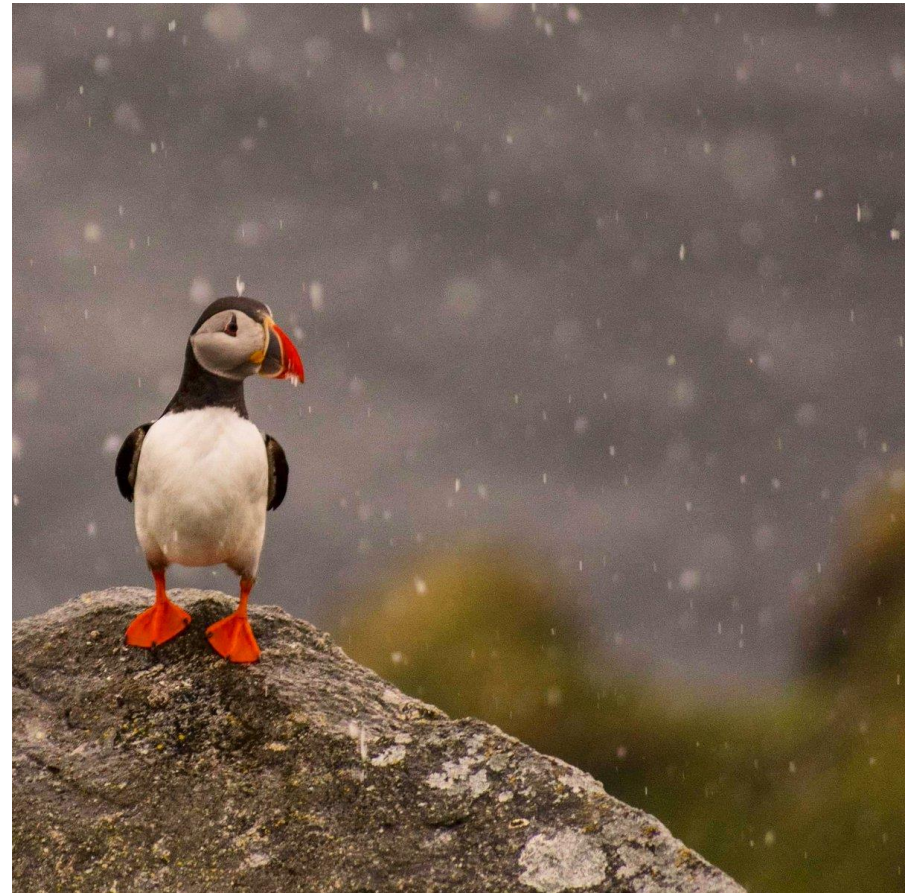
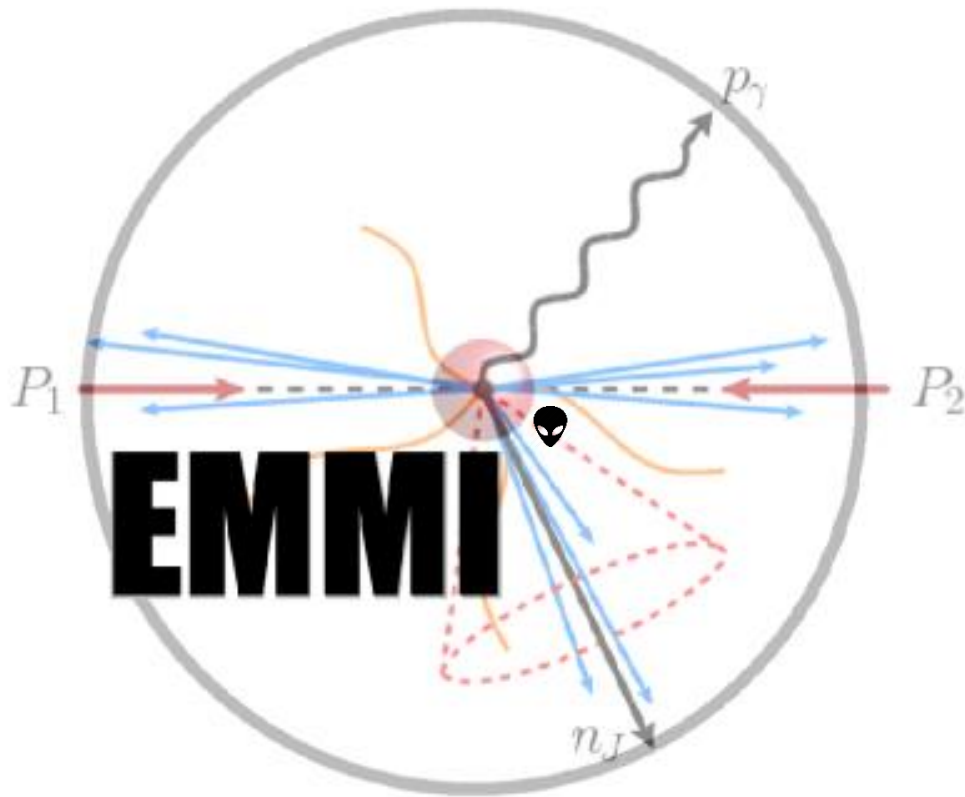
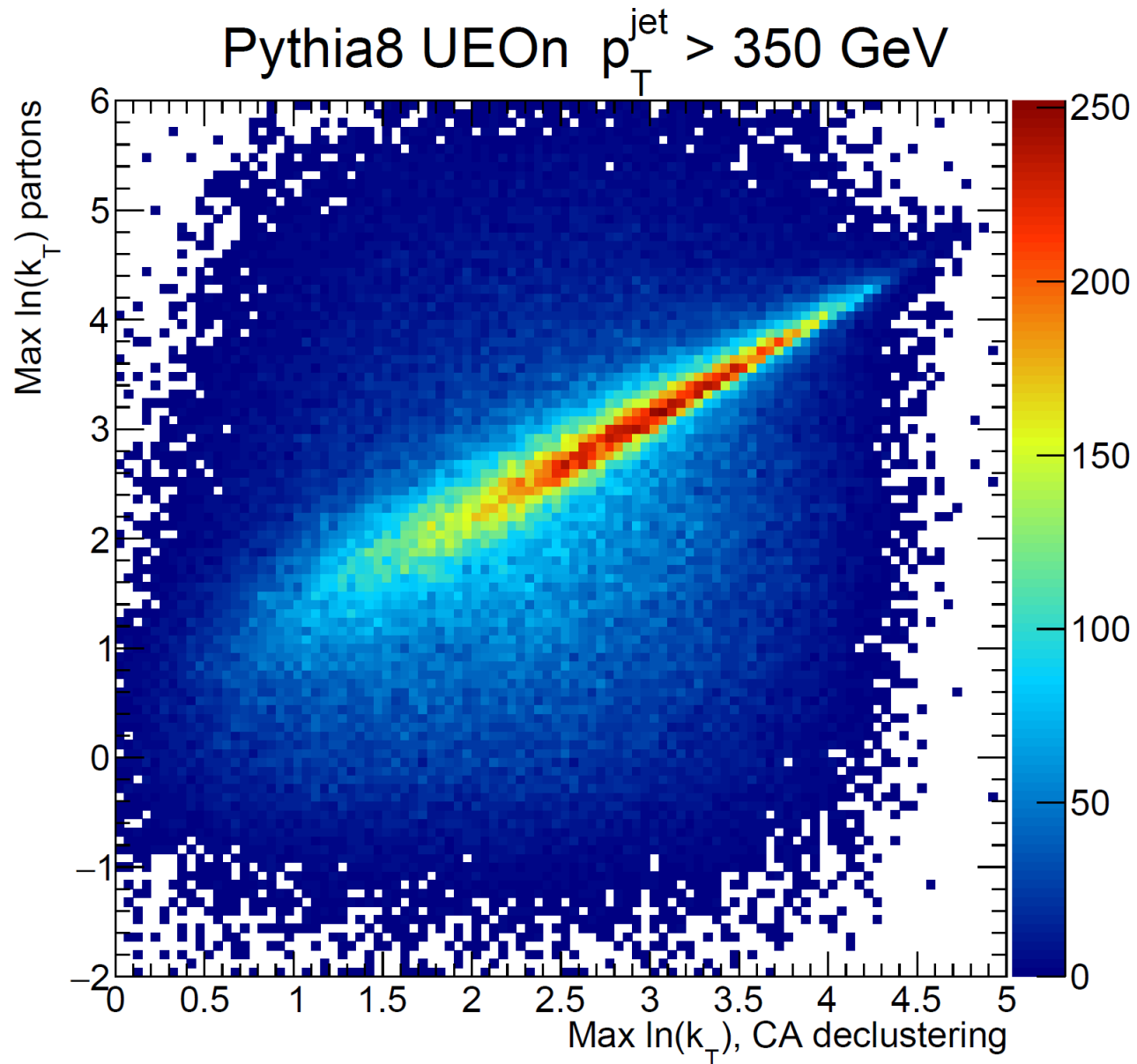


# Status Report



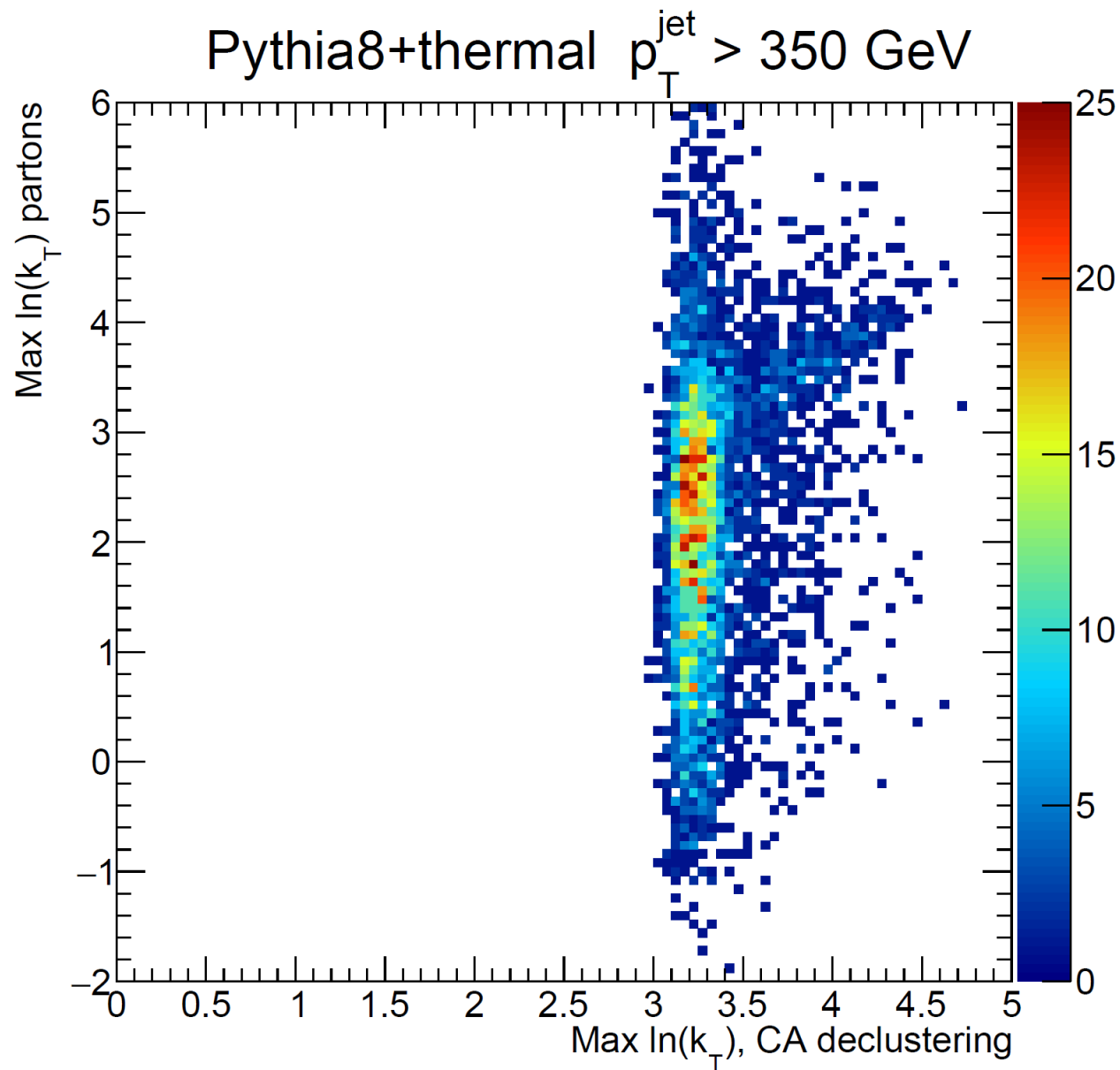
Let's go Lunni!

# Jet (CA) PYTHIA8 pThat300



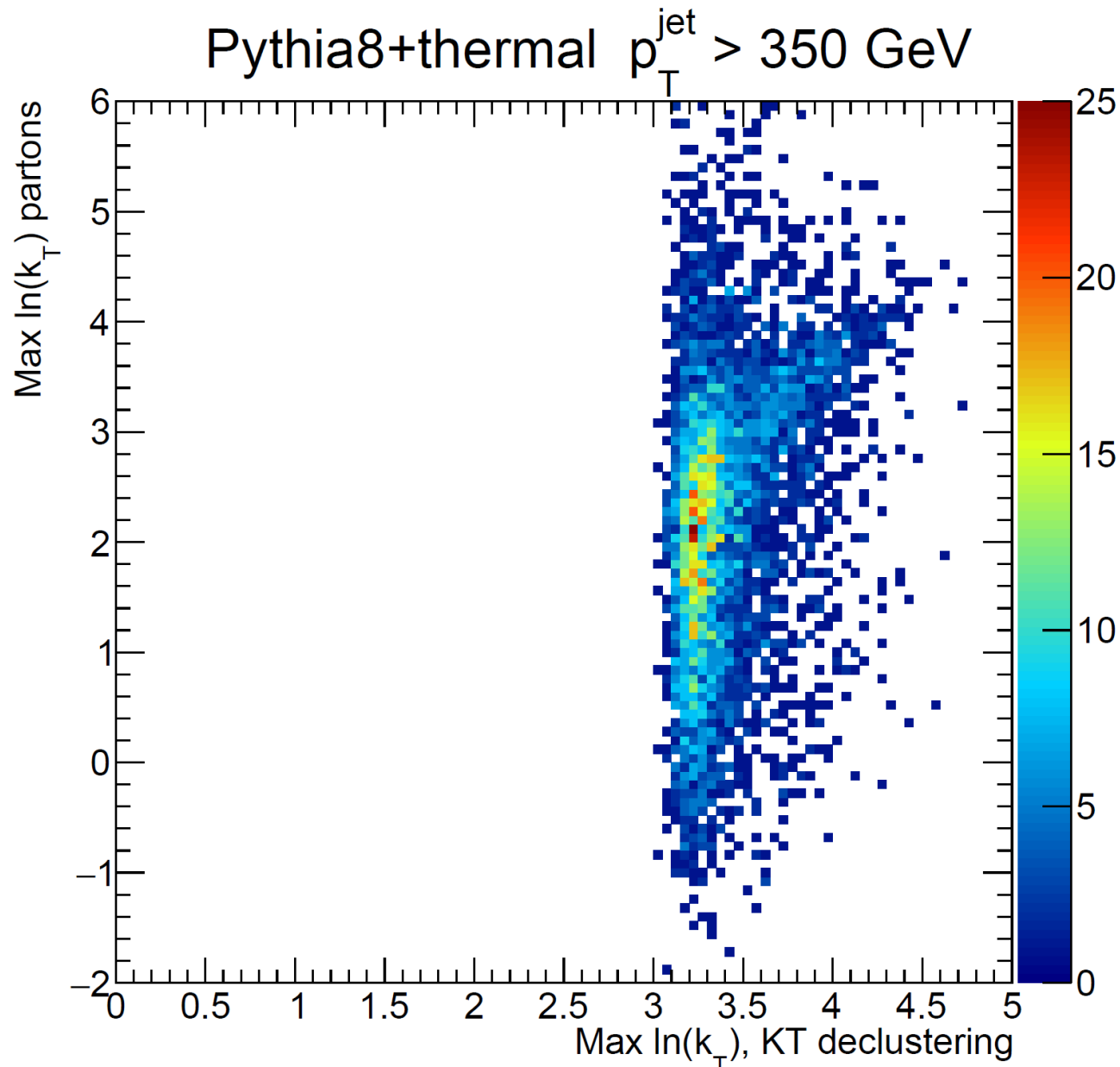
# Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%)

