Some JetRad Comparisons

• I think it is crazy to try and correct back to the “parton level”! The “parton level” is not an “observable”. CDF measures “observables”!

• It is important to correct what we see in the calorimeter or with the COT back to the “particle level” (i.e. back to the “true” observable)!

• However, many people insist on parton level comparisons and CDF did it in Run I.

• Also, the “top mass group” must correct back to the parton level.

• Therefore, my graduate student, Craig Group, and I are running JetRad and making comparisons to see what we can learn.

We are just getting started!
The Run II Inclusive Cross-Section

• Compares NLO JetRad CTEQ5L (absolutely normalized) with the Run II data (from Frank) corrected to the parton level using the Run I extrapolation method.
The Run II Inclusive Cross-Section

- Compares NLO JetRad CTEQ5L (times 1.22) with the Run II data (from Frank) corrected to the parton level using the Run I extrapolation method.
The Run II Inclusive Cross-Section: Data/Theory

- Data/Theory for NLO JetRad **CTEQ5L** and **CTEQ6L** and the Run II data (from Frank) corrected to the parton level using the Run I extrapolation method.
CTEQ6L vs CTEQ5L – NLO vs LO

• (left) Shows the ratio of JetRad NLO for CTEQ6L with CTEQ5L.
• (right) Shows the JetRad CTEQ5L ratio of NLO with LO.
Inclusive Jet Cross Section (MidPoint)

Apply same technique to correct the data.

Gene...

Data compared to PYTHIA using the MidPoint jet algorithm
Data corrected to the hadron level compared to NLO calculation

Gene...
Rise at low $E_T$...
Want to present results that can be used outside of CDF, still need correction to go from the hadron $\rightarrow$ parton level.

See Regis’ talk for more details