sPHENIX TPC software meeting 26th January 2017

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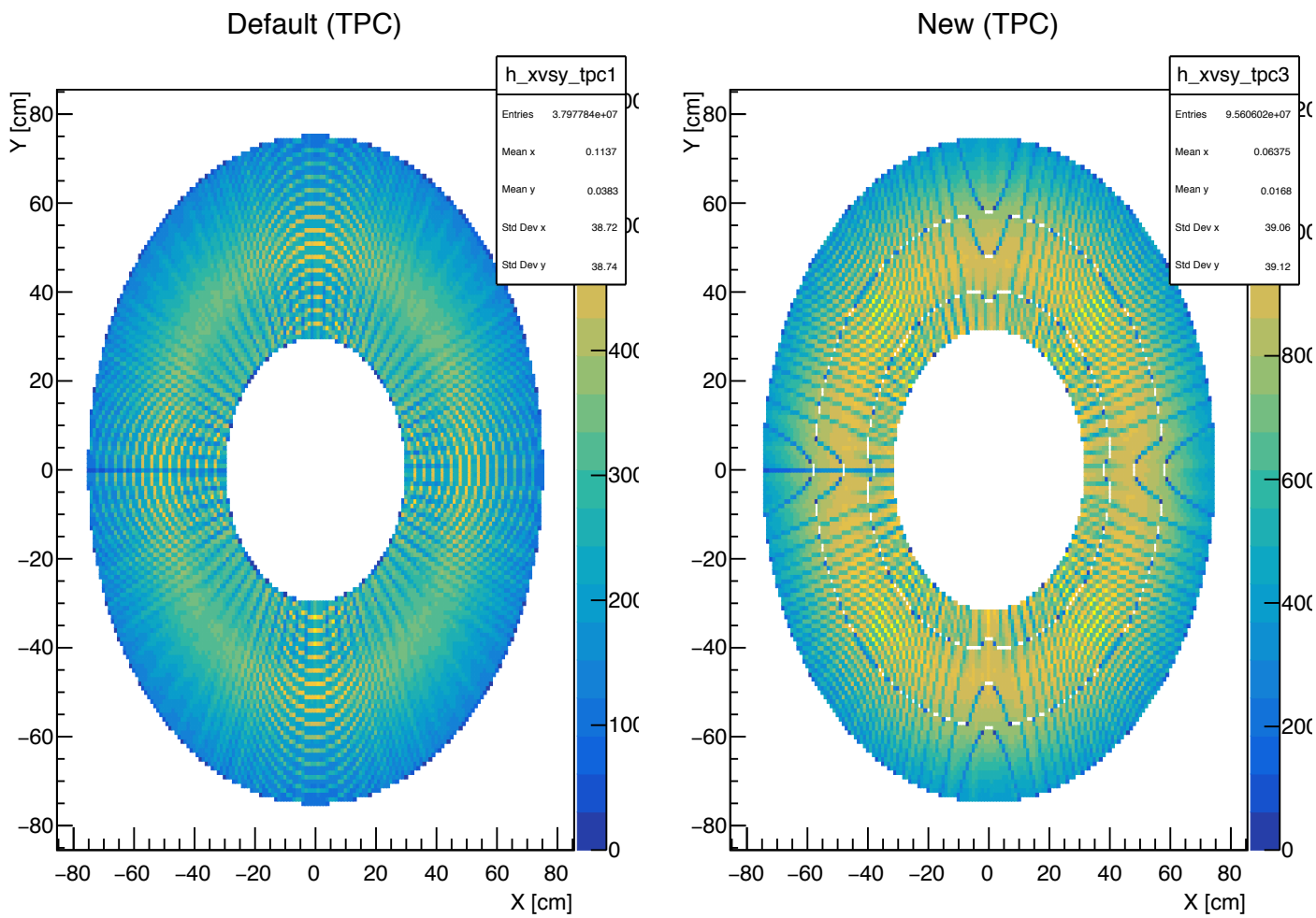
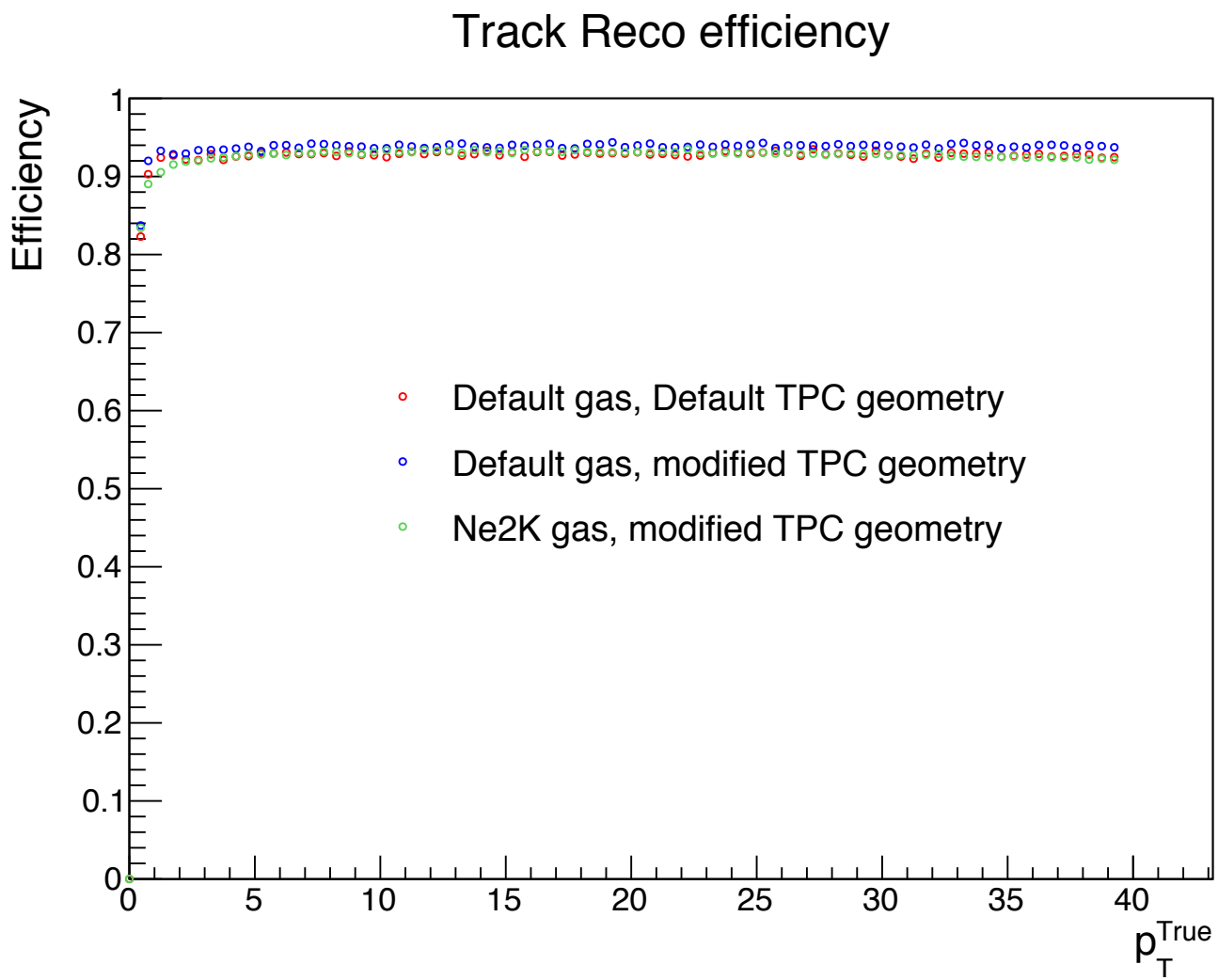
TPC hit distribution (old vs new geometry), pure pions



