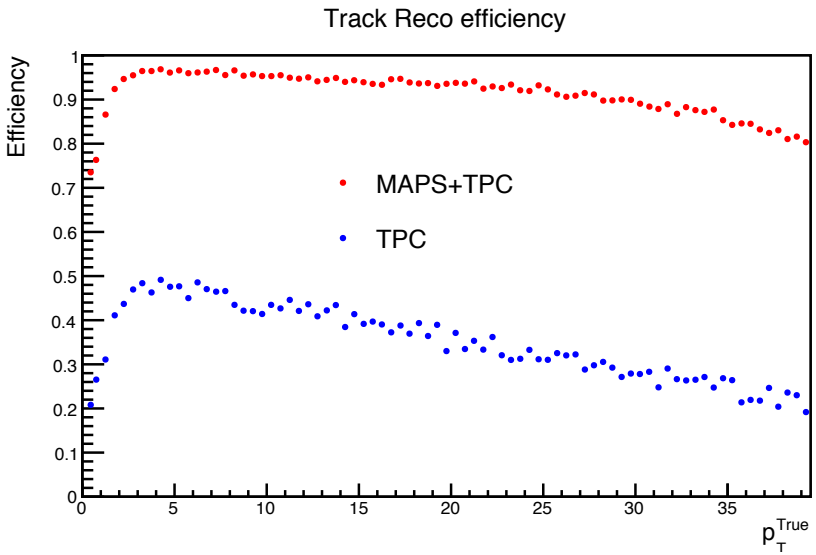

zsize vs z, r > 29
h_zsize_vs_z2
Entries 3281672
Mean x −0.1074
Mean y 0.03
Std Dev x 37.99
Std Dev y 2.426e−07
New
zsize
True z [cm]

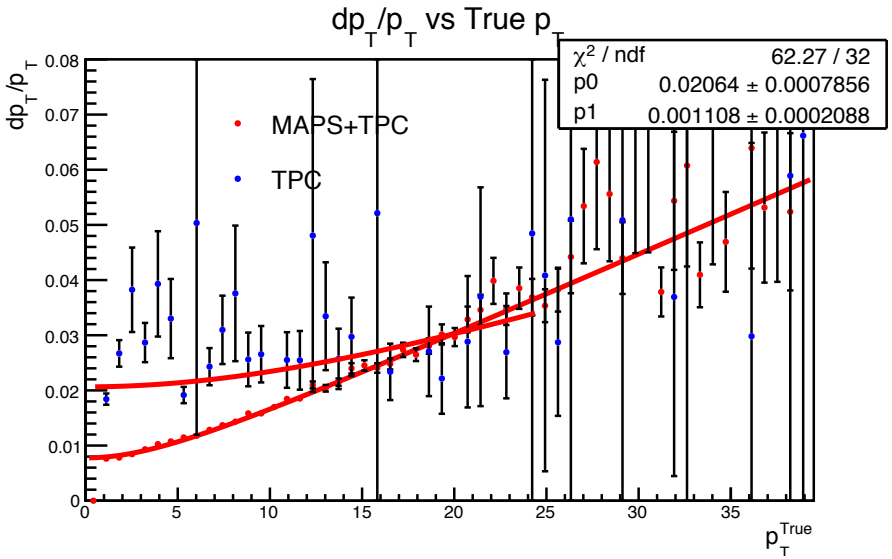

MAPS + IT + TPC R_true * (phi_reco-phi_true)/phisize vs R_true
Graph
1.4
1.2
1
0.8
0.6
0.4
0.2
0
−0.2
30
40
50
60
70
80
True R [cm]
Mean , Alan charge cloud+gas
σ , Alan charge cloud+gas
Mean , Alan charge cloud formulation (Ne2K)
σ , Alan charge cloud formulation (Ne2K)
Mean , New formulation (Ne2K)
σ , New formulation (Ne2K)
Mean , New formulation (Ne2K)
Mean , New formulation (T2K)
σ , New formulation (T2K)

