

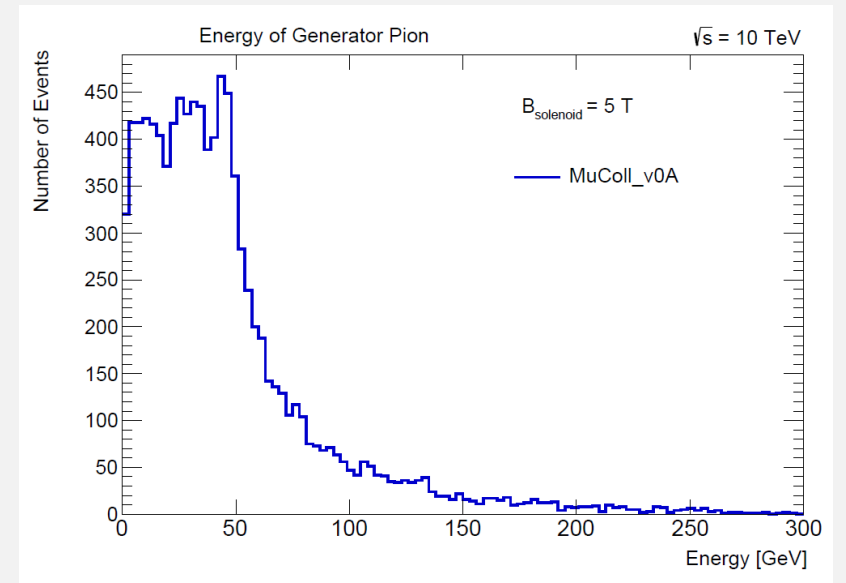
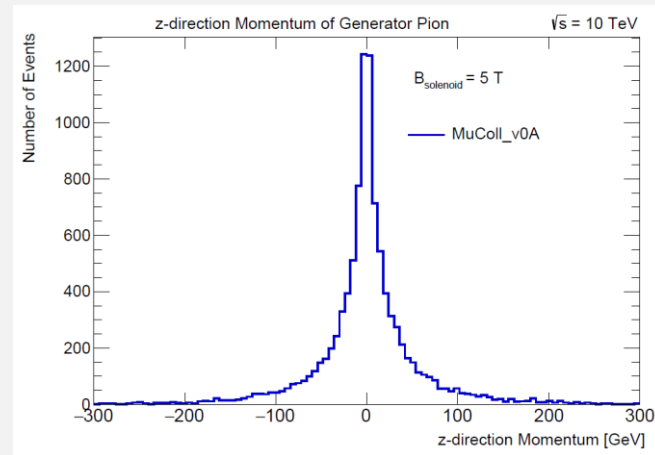
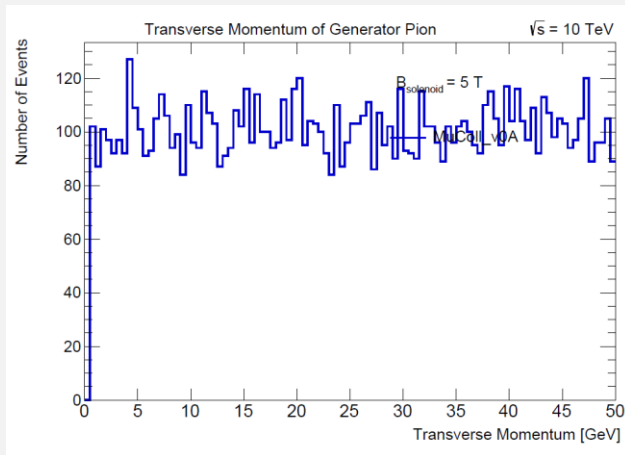
WEEKLY MEETING UPDATE

