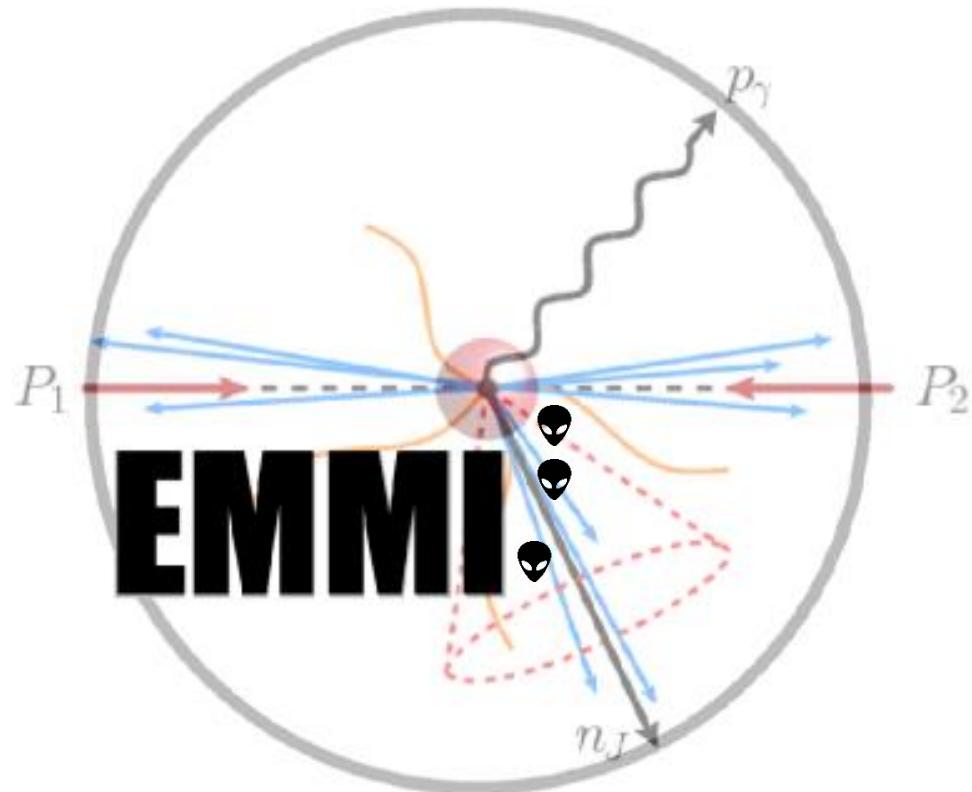


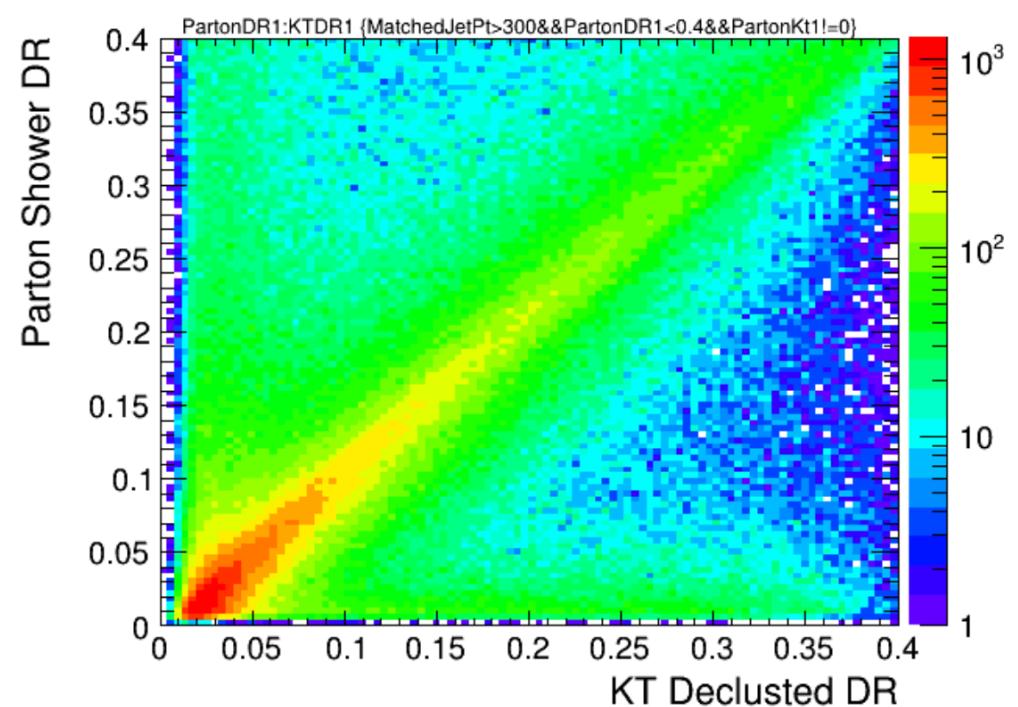
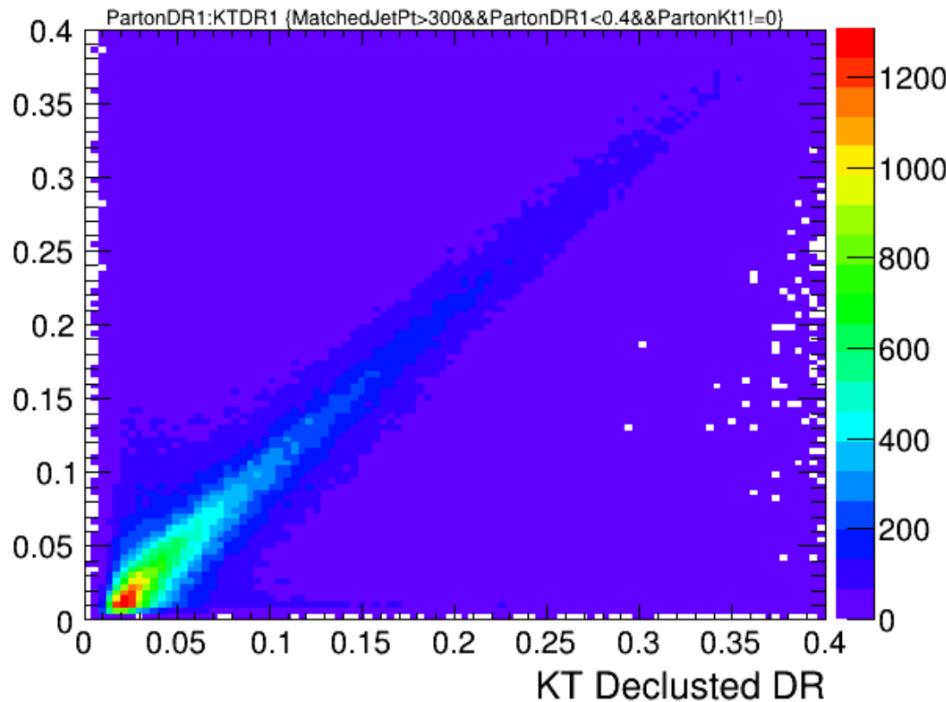
# Status Report



Let's go Lunni!

# Angle reconstruction with KT

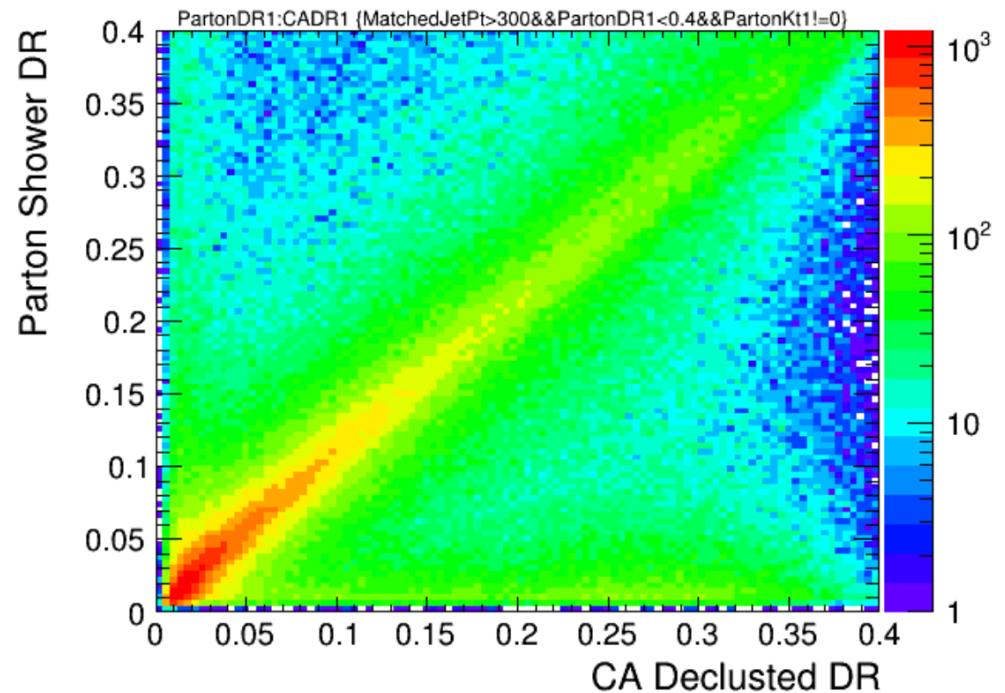
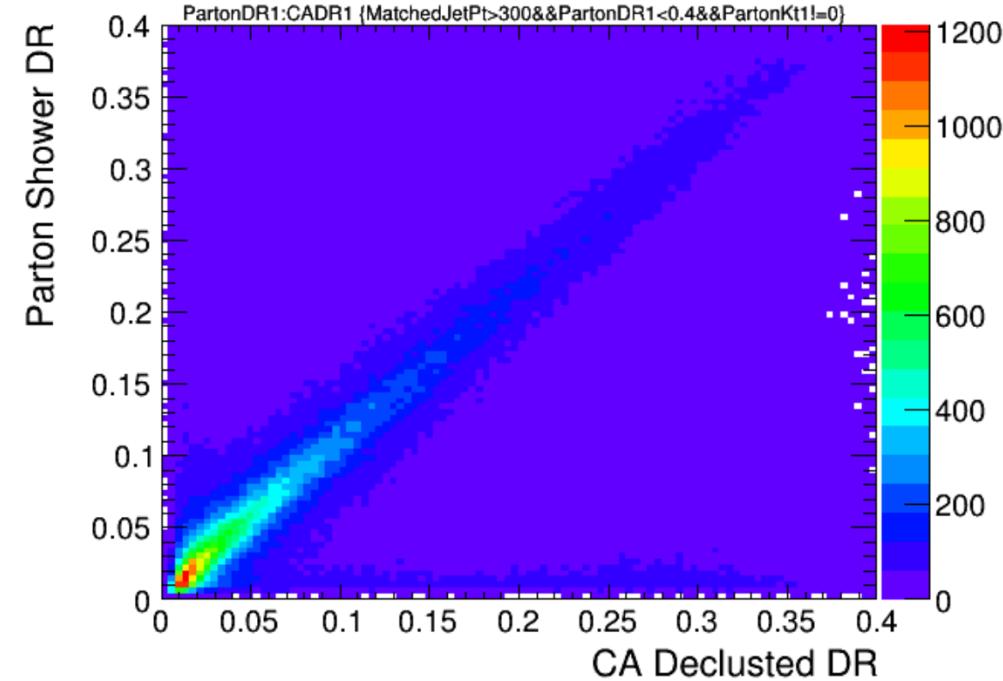
Pythia8 UEOn  $p_T^{\text{jet}} > 350 \text{ GeV}$



Unbeautified

# Angle reconstruction with CA

Pythia8 UEOn  $p_T^{\text{jet}} > 350 \text{ GeV}$

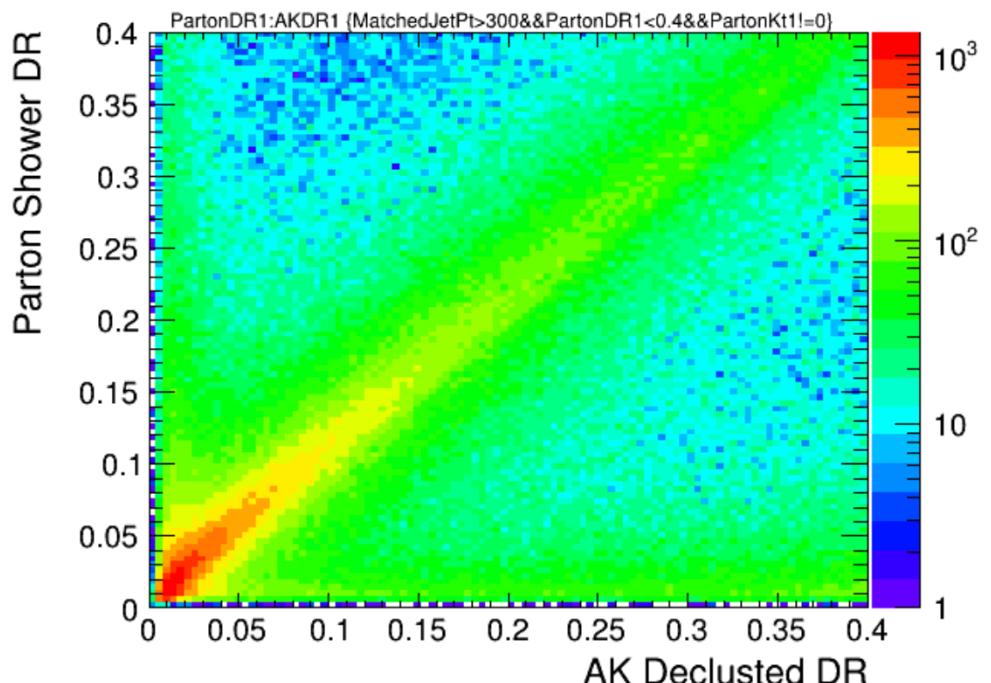
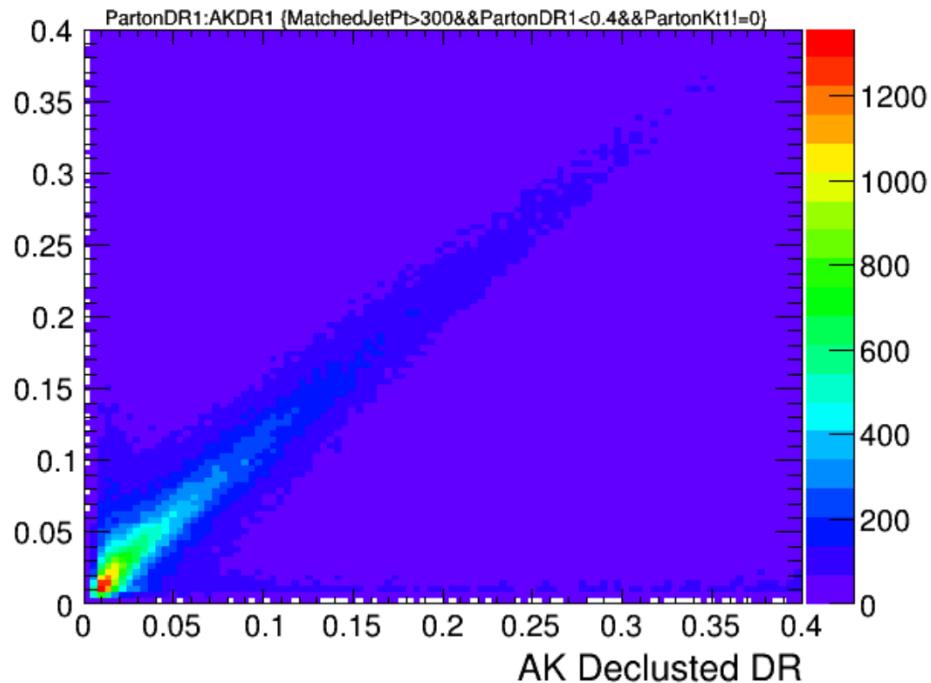


Unbeautified™



# Angle reconstruction with AK

Pythia8 UEOn  $p_T^{\text{jet}} > 350 \text{ GeV}$

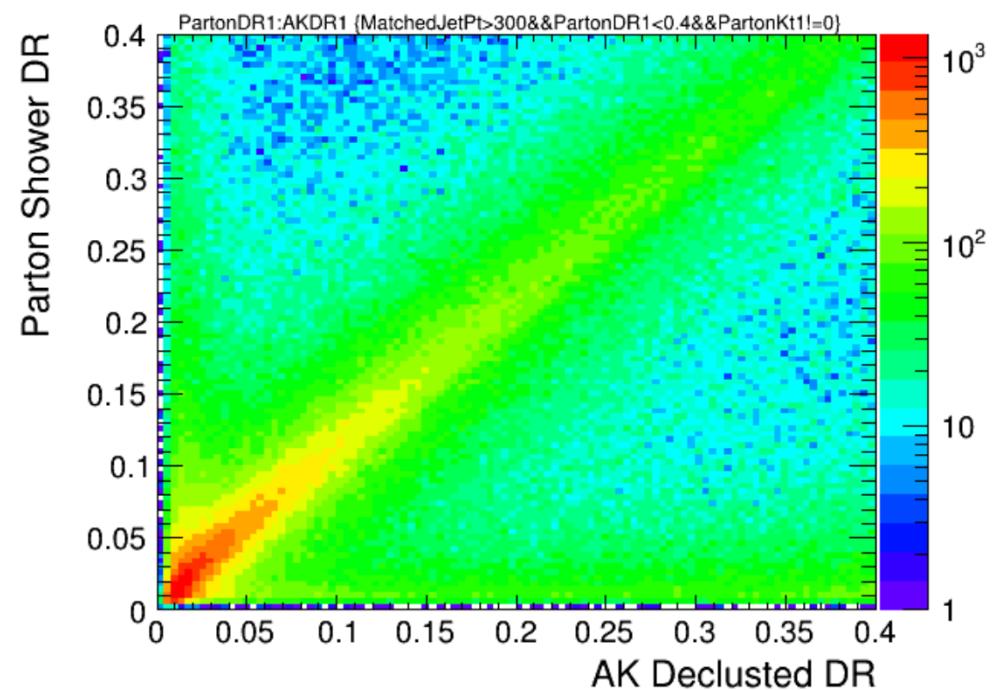
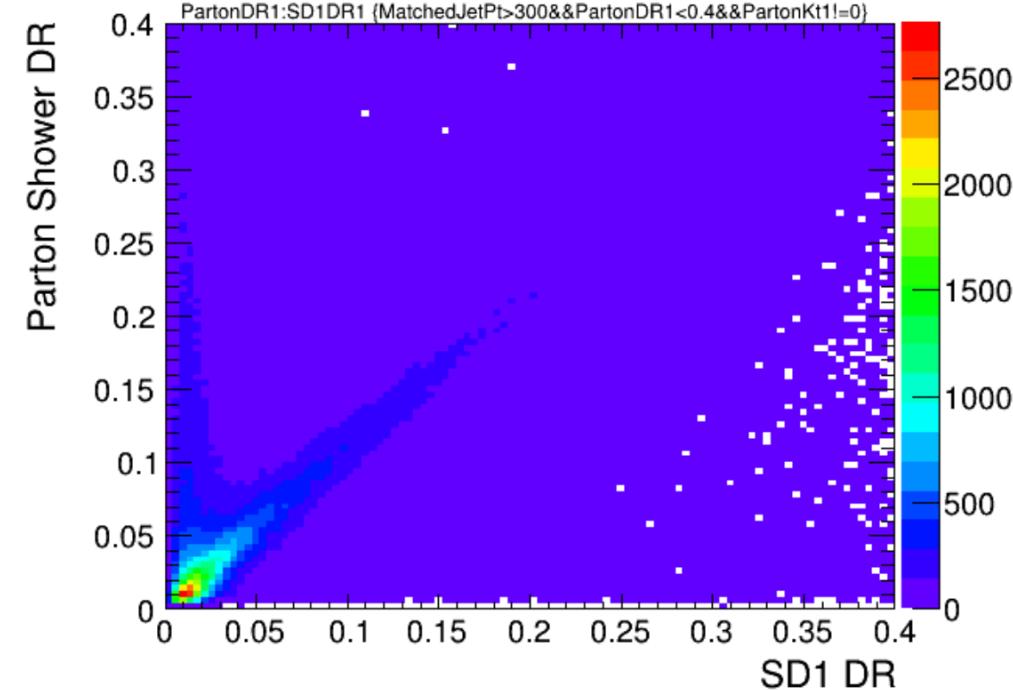