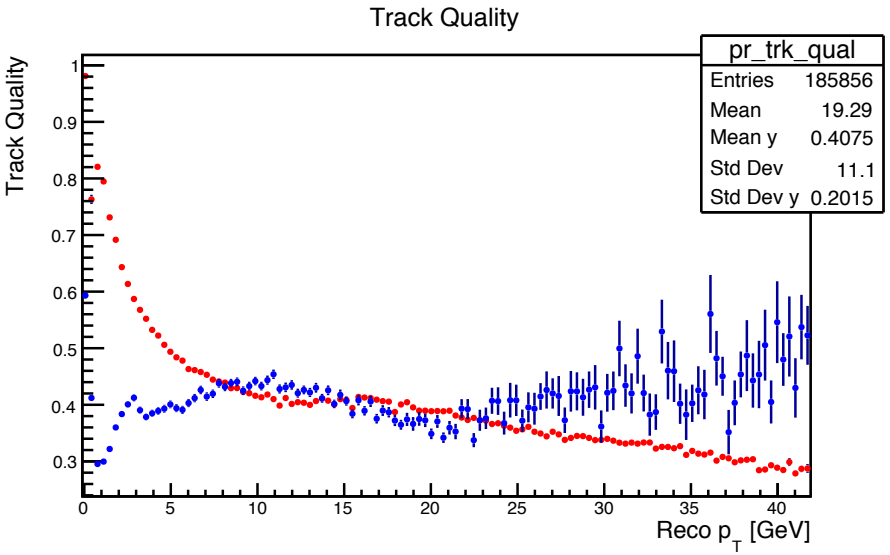
MAPS + TPC R_true * (phi_reco-phi_true)/phisize vs R_true

