

Jet TDR Plot Updates

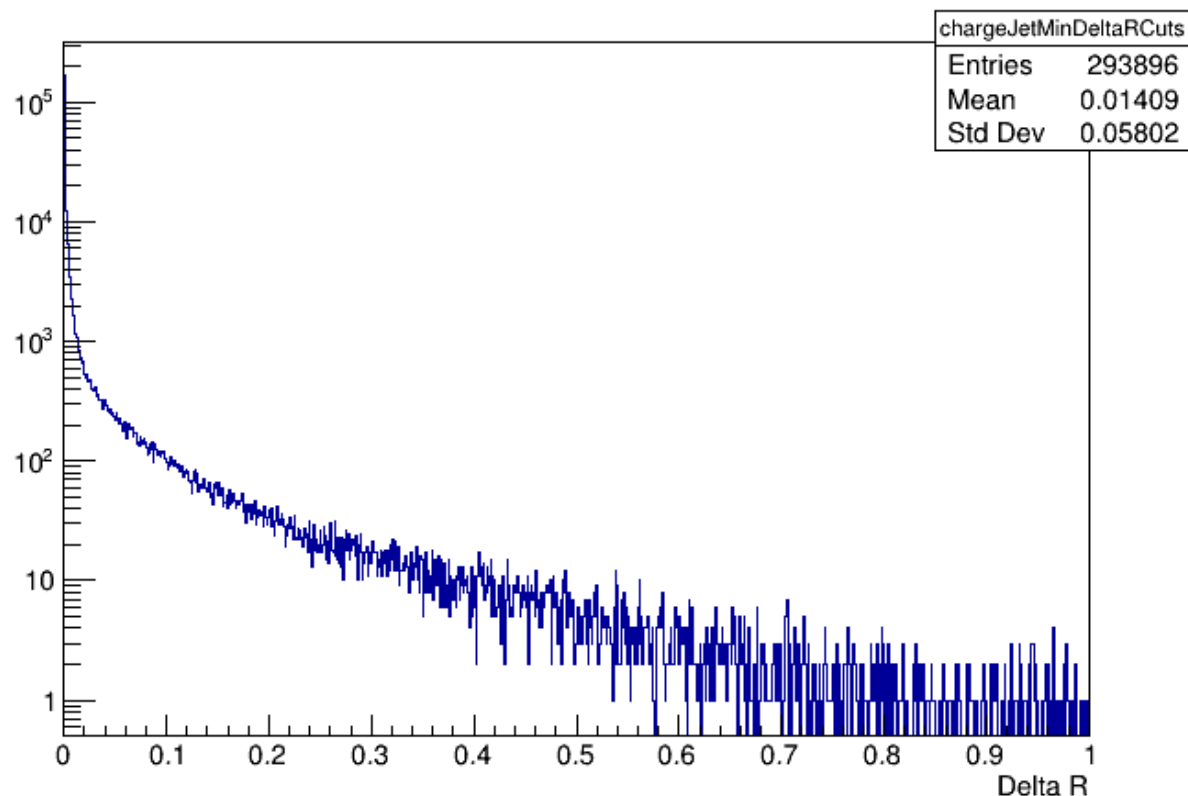
Brian Page

3/20/2024

Jet & HF Working Group Meeting

