

# Study of Single-W process

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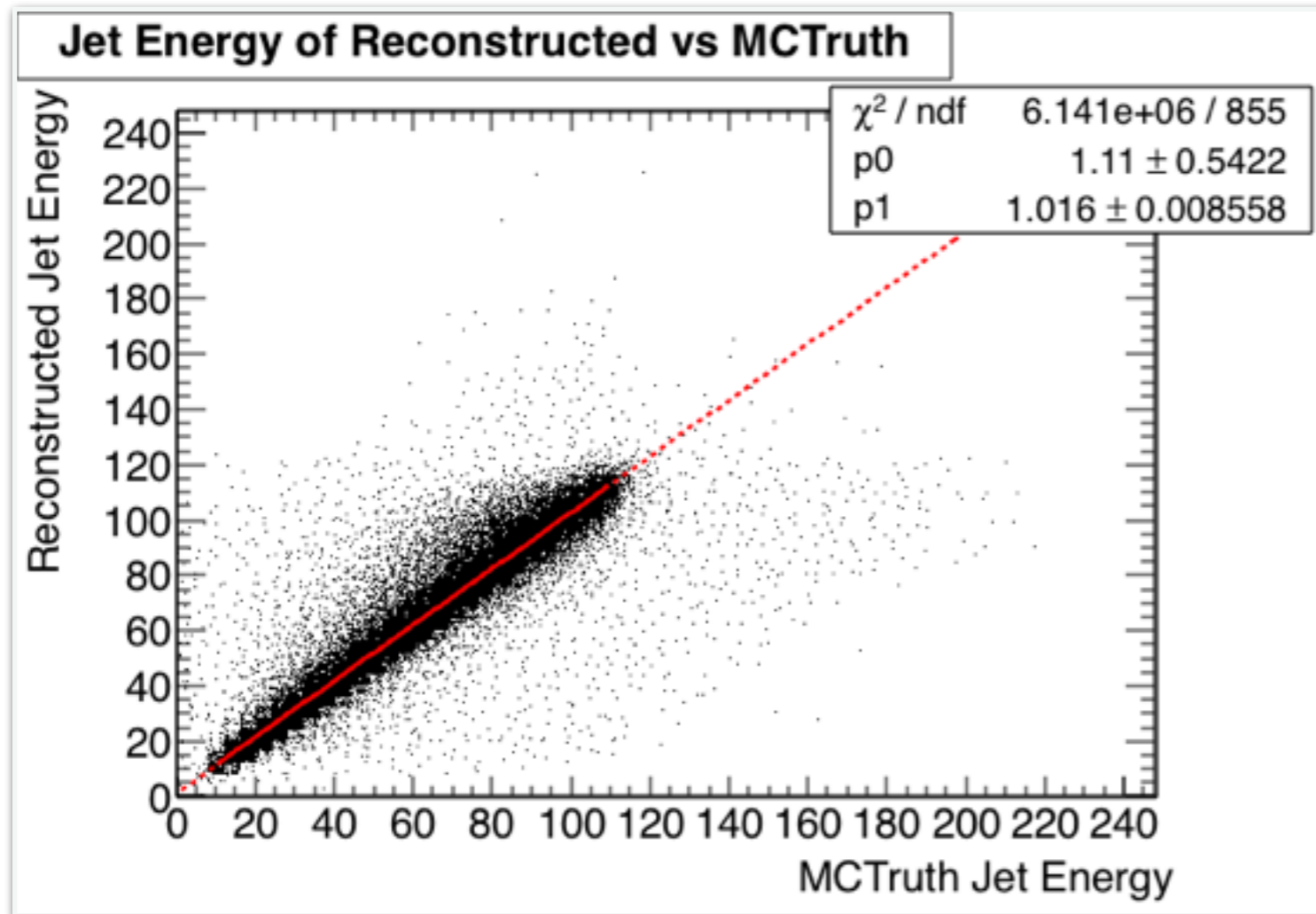
5th, December 2014 :

—> Current status & progress of my study

# Status

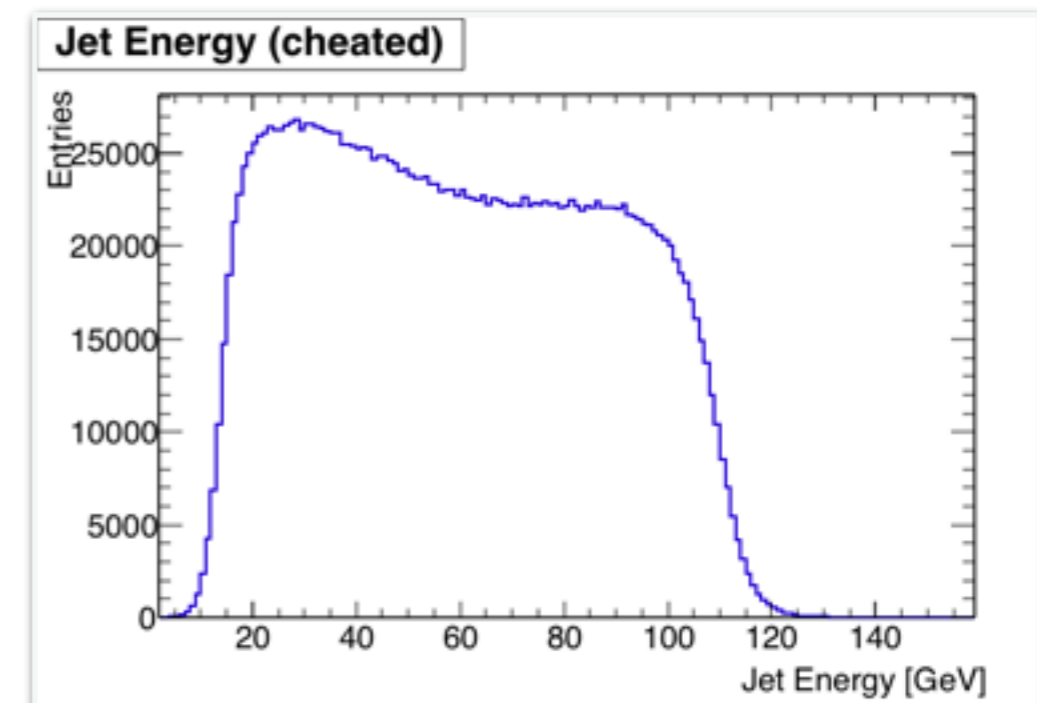
- Checked the individual jet energy
  - correlation between Reco & MC jet energy
- Some bugs are found in my macro to do fitting
  - it have been fixed and I tried to fit again

