Studies of Basic Performances with the file from September Simulation Campaign

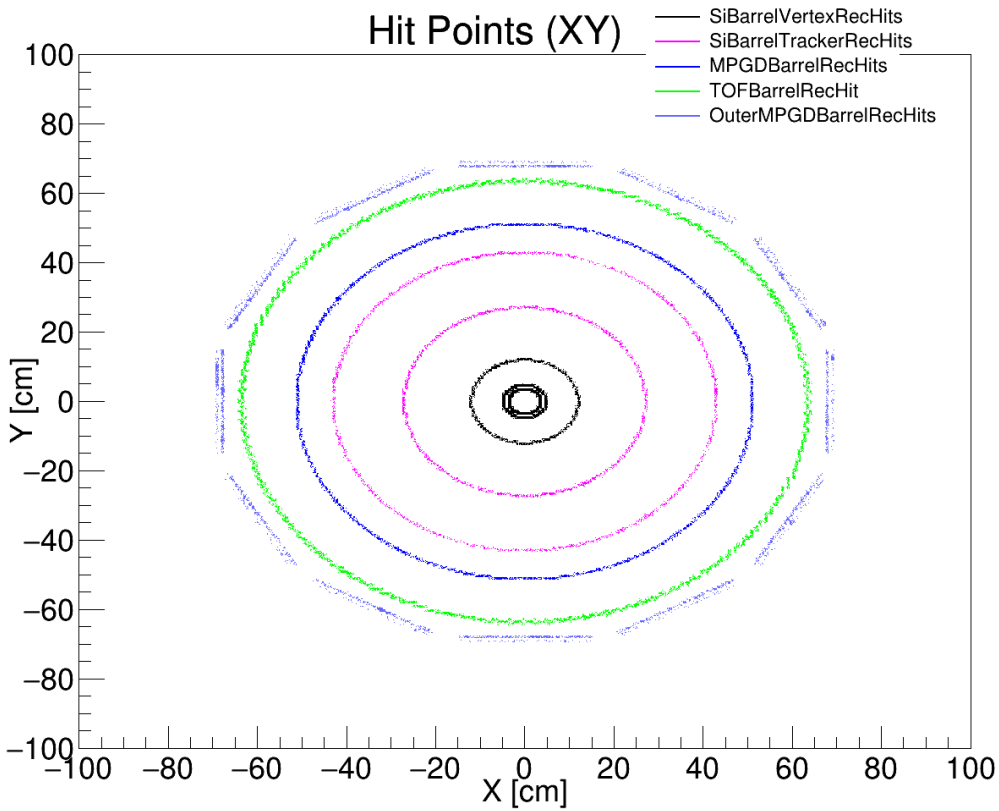
Shyam Kumar, Annalisa Mastroserio, Domenico Elia
INFN Bari, Italy

