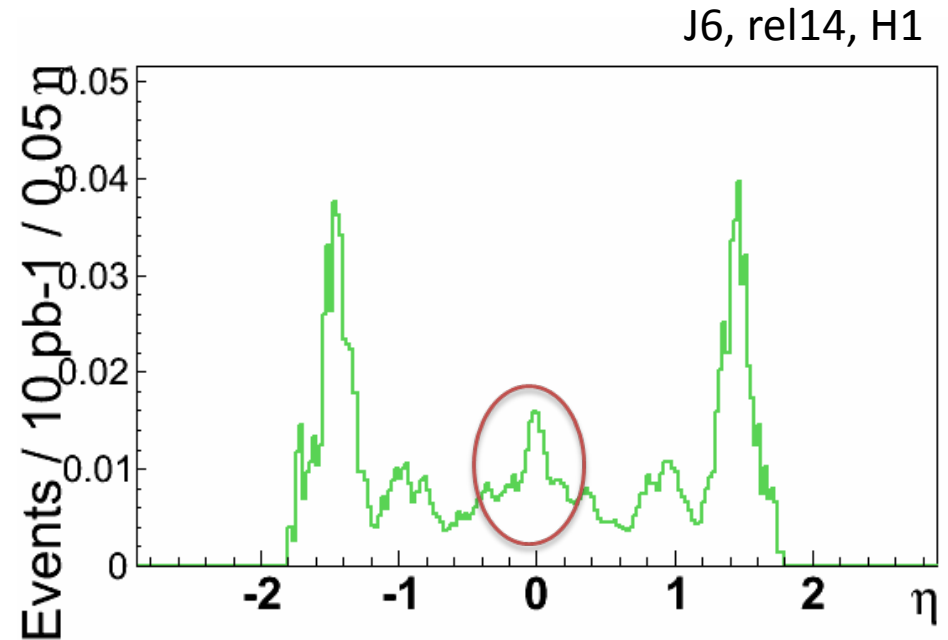


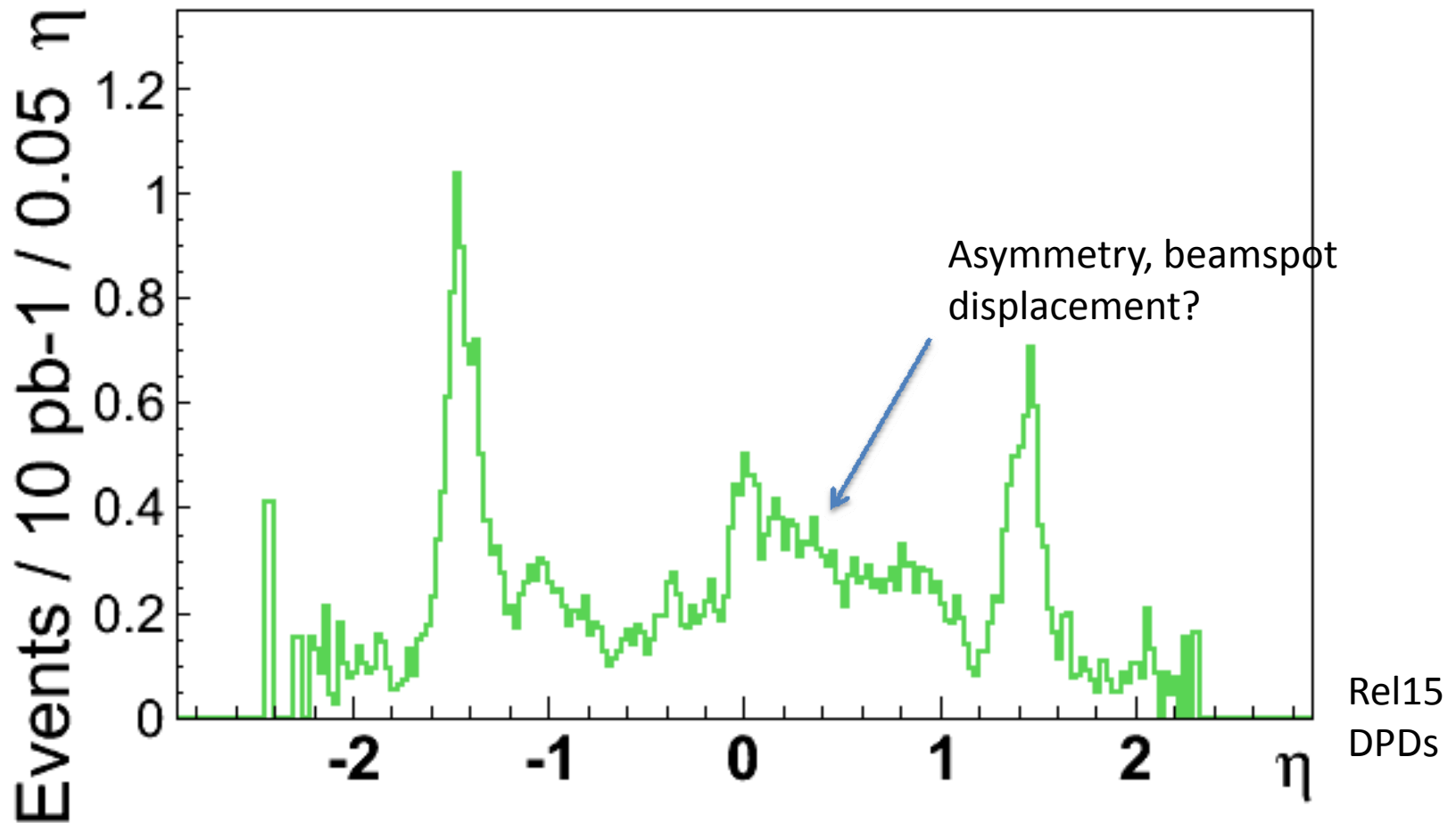
Missing Et tails in the Jx dijet samples

