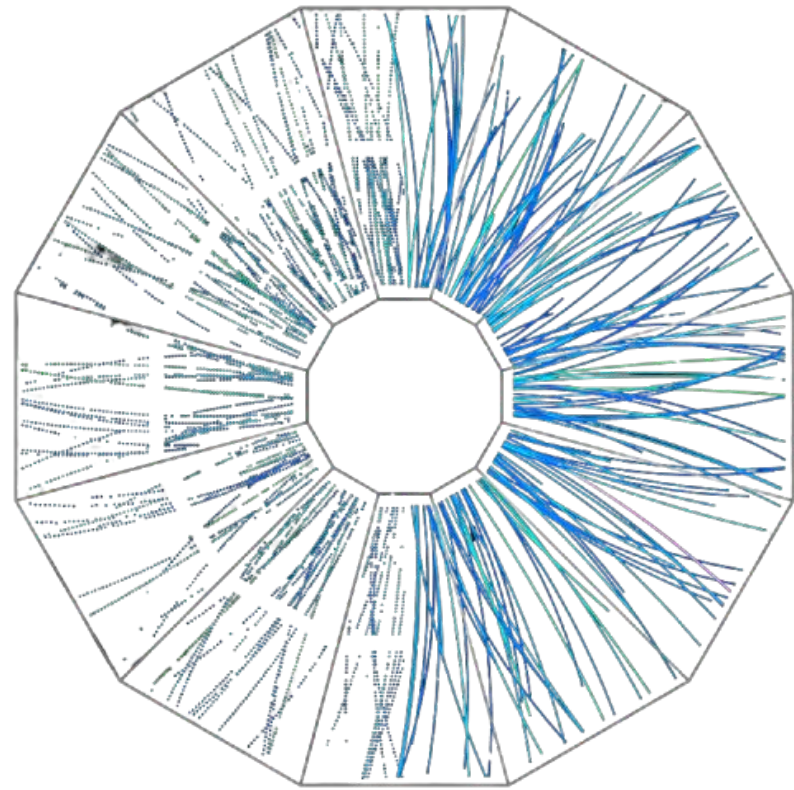
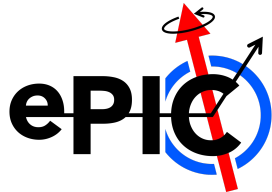


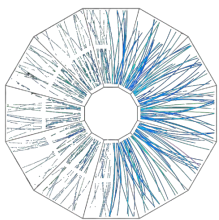
Jet Performance Plots

Dener De Souza Lemos (BNL)

Jets and HF Working Group Meeting



Brookhaven
National Laboratory



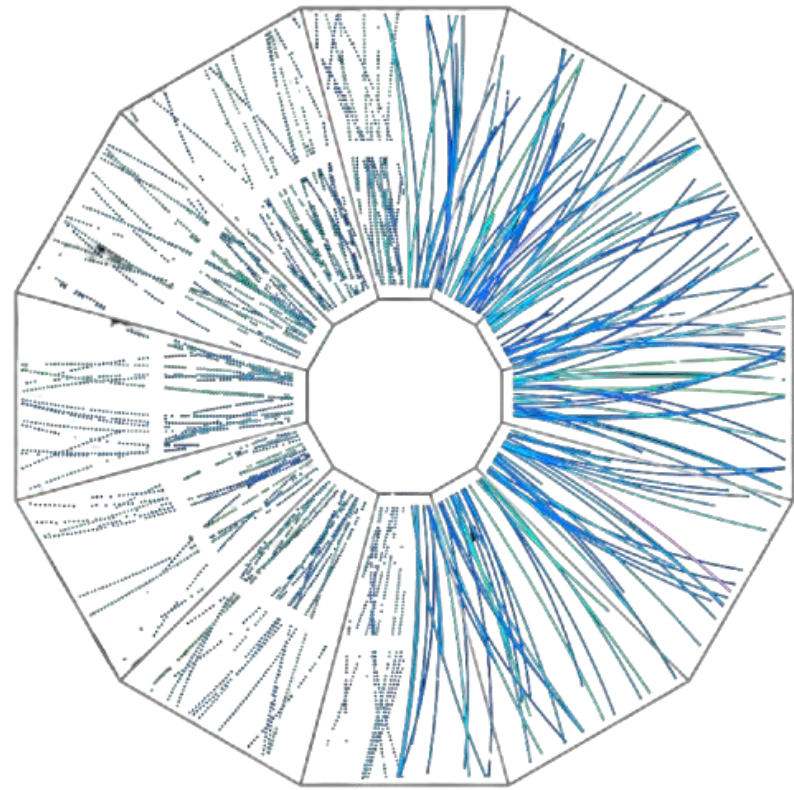
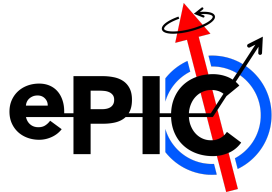
Simulation Details

