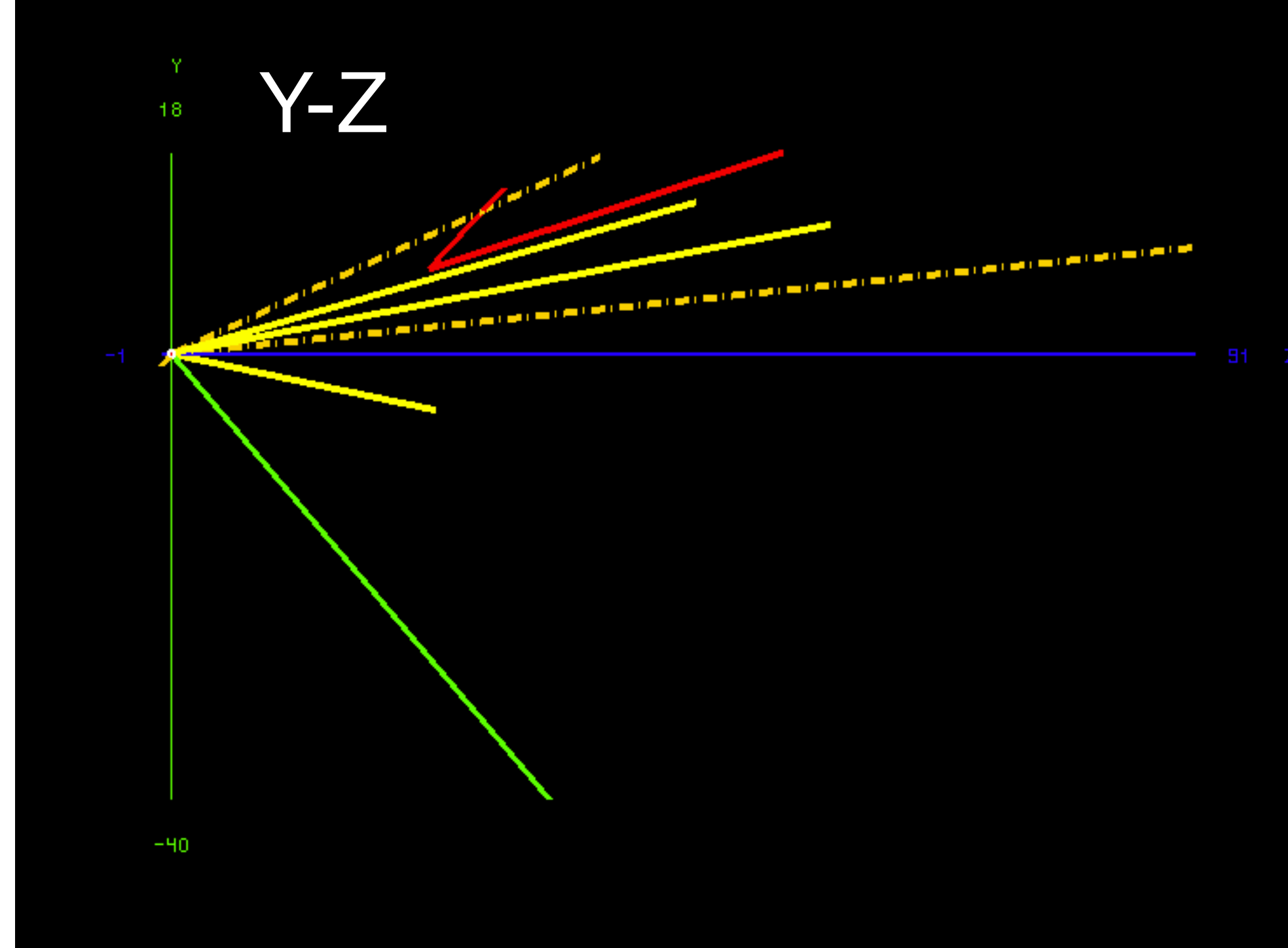


2- vs 3-View Truth Study

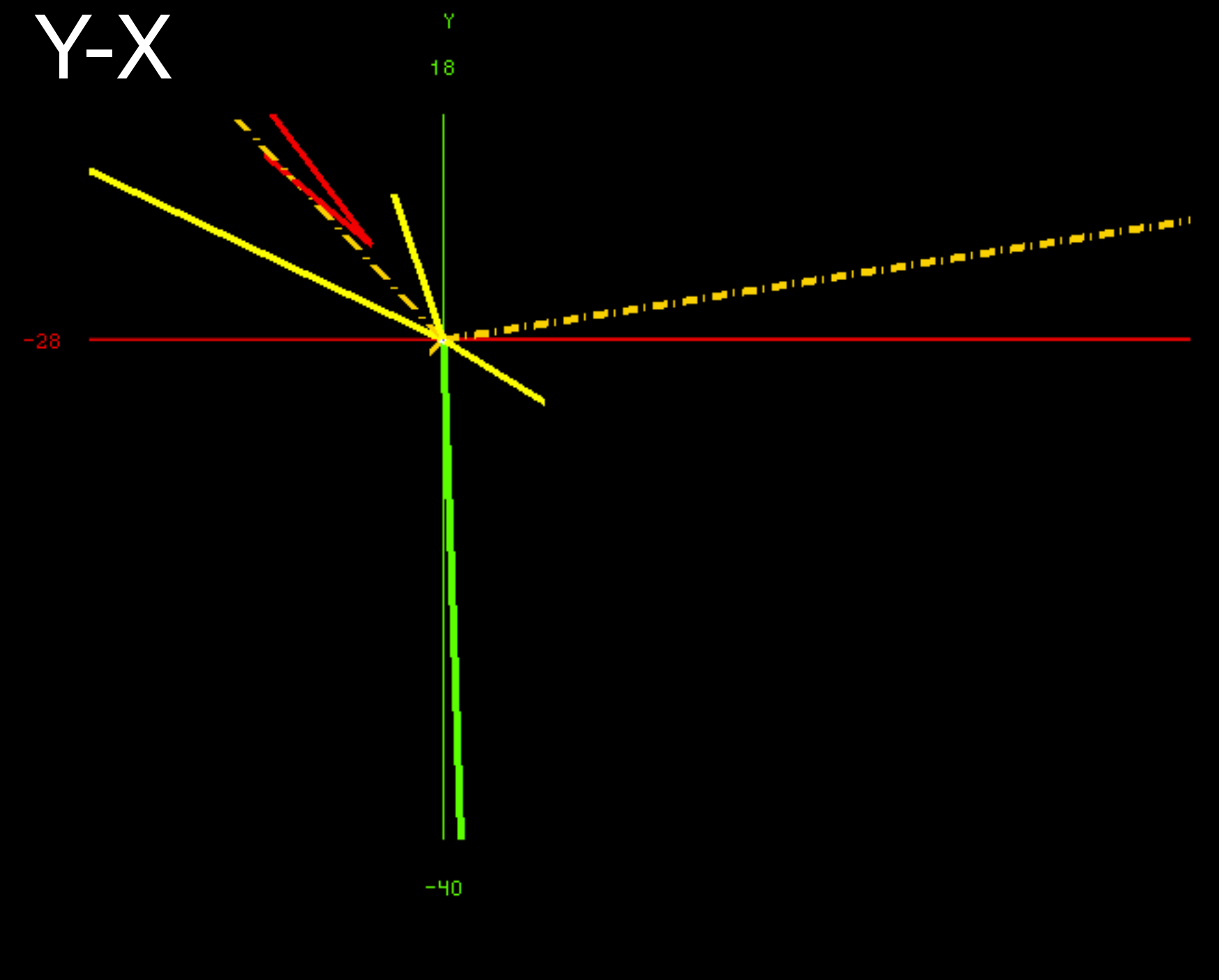
Sandro, Umut, Paola & Claire - 12 Nov 2020

- Started taking a look at 2-view performance on truth samples
- Have 2 samples produced already (Thanks Paola!)
 - CC and NC 3 GeV ν_μ interacting in Ar at $x=y=z=0$, with the neutrino along z
- Working on defining benchmark selections for potential “problematic” cases, eg:
 - photon with overlapping charged track
 - two overlapping photons
 - etc...