- Follow up after 2 June talk in Jet/EtMiss meeting
- Rel 15 DPD samples for this workshop (e344_s479_r635)
- Compare H1 Cone4 topo jets and reference MET to AntiKt4LCTopo jets and LC missing ET



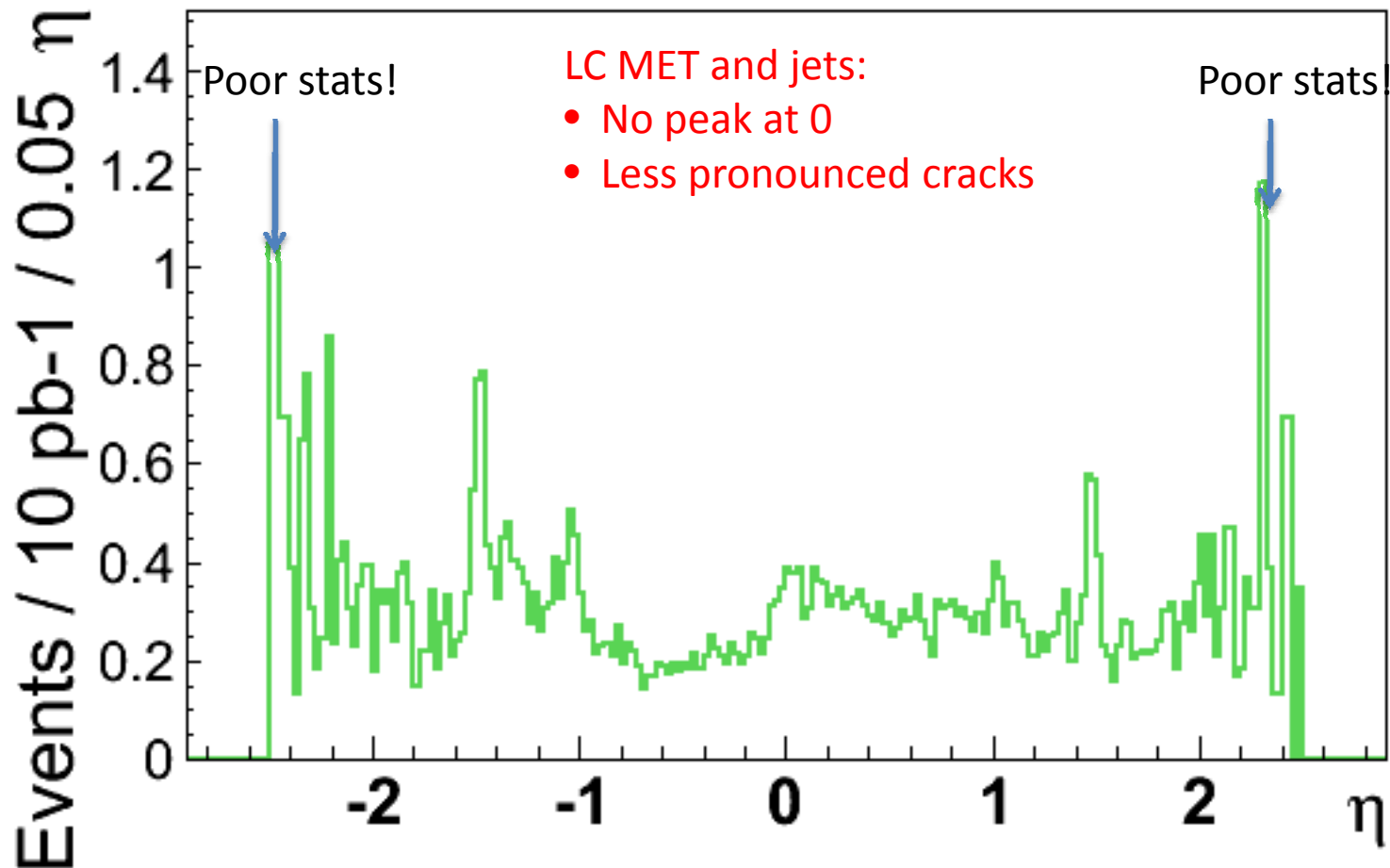
Jet eta distribution for >100 GeV MET

- Cut at 100 GeV reconstructed MET and plot eta distribution of reconstructed sub-leading jet
- Eta-corrected, i.e. account for non-uniform eta distribution of all jets by dividing it out – relative peak heights are comparable
- **Only reconstructed quantities used here, same plot can be filled from data!**



