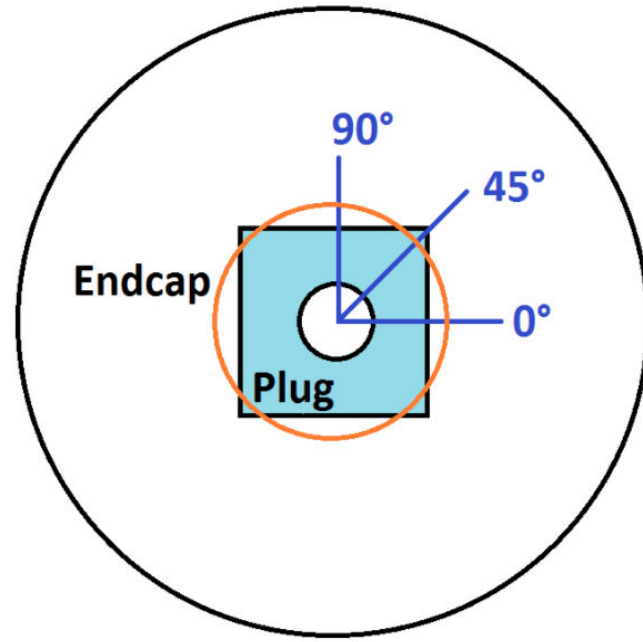
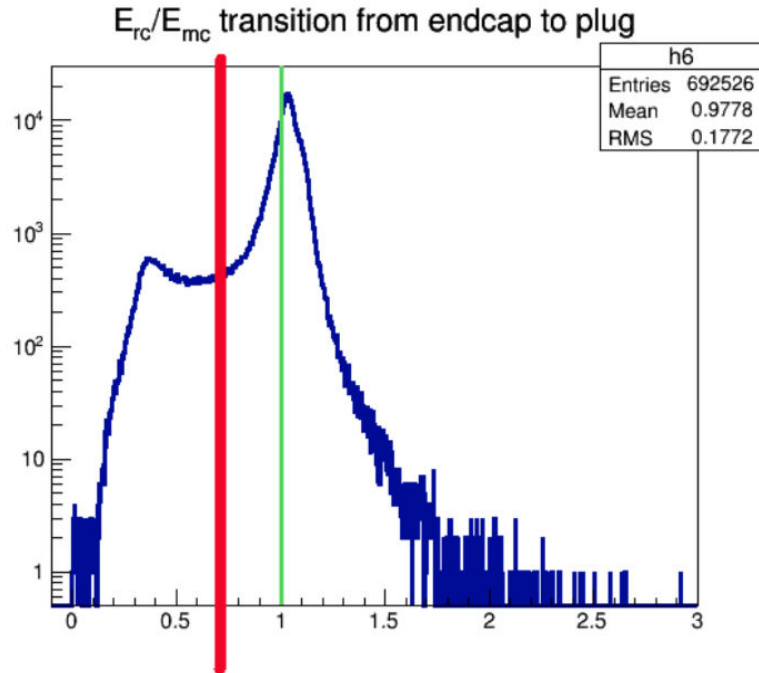
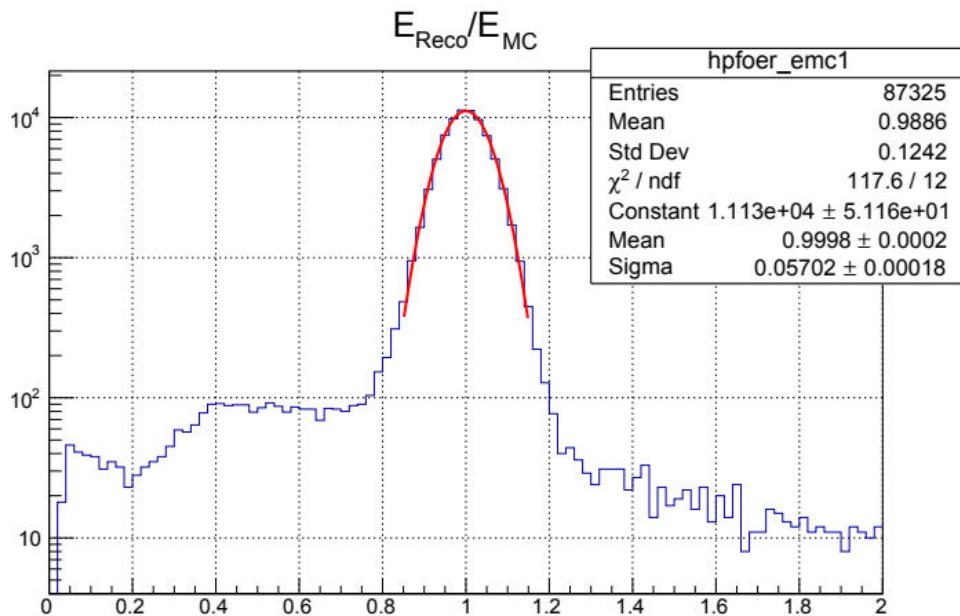
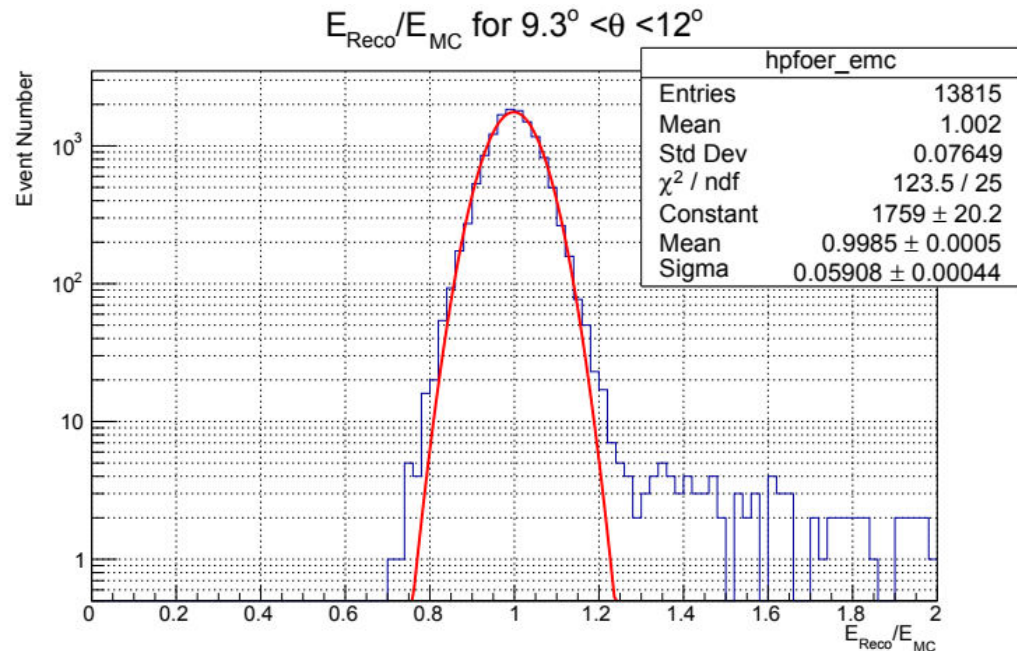