- Energy: 10x100
- Geometry: **25.06.1**
- ep: official production (NCDIS)
 - PYTHIA8.306
 - $q^2 \text{ min} = 1$ and $q^2 \text{ min} = 10$
- eAu: official production (DIS)
 - BeAGLE103
 - $1 < q^2 < 10$ and $10 < q^2 < 100$

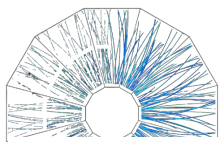
➤ Jet reconstruction

- Charged jets:
 - ReconstructedChargedJets
 - GeneratedChargedJets
- anti- k_T
 - $R = 1.0$ (default at the jet trees)
- Jet Tree maker:
 - <https://github.com/denerslemons/CHJetTrees>

Efficiency and Fake Rate

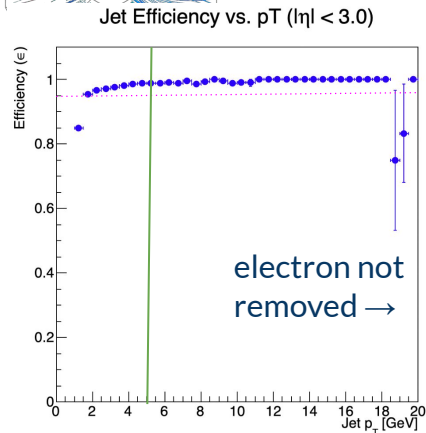


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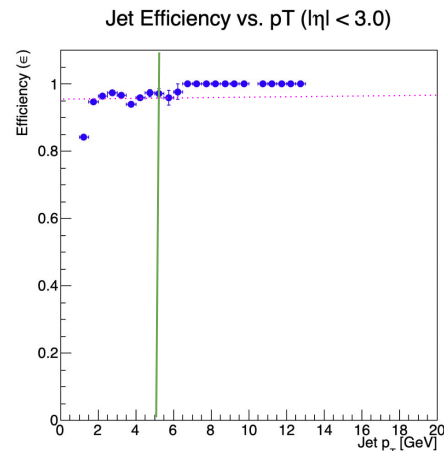
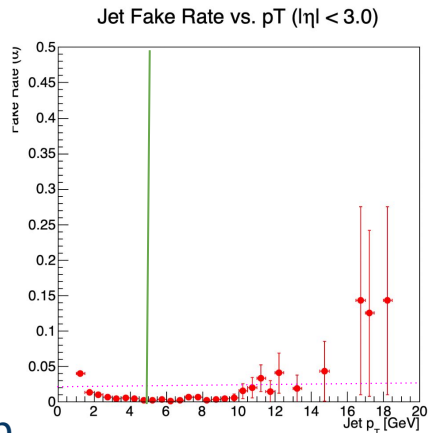