Without background sub



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

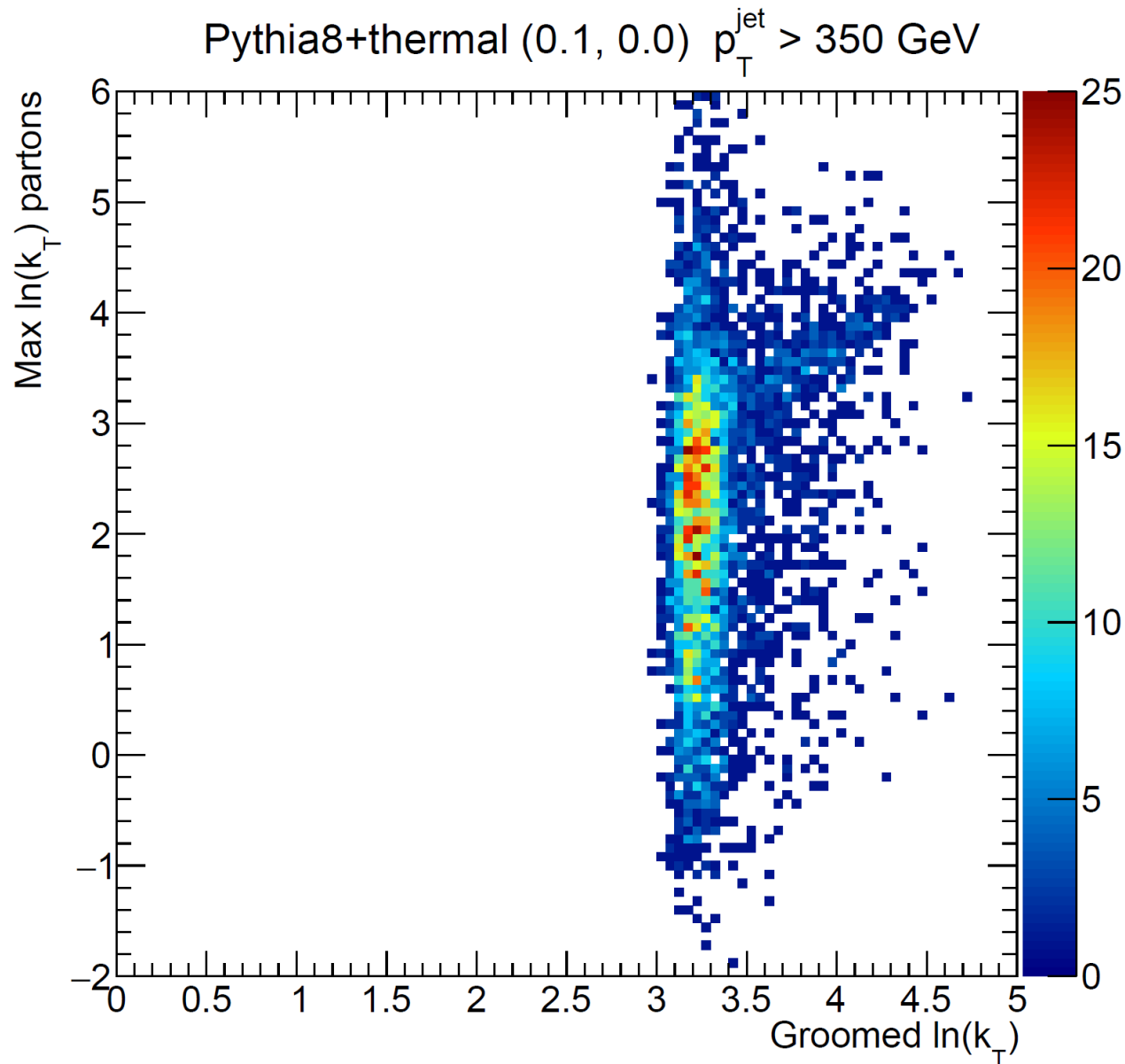
Without background sub



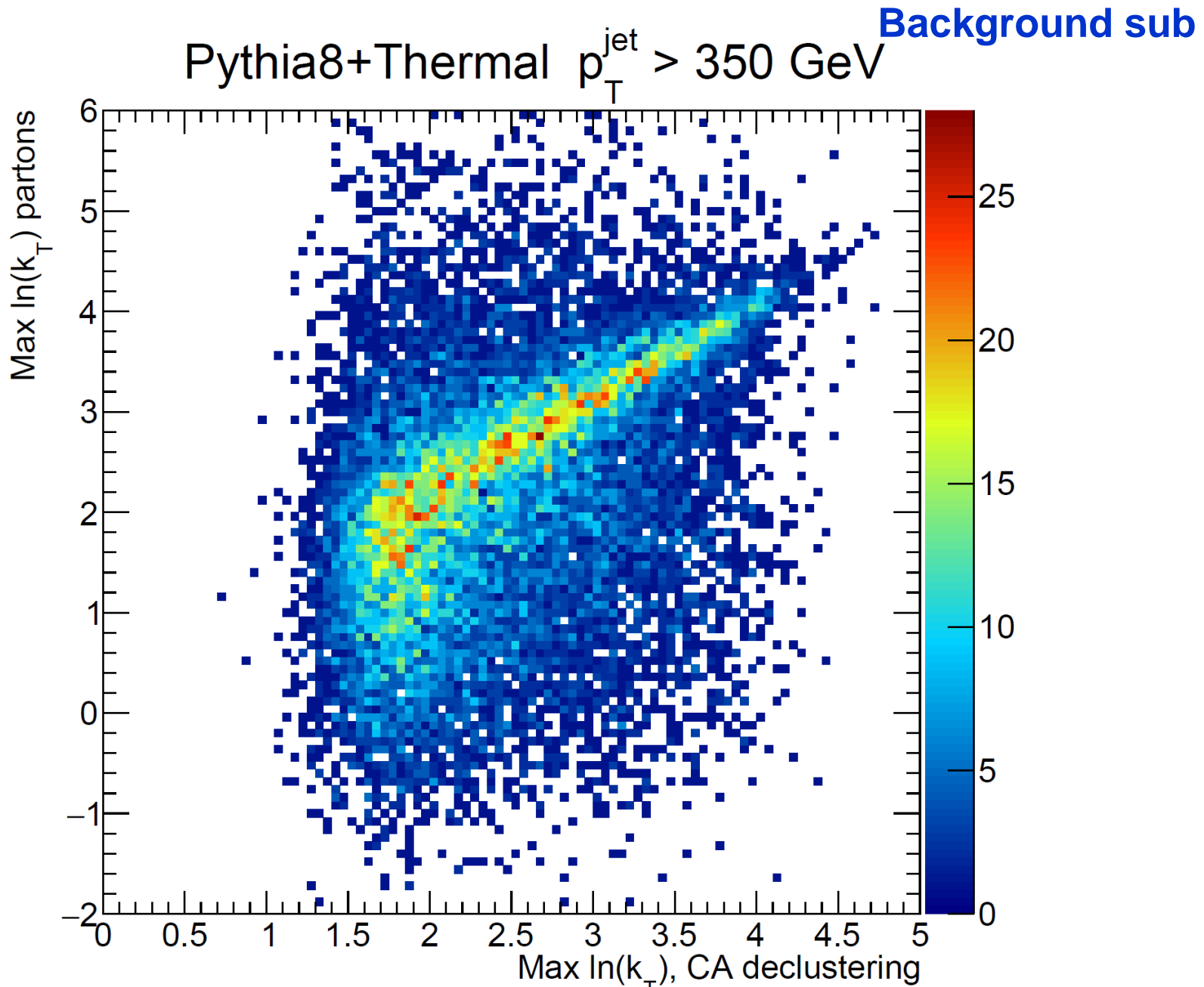
# Groomed Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)

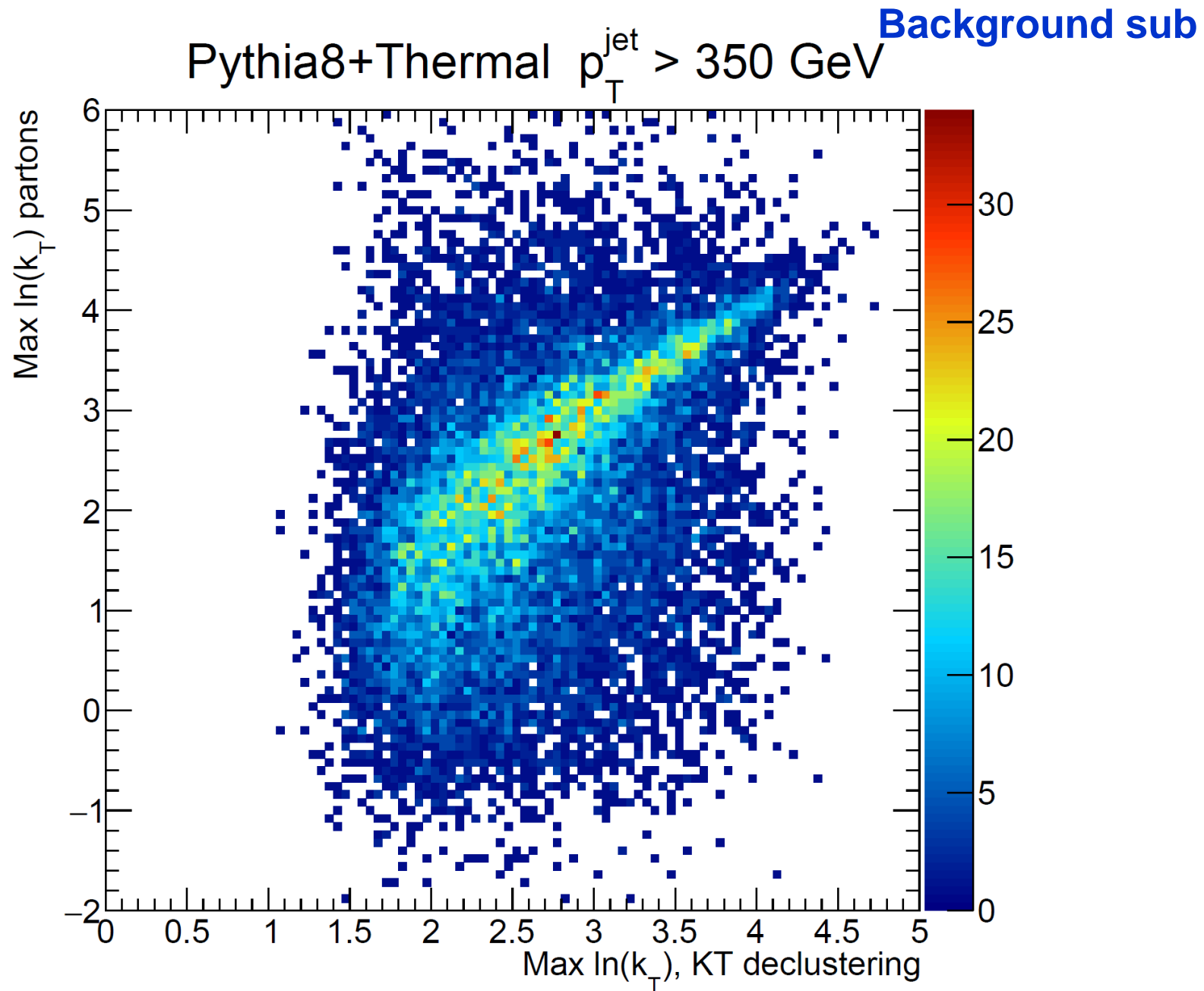
Without background sub



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



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

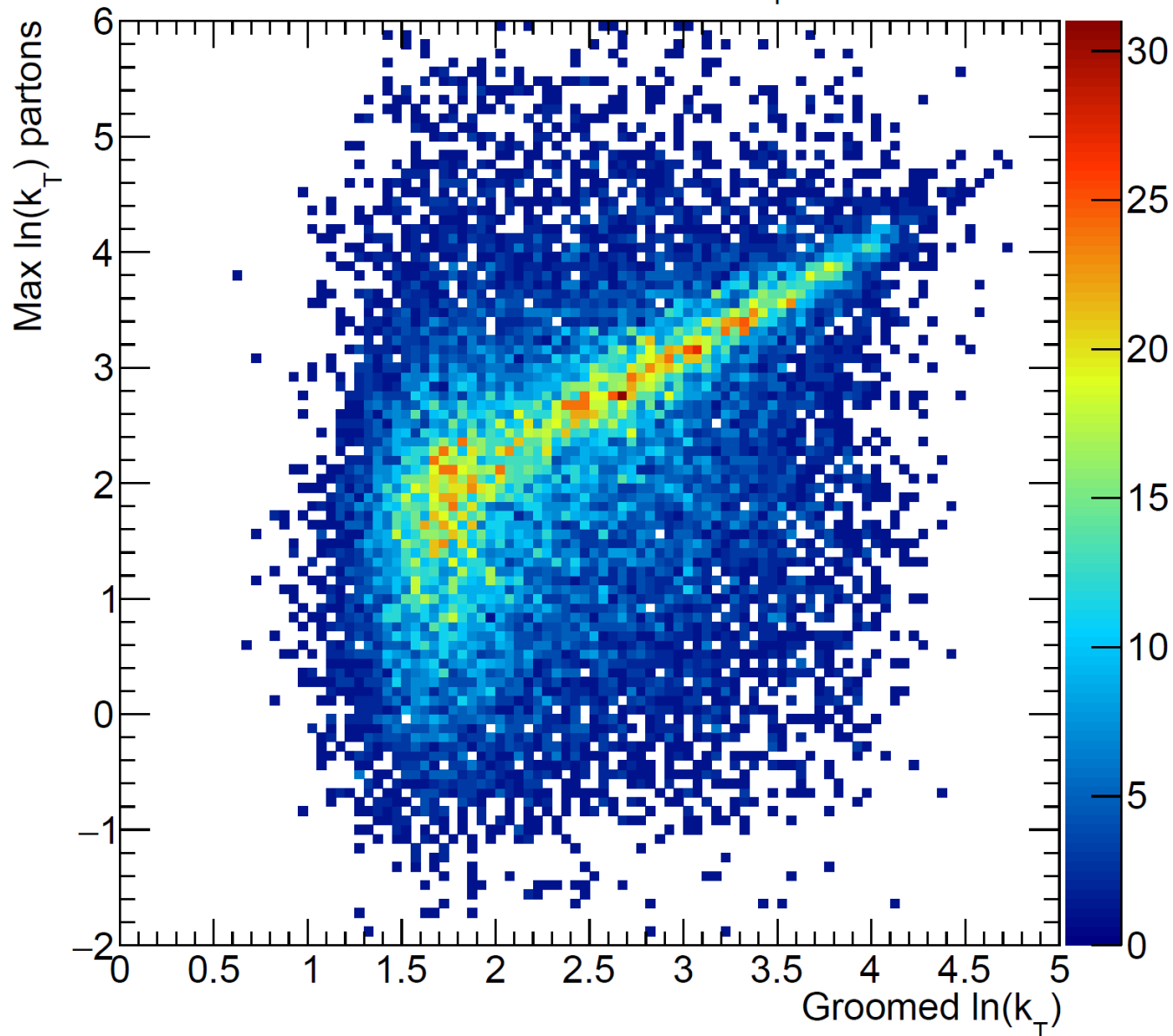


# Groomed Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)

Background sub

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

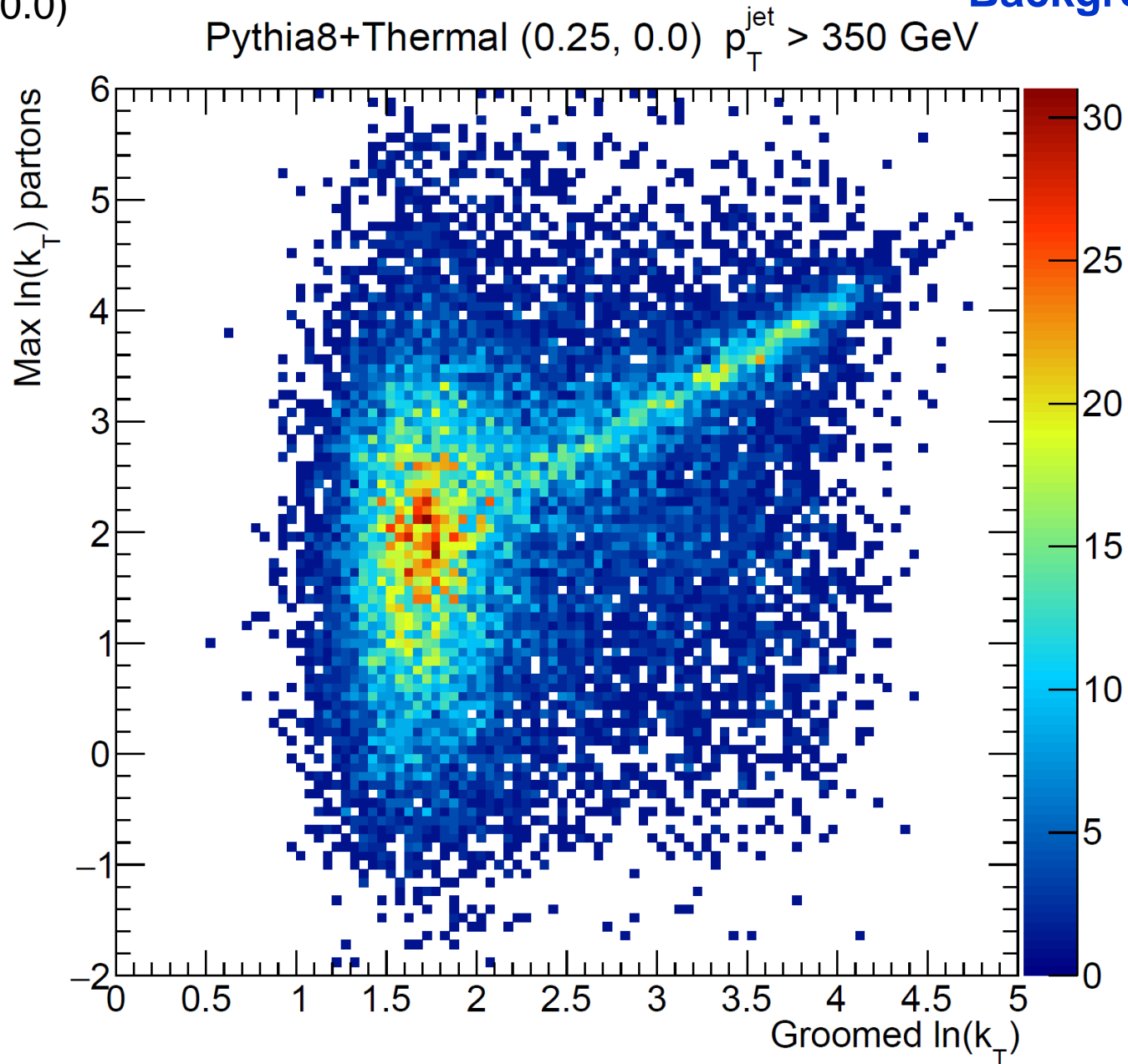




# Groomed Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%)

Zcut (0.25,0.0)

