

Angularity Update

Brian Page

JHQ WG Meeting

5/4/2020

Effect of minimum particle p_T cut

➤ Explore the effect the minimum particle p_T threshold has on angularity spectrum

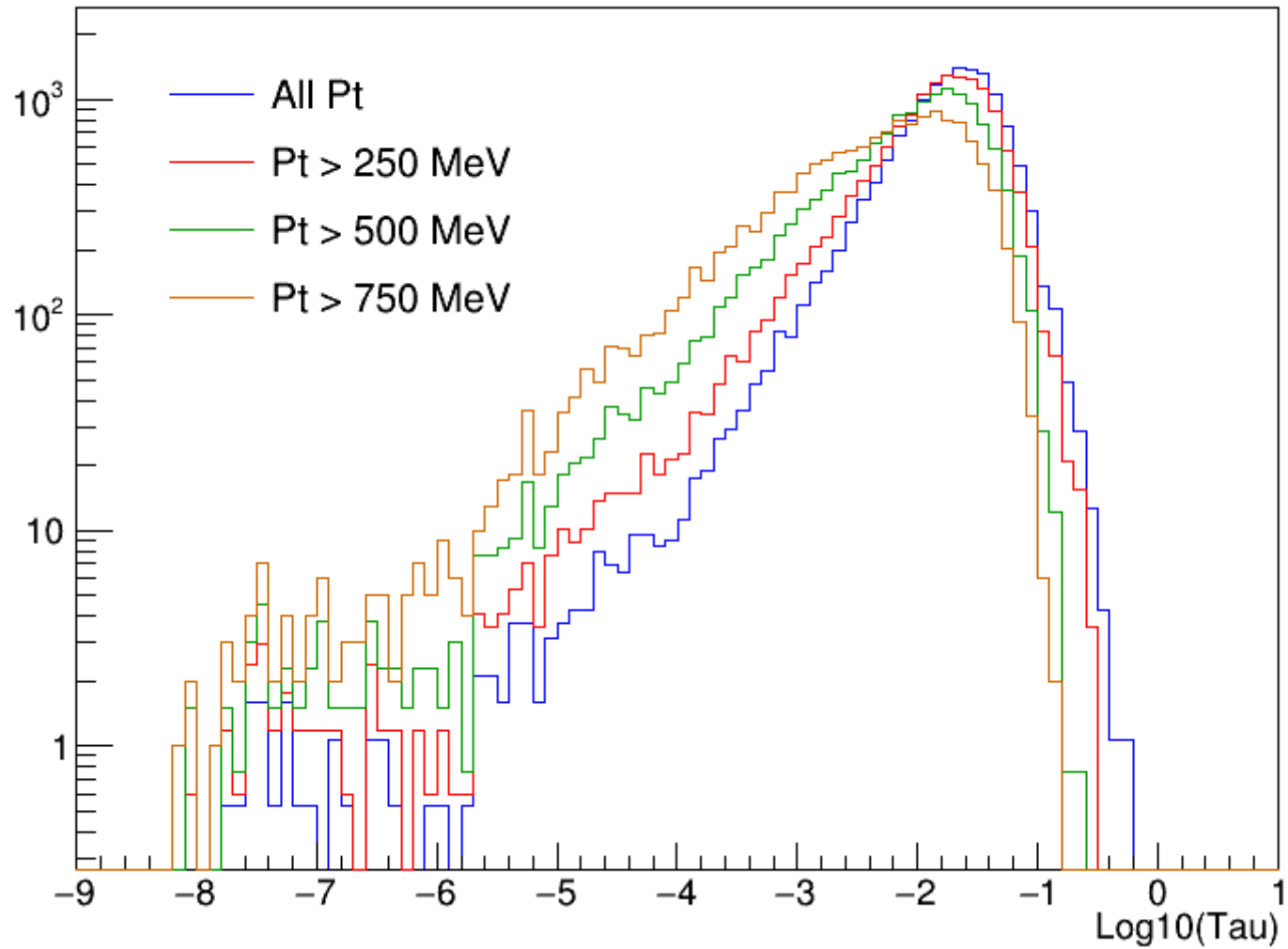
➤ Do at particle level first

