

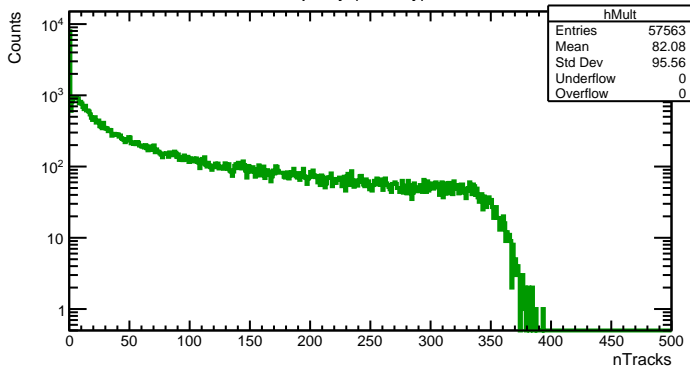
Geant4Star Forward Tracking QA Report

Hijing Au+Au $\sqrt{s_{NN}} = 200$ GeV (2025)

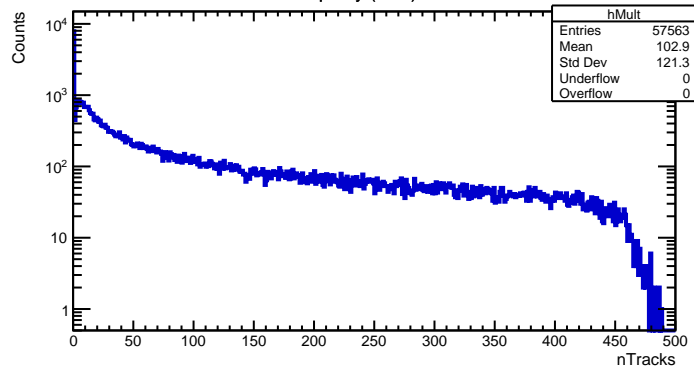
Number of Events: 60k

Yousif El-Feky
The American University in Cairo (AUC)
Hard Probes PWG

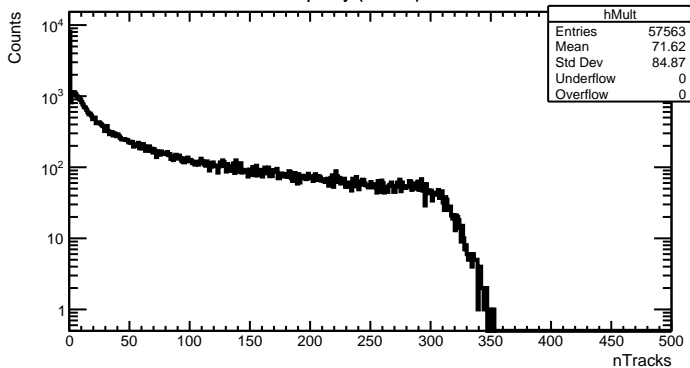
Multiplicity (Primary)



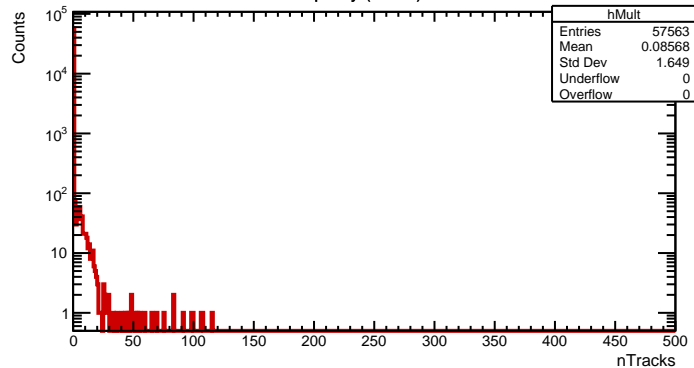
Multiplicity (BLC)

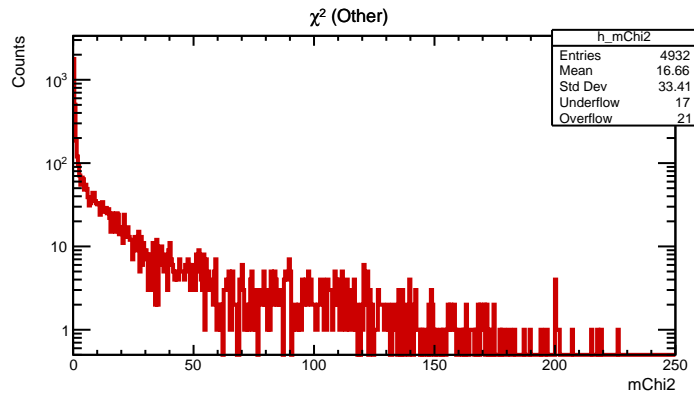
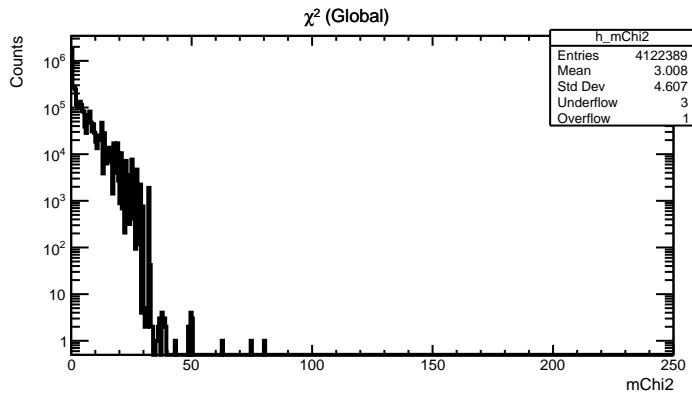
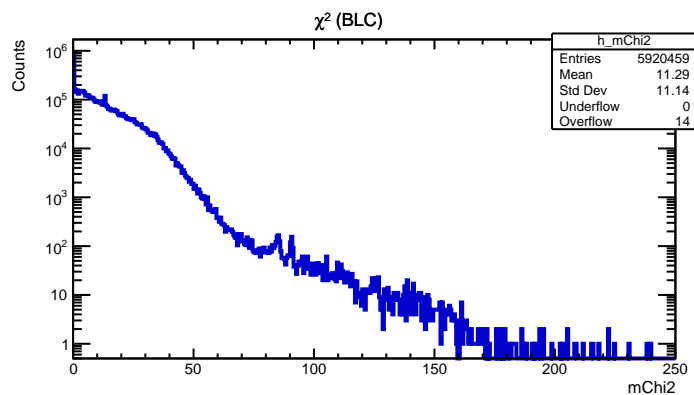
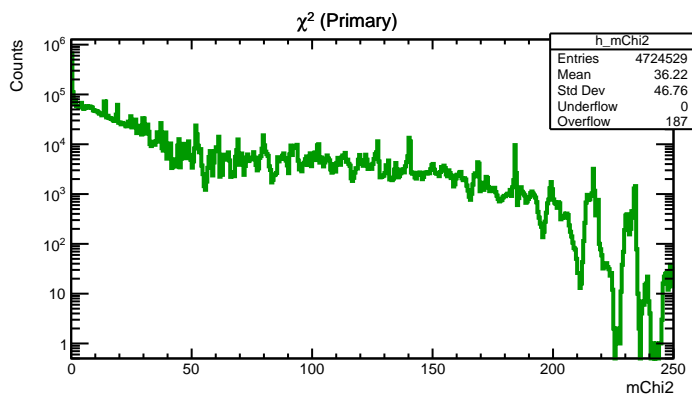


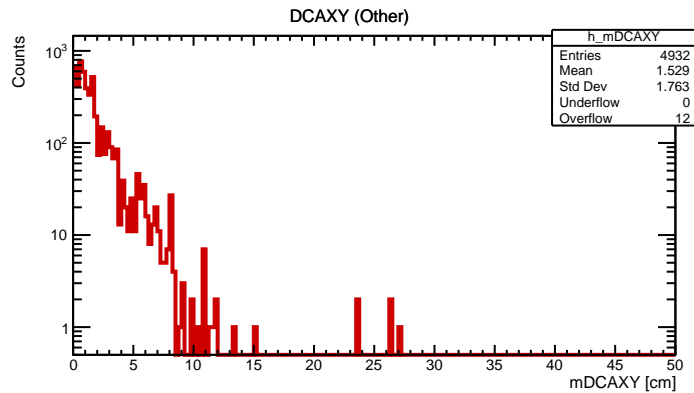
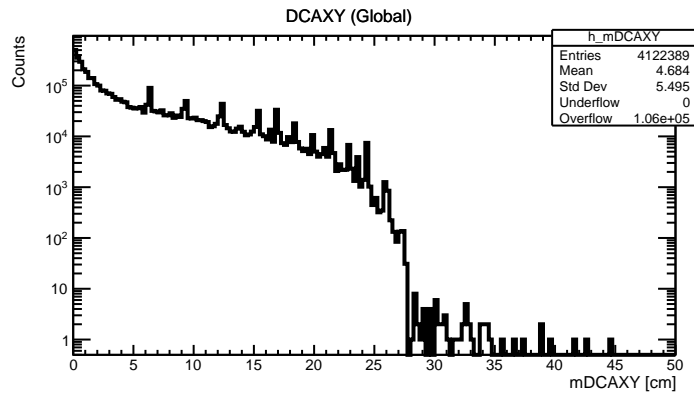
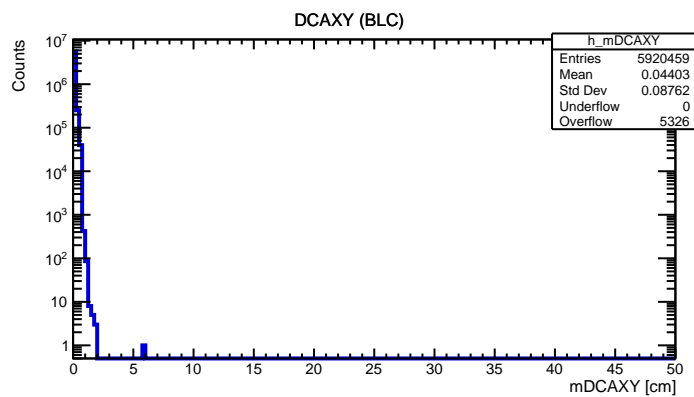
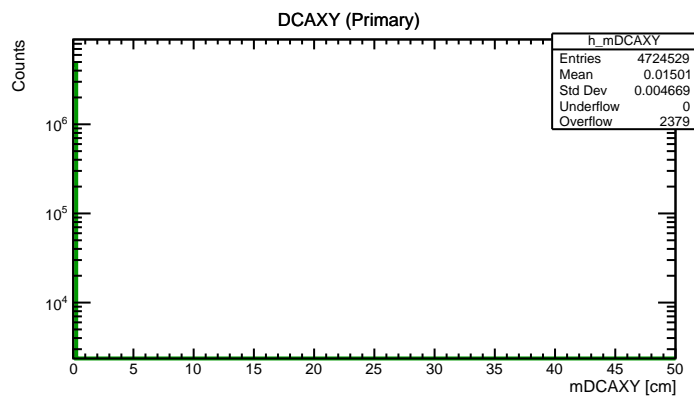
Multiplicity (Global)



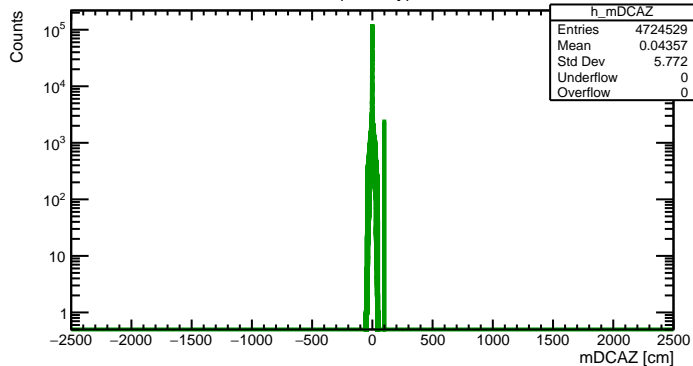
Multiplicity (Other)



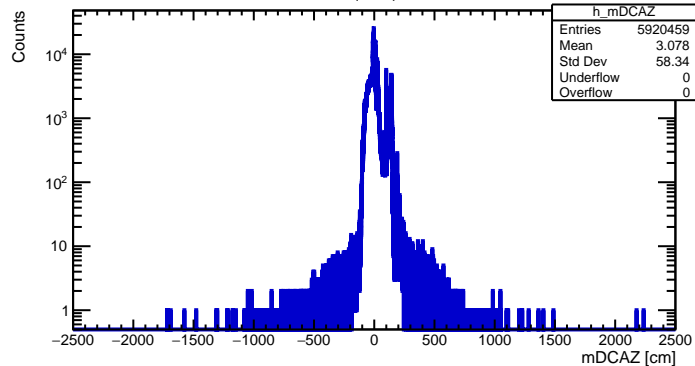




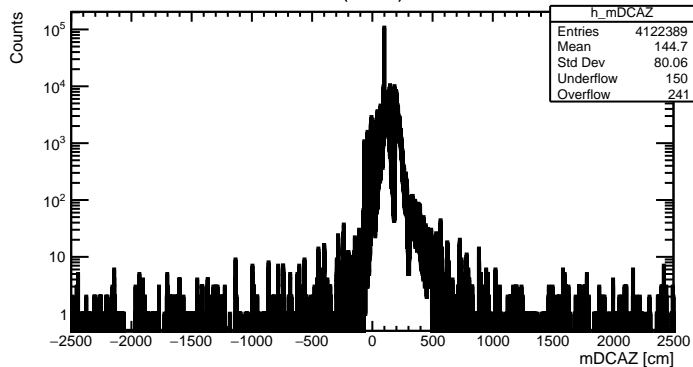
DCAZ (Primary)