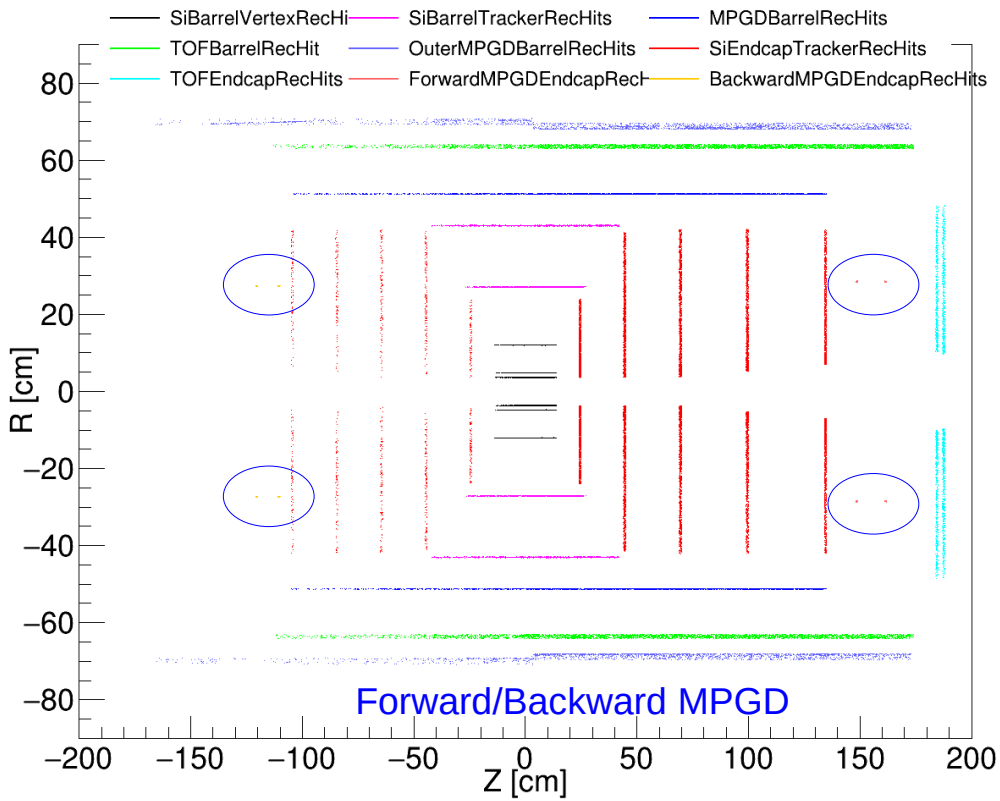
Basic Performances

EPIC/RECO/**23.09.1**/epic_craterlake/DIS/NC/18x275/minQ2=1000/pythia8NCDIS_18x275_minQ2=1000_beamEffects_xAngle=-0.025_hiDiv_1.0000.eicrecon.tree.edm4eic.root

Total Events: 329

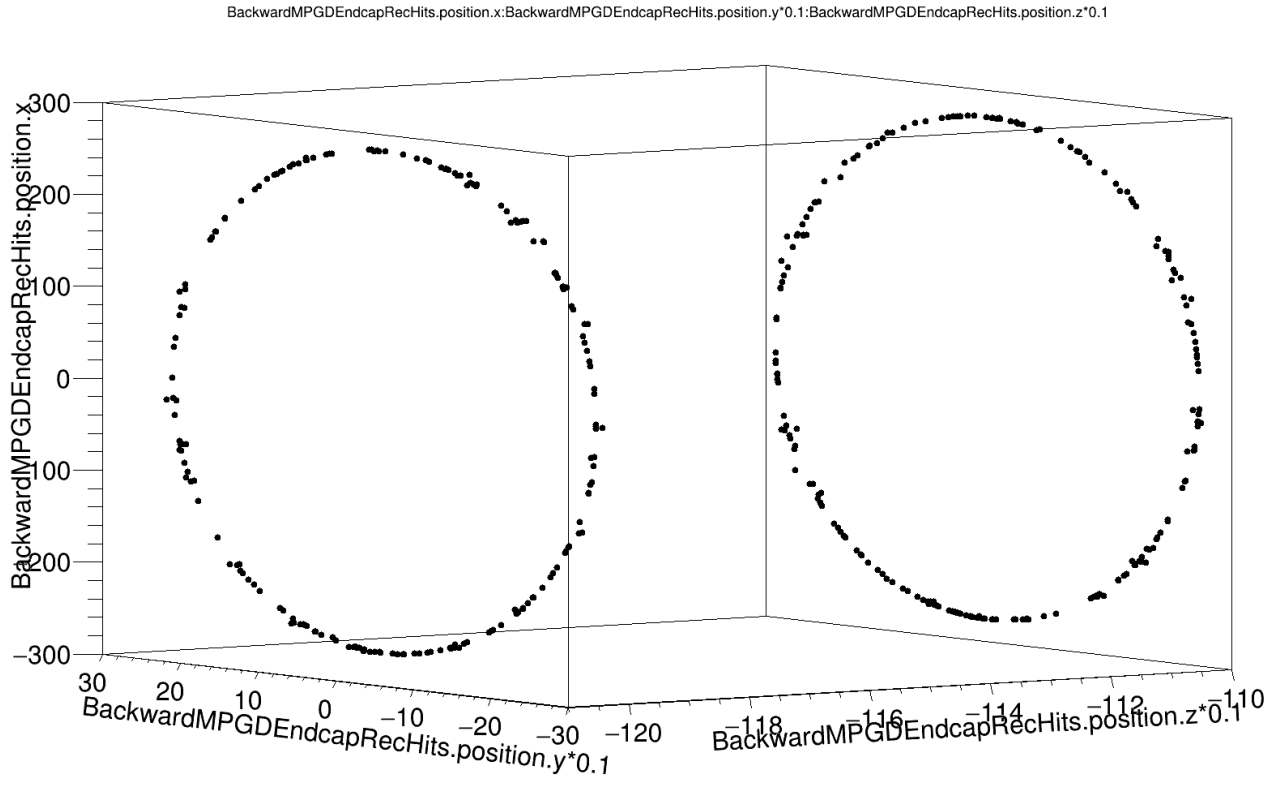
Forward/Backward MPGD hits are registred at a radius (not whole disk)





