Study of Strangeness Production in Underlying Event at 7 TeV

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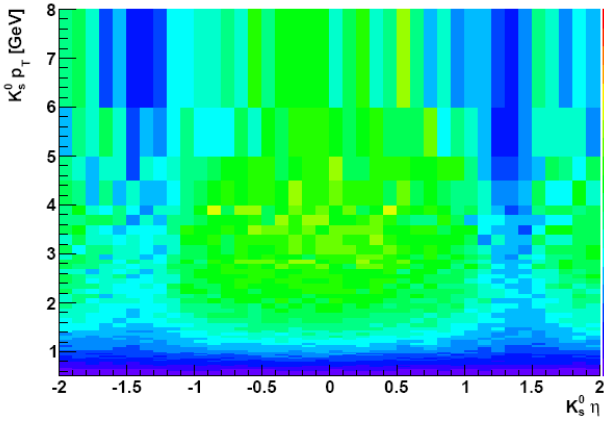
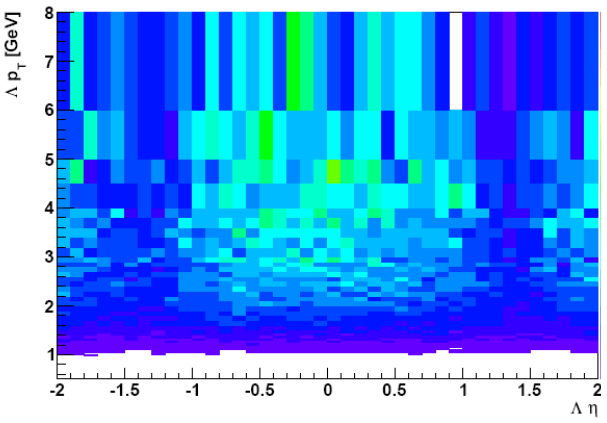
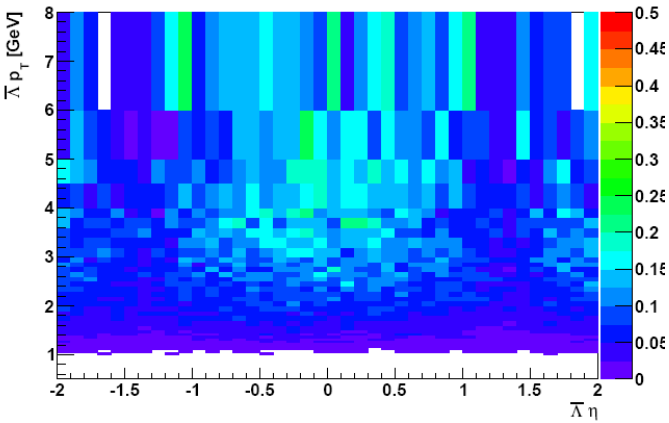
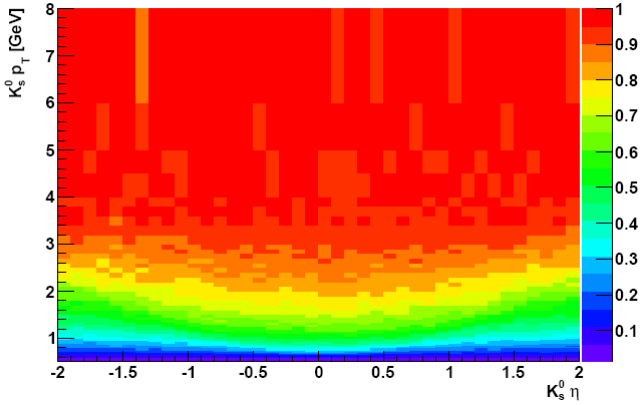
V0 Correction



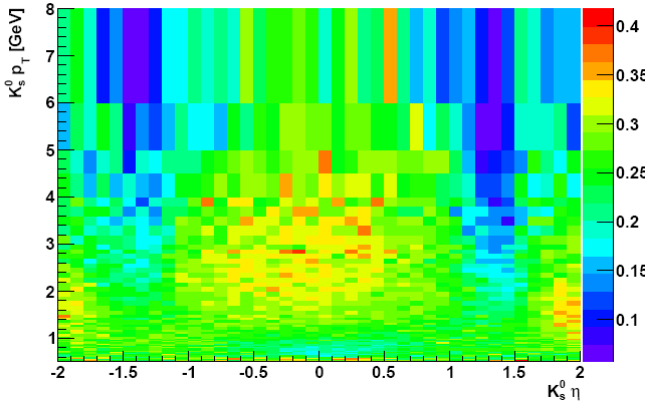




acc x eff



acceptance



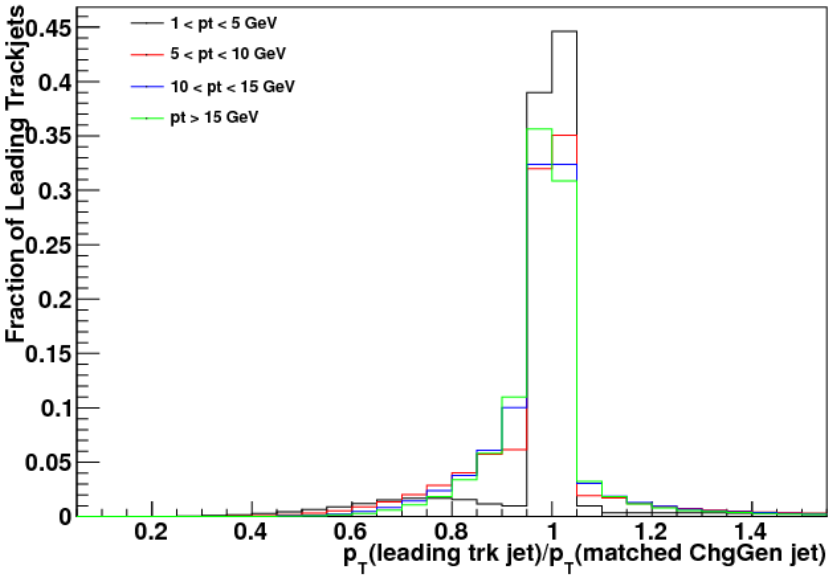
efficiency

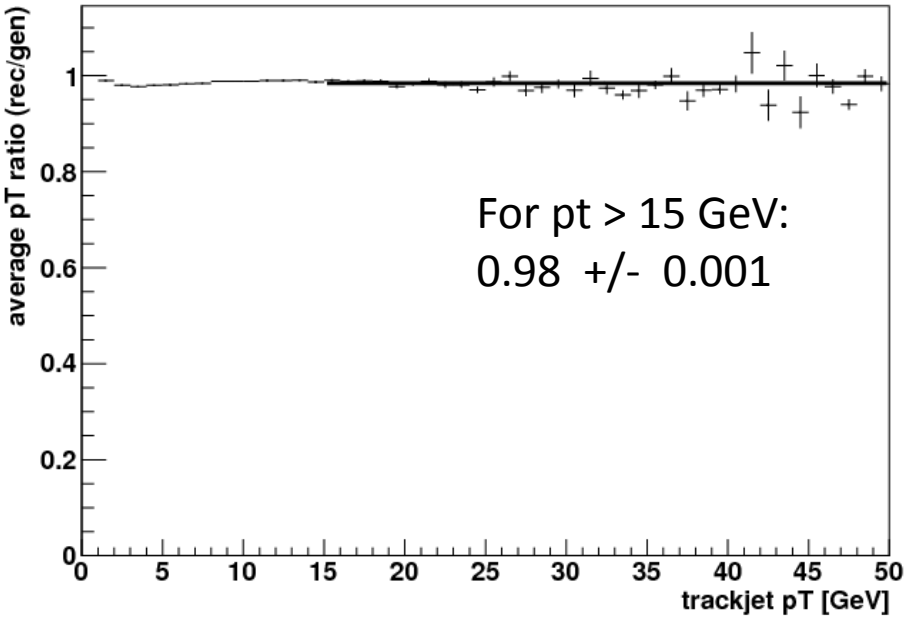
V0 Correction = 1 / (acceptance x efficiency)

