

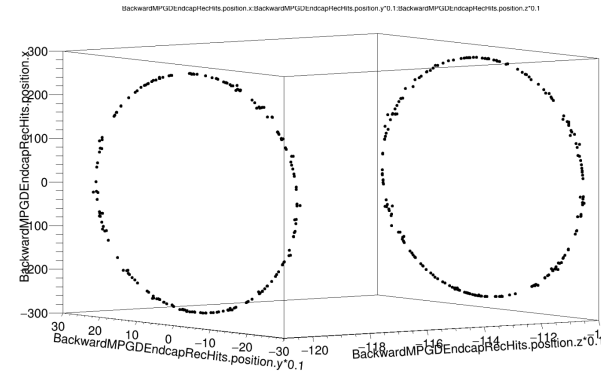
Tracking Simulations Update

Matt Posik
Temple University

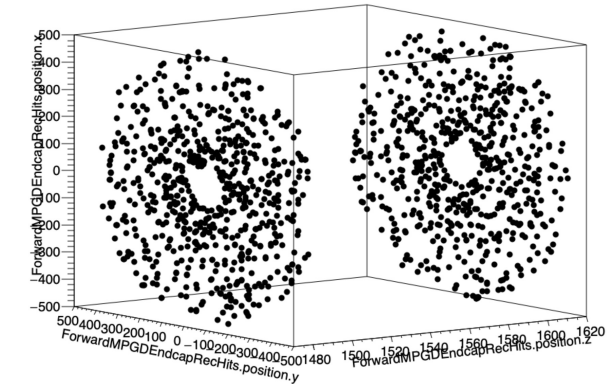
September Campaign tracking performance (Shyam Kumar):

- Issue in MPGD found due to misconfigured readout segmentation -- fixed
- Nhits/Event
 - Future studies will look at different physics set, e.g. min. bias.
- Further studies on simulations with MPGD fix will include:
 - Number of hits vs. eta and chi2/ndf
 - Tracking efficiency
 - Kinematic acceptance

Issue



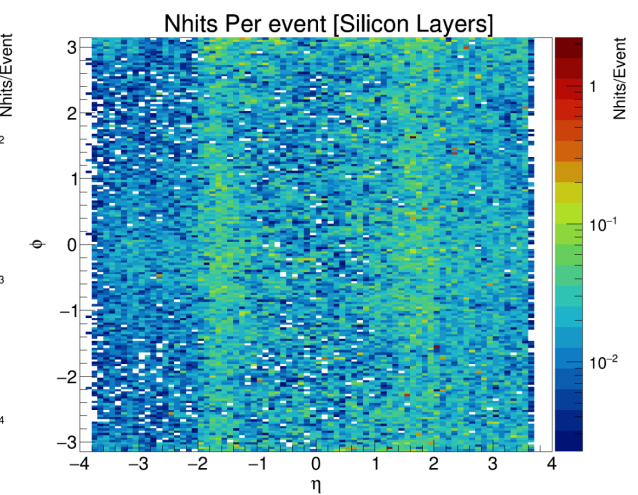
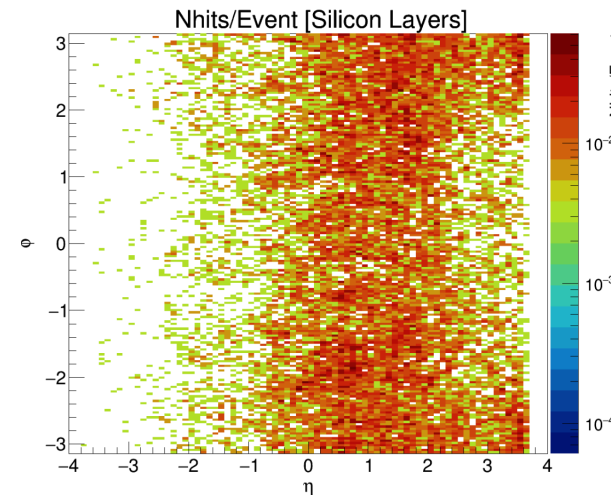
Fix