# WIMP search in Mono-Photon Channel

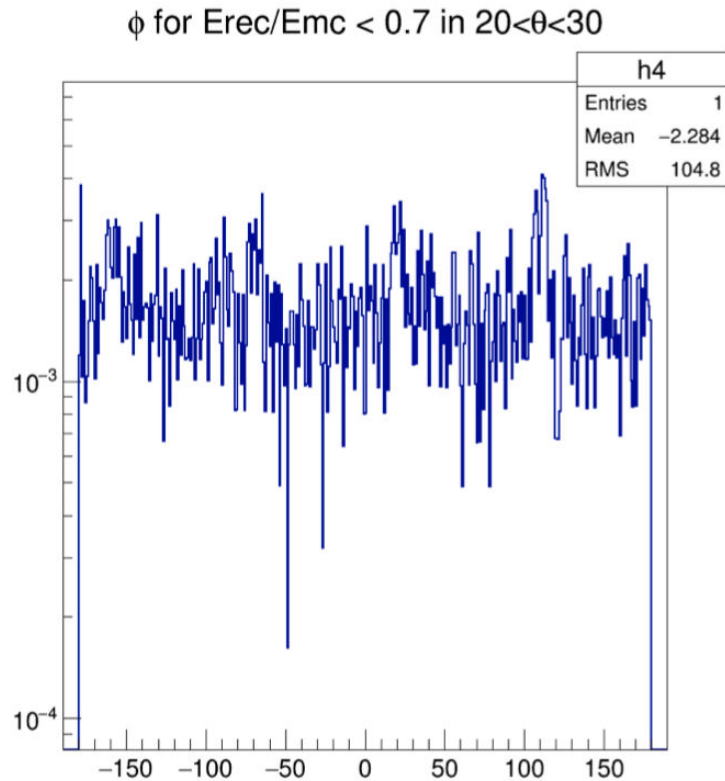
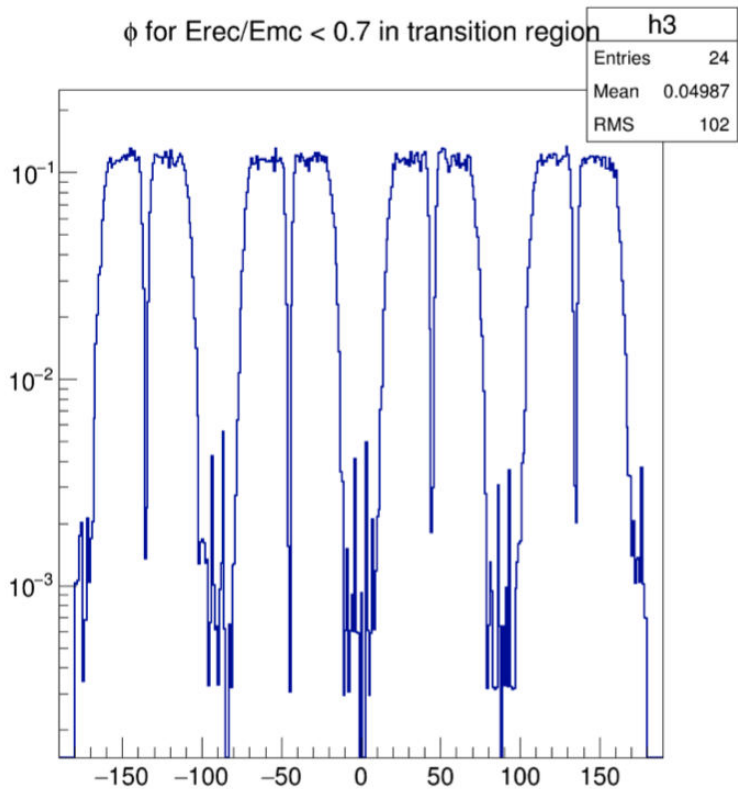
# Problems in the previous work