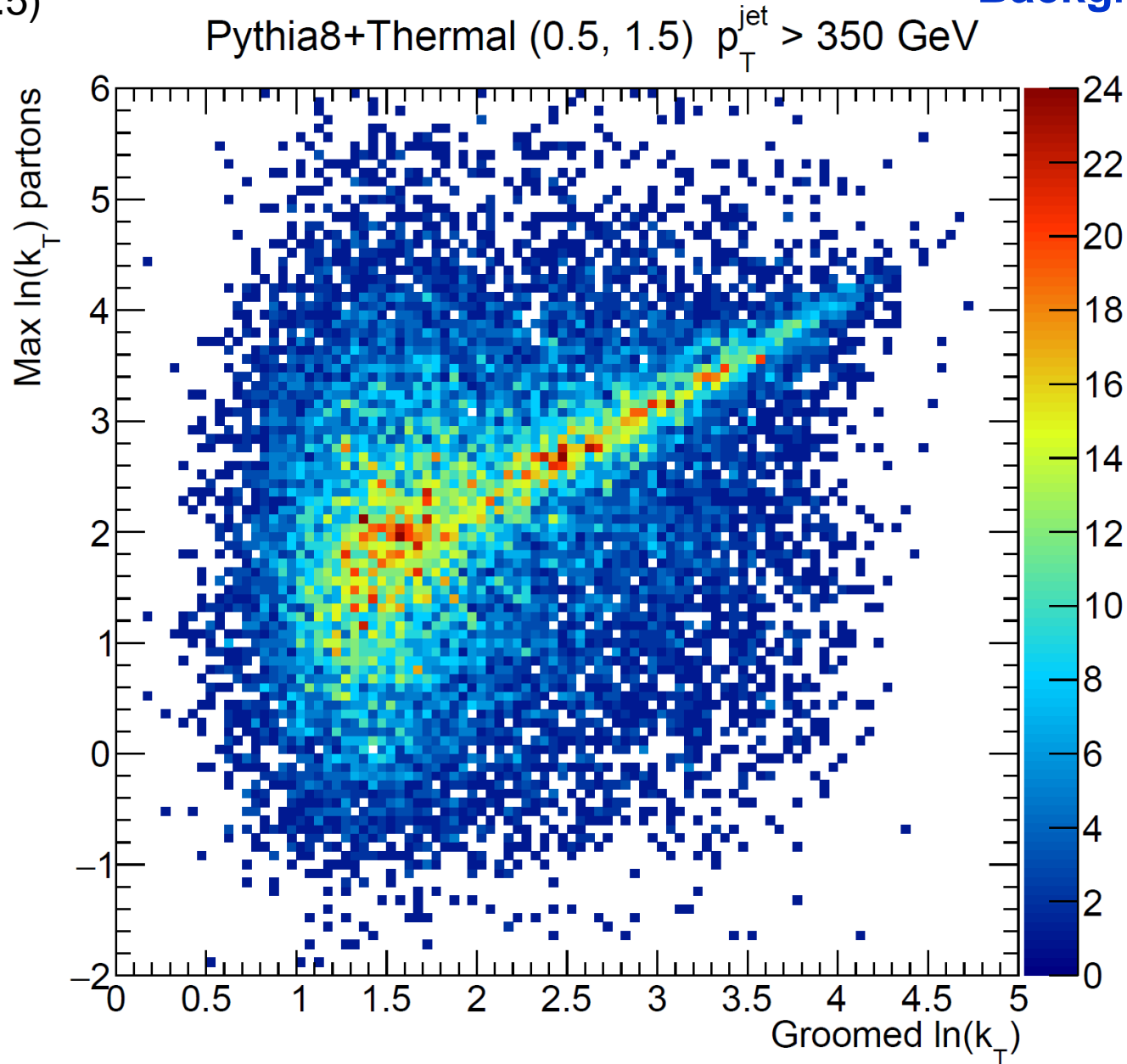
Background sub



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

Zcut (0.5,1.5)

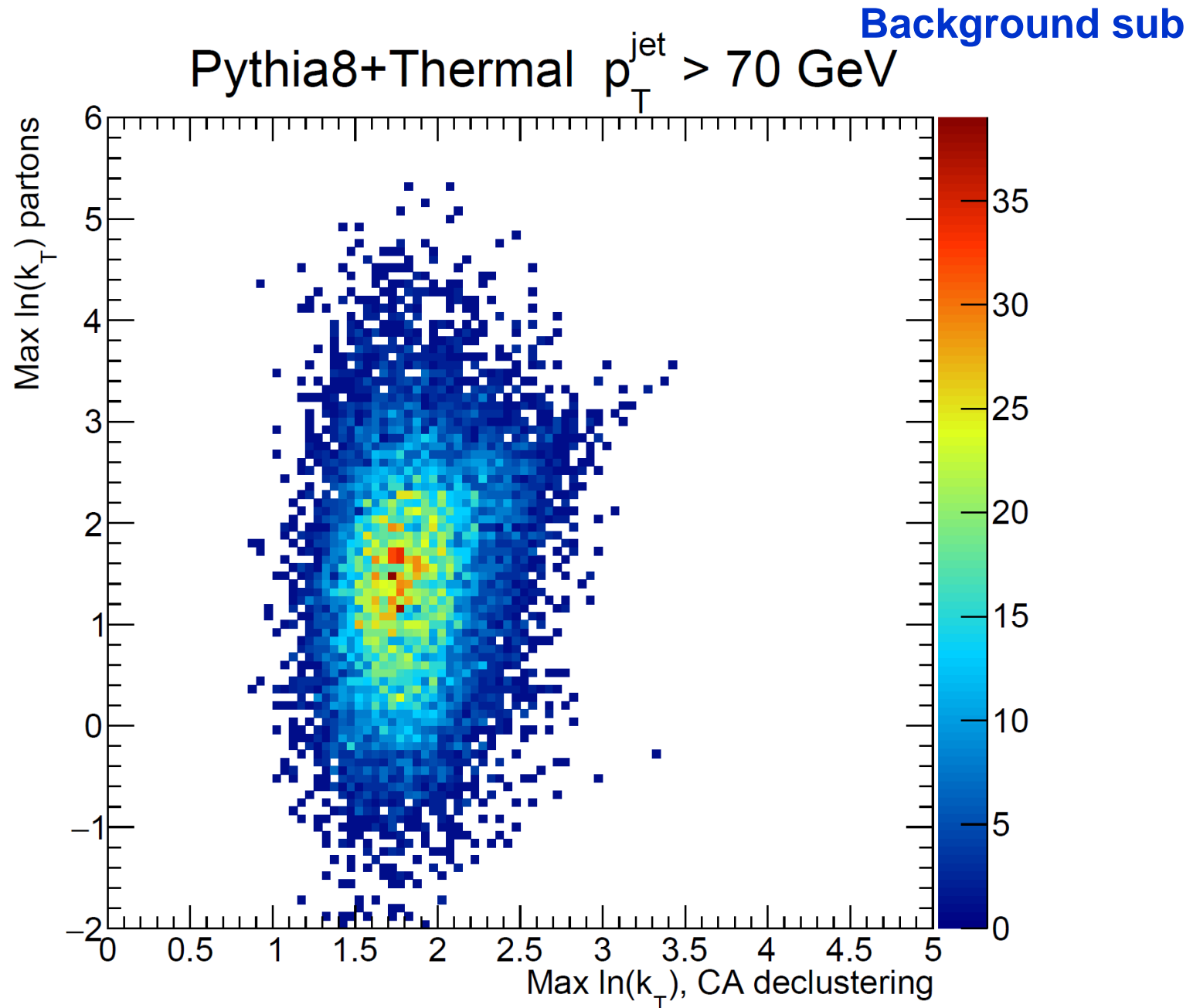
Background sub



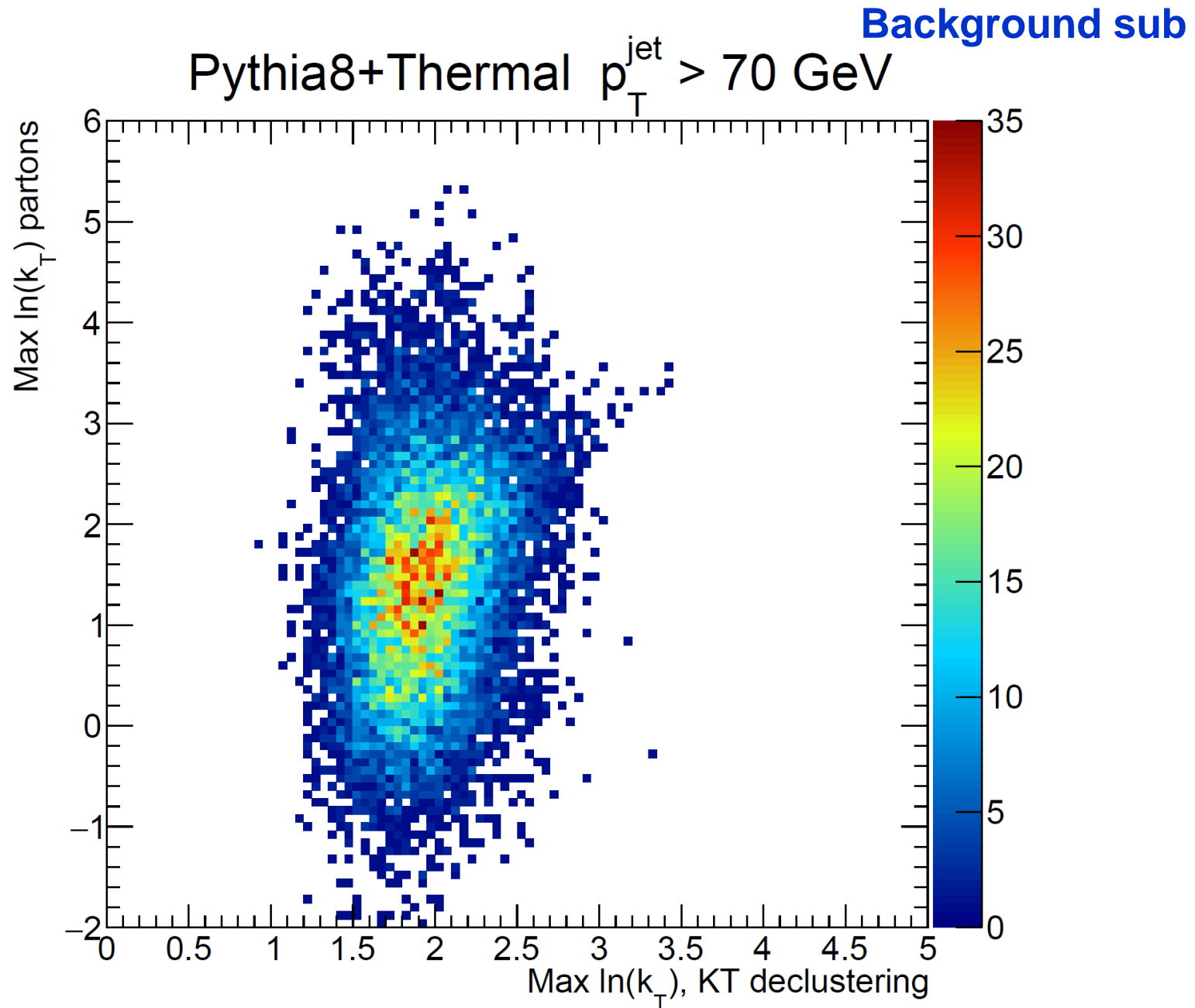
# Low $p_T$ Jet in thermal background



# Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%) Low $p_T$ jet



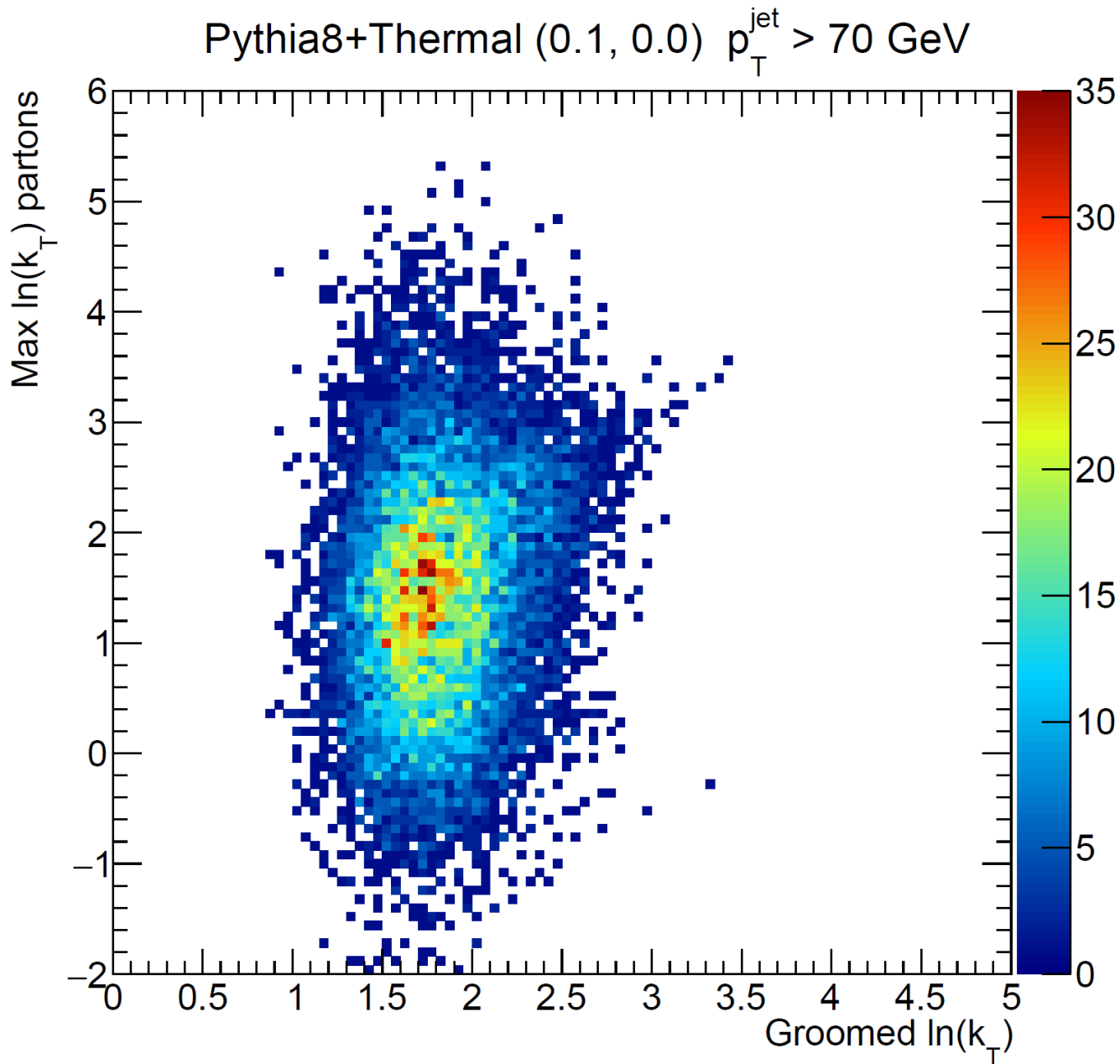
# Jet (KT) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%) Low $p_T$ Jet



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

Zcut (0.1,0)

Background sub

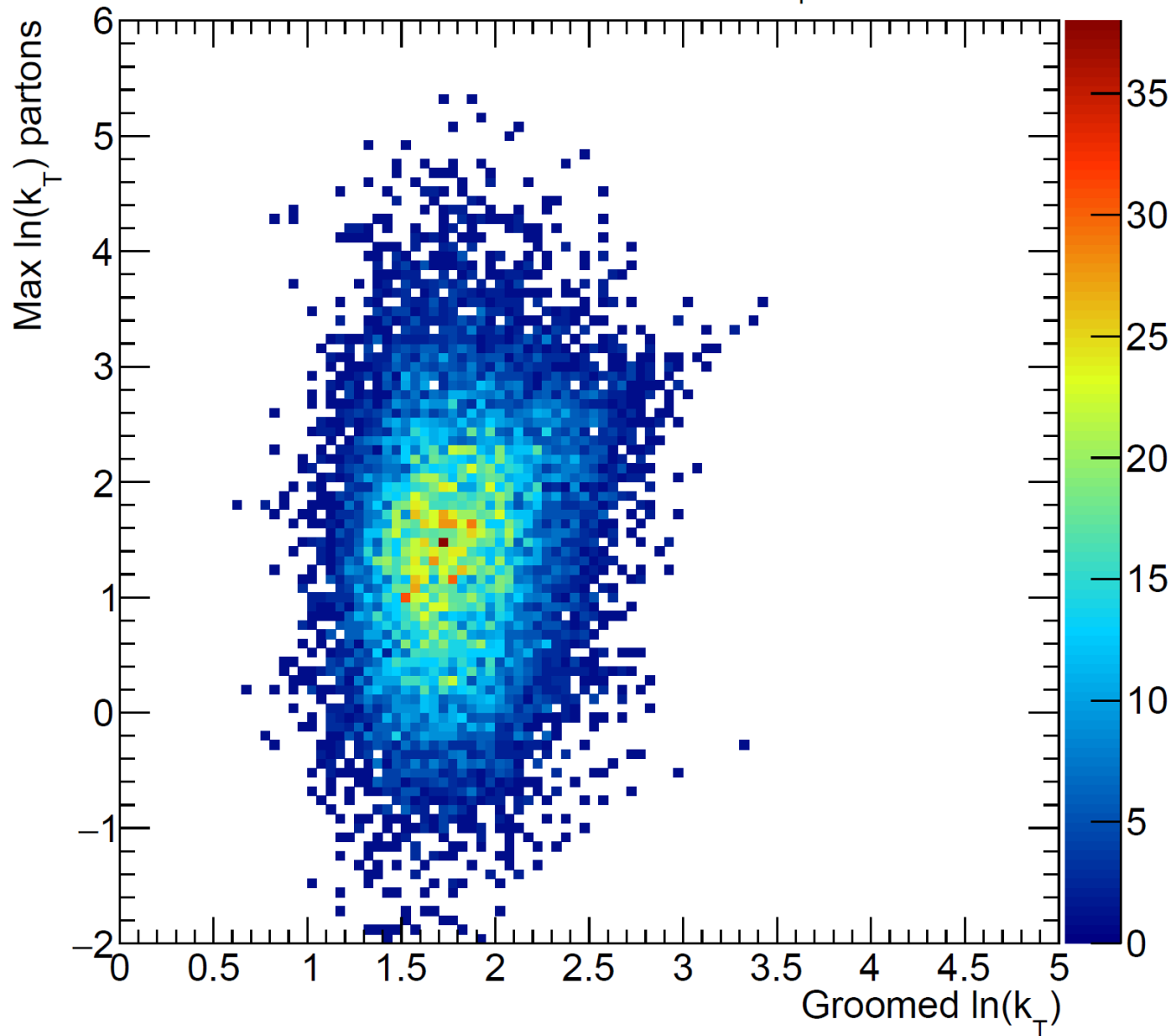


# Groomed Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%) Low $p_T$ Jet

Zcut (0.25, 0.0)

