Let's go Lunni!
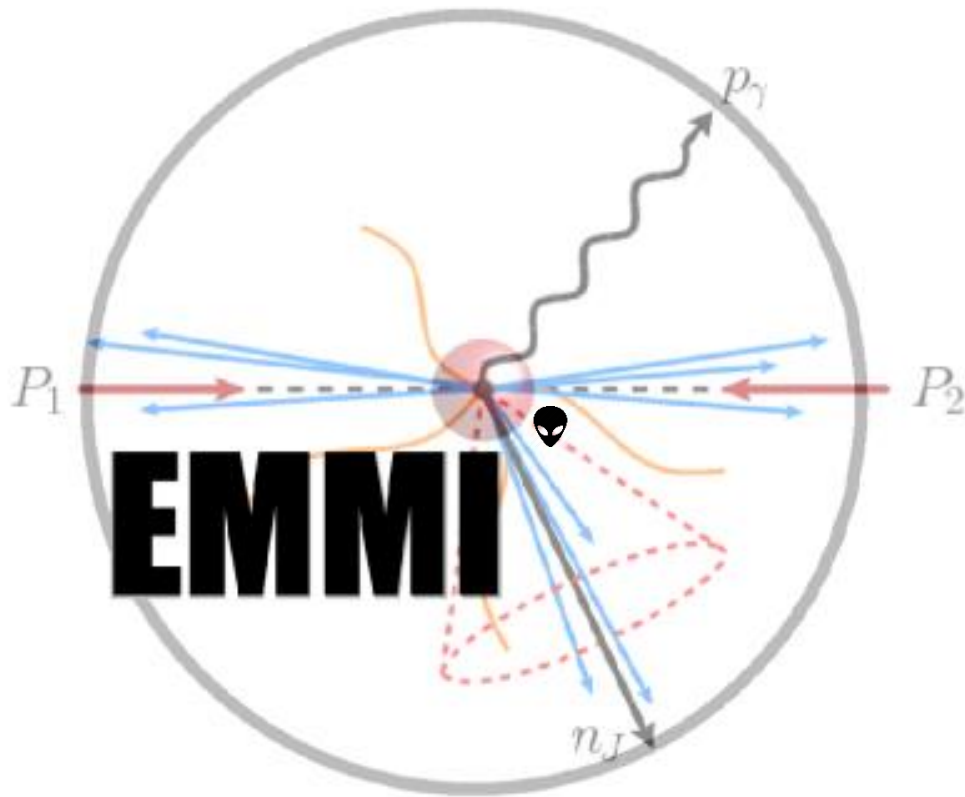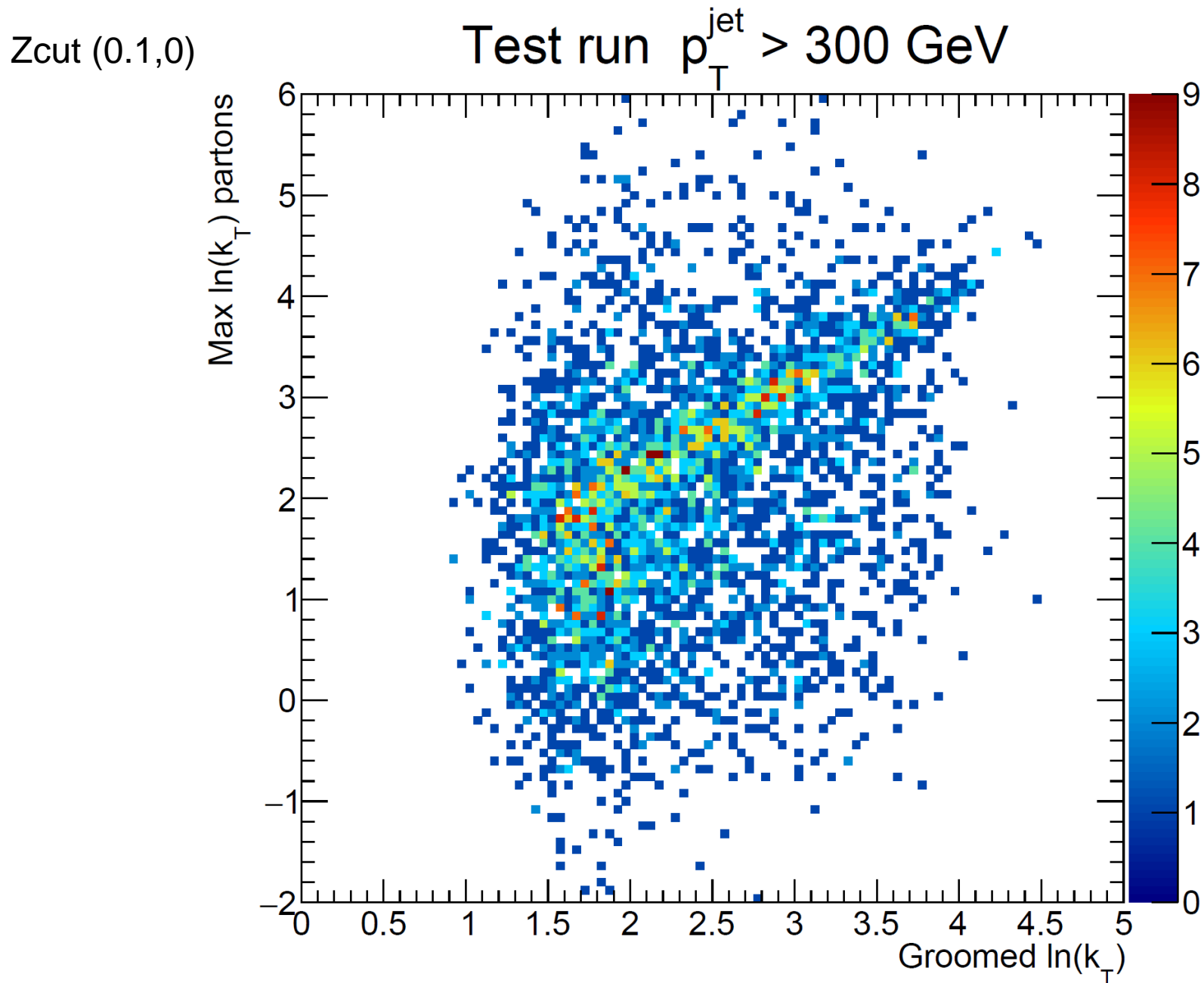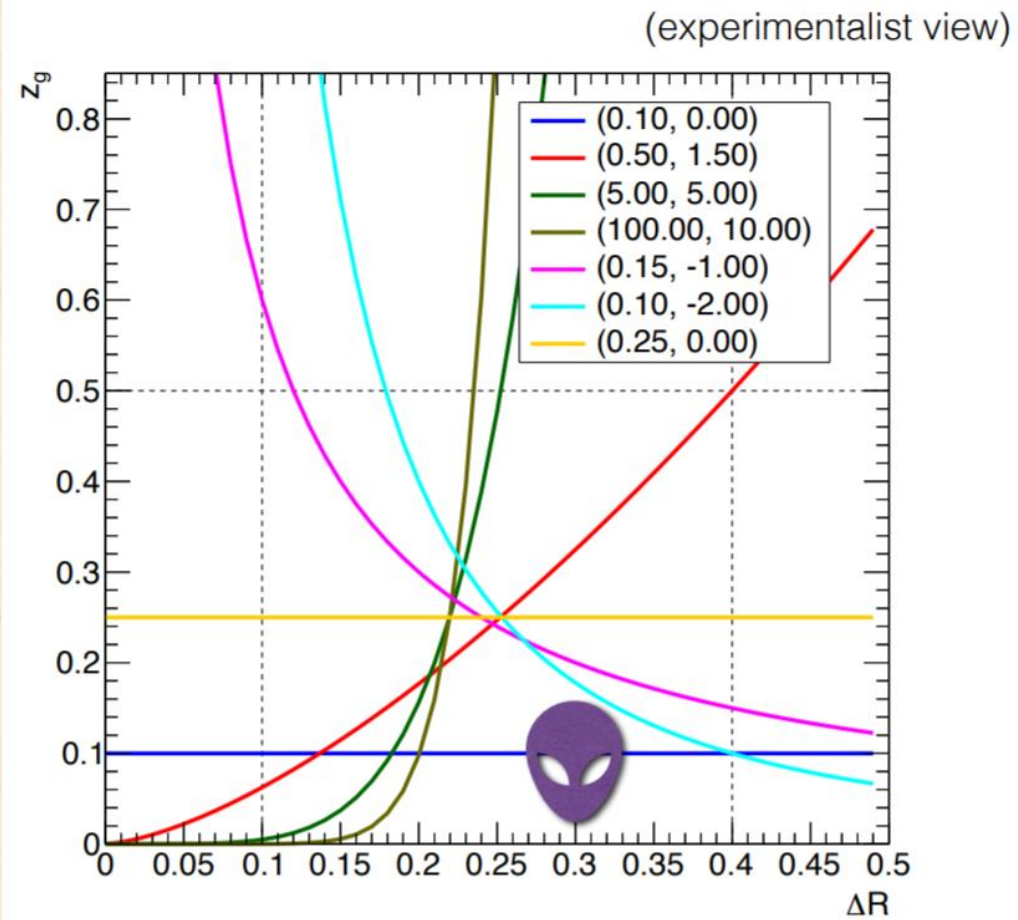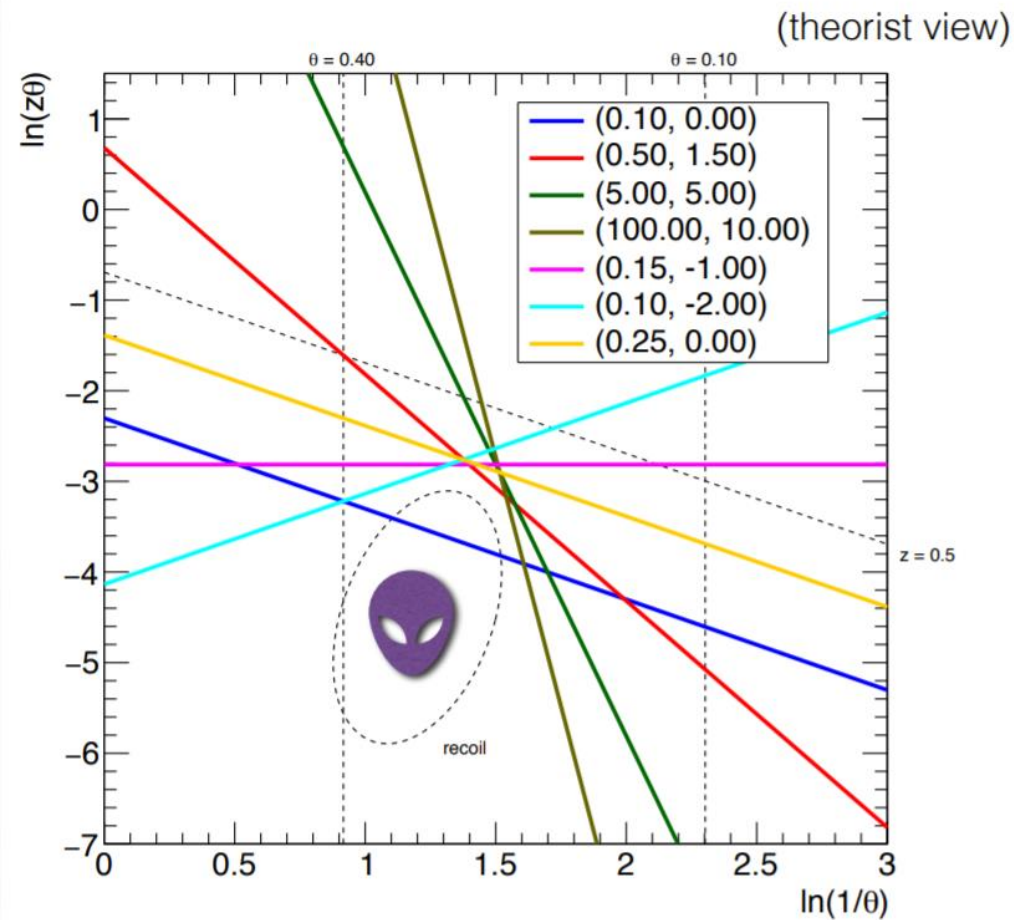
Groomed Jet (CA) PYTHIA+Termal Background (PbPb 5 TeV 0-10%)