TrackJet-Pt Correction

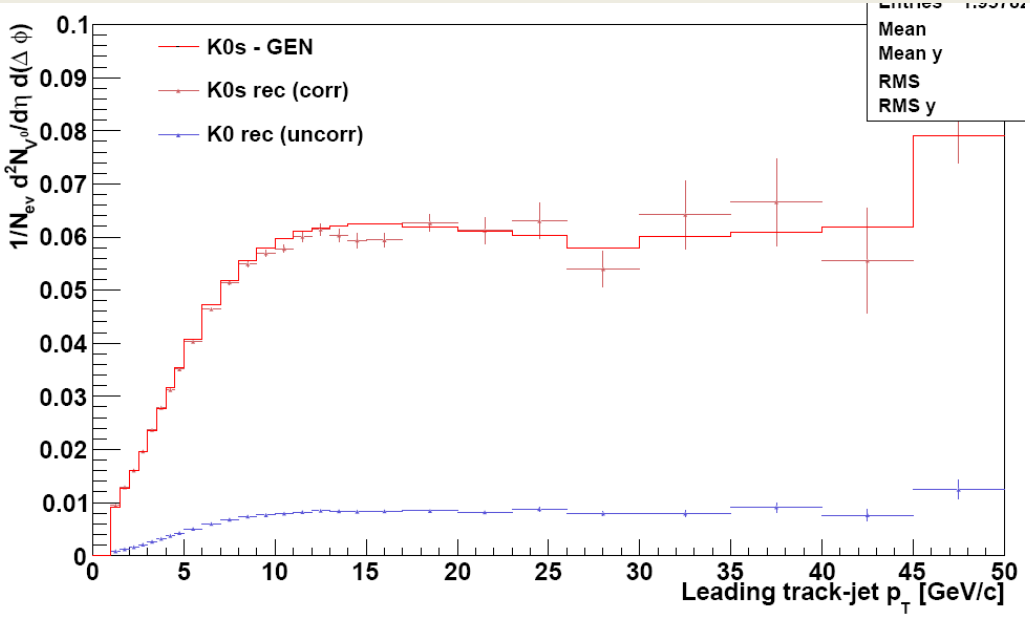
- Reconstructed GenChargedJet
  - select all stable charged generated particles with pT > 0.5 GeV and |eta| < 3.0
  - ***remove resonances from clustering***
  - run anti-kt algorithm (R = 0.5) on this ChargedGen selection
- match closest gen jet in R($\Delta\eta\Delta\phi$) < 0.5 to reco trackjet

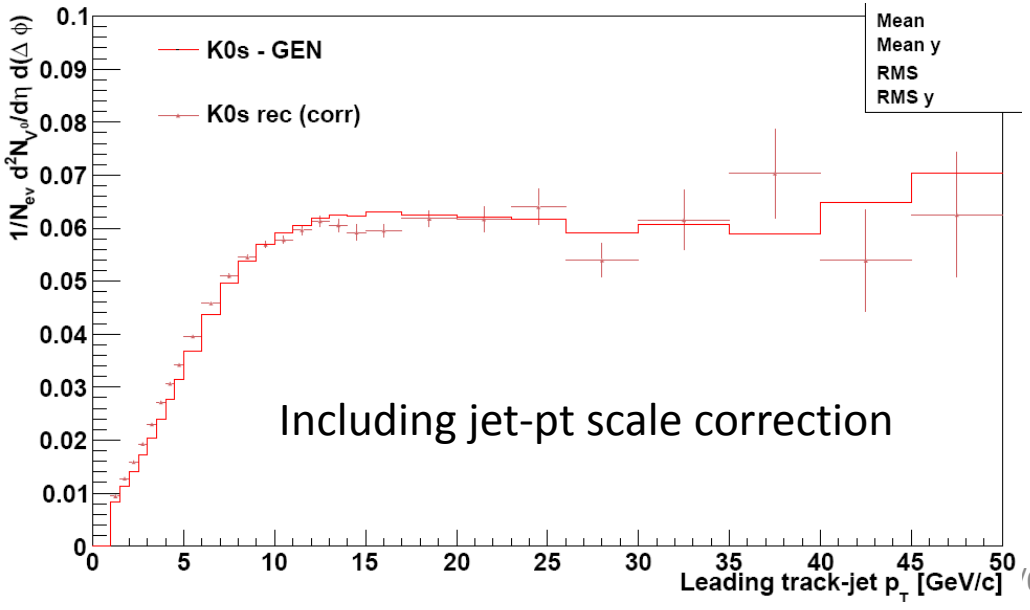
pT ratio





Closure Test (Pythia6-D6T)



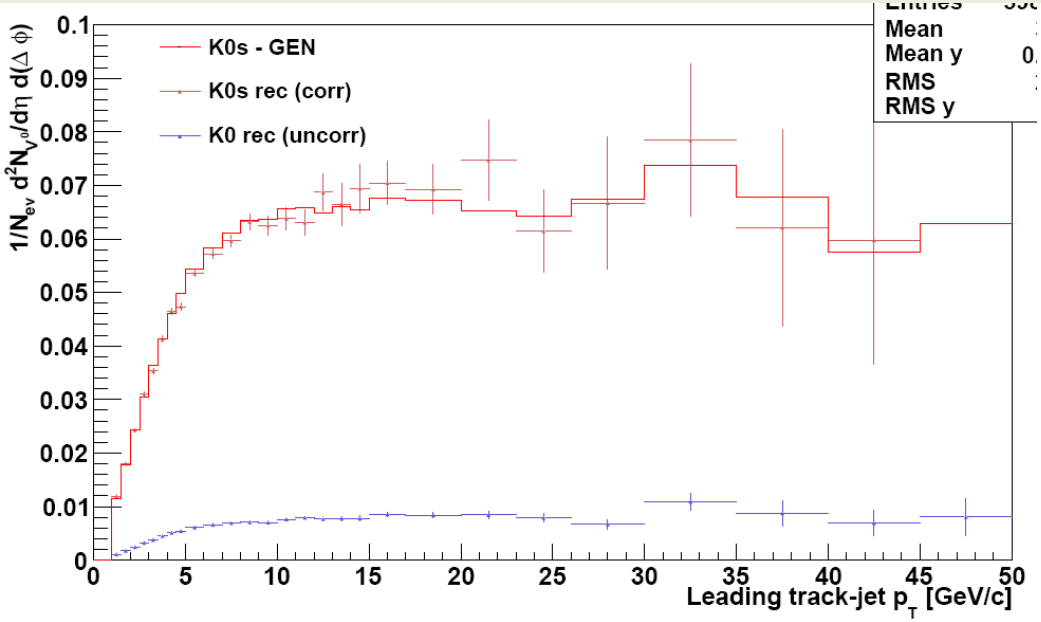


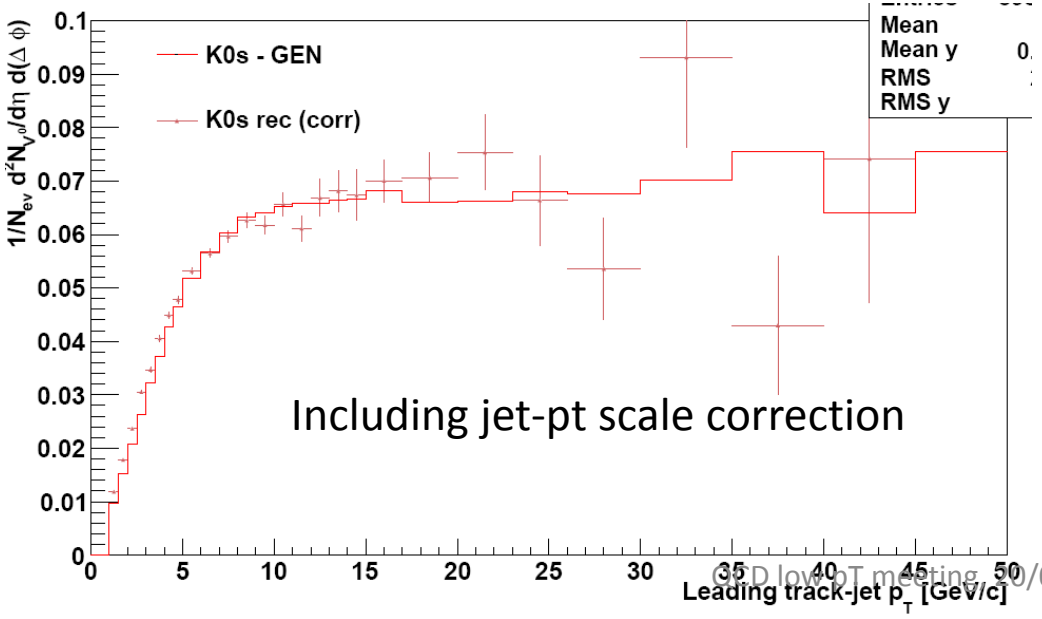
- compare TRUE MC distribution to corrected reconstructed level (acceptance, efficiency, background subtracted)