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ENERGY RESOLUTION FOR SAMPLES WITHOUT BIB

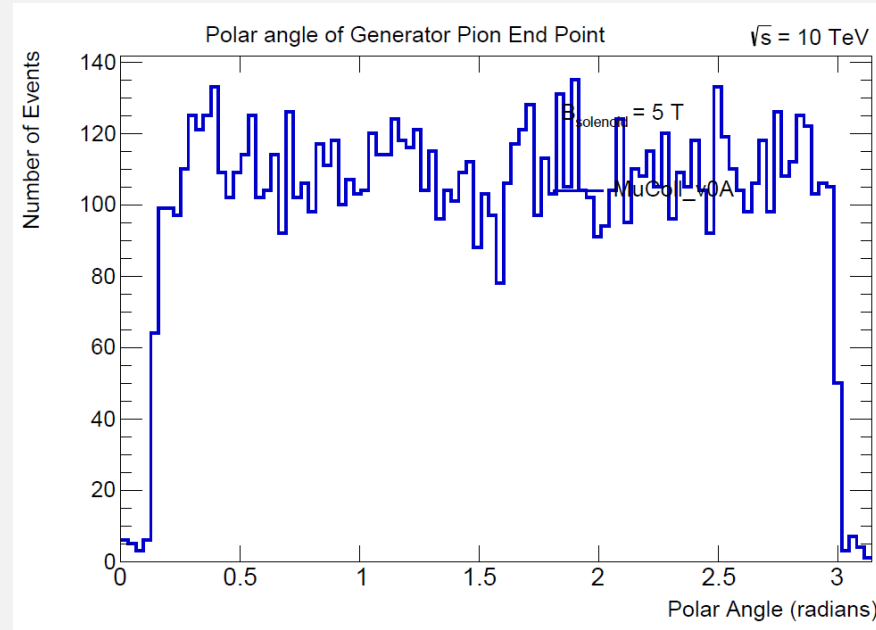
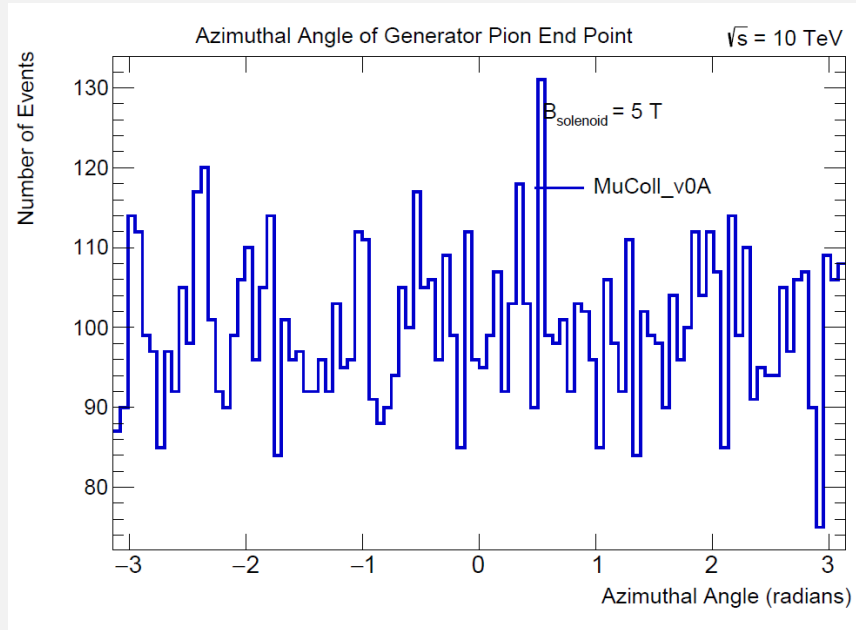
- look at samples updated by Dr. Meloni for v0A geometry without BIB
- samples have transverse momentum uniformly distributed within a range and z-direction momentum having a Gaussian distribution around 0
- looked at samples with pT within 0-50GeV
- plotted (clustered energy – generator energy) / generator energy

V0A, NO BIB, PT 0-50GeV, GENERATOR ENERGY AND MOMENTUM DISTRIBUTION

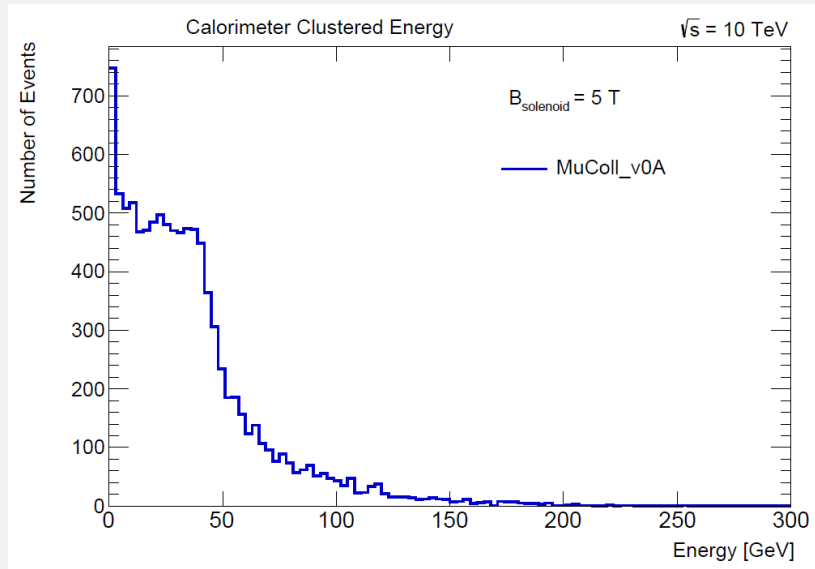


transverse momentum uniformly distributed within 0-50GeV,
z-direction momentum having a Gaussian distribution around 0

