Jets and Heavy Flavor TDR (tentative) Plots

Brain Page & Olga Evdokimov

Jet Performance TDR Plots: JES / JER

Brian Page
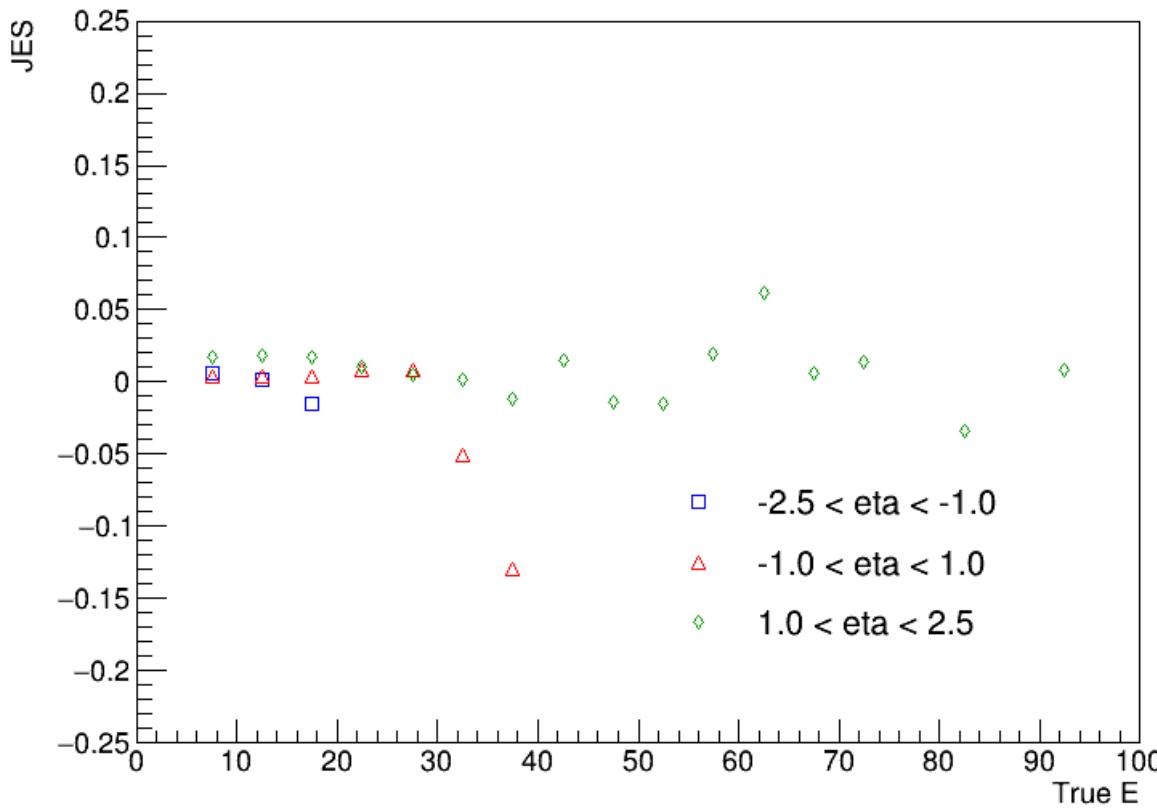