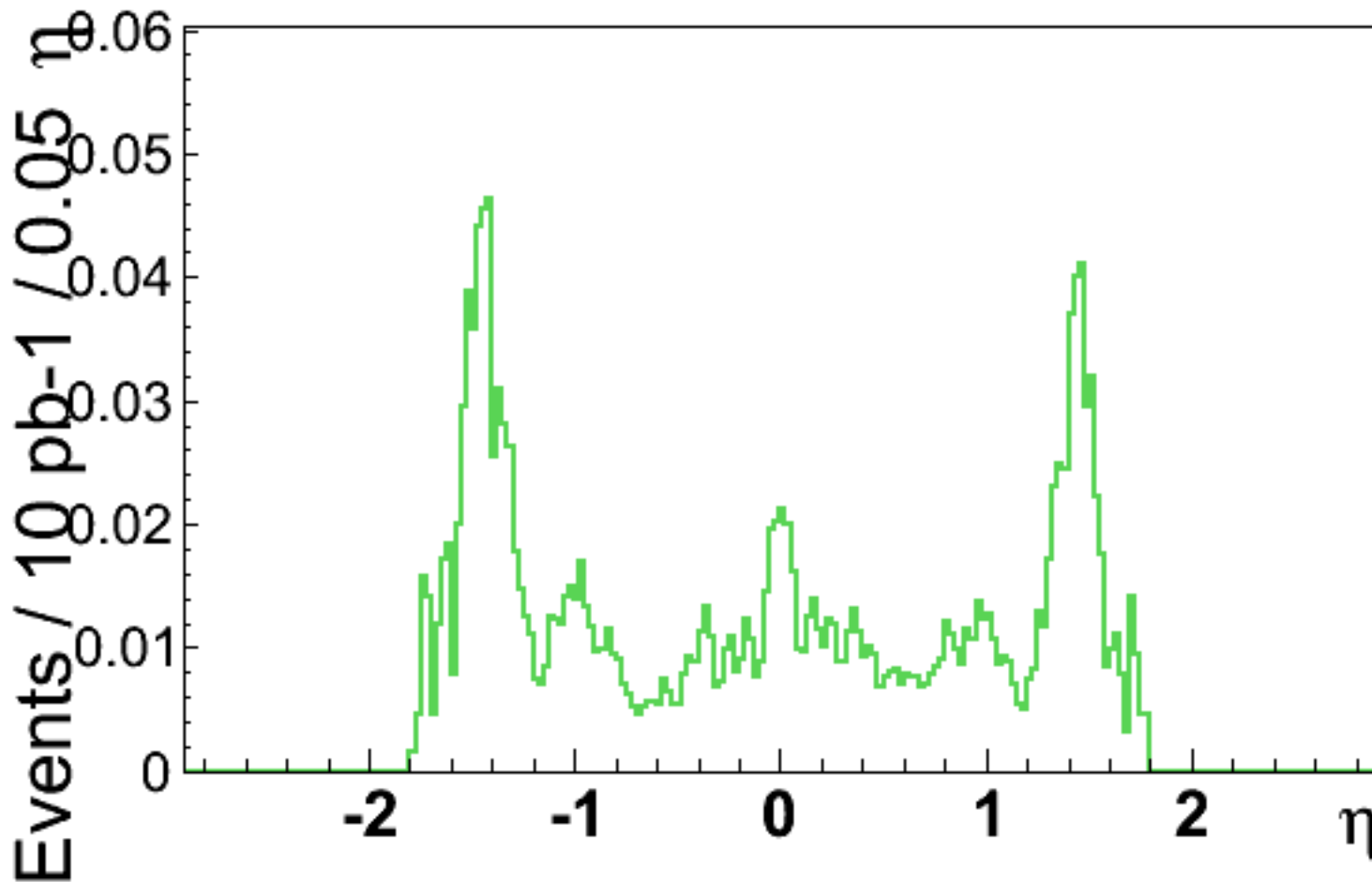
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Jet eta distribution for >100 GeV MET