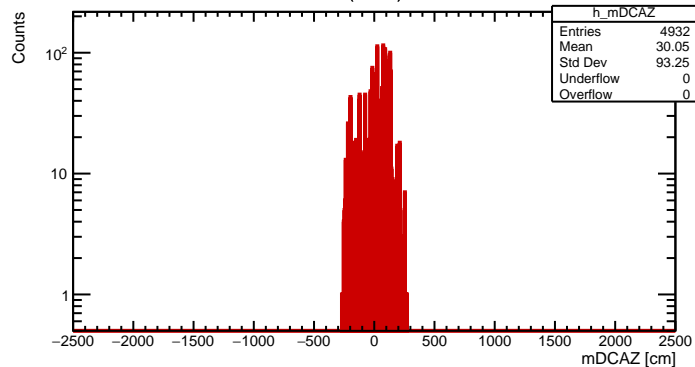
DCAZ (BLC)

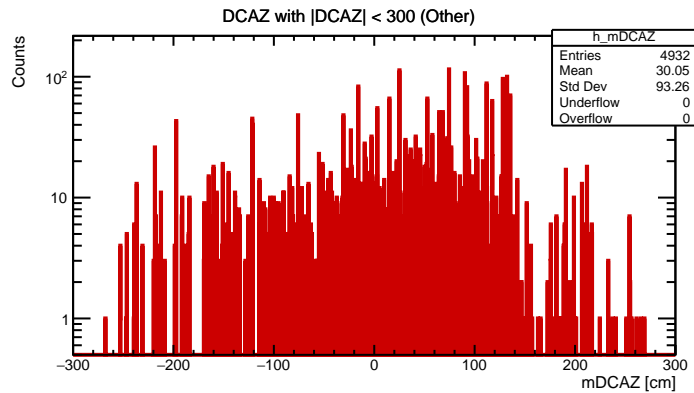
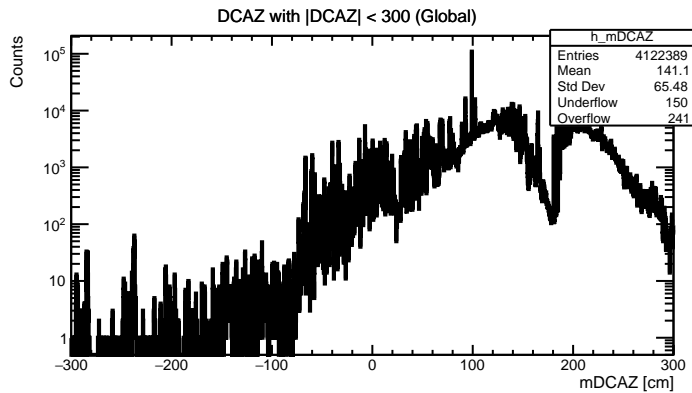
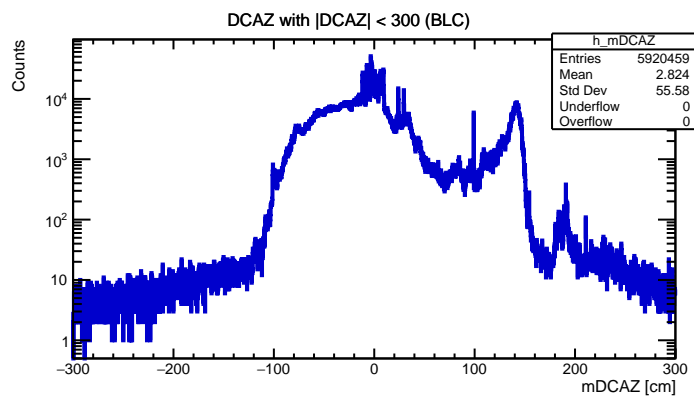
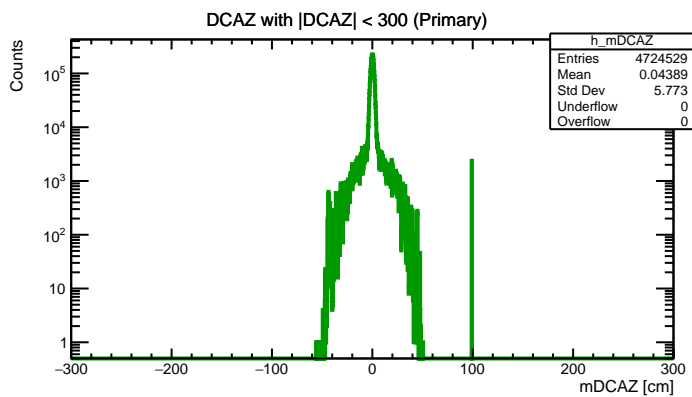


DCAZ (Global)

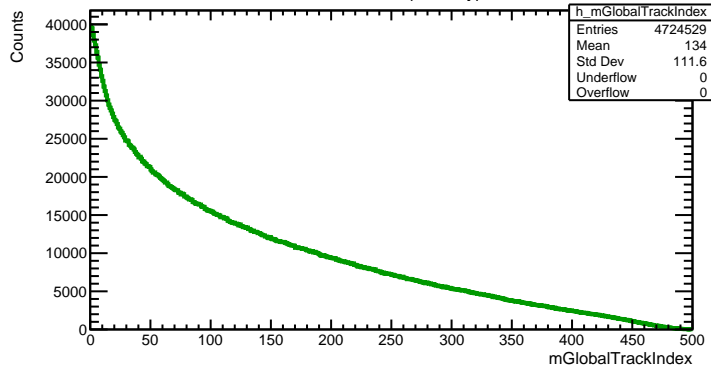


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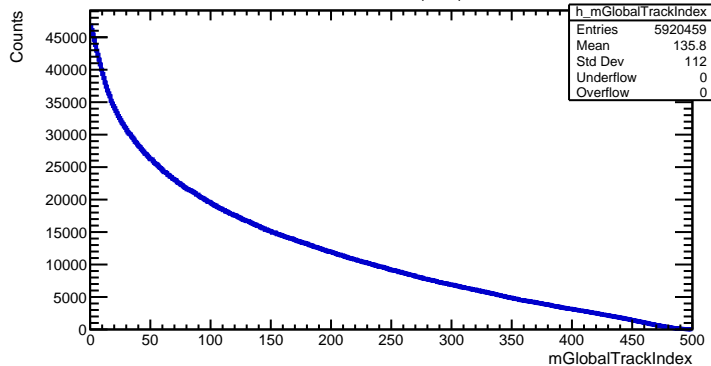




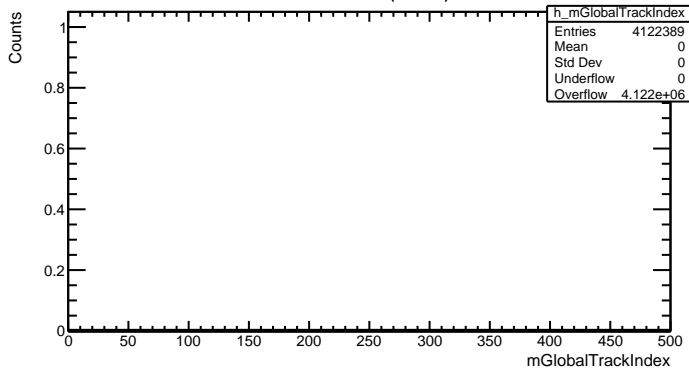
Global Track Index (Primary)



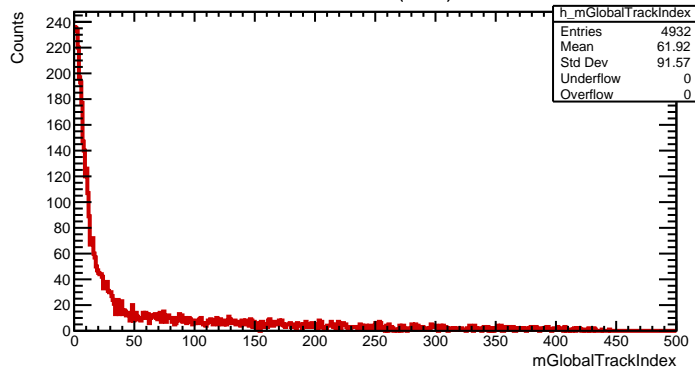
Global Track Index (BLC)

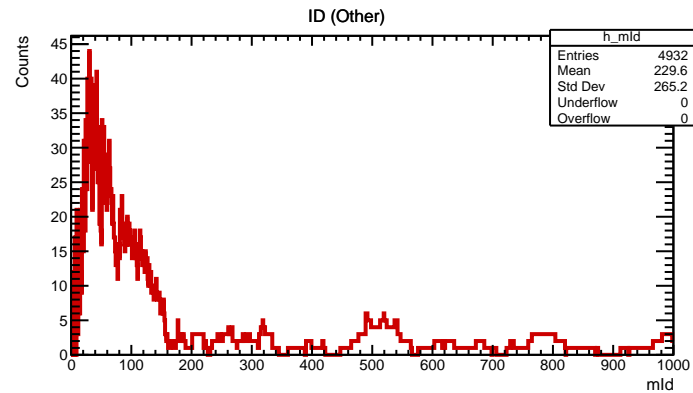
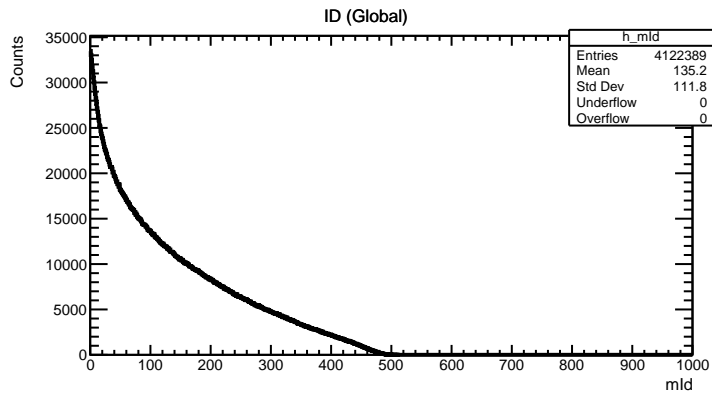
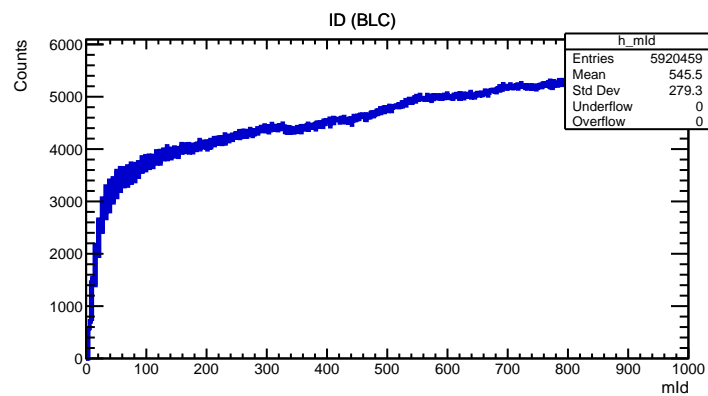
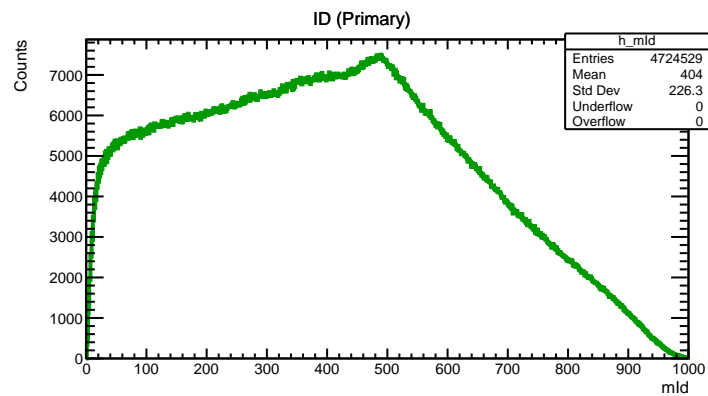


Global Track Index (Global)

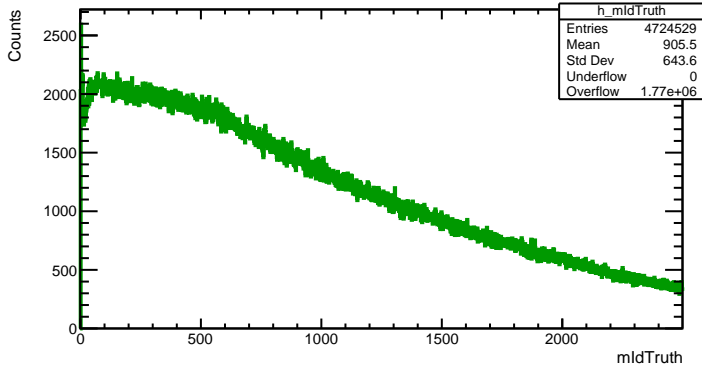


Global Track Index (Other)

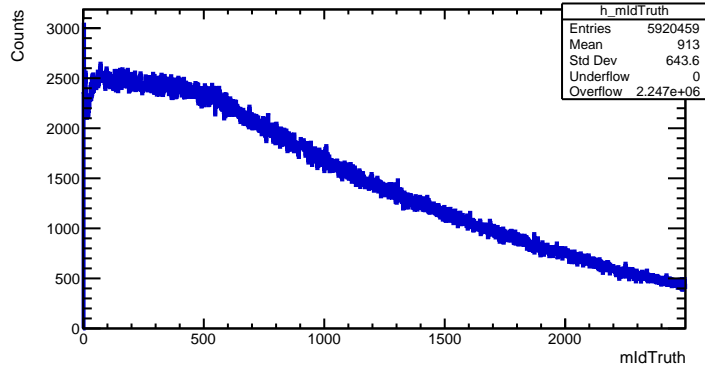




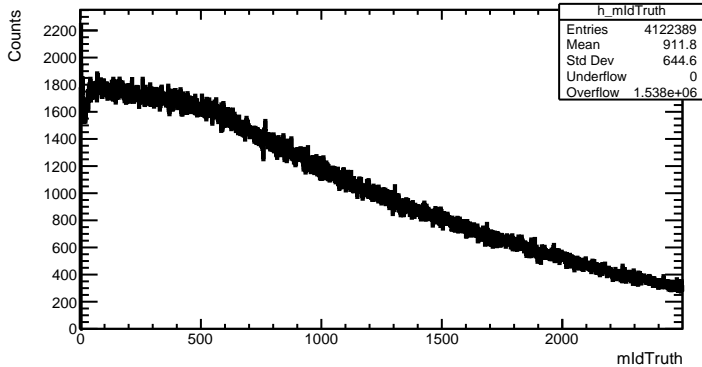
ID Truth (Primary)