Unbeautified™



# Angle reconstruction with SD

Pythia8 UEOn  $p_T^{\text{jet}} > 350 \text{ GeV}$



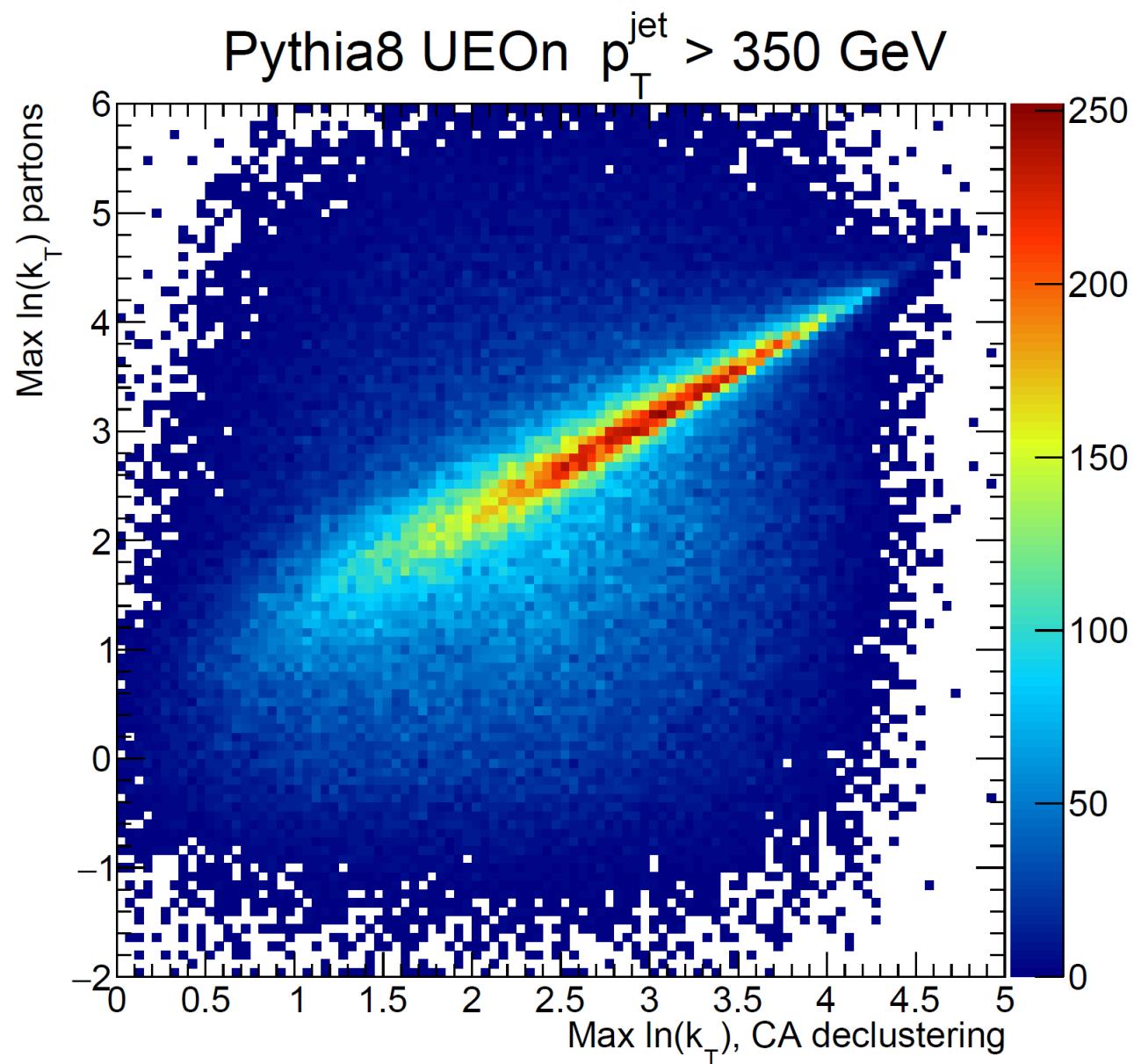
Zcut, Beta = (0.1, 0)

Unbeautified™

# Old slides

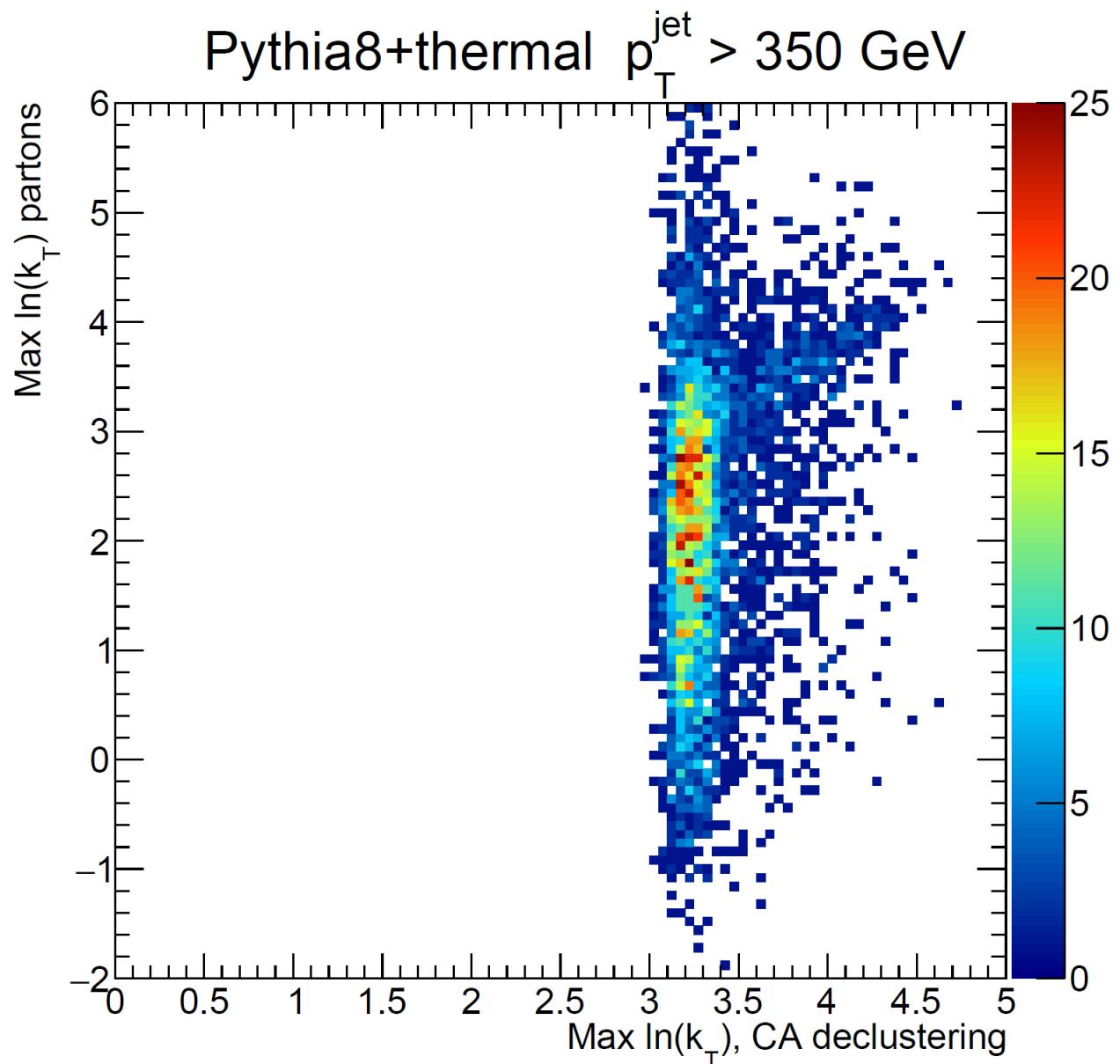


# Jet (CA) PYTHIA8 pThat300



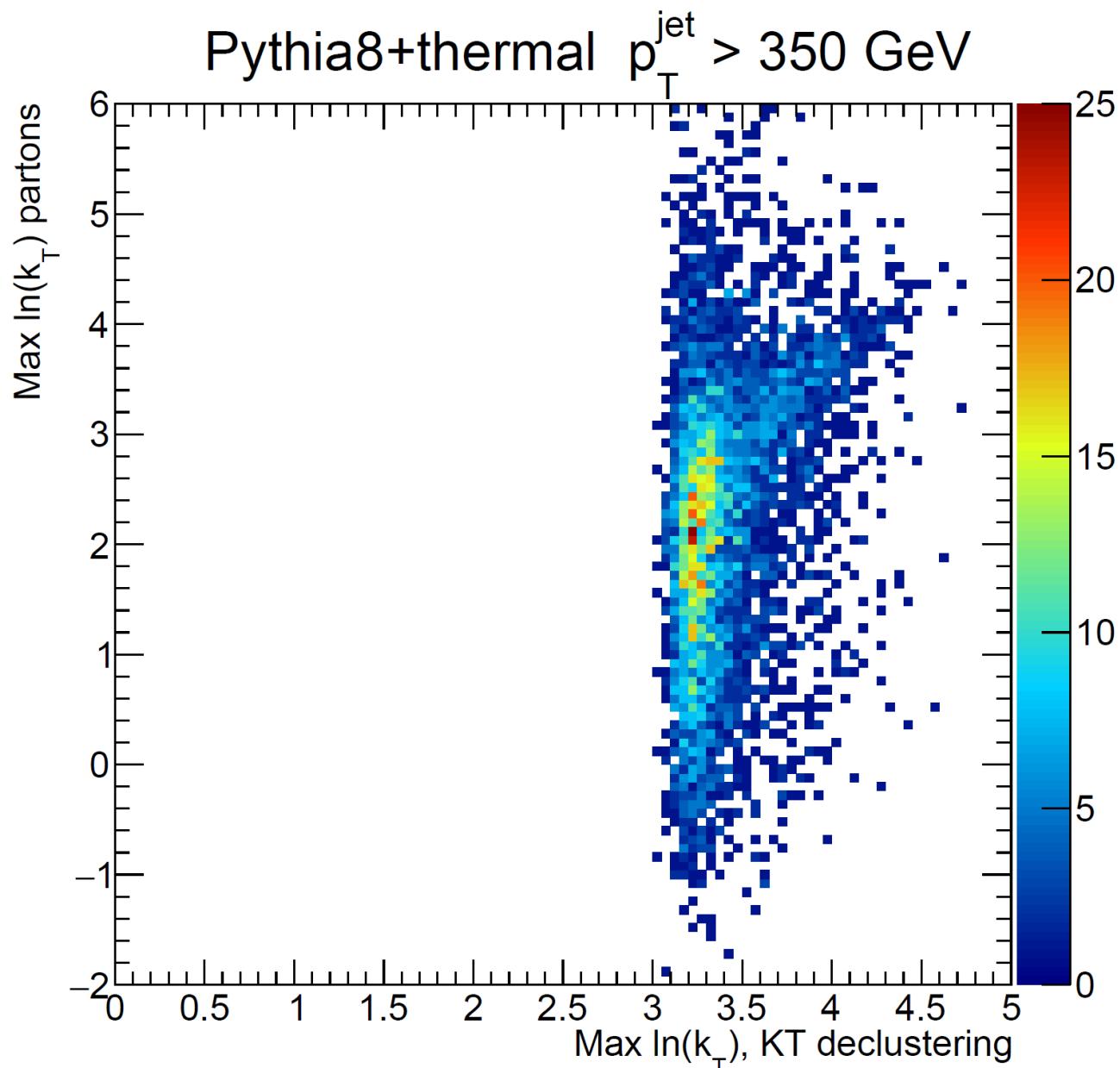
# Jet (CA) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%)

Without background sub



# Jet (KT) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%)

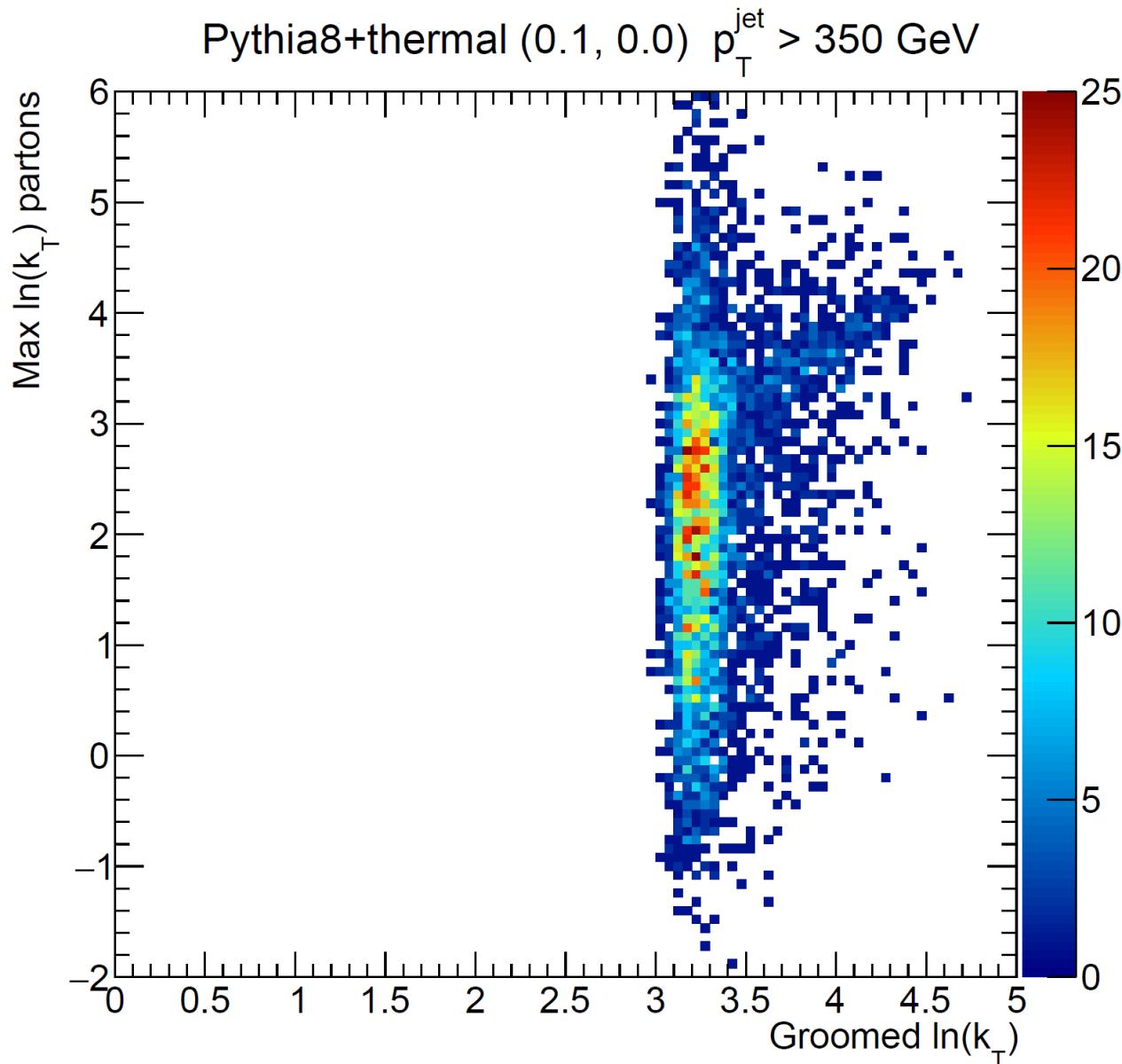
Without background sub



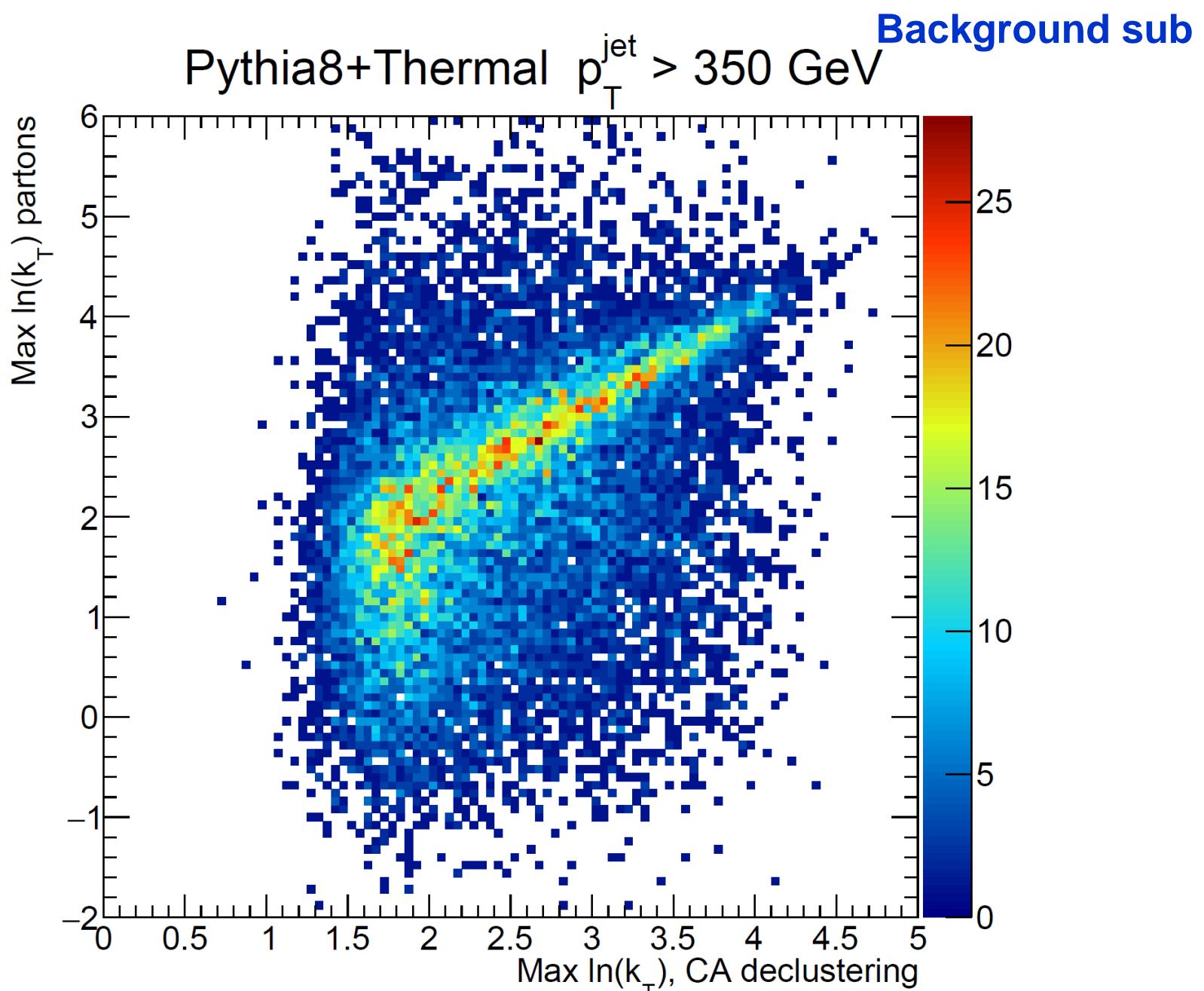
# Groomed Jet (CA) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)