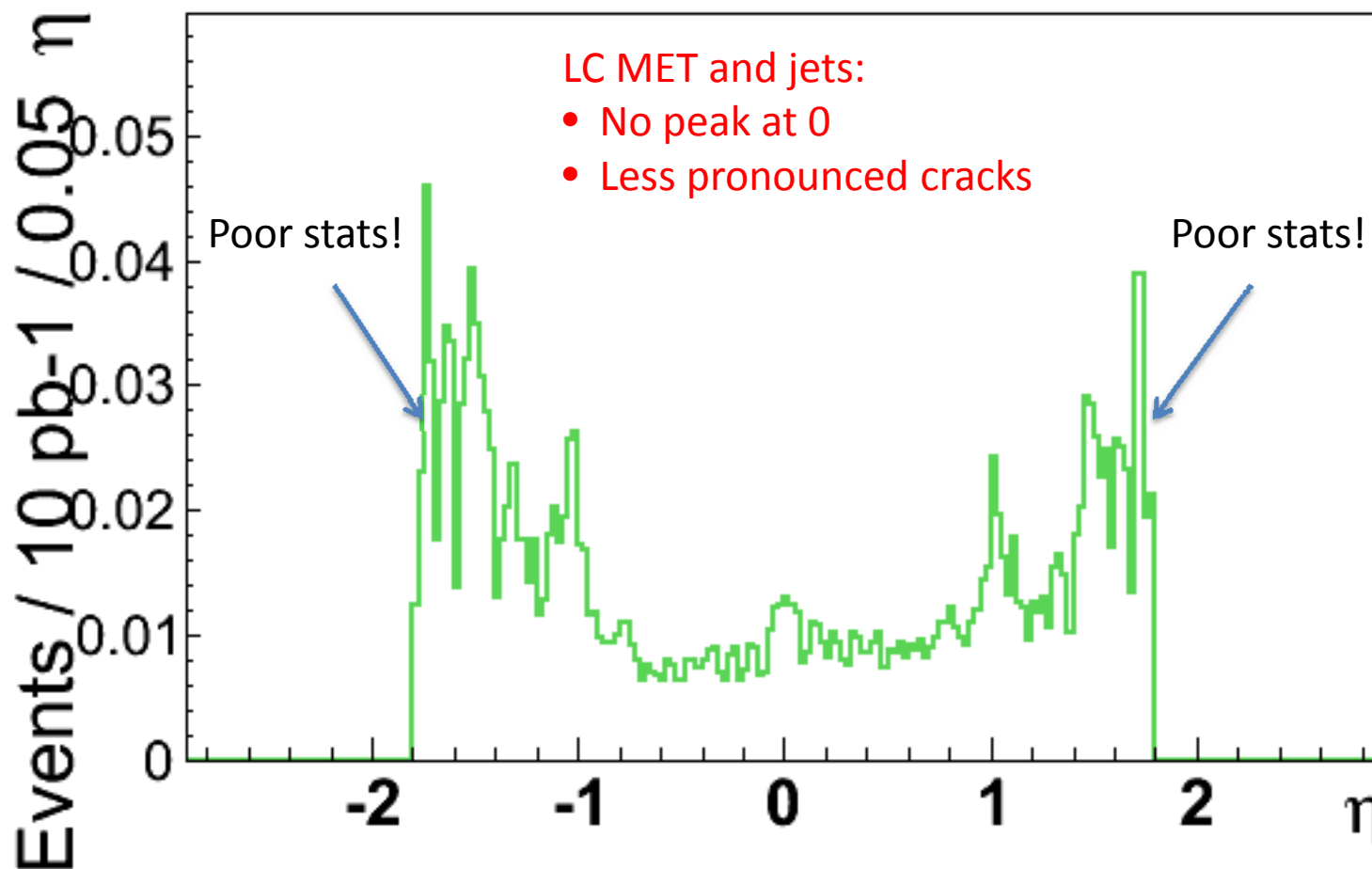
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- **Only reconstructed quantities used here, same plot can be filled from data!**