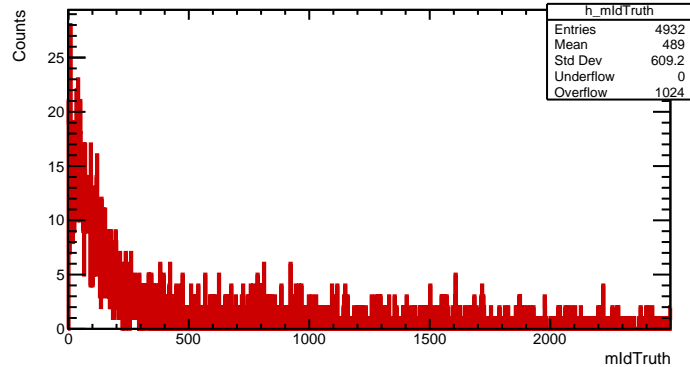
ID Truth (BLC)

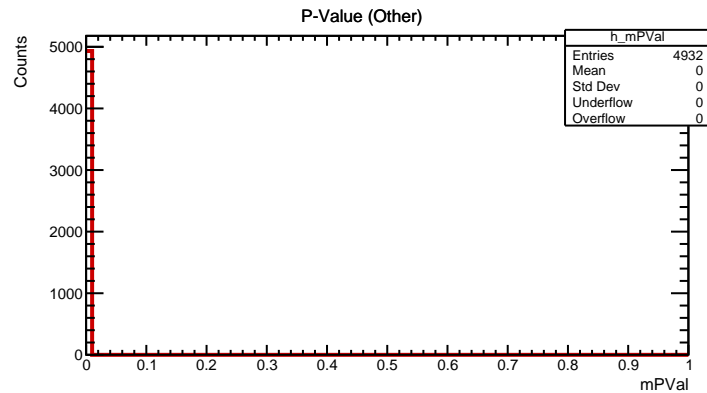
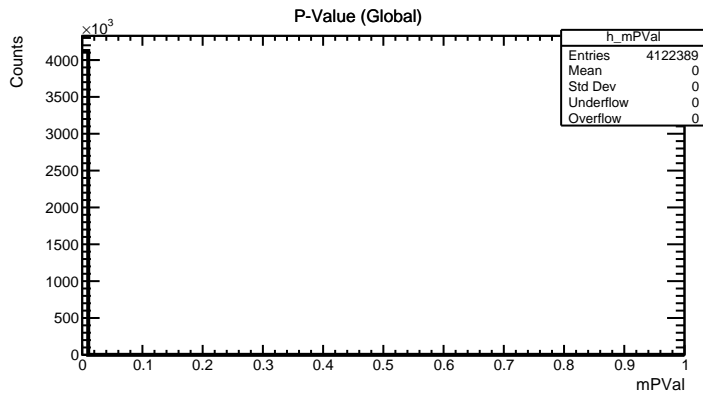
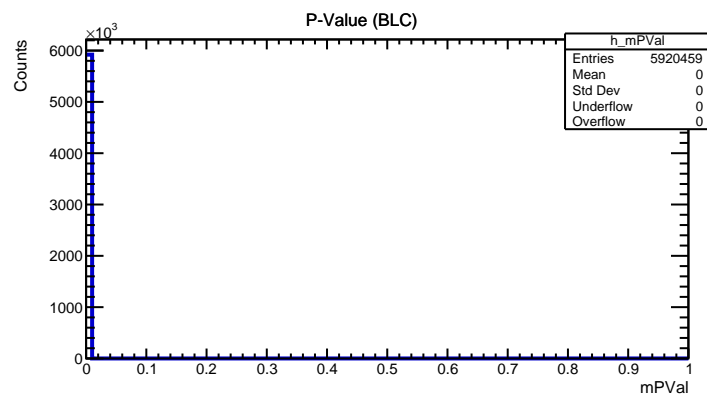
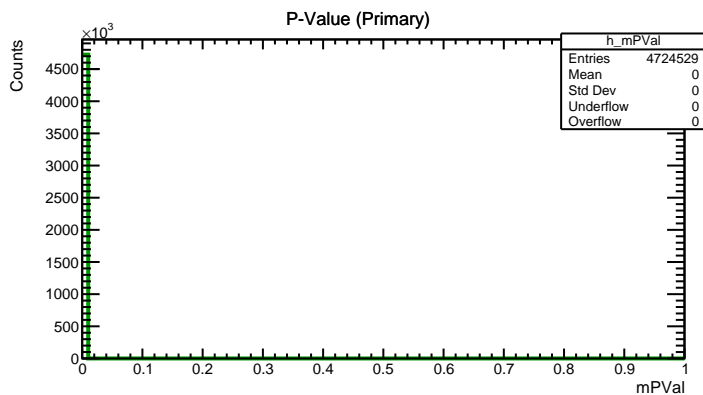


ID Truth (Global)

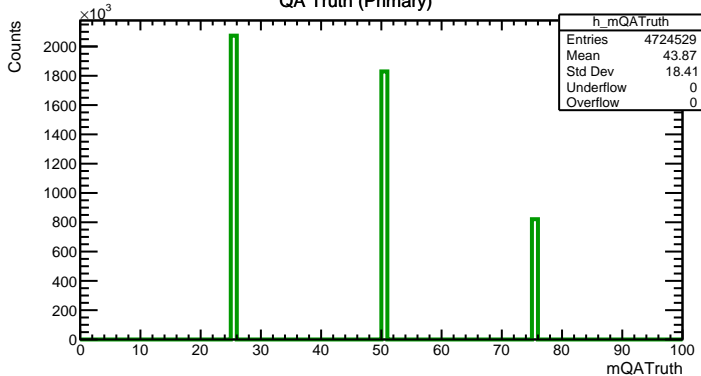


ID Truth (Other)

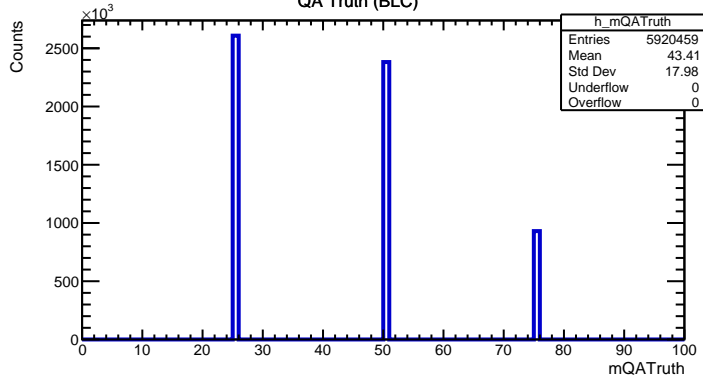




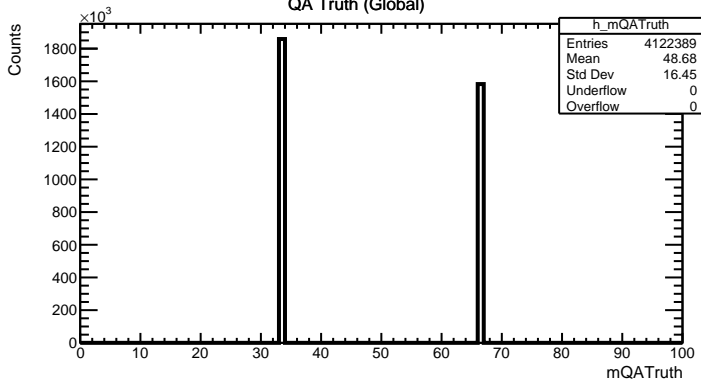
QA Truth (Primary)



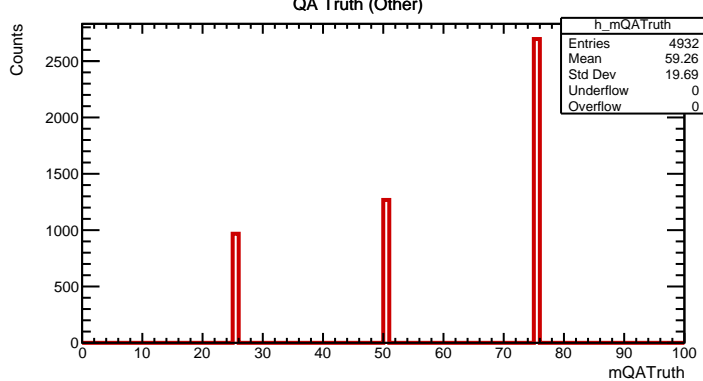
QA Truth (BLC)

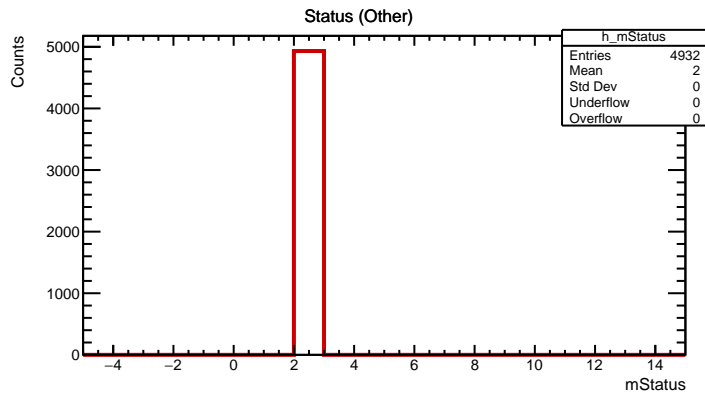
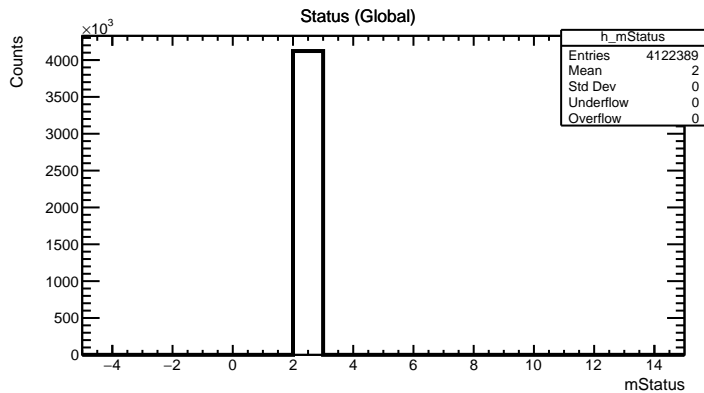
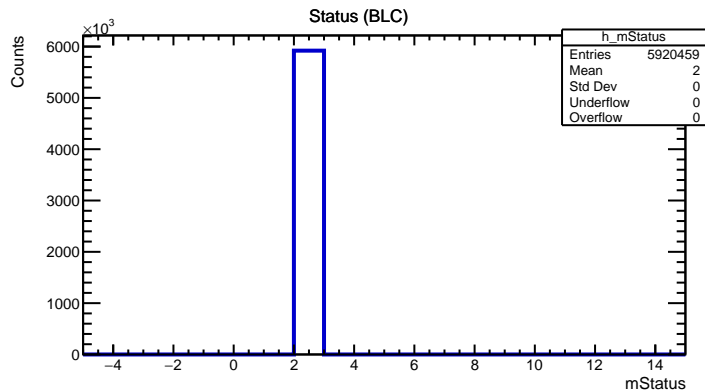
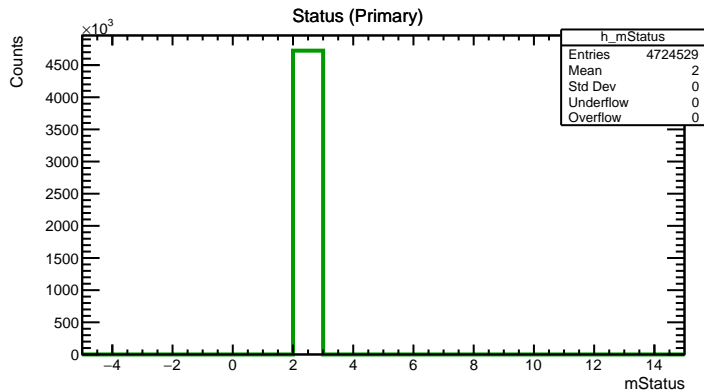


QA Truth (Global)

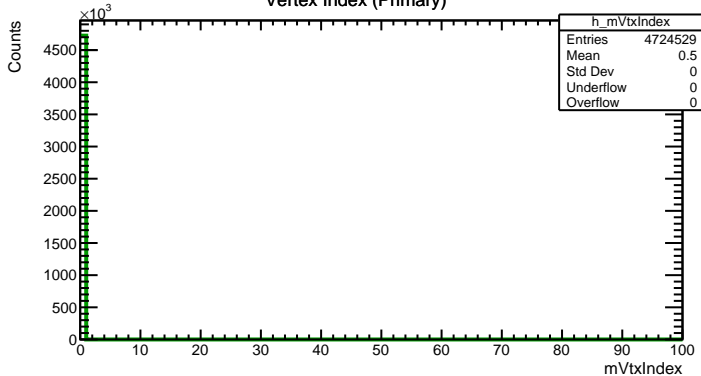


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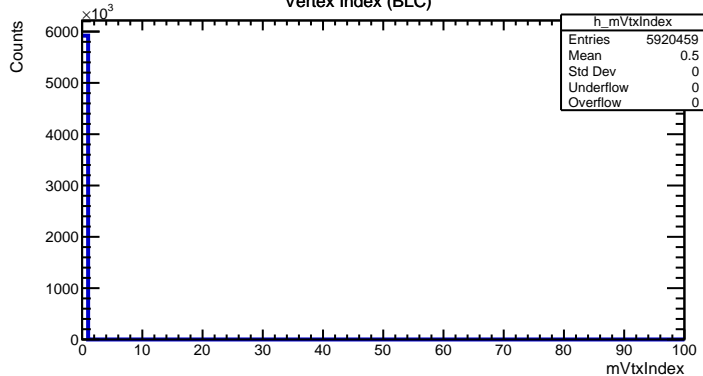