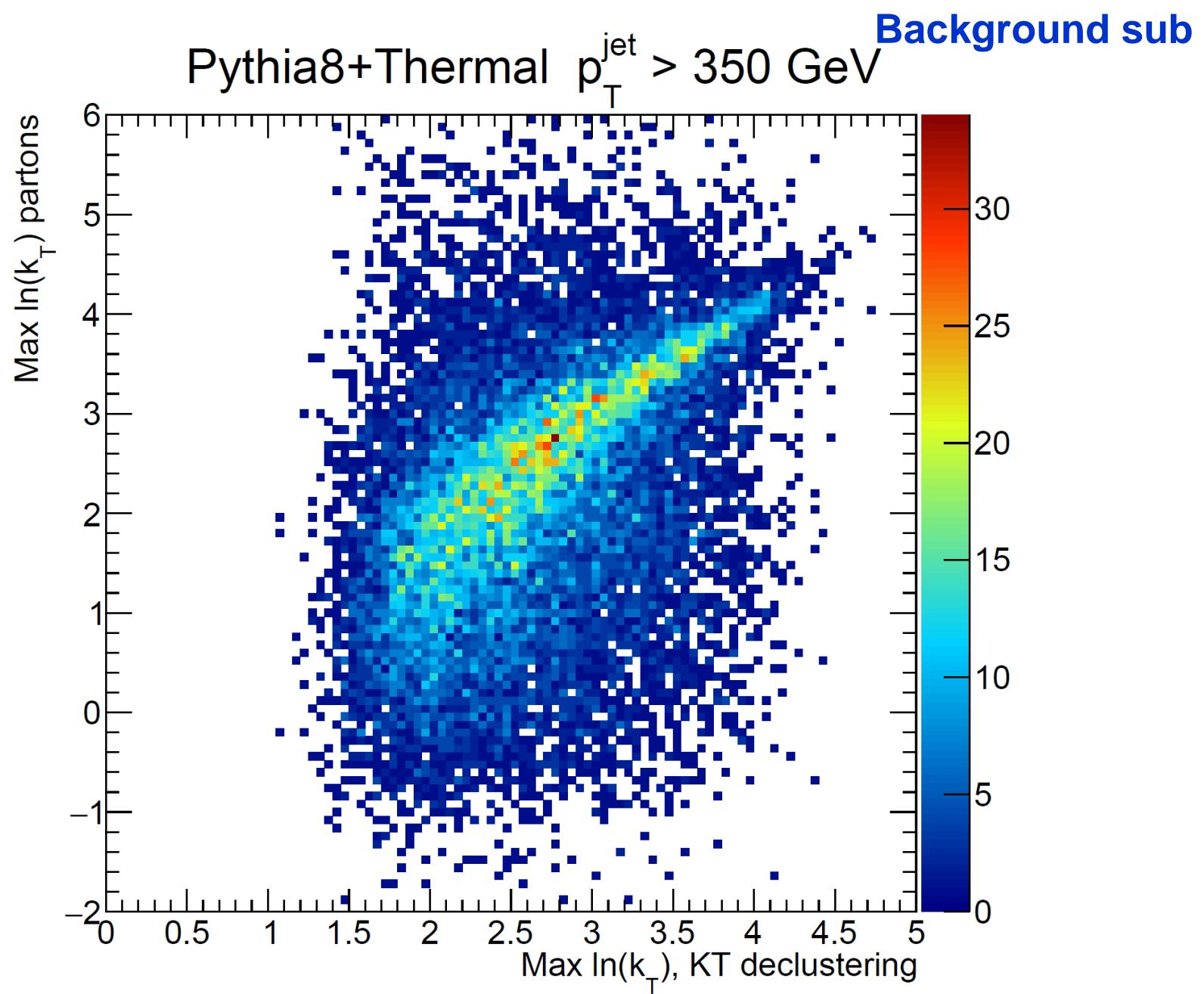
Without background sub



# Jet (CA) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%)



# Jet (KT) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%)

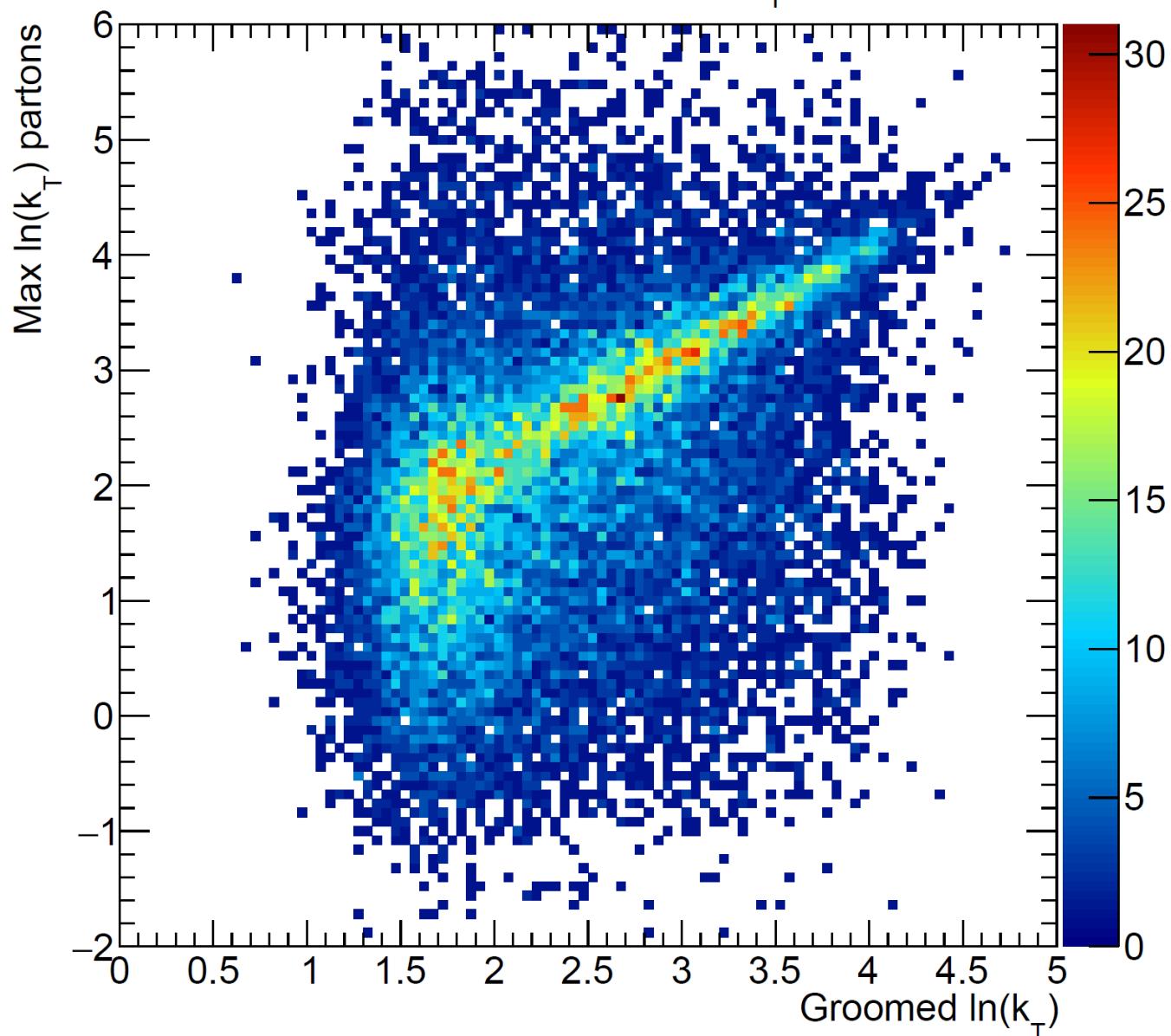


# Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)

Pythia8+Thermal (0.1, 0.0)  $p_T^{\text{jet}} > 350 \text{ GeV}$

Background sub

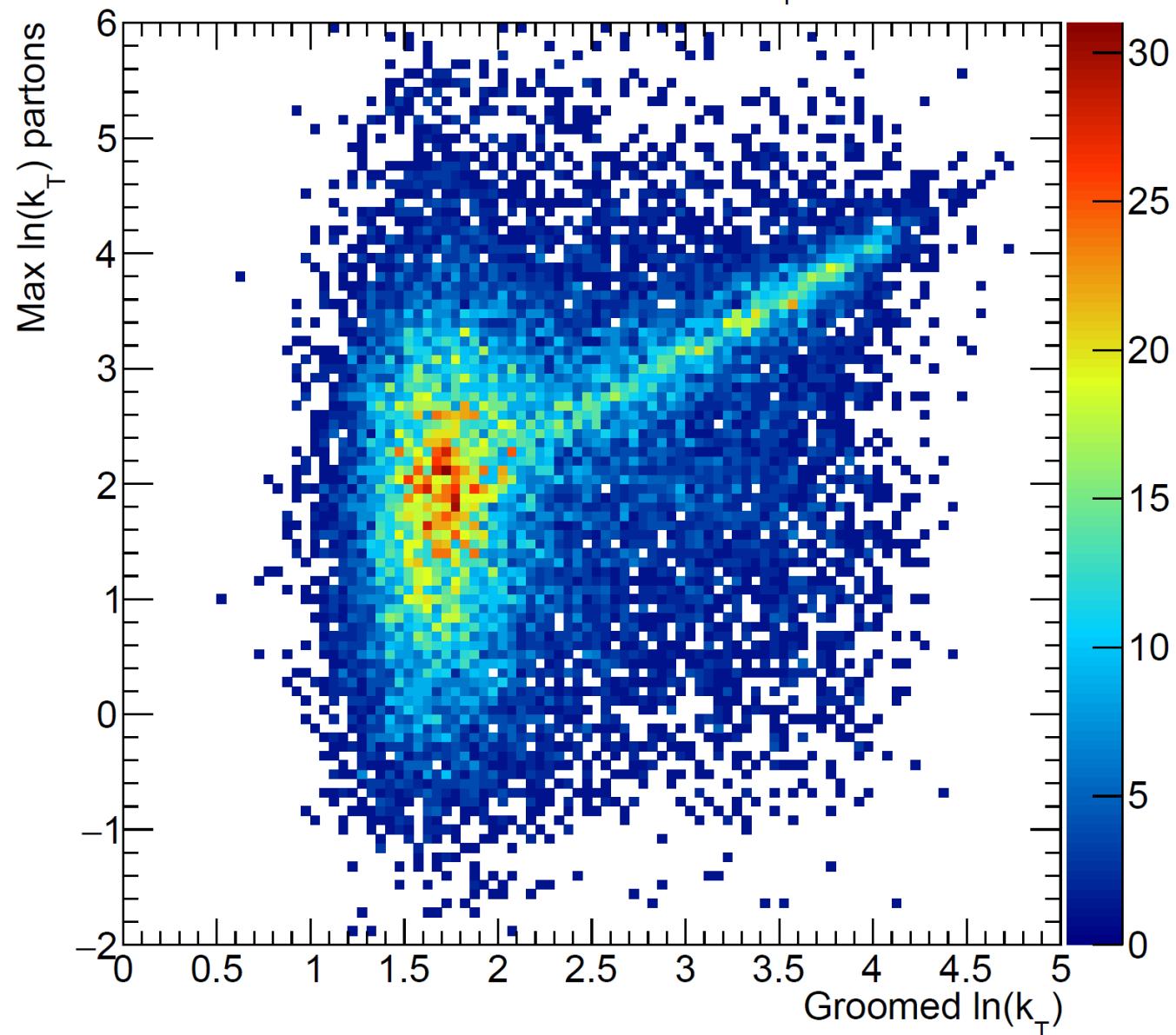


# Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.25,0.0)

Pythia8+Thermal (0.25, 0.0)  $p_T^{\text{jet}} > 350 \text{ GeV}$

Background sub

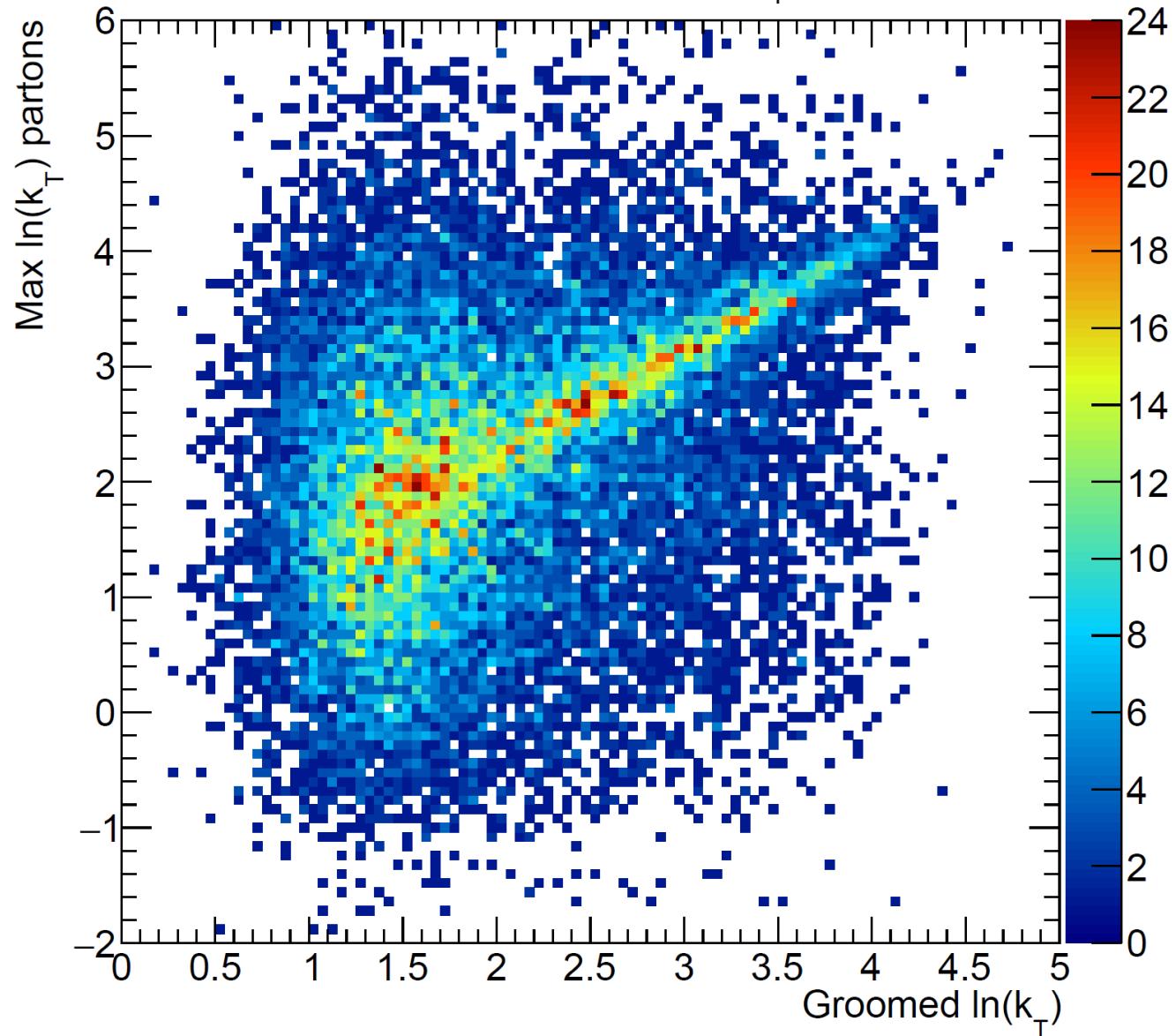


# Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.5,1.5)