Zcut (0.1,0)
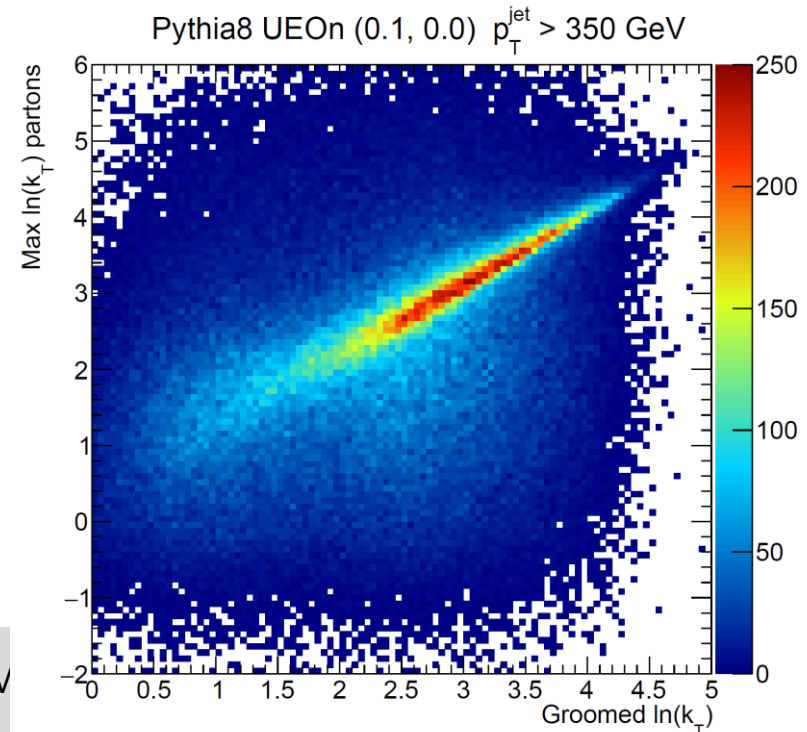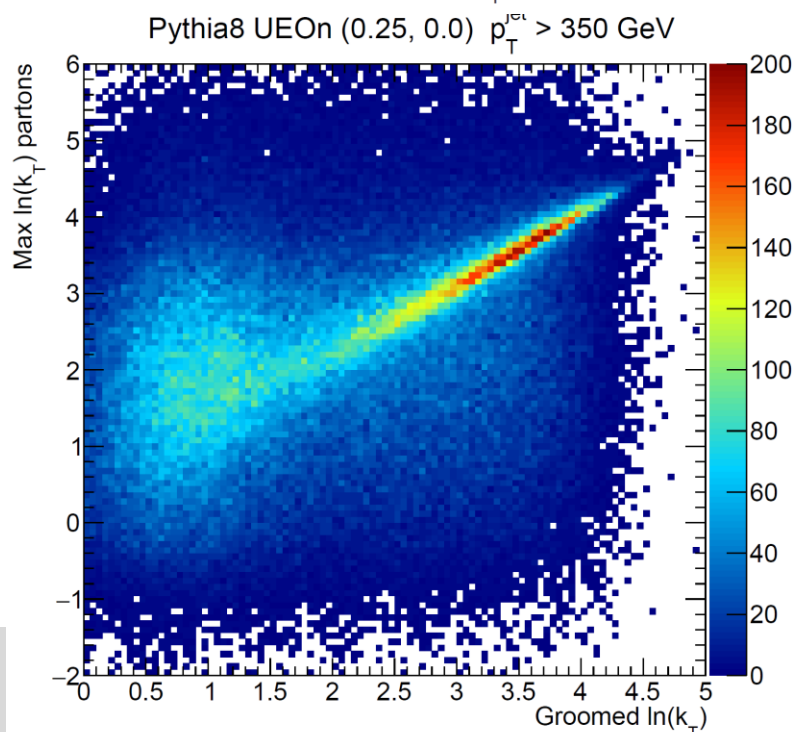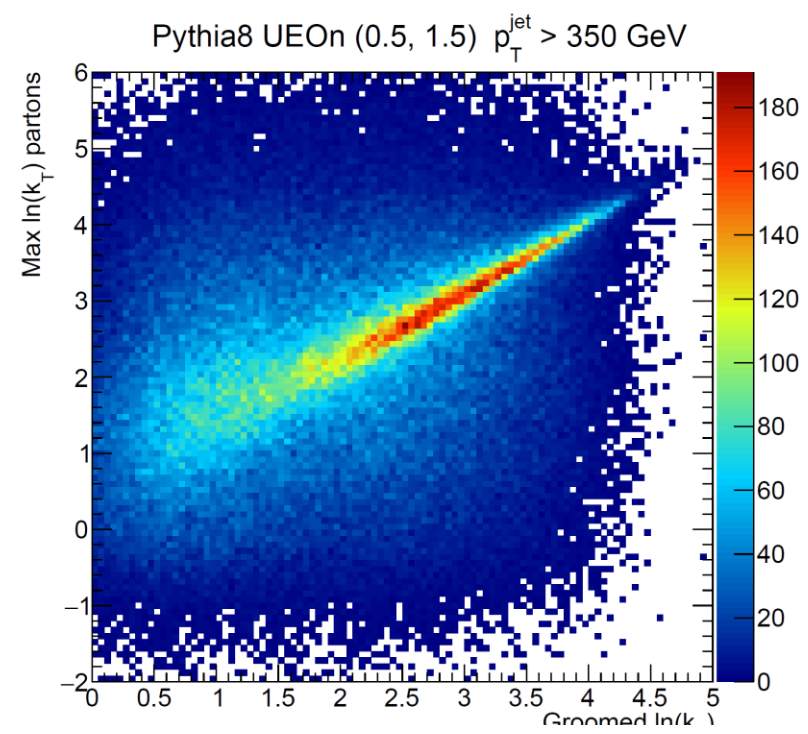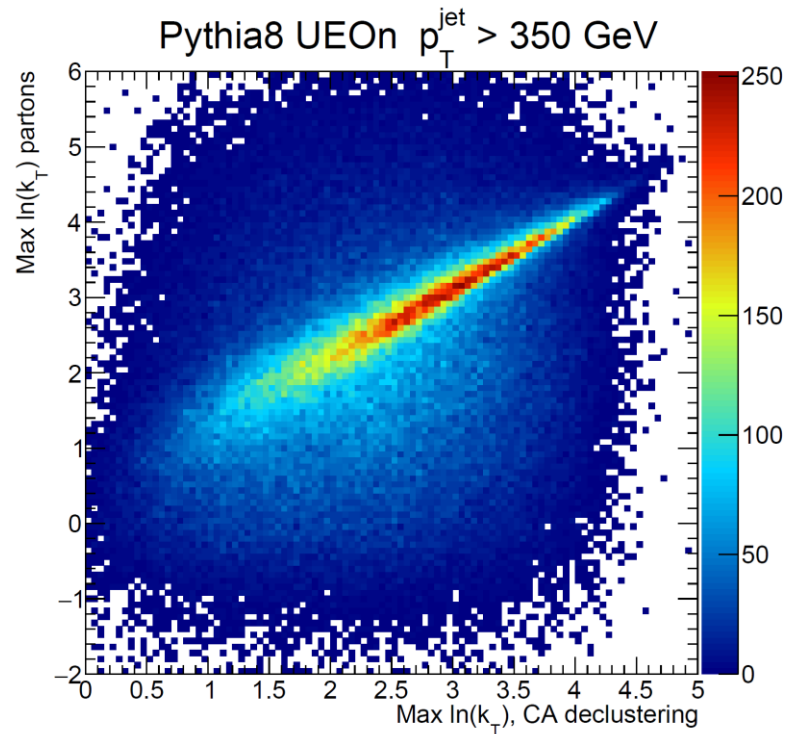