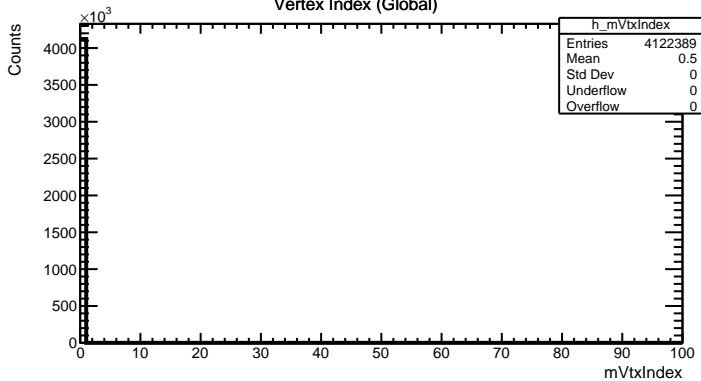
Vertex Index (Primary)



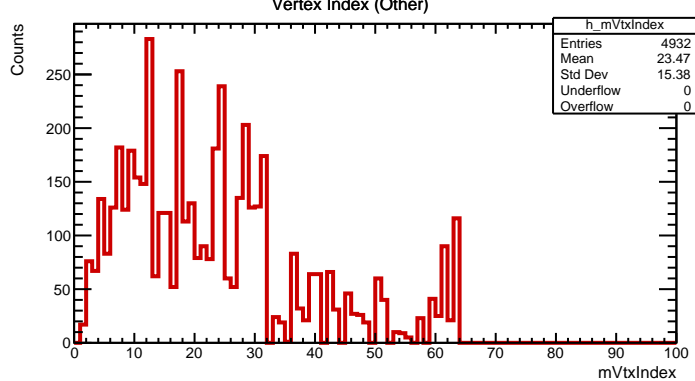
Vertex Index (BLC)

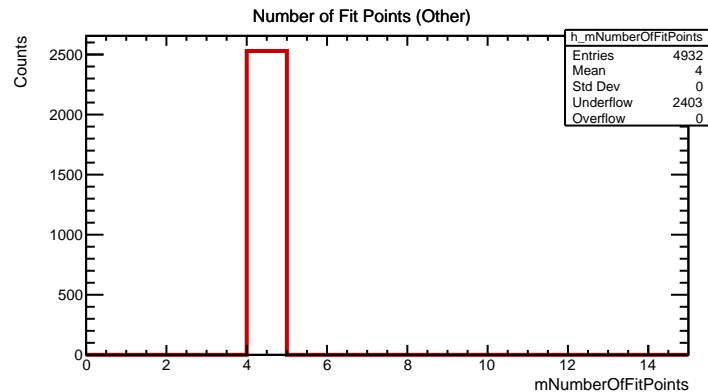
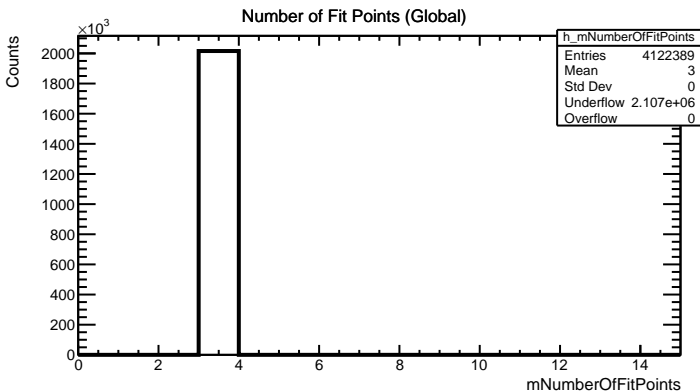
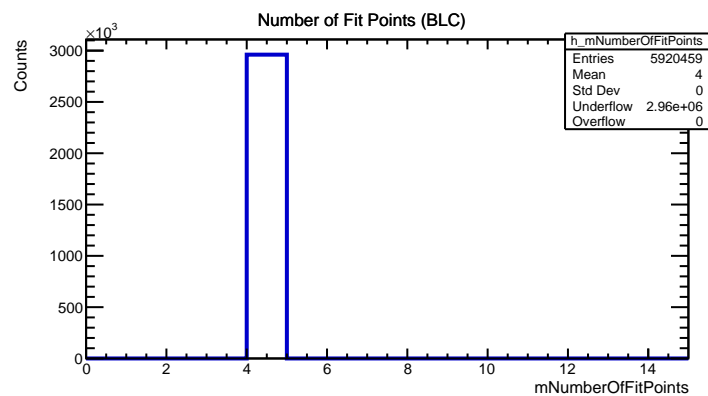
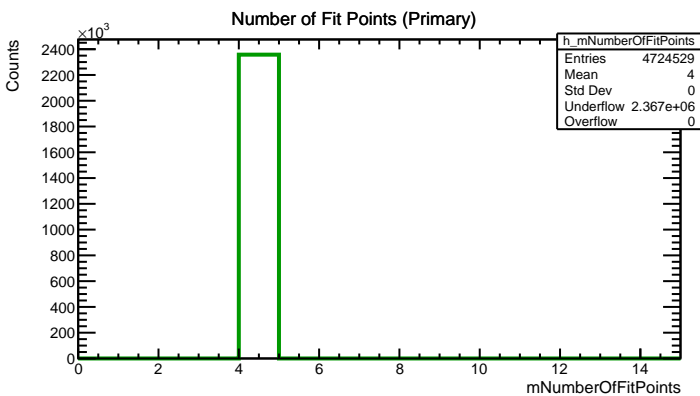


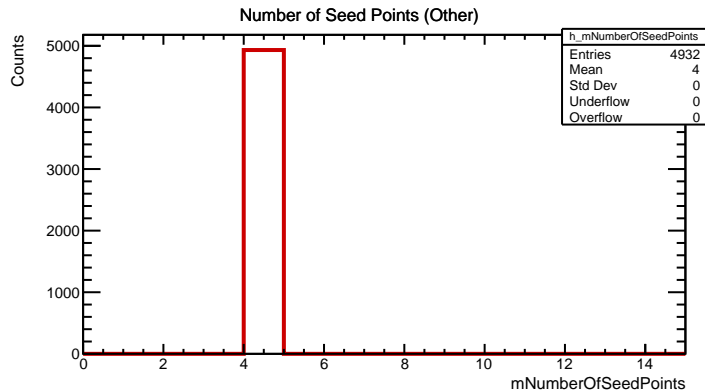
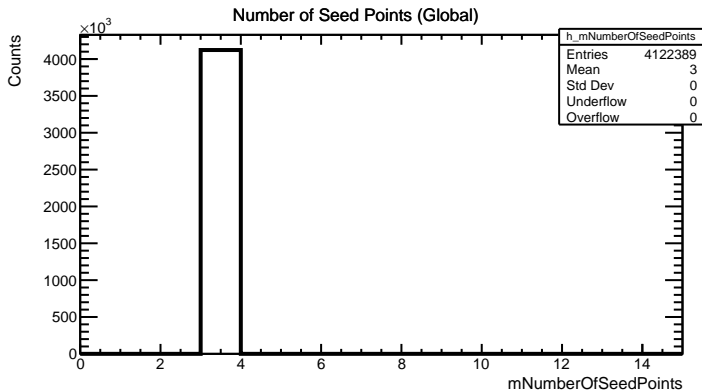
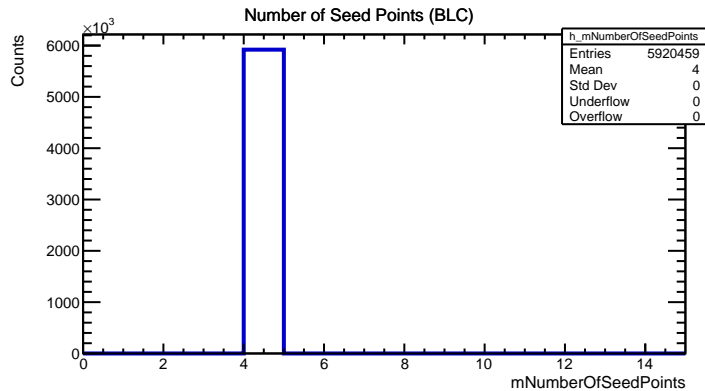
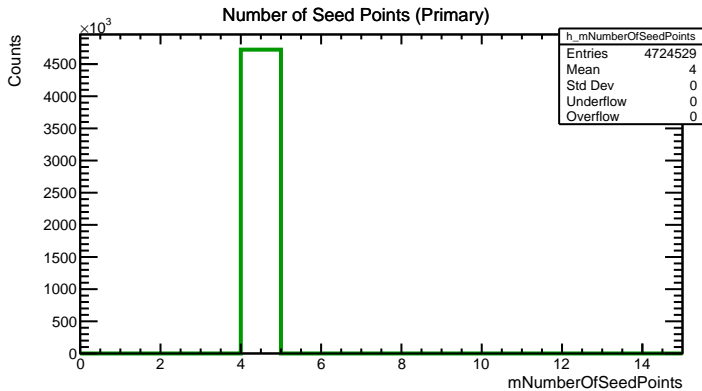
Vertex Index (Global)

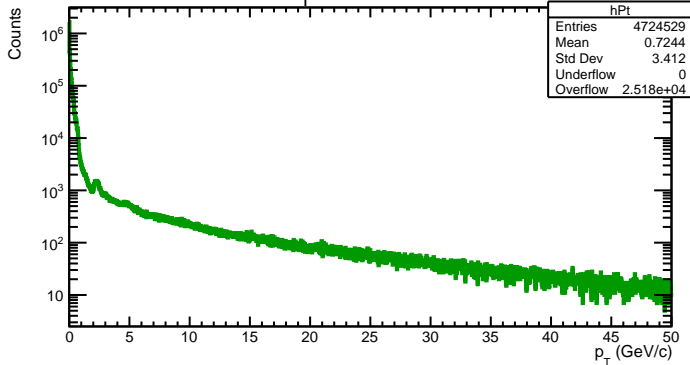
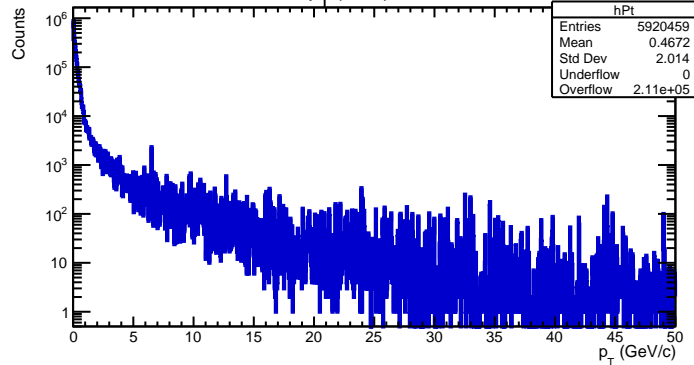
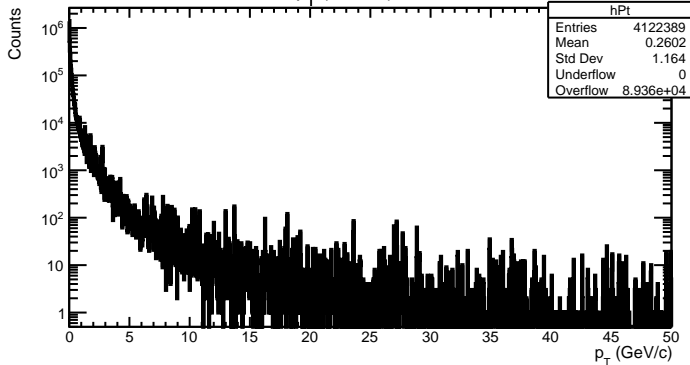
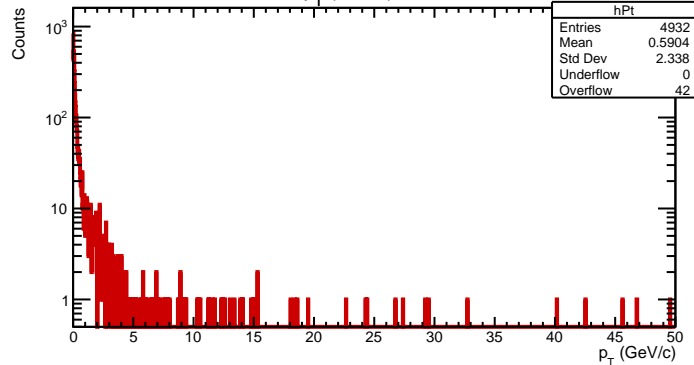