- statistical errors only

K0s

Closure Test (Pythia6-TuneZ1)

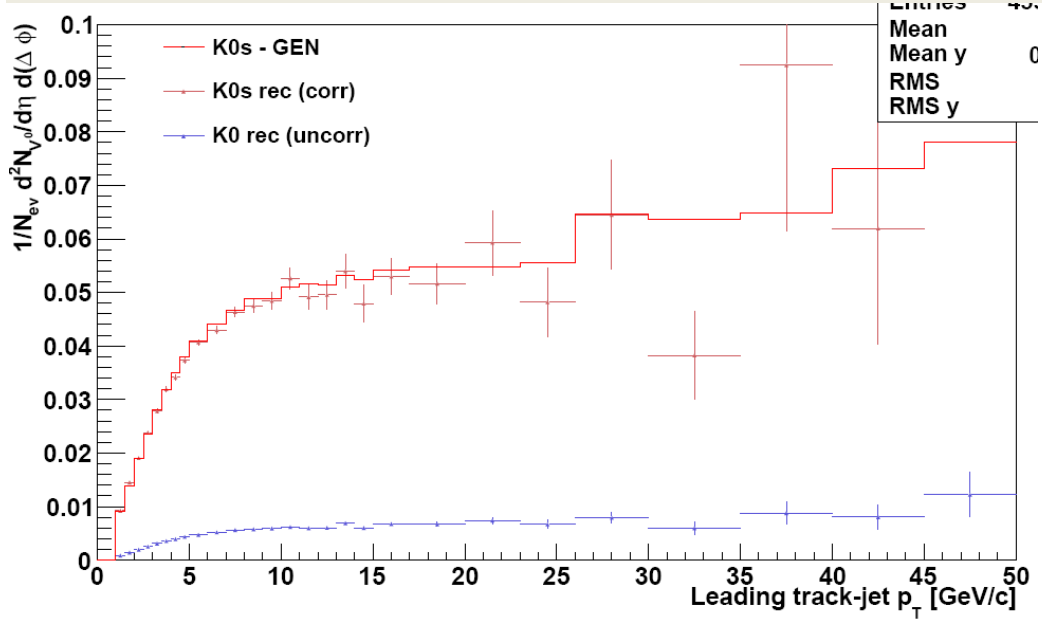


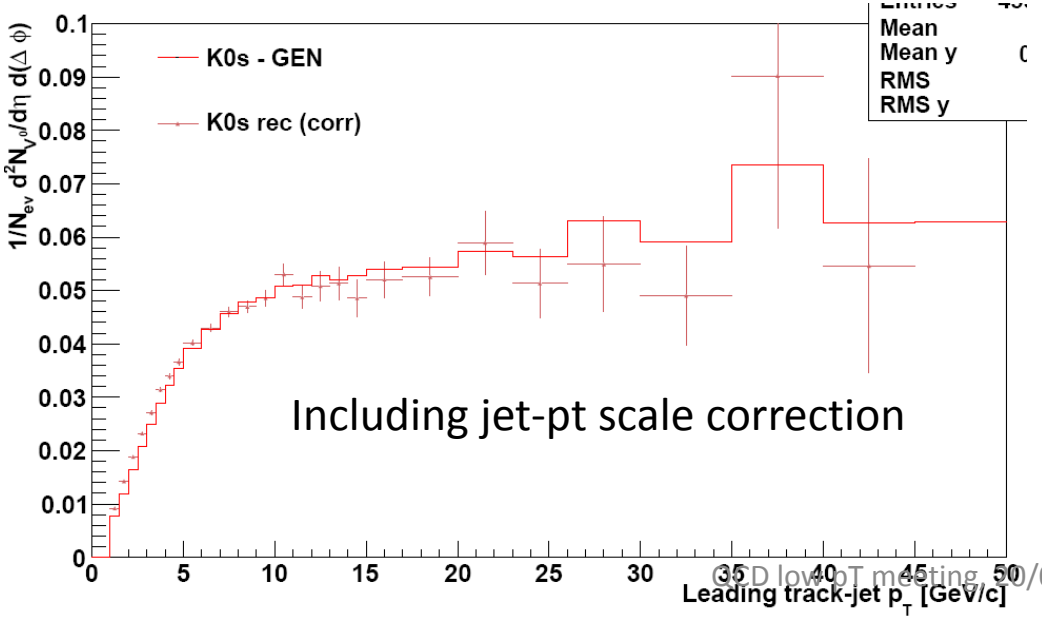


- using V0 correction from D6T

K0s

Closure Test (Pythia8)