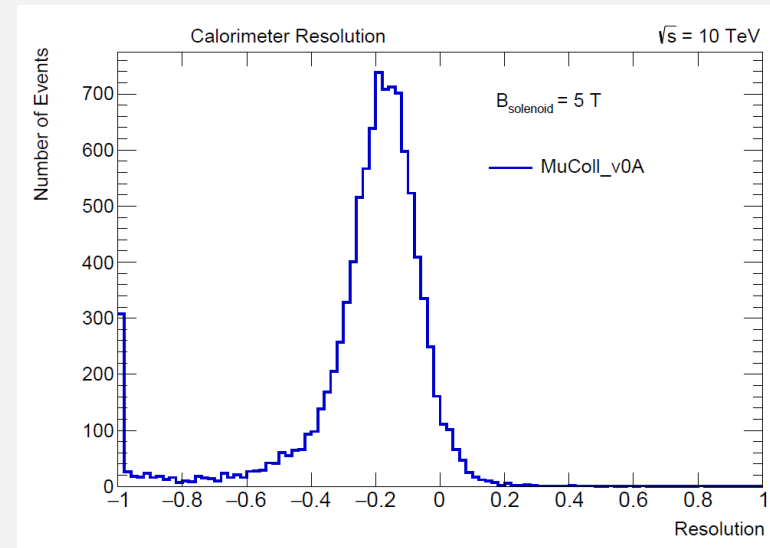
V0A, NO BIB, PT 0-50GEV, GENERATOR MOMENTUM ANGLE DISTRIBUTION



V0A, NO BIB, PT 0-50GEV, CALORIMETER CLUSTERED ENERGY



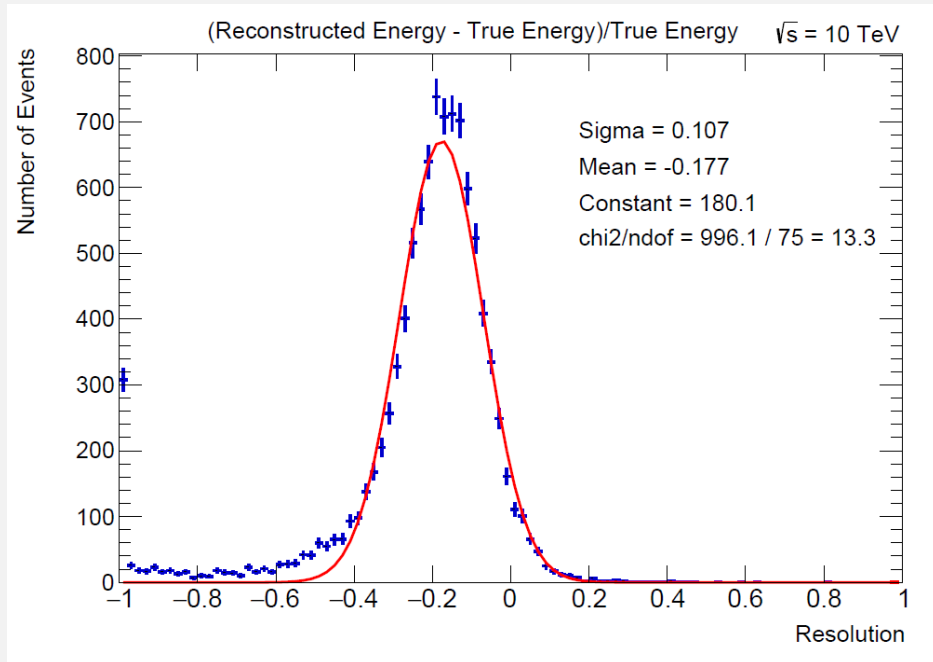
clustered energy: sum of energy of hits in the calorimeter in a cone of 0.1 radian in theta/phi around the generator level pion endpoint