Pythia8+Thermal (0.5, 1.5)  $p_T^{\text{jet}} > 350 \text{ GeV}$

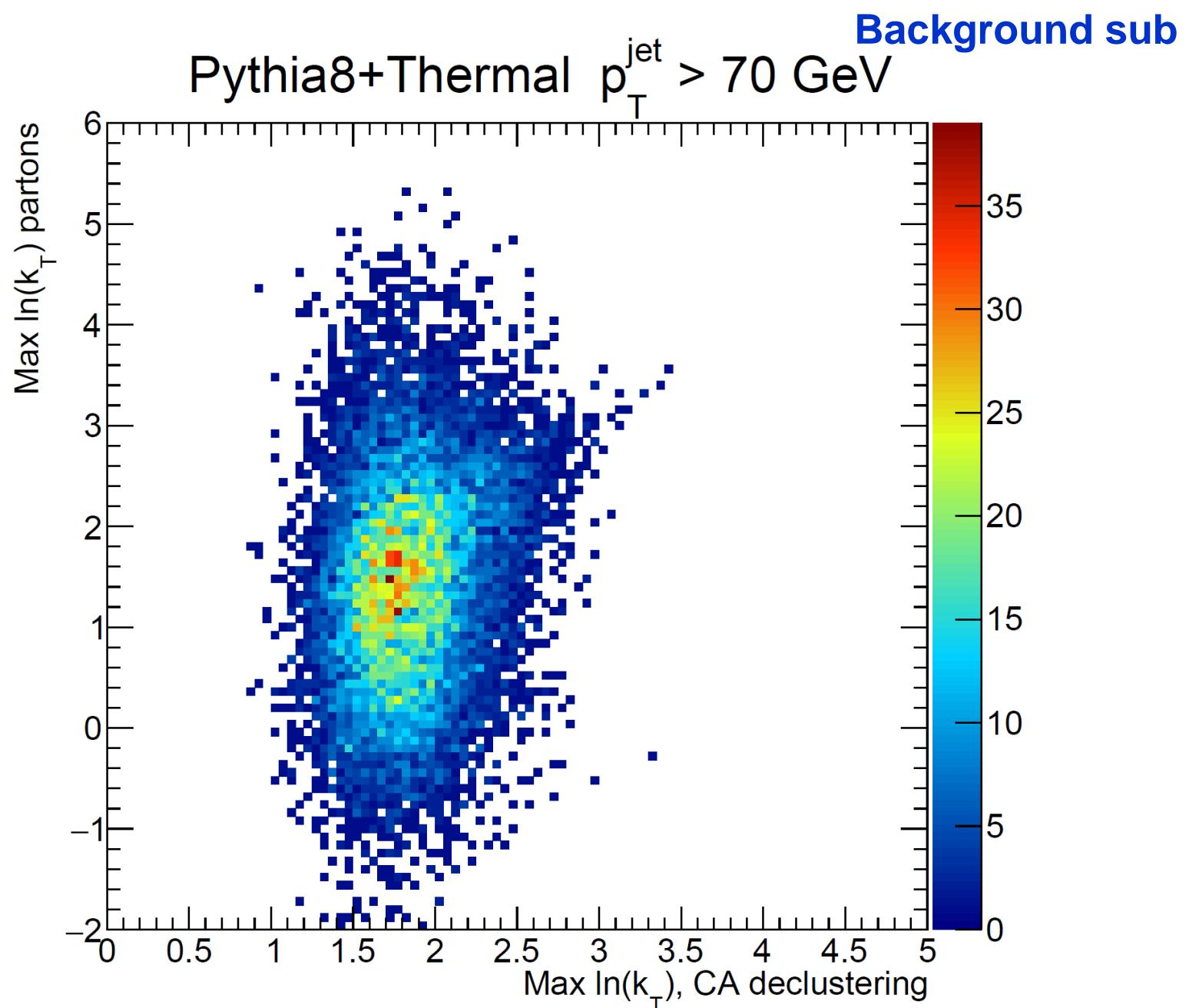
Background sub



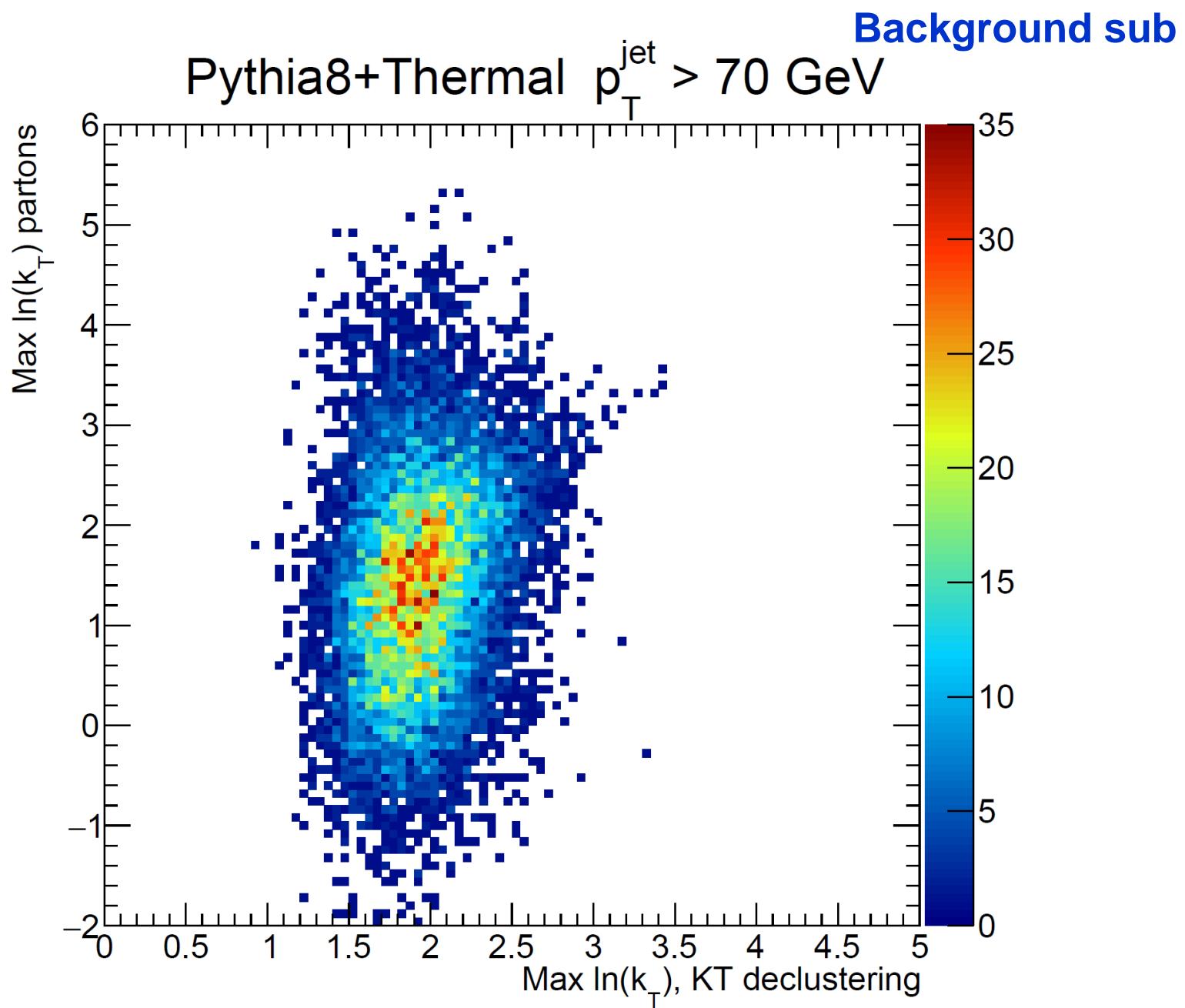
# Low pT Jet in thermal background



# Jet (CA) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%) Low pT jet

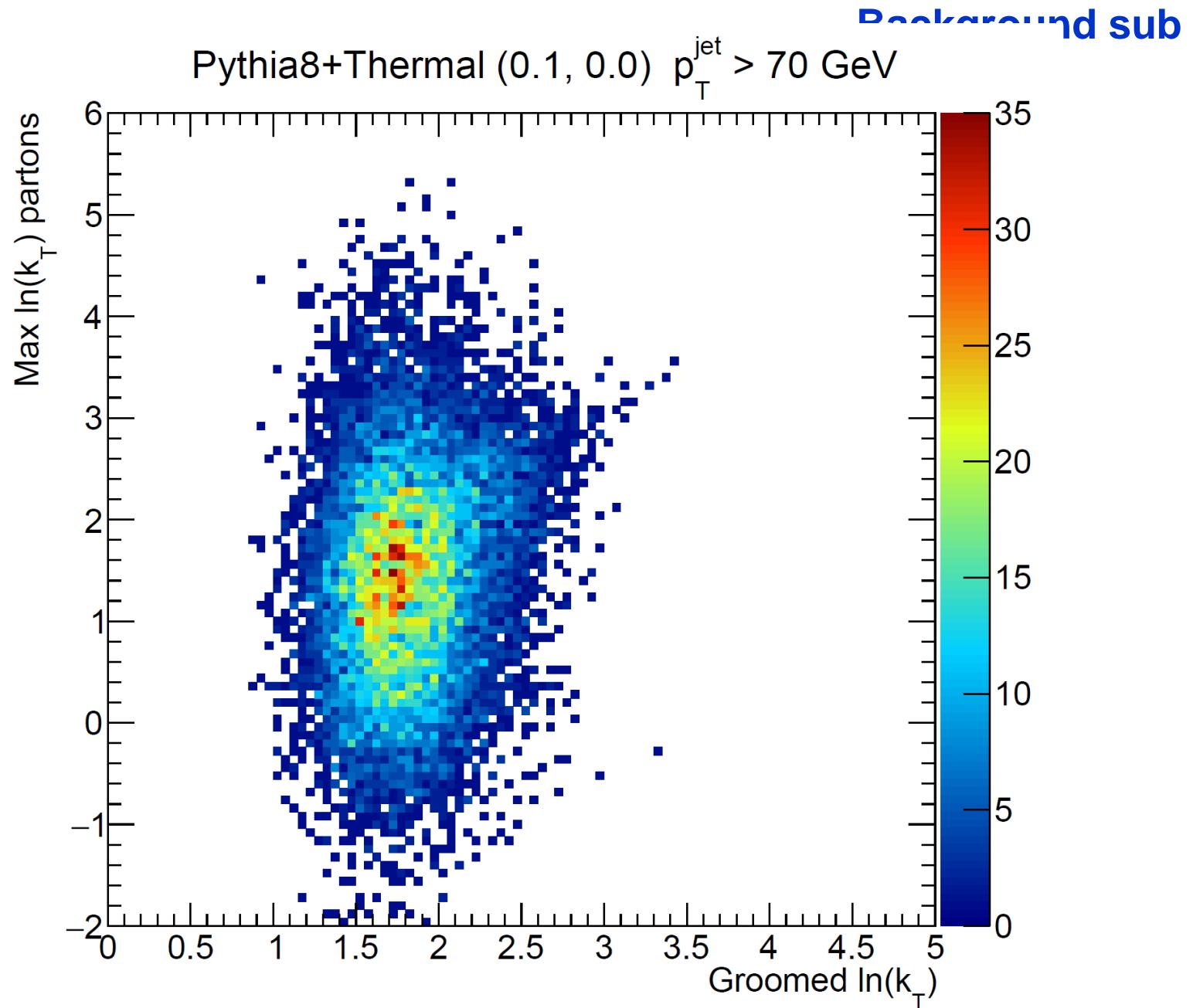


# Jet (KT) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%) Low pT Jet



# Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)

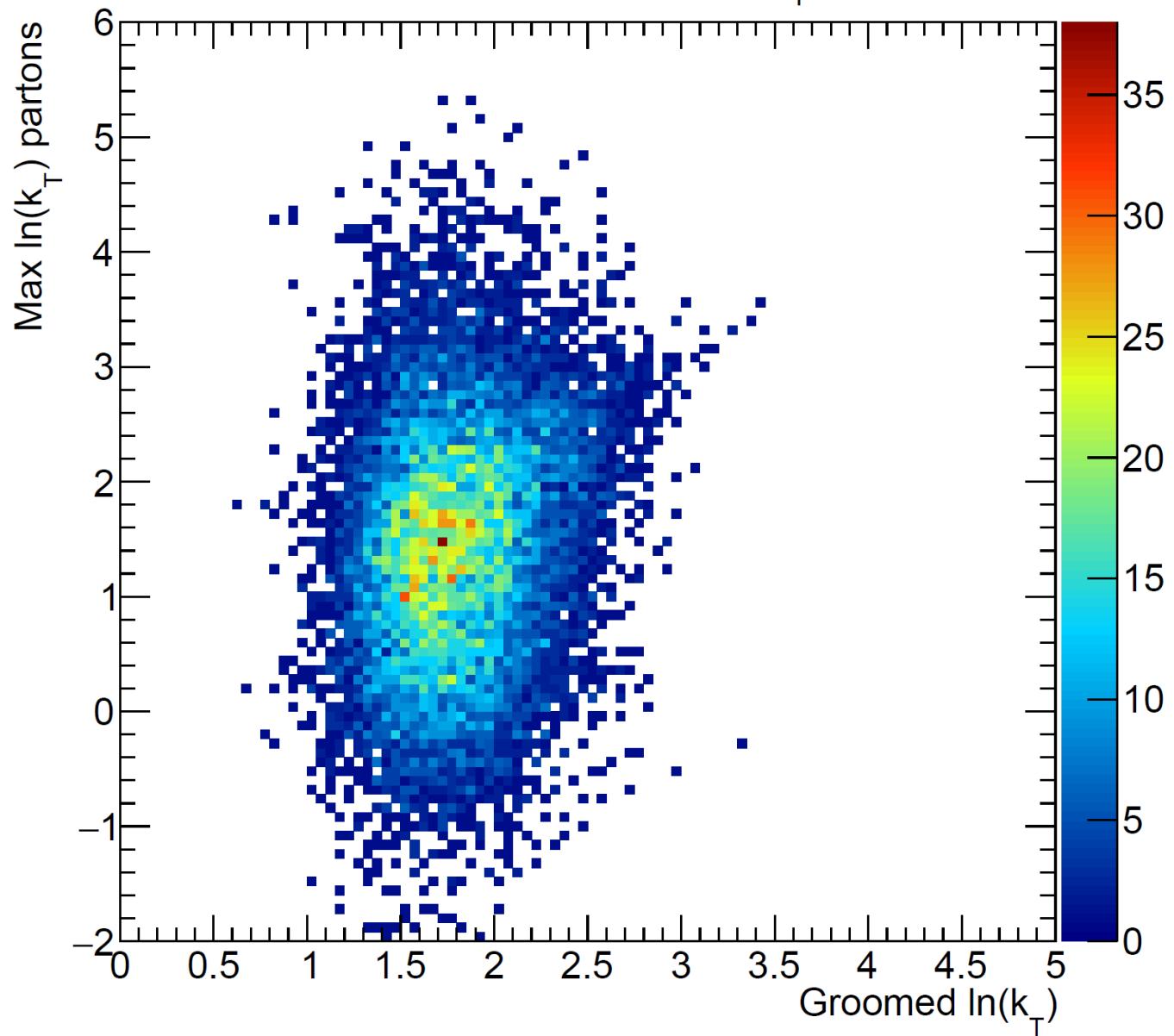


# Groomed Jet (CA) PYTHIA+TermaL Background (PbPb 5 TeV 0-10%) Low pT Jet

Zcut (0.25, 0.0)

Pythia8+Thermal (0.25, 0.0)  $p_T^{\text{jet}} > 70 \text{ GeV}$

Background sub

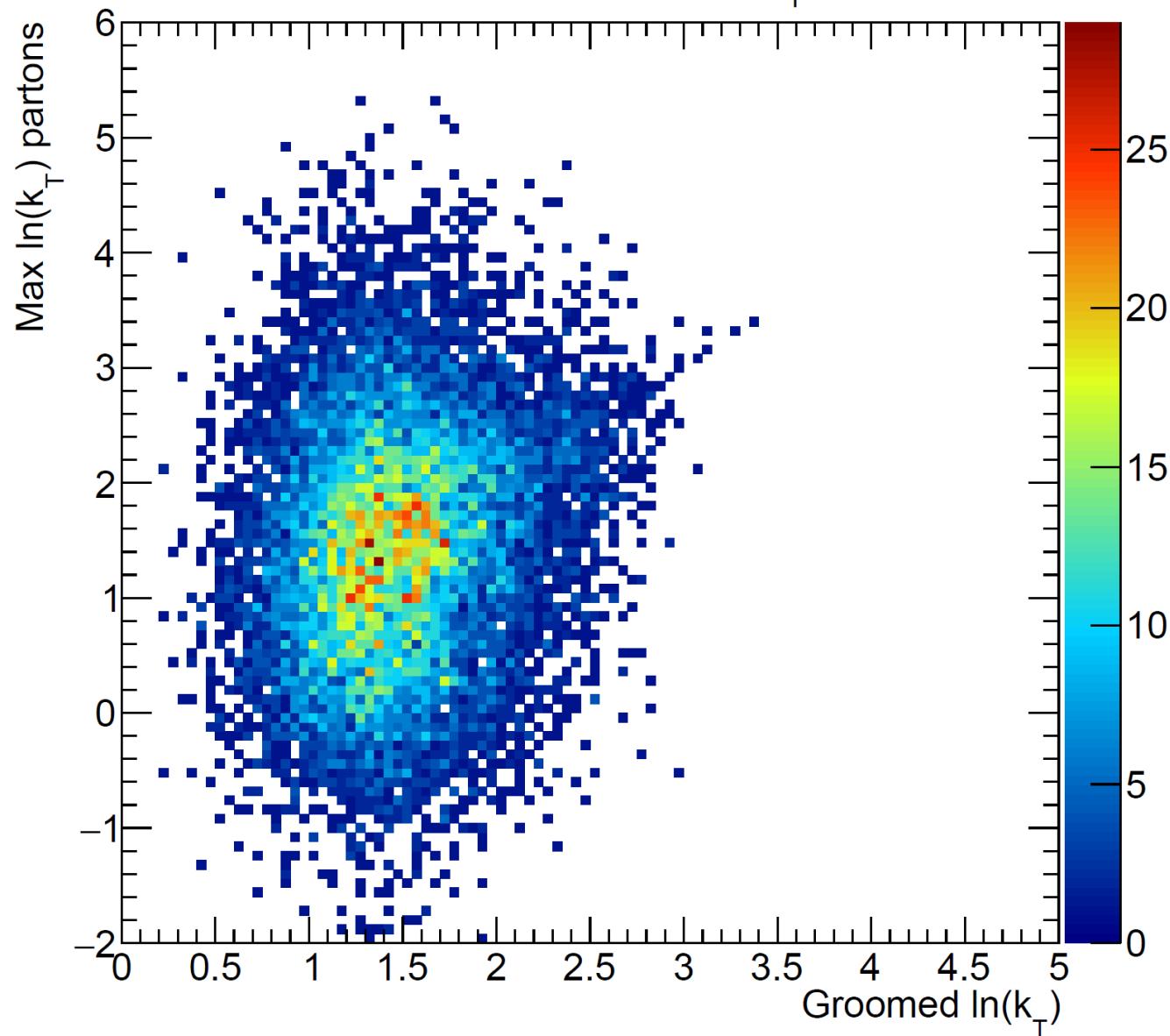


# Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.5, 1.5)

Pythia8+Thermal (0.5, 1.5)  $p_T^{\text{jet}} > 70 \text{ GeV}$

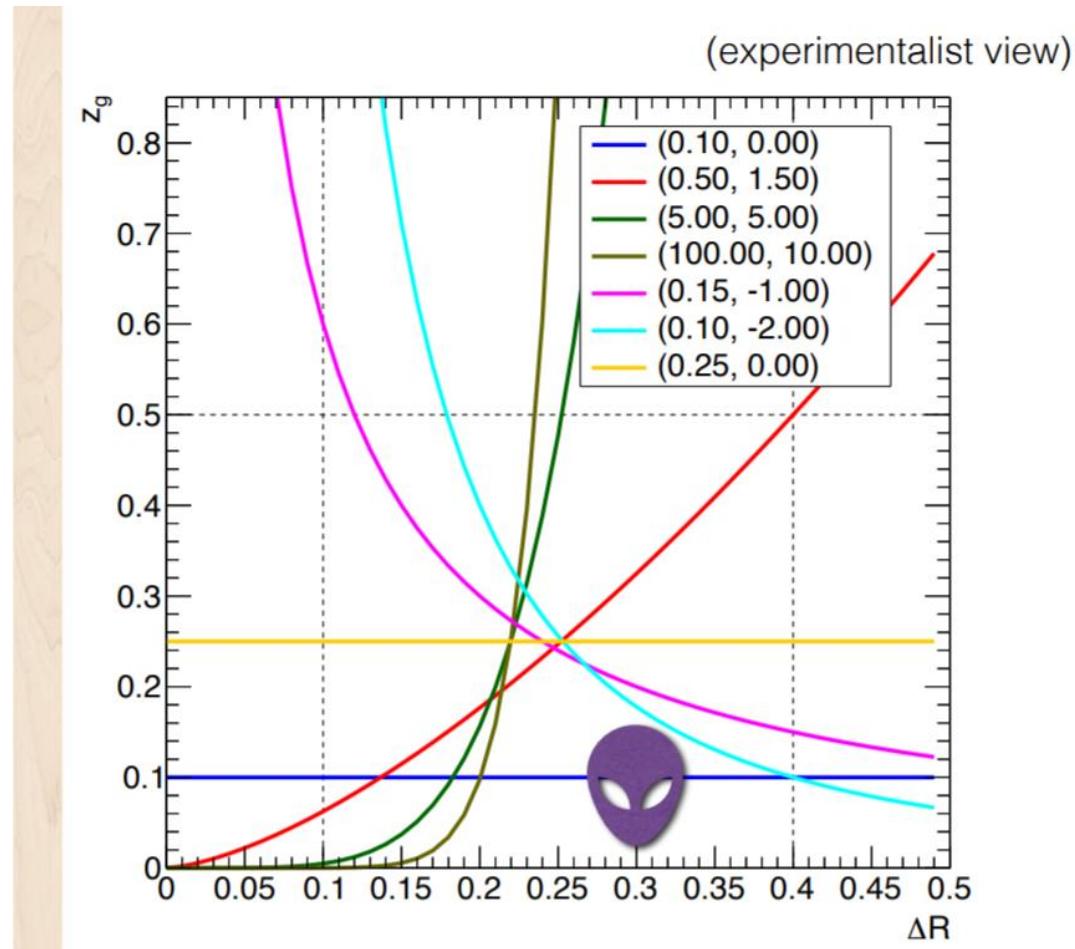
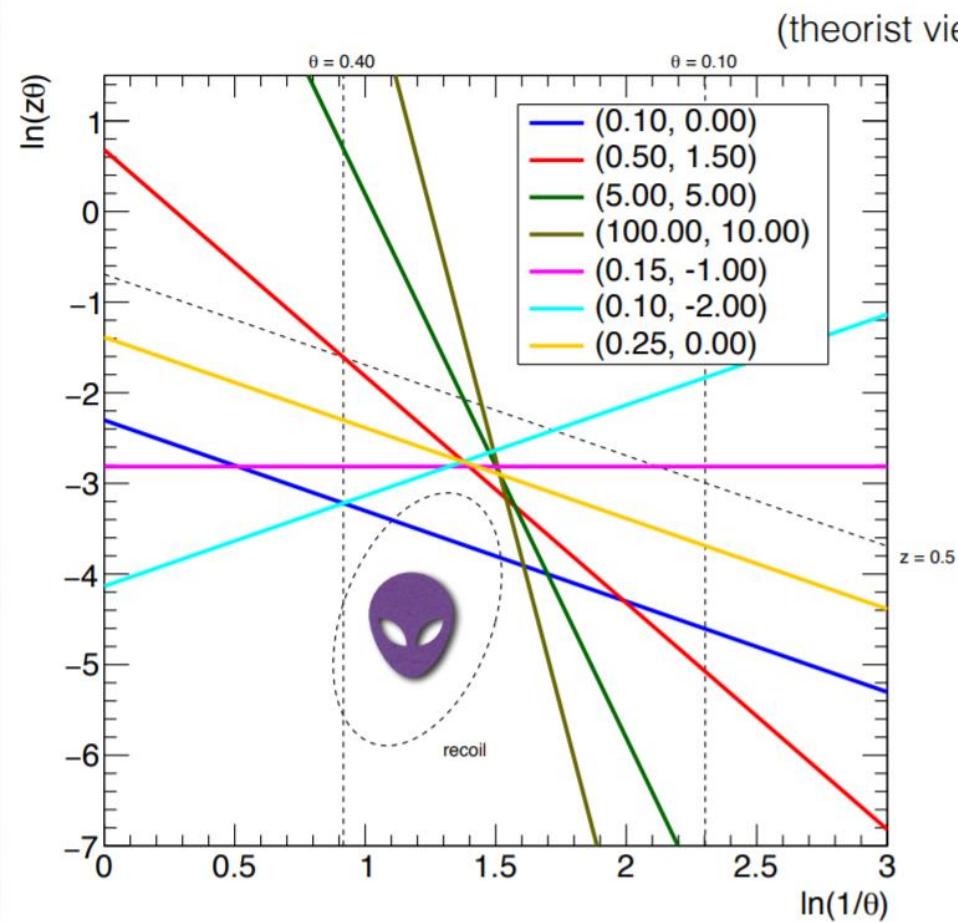
Background sub