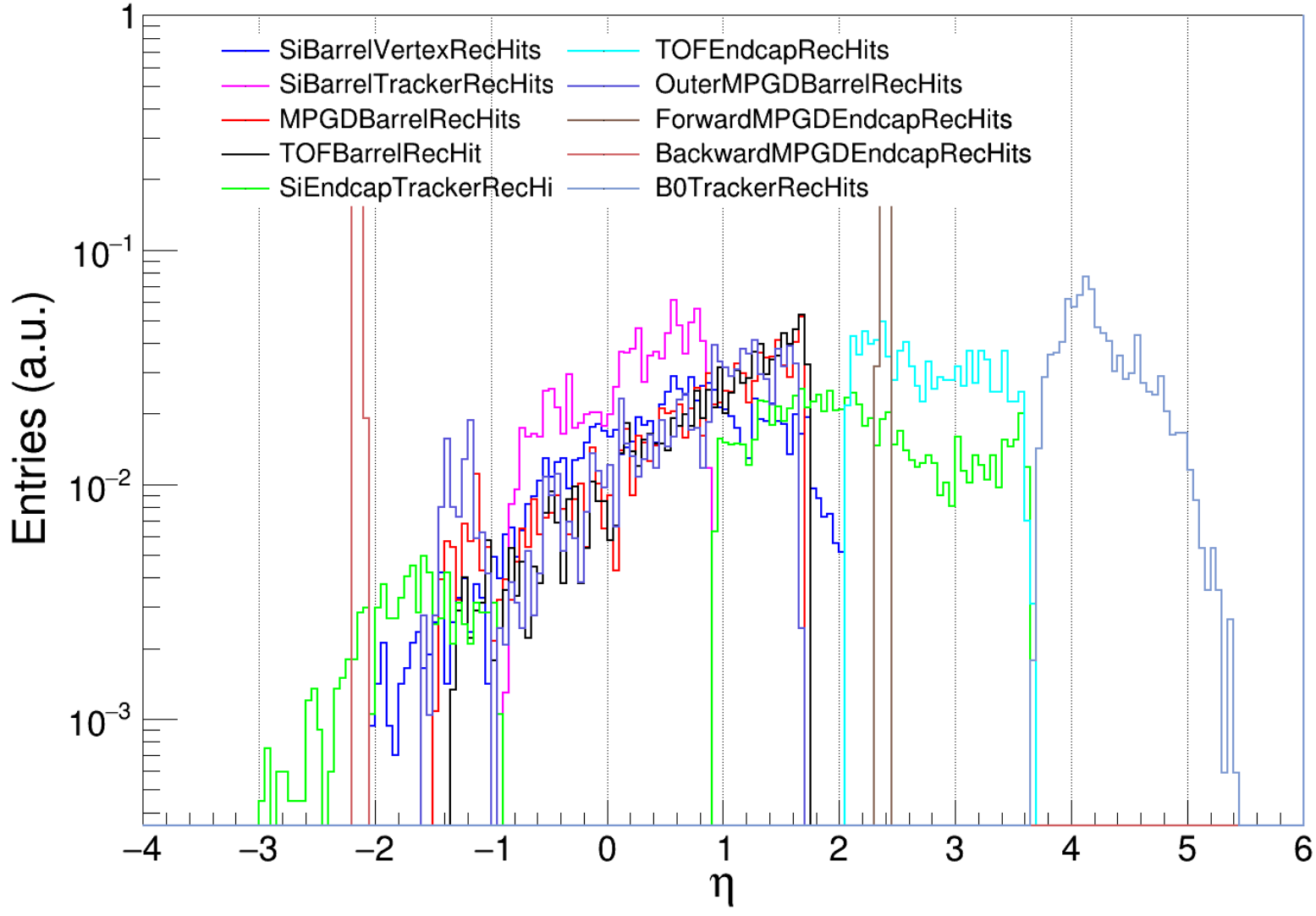
Basic Performances

Forward/Backward MPGD hits are registred at a radius (not whole disk) [Reported and Fixed by Matt]