Jet Performance TDR Plots: Gen-Reoc

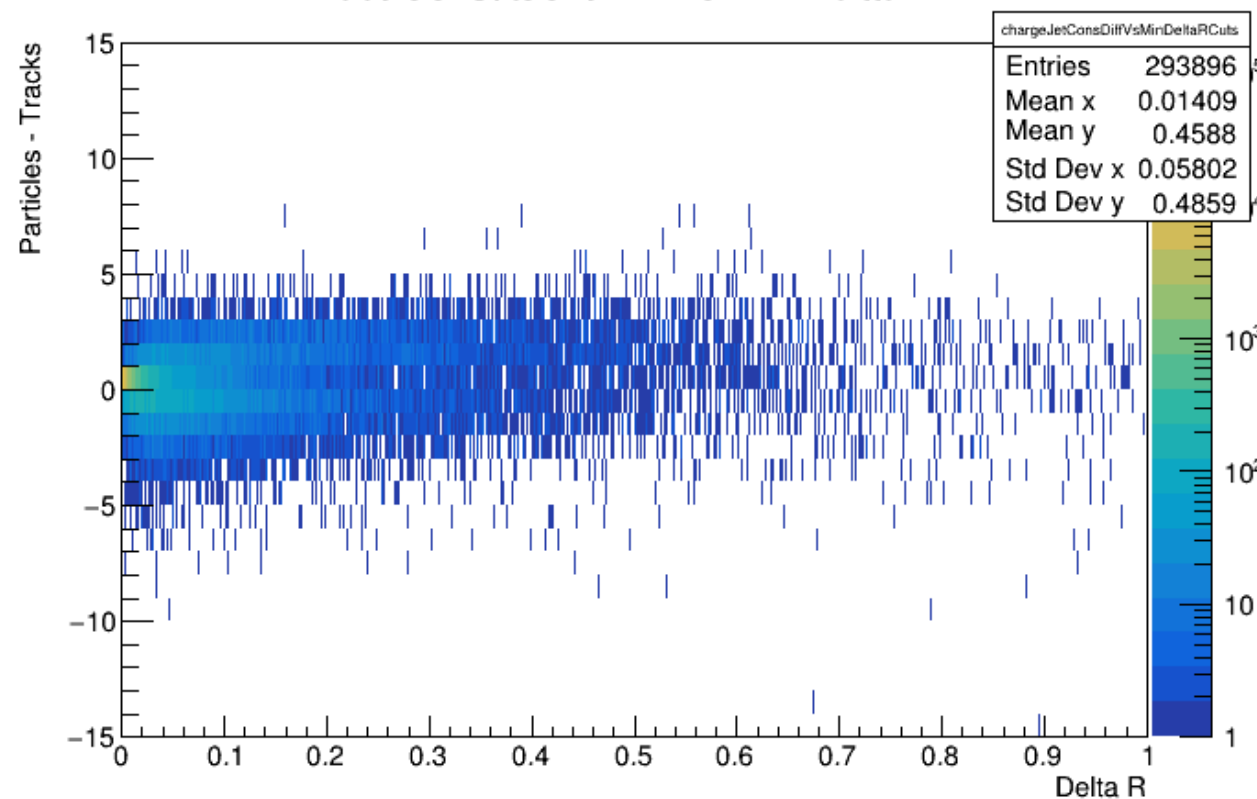
Gen Reco Min Delta R



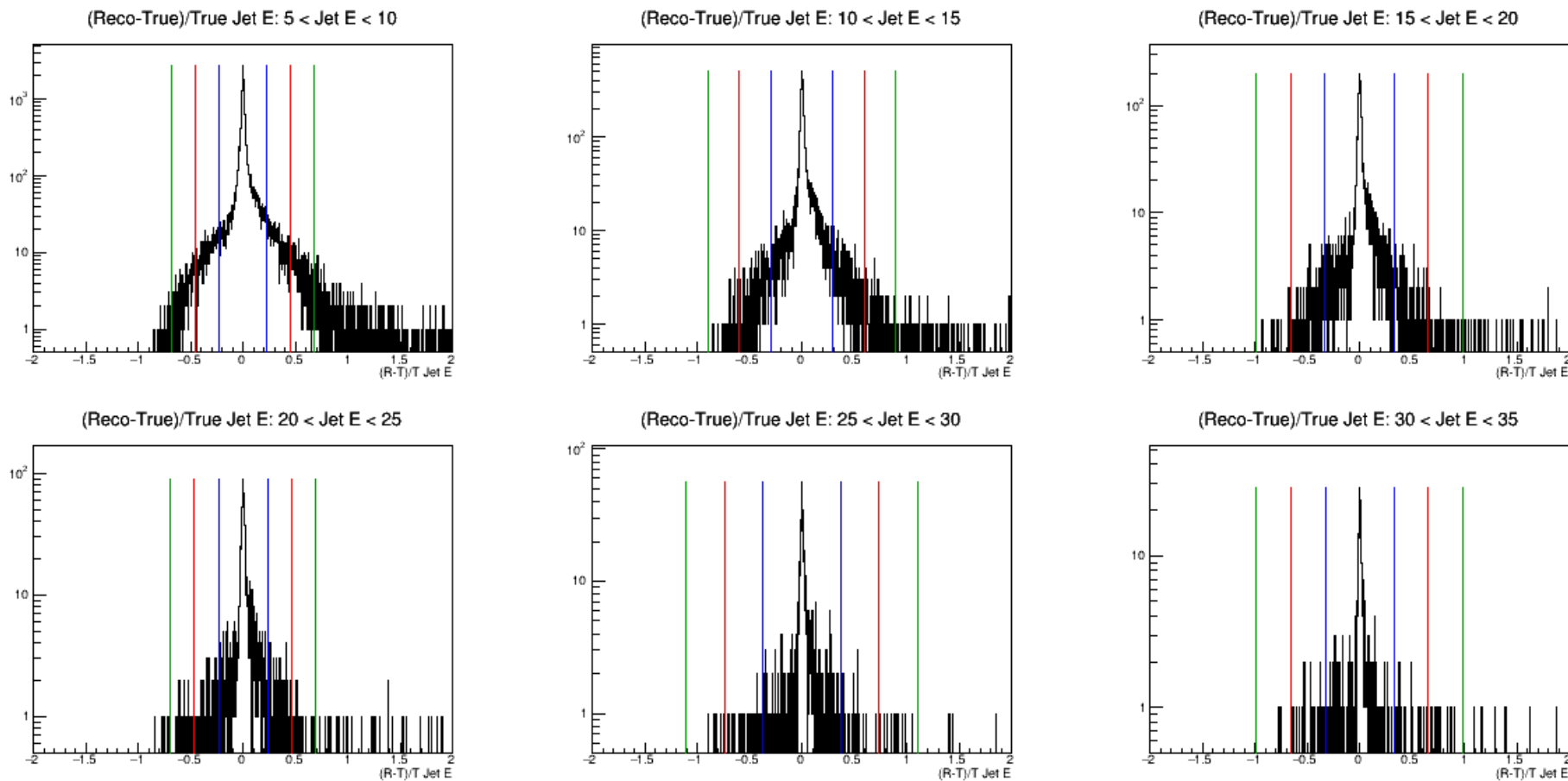
❑ Need to define the association between generated and reconstructed jets – choose a delta R of 0.25 for now