Effect of electron removal

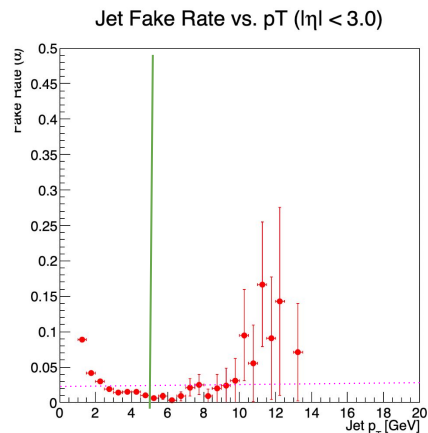
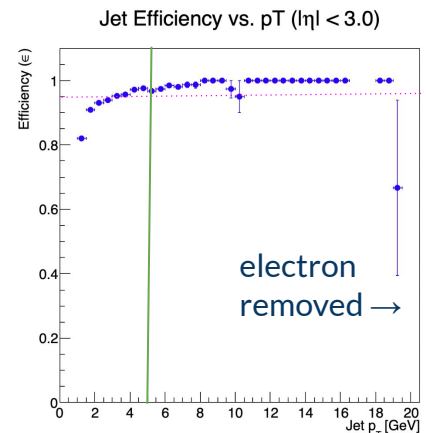
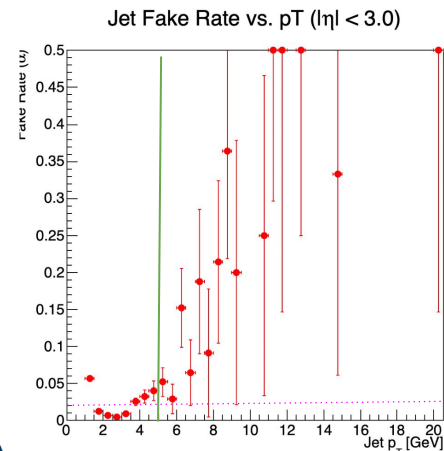
1/10 of stats



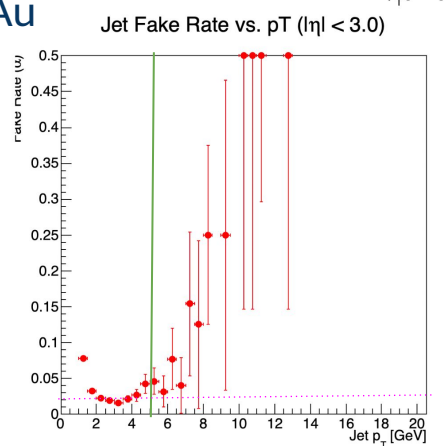
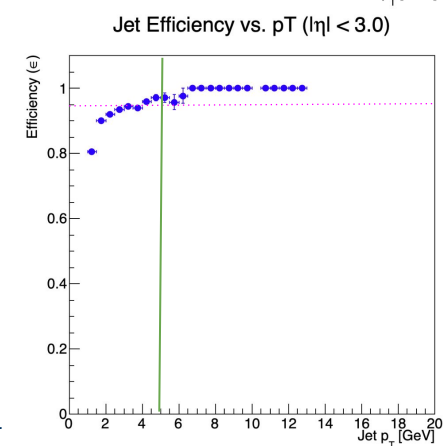
ep