# Jet Energy Correlation btwn. Reco&MC

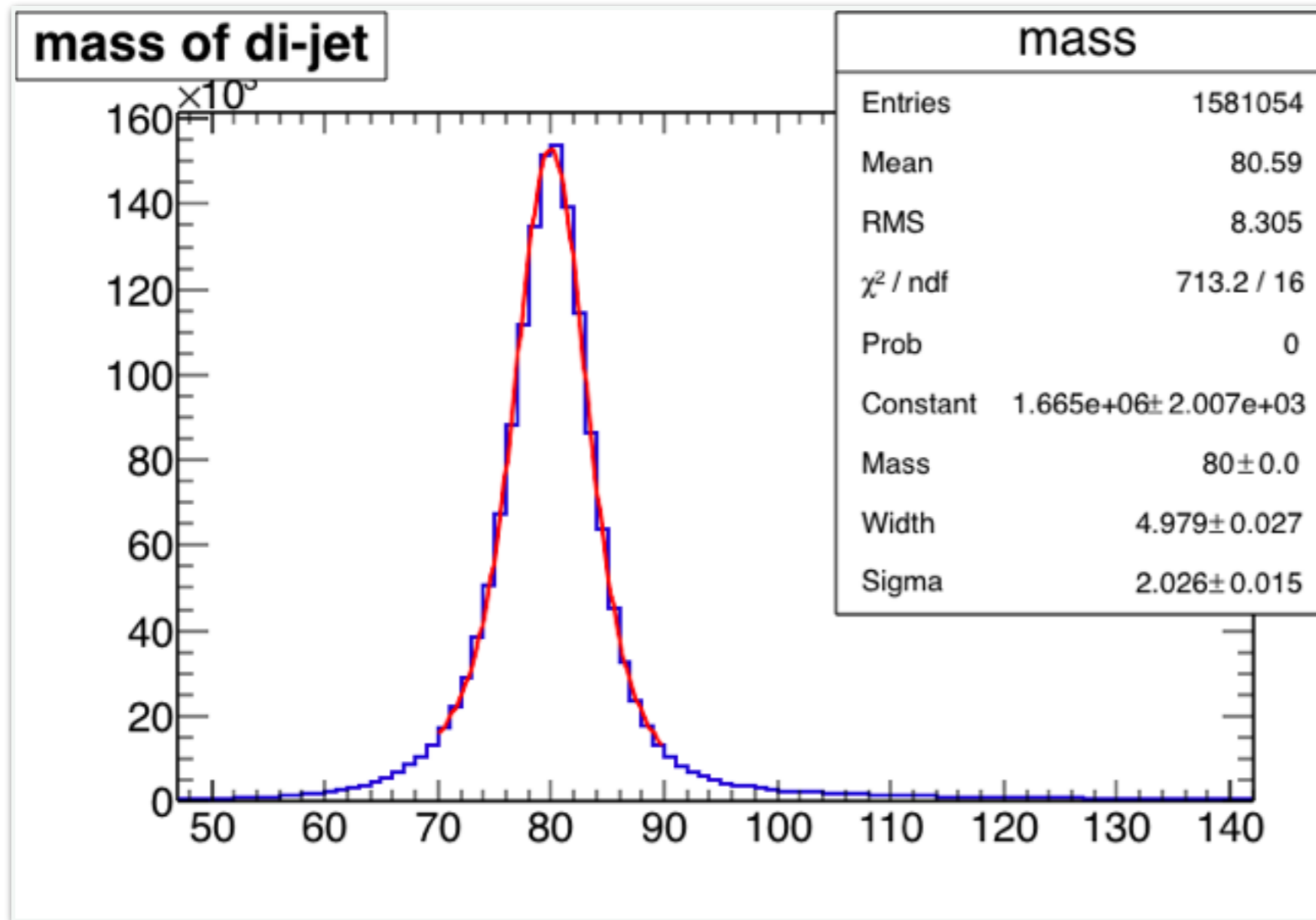


inclination = 1.016 ± 0.009  
shifted only 1.6%

jet energy distribution



# Fitting..



Chi-sq/ndf ~ 45

fit result parameter width  $\sim 5$  GeV is not consistent with the width of  $W \rightarrow \text{hadrons}$ , which is 1.405 GeV

# Summary & Next

- I checked individual jet energy, there are not so much difference between MCTruth and Reconstructed jets
- I tried to fit the W mass peak
  - but the reduced chi square was not good
  - if any ideas to improve fitting result, please tell me
- TO DO
  - realistic reconstruction for tagging ISR and overlays
    - ==> FastJet kt clustering
  - systematic and statistic error study

Back up