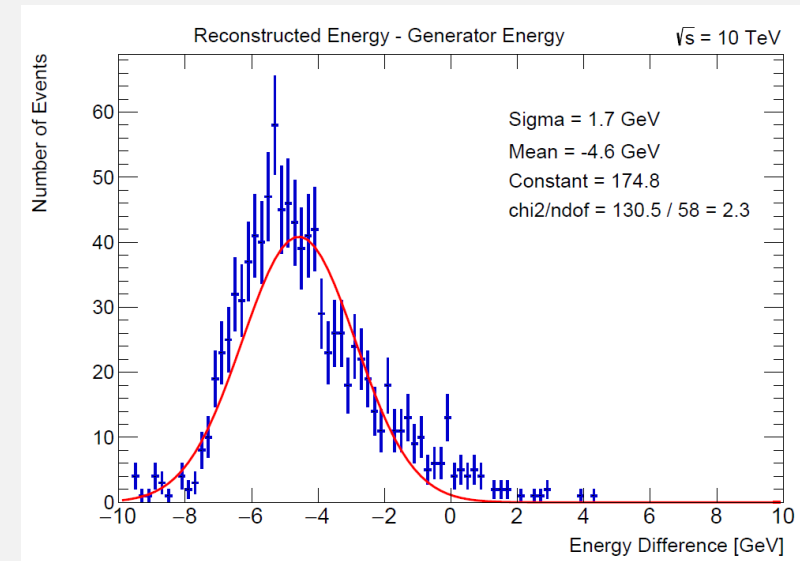
resolution plot is (clustered energy – generator energy) / generator energy

The resolution ≈ -1 (clustered energy \ll generator energy) data points usually have momentum almost completely along z direction (theta < 0.2 or theta > 2.9)

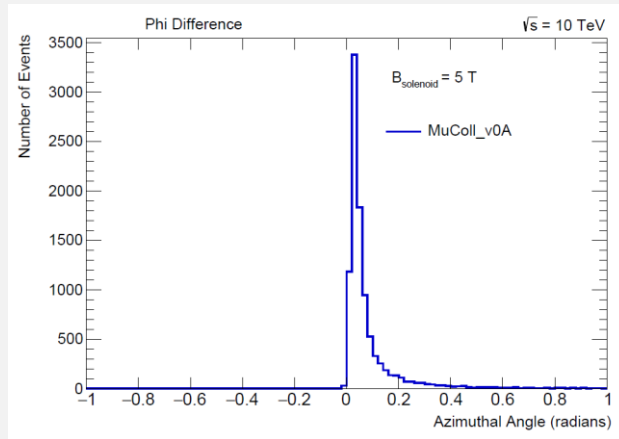
V0A, NO BIB, PT 0-50GEV, CALORIMETER ENERGY RESOLUTION



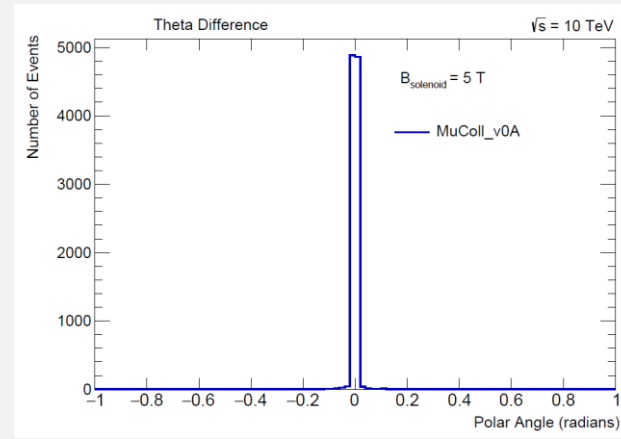
**Compare: 10GeV pion gun, momentum
along y-direction, v0A geometry, with BIB**



V0A, NO BIB, PT 0-50 GeV, DIFF BETWEEN MOMENTUM ANGLE AND ENDPOINT ANGLE

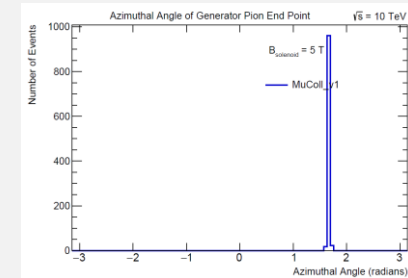


the difference is momentum phi/theta –
endpoint phi/theta

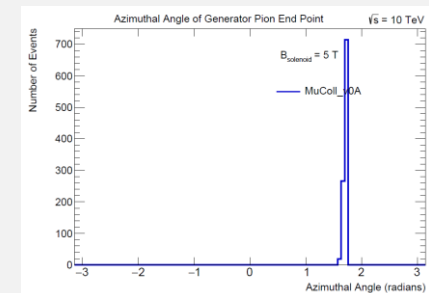


interaction with
detector ->
trajectory changes

When momentum completely
along y direction (10 GeV):



v1 geometry



v0A geometry