CC event

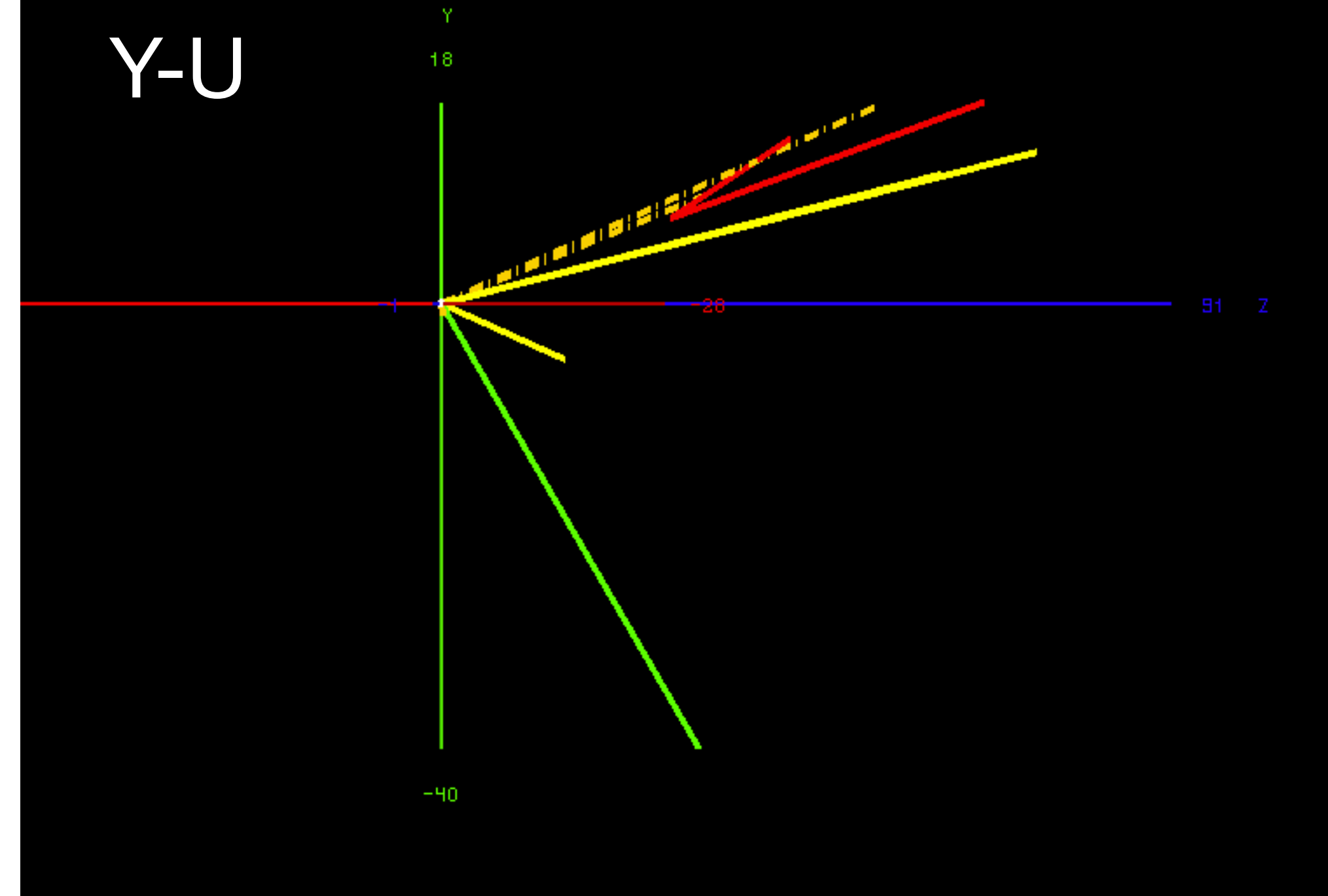


Y-X



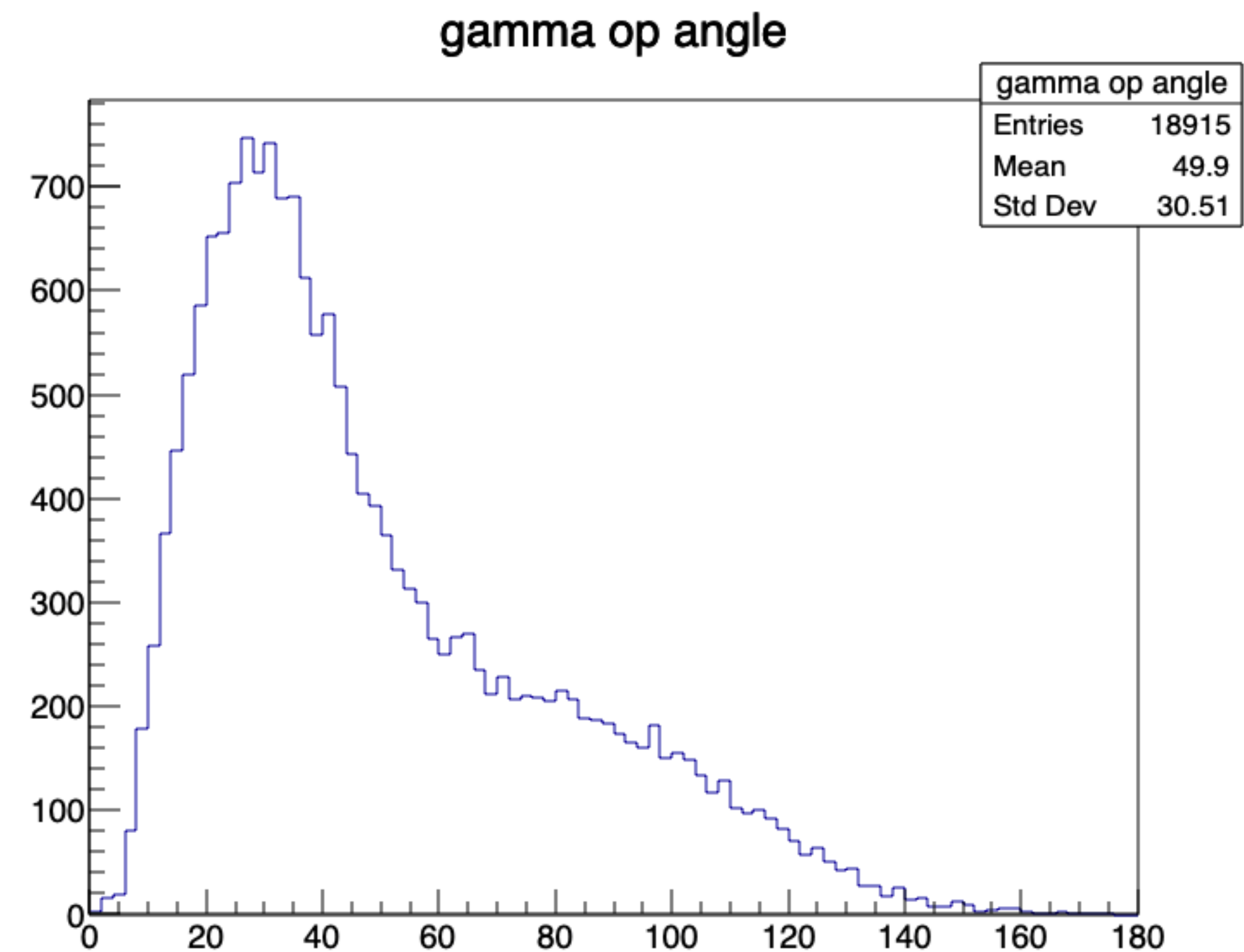
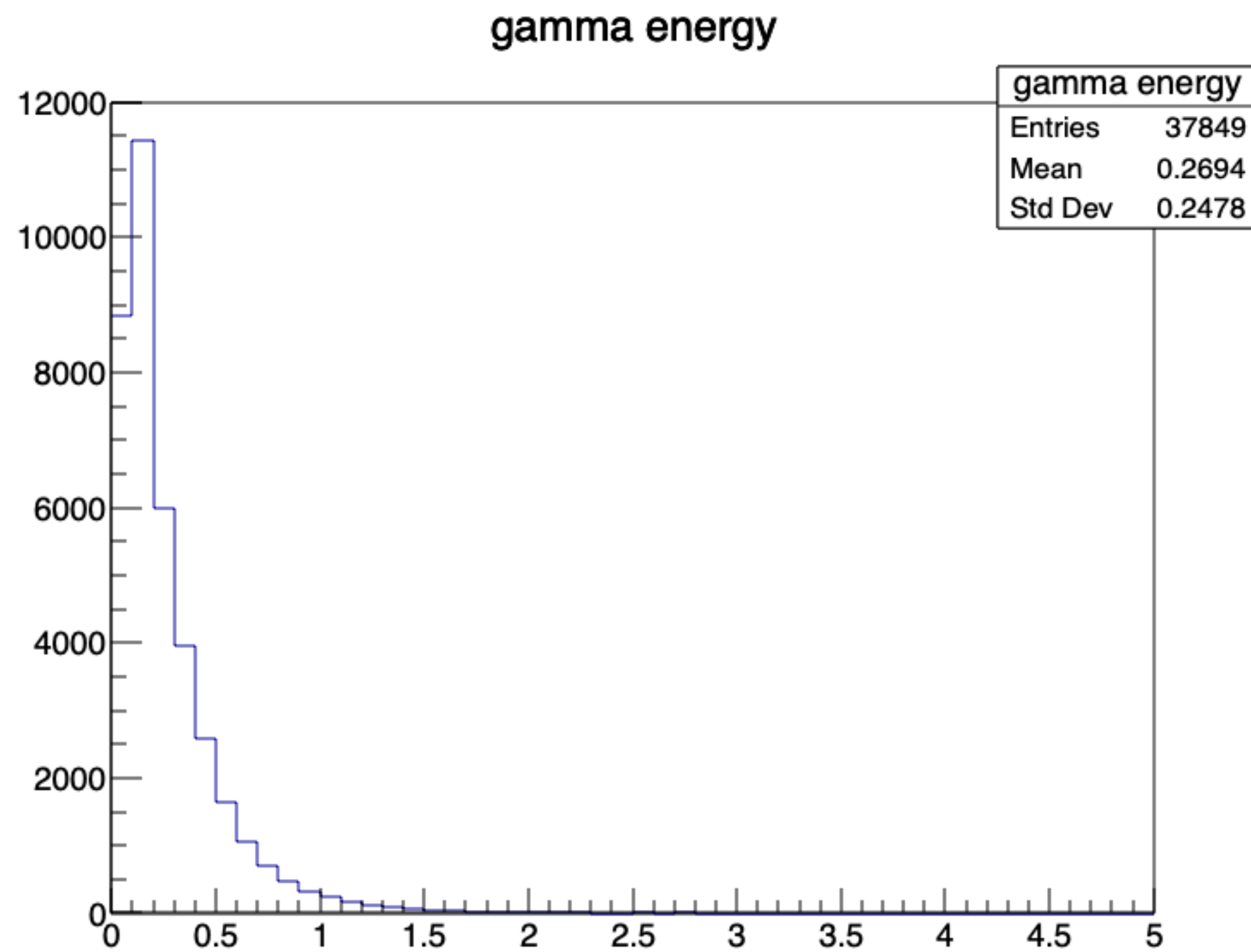
- Event display from Umut
 - Red: photon
 - Green: lepton
 - Yellow dashed: π^0
 - Yellow solid: charged hadron