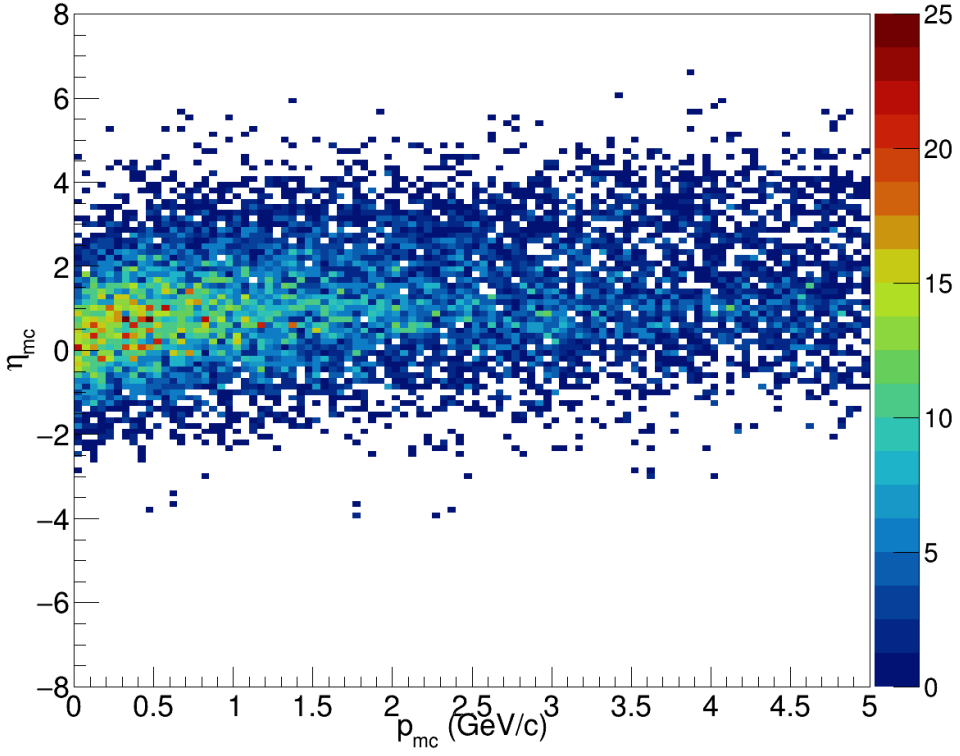
Momentum Resolution and DCA resolution will be affected because MPGD hits (disks) are missing