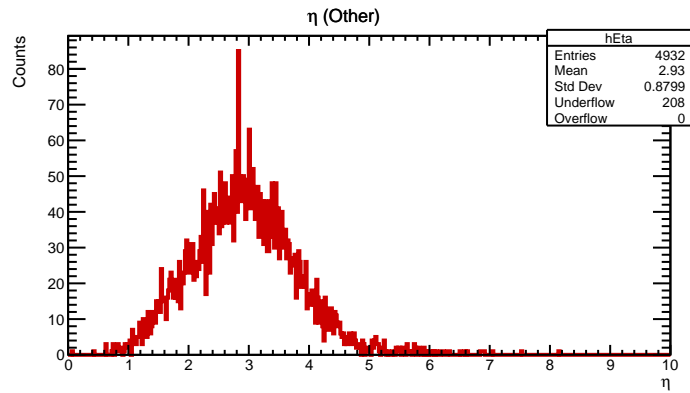
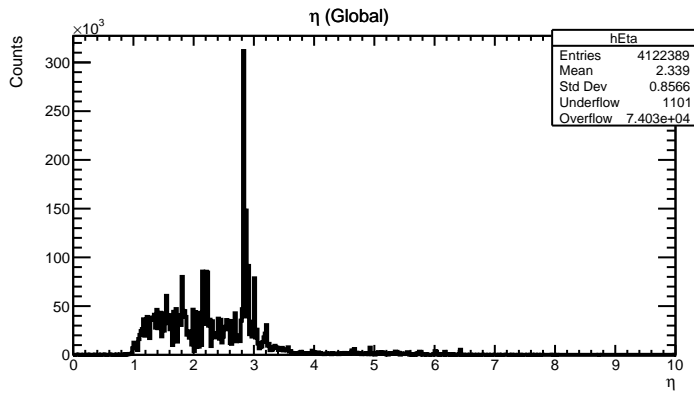
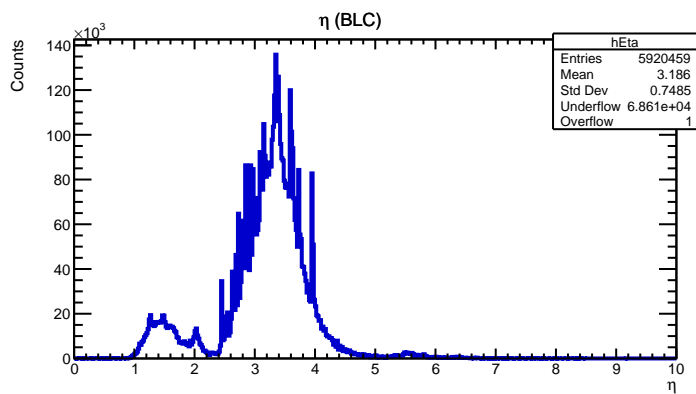
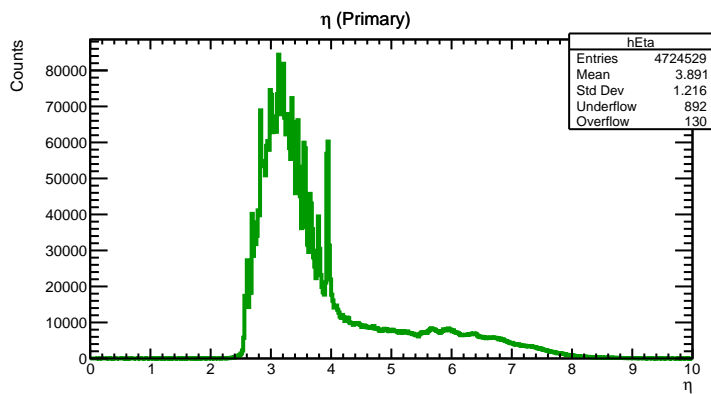
Vertex Index (Other)

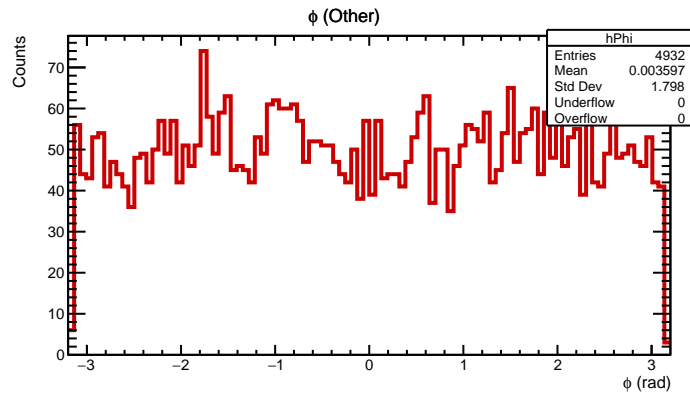
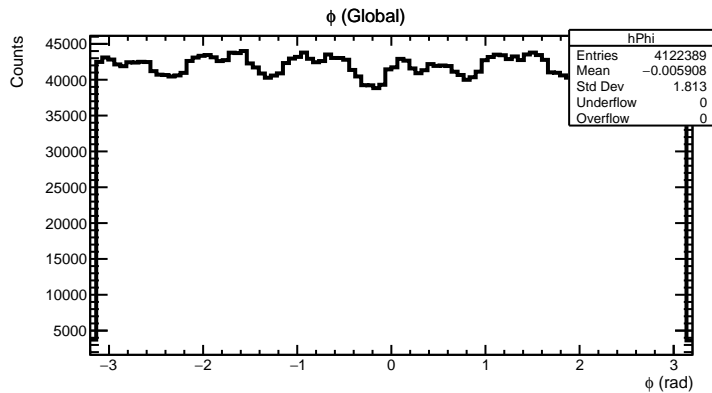
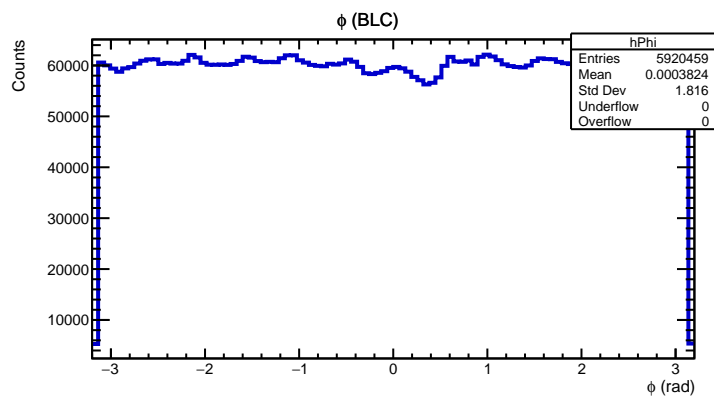
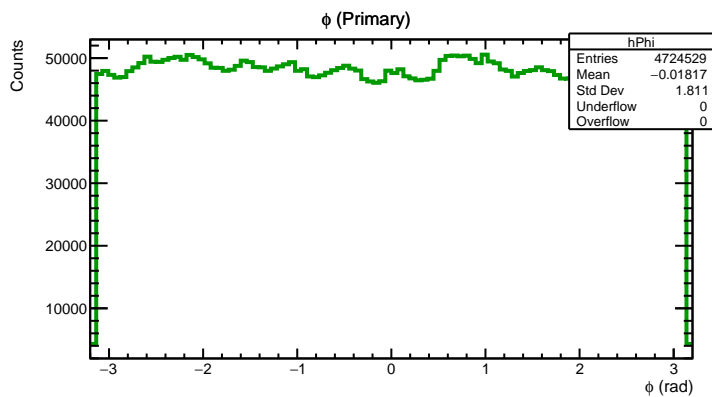


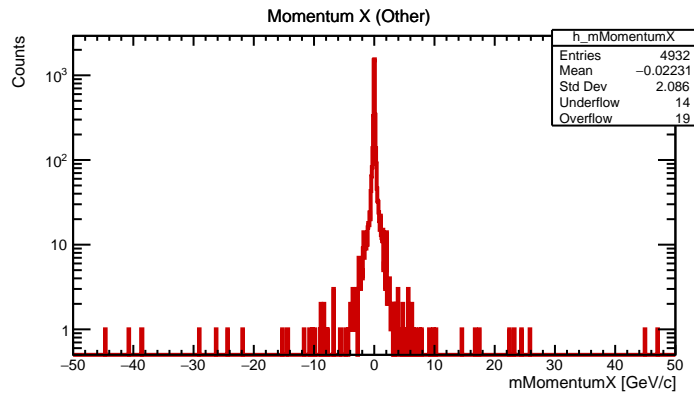
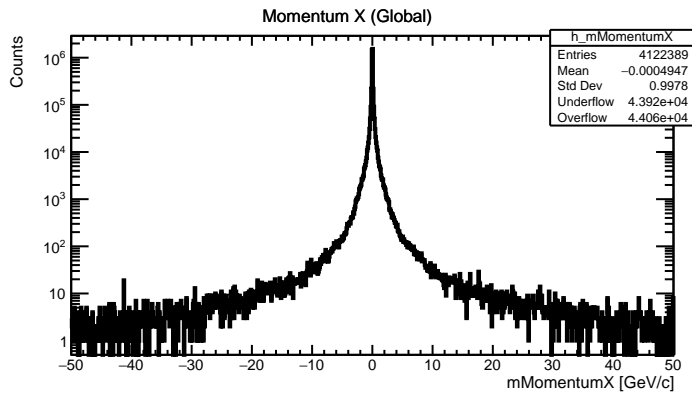
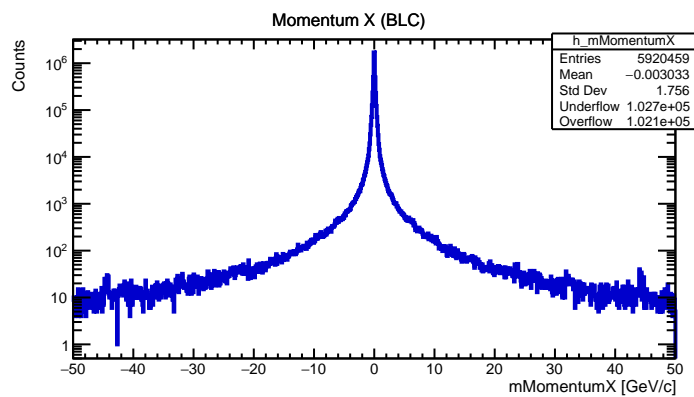
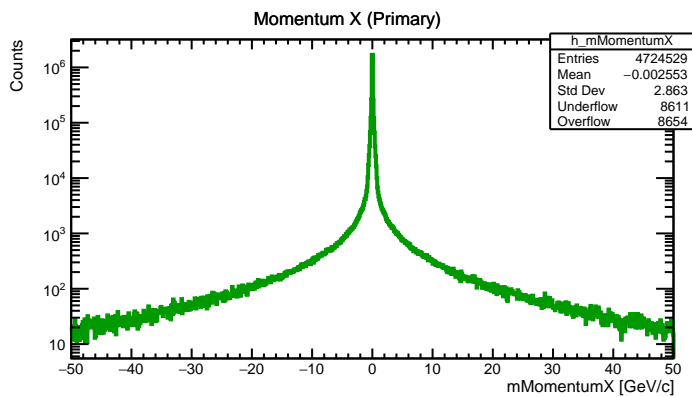


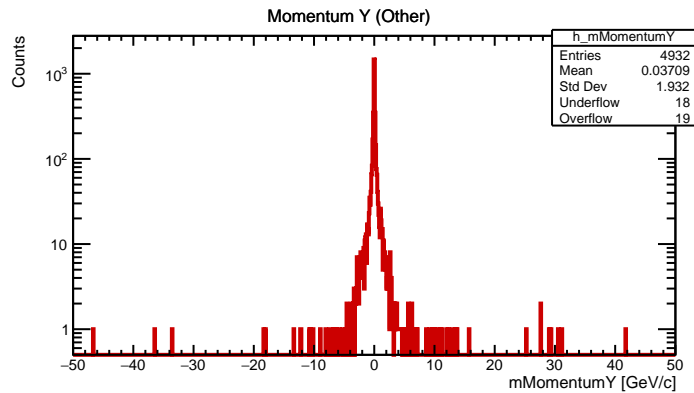
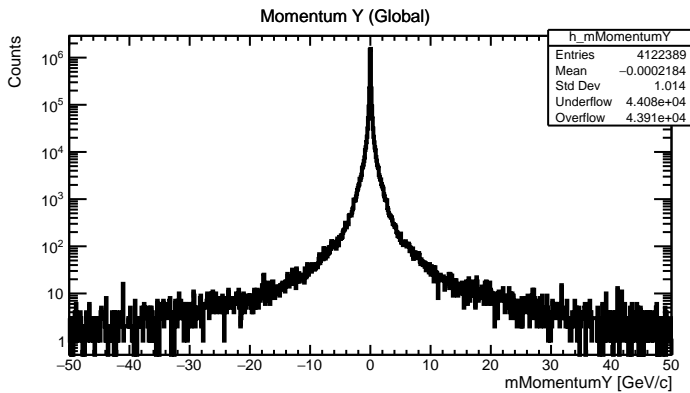
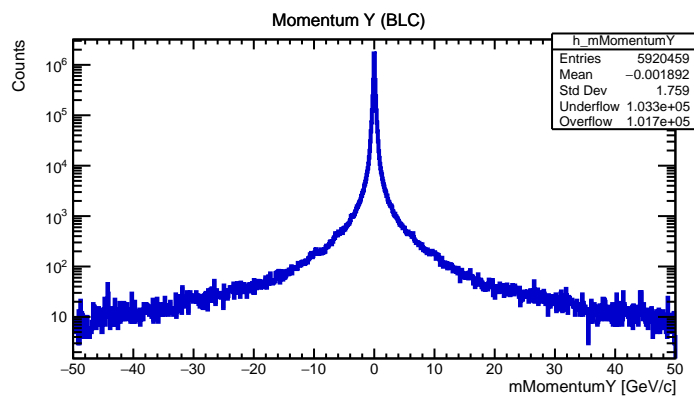
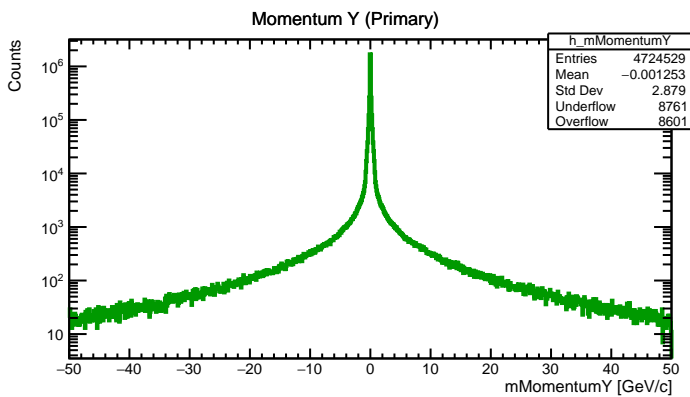


p_T (Primary) p_T (BLC) p_T (Global) p_T (Other)