$$\tau_a = \frac{1}{p_T} \sum_{i \in J} p_{Ti} \Delta R_{iJ}^{2-a}$$

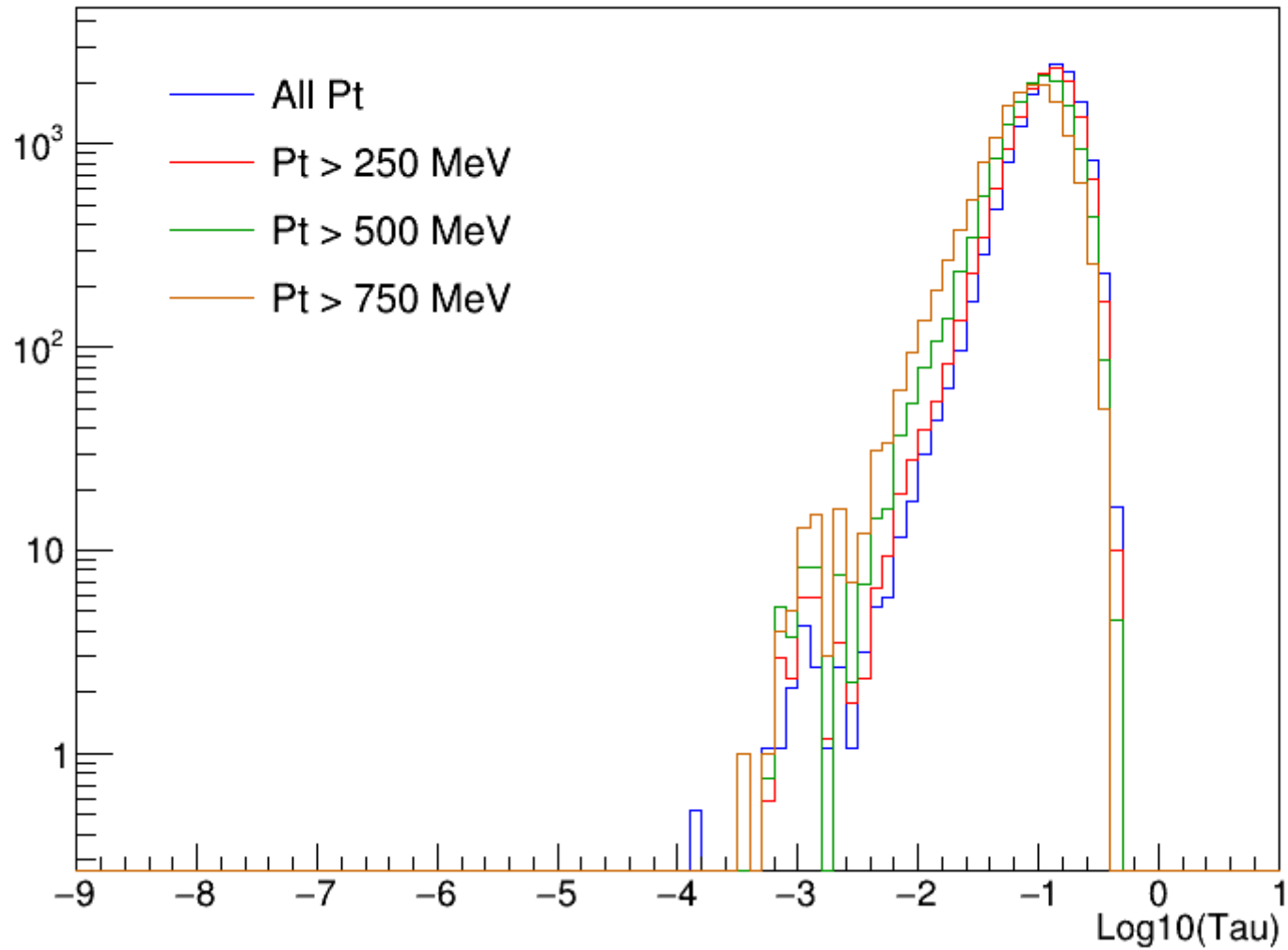
➤ Relevant for B-field choice

➤ Simu: PYTHIA 6; $10^{-5} < Q^2 < 1$; $|\text{particle Eta}| < 3.5$; Jet $p_T > 10$ GeV