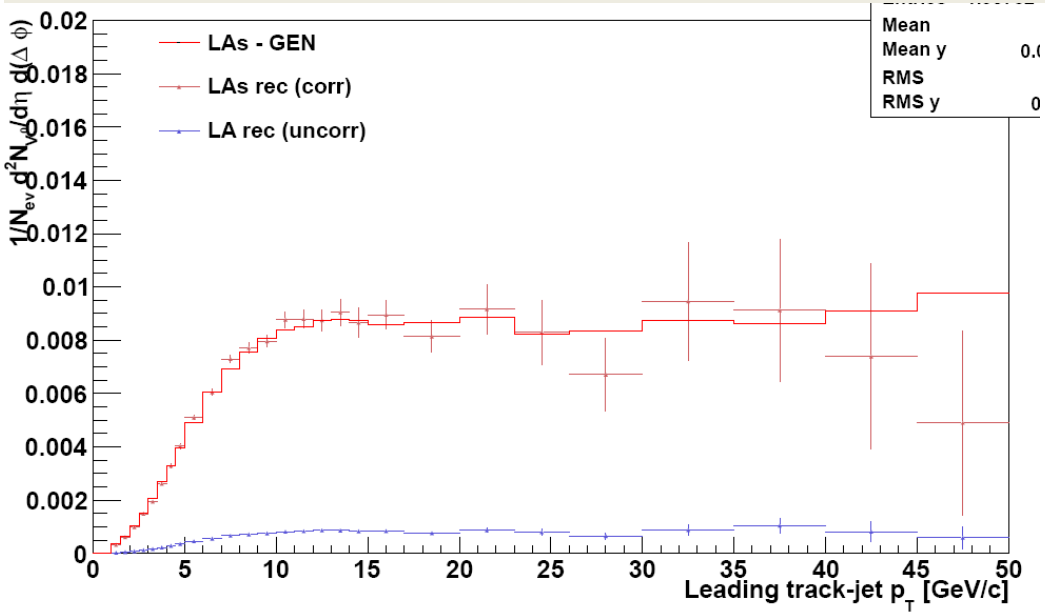


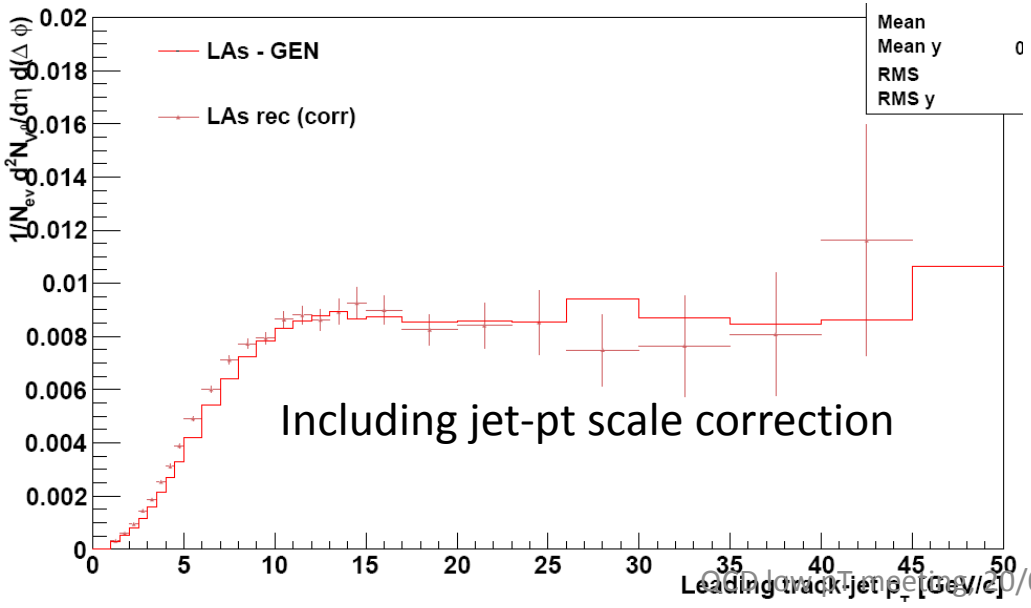


- using V0 correction from D6T

K0s

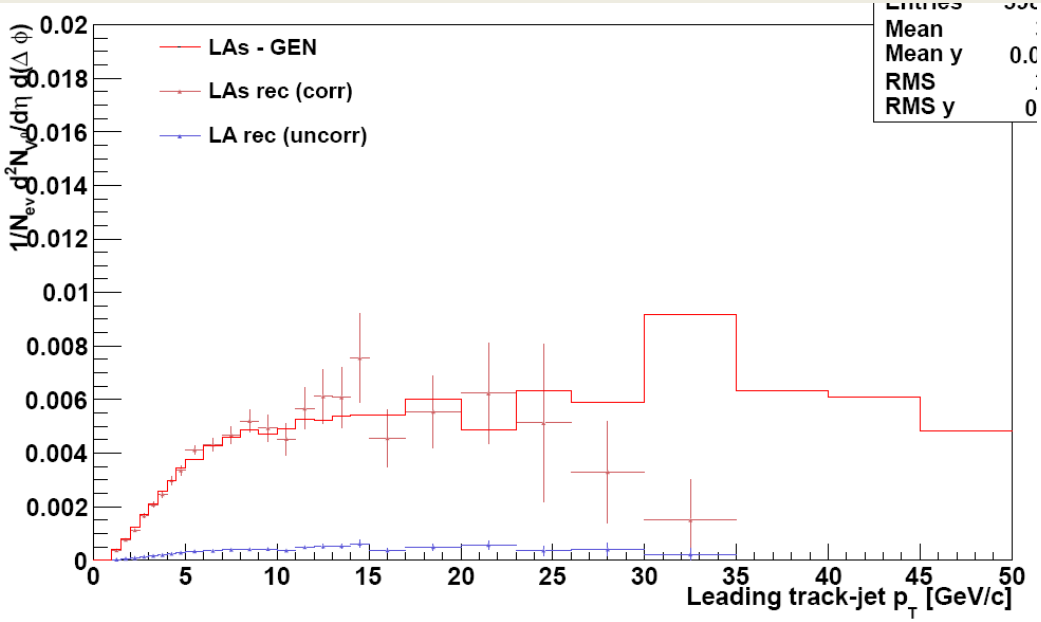
Closure Test (Pythia6-D6T)

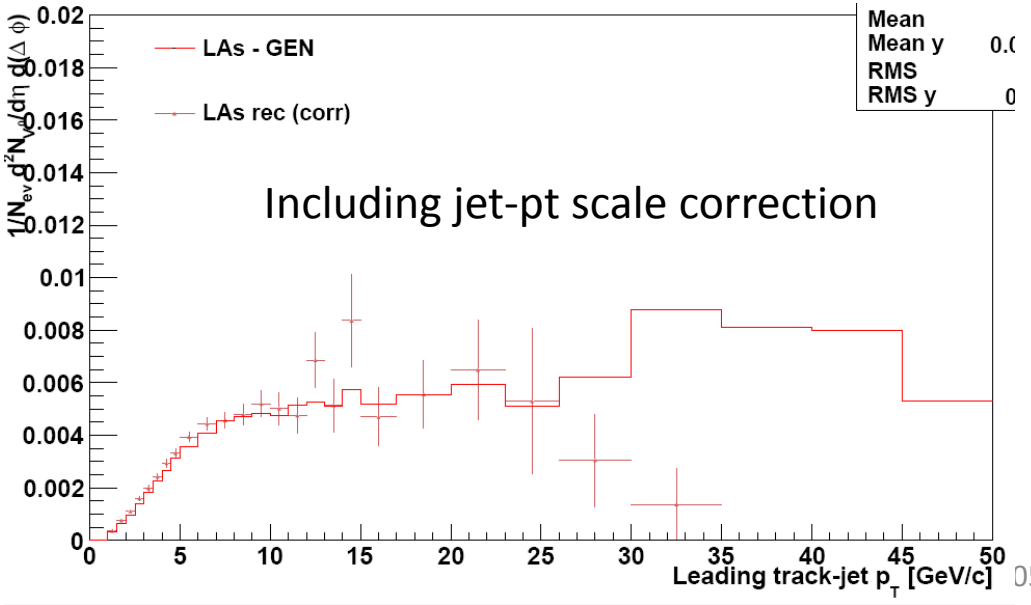




La

Closure Test (Pythia6-TuneZ1)