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

Background sub

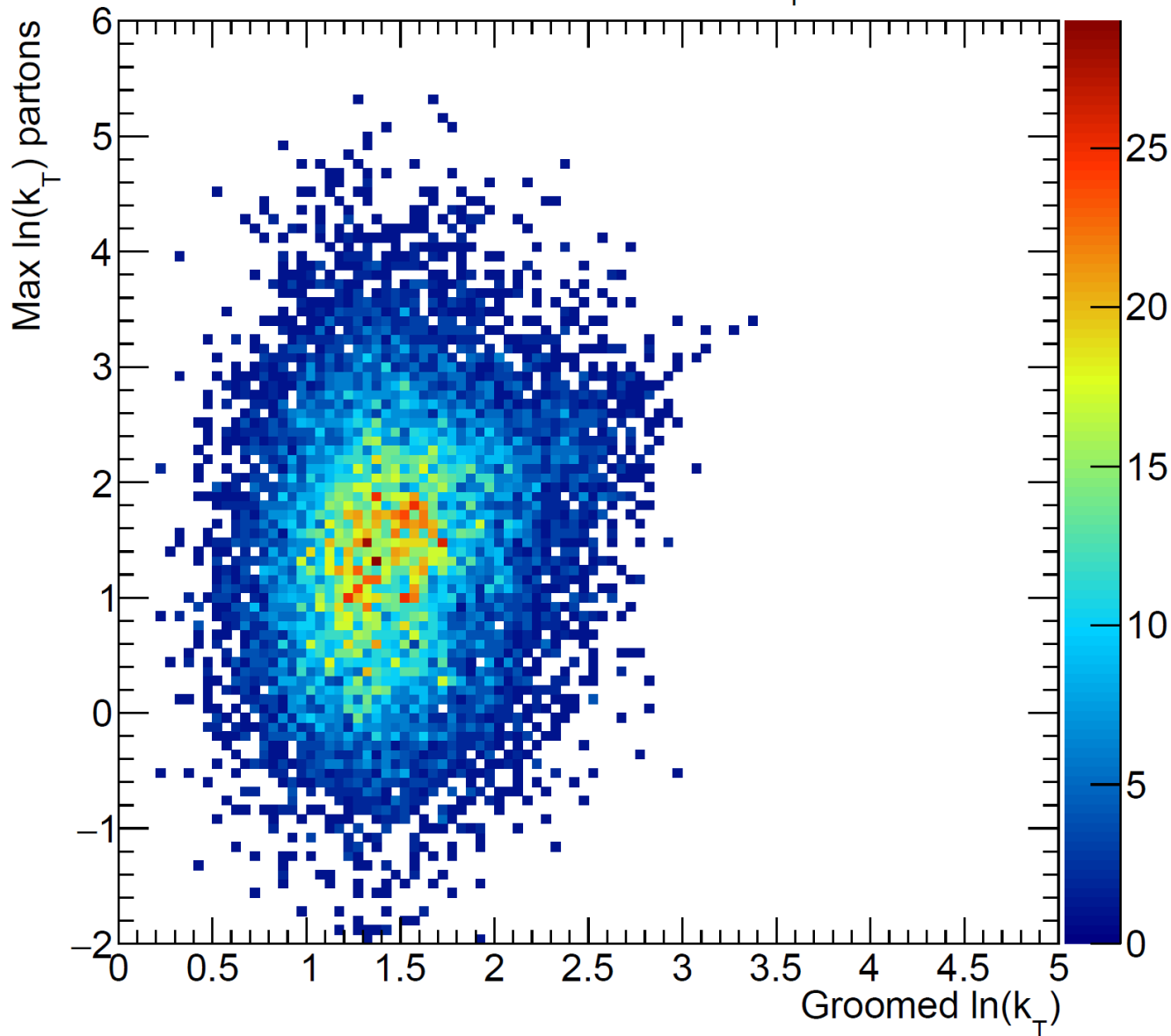


# Groomed Jet (CA) PYTHIA+Thermal Background (PbPb 5 TeV 0-10%)

Zcut (0.5, 1.5)

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

Background sub

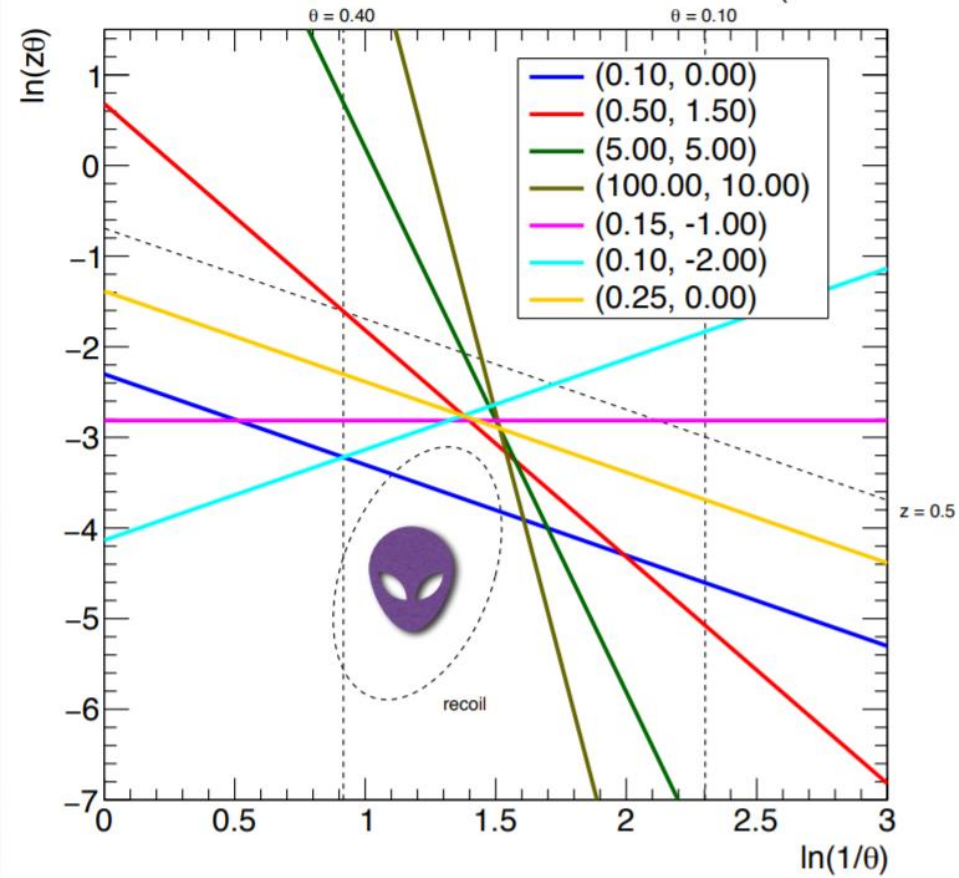




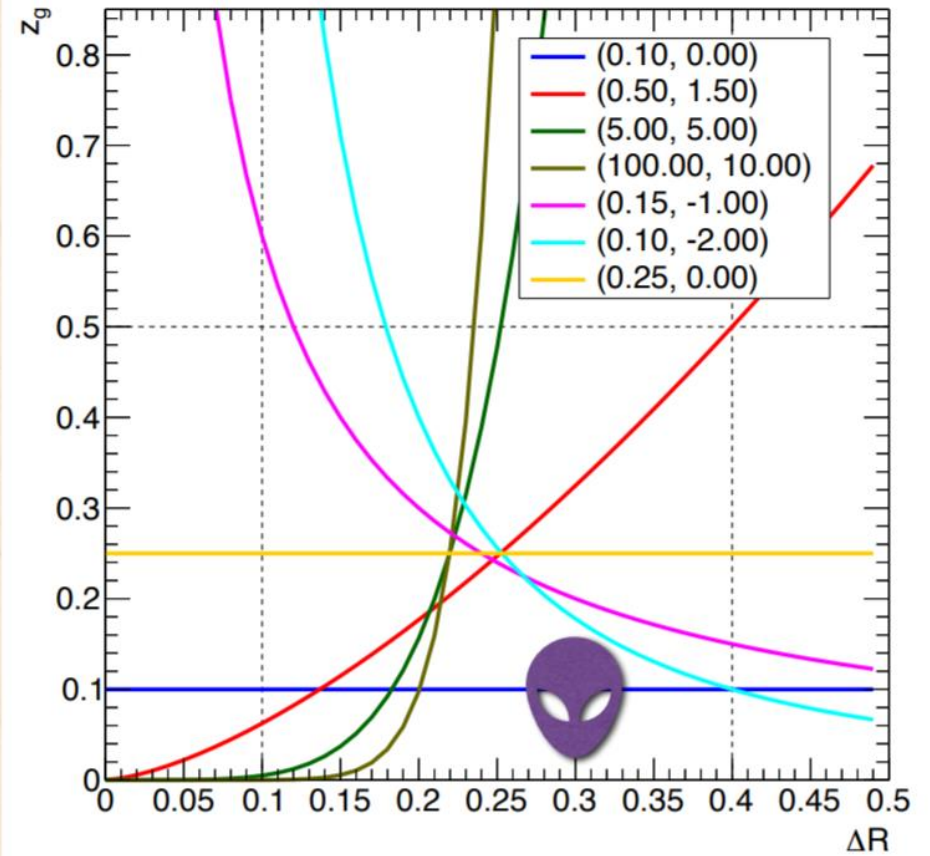
# Previous Report

# Softdrop

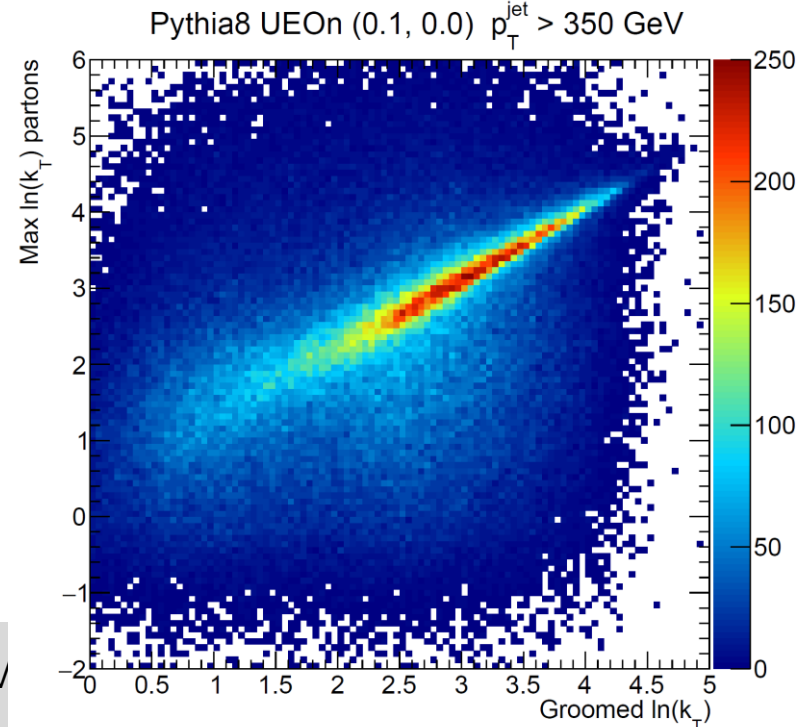
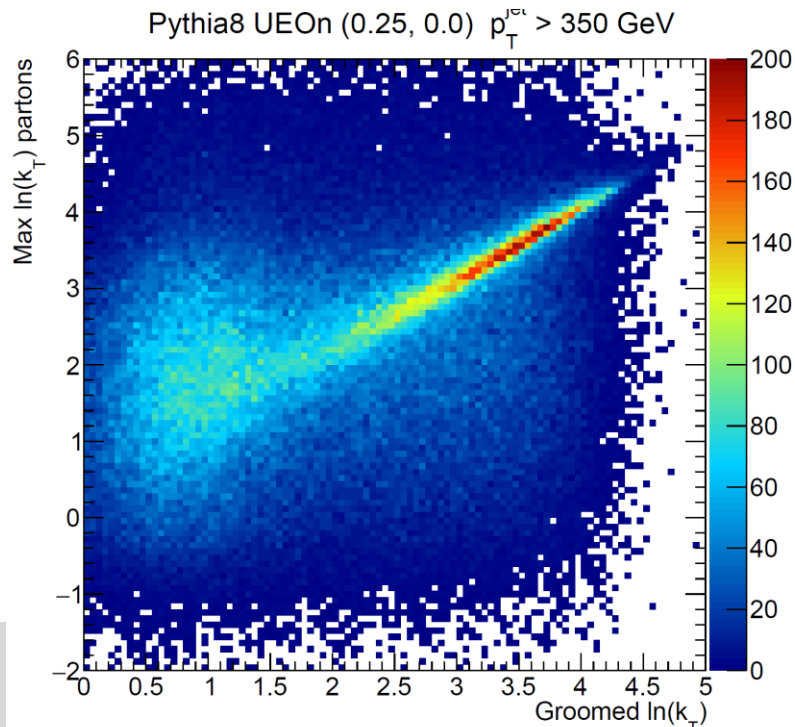
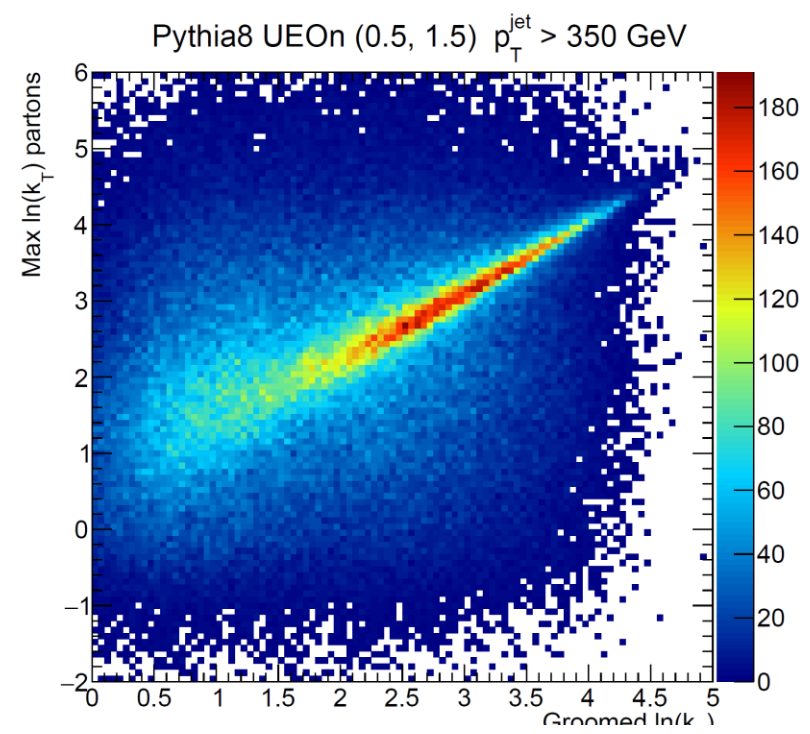
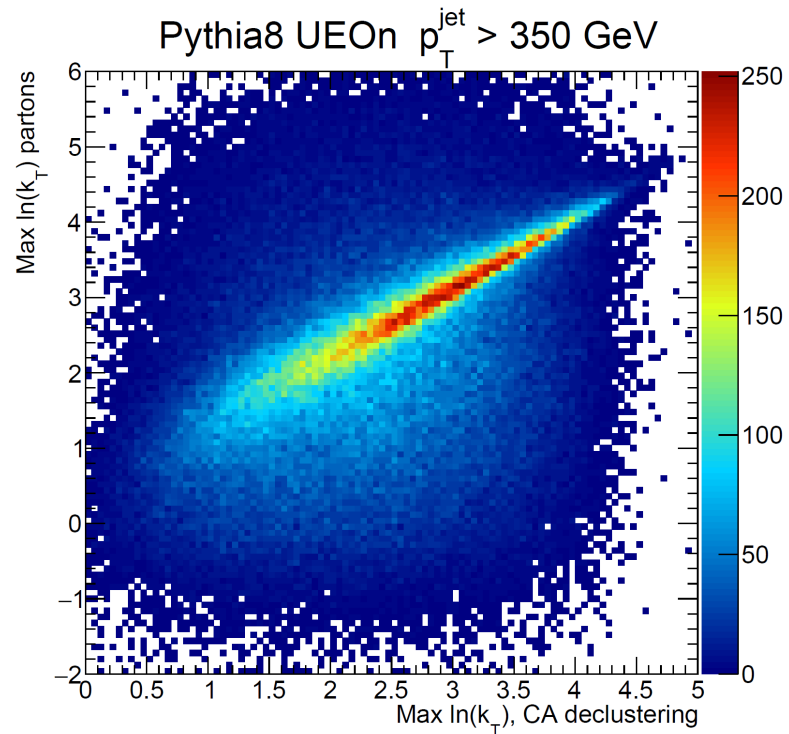
(theorist view)