Jet Angularity ($a = -2.0$): $p_T > 10$ GeV



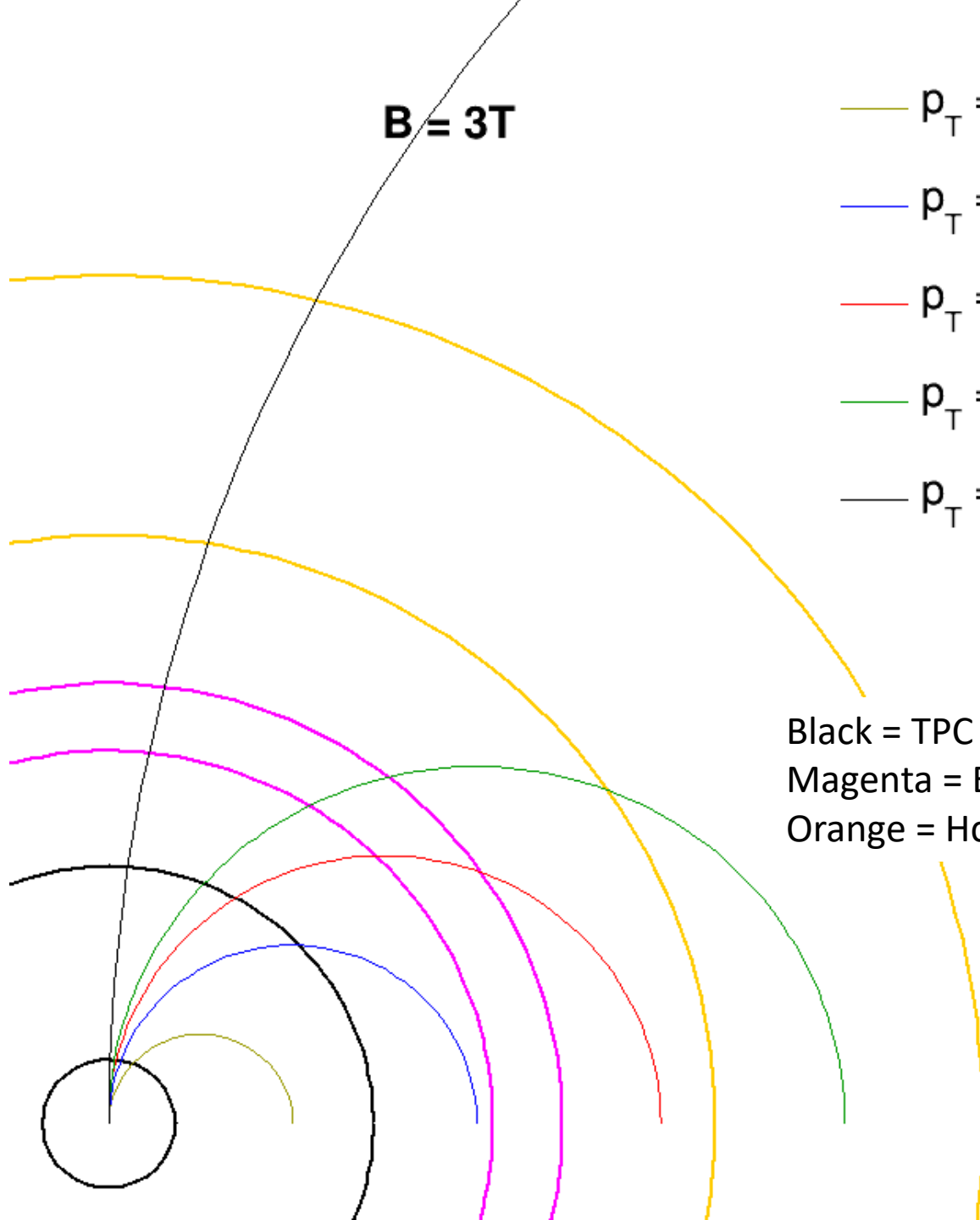
Jet Angularity ($a = 0.5$): $p_T > 10$ GeV



B = 3T

- $p_T = 250$ MeV
- $p_T = 500$ MeV
- $p_T = 750$ MeV
- $p_T = 1000$ MeV
- $p_T = 5000$ MeV

Black = TPC (20-80 cm)
Magenta = EMCAL (116-137 cm)
Orange = Hcal (183-264 cm)



B = 1.5T

— $p_T = 250$ MeV

— $p_T = 500$ MeV

— $p_T = 750$ MeV

— $p_T = 1000$ MeV

— $p_T = 5000$ MeV

Black = TPC (20-80 cm)

Magenta = EMCal (116-137 cm)

Orange = Hcal (183-264 cm)