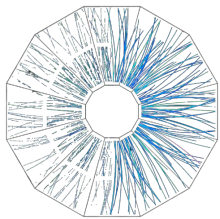


eAu



4

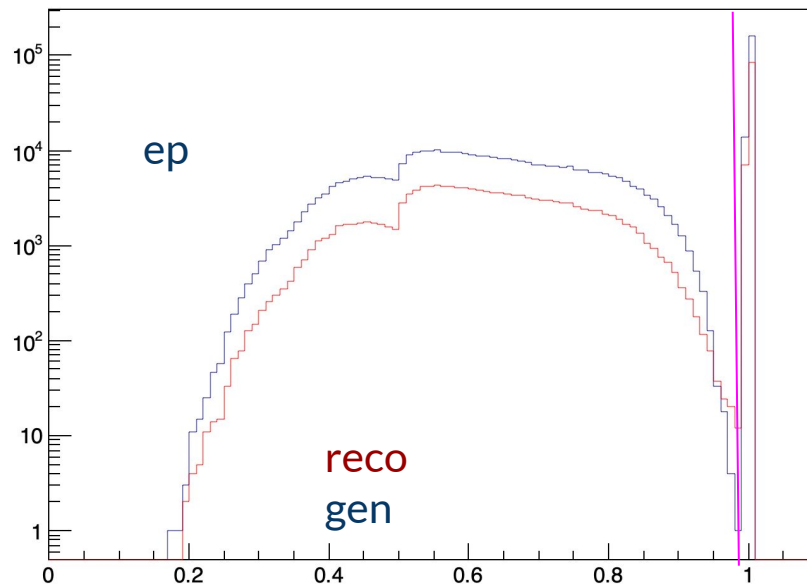




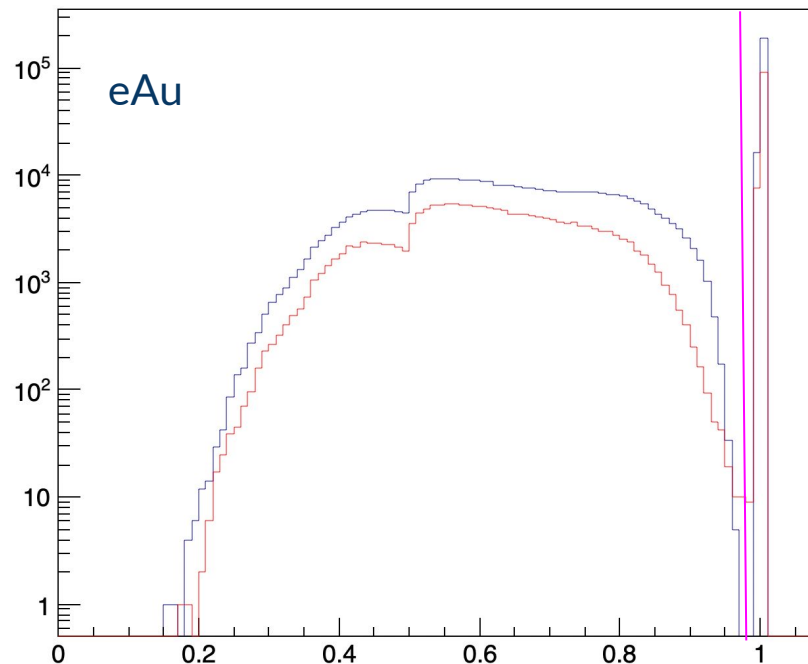
Jets made by one track

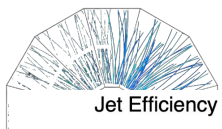
1/10 of stats

Leading Trk $p_T / p_{T,jet}$ 0.96 cut

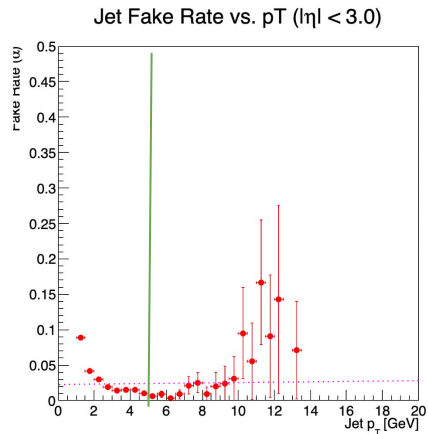
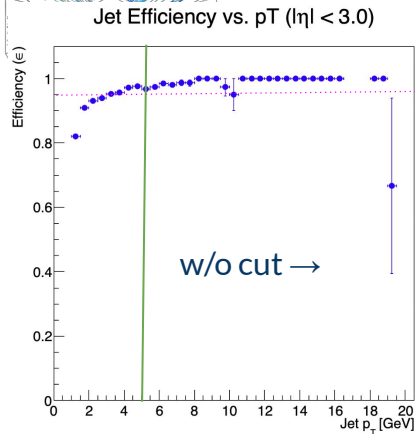