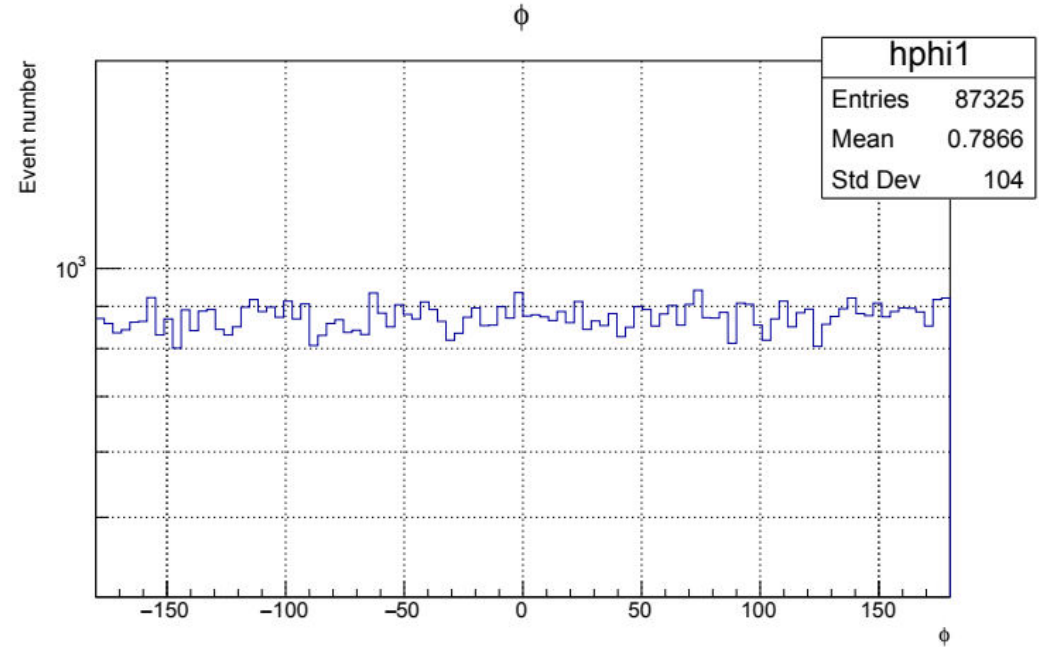
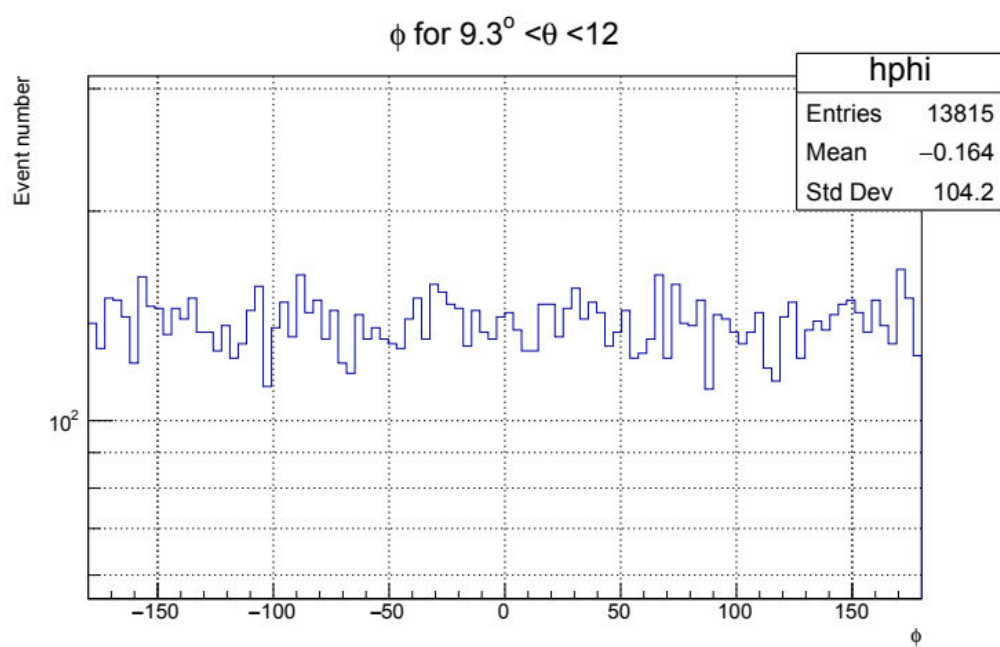
# Plots according to current sample