❑ To-Do: look into effects of varying this parameter

Jet Constituent Diff Vs Min Delta R



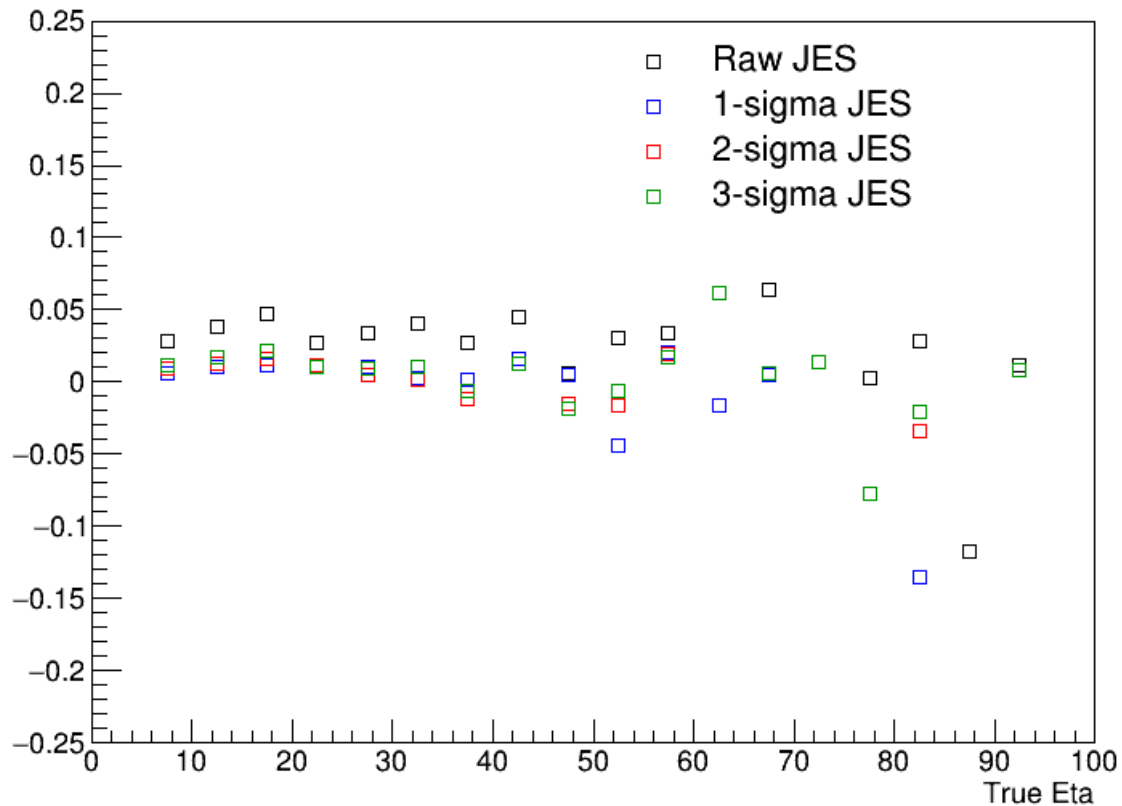
Jet Performance TDR Plots: Characterizing Tails



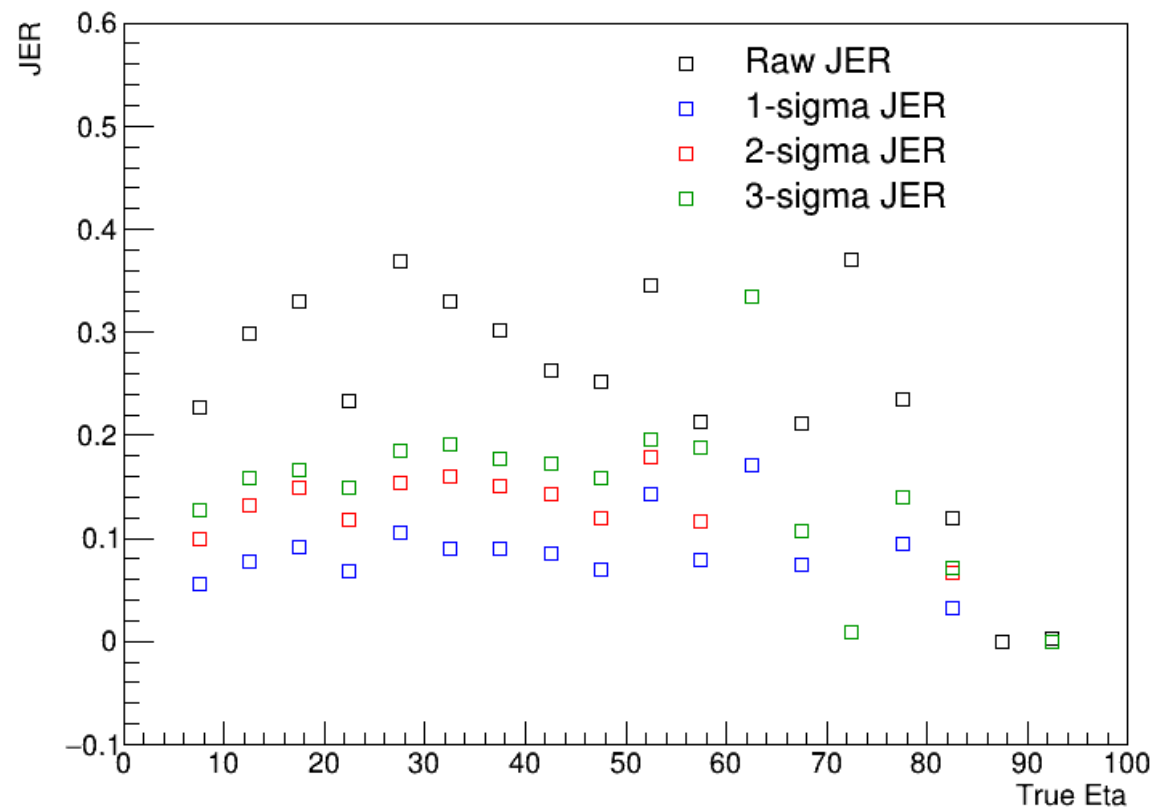
- ❑ Define JES and JER as mean and RMS of distribution over some truncated range
- ❑ Find RMS of full distribution and define truncated range as 1, 2, or 3 times RMS centered around the bin with the largest value
- ❑ Recalculate mean and RMS within this range

