Jet and Heavy Flavor WG Summary

Olga and Brian

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Group Information and Contacts

❑ Mailing List: eic-projdet-jethf-l@lists.bnl.gov
   ❑ https://lists.bnl.gov/mailman/listinfo/eic-projdet-jethf-l

❑ Meeting Indico Pages: https://indico.bnl.gov/category/420/

❑ Wiki Page: https://wiki.bnl.gov/eic-project-detector/index.php/JetsHF

❑ Mattermost Chat: (sign-up link)
   https://eic.cloud.mattermost.com/signup_user_complete/?id=i8gnmob4stdrpjfrezhegxs3ew

❑ Conveners
   ❑ Olga Evdokimov – evdolga@uic.edu
   ❑ Brian Page – bpage@bnl.gov

❑ Meetings
   ❑ Keep the Wednesday 12 pm time slot? Biweekly?
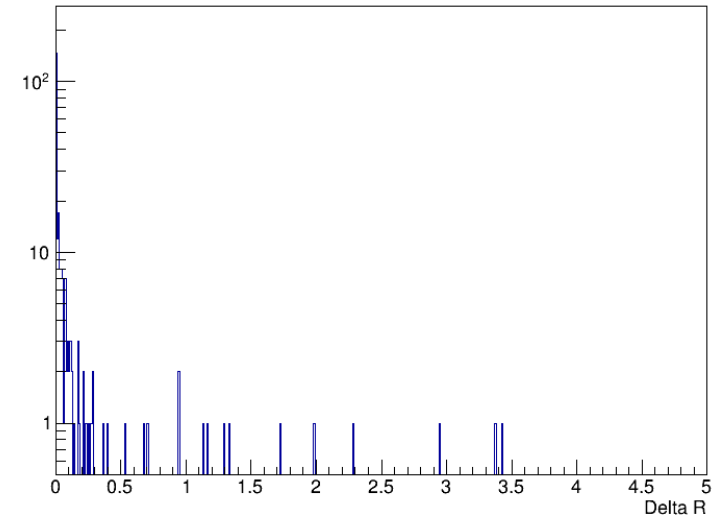
Benchmarks

❑ Initial set of jet benchmarks

  ➢ Kinematic Distributions (Jet pT, Eta, Phi, E, correlations)

  ➢ Reconstructed / Generator Jet Delta R

  ➢ Duplicate Track Plots

  ➢ Jet Energy Resolution / Scale (Vs Eta and E)

❑ Root macro for generating these quantities using RDataFrames (mostly) exists - needs a little more work
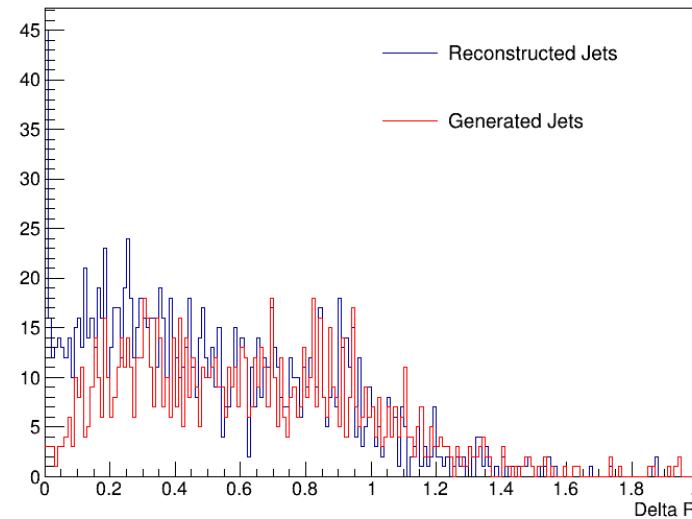
❑ Based on ReconstructedJets and GeneratedJets branches of EICrecon output

  ➢ Currently track-only

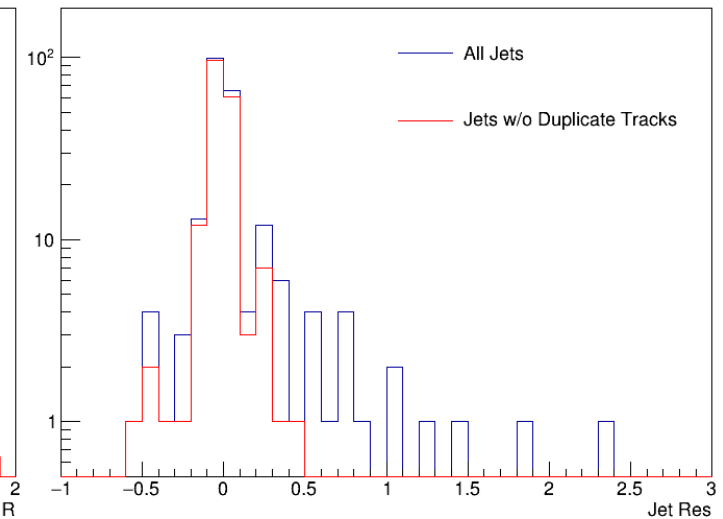 ➢ Should change GeneratedJets factory to only include charged truth particles

Delta R Between Closest Truth and Reco Jets

Pairwise Distance Between Particles in a Jet

(Reco - Truth)/Truth Jet Energy

Reconstruction Tasks

❏ Vertexing

➢ Task: Integrate primary vertexing in reconstruction (Workforce: Joe)

➢ Task: Represent vertex information in the ePIC data model EDM4eic (?)

➢ Task: Survey common packages for the reconstruction of the secondary vertex (?)

❏ Particle Flow

➢ Task: Track matching (Synergy with e-finding)

➢ Task: Understand cluster matching and cluster splitting (Work in calo group?)

➢ Task: Survey existing implementations of particle flow (Some work on this from calo group?)

➢ Task: Explore necessity of custom approach for barrel and backwards regions (Brian?)