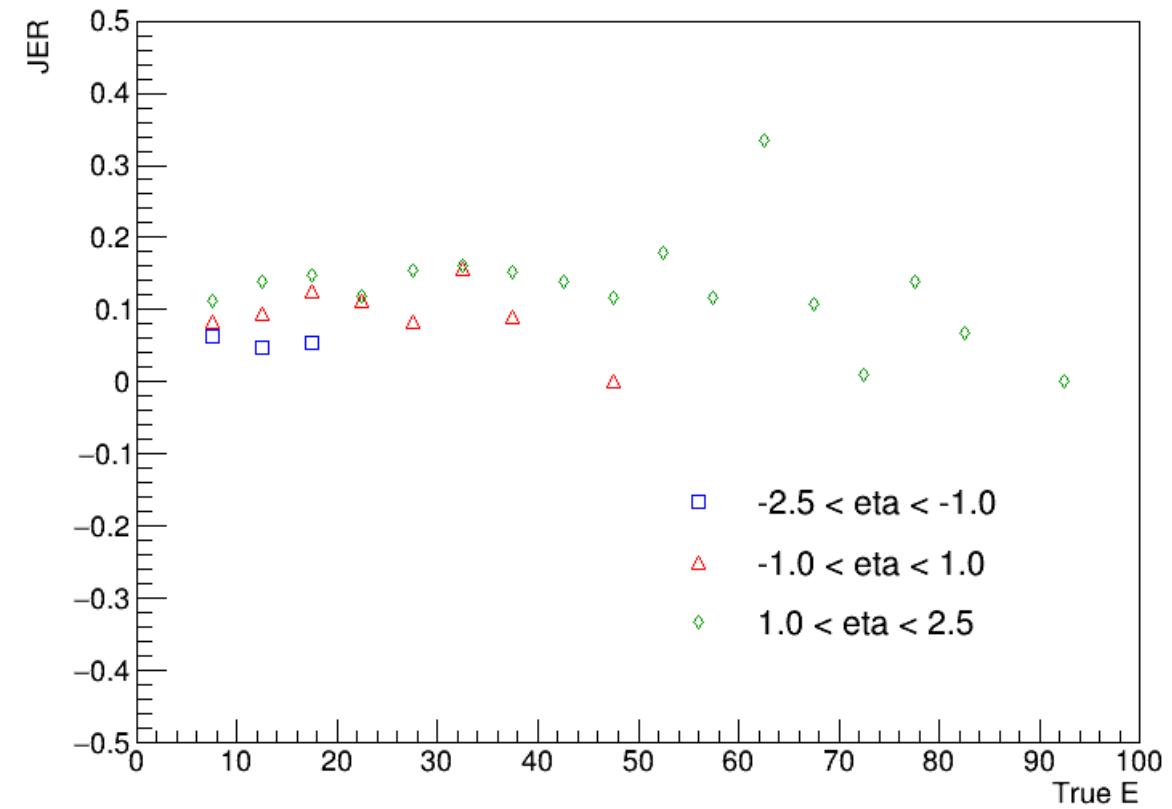
- Process: e+p -> jet + X
- Observables: Jet Energy Scale and Resolution
- Pythia8 ep NC DIS 18x275 Q2 > 10 GeV2
- Luminosity not specified