Test run $p_T^{jet} > 300$ GeV

Previous Report

Softdrop
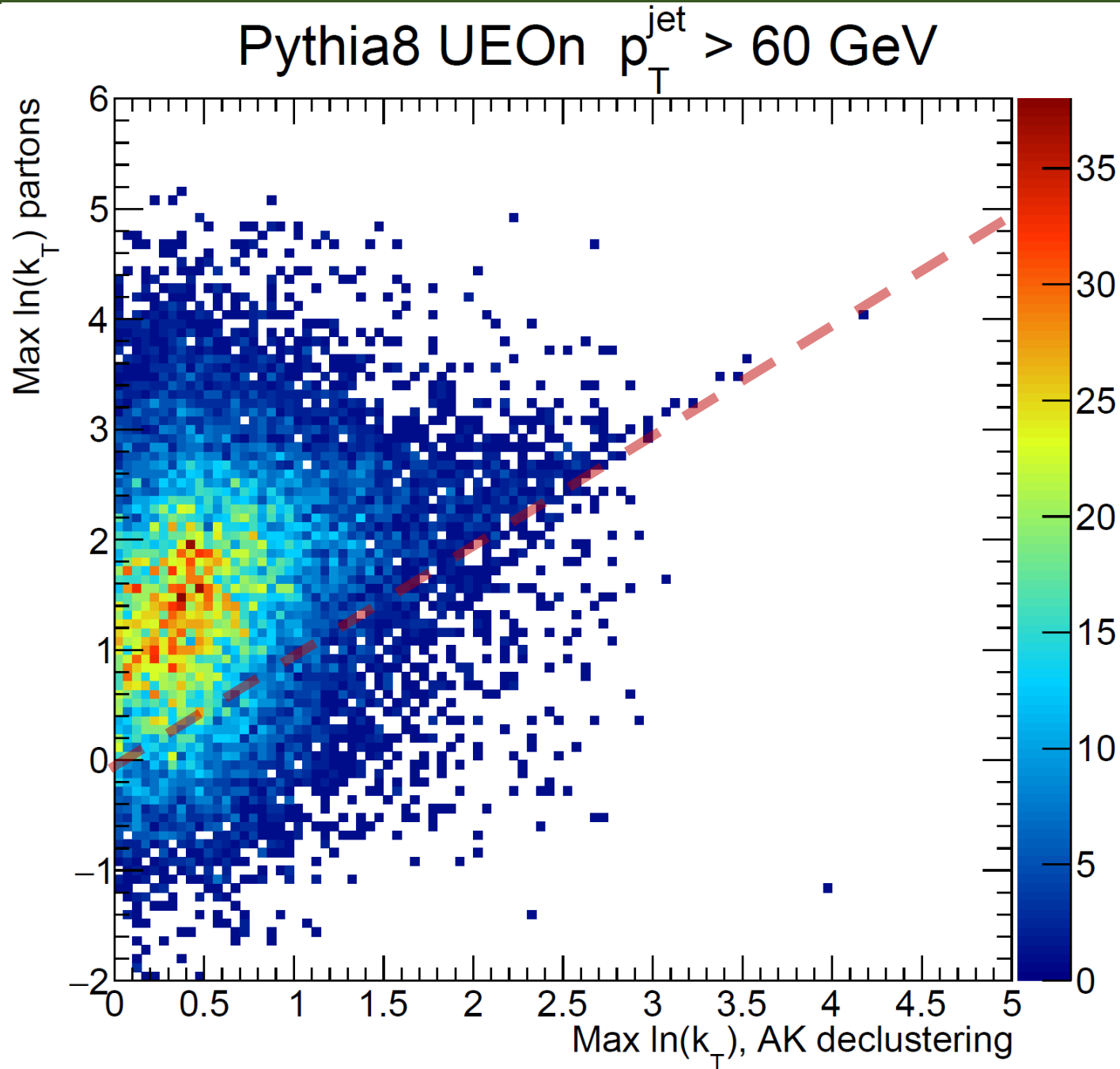
(theorist view)

(experimentalist view)