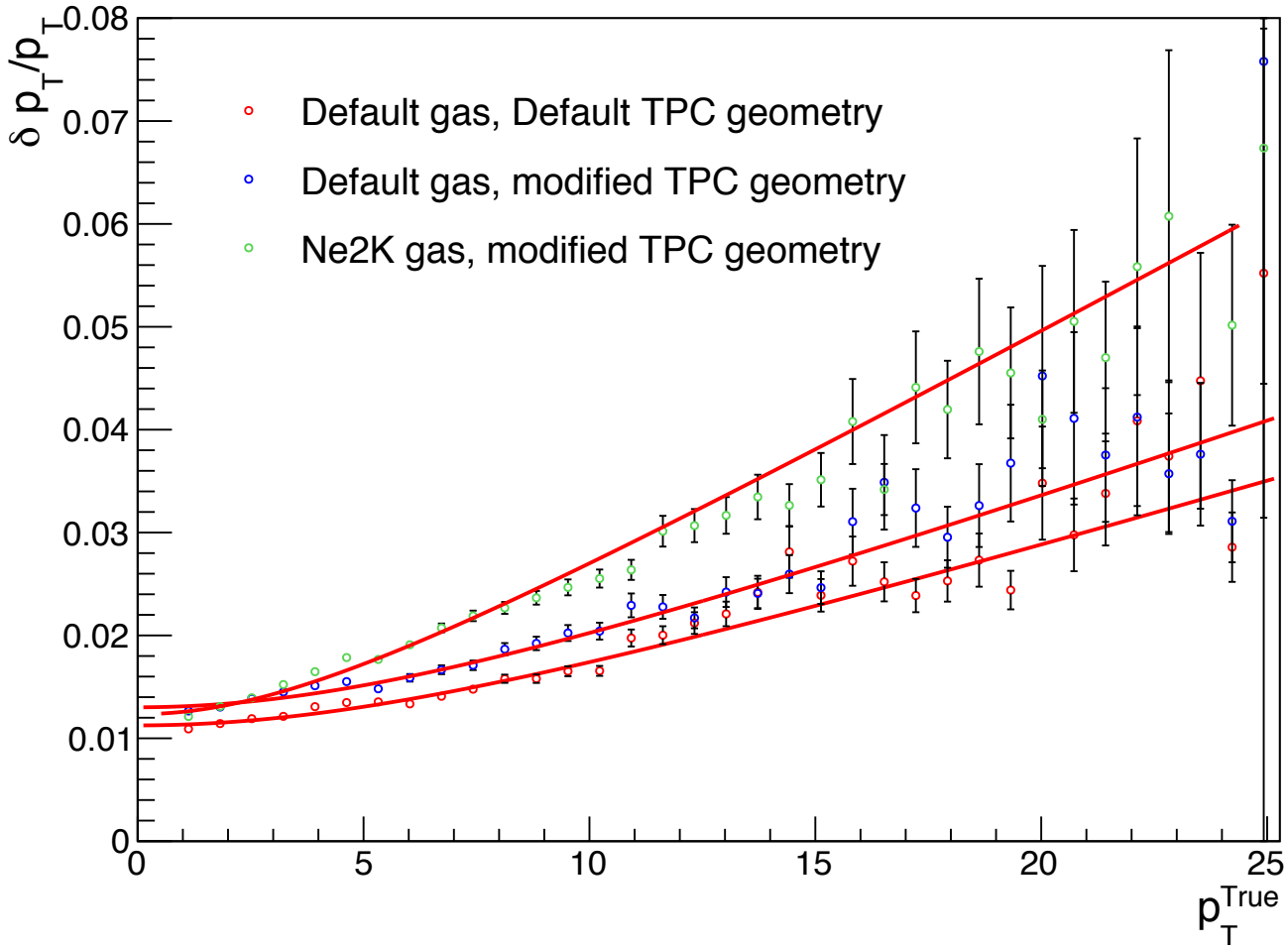
Track reconstruction efficiency for pure pions without space charge for different TPC geometry [MAPS(3) + INTT (4) + TPC (40)] and gas