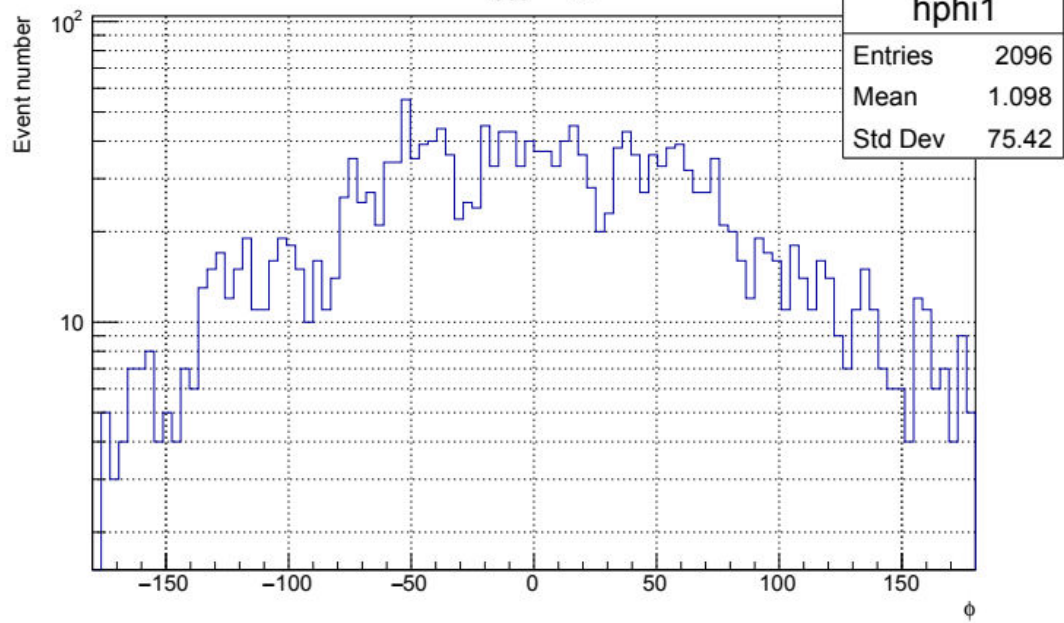
# Problems in the previous work



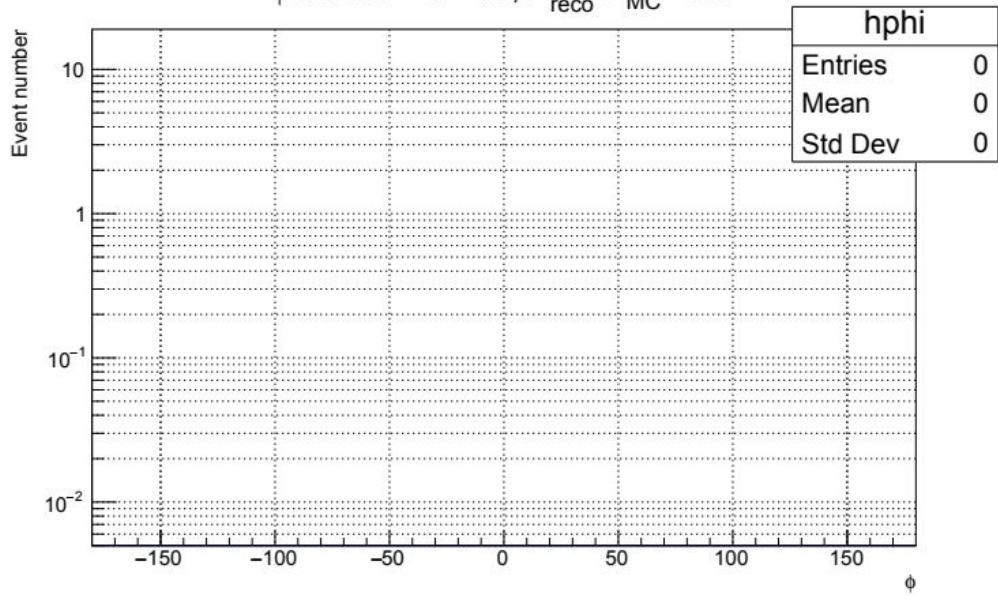
# Plots according to current sample



$\phi$  for  $E_{\text{reco}}/E_{\text{MC}} < 0.7$

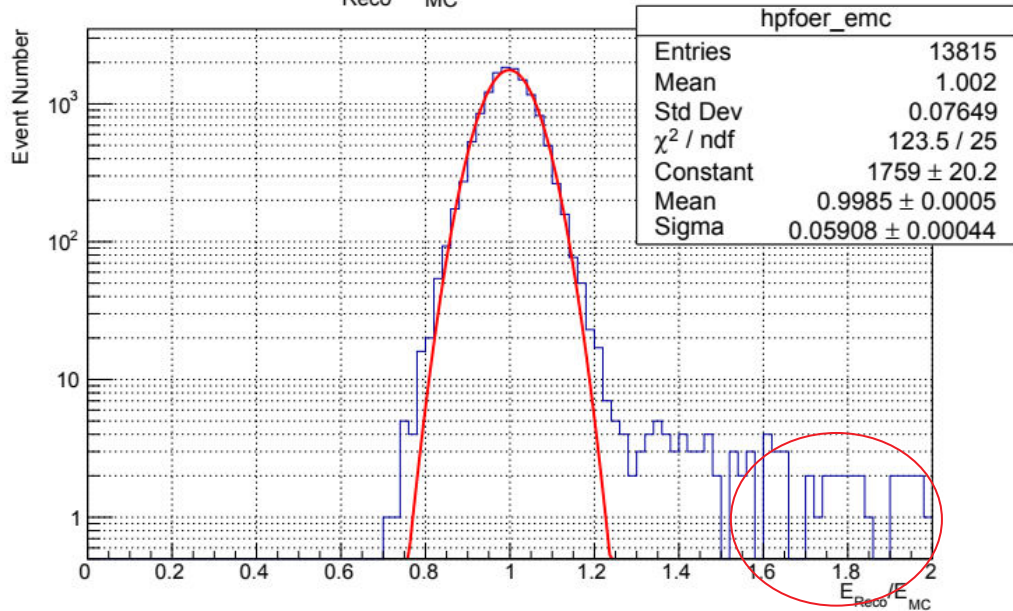


$\phi$  for  $9.3^\circ < \theta < 12^\circ$ ,  $E_{\text{reco}}/E_{\text{MC}} < 0.7$