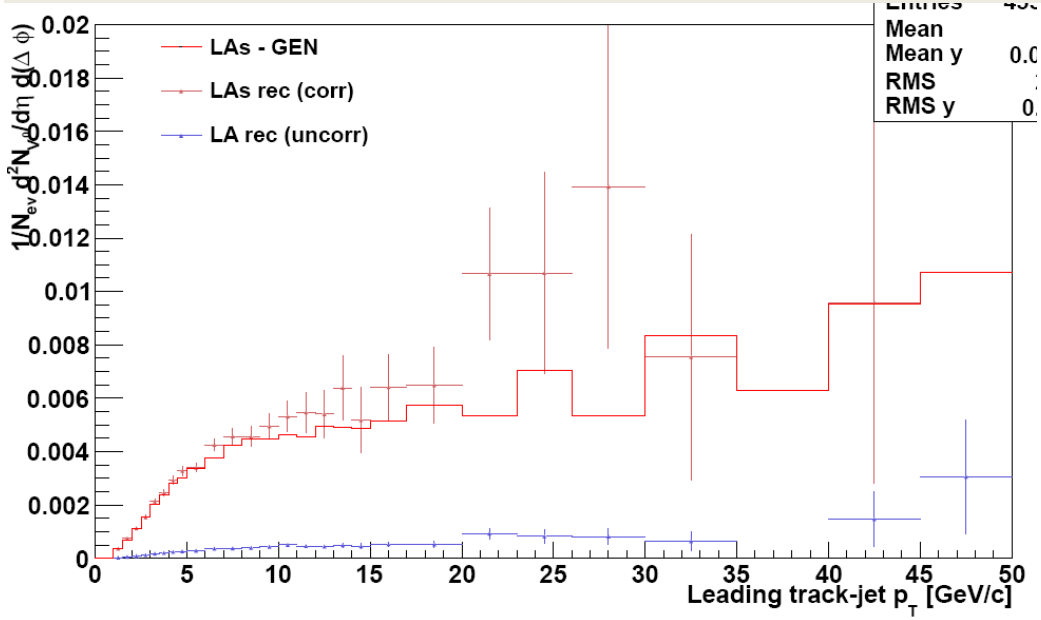


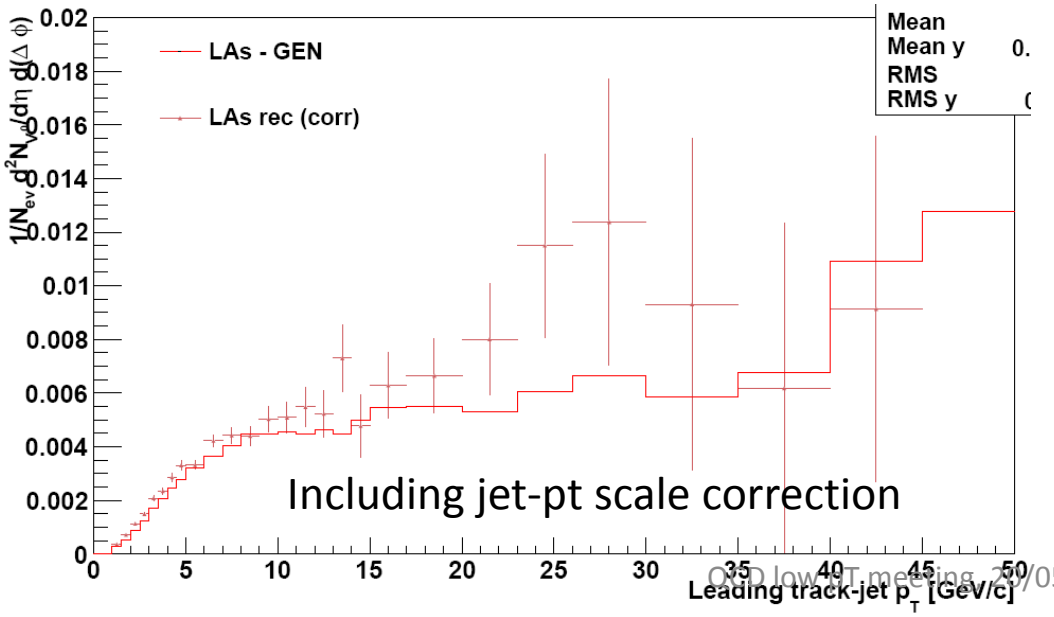


- using V0 correction from D6T

La

Closure Test (Pythia8)