Leading Trk $p_T / p_{T,jet}$ 0.96 cut

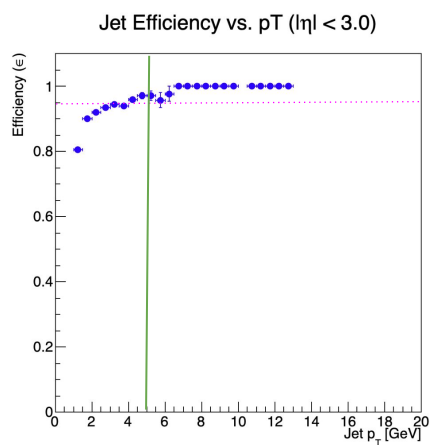




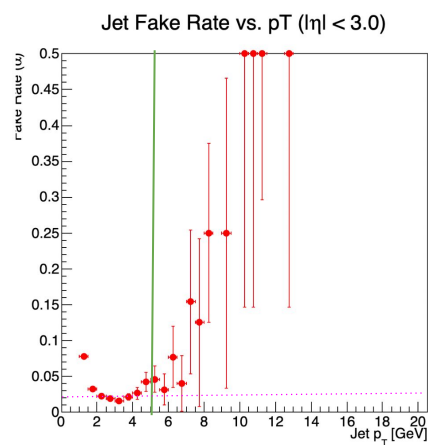
Effect of single track jet cut



6

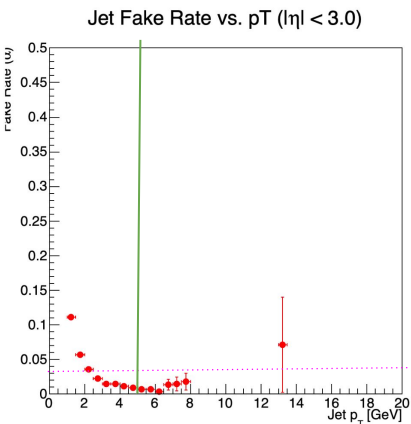
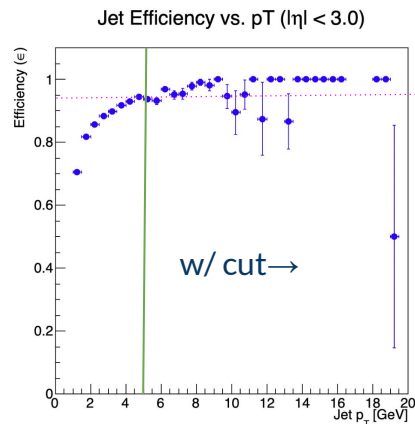


1/10 of stats

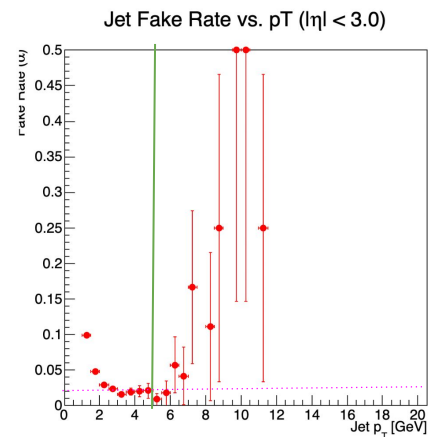
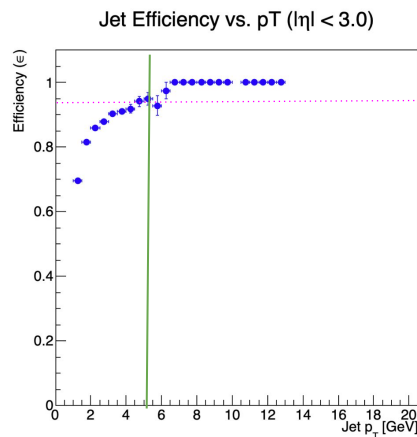


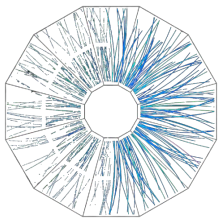
ep

eAu



6





TODO's

- Double check QA's
- Work with fits
- Produce plots using ePIC official style
- Work on physics results
 - R_{eAu} for different jet R
 - FastJet is already working
 - Comparison with official jet tree ongoing

A word cloud featuring the phrase "Thank You" in numerous languages. The words are arranged in a circular pattern, with "thank you" in the center in large, bold, red letters. Other prominent words include "danke" (blue), "gracias" (green), "mercies" (orange), and "shukriya" (purple). Smaller words in various colors surround the central phrase, representing a wide range of linguistic expressions for gratitude. The background is white, and the overall shape of the word cloud is roughly circular.