Rel15
DPDs

Jet eta distribution for >100 GeV MET

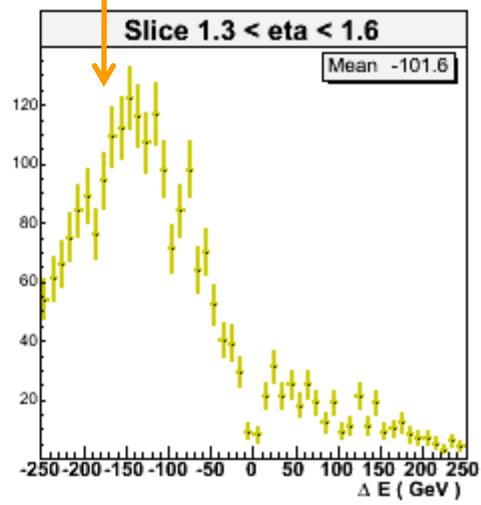
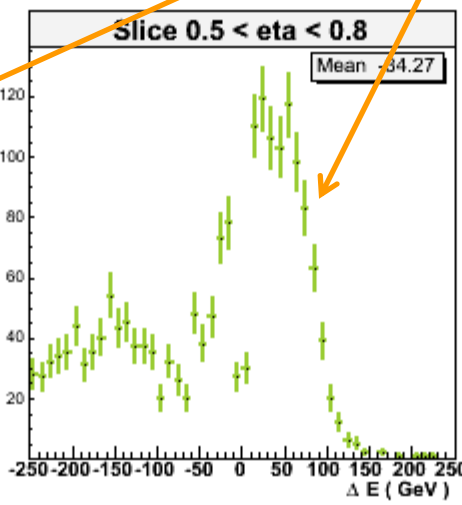
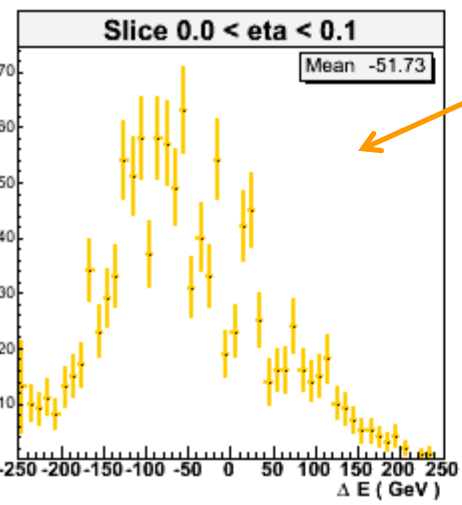
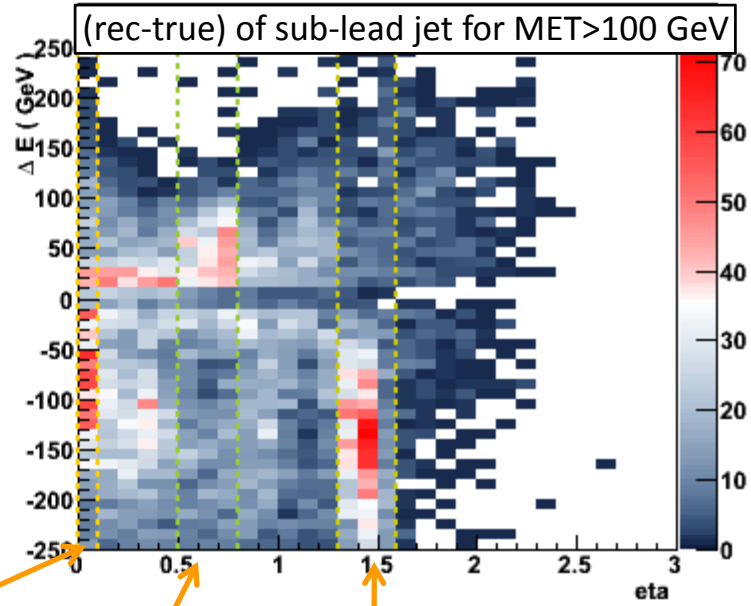
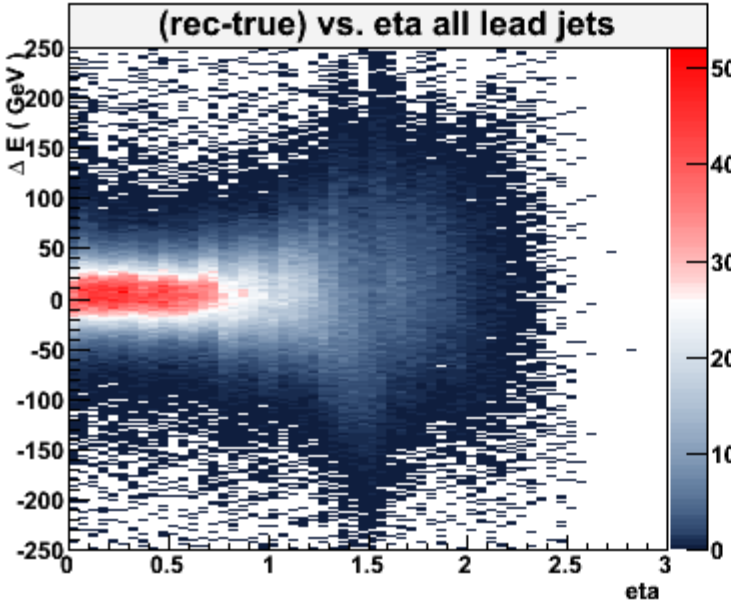
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- **Only reconstructed quantities used here, same plot can be filled from data!**