September Simulation file

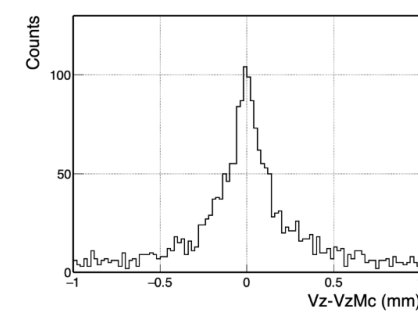
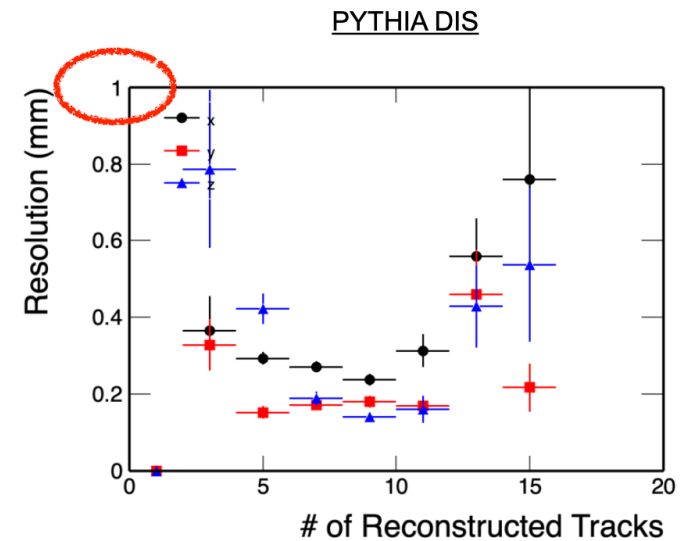
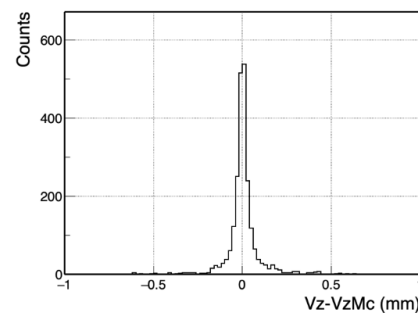
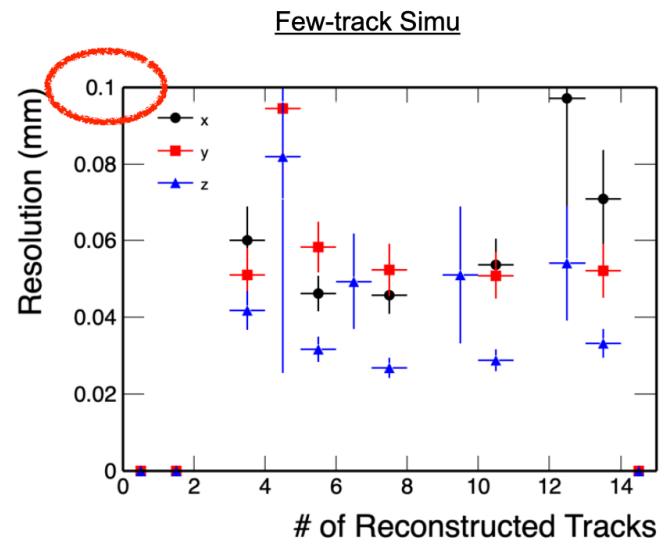
1000 Events Pythia8 Background Simulation (hepmc by Koliija)

Total Events: 329



- Vertex reconstruction algorithm implementation and analysis being done by: Joe Osborn, Xin Dong, and Lokesh Kumar
 - Implementing vertex objects into edm4eic
 - Tuning vertexing algorithm
 - Secondary vertices
 - Understanding vertex difference between DIS and few-track events

[Track Recon. Meeting](#)



- ❑ New TrackerHit and Measurement2D data types defined (Track Recon. and Software WGs)
- ❑ Measurement2D ([PR 1076](#)): Allow passing of tracker hits to CKF instead of sourcelink and measurements from ACTS.
 - Identify the surface of hits used in reconstructed tracks
 - Allow for measurement2D to trajectory associations
- ❑ ACTS upgrade from v21 to 26 ongoing ([PR 1072](#))