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

Pythia8 UEOn (0.5, 1.5) $p_T^{jet} > 350$ GeV

Pythia8 UEOn (0.25, 0.0) $p_T^{jet} > 350$ GeV

Pythia8 UEOn (0.1, 0.0) $p_T^{jet} > 350$ GeV

Pythia8 UEOn $p_T^{jet} > 60$ GeV

Pythia8 UEOn $p_T^{jet} > 60$ GeV

Pythia8 UEOn $p_T^{jet} > 60$ GeV

Pythia8 UEOn p_T^{jet} > 60 GeV

Pythia8 UEOn (0.1, 0.0) p_T^{jet} > 60 GeV

Pythia8 UEOn (0.5, 1.5) p_T^{jet} > 60 GeV

Pythia8 UEOn (0.25, 0.0) p_T^{jet} > 60 GeV

Pythia8, leading parton, $\hat{p}_T = 300$
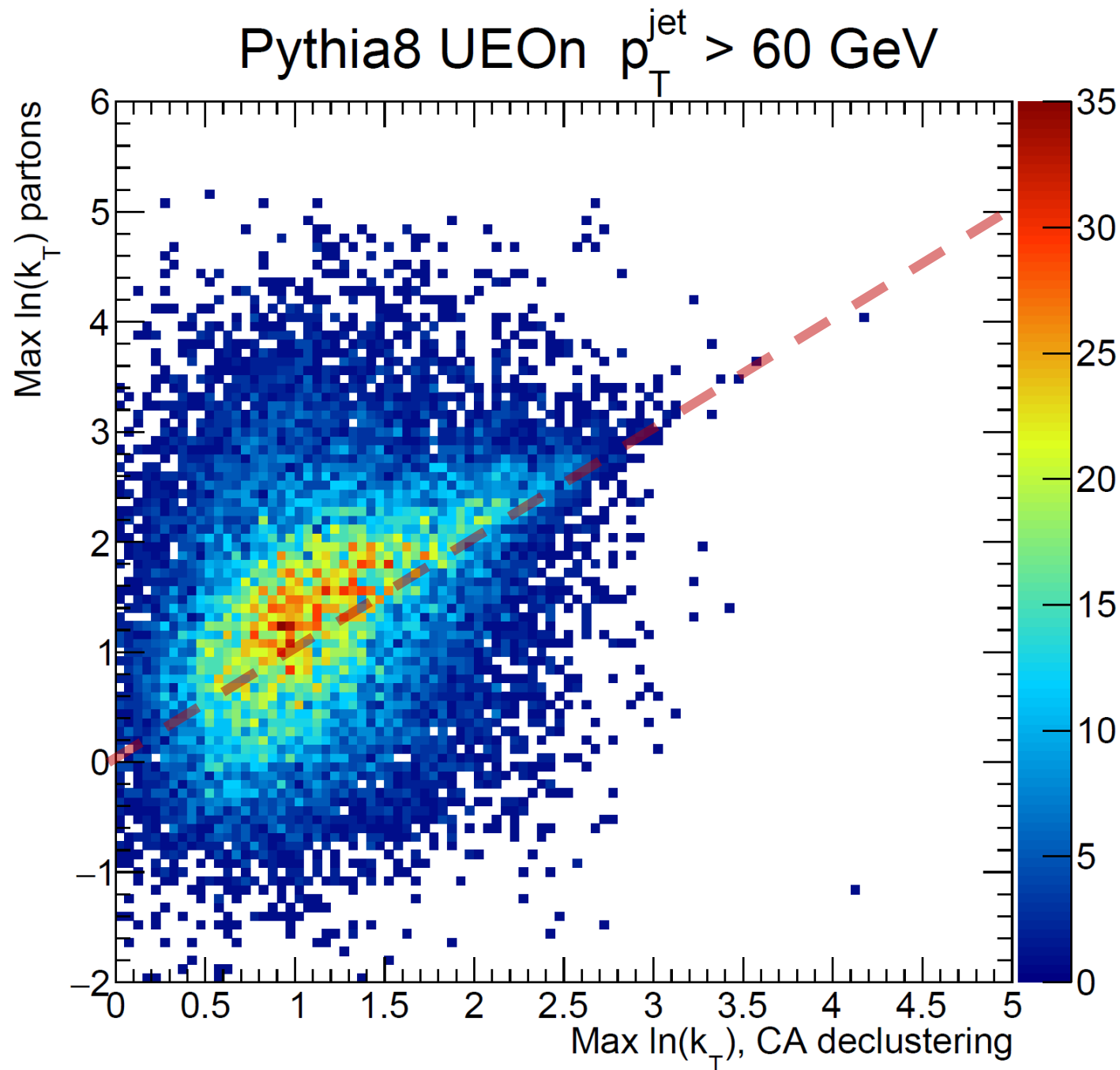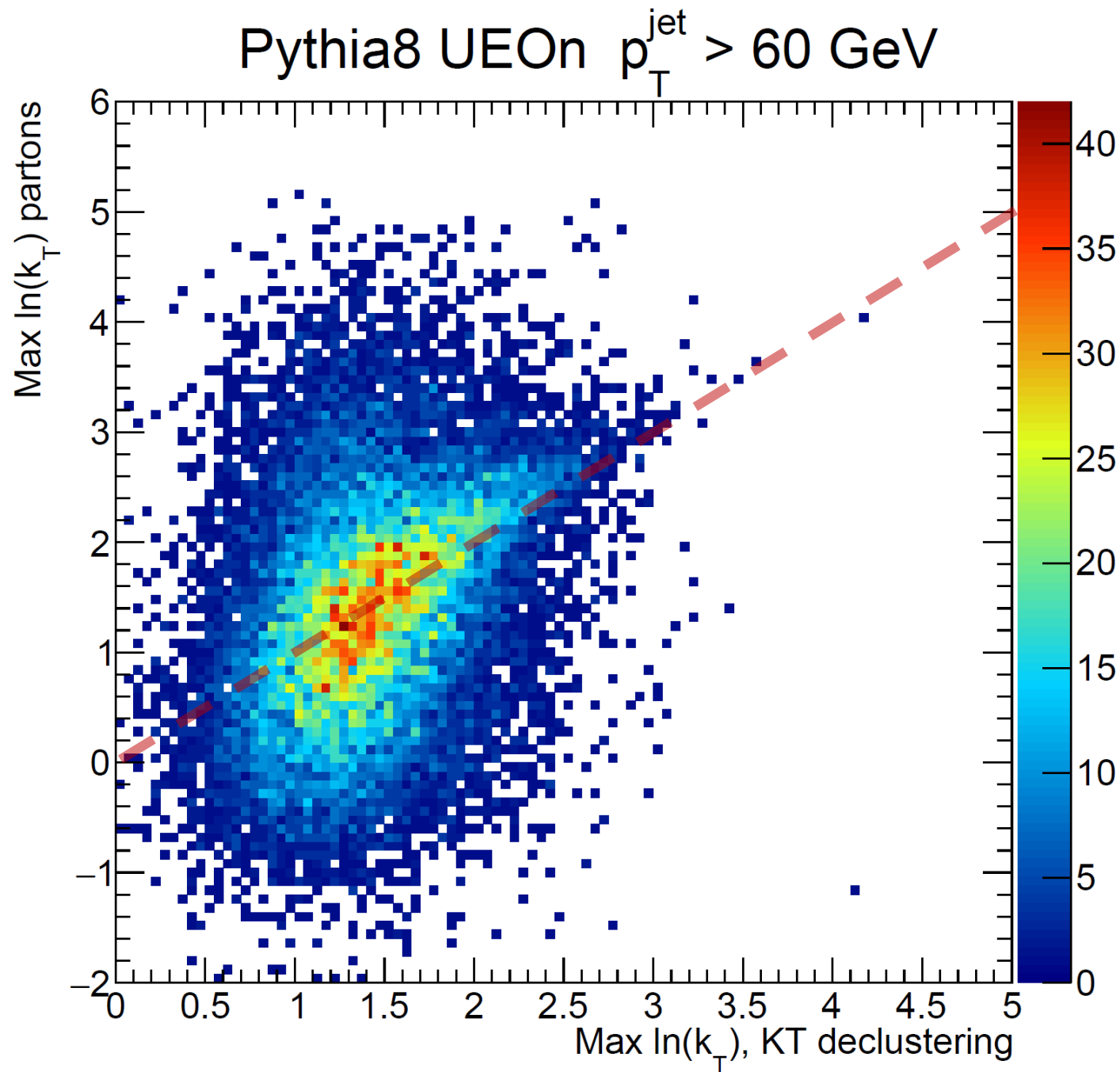
$p_T^{jet} > 350$ GeV
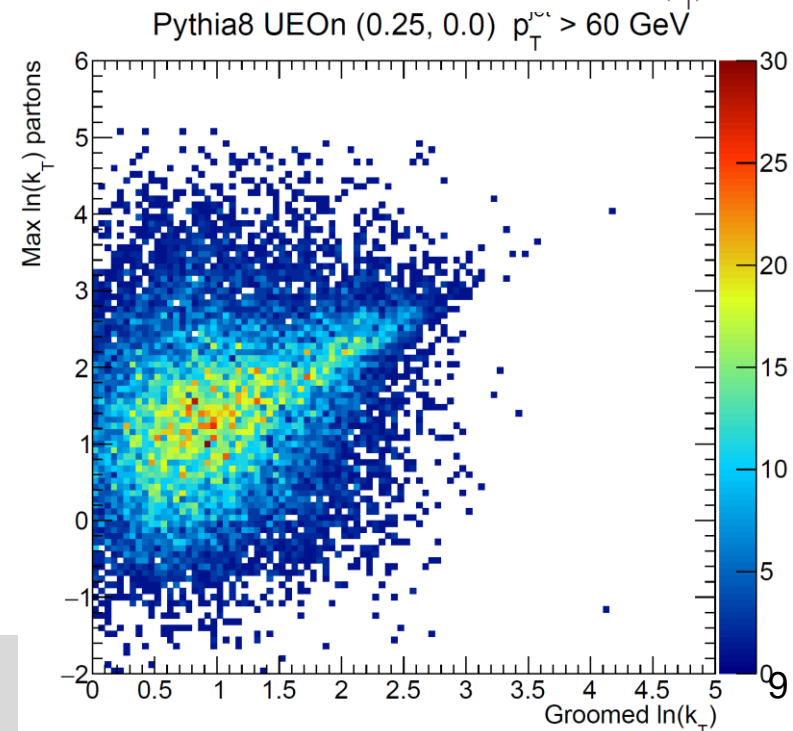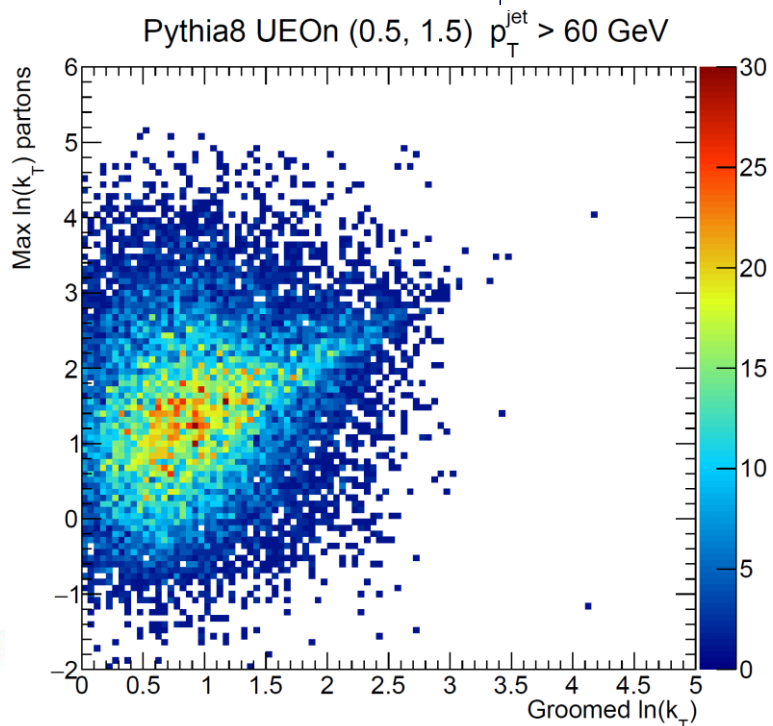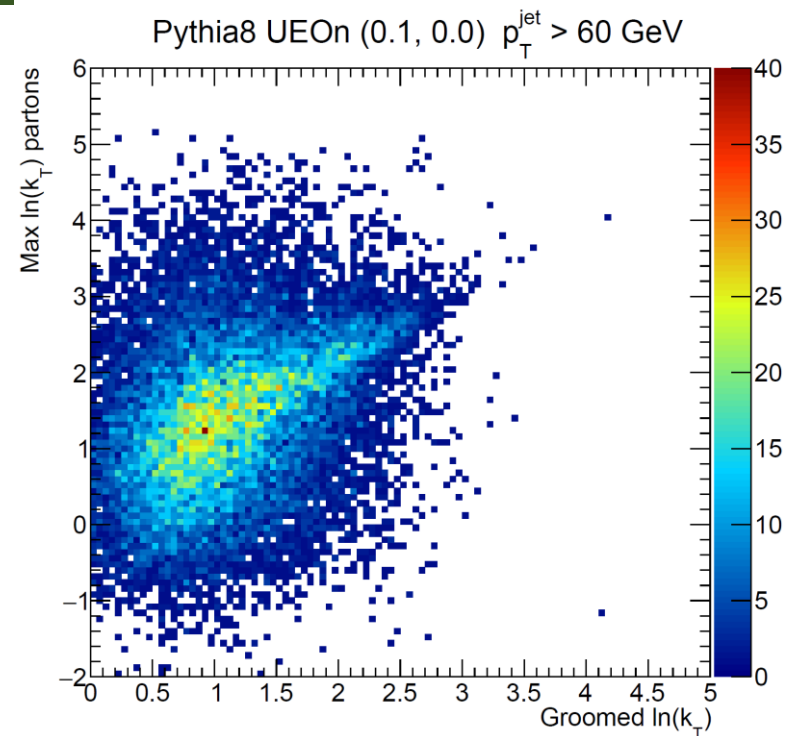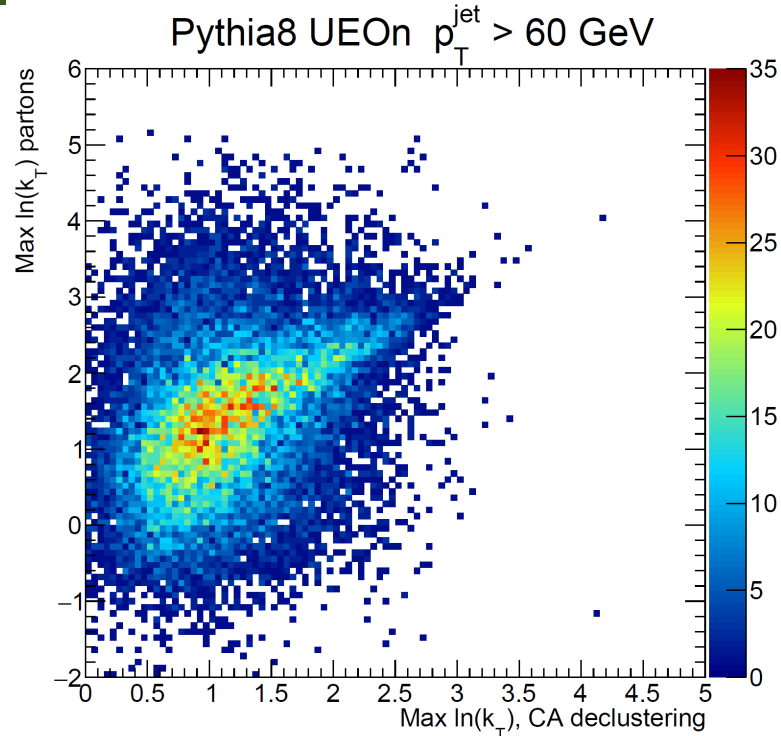
$p_T^{jet} > 350$ GeV