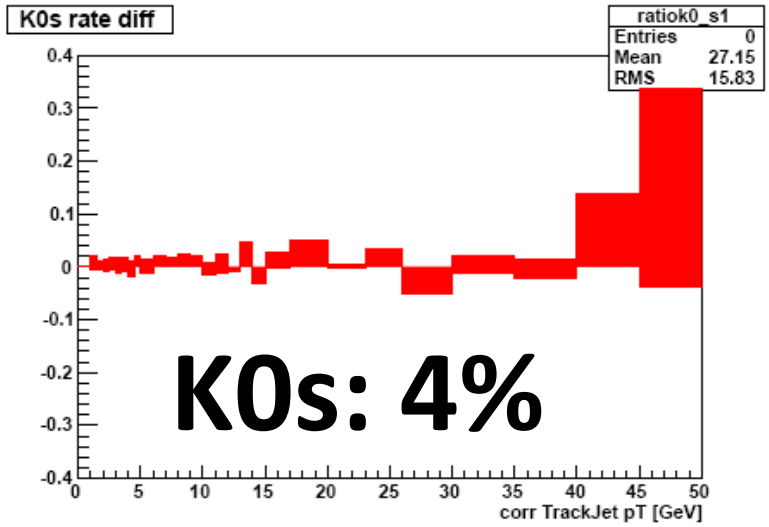


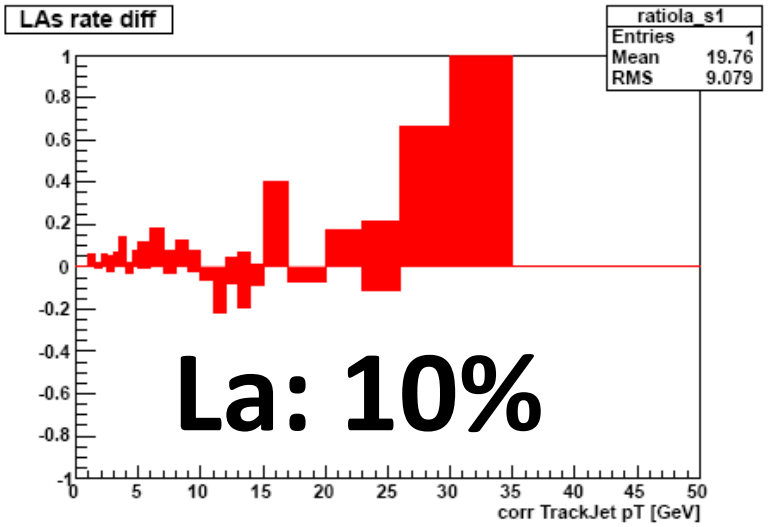


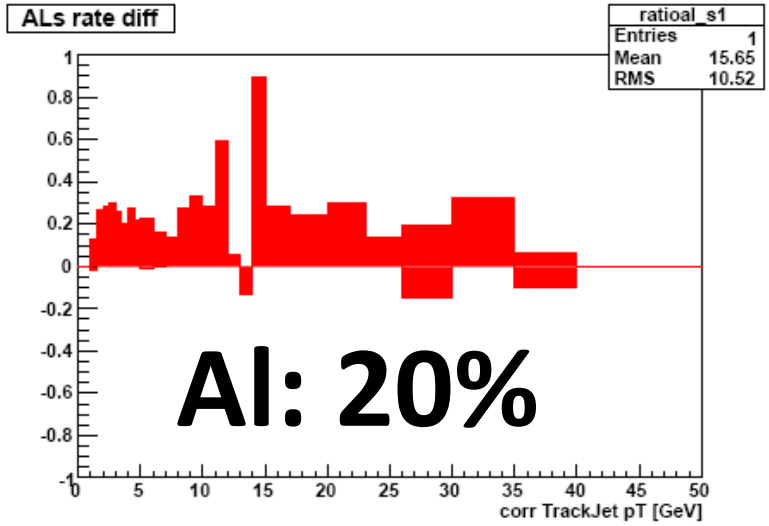
- using V0 correction from D6T

La

V0 Correction Systematics

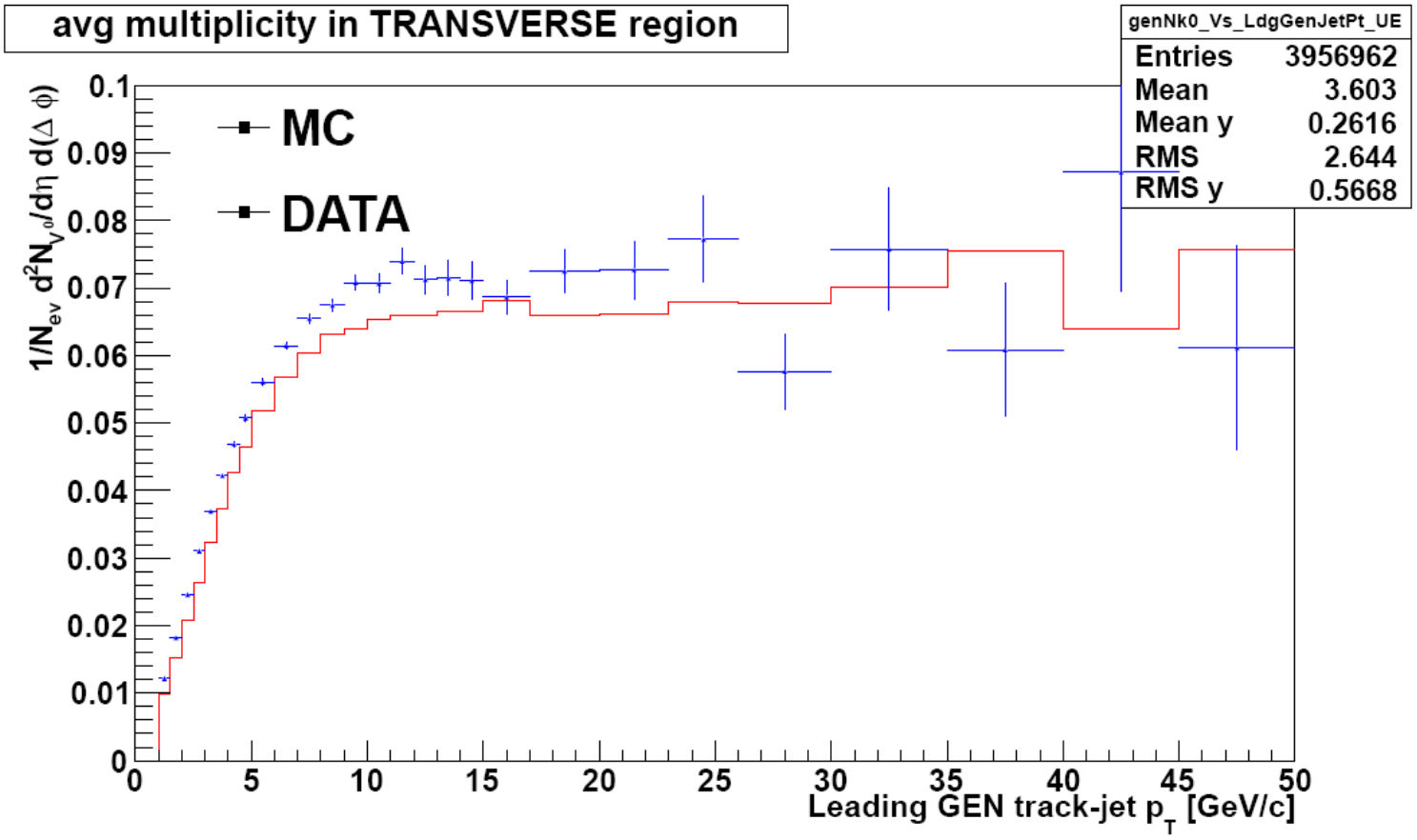






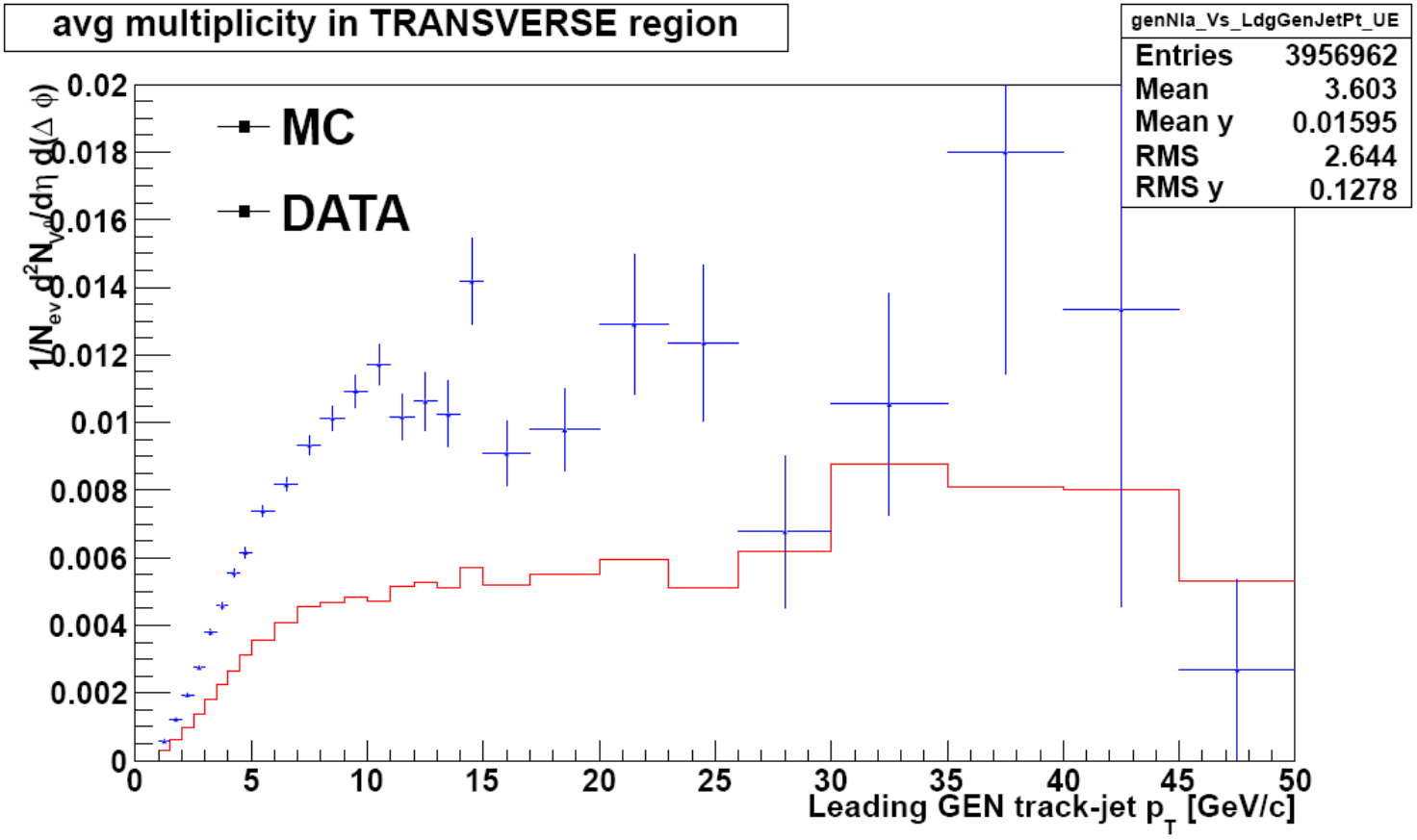
- syst estimated from the difference in rates obtained using V0 corrections from D6T, Z1 and Pythia8 MC samples

Rates K0s

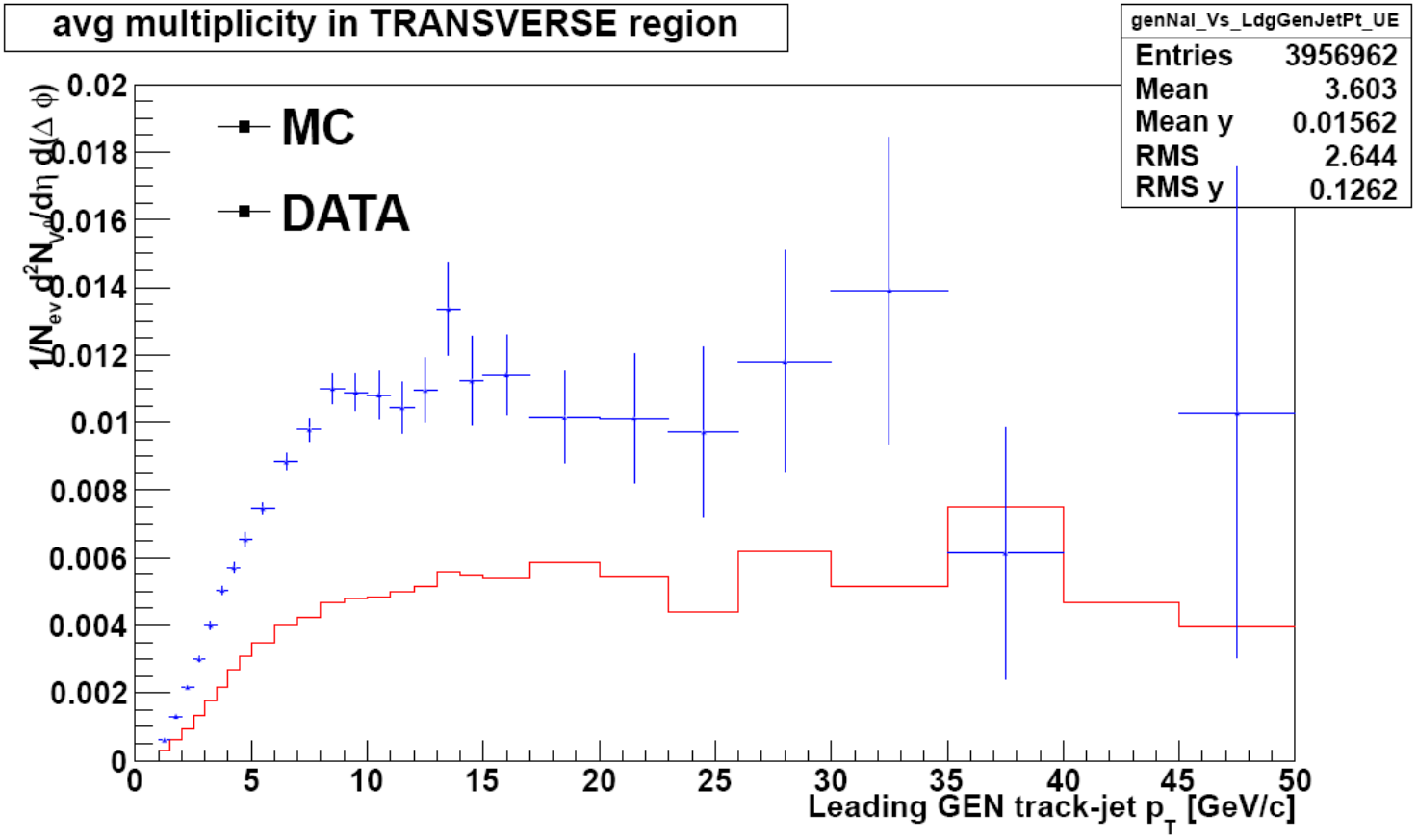


- V0 correction and jet-pt correction applied
- corrected for background (bin-by-bin basis)
- Jet-pt correction to hadron level