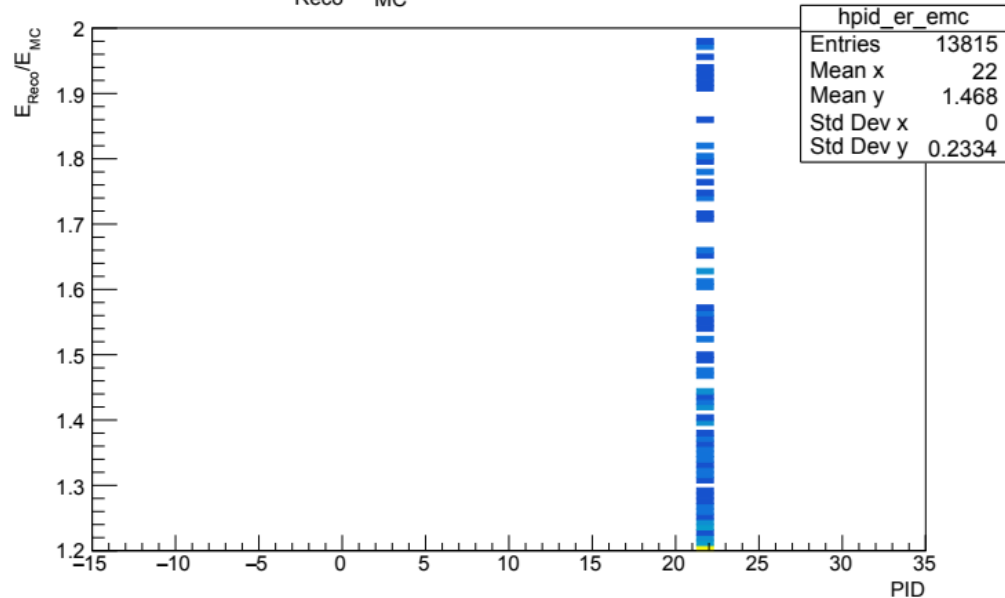


# Verifying photon reconstruction

$E_{\text{Reco}}/E_{\text{MC}}$  for  $9.3^\circ < \theta < 12^\circ$

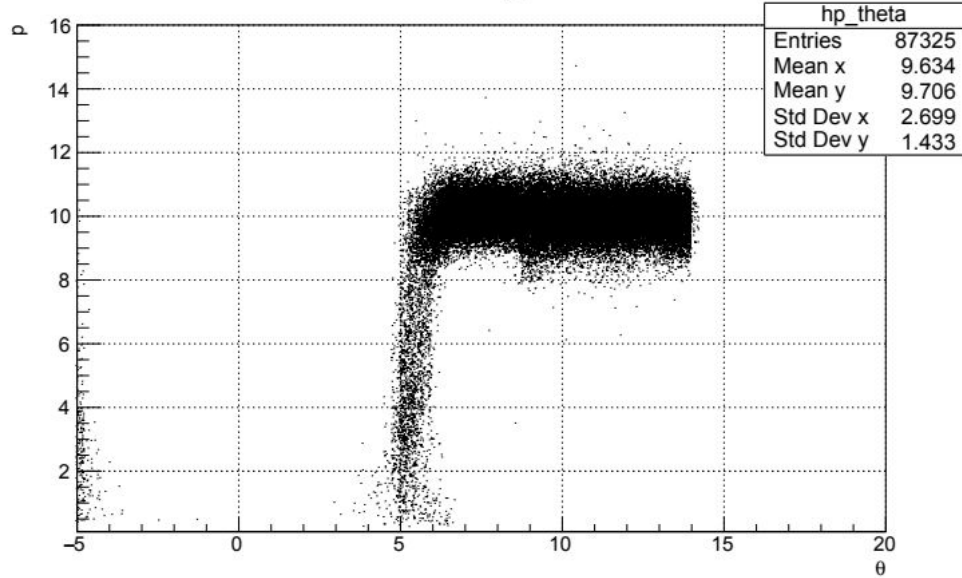


$E_{\text{Reco}}/E_{\text{MC}}$  for  $9.3^\circ < \theta < 12^\circ$  vs. PID

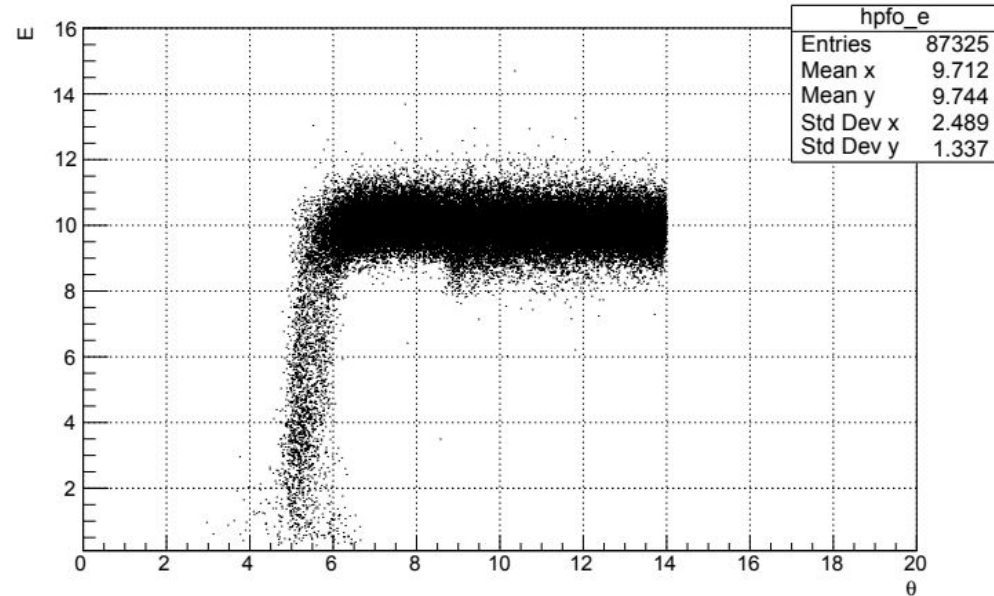


# Direction of the photon with respect to beam

Momentum,  $p$  vs.  $\theta$

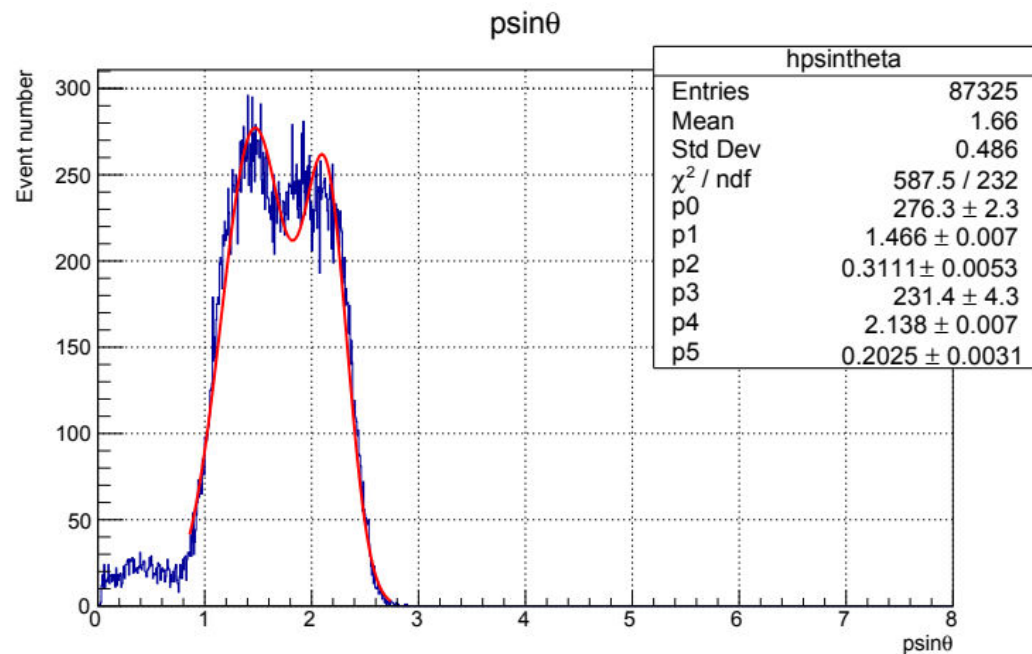
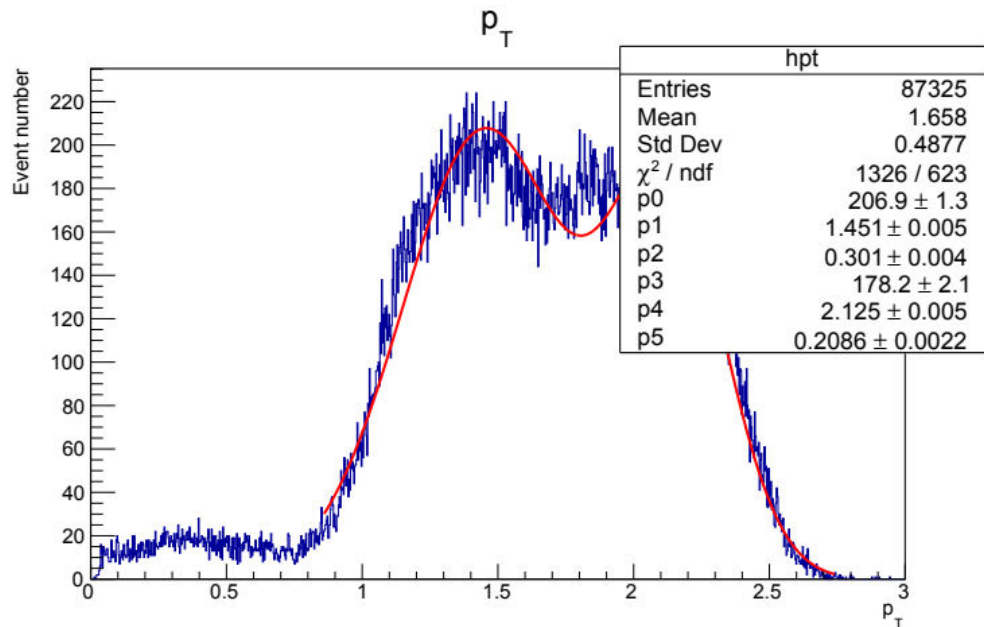