PYTHIA $\hat{p}_T$ >300 GeV, KT
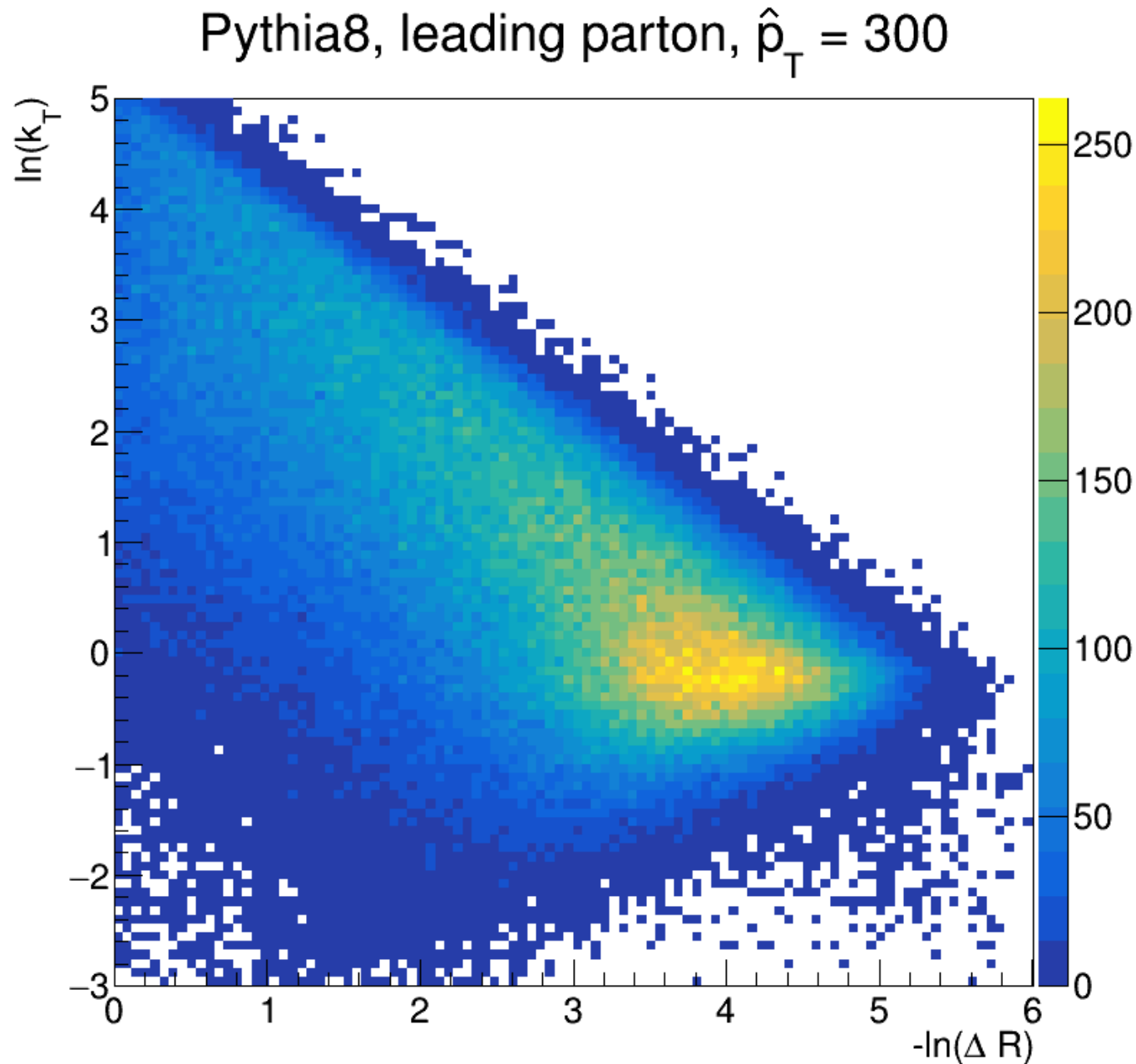
$p_T^{jet} > 350$ GeV