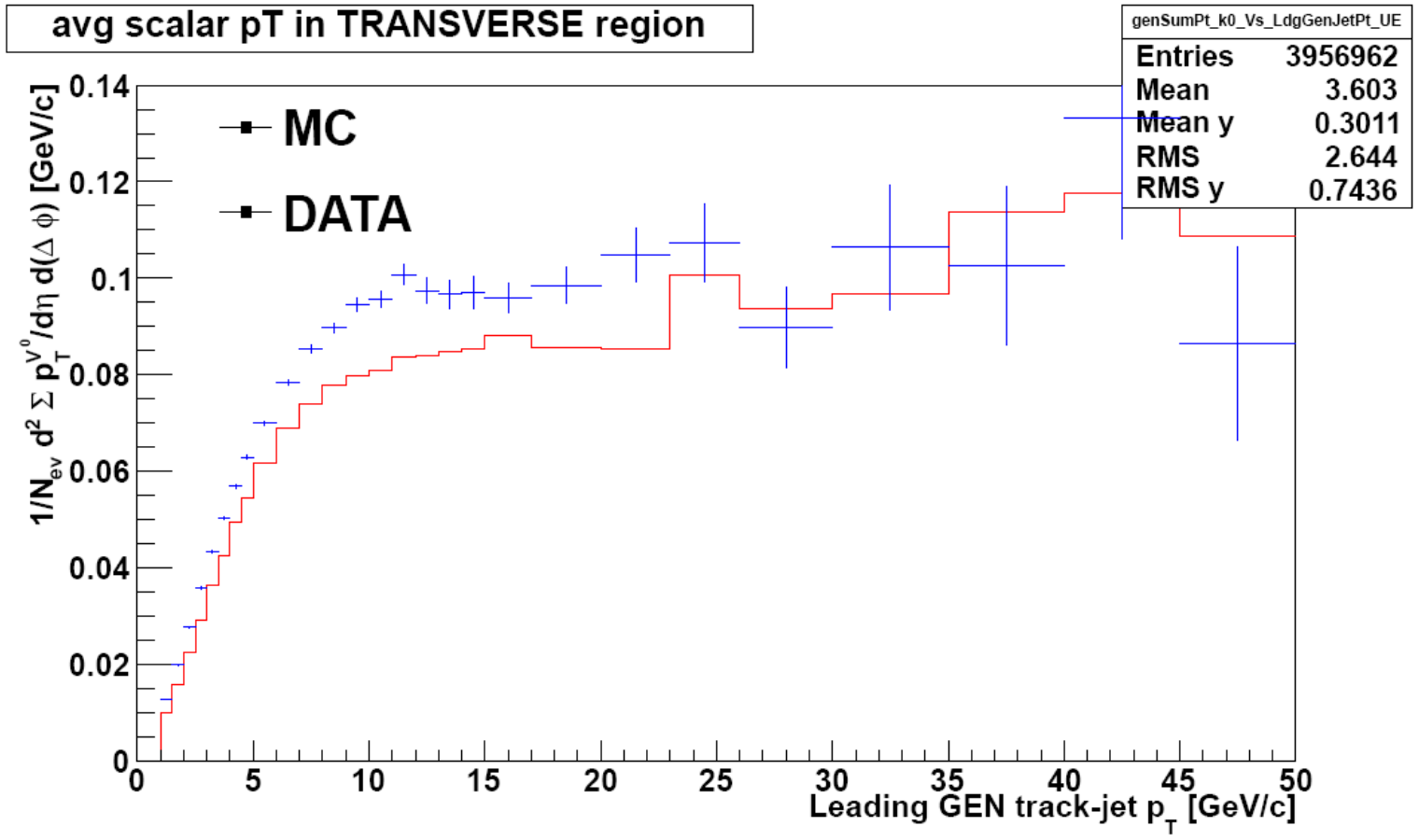
Rates Lambda



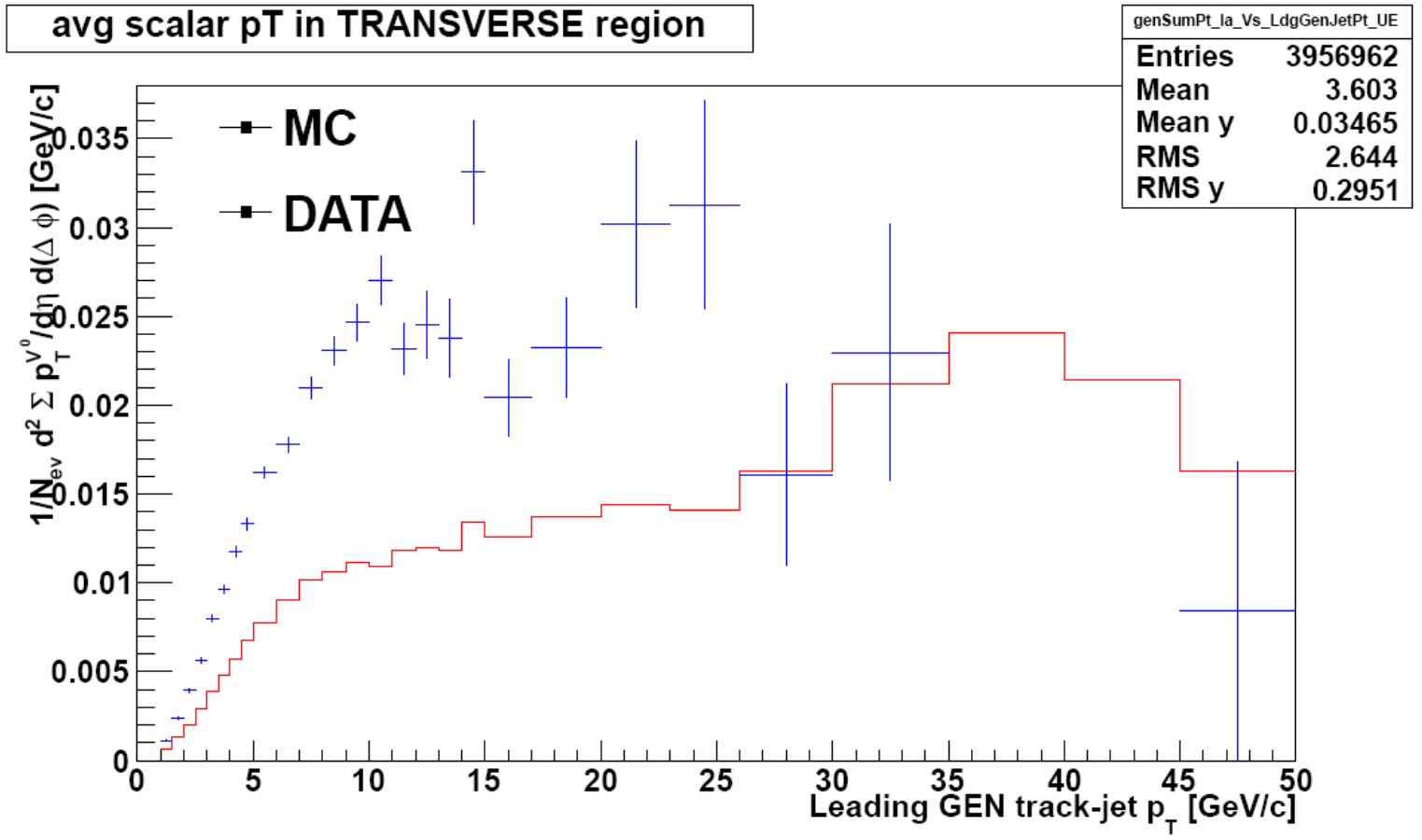
Rates AntiLambda



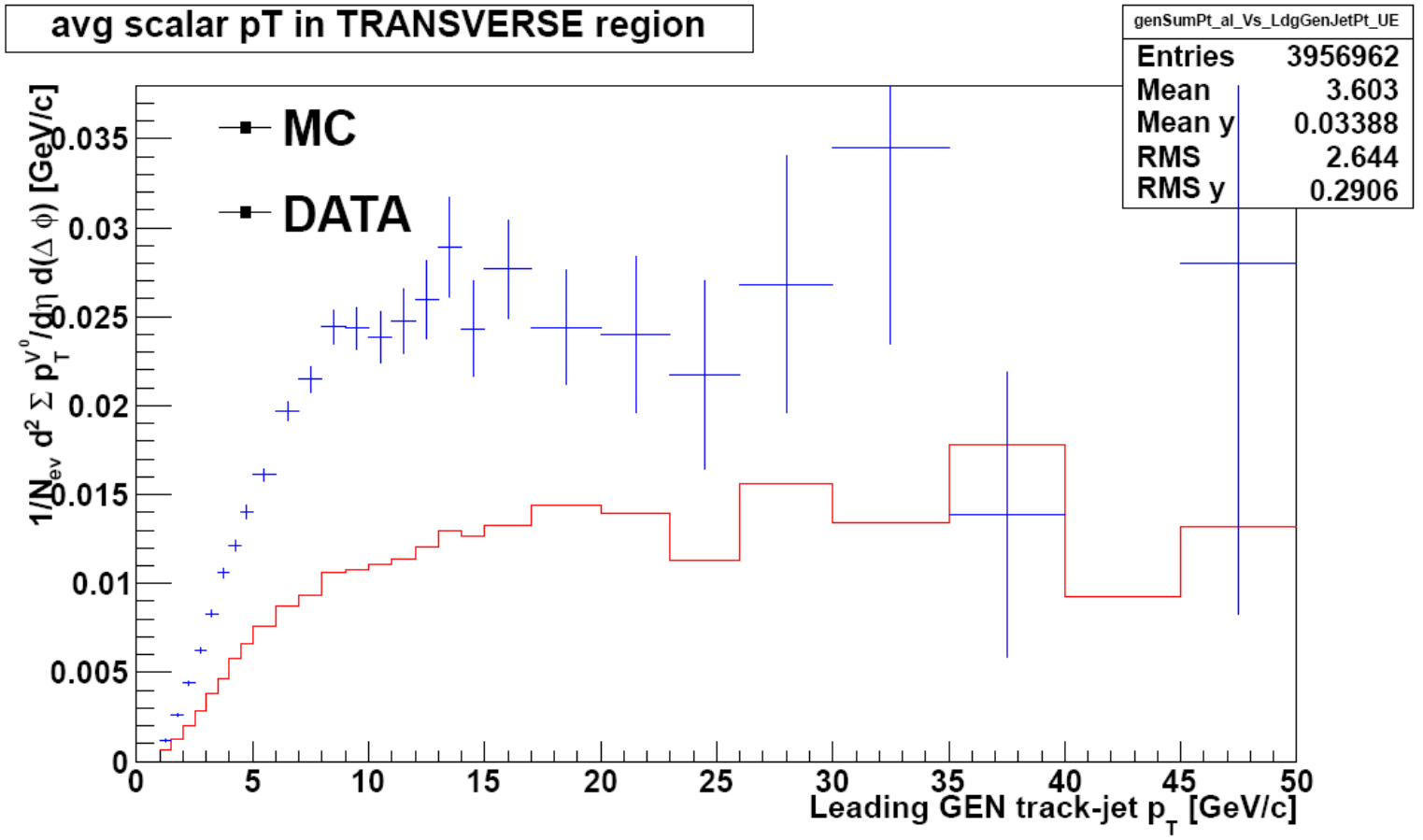
Scalar pT Sum K0s



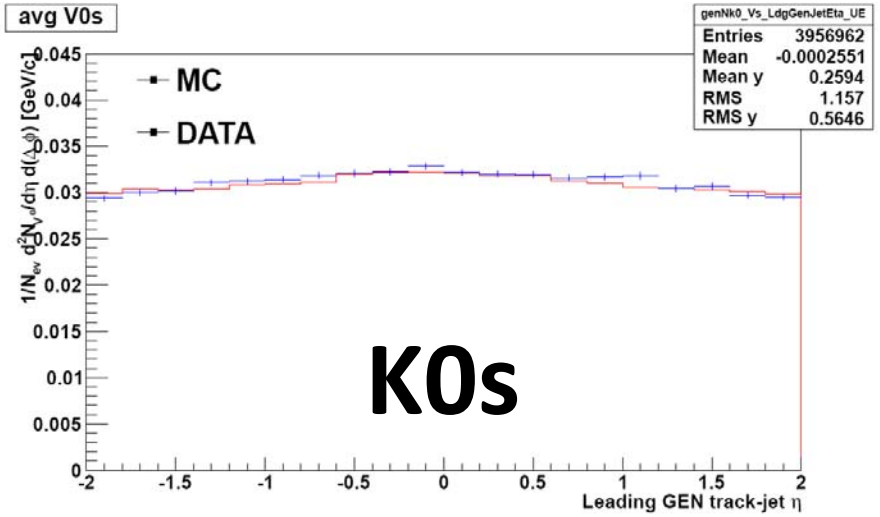