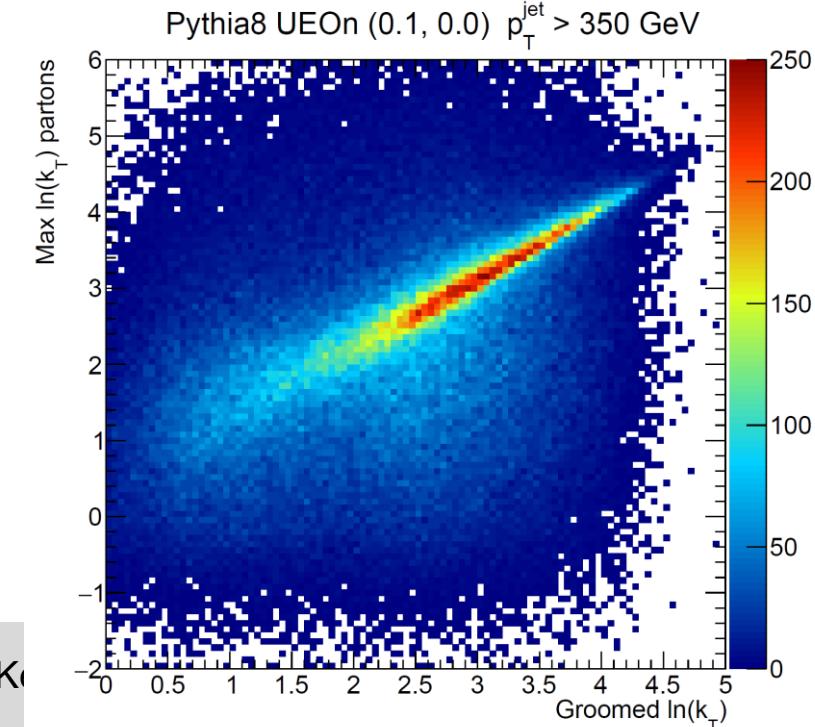
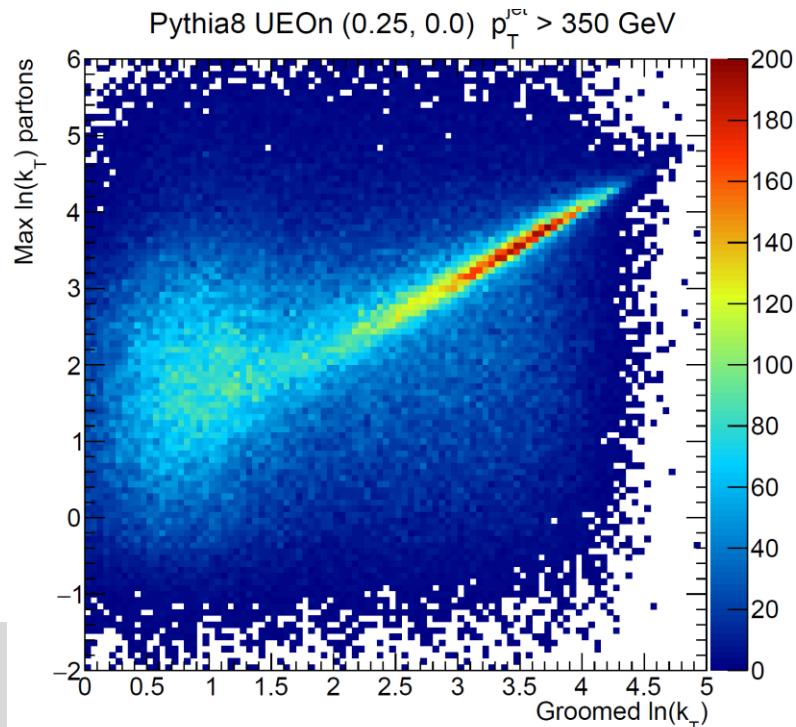
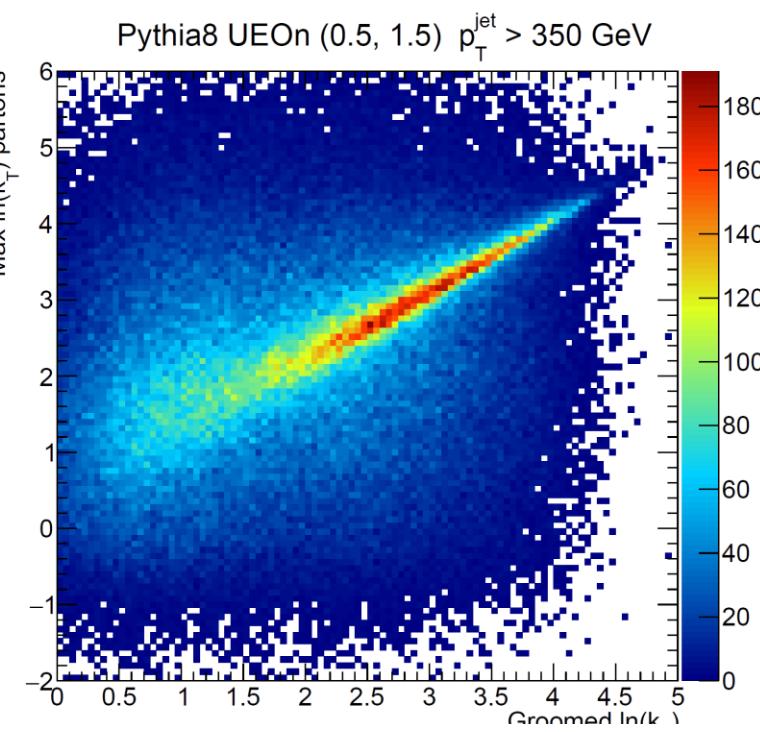
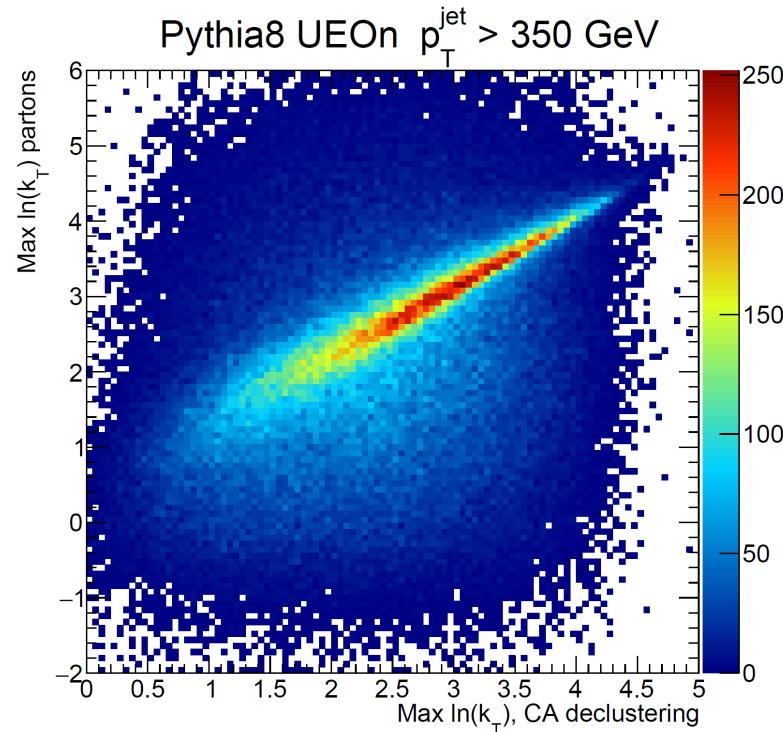
# Previous Report



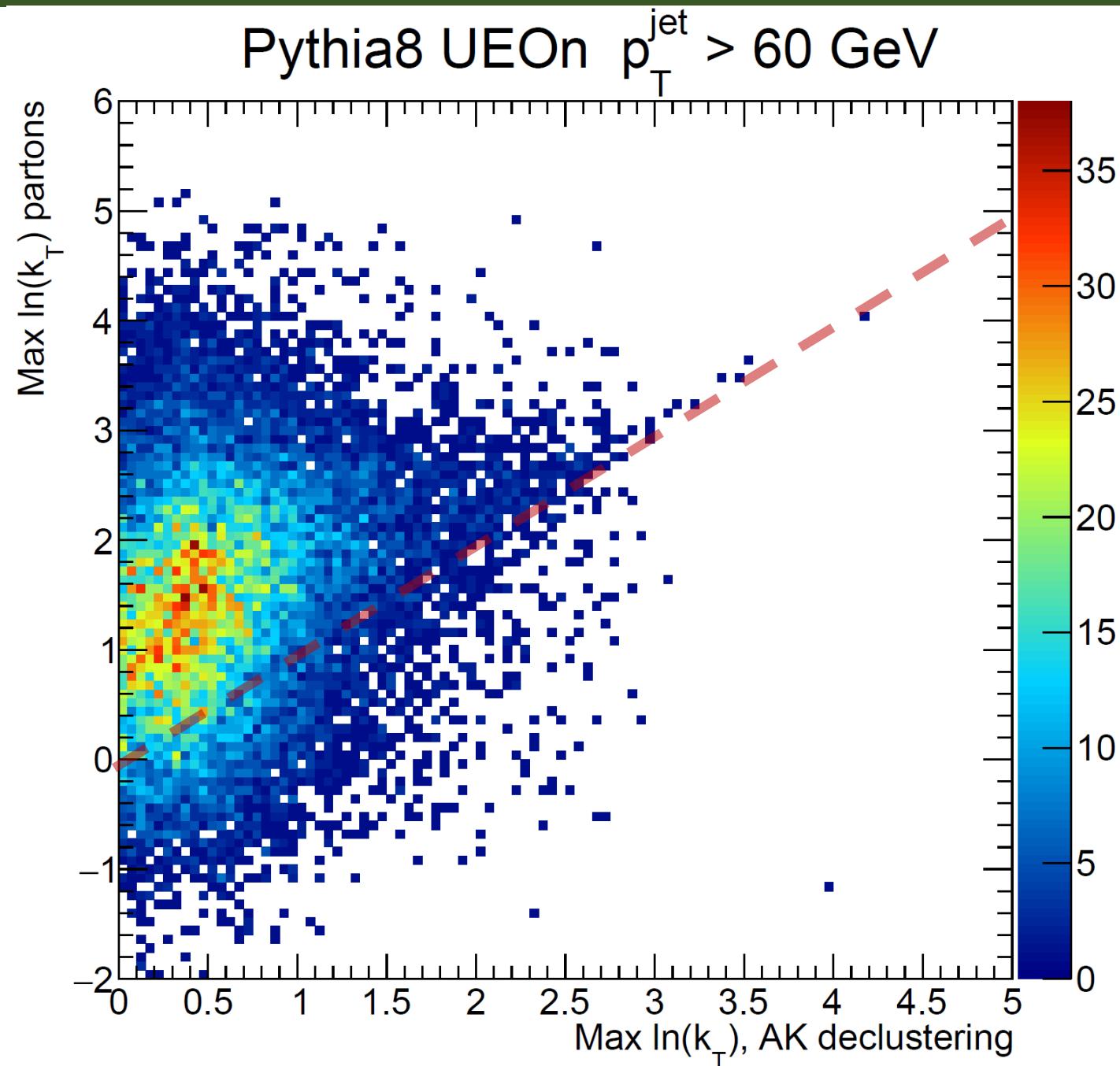
# Softdrop



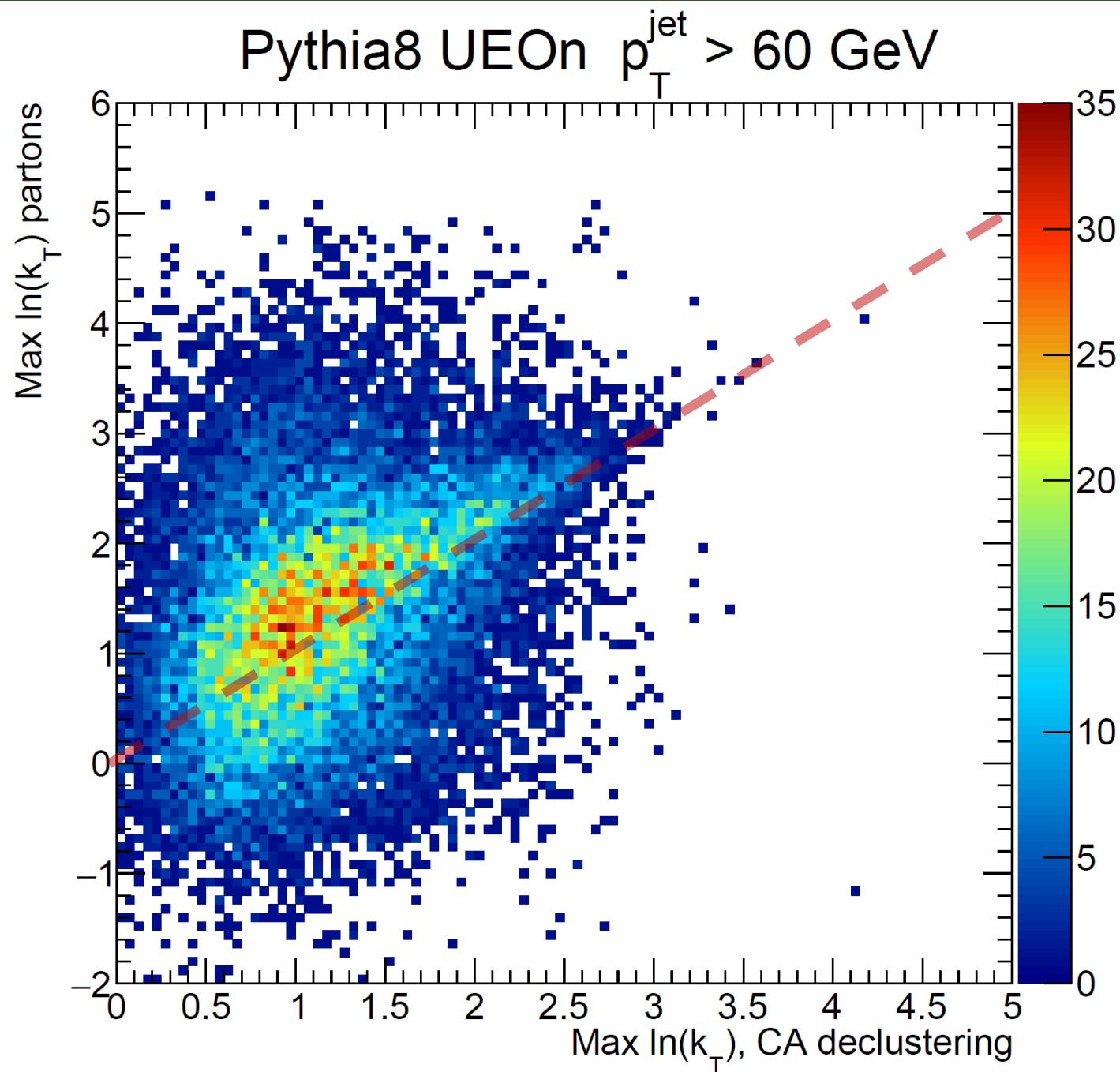
# Performance with $\hat{p}_T > 300$ GeV



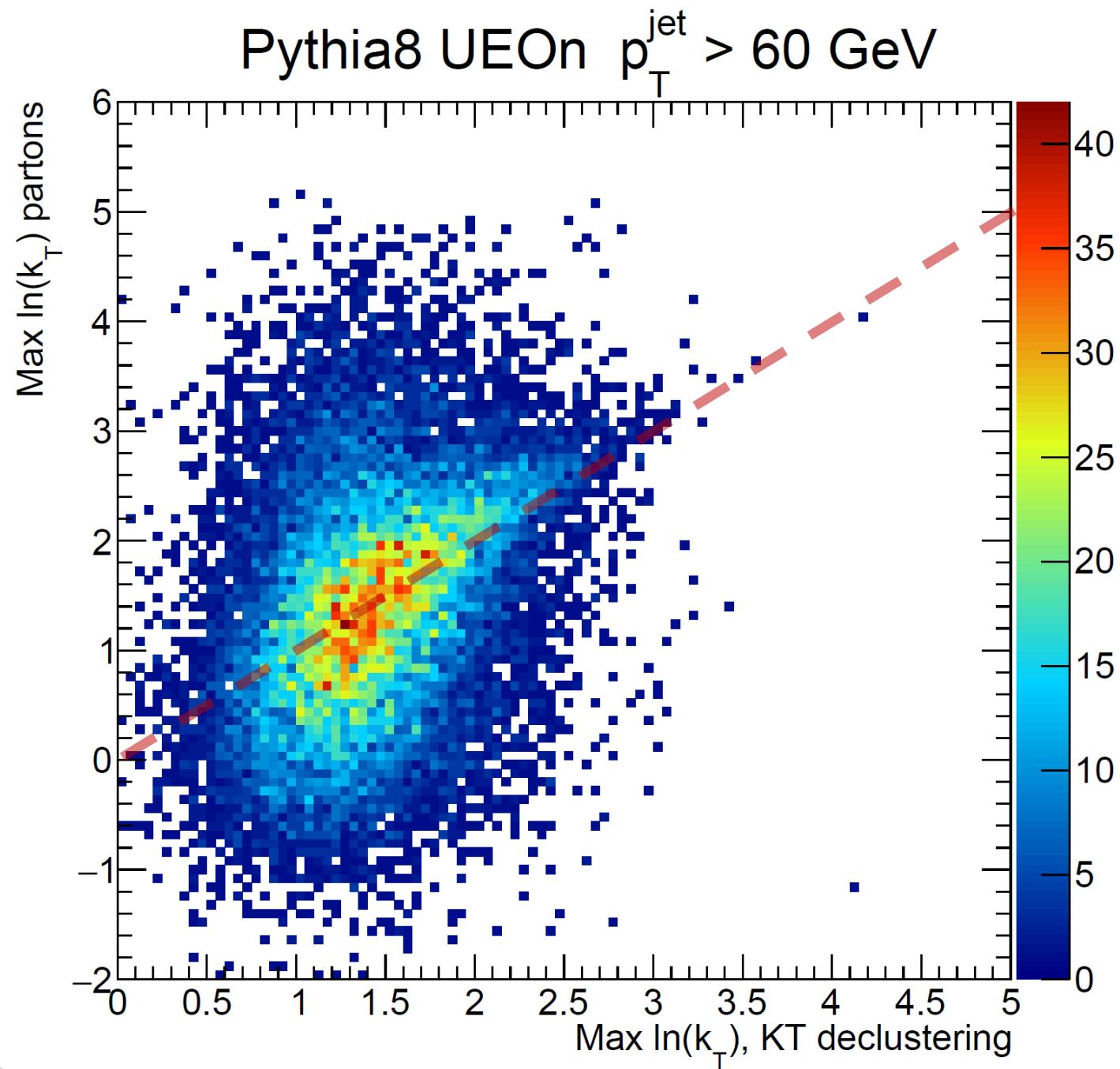
# Performance with $\hat{p}_T > 50$ GeV, Anti-KT



