

Quick Updates 10/5/23

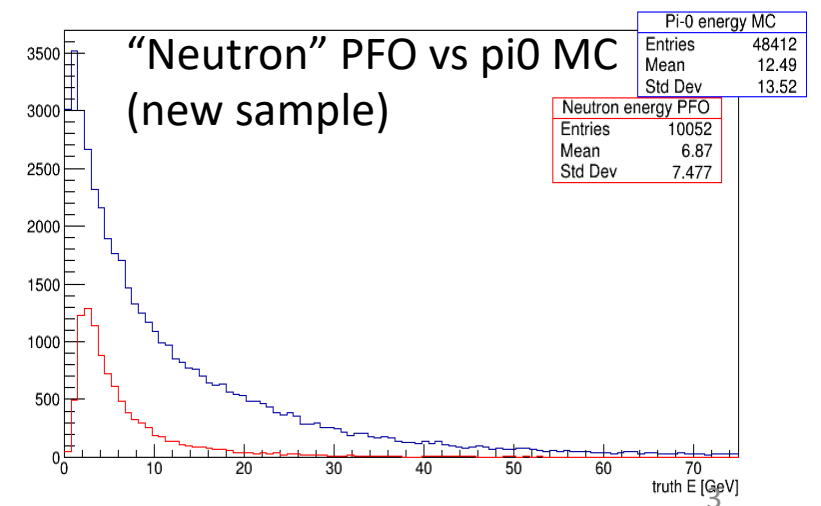
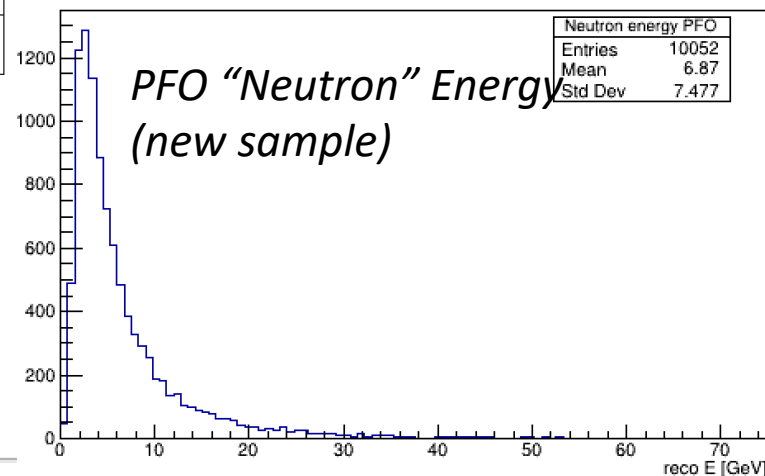
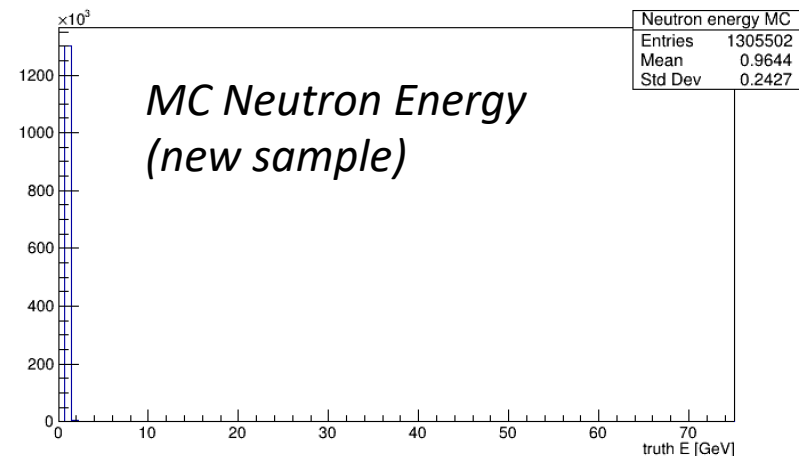
- New samples in the works (huge shoutout to Fede!)
- Pandora and neutrals
- Cluster matching update

New Samples

- Going forward, will be working with:
- `/tank/data/snowmass21/muonc/fmeloni/reco/tauGun_pT*`
- Currently have a 0-50 slice, 50-250 being copied over now
- Running on the new image with proper geometry
- Thanks Fede!!

Pandora and Neutrals

- First noticed many events with a pi0 decaying from tau had a “neutron” being reconstructed with energy/position comparable to the MC pion
- It seems Pandora can only ID neutrals as 2112 (neutrons) or 22 (photons)
- Reconstructed “neutron” spectrum shares shape of neutral pion spectrum



Cluster Matching

- This week, Sergo and I will be doing a deeper dive into the Pandora cluster/track association algorithm, specifically focusing on the distance optimization step and the energy cuts to see if we can understand the poor behavior
- I plan to investigate events that have a track and a cluster which are not matched together to form a PFO, see which cuts they are failing
- We will report back!