Rel15
DPDs

J6 $\Delta(\text{jet energy})$ vs eta for MET > 100 GeV

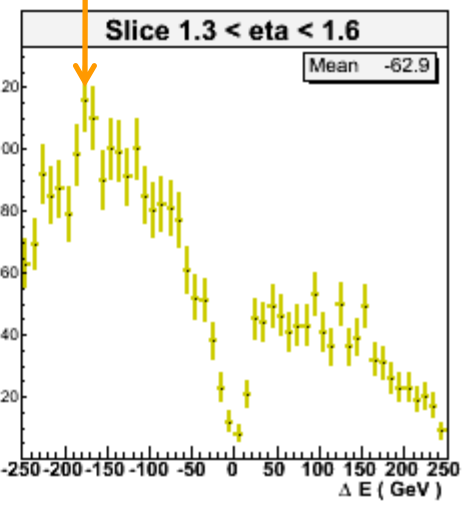
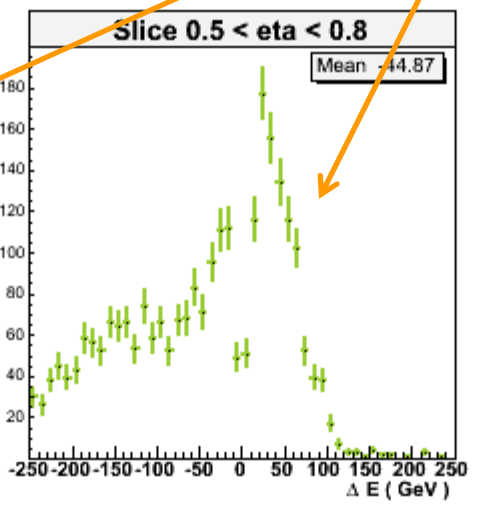
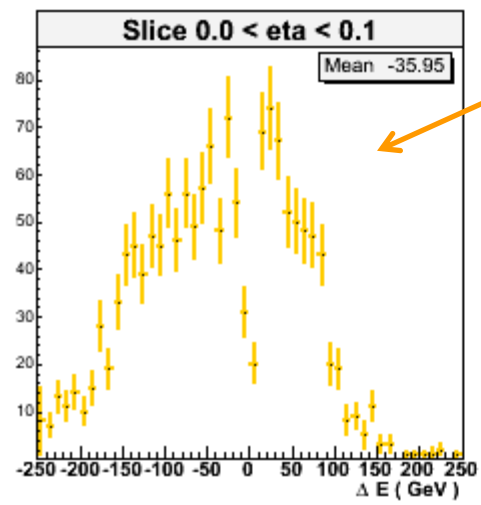
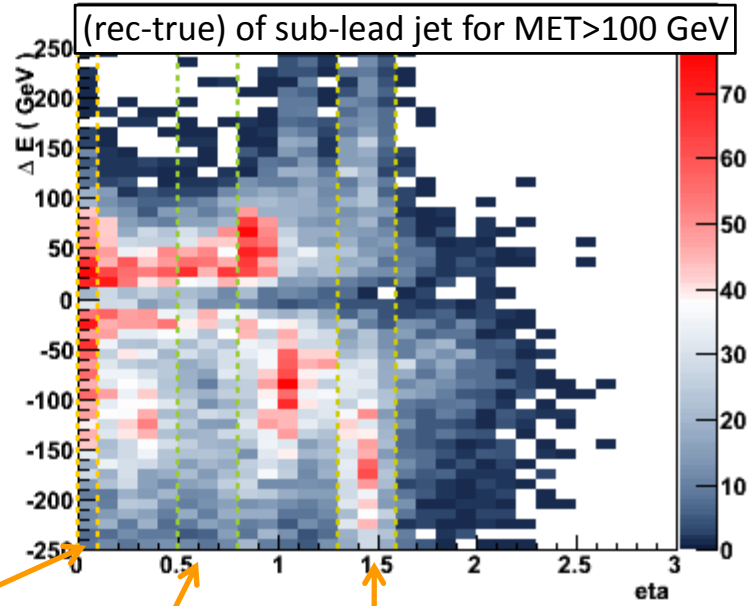
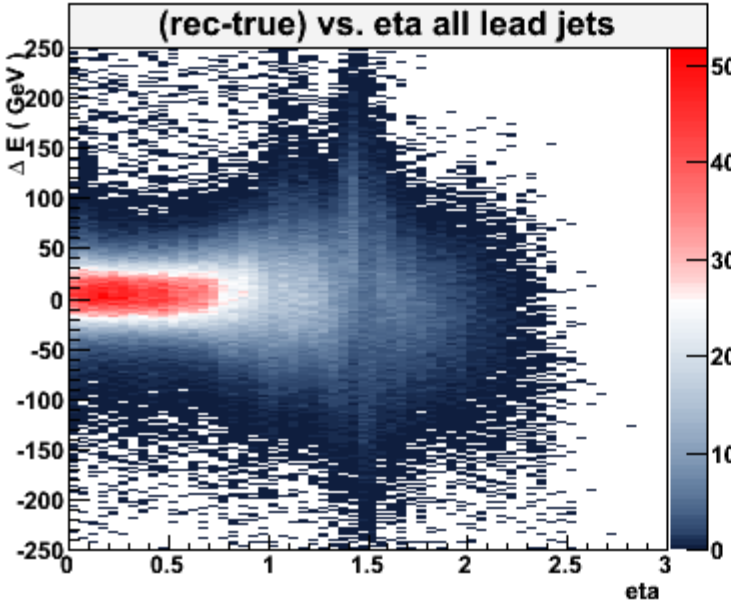
- Cut on large MET projects out the tails in the jet resolution
- These appear to be largely asymmetric
- For $|\text{eta}| < 0.1$ distribution peaks at 70 GeV underestimation of energy
- Overshoot around $|\text{eta}| 0.7$