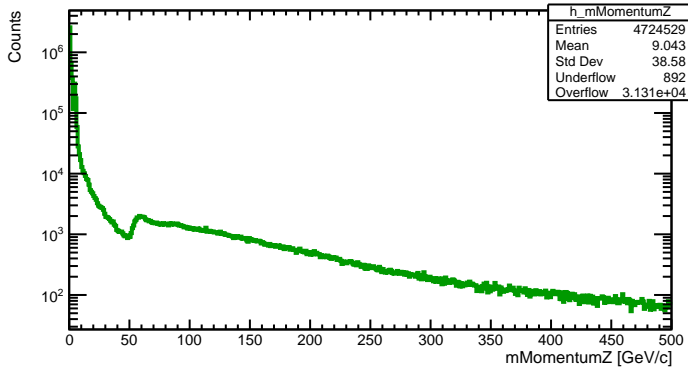




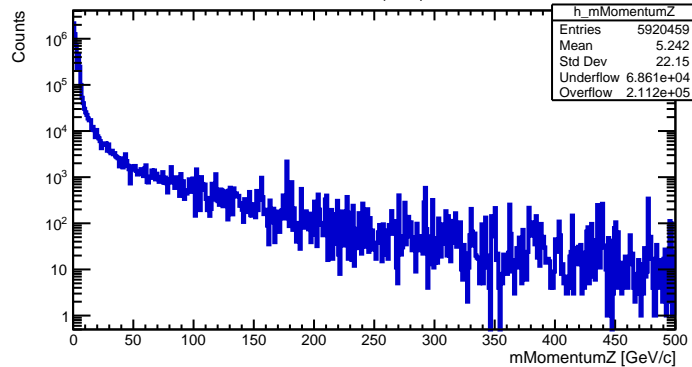




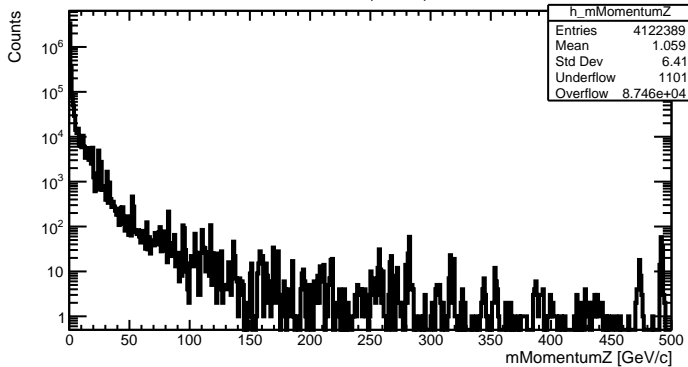
Momentum Z (Primary)



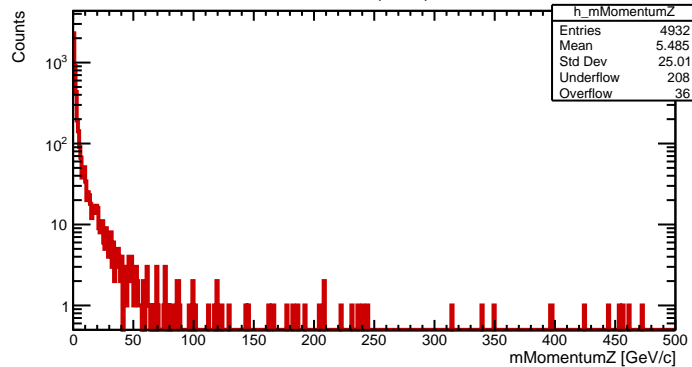
Momentum Z (BLC)



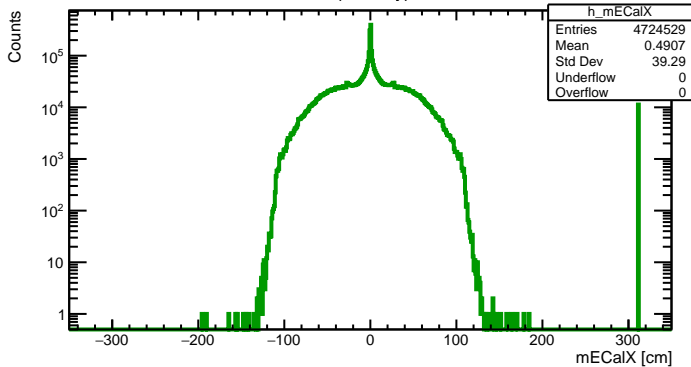
Momentum Z (Global)



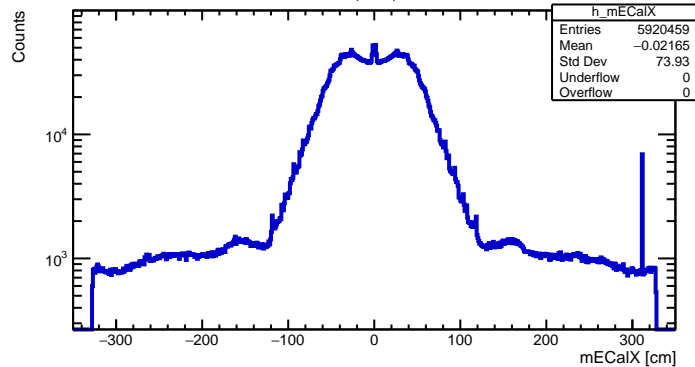
Momentum Z (Other)



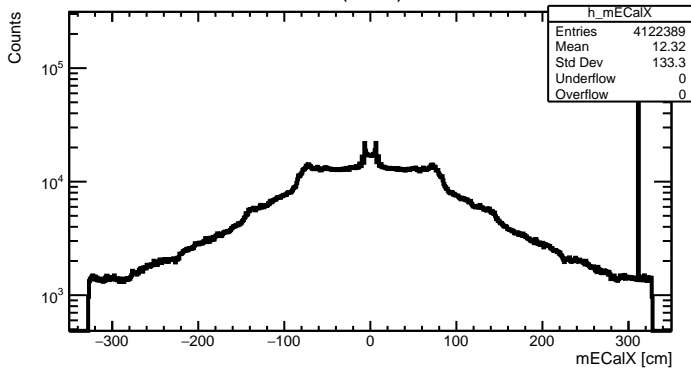
ECaIX (Primary)



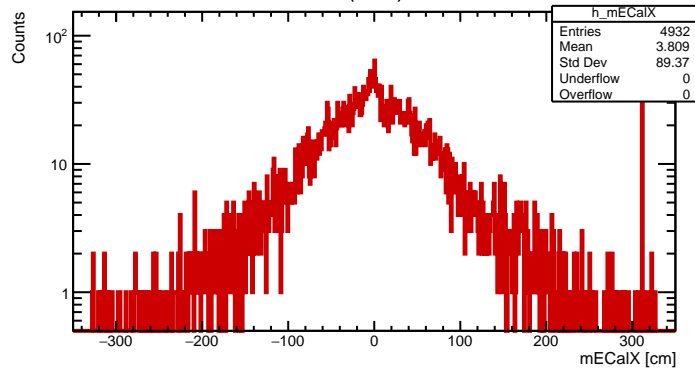
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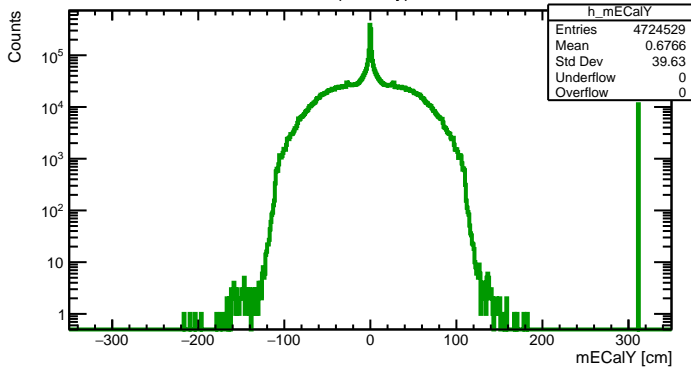
ECaIX (Global)



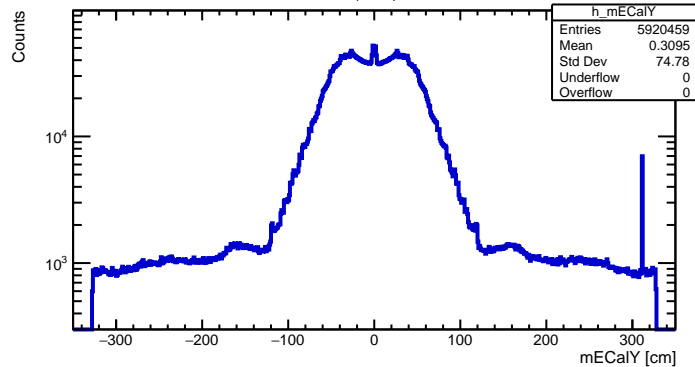
ECaIX (Other)



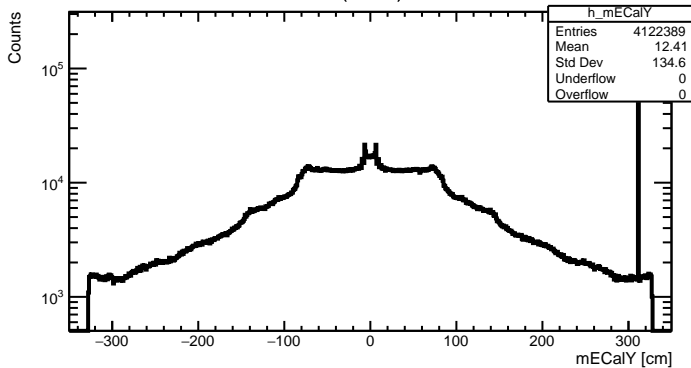
ECalY (Primary)



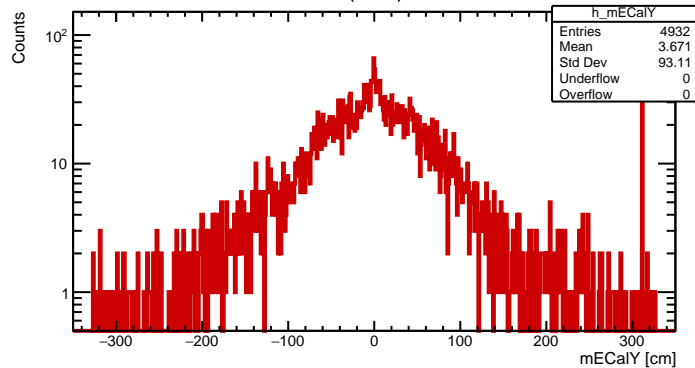
ECalY (BLC)



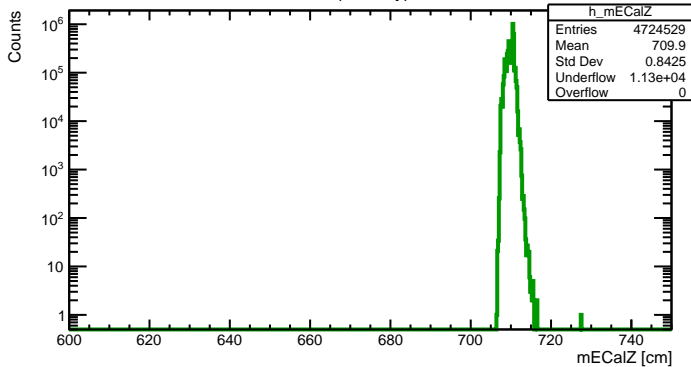
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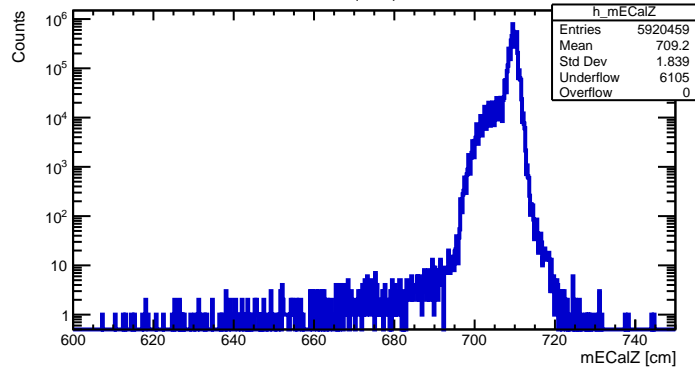
ECalY (Other)



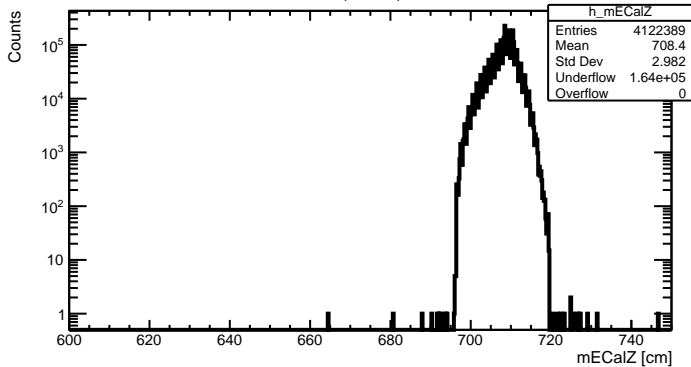
ECalZ (Primary)



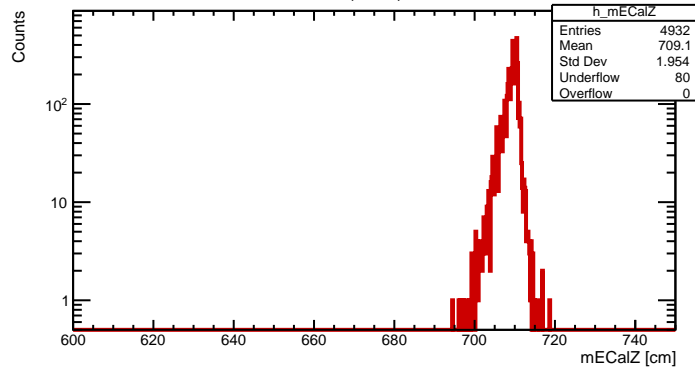
ECalZ (BLC)