Jet Performance TDR Plots: Characterizing Tails

Jet Energy Scale Sigma Comp Vs Eta



Jet Energy Resolution Sigma Comp Vs Eta



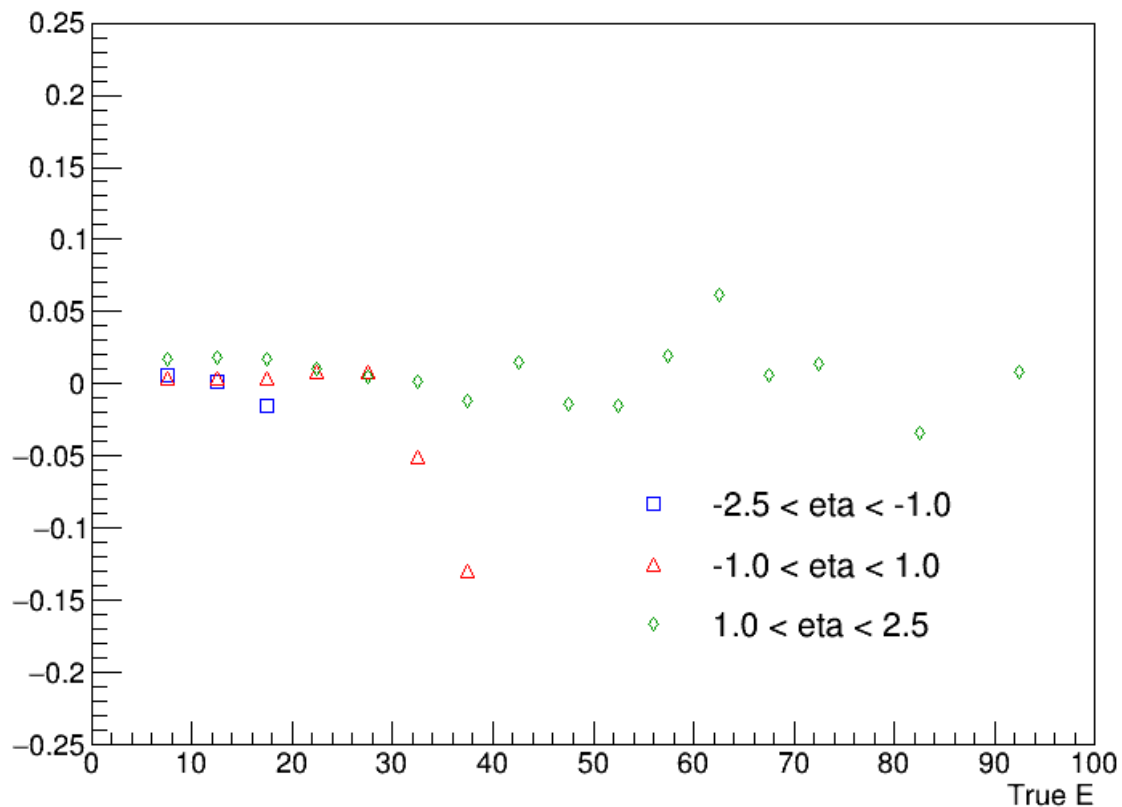
See effect of different $n \times \text{RMS}$ truncations on JES and JER