UE Off

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

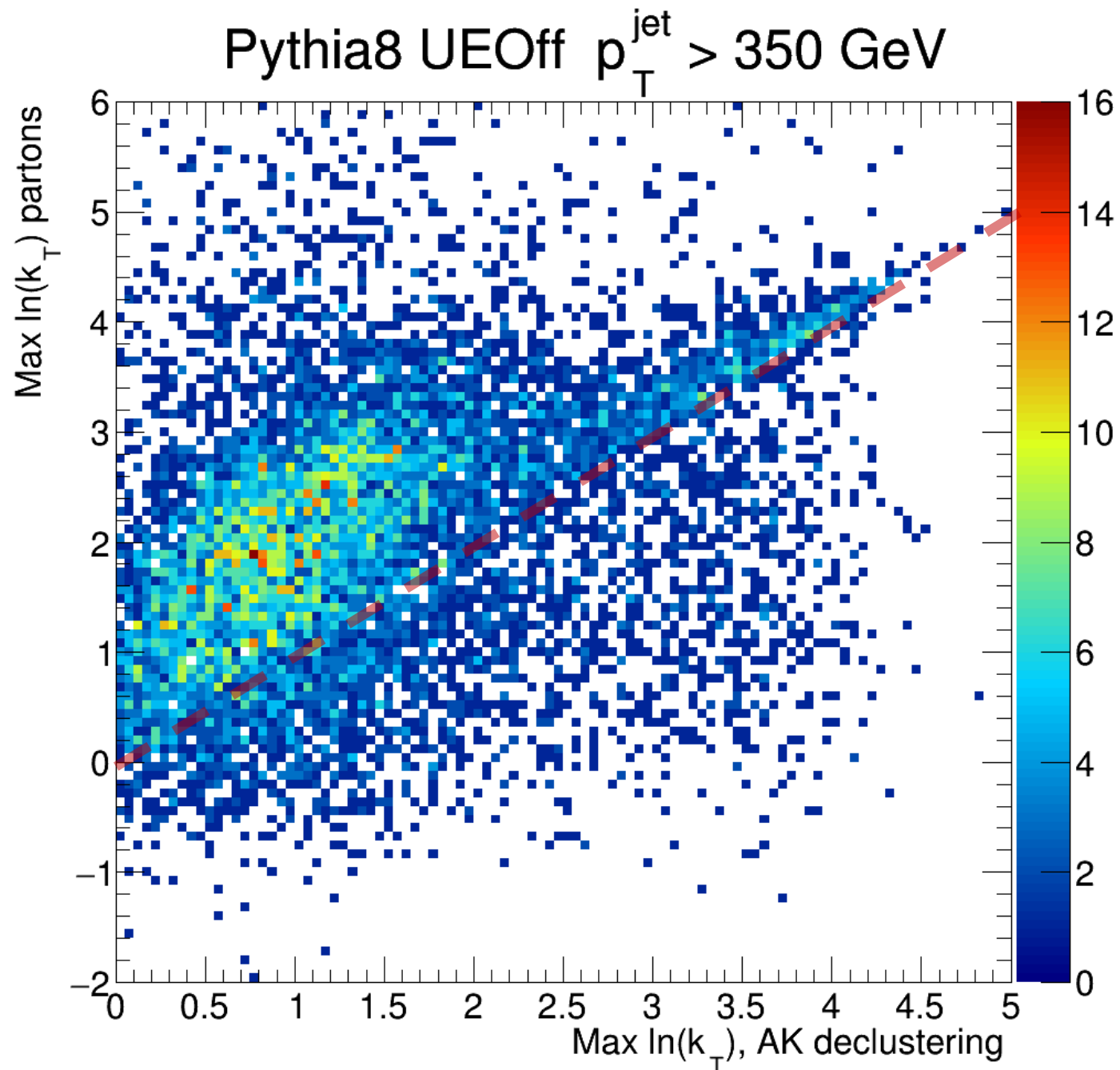Pythia8 UEOff $p_T^{jet} > 350$ GeV

Pythia8 UEOff p_T^{jet} > 350 GeV

Pythia8 UEOff $p_T^{jet} > 350$ GeV
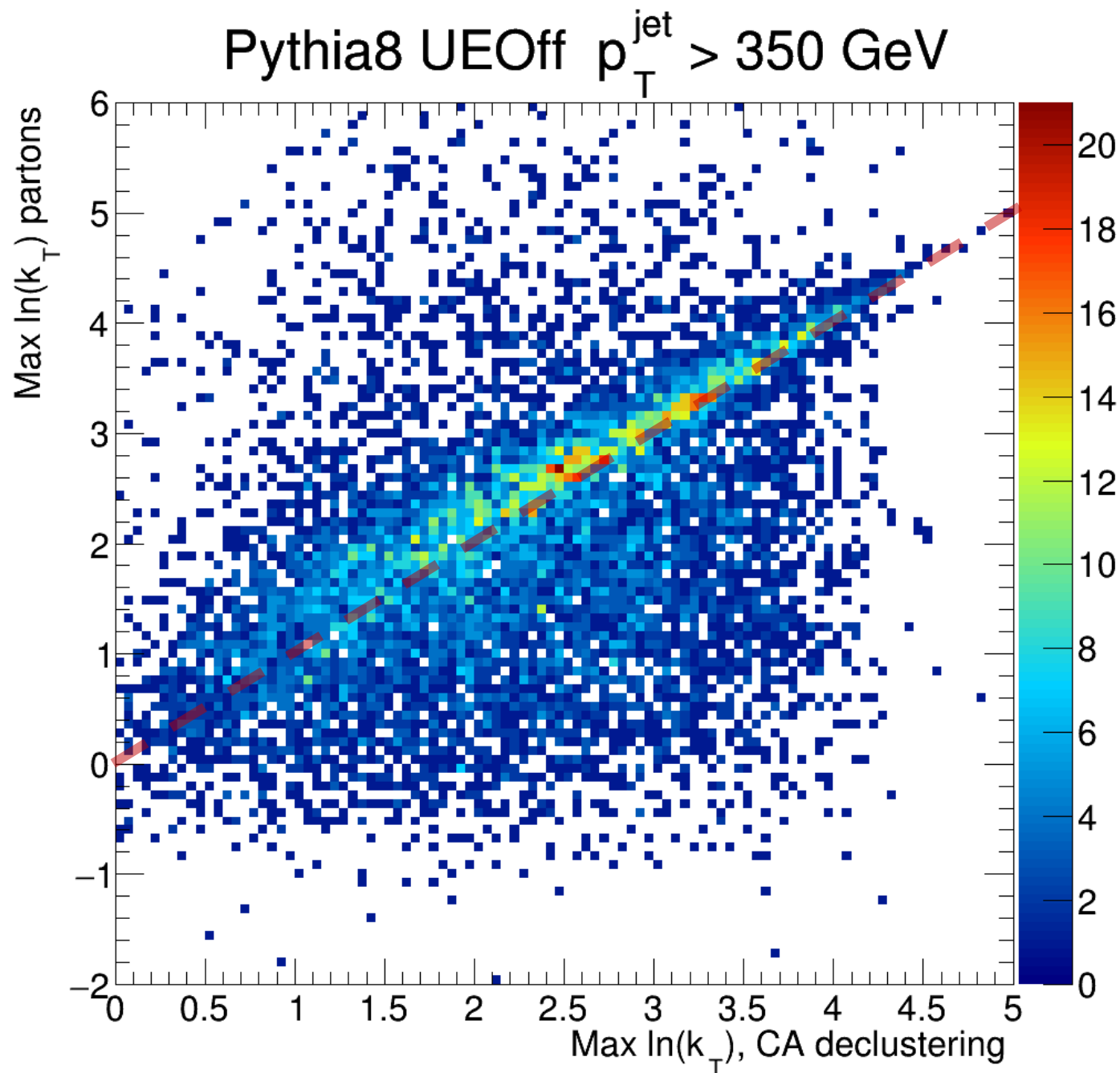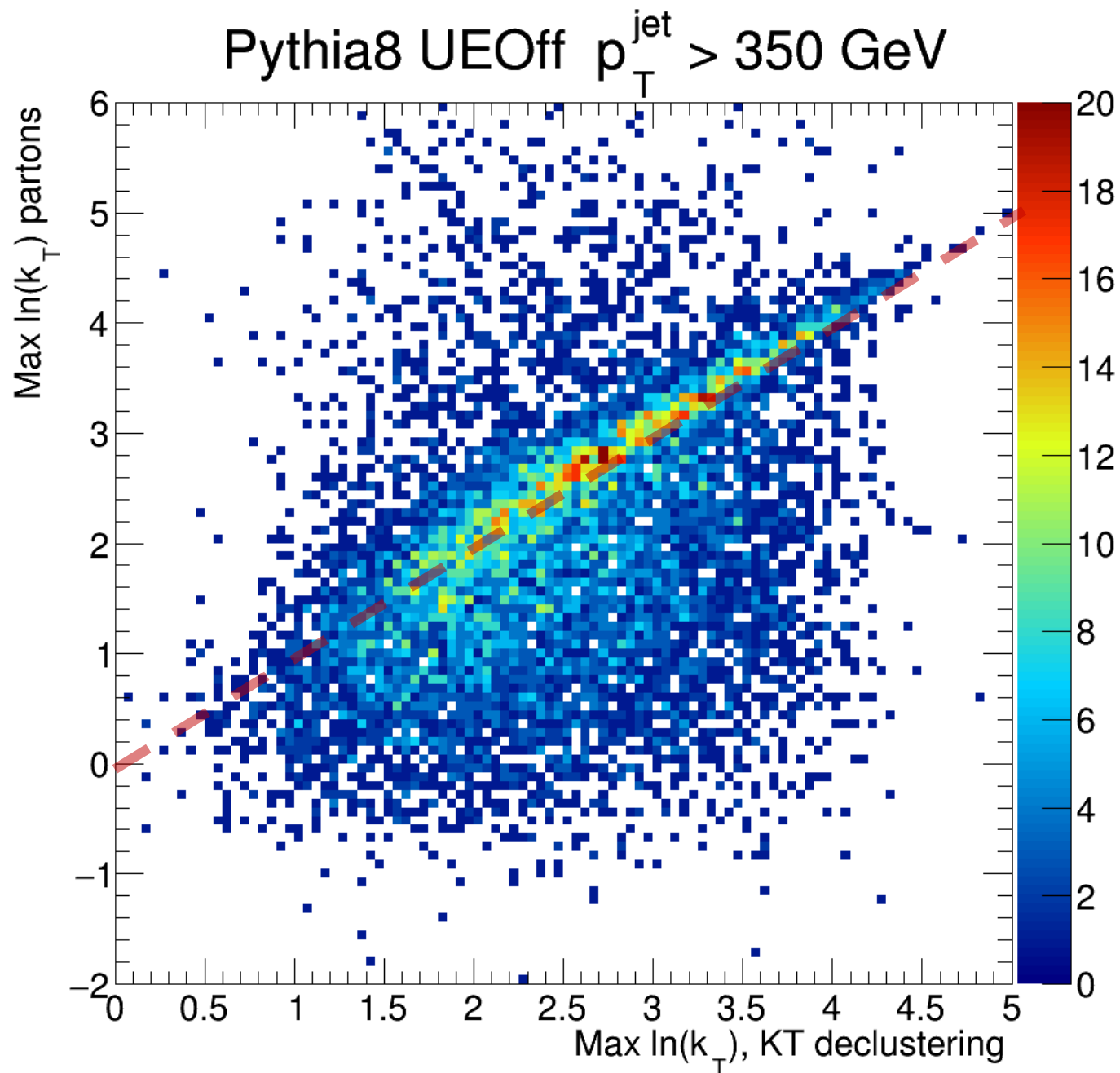
PYTHIA $\hat{p}_T$ >300 GeV, CA