Scalar pT Sum Lambda

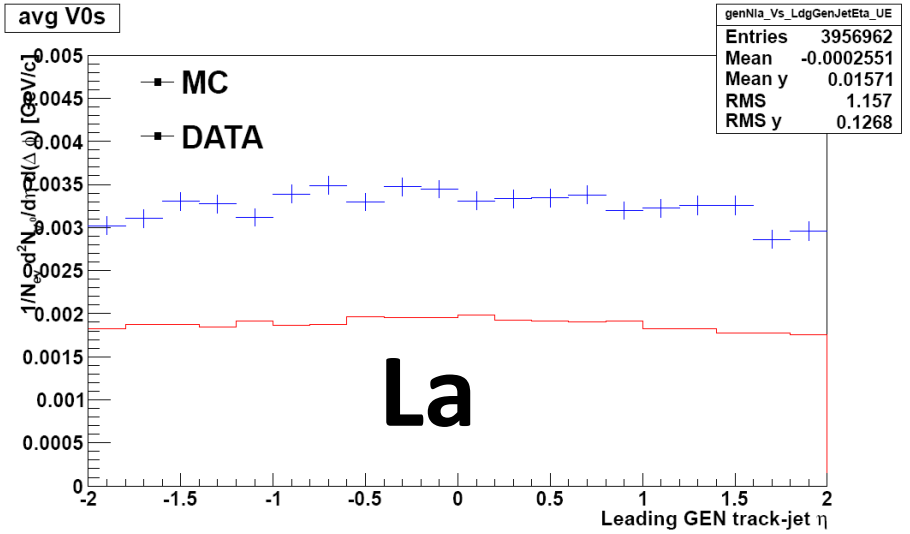


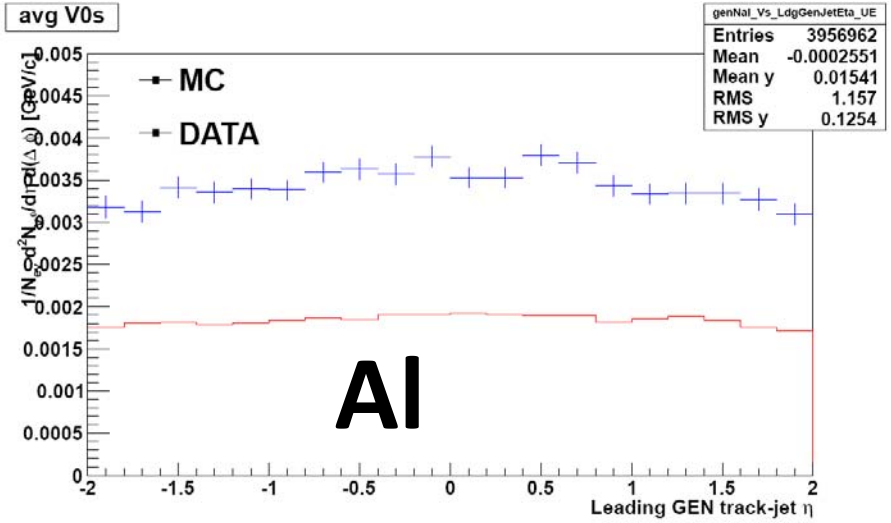
Scalar pT Sum AntiLambda



Rates as f(jet-eta)







Conclusion & Plans

Backup