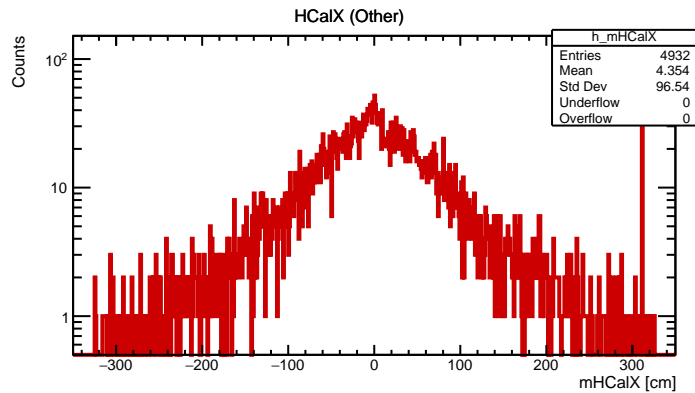
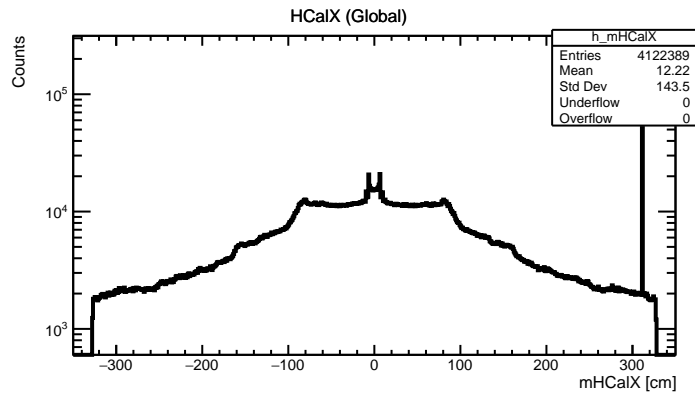
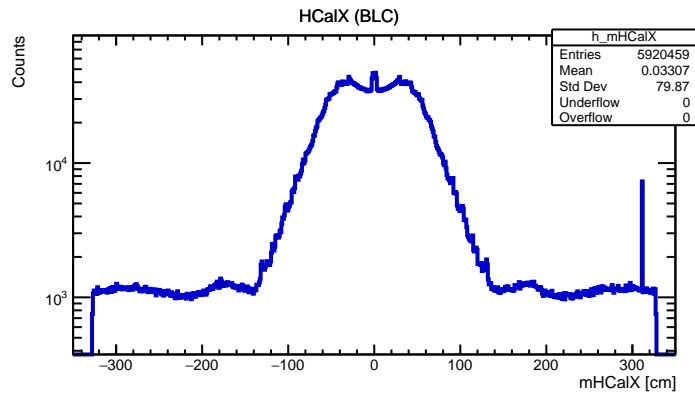
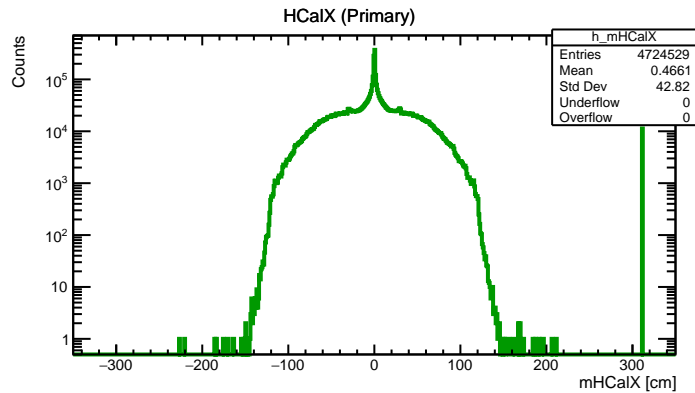


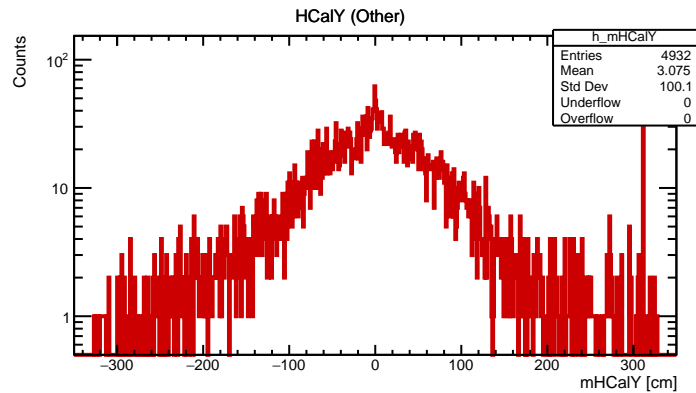
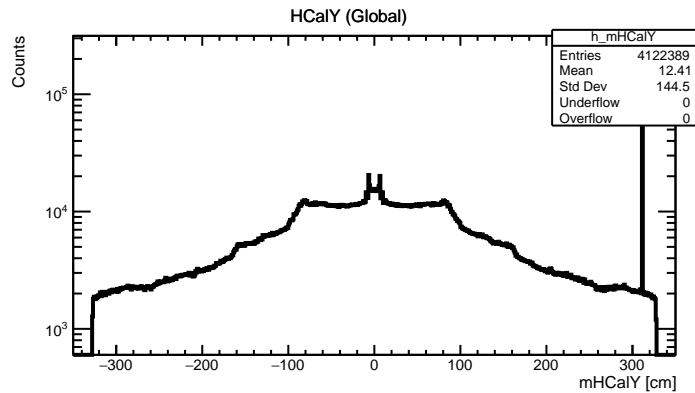
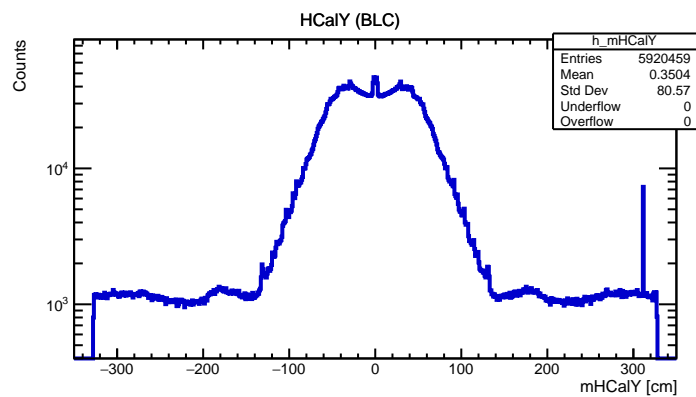
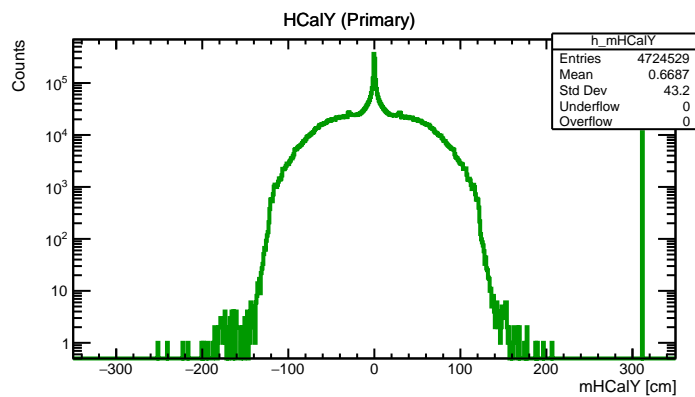
ECalZ (Global)



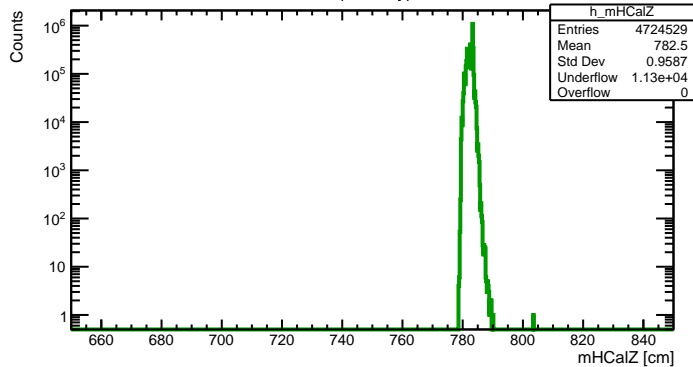
ECalZ (Other)



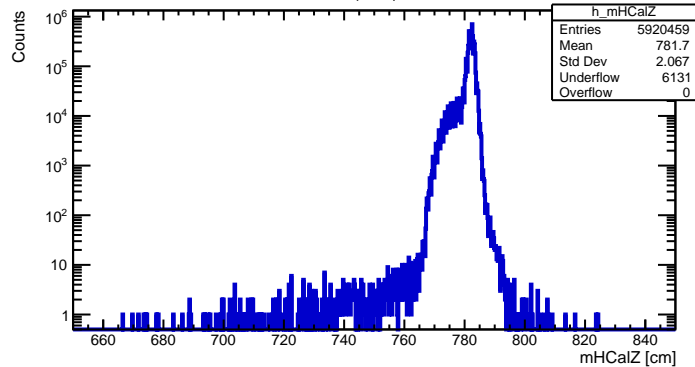




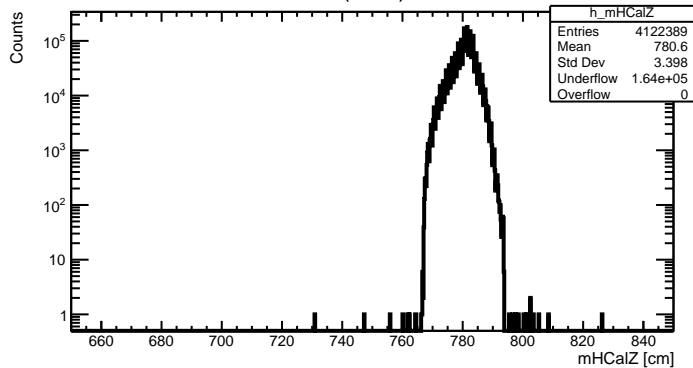
HCalZ (Primary)



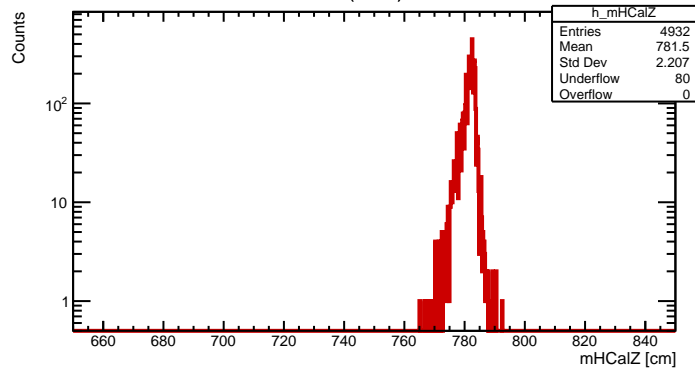
HCalZ (BLC)

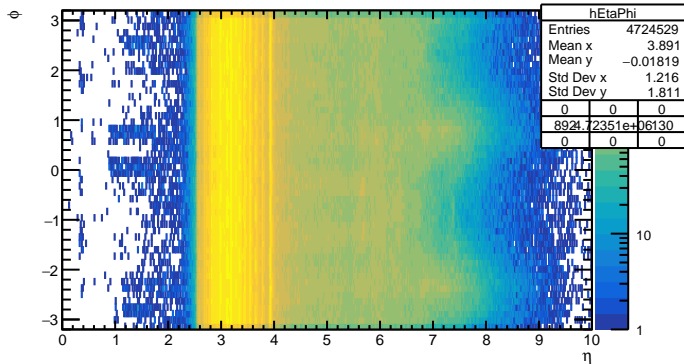
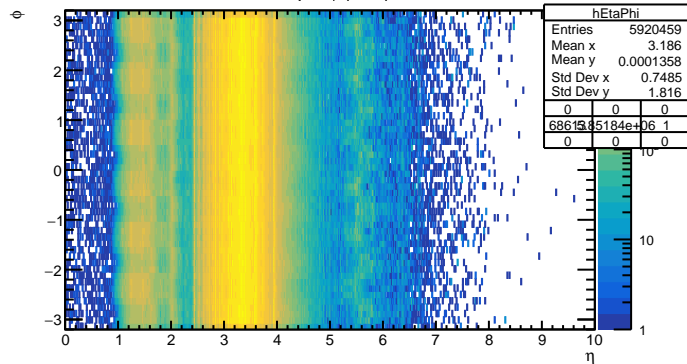
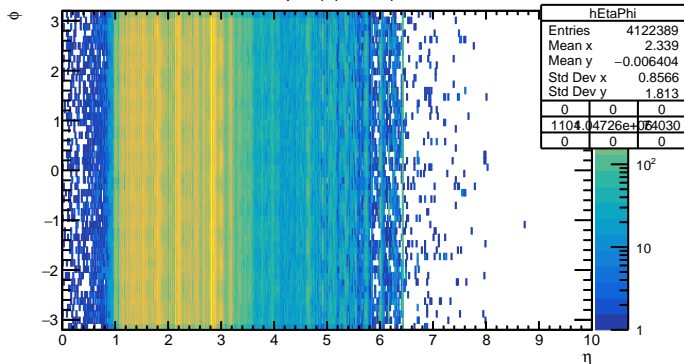
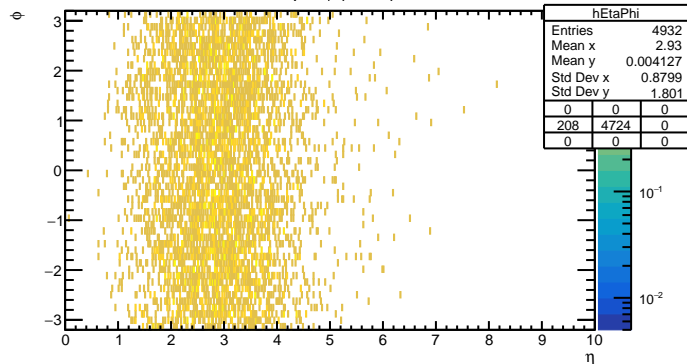