J6 H1
Rel15 DPDs

J6 $\Delta(\text{jet energy})$ vs eta for MET > 100 GeV

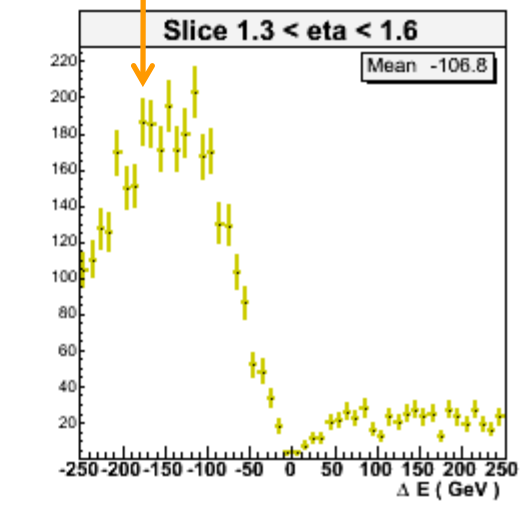
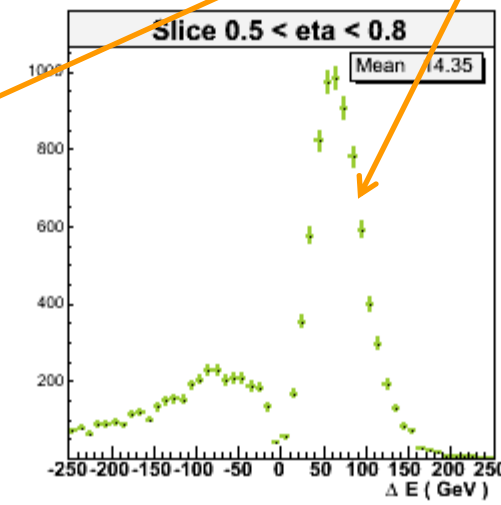
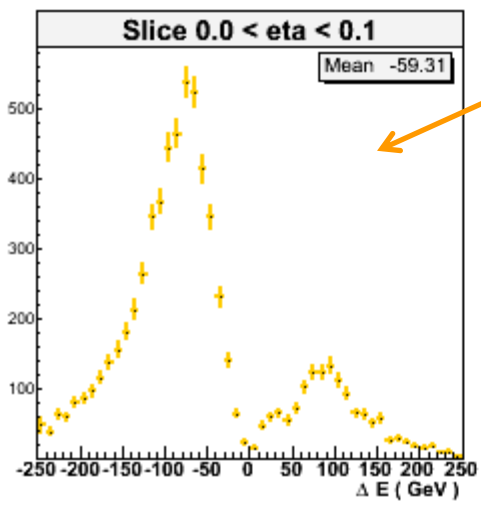
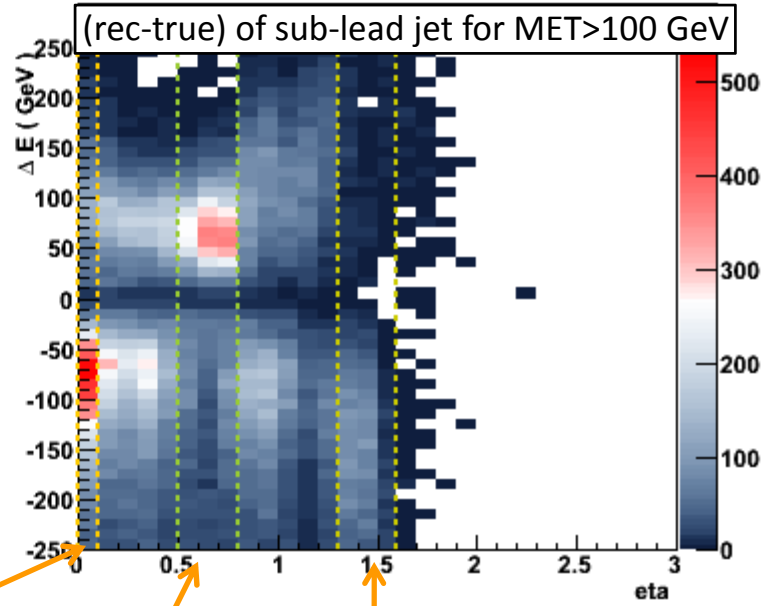
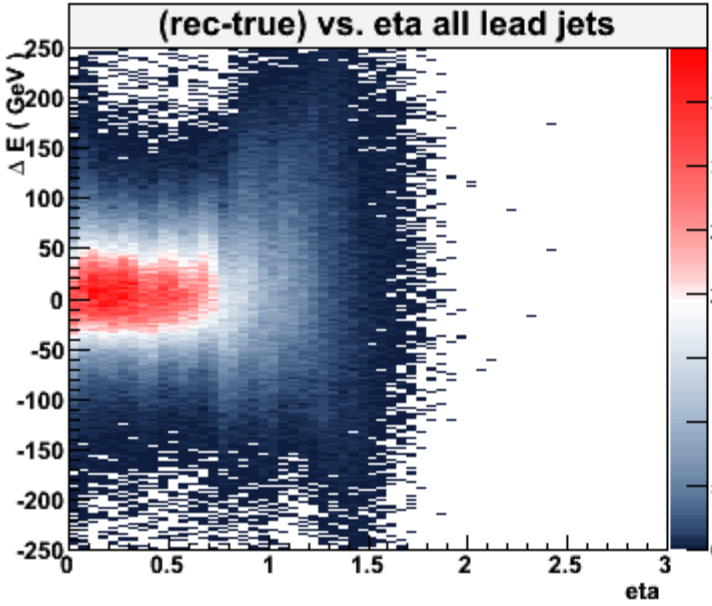
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- Overshoot around $|\text{eta}| 0.7$