E vs.  $\theta$



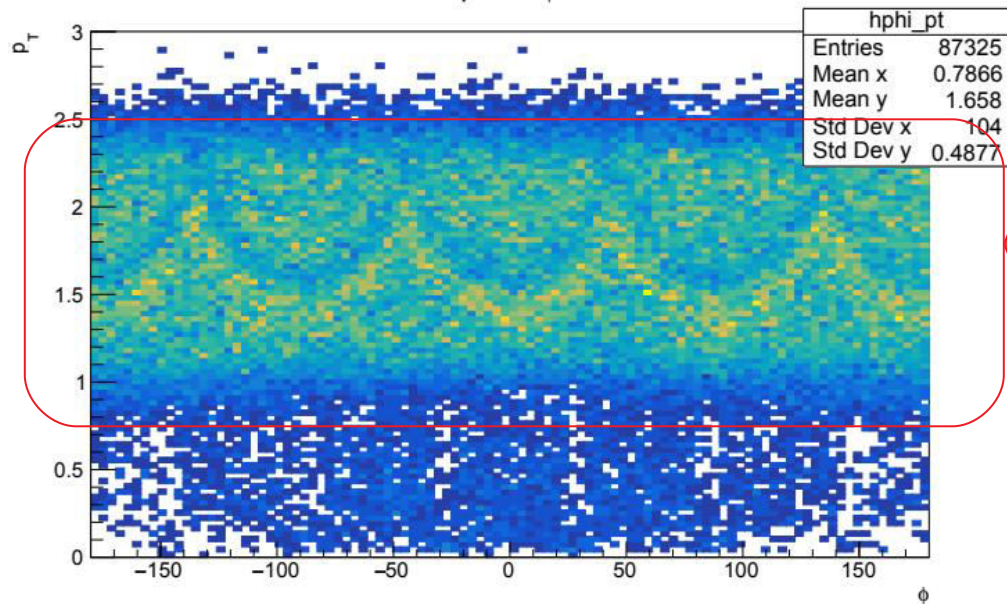


# Transverse momentum

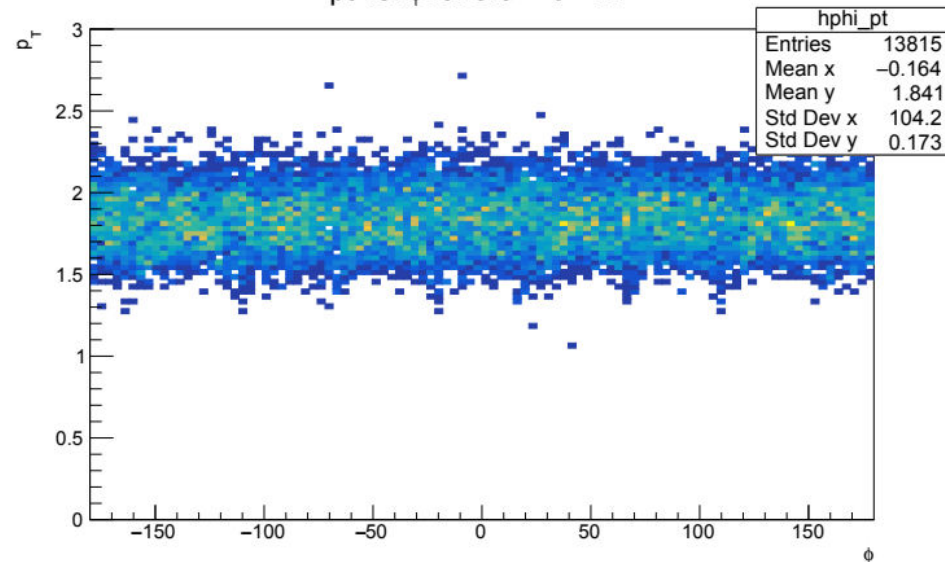


# Transverse momentum-phi correlation

pt vs.  $\phi$

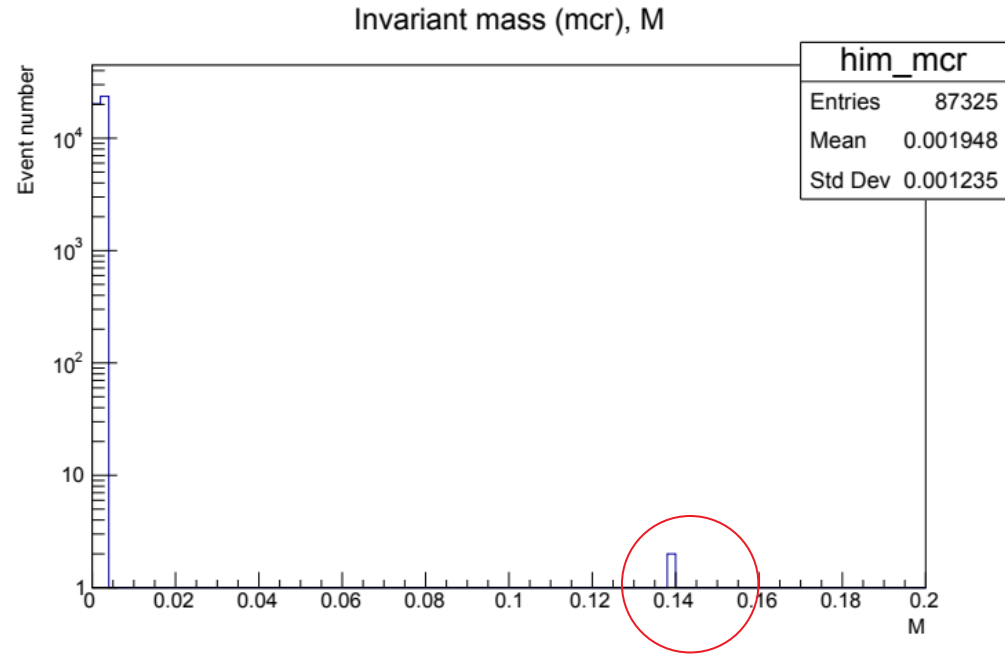
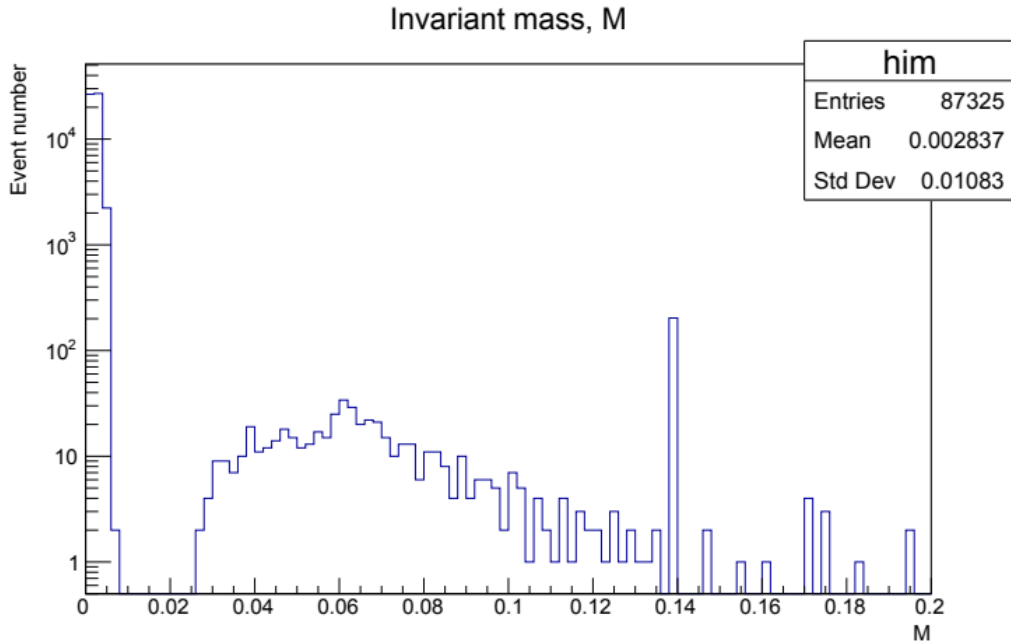