- No such observable difference in track reconstruction efficiency.

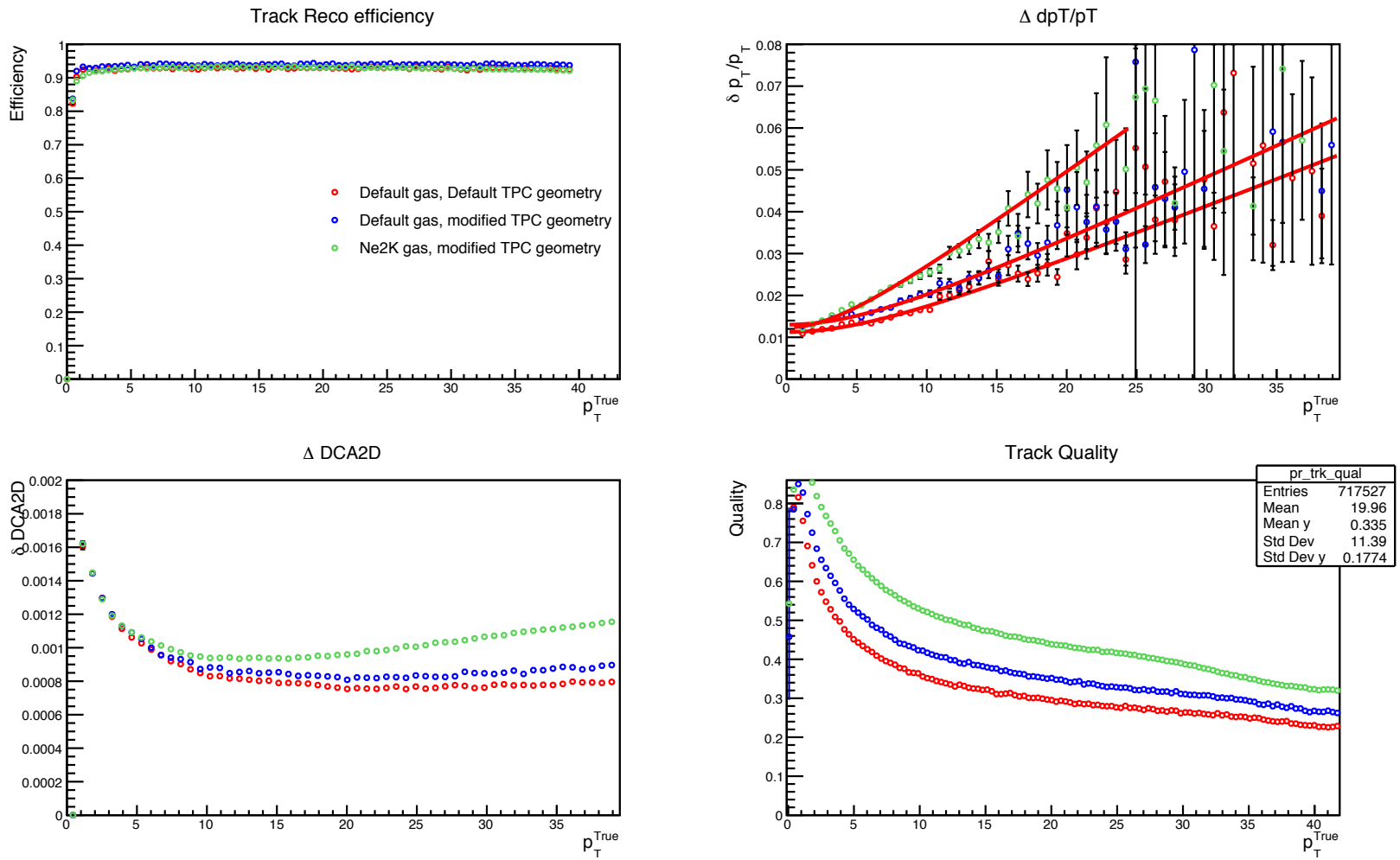
pT resolution for pure pions without space charge for different TPC geometry [MAPS(3) + INTT (4) + TPC (40)] and gas

Δ dpT/pT



- Change in pT resolution with change in TPC gas
- Does the pT resolution matches with back hand calculation ????

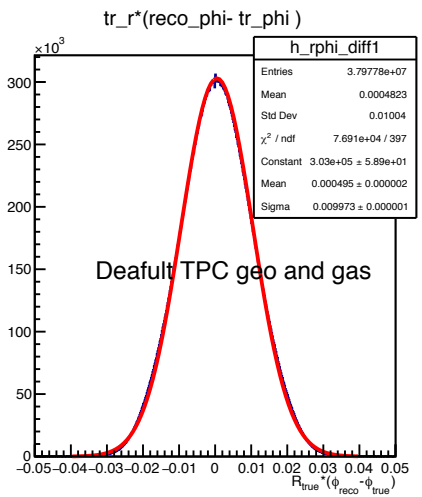
Overall tracking performance for pure pions without space charge for different TPC geometry [MAPS(3) + INTT (4) + TPC (40)] and gas