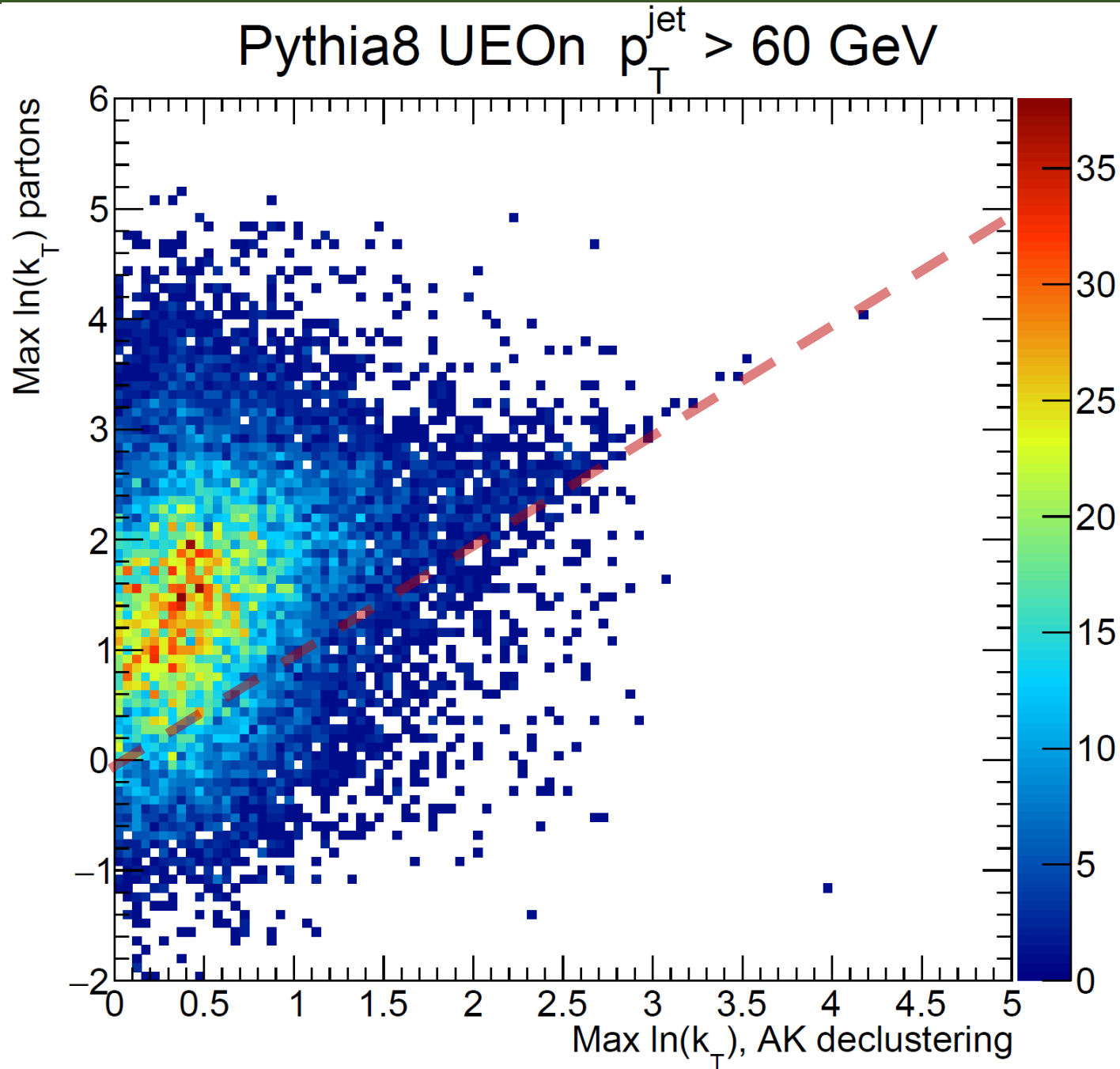
(experimentalist view)



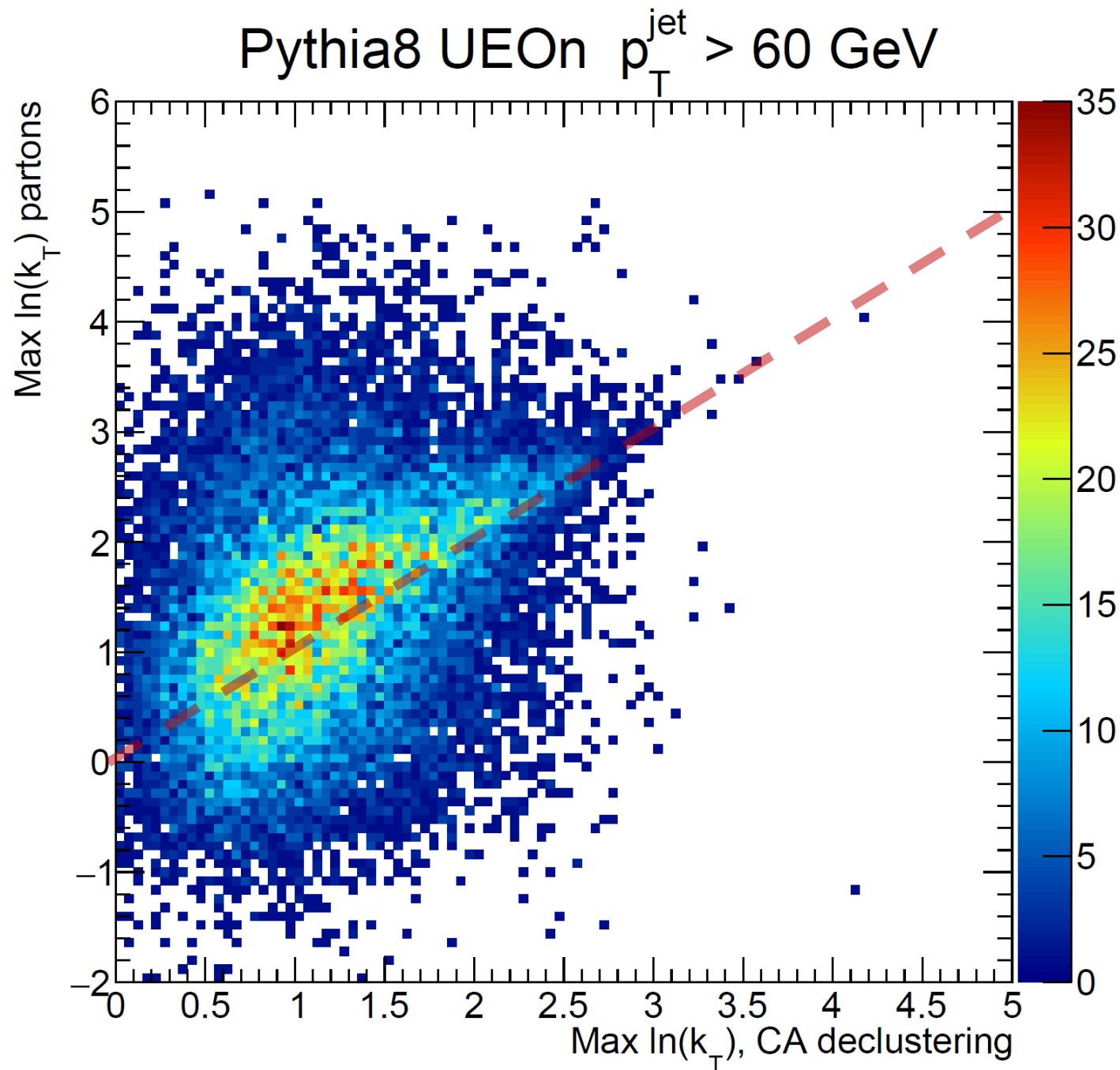
# Performance with $\hat{p}_T > 300$ GeV



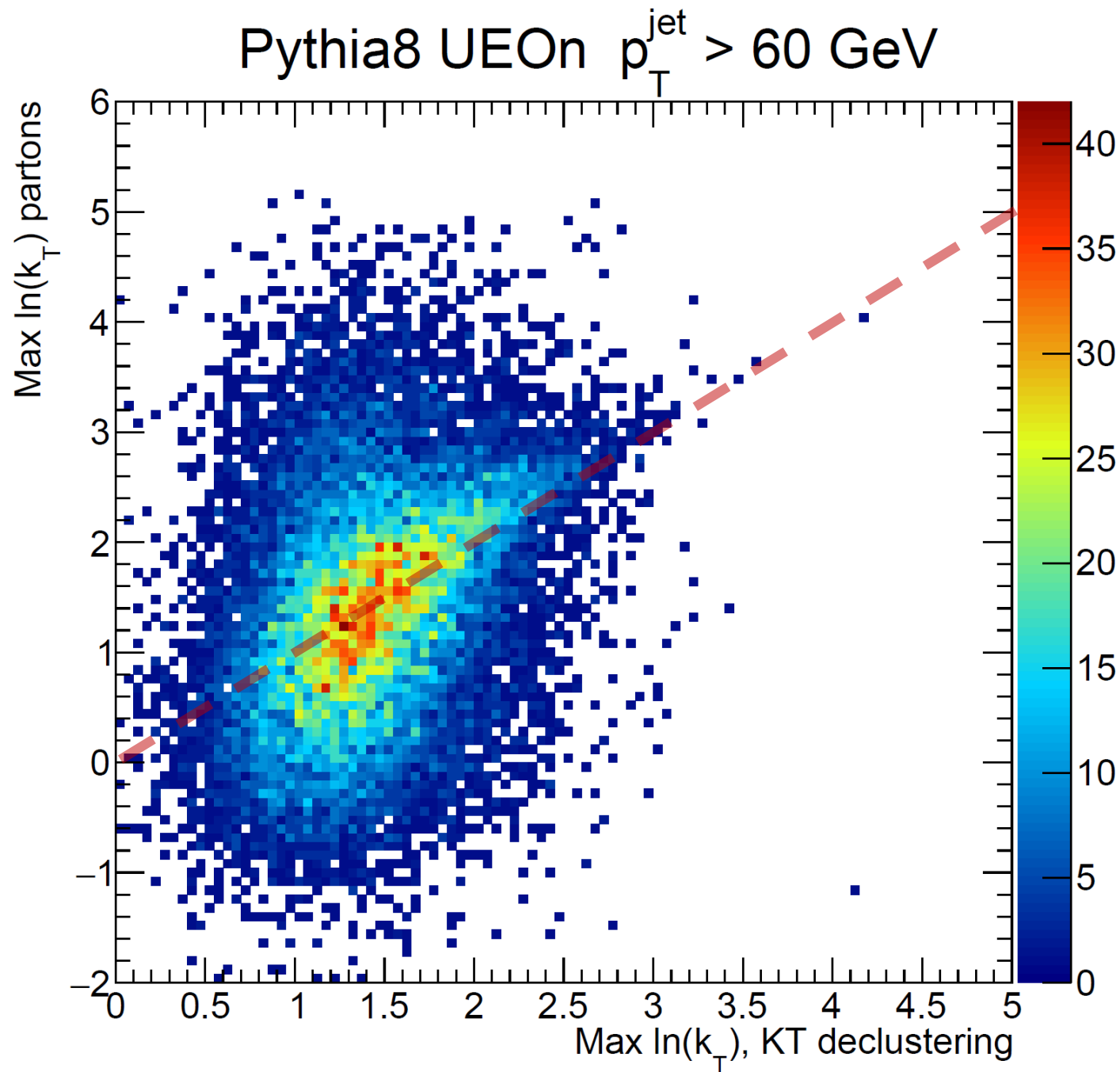
# Performance with $\hat{p}_T > 50$ GeV, Anti-KT



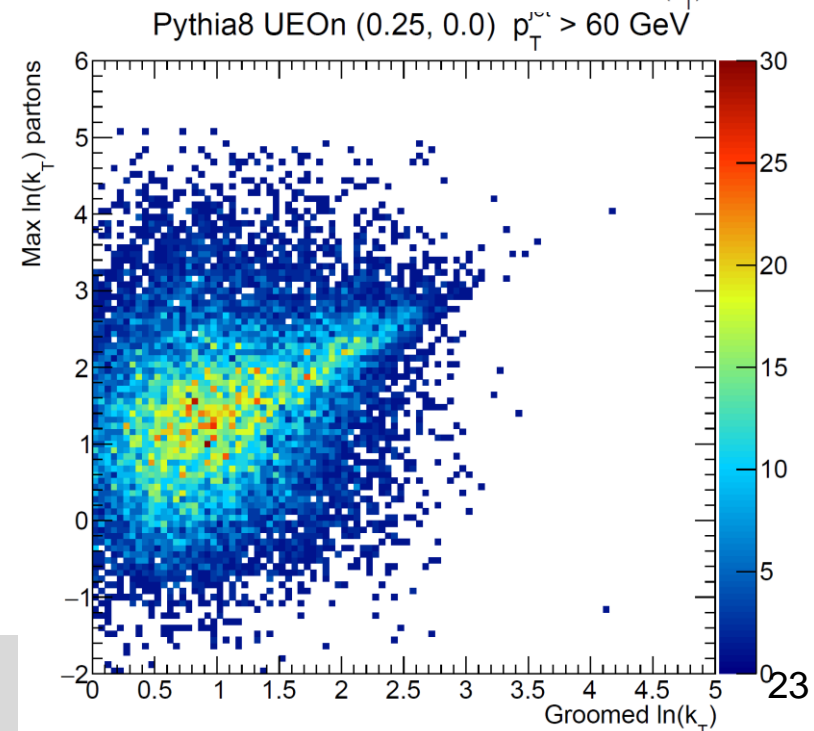
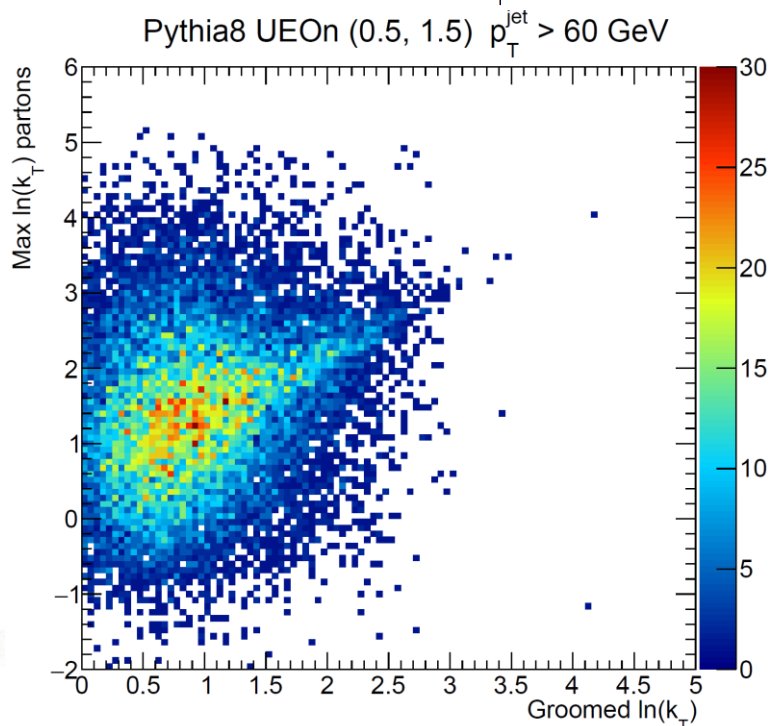
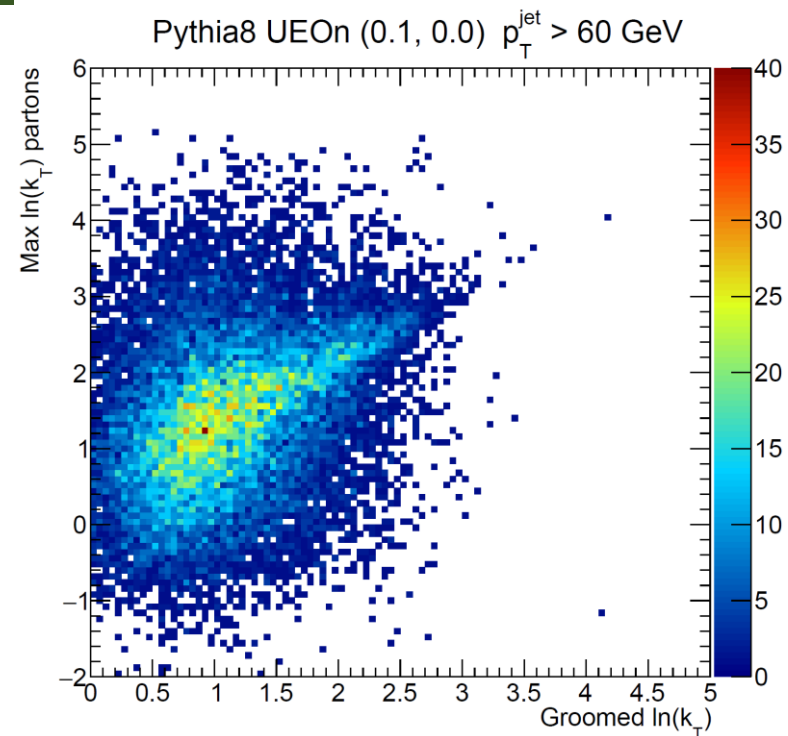
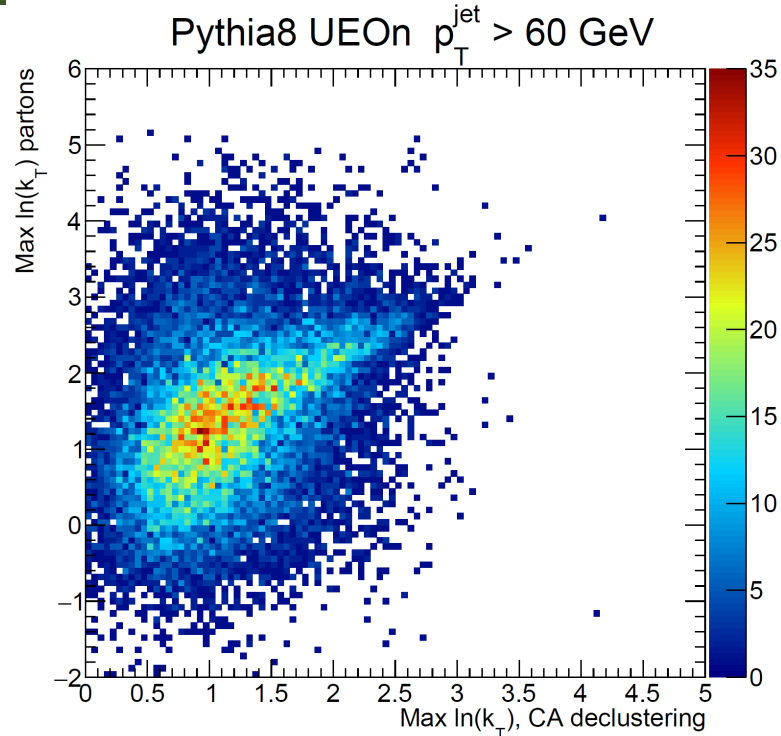
# Performance with $\hat{p}_T > 50$ GeV, CA