- Core science is all jet-based measurements
- Challenge to detector: Currently, these are track-only jets and so test the tracking resolution and efficiency over the acceptance of the detector

Hadron-In-Jet Collins TDR Plots

Kevin Adkins
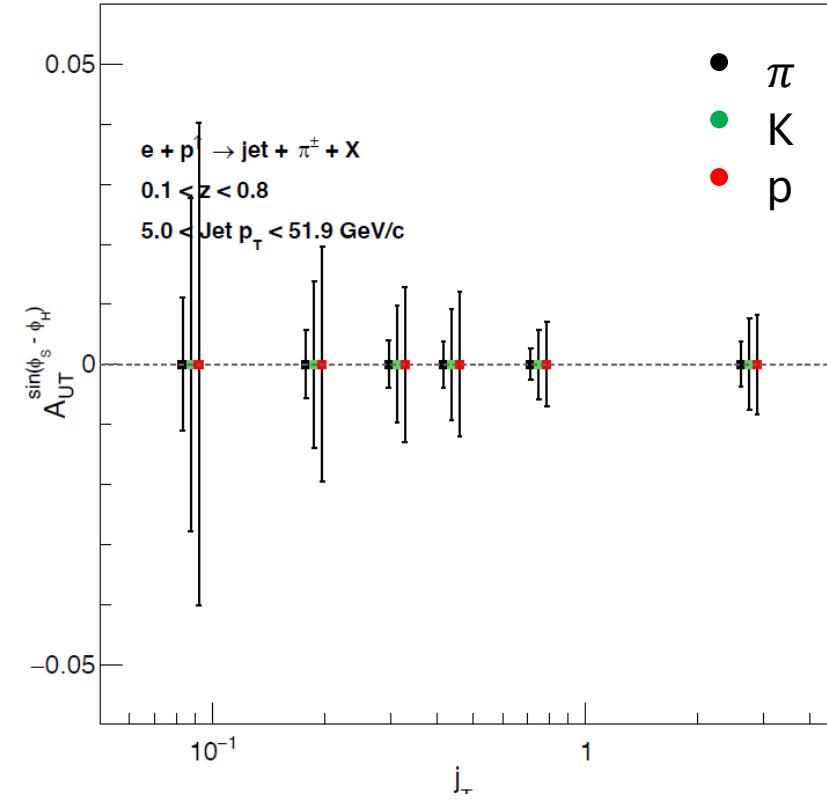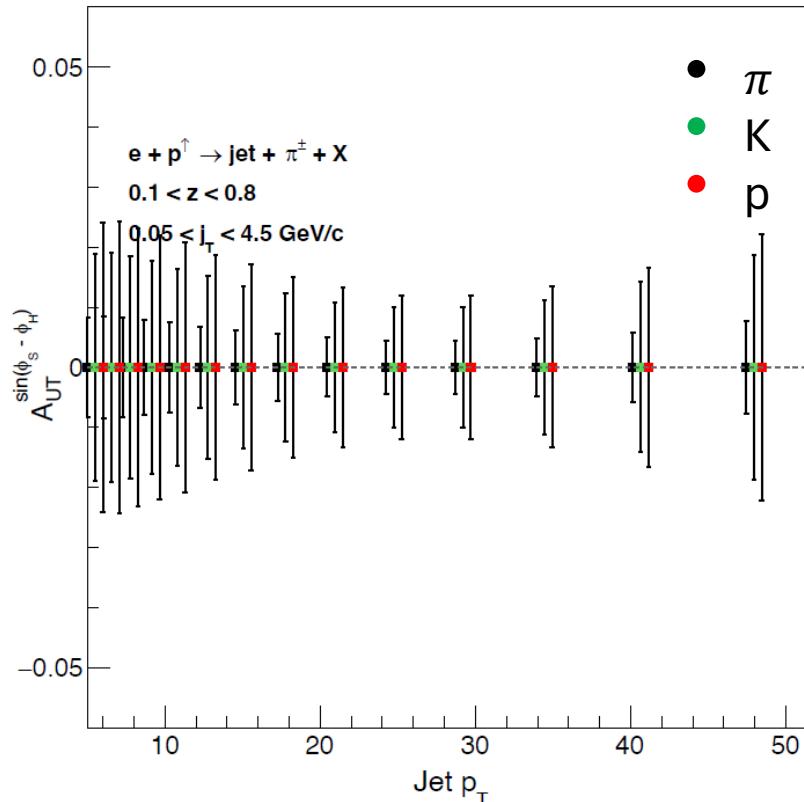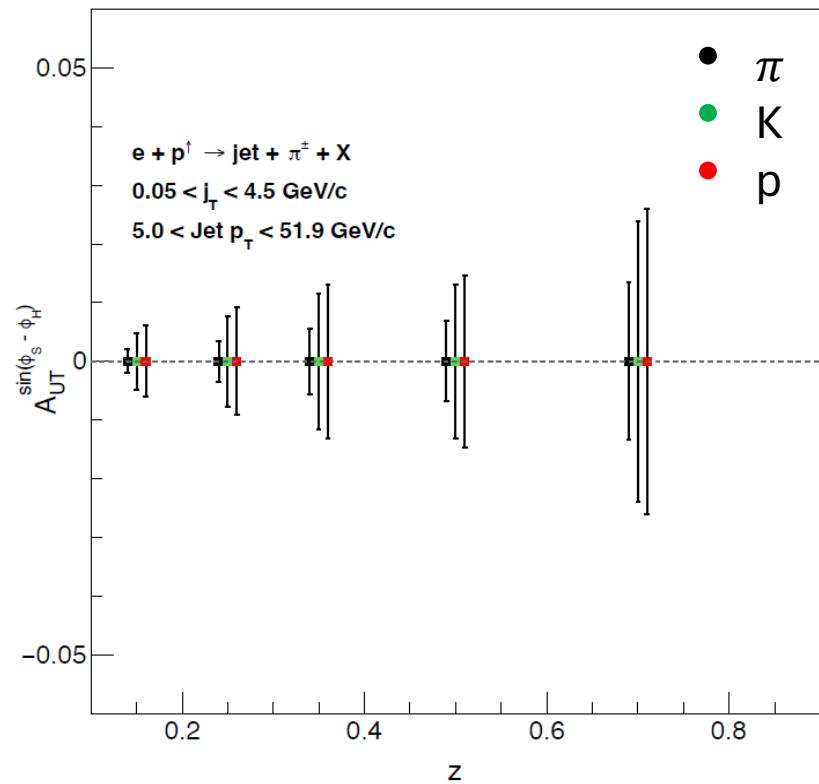
- ❑ Process: e+p -> jet + PID-hadron+X
- ❑ Observables: PID hadron in jet
- ❑ Pythia8 ep NC DIS 18x275 Q2 > 100 GeV2, Q2 > 1000 GeV2, campaign: 23.12.0
- ❑ Luminosity not specified