JER more sensitive to this choice

Use $2 \times \text{RMS}$ for now

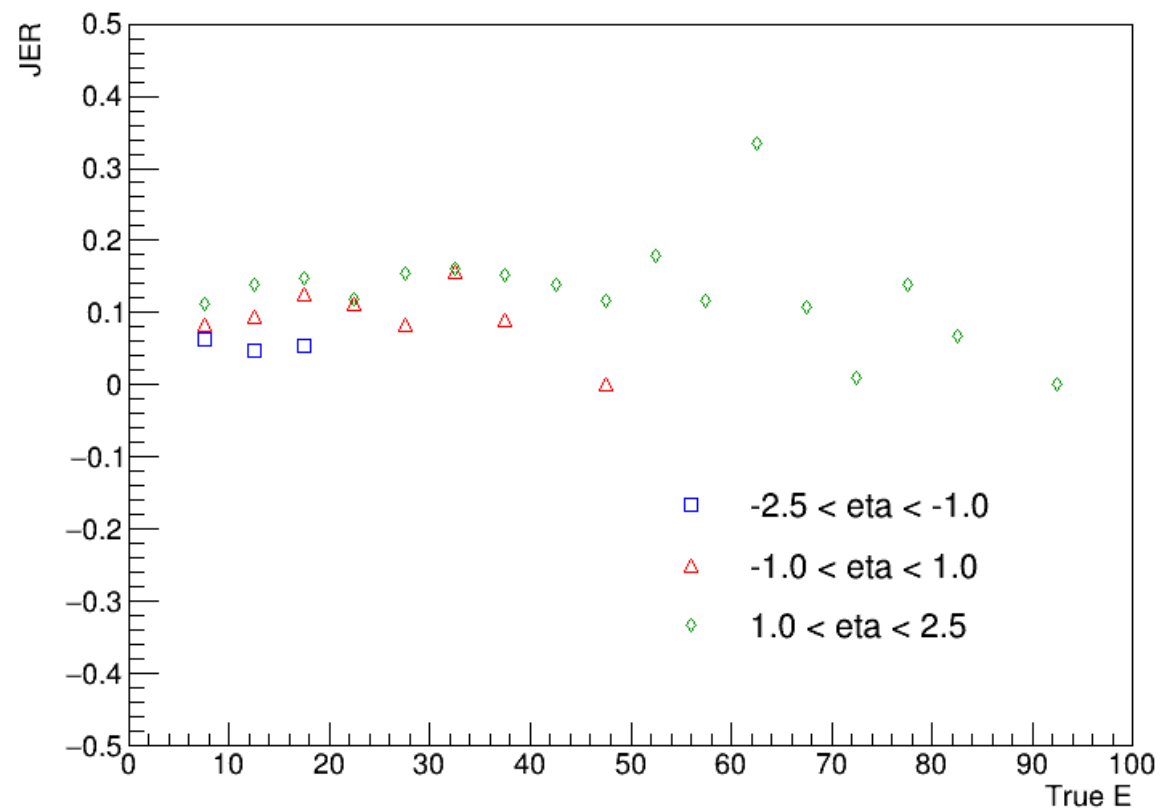
Jet Performance TDR Plots: Money Plots

Jet Energy Scale

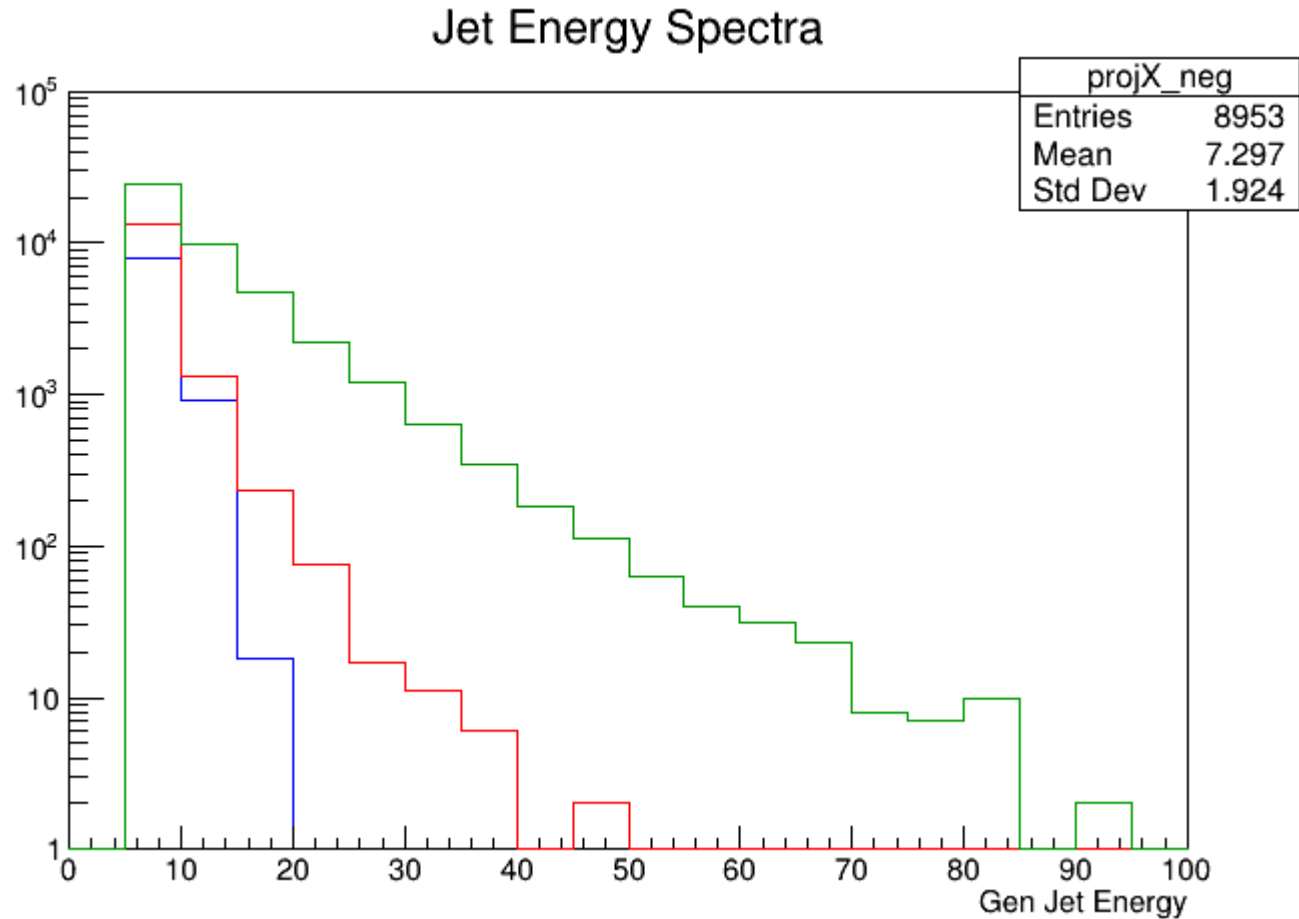


☐ Money plots are JES and JER as a function of energy for different jet eta bins

Jet Energy Resolution



Jet Performance TDR Plots: Statistics



- Statistics for money plots
- Only 500 files from the 18x275 Q2 > 10 NC DIS sample from December campaign