Y-U

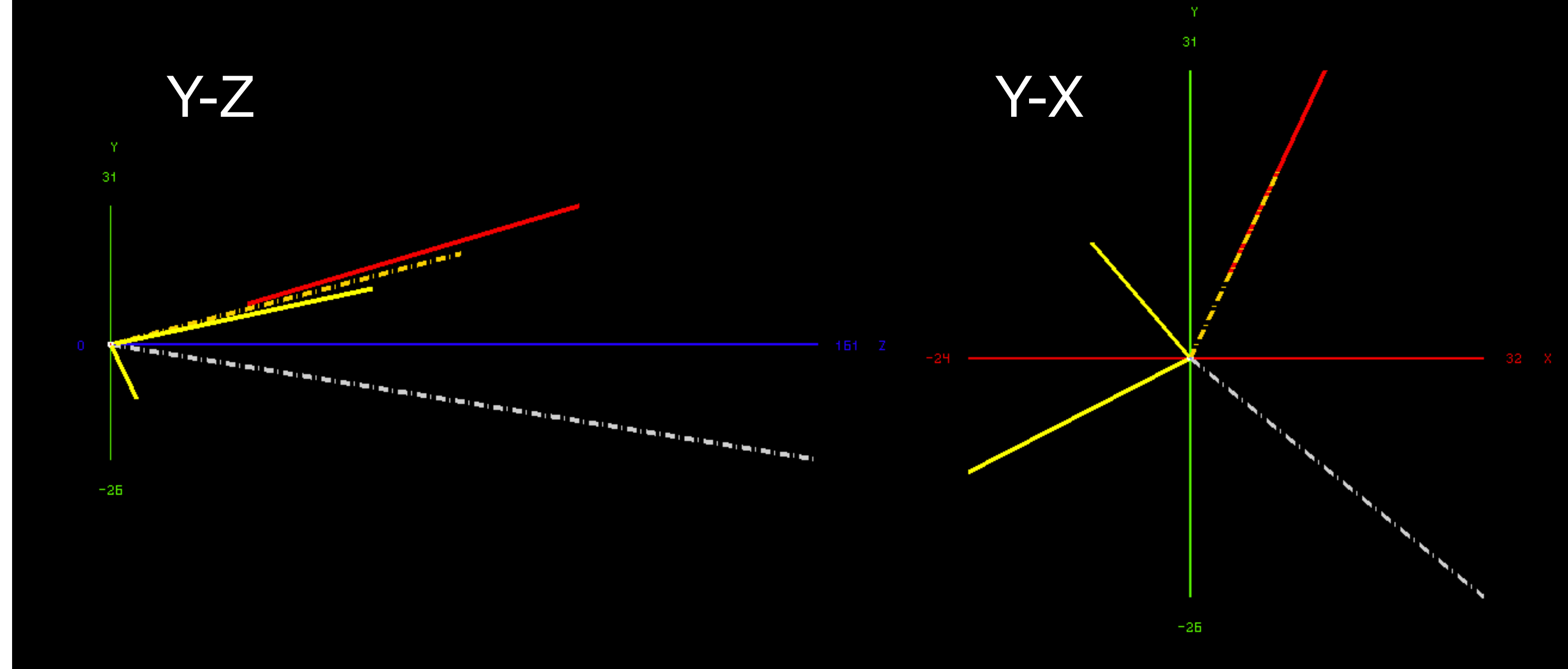


Some initial plots

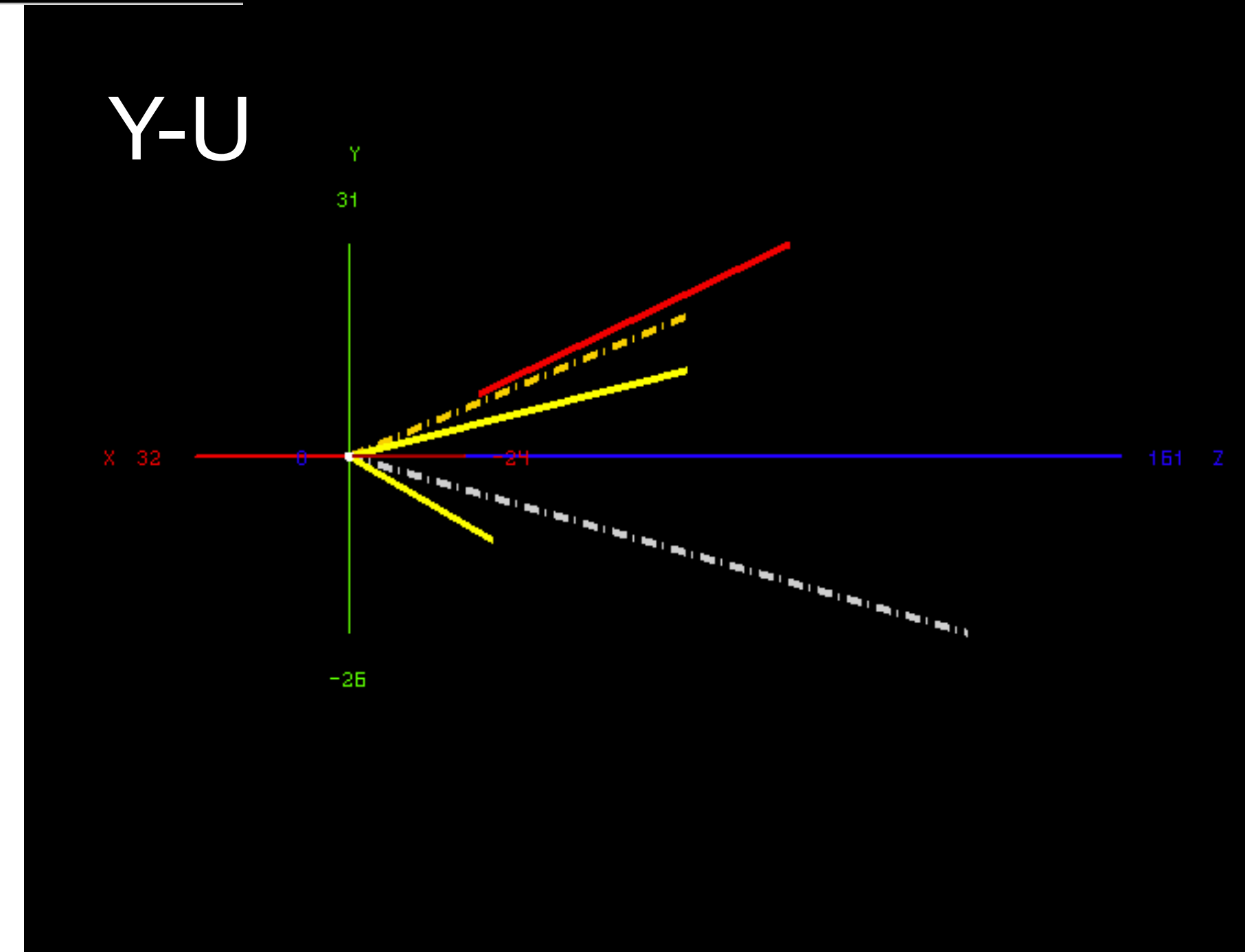
100k CC events



NC event

