Track Recon Status and Plan

Shujie Li

EIC Group Meeting
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Discussion from TrackingWG Meeting

- Track recon task force https://indico.bnl.gov/event/18274/#1-announcement

- Clustering

- MPGD geometry

- particles with pT < 0.2 curl many times inside the barrel leaving a lot of hits.
  - DIS background estimates.
  - Due to the integration time of the silicon affect the "next" event ?
  - Pattern recognition studies must include not just beam-gas and SR bkg, but also this low-momentum hits bkg

- # of hits at large eta (detector raw hits vs # of measurement attached to track)

- Simulation and software group:
  - TrackID in MC propagated to the hits
  - MC matching of MC particle with Reco Track
  - Pattern recognition implementation and testing
  - Background embedding

Ongoing work towards the March simulation campaign

- Low momentum track, init parameter smearing – Shyam

- Background embedding - Rey

- Orthogonal seeder:

    - parameter tuning - Rey, Joe, YueShi

    - seed filter and ranking - YueShi

    - barrel v.s. disk region - YueShi ?

- # of hits

    - raw hits - Shyam, Nicolas

    - hits per track - Nicolas

- Validation plots

    - track info - Barak, Nicolas

        - EICrecon plugin - Nicolas:

        https://github.com/eic/EICrecon/blob/angular_studies_tof/src/benchmarks/reconstruction/tracking_studies/tracking_studiesProcessor.cc

- Farforward B0 tracker - Sakib

Orthogonal seeder TBD:

ACTS version control

forward v.s. central region different parameter

ambiguity solver after track recon
https://atlassoftwaredocs.web.cern.ch/trackingTutorial/ambitrt/