Kinematic Acceptance

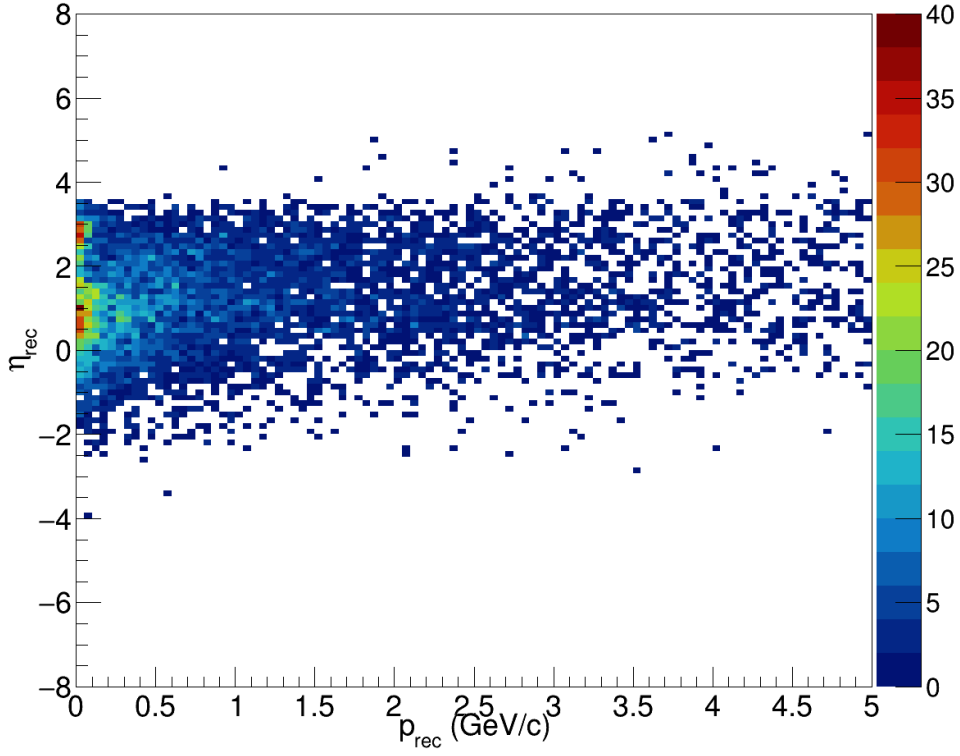


Basic Performances

Generated



Reconstructed

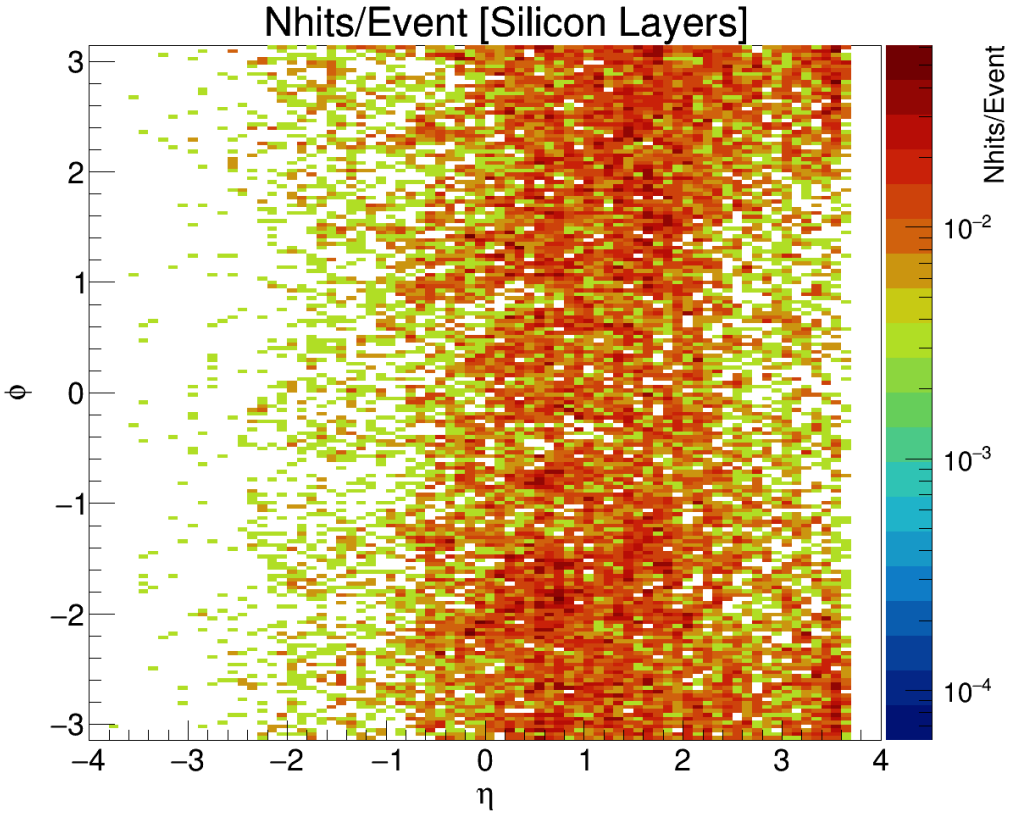


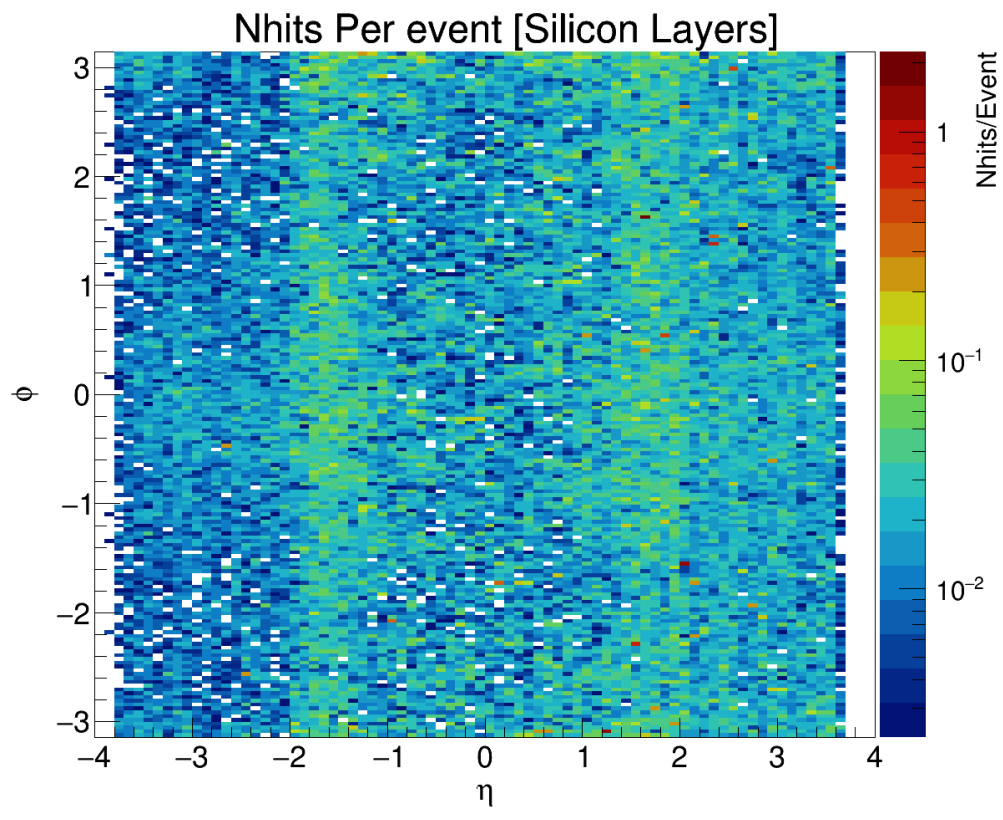
Nhits Per Event (Silicon Barrel and Disks)

September Simulation file

1000 Events Pythia8 Background Simulation (hepmc by Kolija)

Total Events: 329





The hepmc file ishere:
S3/eictest/EPIC/EVGEN/BACKGROUNDS/bgmerged_ep_noradcor.10x100_q2_10_100_run001_n_10000.hepmc

Summary and Future Studies

- Presented the basic performances and the issue with Forward/Backward was observed and fixed by Matt
- Nhits/Event was presented for the simulation campaign and the background file by Kolija
- Future studies will be done once there is a new simulation file:
  - Similar Performances
  - Average Nhits vs Eta in different momentum range
  - Chi2/ndf vs Number of Hits
  - Momentum and DCA resolutions
  - Tracking Efficiency