pt vs.  $\phi$  for  $9.3^\circ < \theta < 12$



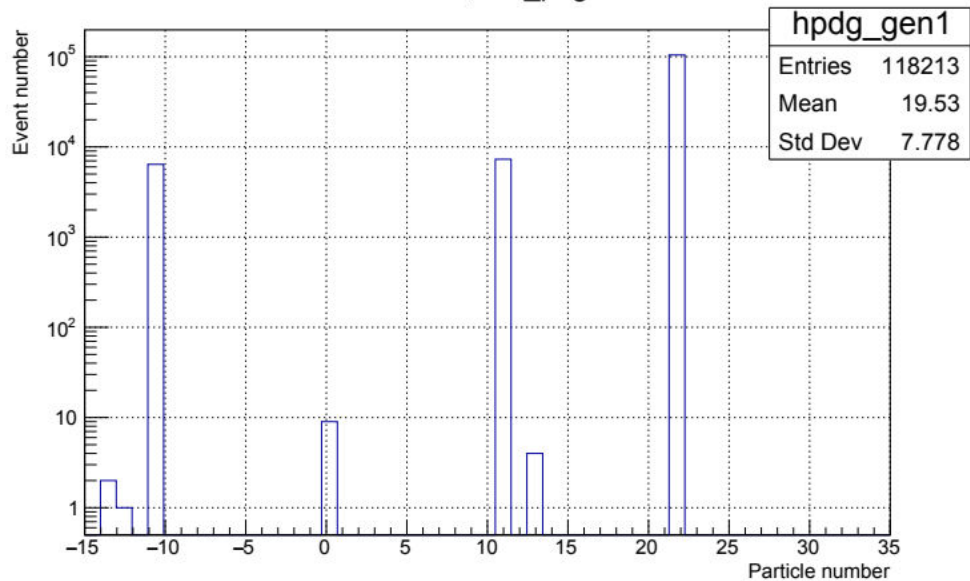
# Problem in the invariant mass?