p_T^{jet} > 350 GeV

Max ln(k_T) partons

Max ln(k_T), CA declustering
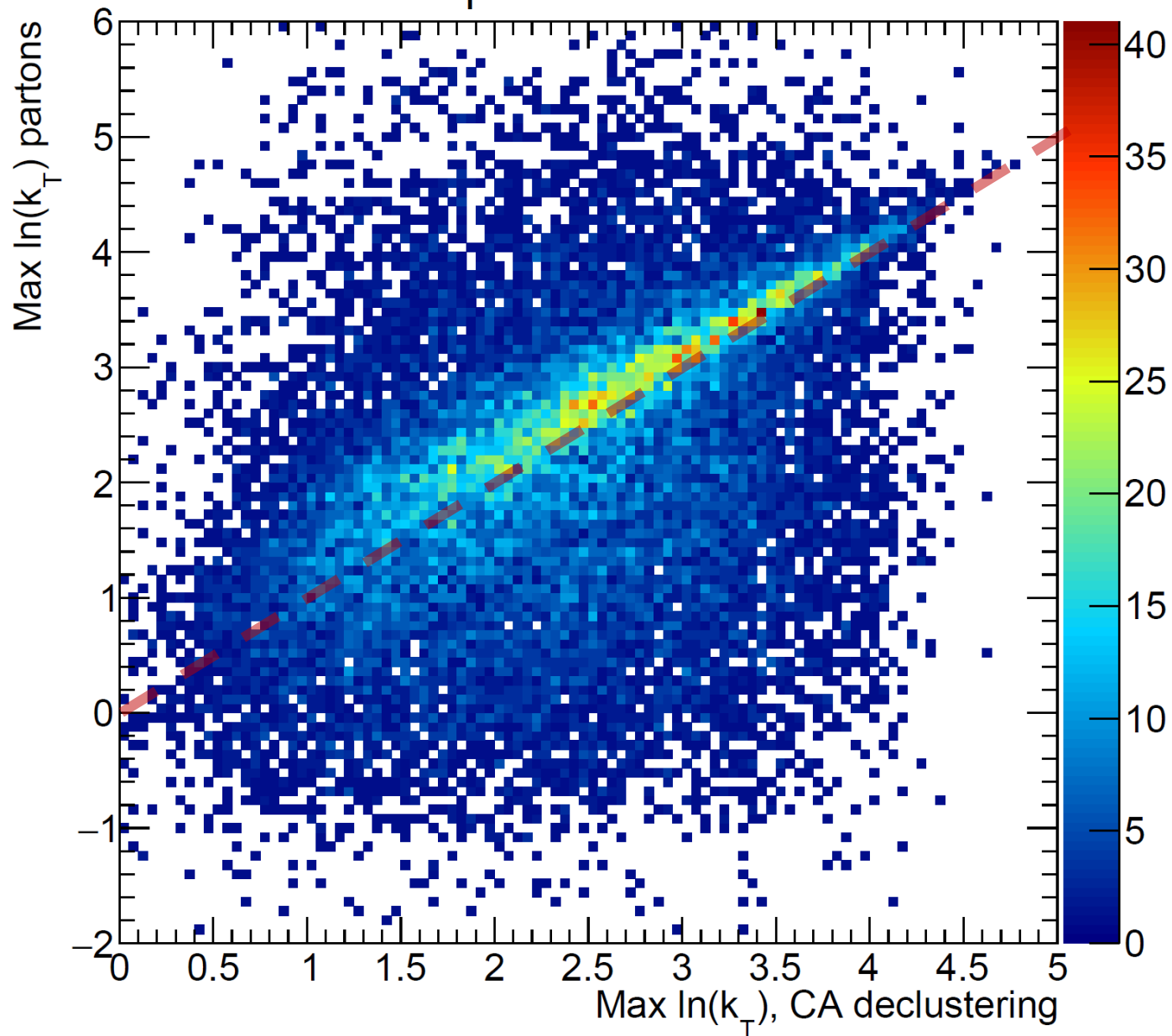
PYTHIA $\hat{p}_T$ >300 GeV, KT