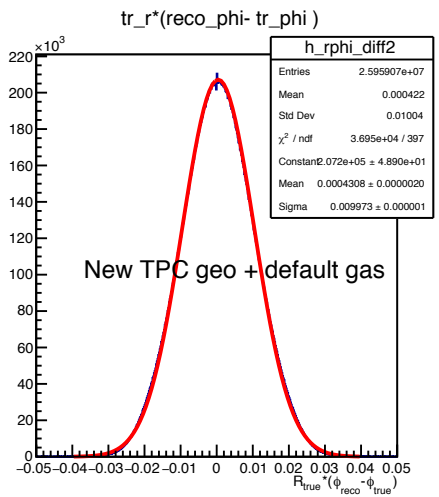


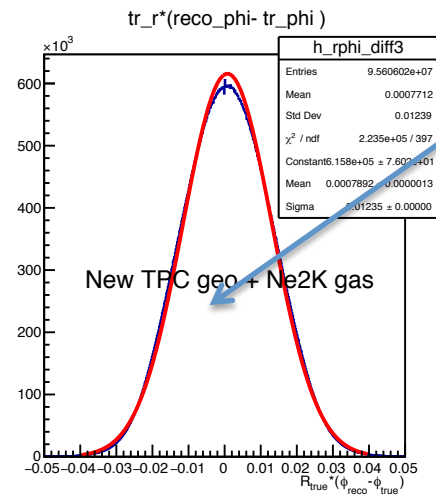
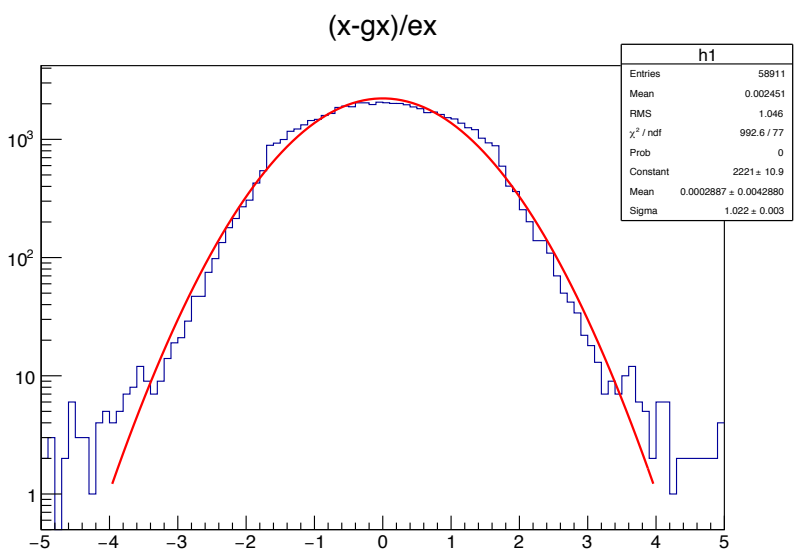
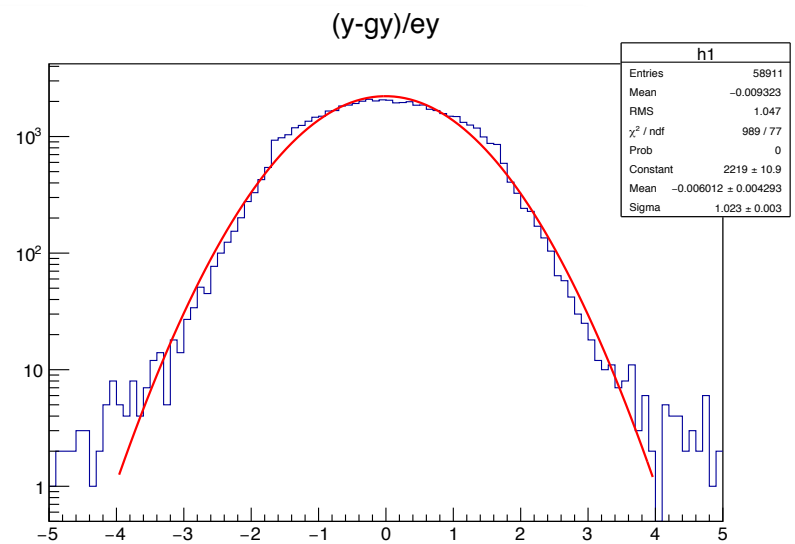
- For Ne2K gas DCA resolution gets bit worse (> 10 microns) for pT > 10 GeV.
- Currently DCA is not driven only by MAPS. Usage of Kalman filter and TPC hits for DCA measurement affects it with change in TPC.
- Planning to make pull request.

Suggestions of plots for pull request

- Check r*phi (measured – truth) for TPC clusters to the level of 100 um
- Check cluster size and whether it is expected. ????
- Check cluster(position-truth)/error , should be centered at 0 with 1 sigma width







More broader than other two cases