HCalZ (Global)

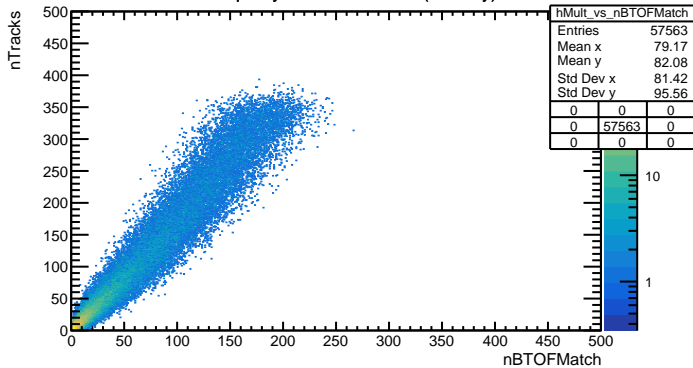


HCalZ (Other)

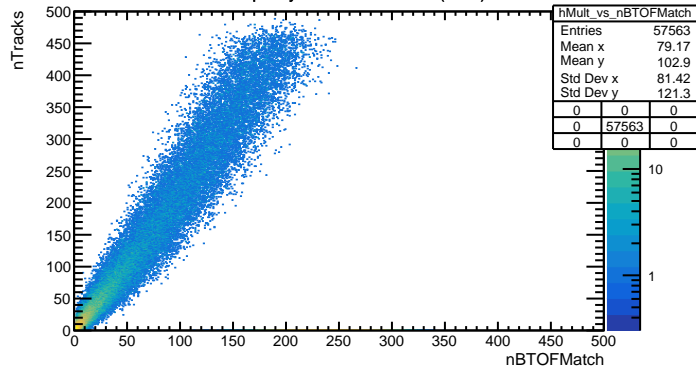


η vs ϕ (Primary) η vs ϕ (BLC) η vs ϕ (Global) η vs ϕ (Other)

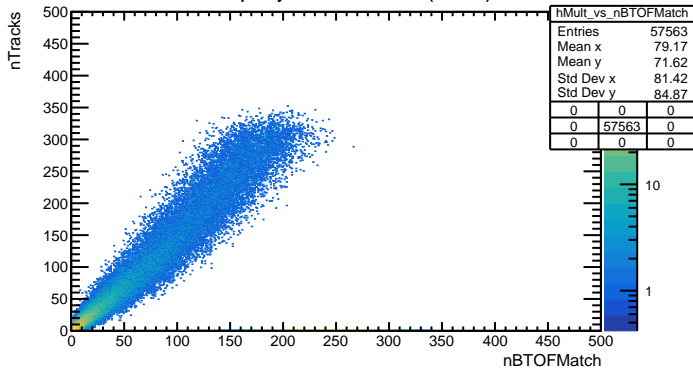
Multiplicity vs nBTOFMatch (Primary)



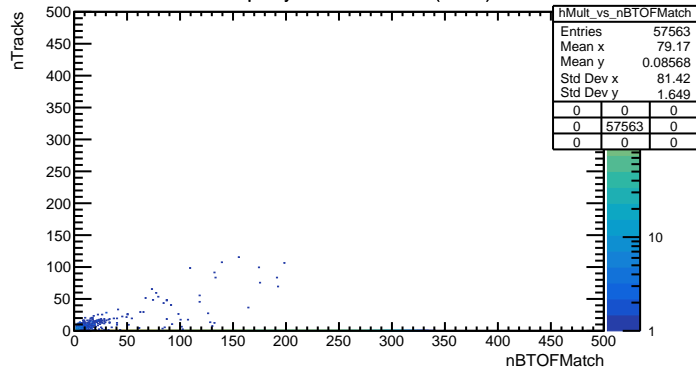
Multiplicity vs nBTOFMatch (BLC)



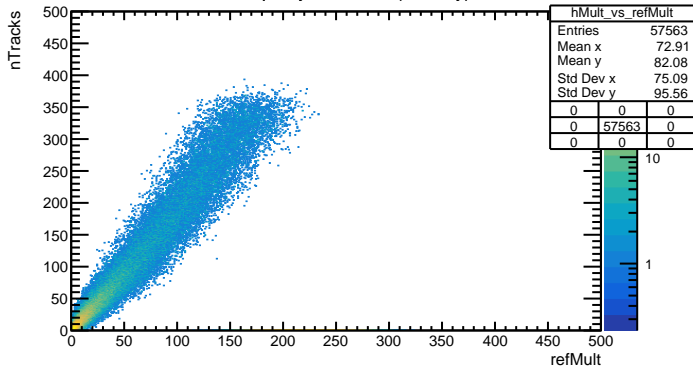
Multiplicity vs nBTOFMatch (Global)



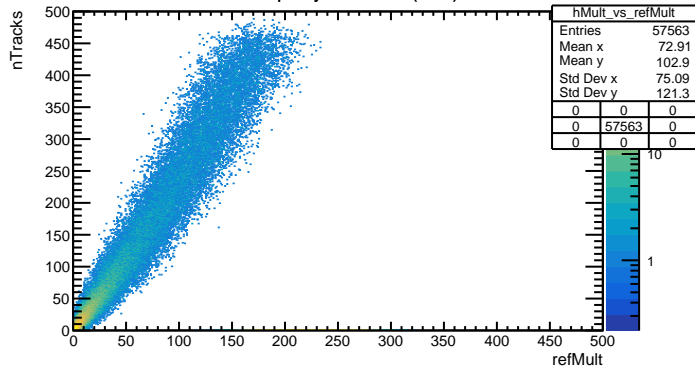
Multiplicity vs nBTOFMatch (Other)



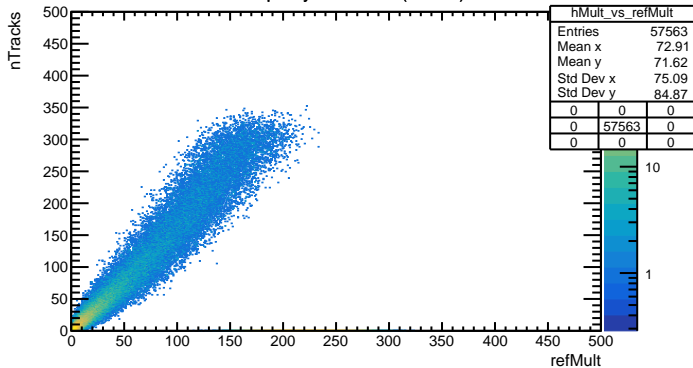
Multiplicity vs refMult (Primary)



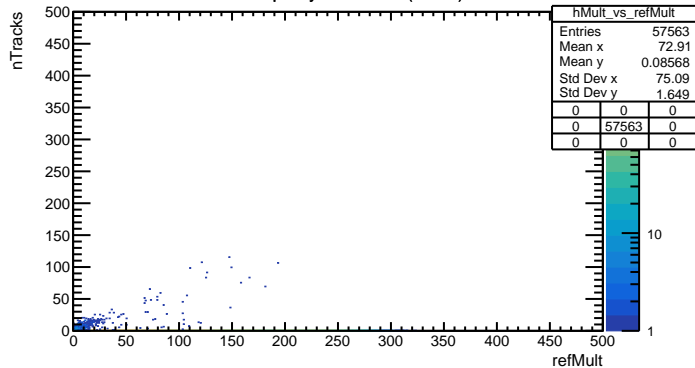
Multiplicity vs refMult (BLC)



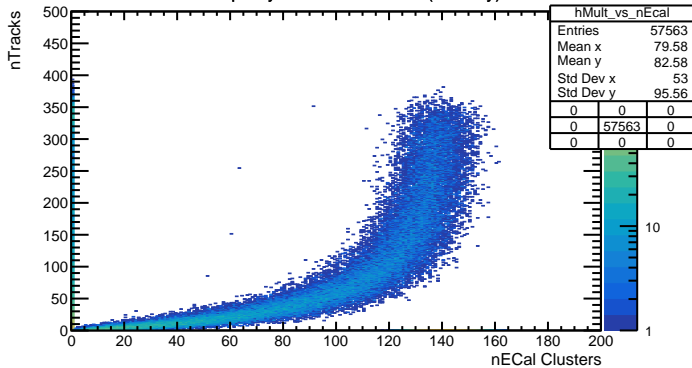
Multiplicity vs refMult (Global)



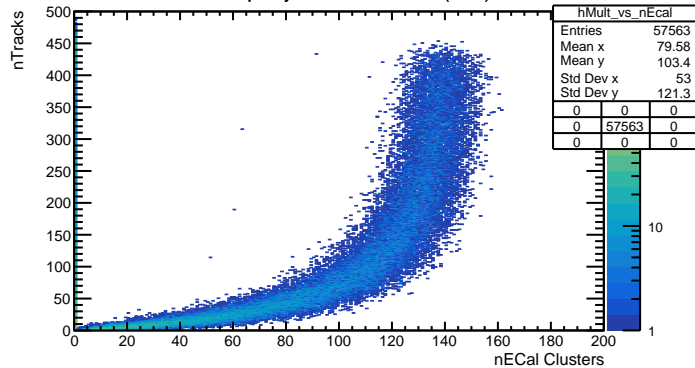
Multiplicity vs refMult (Other)



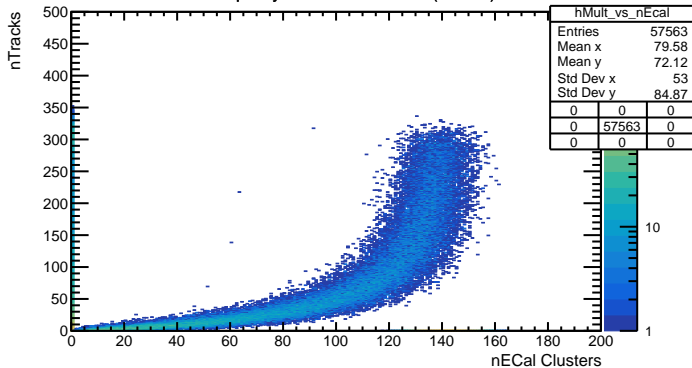
Multiplicity vs nEcal clusters (Primary)



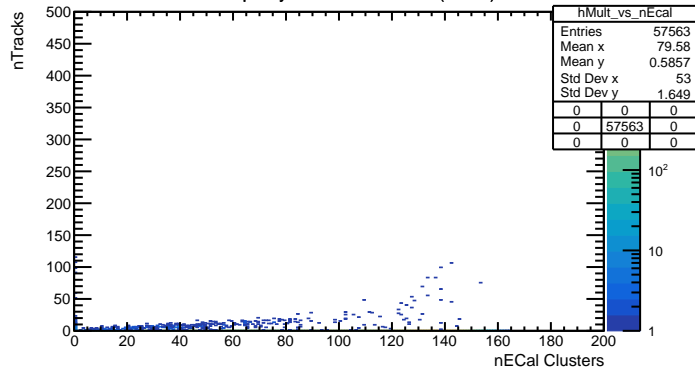
Multiplicity vs nEcal clusters (BLC)



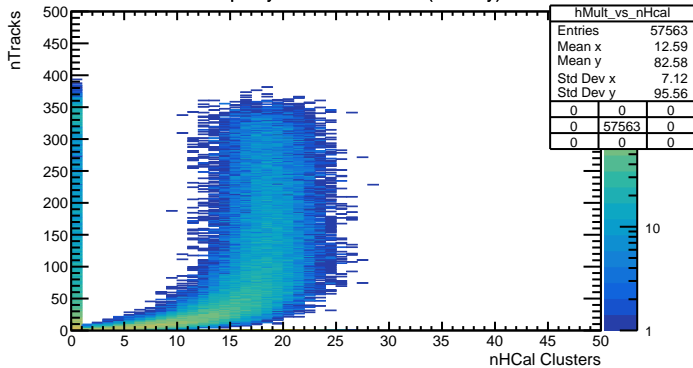
Multiplicity vs nEcal clusters (Global)



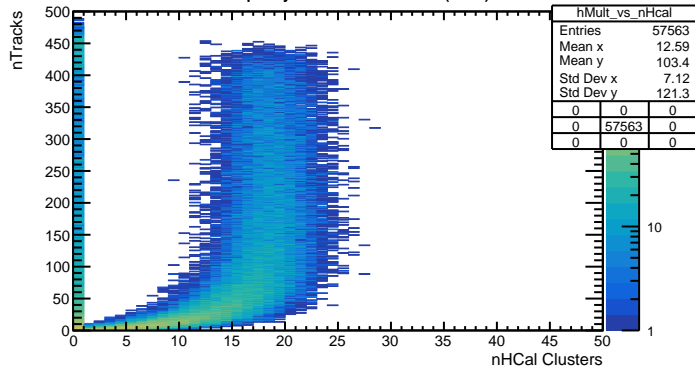
Multiplicity vs nEcal clusters (Other)



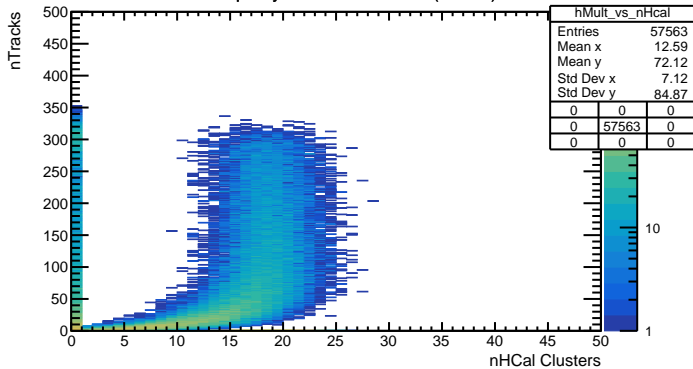
Multiplicity vs nHCal clusters (Primary)



Multiplicity vs nHCal clusters (BLC)



Multiplicity vs nHCal clusters (Global)



Multiplicity vs nHCal clusters (Other)