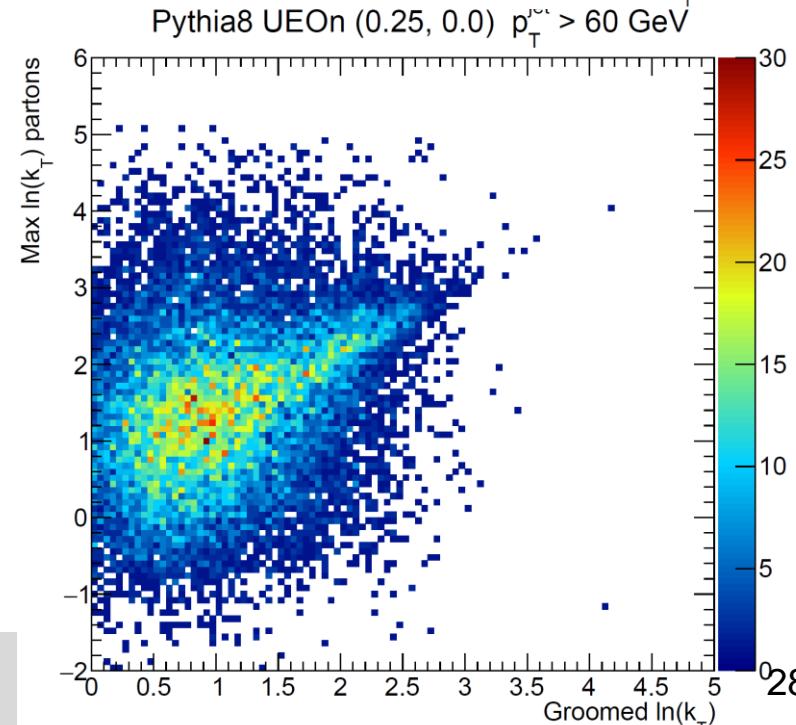
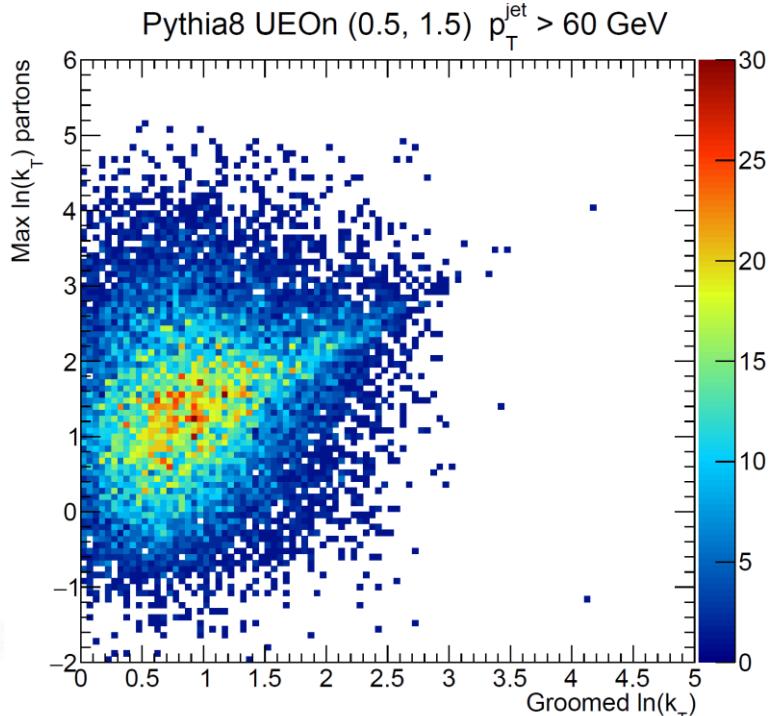
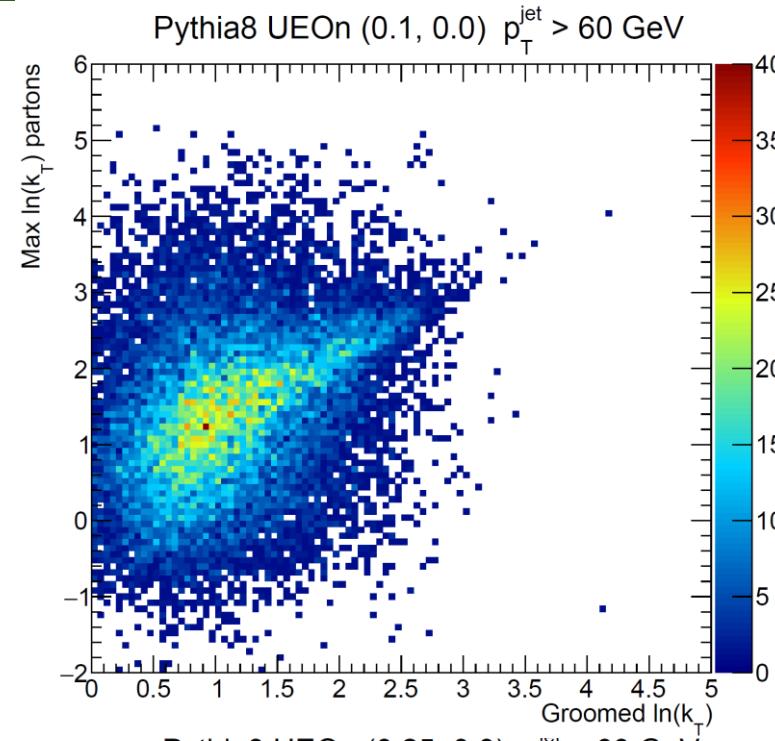
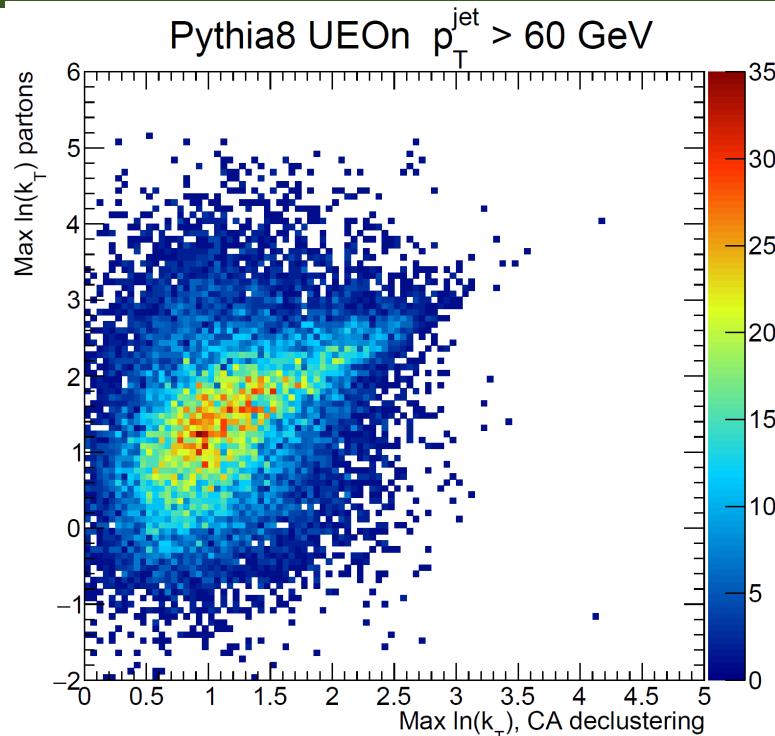
# Performance with $\hat{p}_T > 50$ GeV, CA



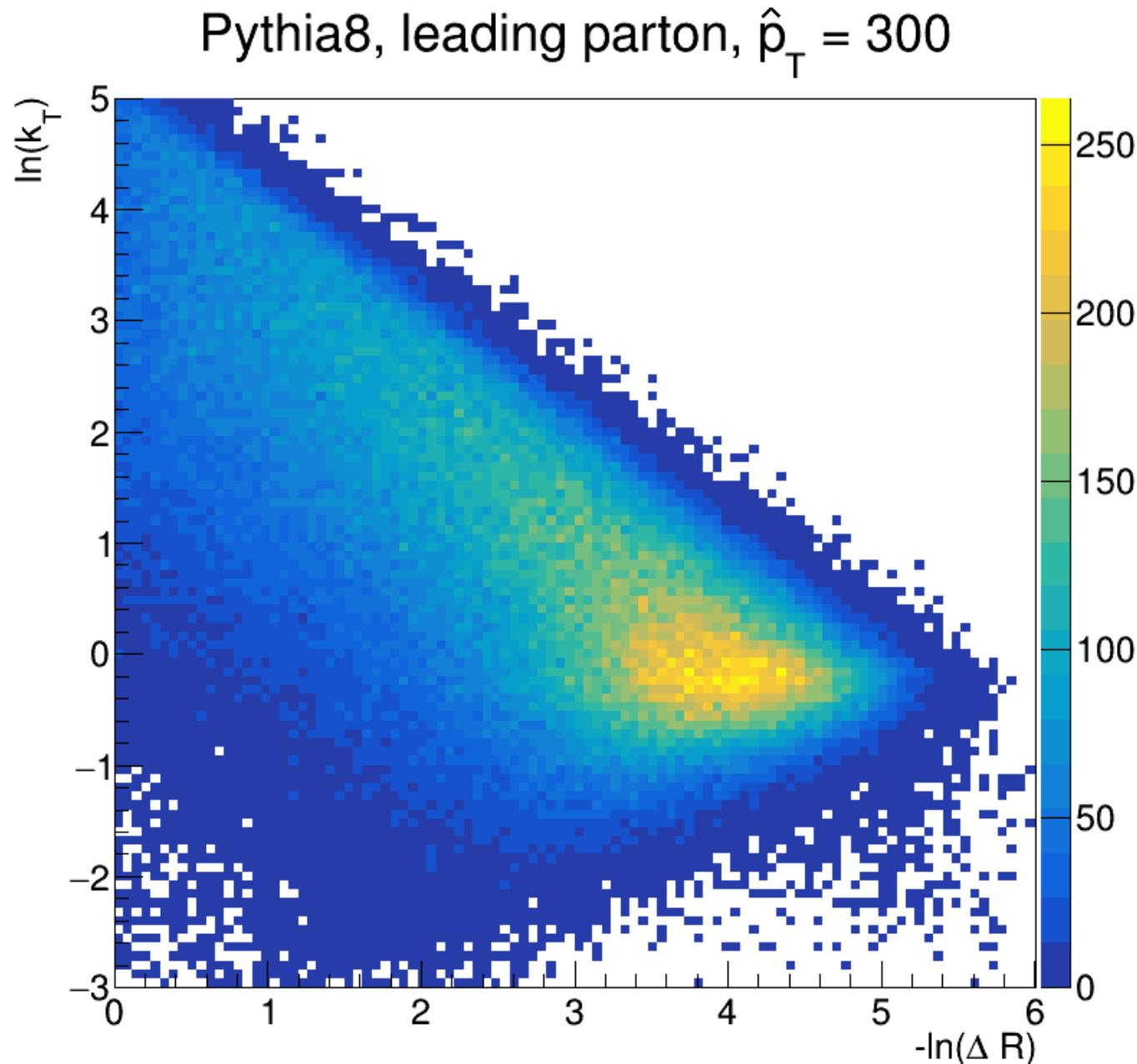
# Performance with $\hat{p}_T > 50$ GeV, KT



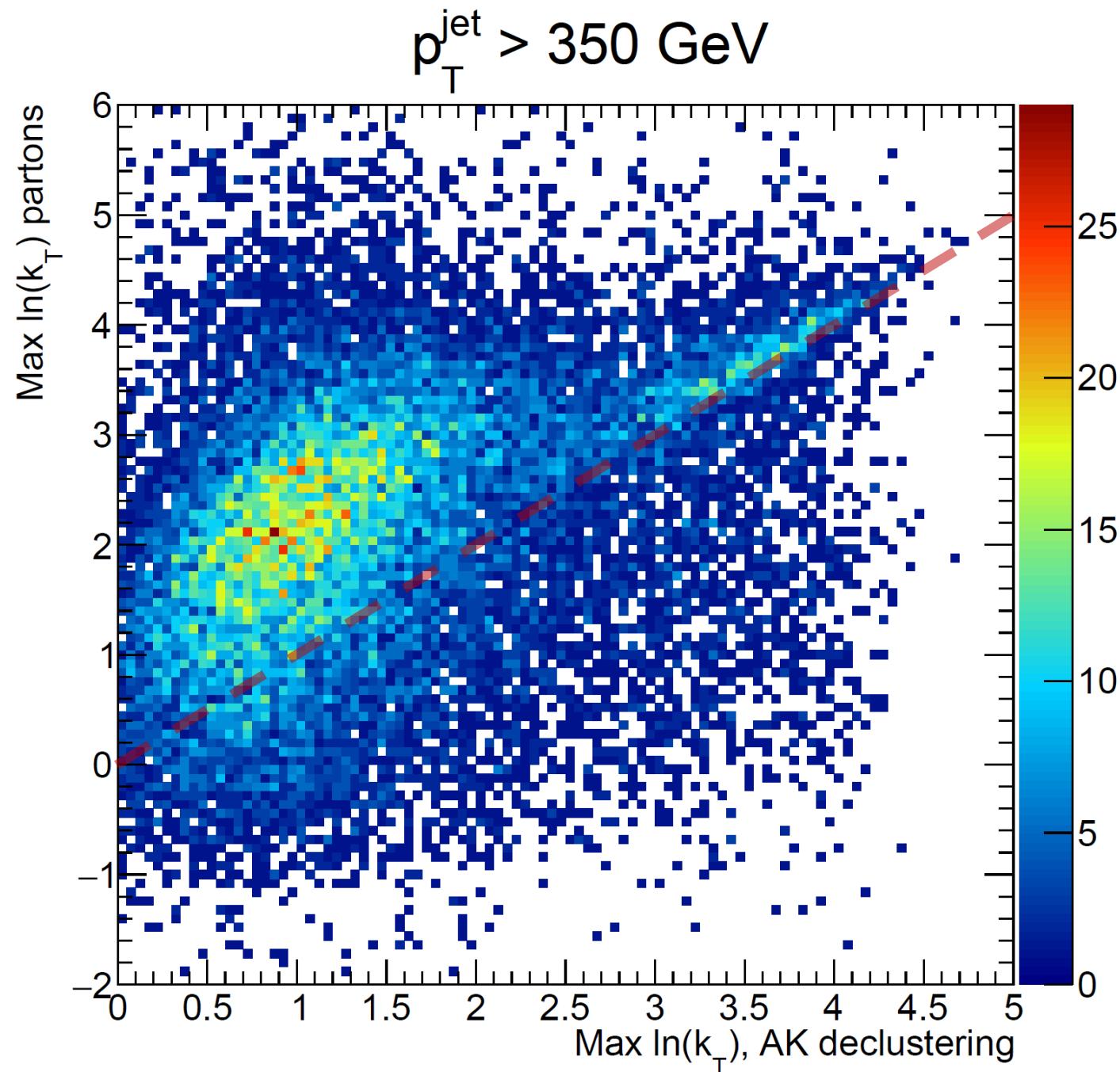
# Performance with $\hat{p}_T > 50$ GeV, CA