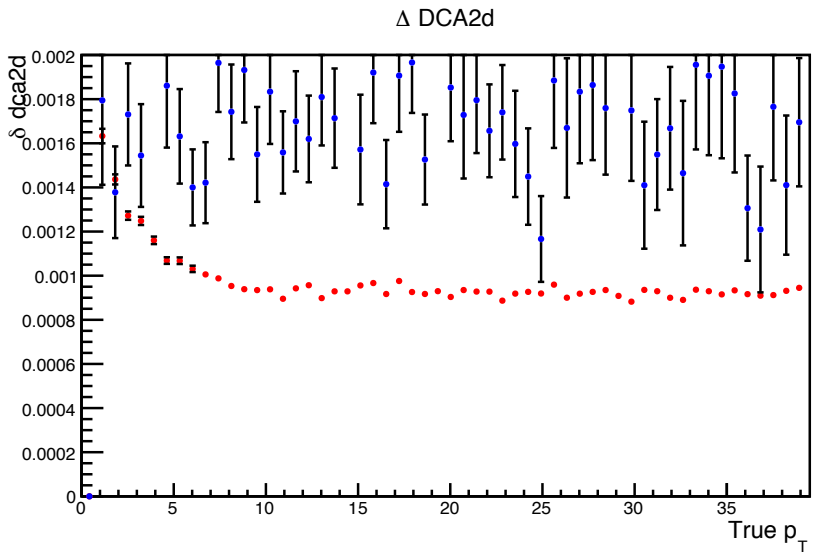


MAPS+TPC vs TPC only

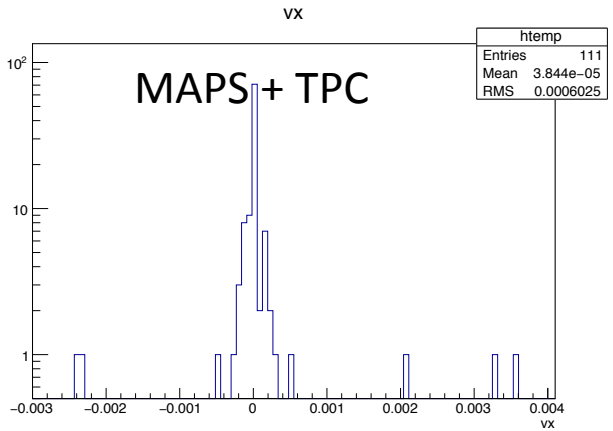


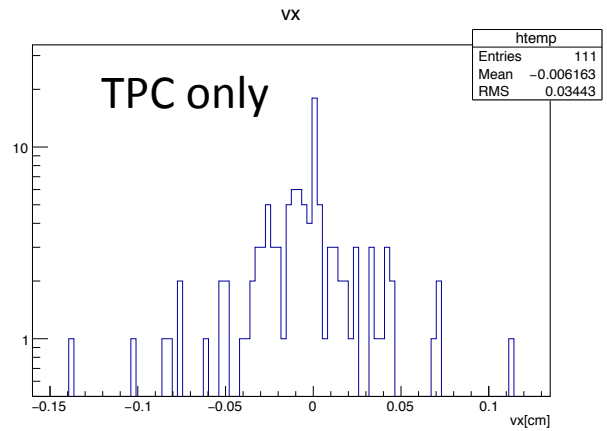


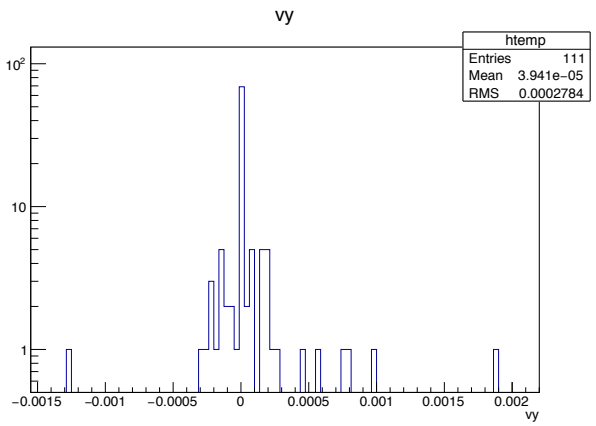


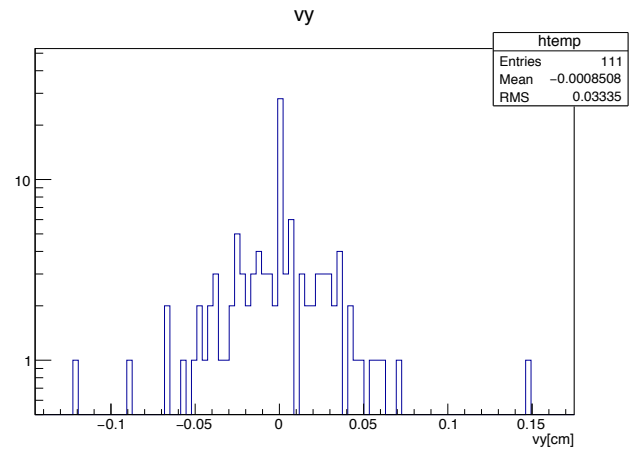


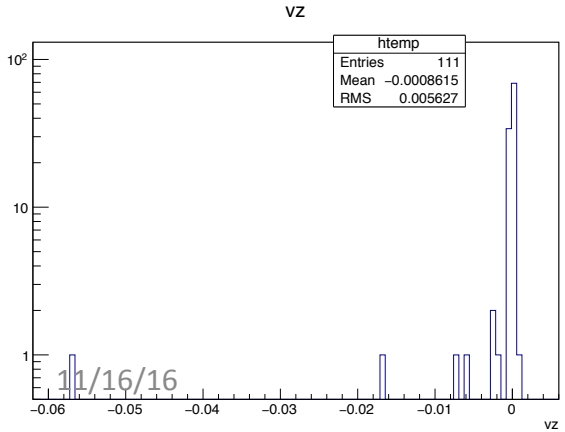
Reconstructed vertex distribution (MAPS+TPC vs TPC only)