## Photon only, npfos=1

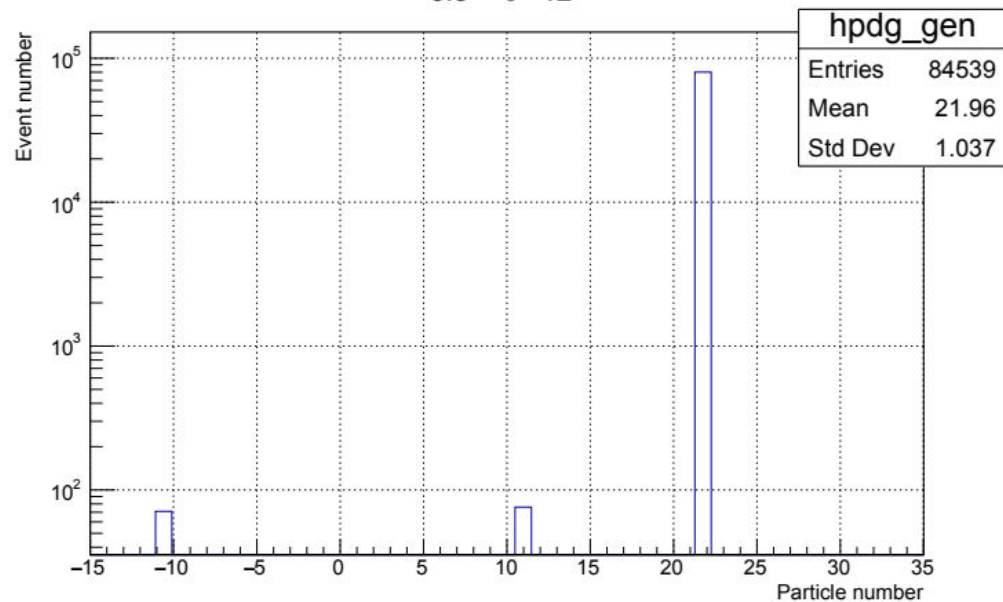


# Particles involved

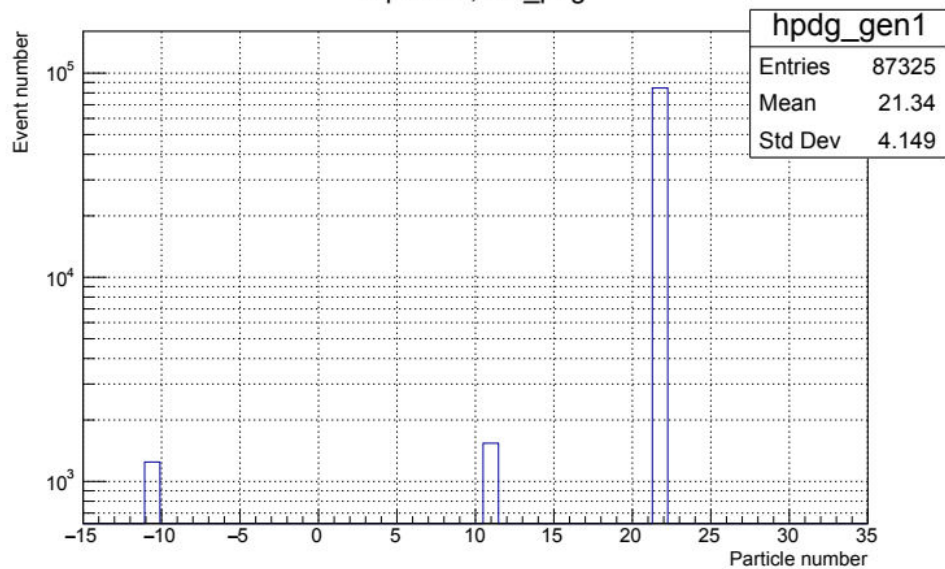
No cut,mcr\_pdg



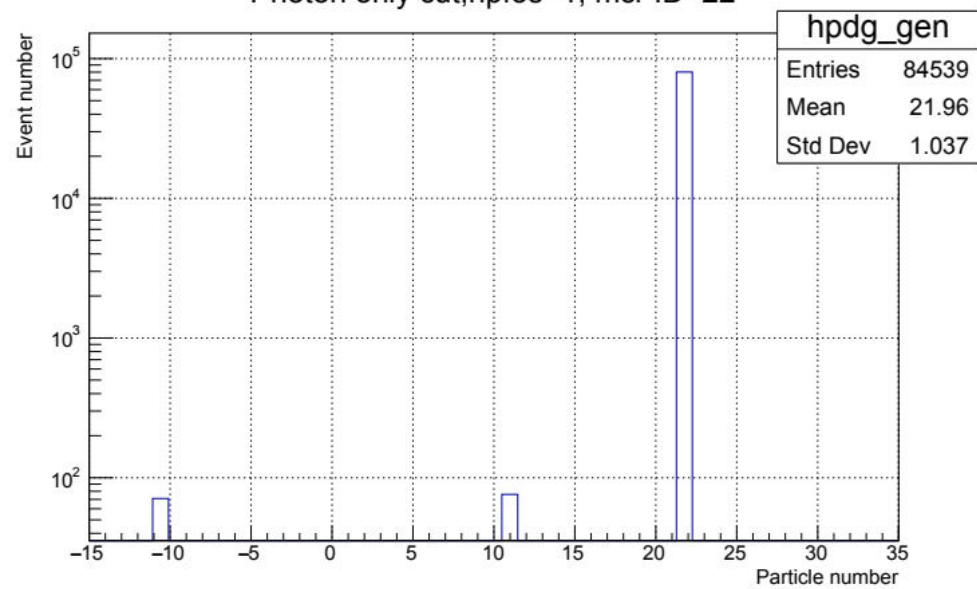
$9.3^\circ < \theta < 12^\circ$



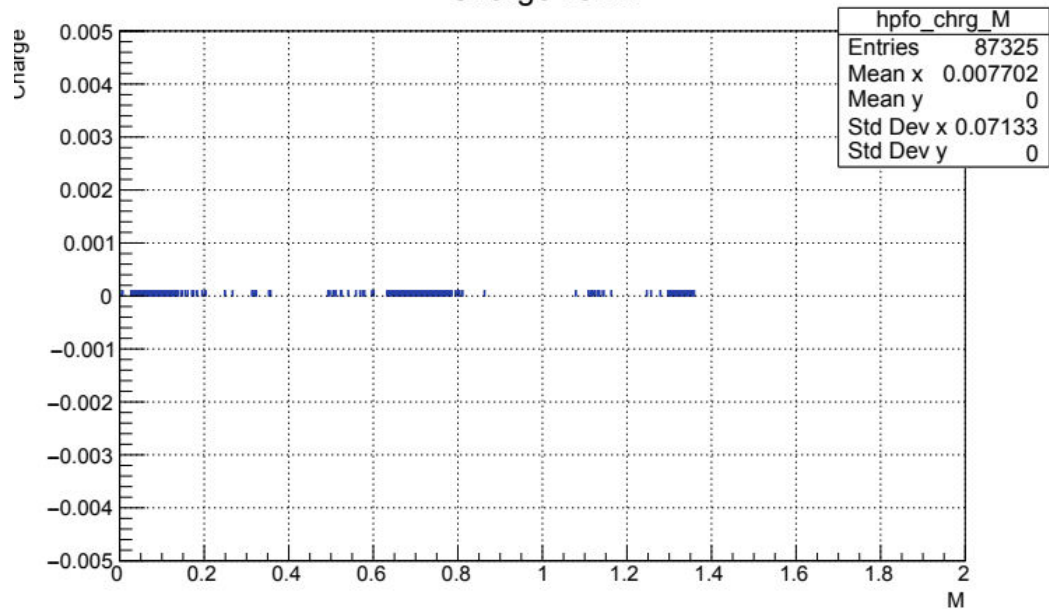
Npfos=1,mcr\_pdg



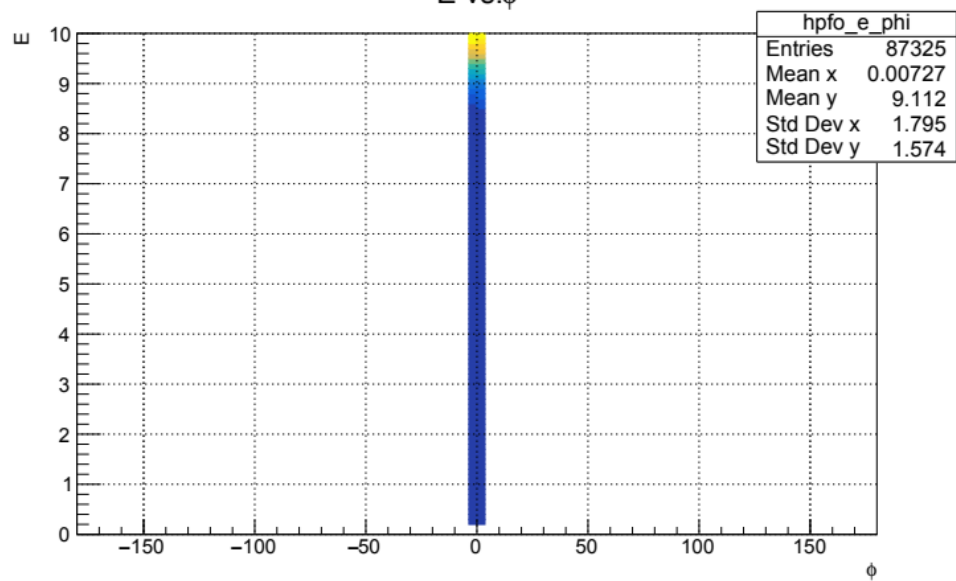
Photon only cut,npfos=1, mcr ID=22



Charge vs. M



E vs.  $\phi$



# Future tasks

- Create relevant plots for the samples at 500 GeV