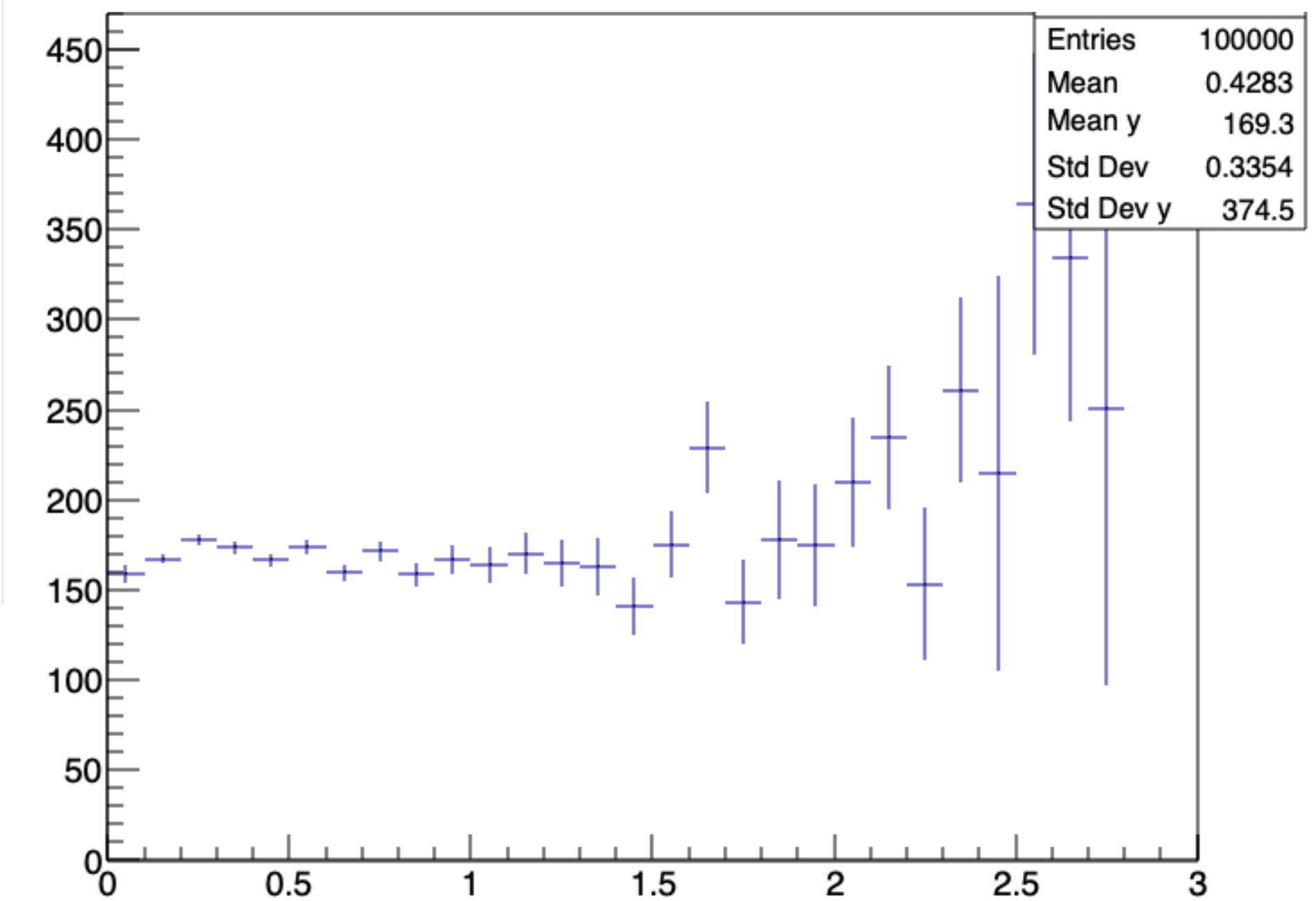
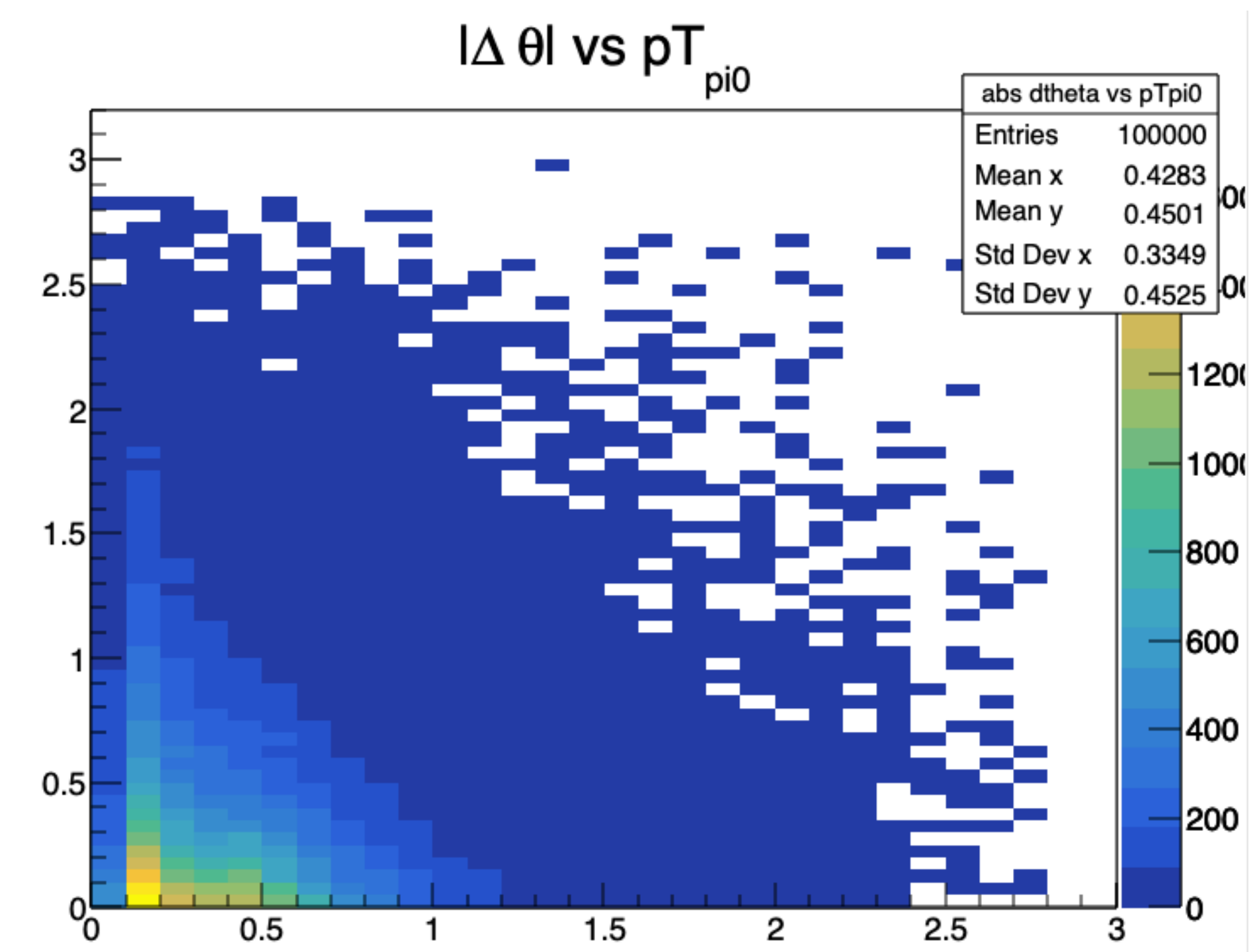
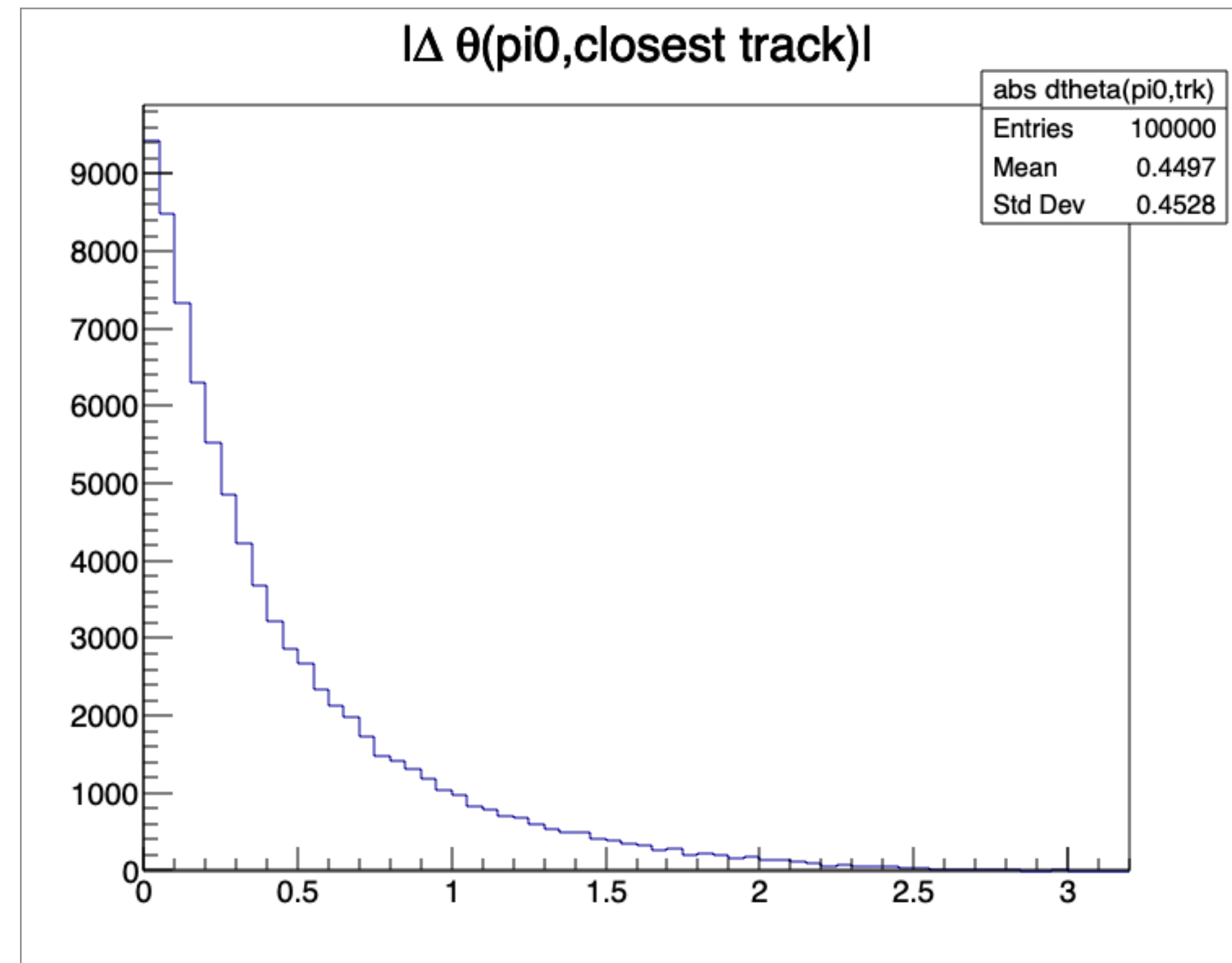


- Event display from Umut
 - Red: photon
 - Grey dashed: neutrino
 - Yellow dashed: pi0
 - Yellow solid: charged hadron



Some initial plots

100k NC events



Next steps...

- Finalise separation criteria:
 - Photon and track: currently using π^0 , also look at photon vertex
 - Two photons
- Calculate fraction of misreconstructed events in 2 vs 3 views