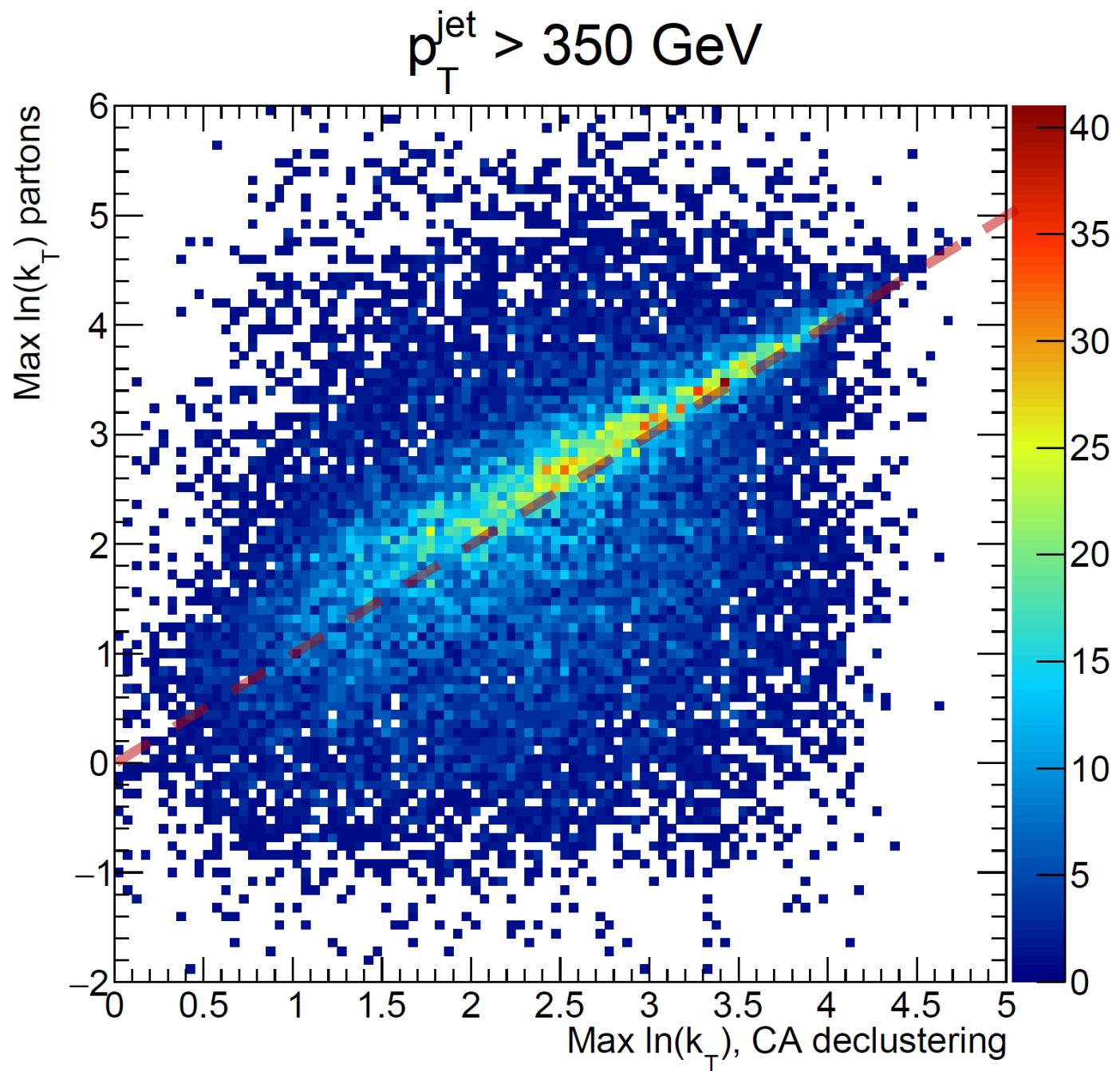
# Lund Diagram from Parton Shower



# PYTHIA $\hat{p}_T > 300$ GeV, Anti-KT

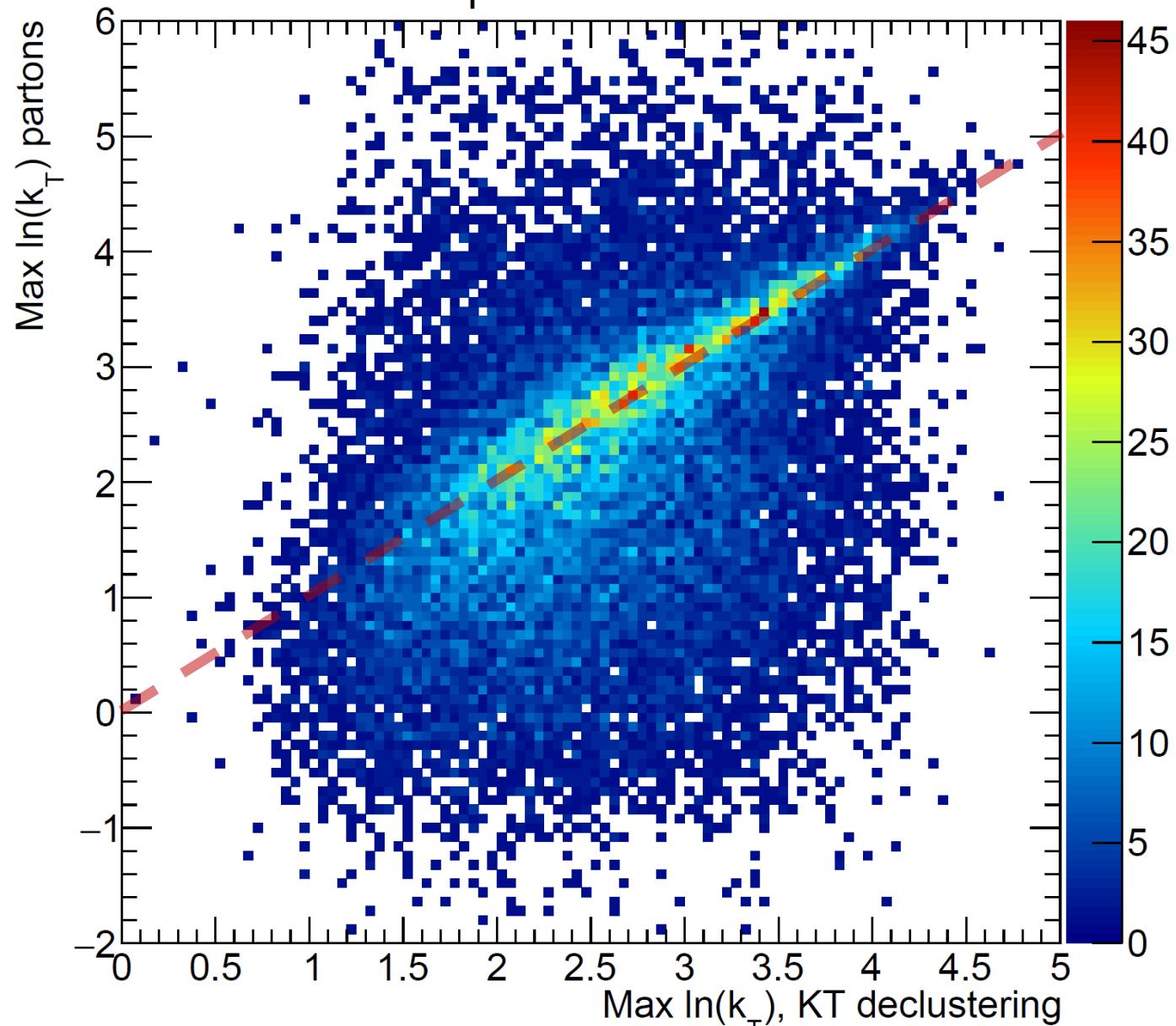


# PYTHIA $\hat{p}_T > 300 \text{ GeV}$ , CA



# PYTHIA $\hat{p}_T > 300 \text{ GeV}$ , KT

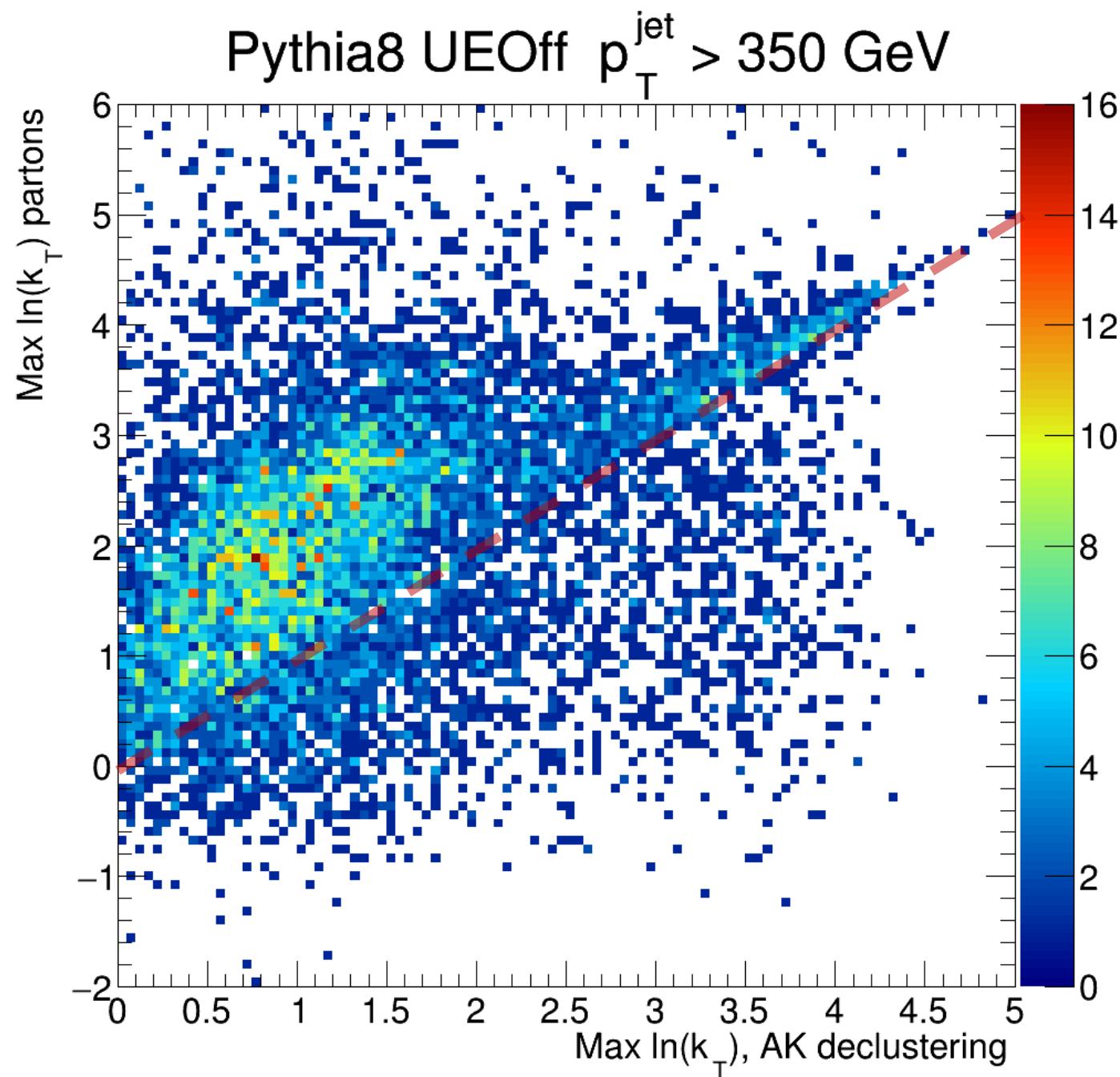
$p_T^{\text{jet}} > 350 \text{ GeV}$



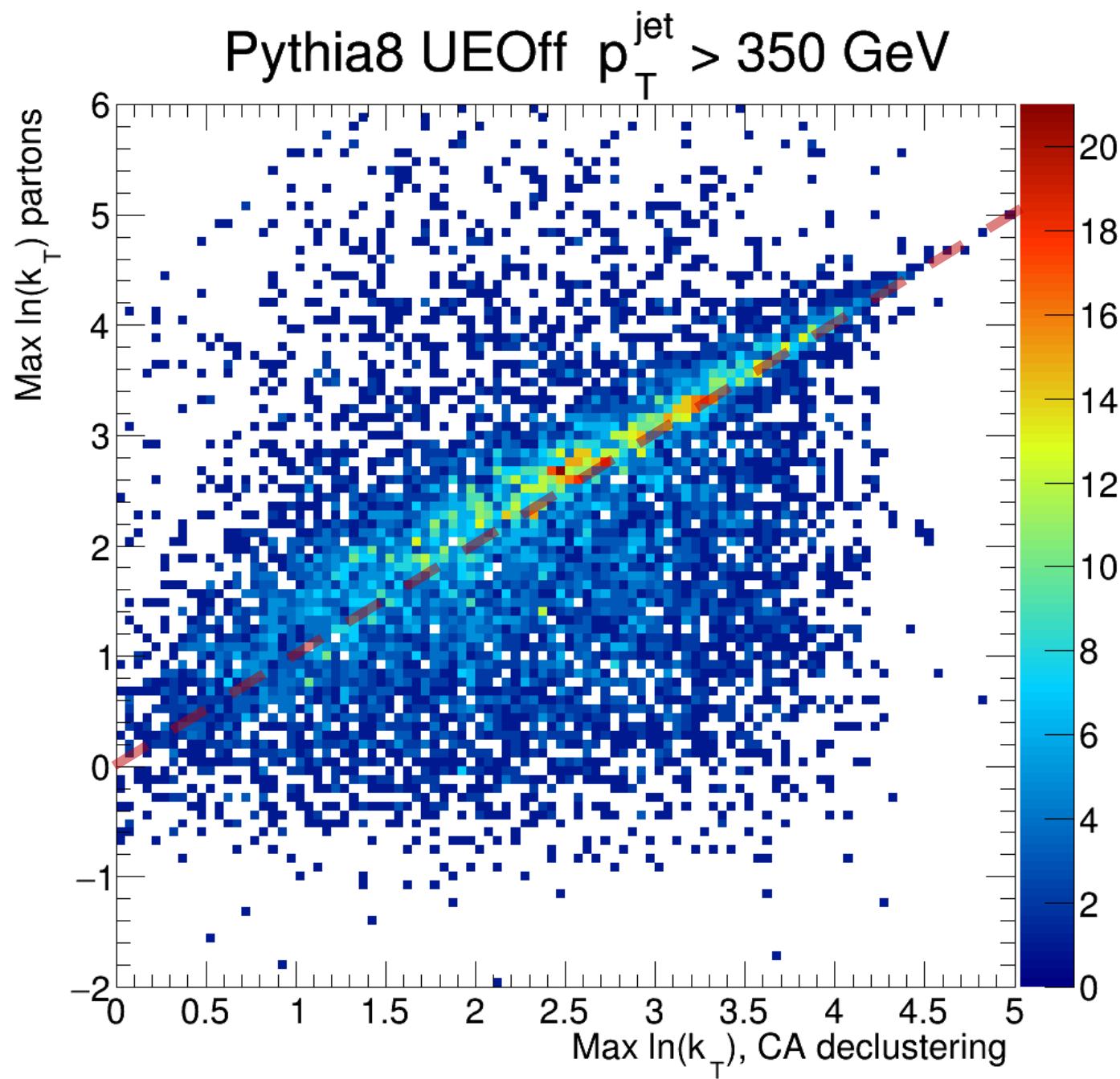
# UE Off



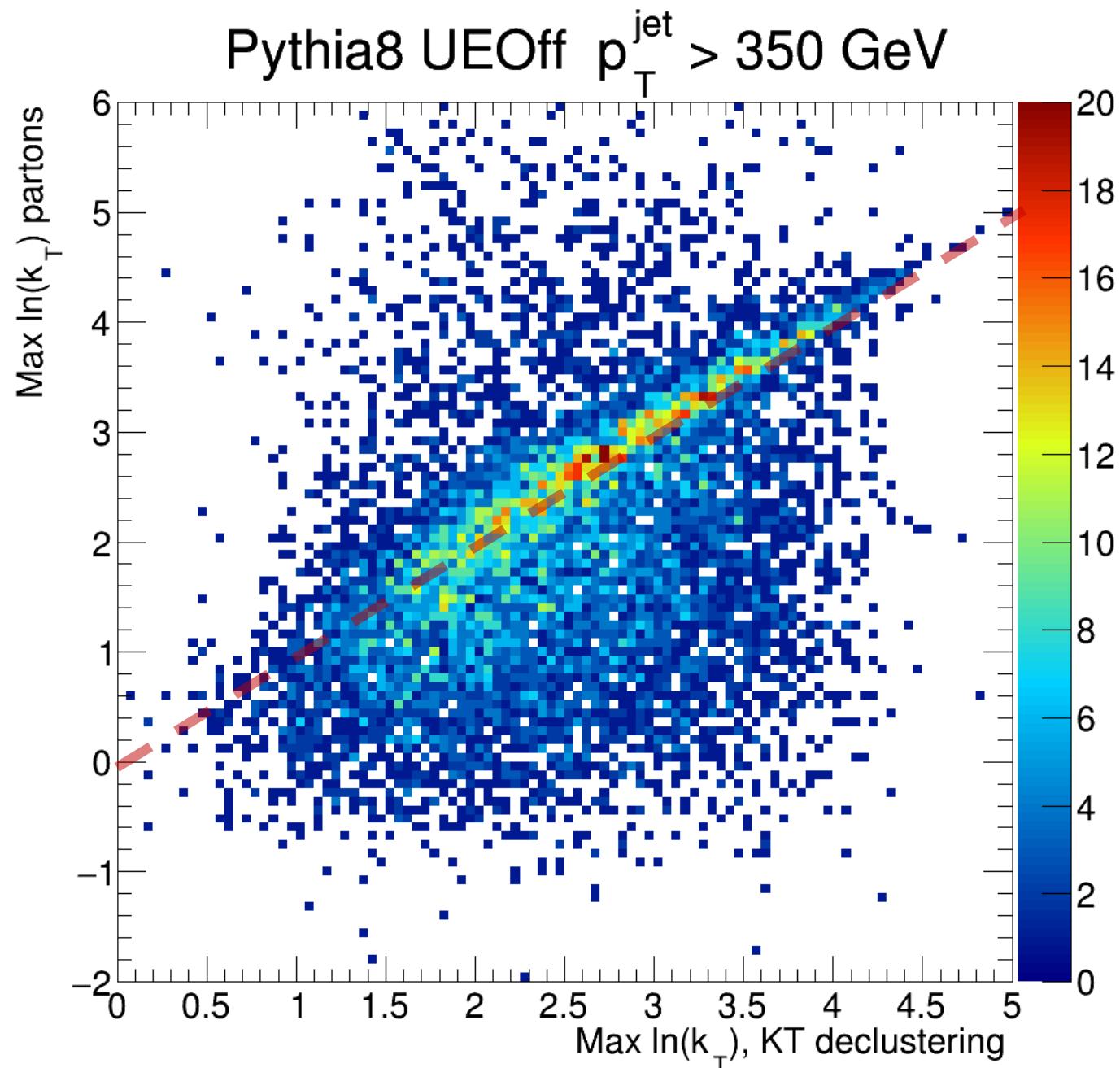
# PYTHIA $\hat{p}_T > 300$ GeV, Anti-KT



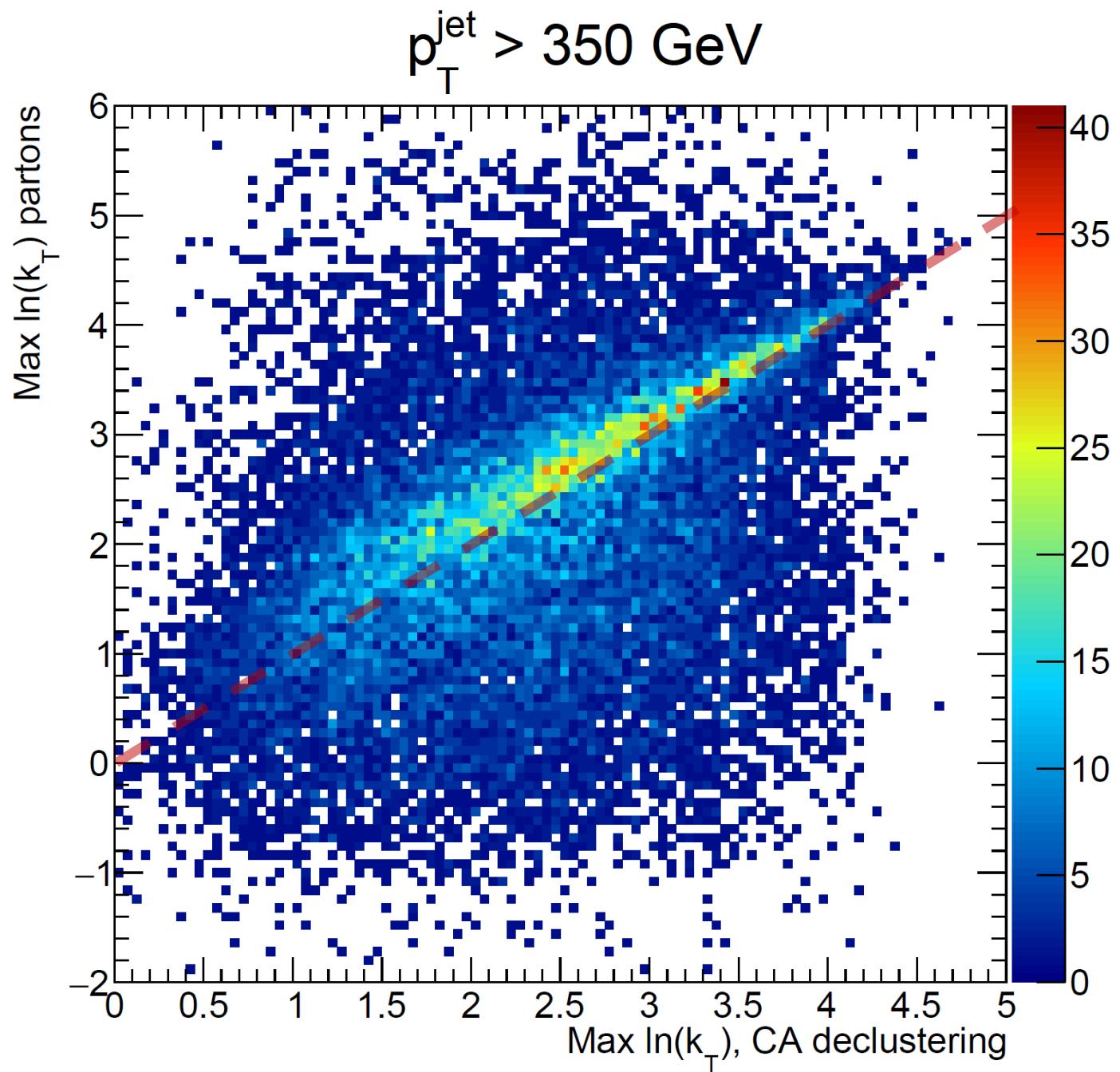
# PYTHIA $\hat{p}_T > 300$ GeV, CA



# PYTHIA $\hat{p}_T > 300 \text{ GeV}$ , KT

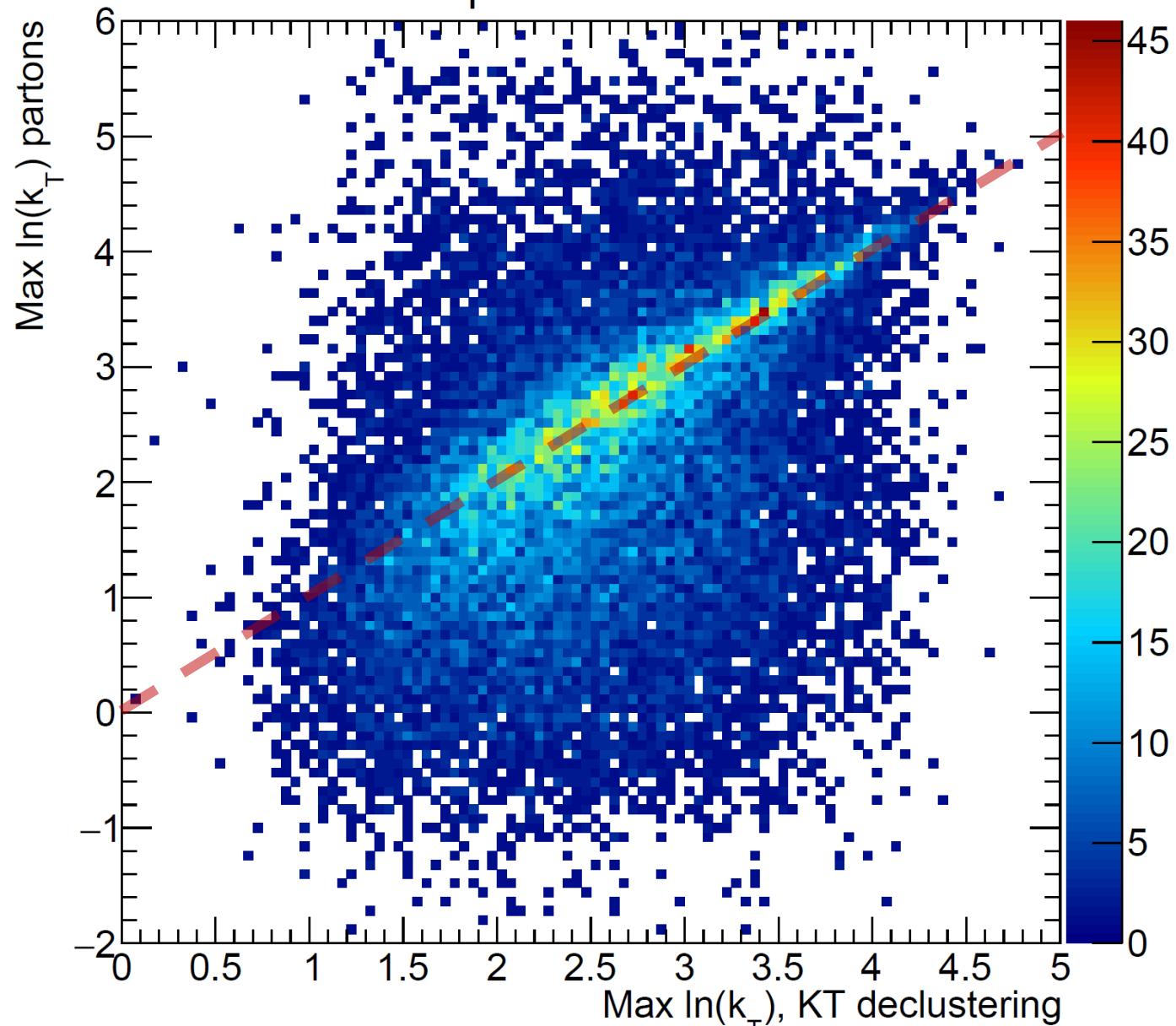