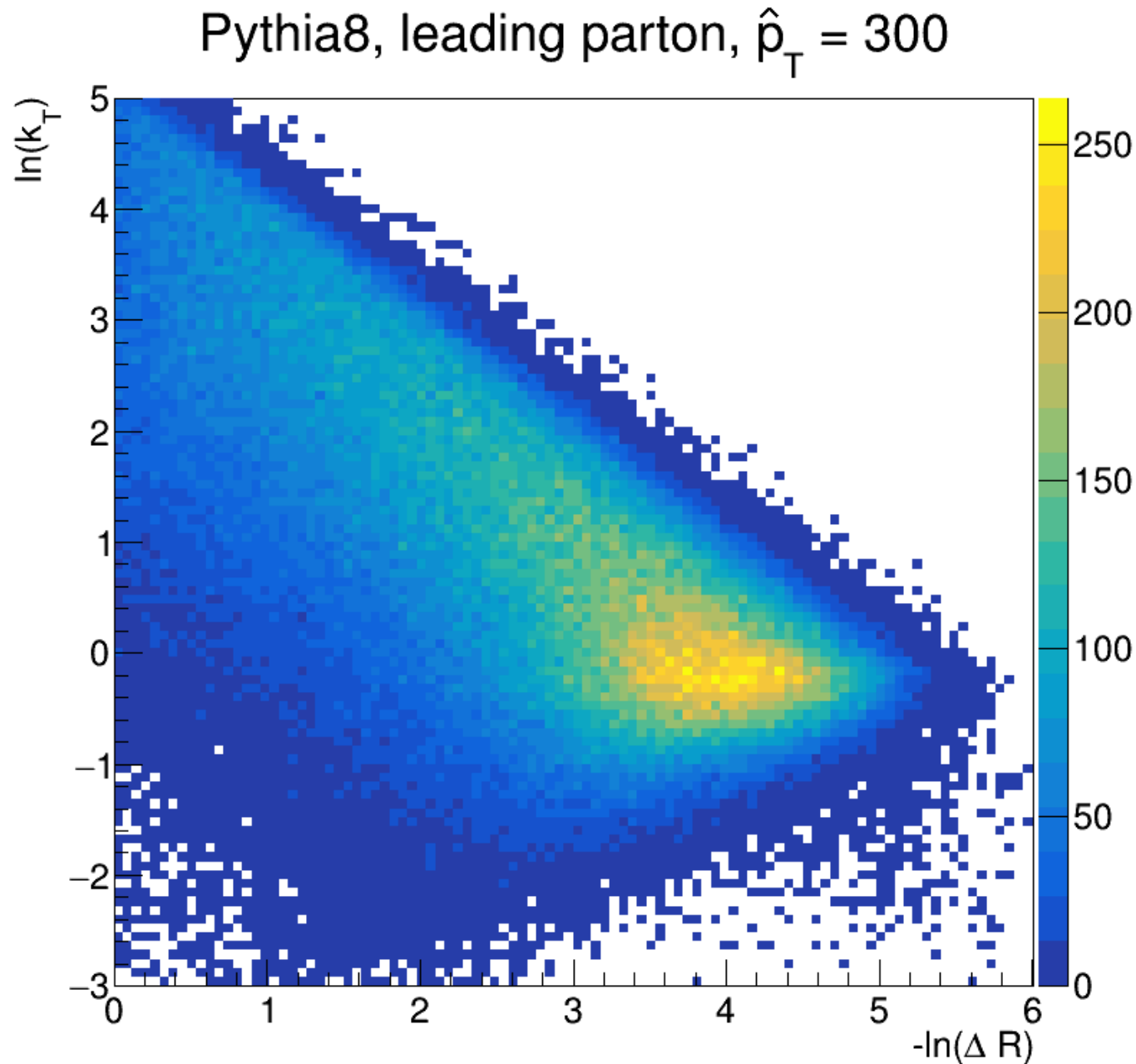
# Performance with $\hat{p}_T > 50$ GeV, KT