p_T^{jet} > 350 GeV
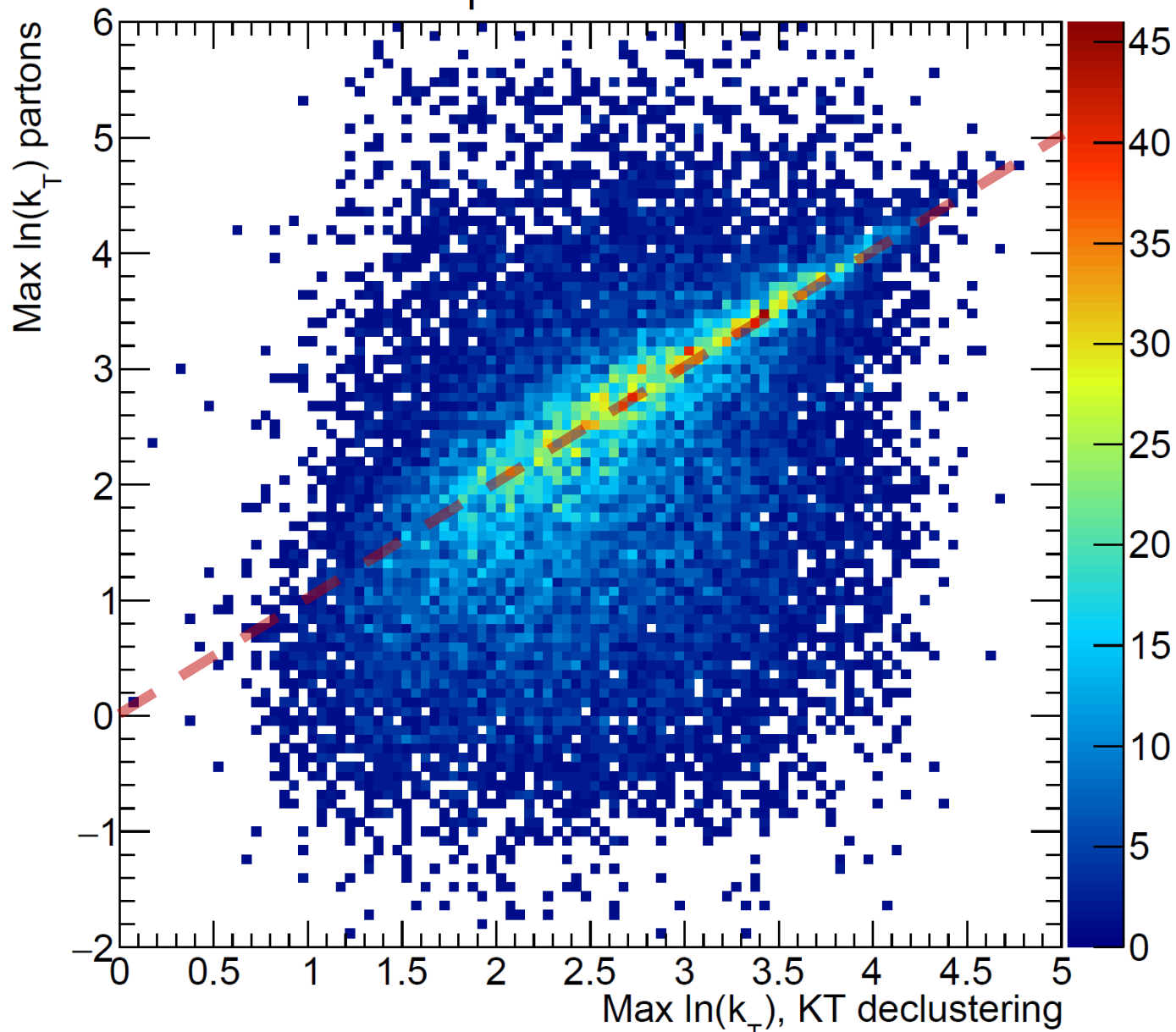
Unbeautified plots

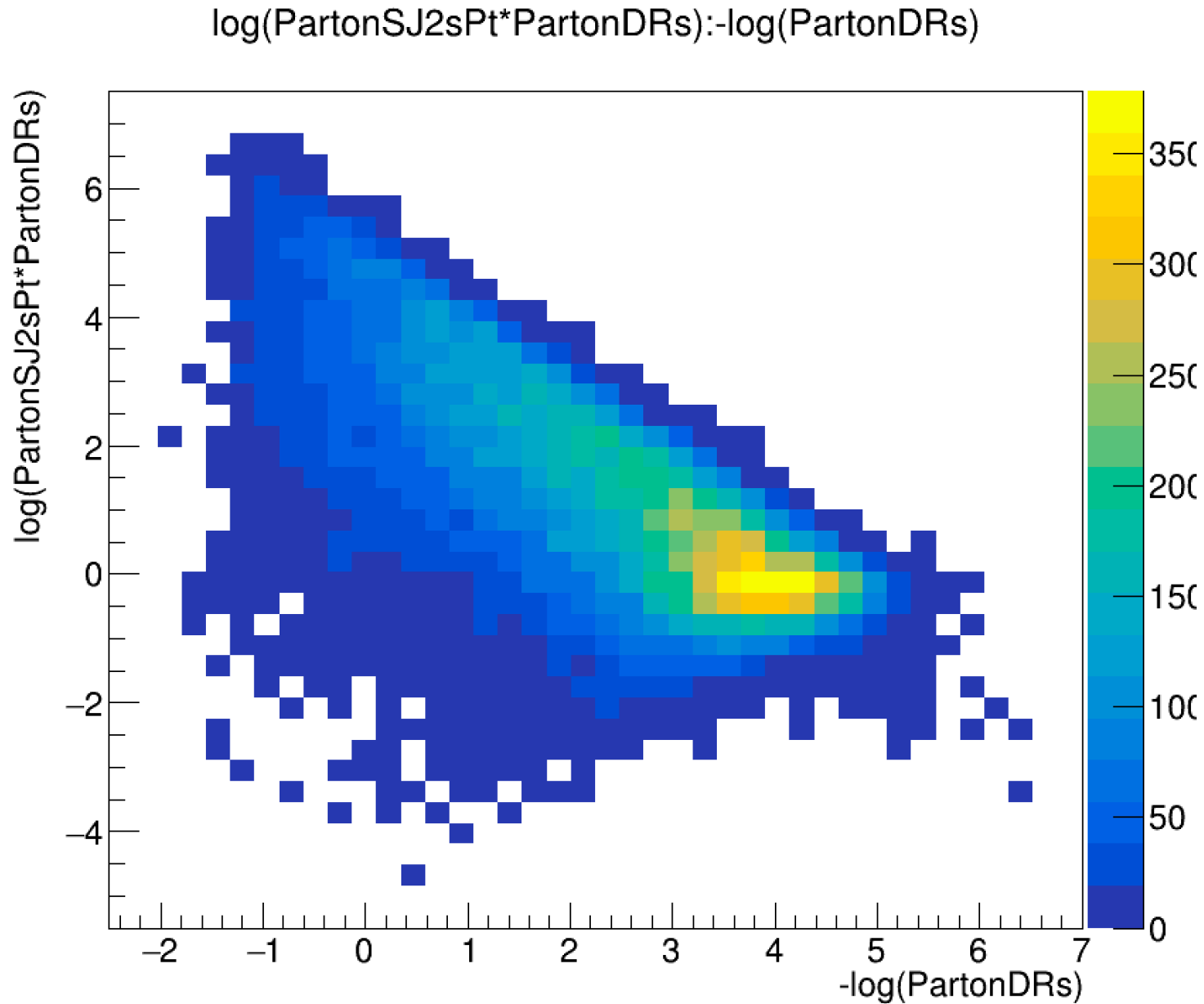# Unbeautified Parton Level Lund Diagram

log(PartonSJ2sPt*PartonDRs):-log(PartonDRs)

With lower statistics in cross-check macro

Unbeautified bad plot

log(SignalJetCAZGs[0]*SignalJetCADRs[0]*SignalJetPt[0]):log(0.4/SignalJetCADRs[0]) (SignalJetPt[0]>300)

KT

CA

Unbeautified resolution function

Unbeautified resolution function
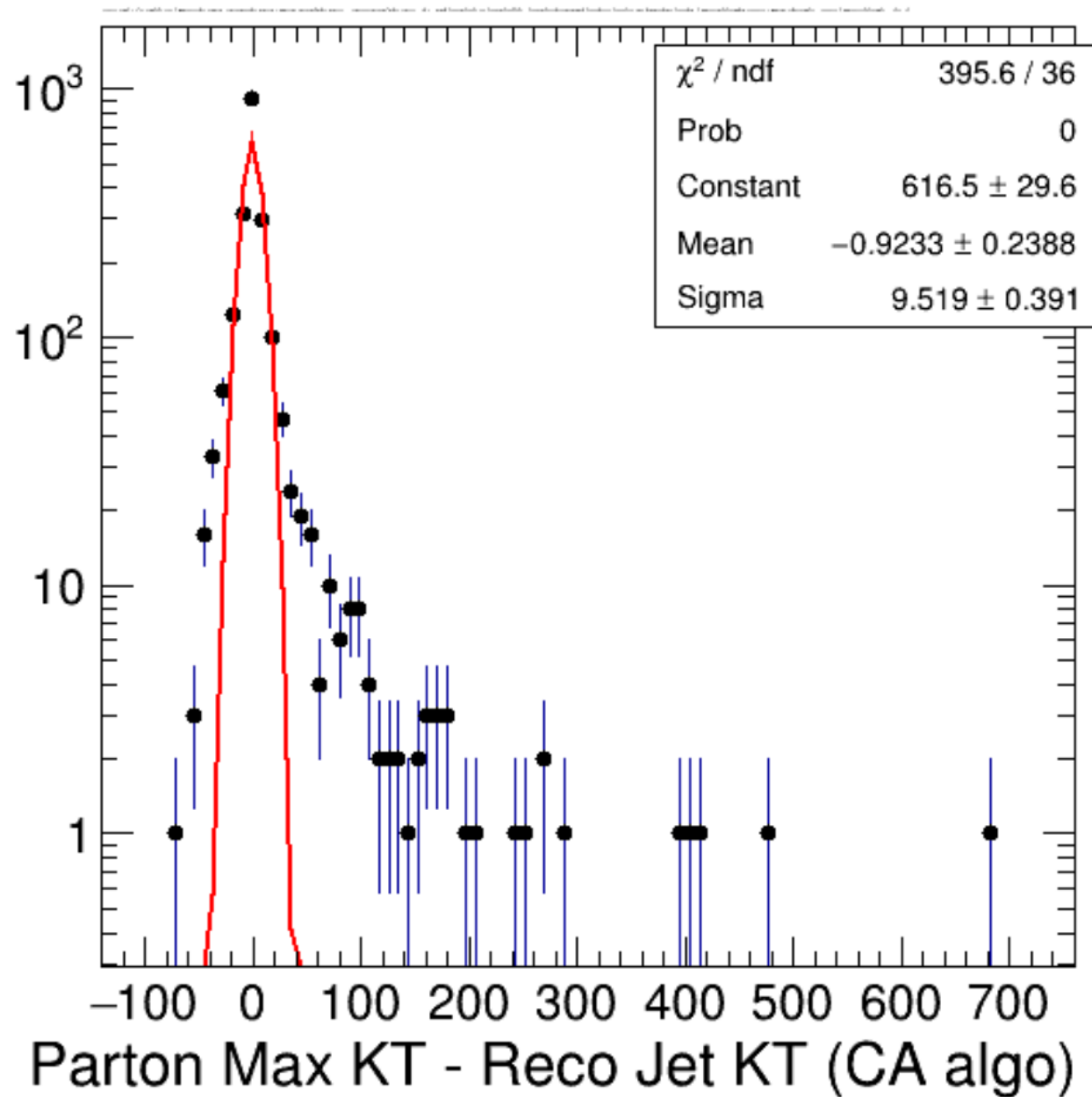
Unbeautified resolution function

χ^2 / ndf   455 / 37
Prob   0
Constant 664.1 ± 30.7
Mean 4.339 ± 0.287
Sigma 8.515 ± 0.329

Parton Max KT - Reco Jet KT (AK algo)