# PYTHIA $\hat{p}_T > 300$ GeV, CA



# PYTHIA $\hat{p}_T > 300 \text{ GeV}$ , KT

$p_T^{\text{jet}} > 350 \text{ GeV}$

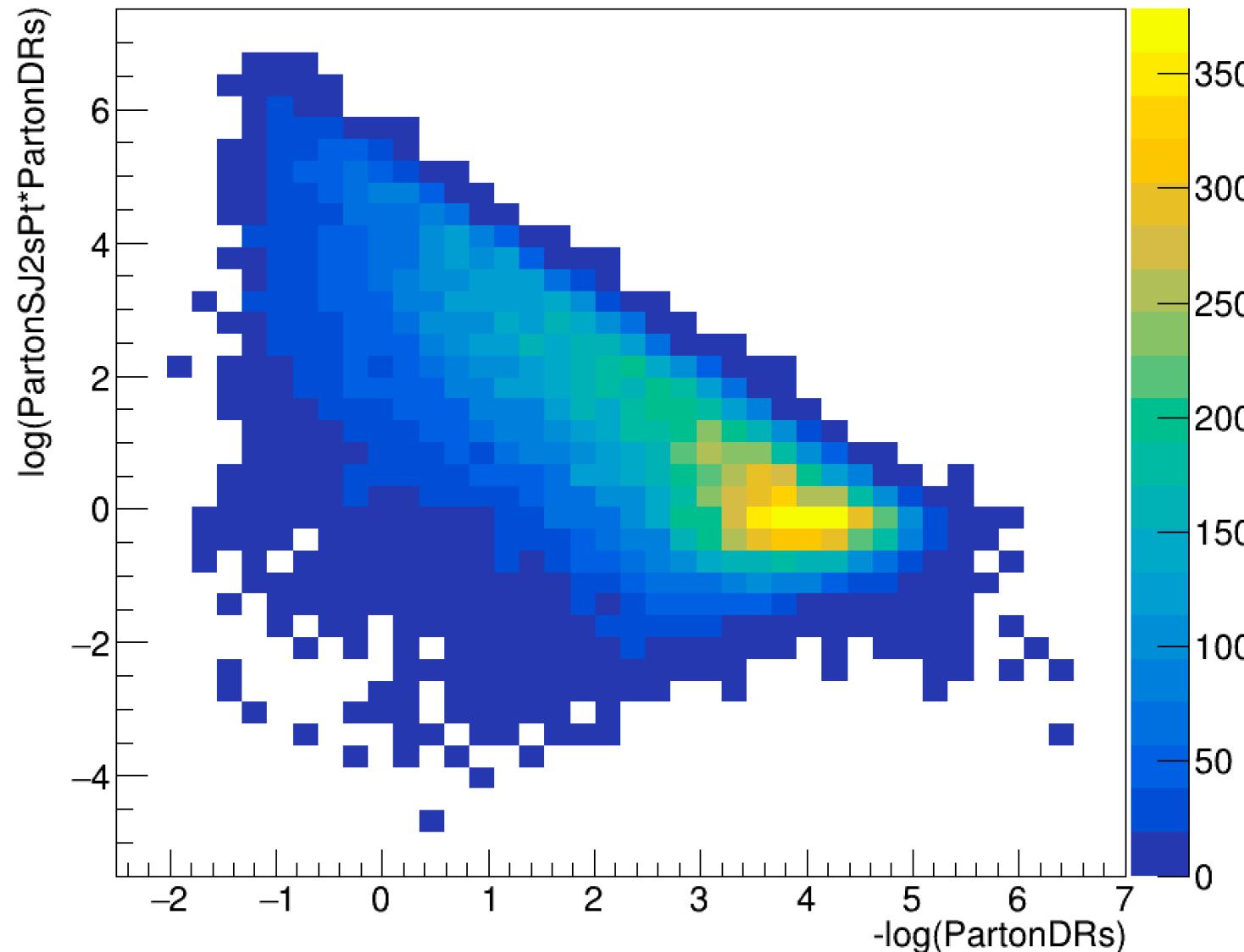


# Backup slides

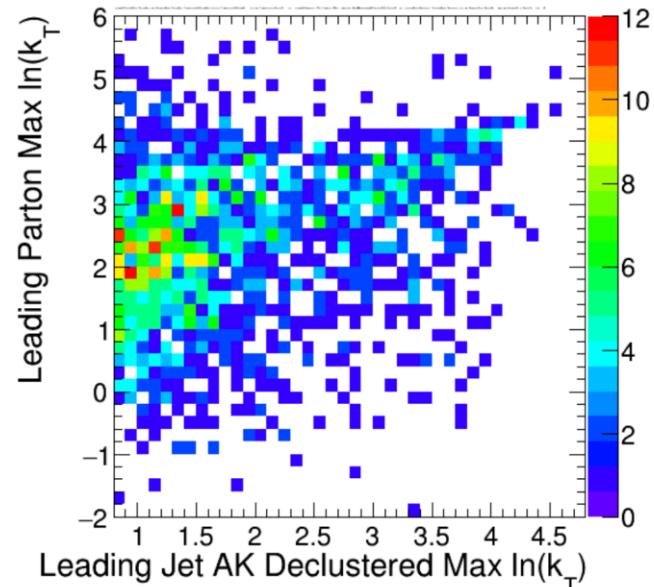
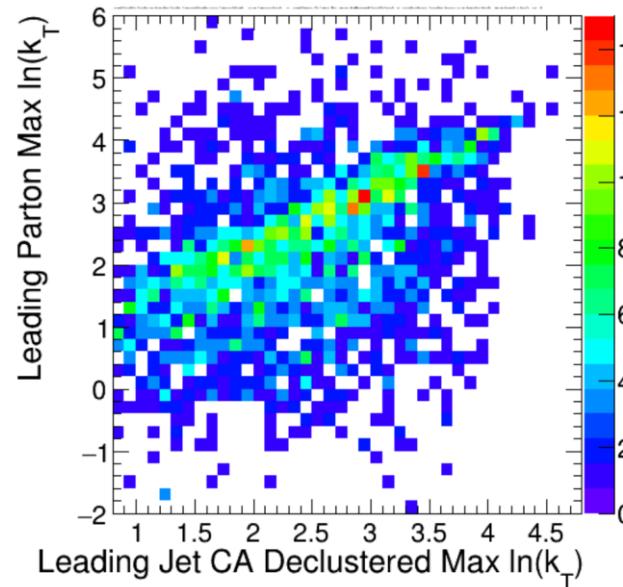
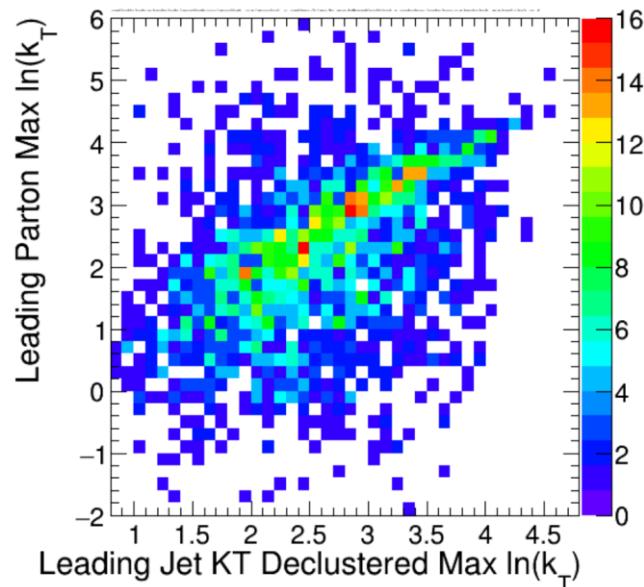
## Unbeautified plots

# Unbeautified Parton Level Lund Diagram

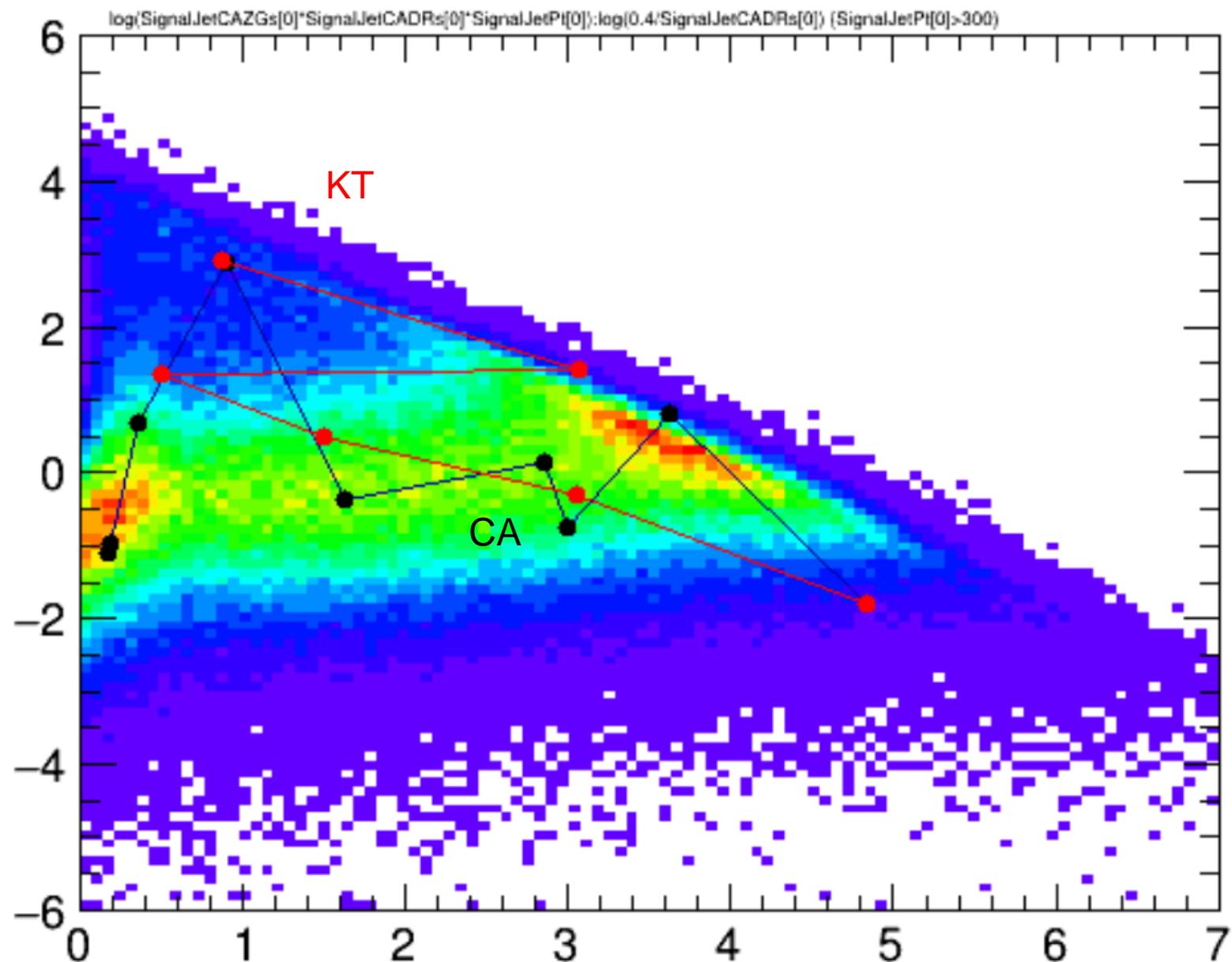
$\log(\text{PartonSJ2sPt} * \text{PartonDRs}) : -\log(\text{PartonDRs})$



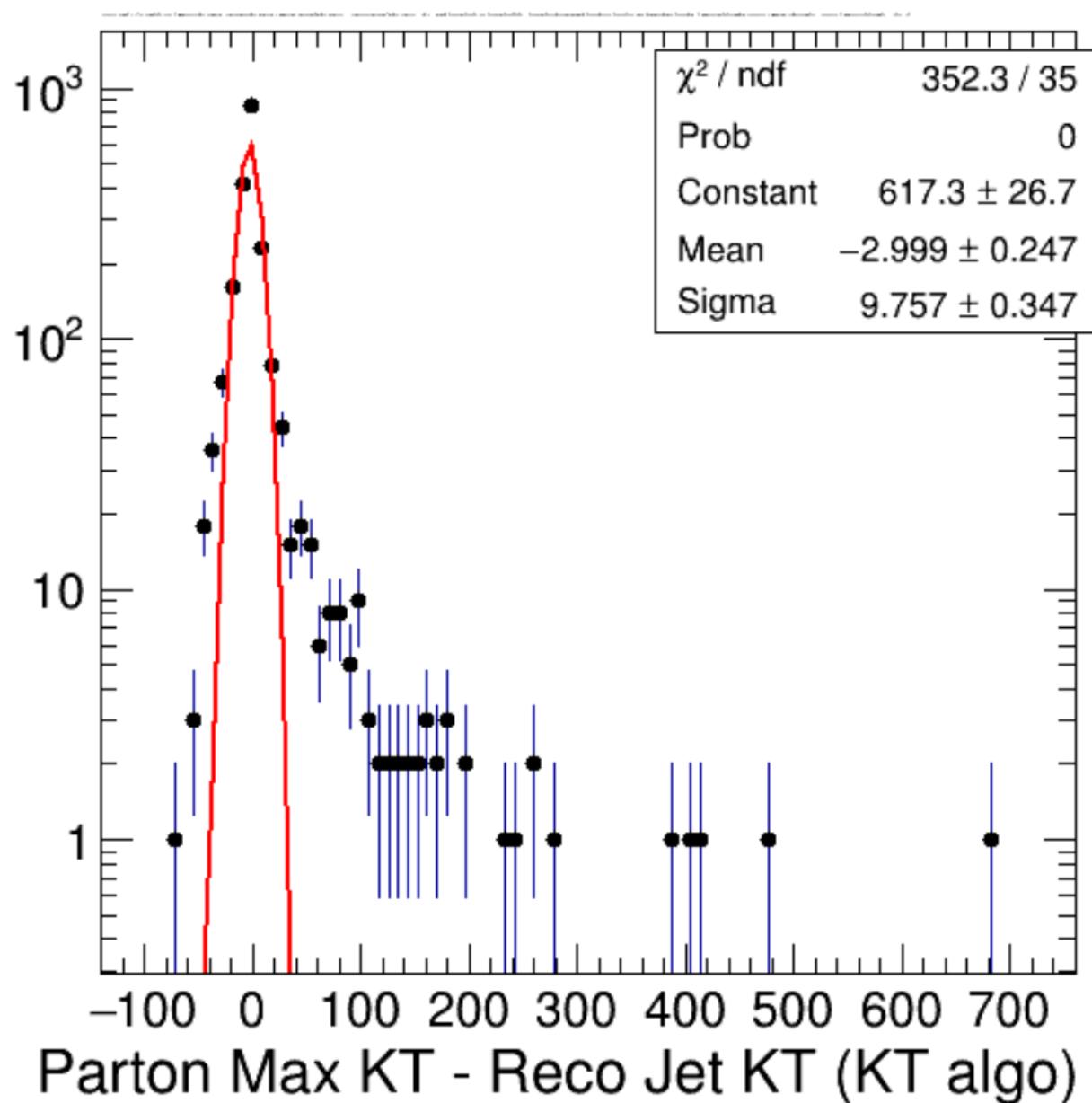
# With lower statistics in cross-check macro



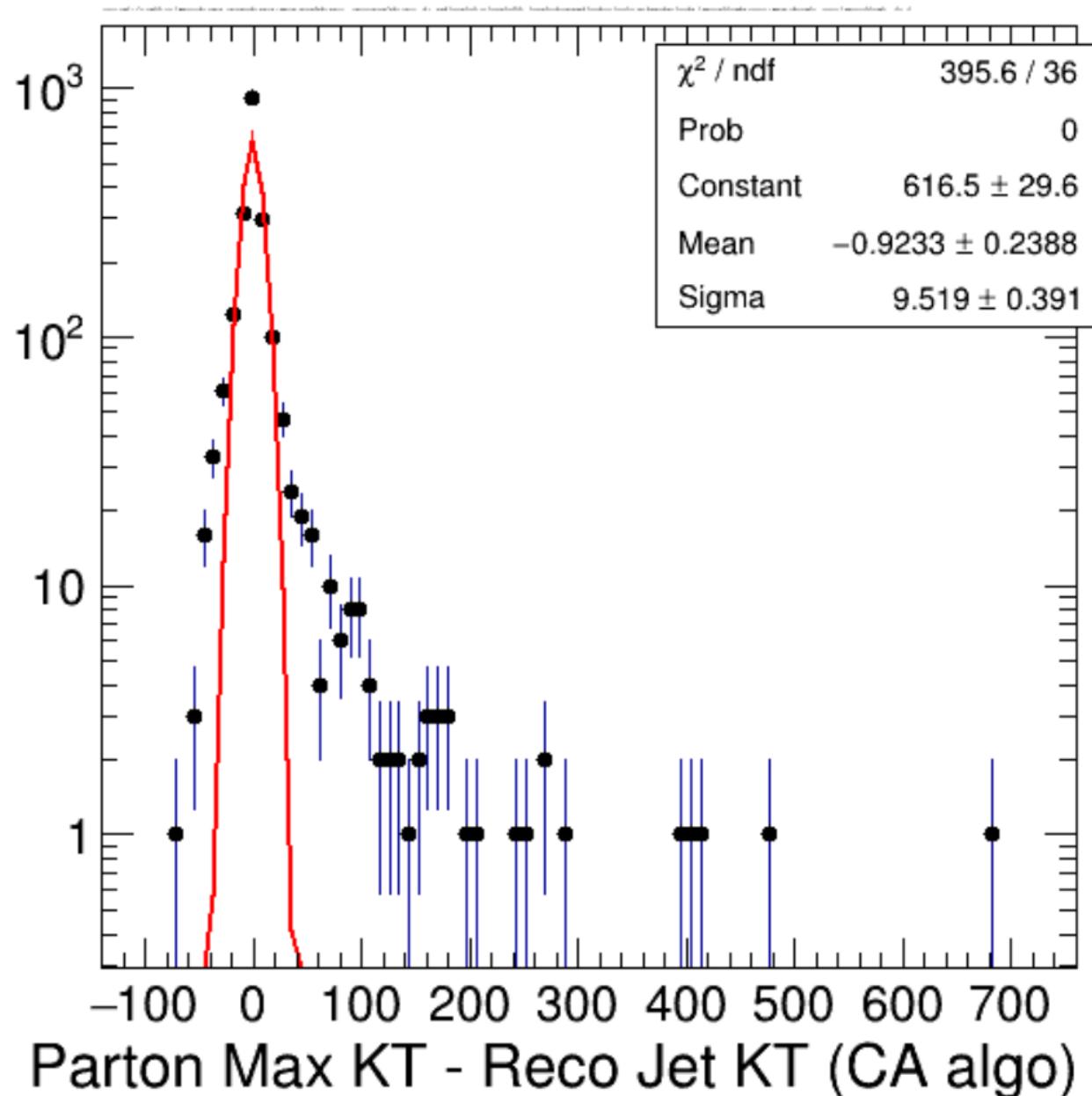
# Unbeautified bad plot



# Unbeautified resolution function



# Unbeautified resolution function



# Unbeautified resolution function