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



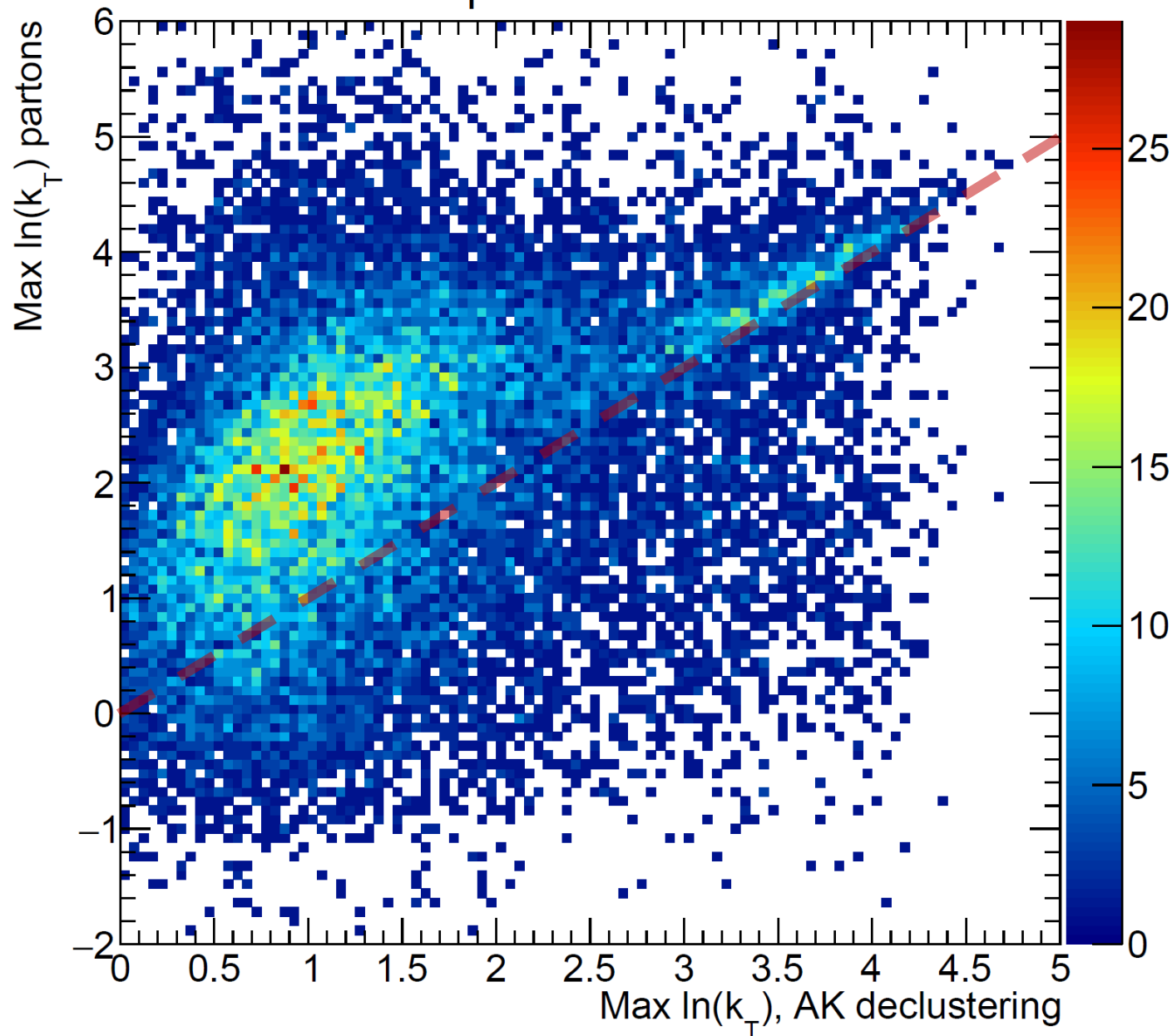
# Lund Diagram from Parton Shower





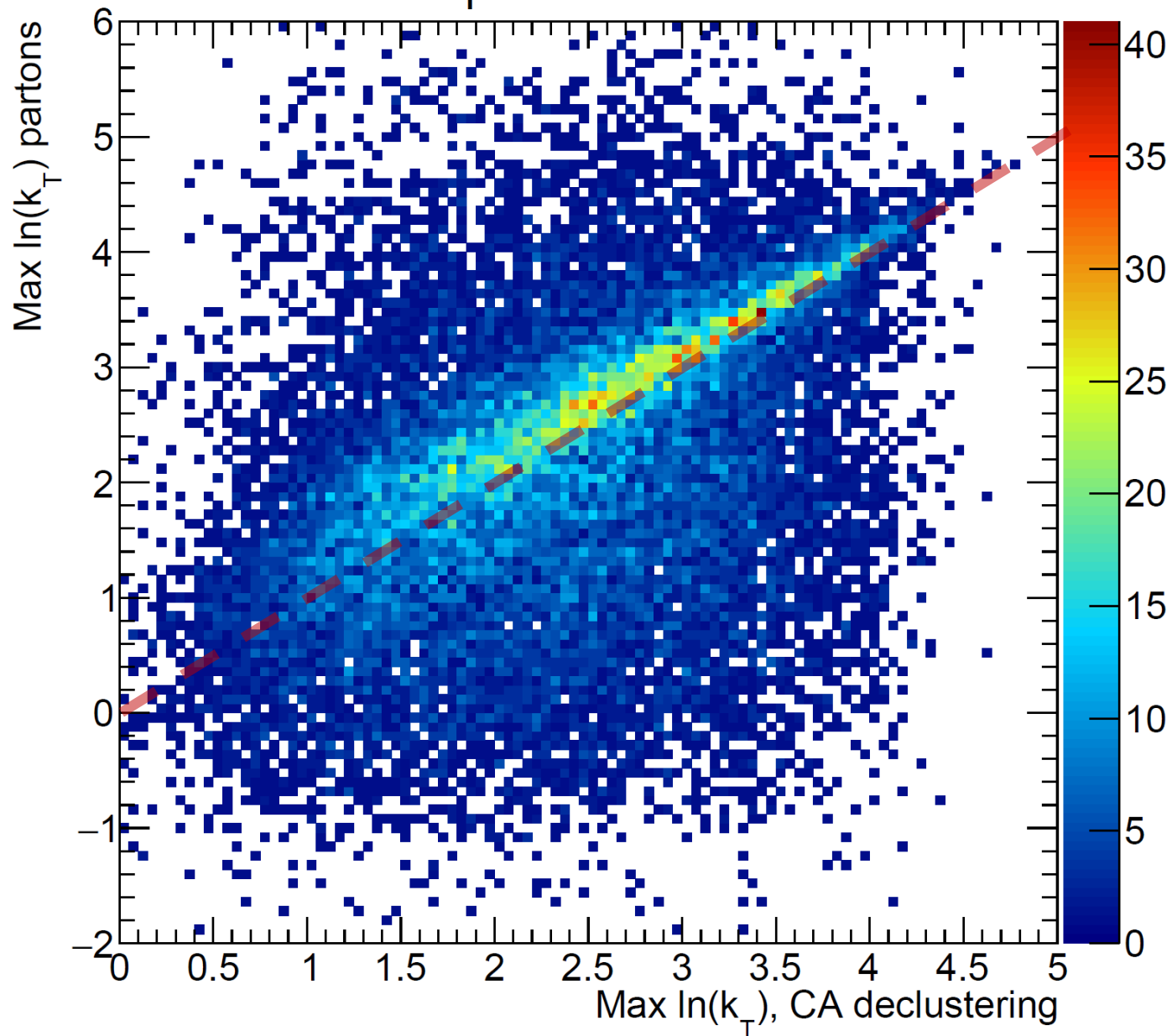
# PYTHIA $\hat{p}_T > 300$ GeV, Anti-KT

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



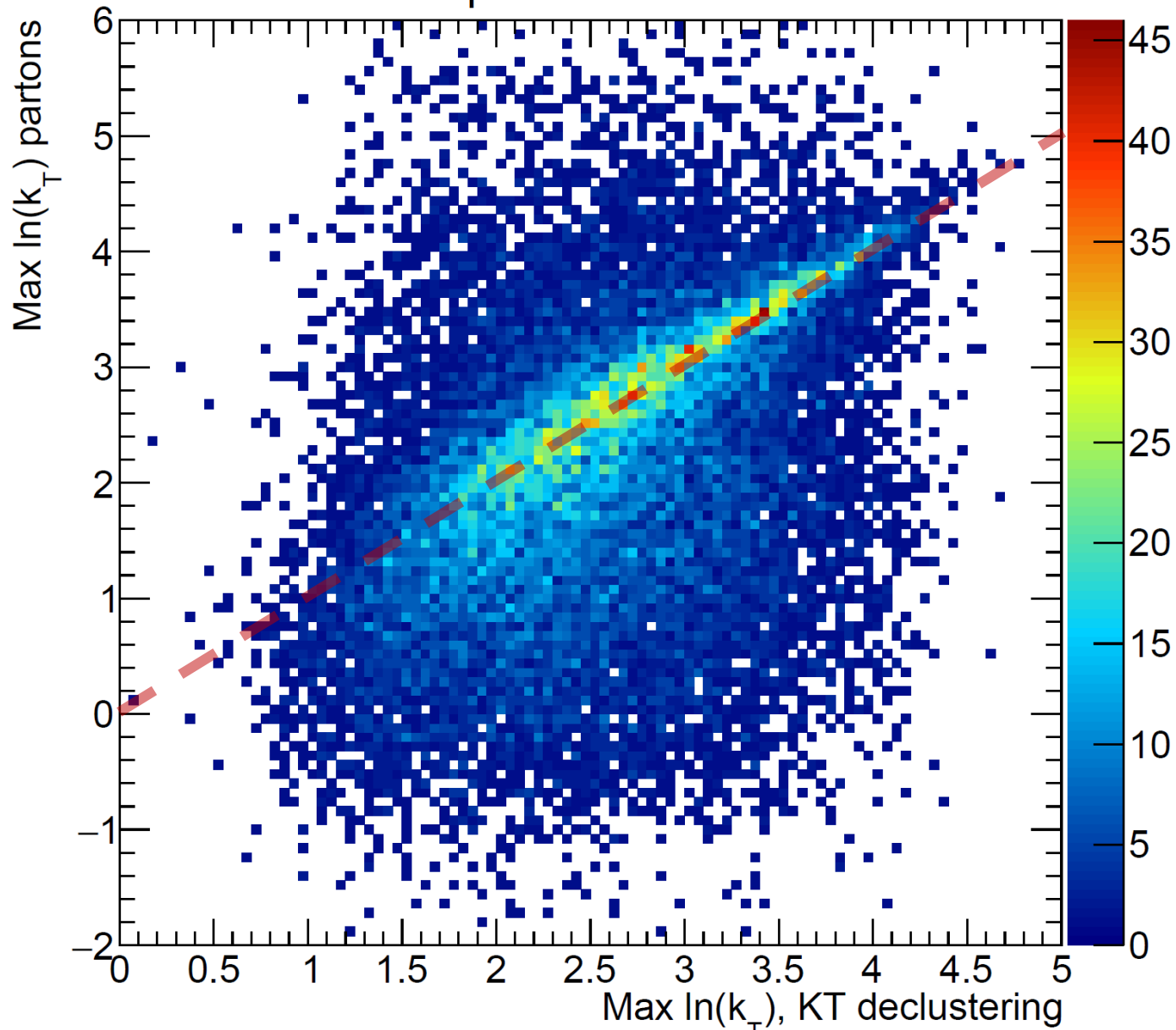
# PYTHIA $\hat{p}_T > 300$ GeV, CA

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



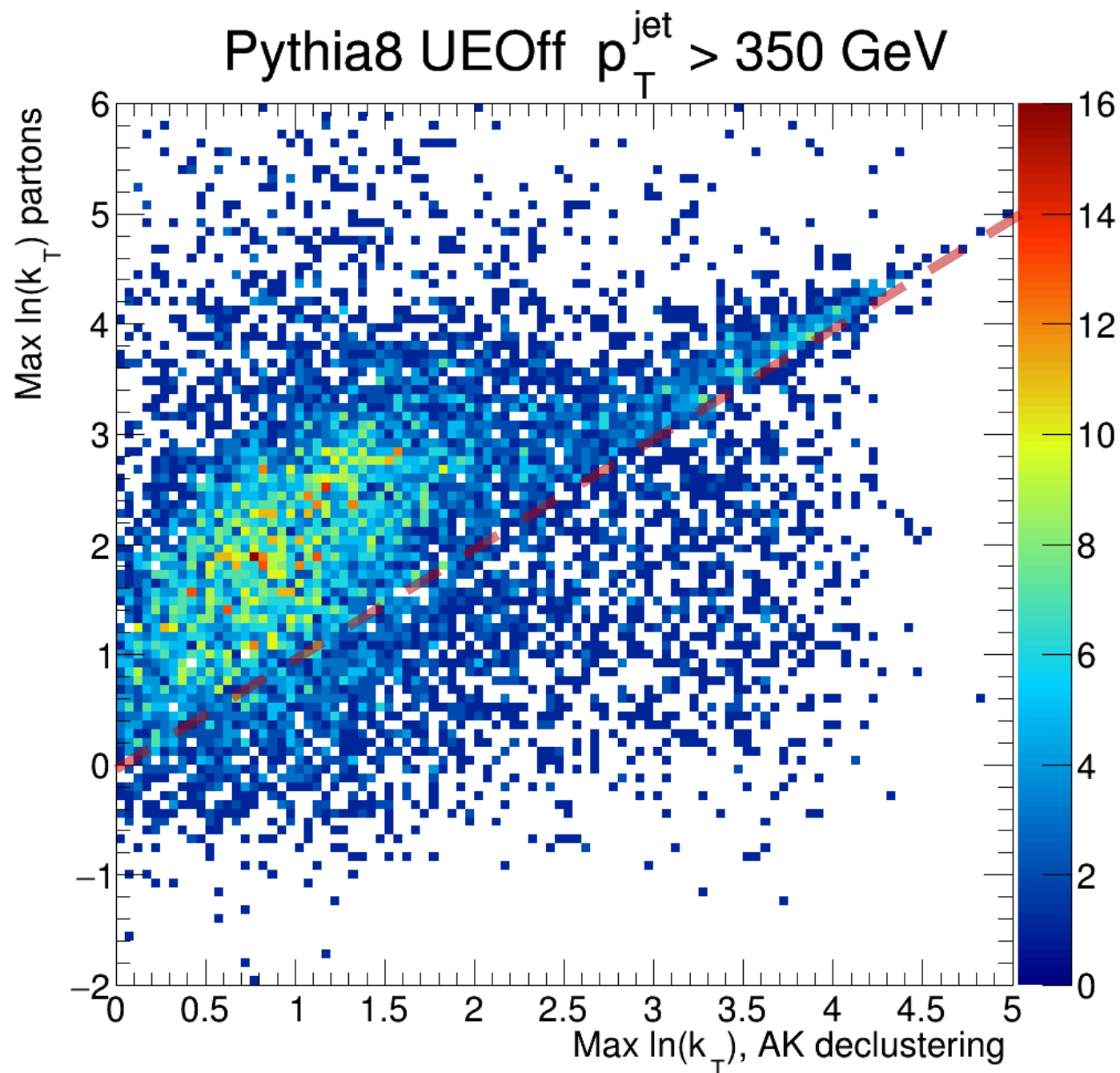
# PYTHIA $\hat{p}_T > 300$ GeV, KT

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

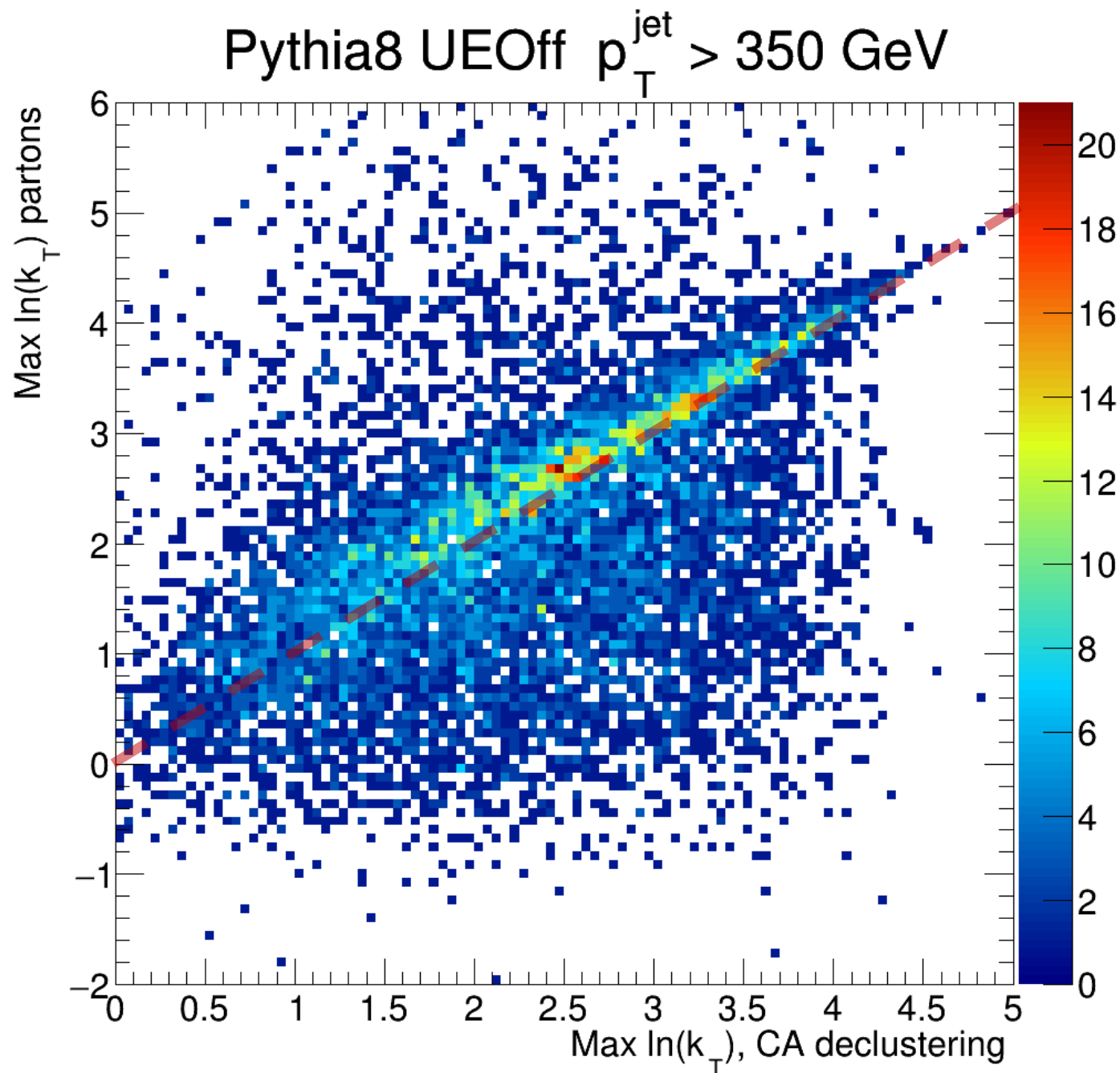


# UE Off

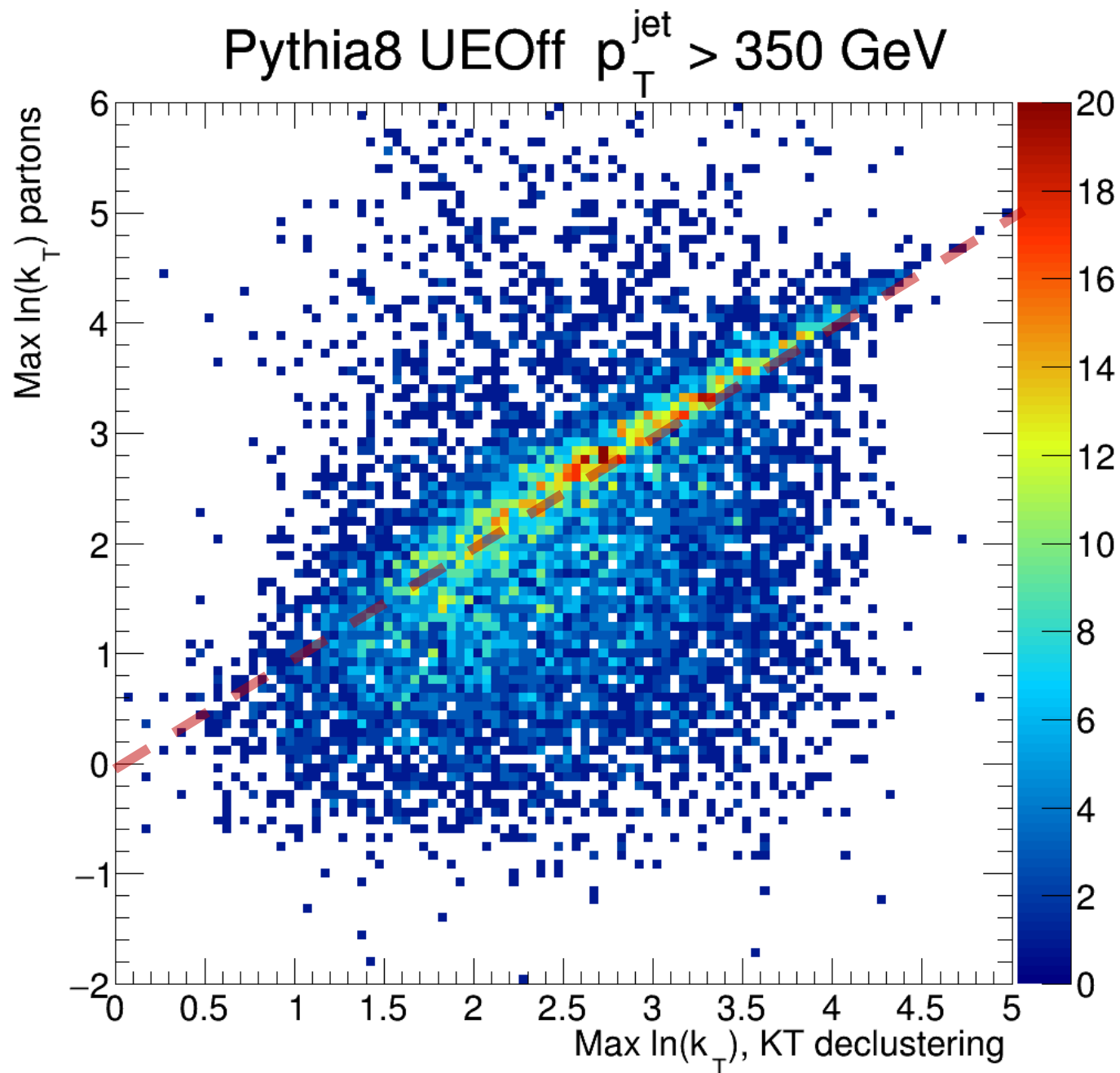
# PYTHIA $\hat{p}_T > 300$ GeV, Anti-KT



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