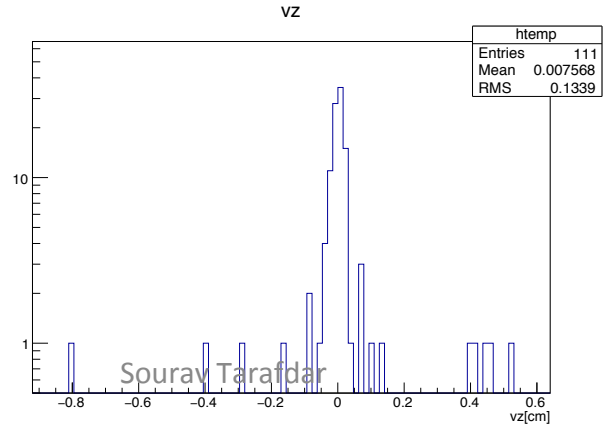


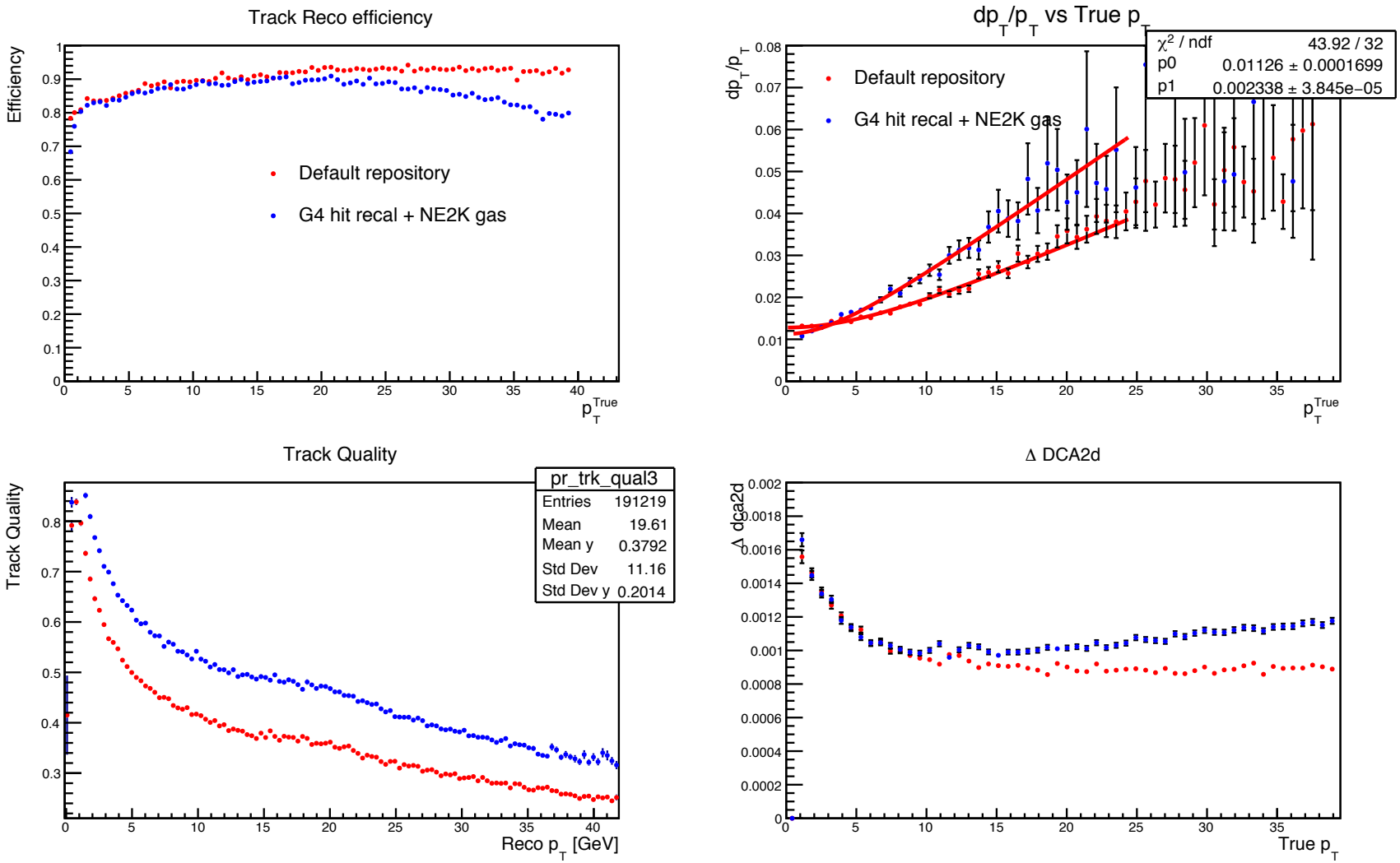










- Pions with vertex (0,0,0) embedded in Hijing.
- Without MAPS improper vertex reconstruction with the current software.
- Require more indepth modification of tracking software for having standalone TPC reconstruction software.

Recalibrated G4 hit + Ne2K gas