J6 LC
Rel15 DPDs

J7 $\Delta(\text{jet energy})$ vs η for MET > 100 GeV

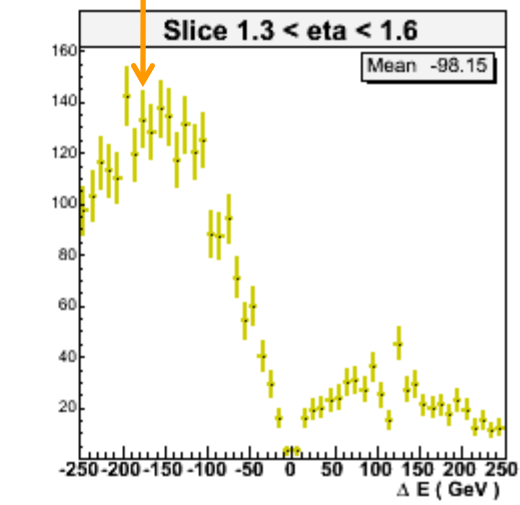
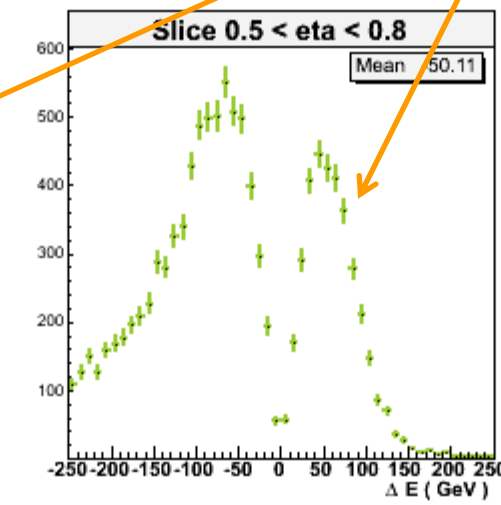
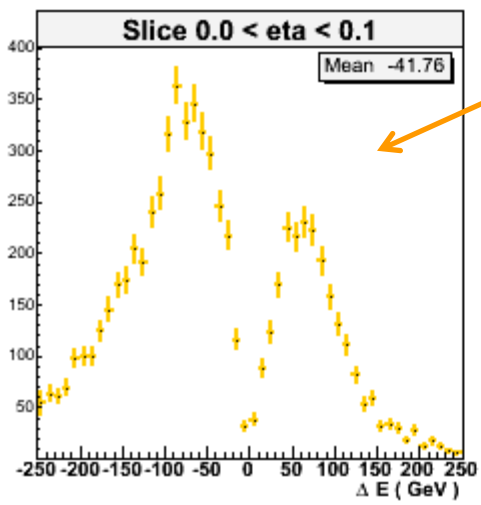
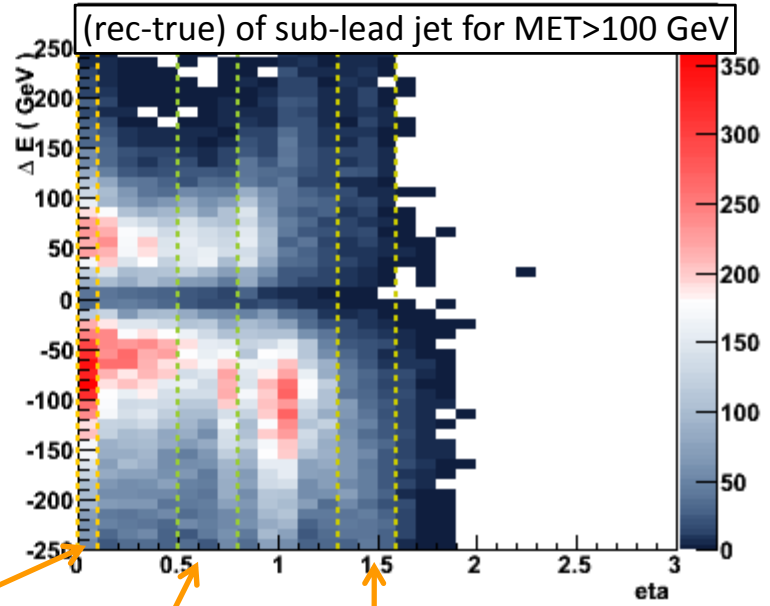
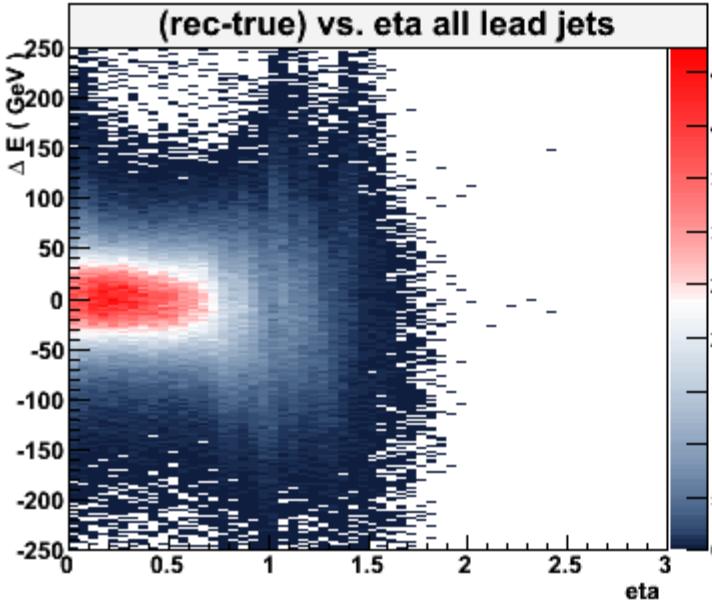
- Cut on large MET projects out the tails in the jet resolution
- These appear to be largely asymmetric
- For $\eta < |0.1|$ distribution peaks at 70 GeV underestimation of energy
- Overshoot around $\eta \approx |0.7|$



J7 H1
Rel15 DPDs

J7 $\Delta(\text{jet energy})$ vs eta for MET > 100 GeV

- Cut on large MET projects out the tails in the jet resolution
- These appear to be largely asymmetric
- For $|\text{eta}| < 0.1$ distribution peaks at 70 GeV underestimation of energy
- Overshoot around $|\text{eta}| \approx 0.7$



J7 LC
Rel15 DPDs

H1 vs. LC calibration in J6/J7 in large MET events

- Apparently no peak at $\eta=0$ when using LC MET and jet collection
 - Only the H1 calibration causes an MET tail at $\eta=0$
 - But asymmetry / beamspot displacement dilutes things a bit
- Looking at the tails in the jet resolutions projected out by requiring large MET, the LC calibration is considerably less asymmetric!