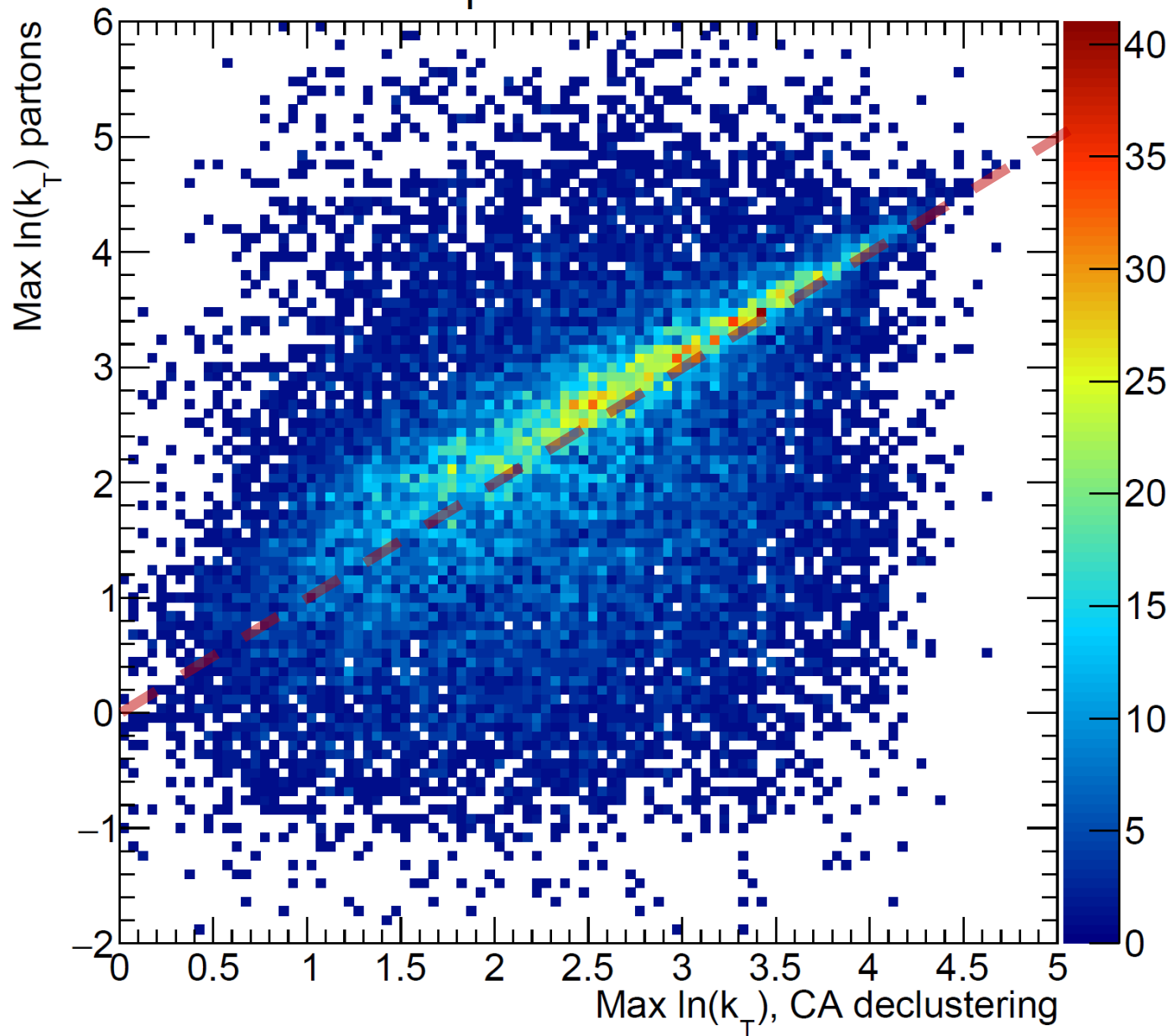


# PYTHIA $\hat{p}_T > 300$ GeV, KT



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

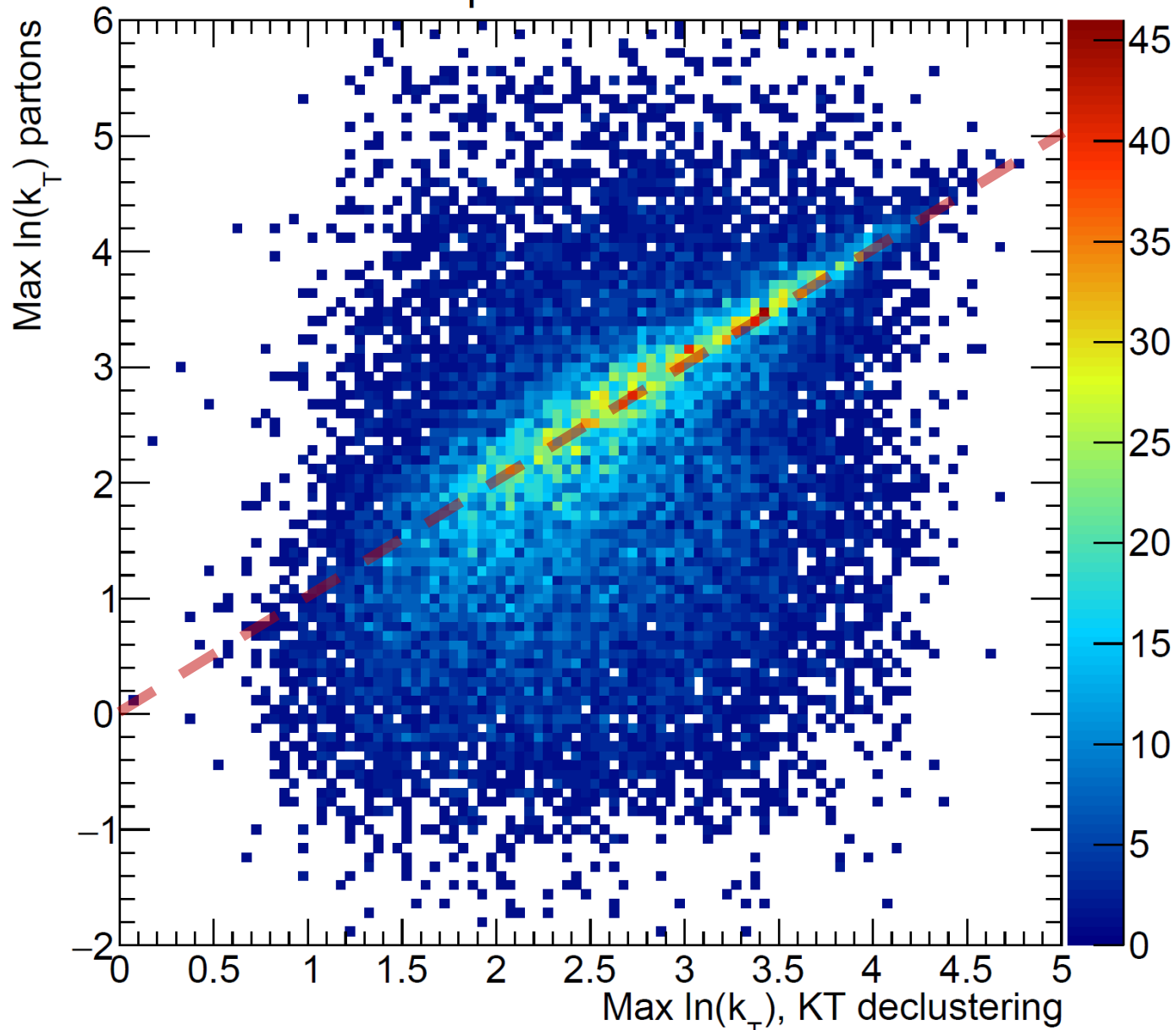
$p_T^{\text{jet}} > 350$  GeV





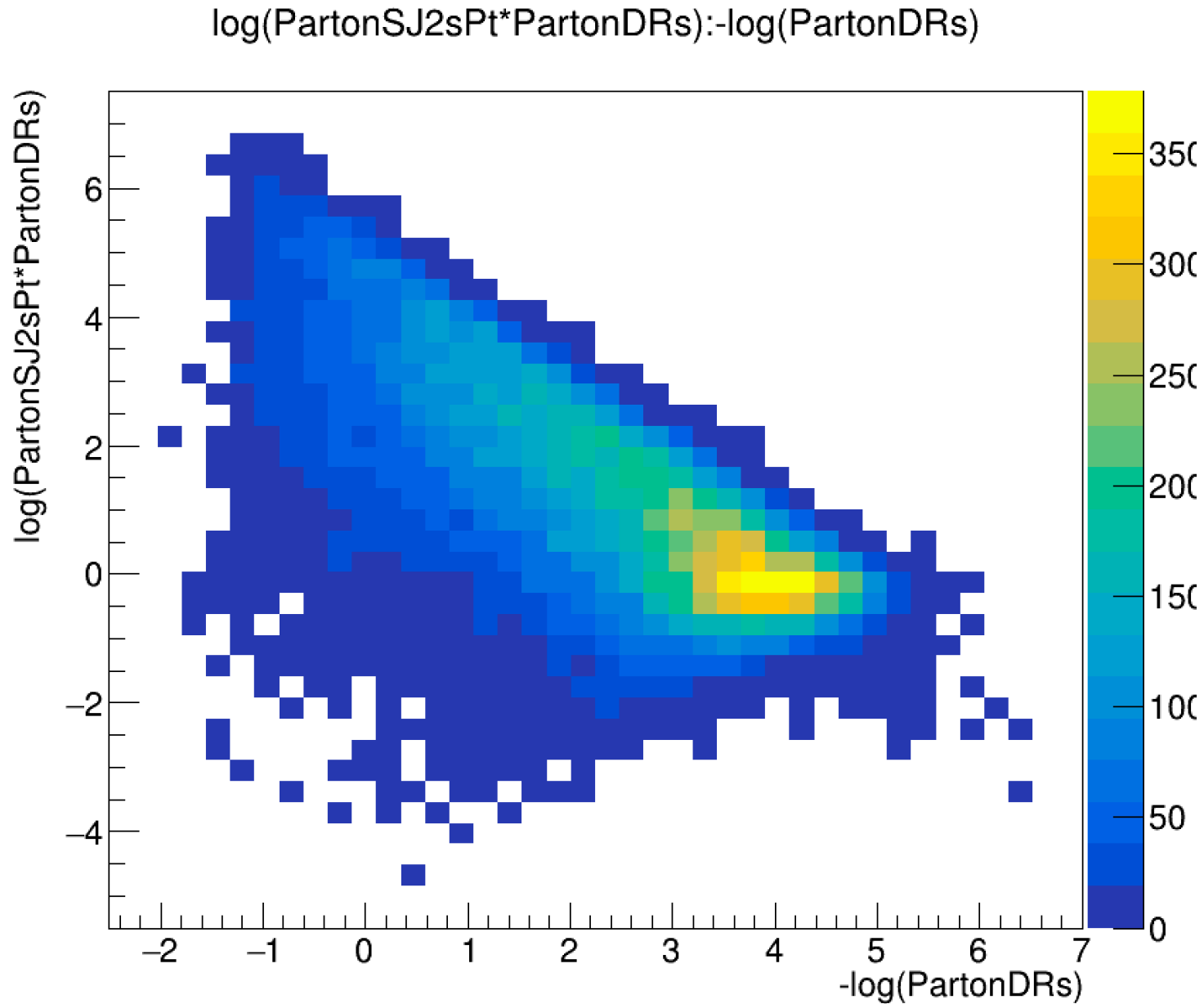
# PYTHIA $\hat{p}_T > 300$ GeV, KT

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

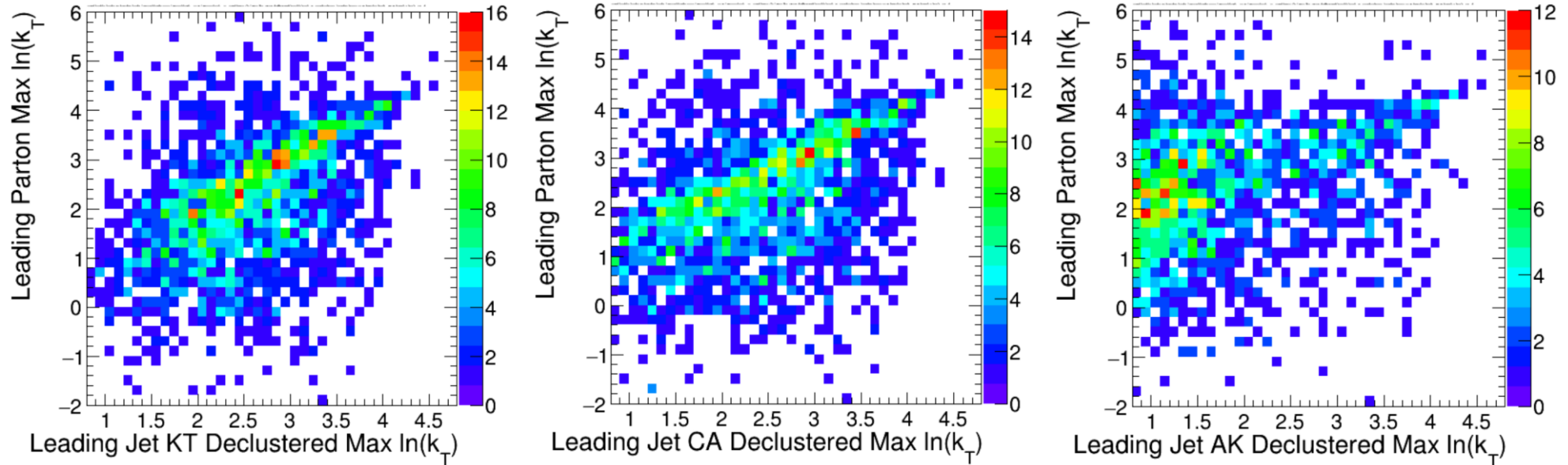


## Unbeautified plots

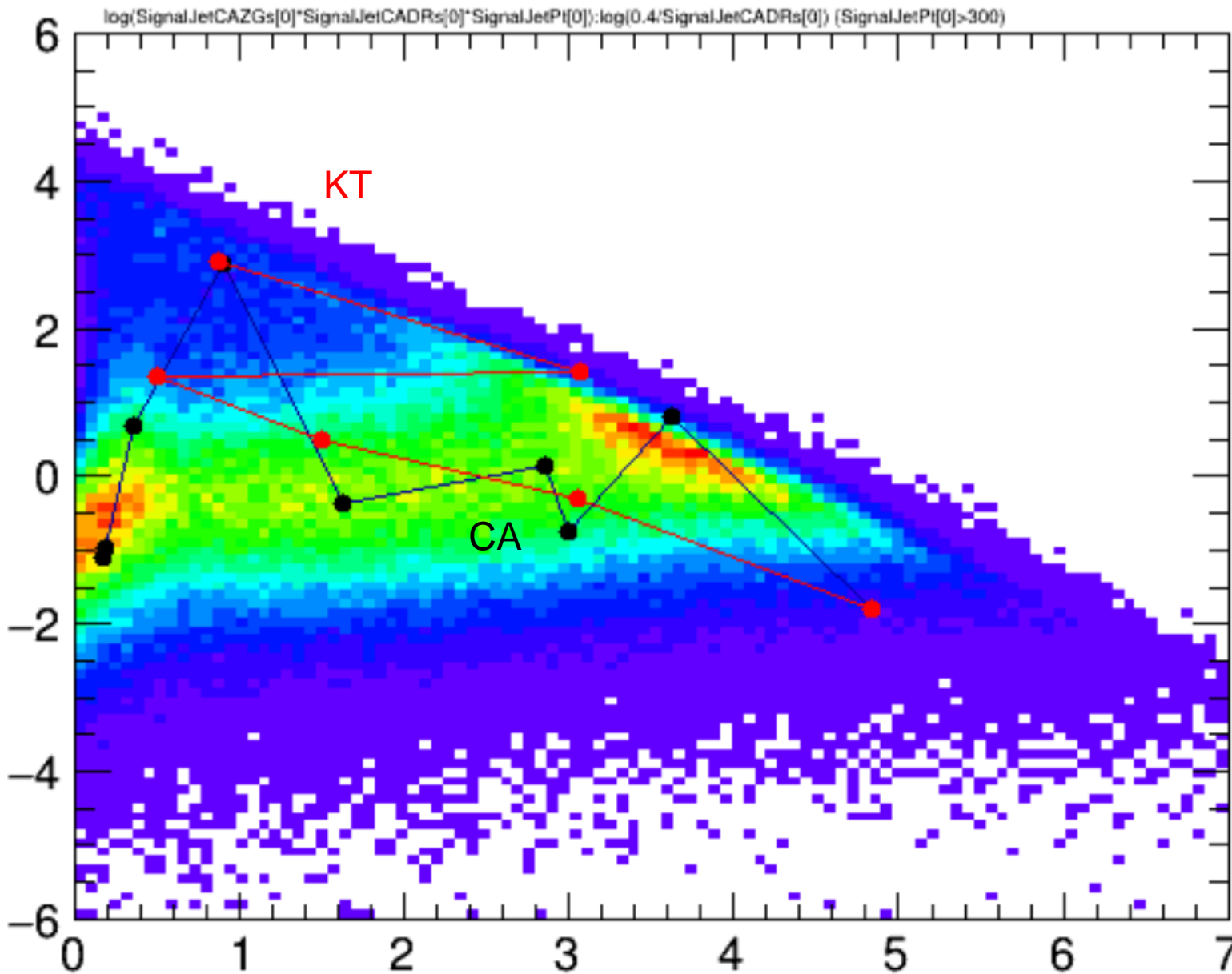
# Unbeautified Parton Level Lund Diagram



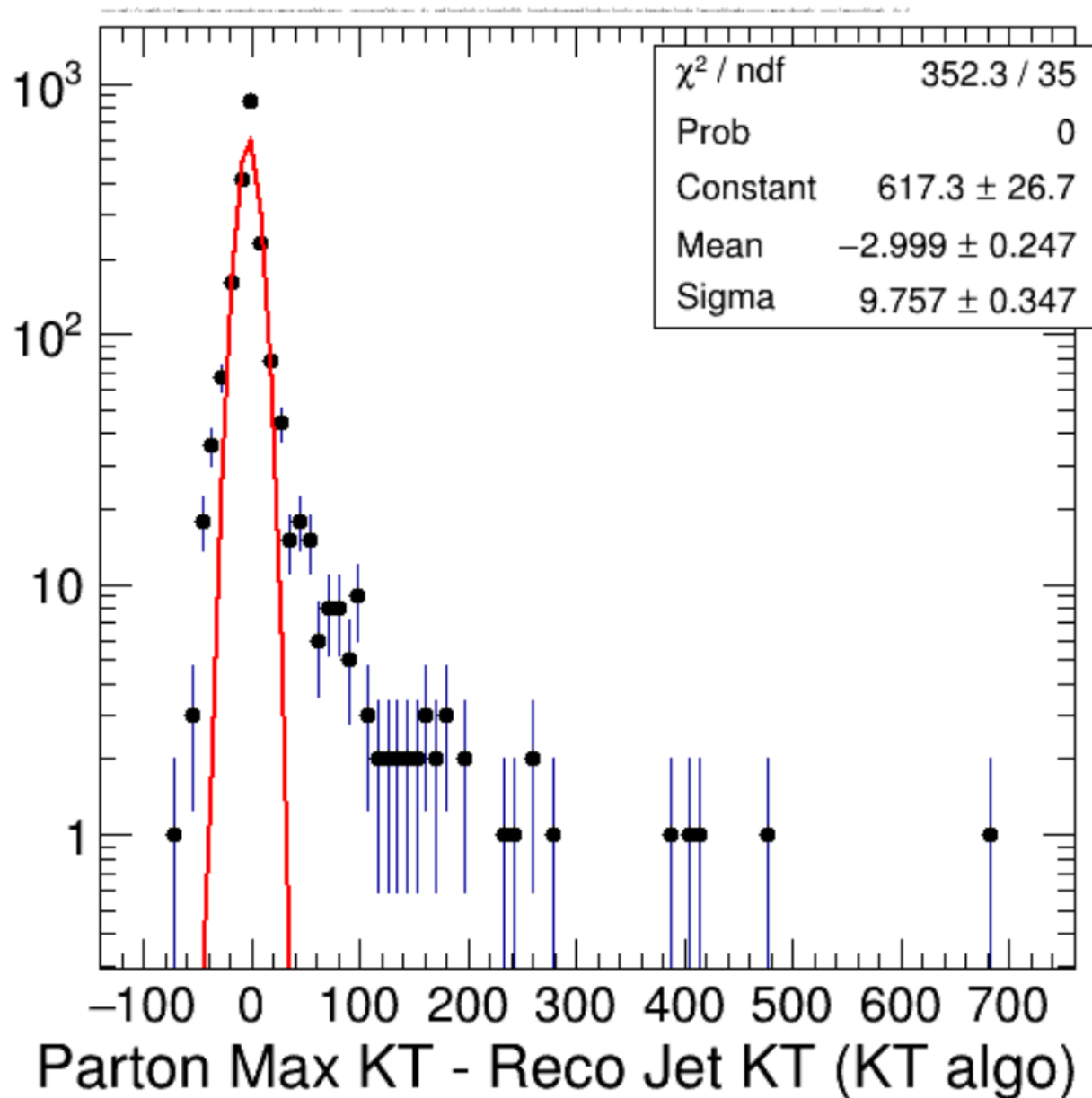
# With lower statistics in cross-check macro



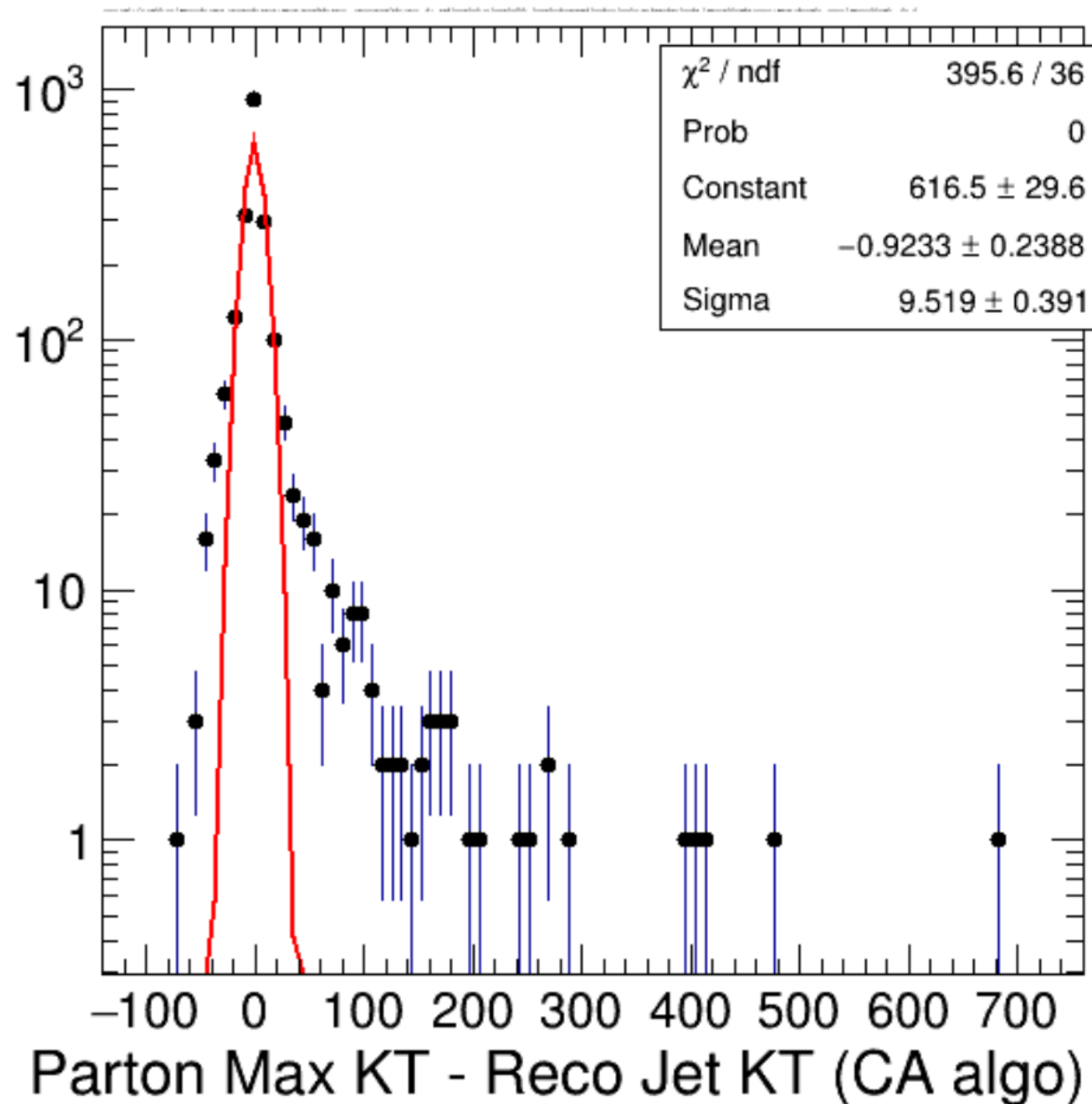
# Unbeautified bad plot



# Unbeautified resolution function



# Unbeautified resolution function



# Unbeautified resolution function