- ❑ Core science: Collins effect (initial proton spin connection to final state in-jet PID azimuthal hadron distributions)
- ❑ Challenge to detector: tracking efficiencies, PID, jet axis/track pointing resolutions over the acceptance of the detector

Vertex resolution/Track DCA TDR Plots

Xin Dong, et al
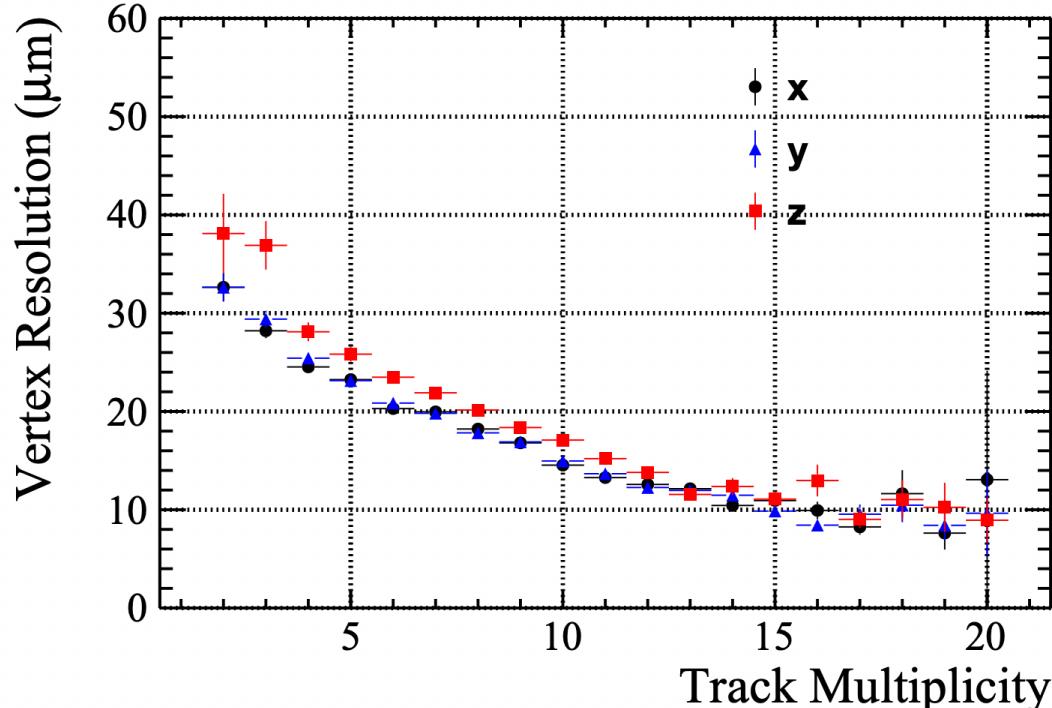
Old plots; updates forthcoming
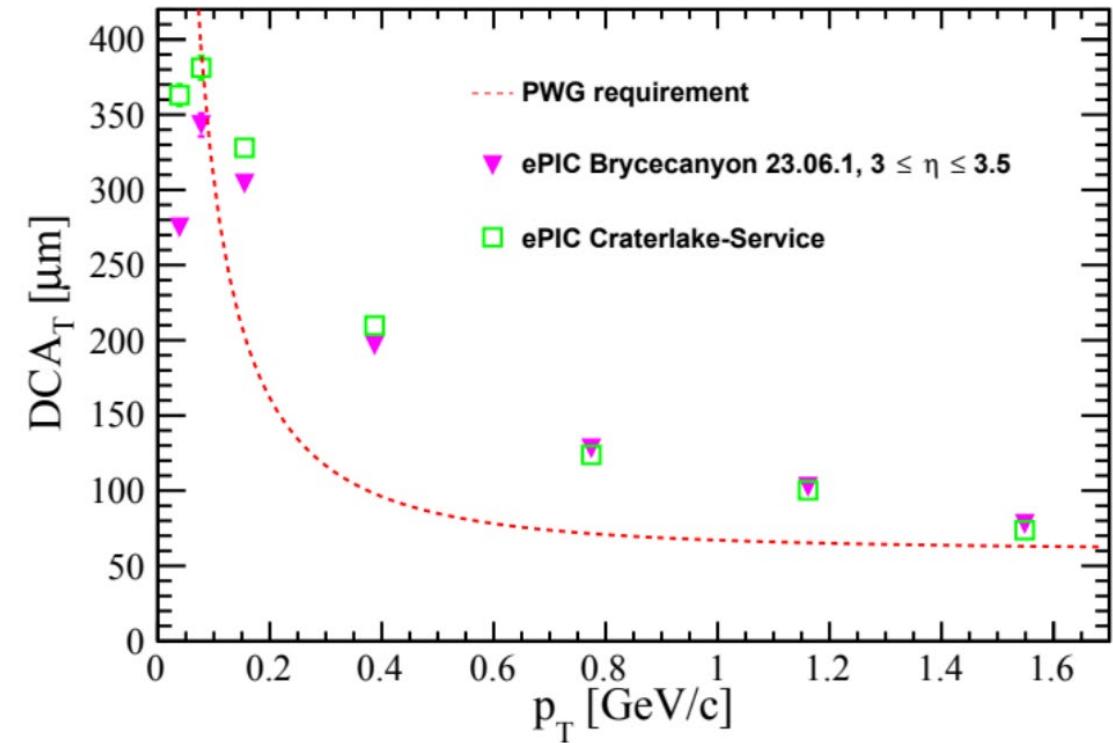
- ❑ Process: e+p -> jet + PID-hadron+X
- ❑ Observables: primary/secondary tracks/vertecies
- ❑ Pythia8 ep NC DIS 18x275; filtered D0 sample
- ❑ Luminosity not specified

- ❑ Core science: all HF measurements
- ❑ Challenge to detector: primary/secondary vertex reconstruction, track pointing resolution