Inclusive three-jet cross section at D0

ZDENEK HUBACEK, Czech Technical University, D0 COLLABORATION — We analyze multijet production in a dataset corresponding to an integrated luminosity of 0.7 fb$^{-1}$ collected with the D0 detector at the Fermilab Tevatron Collider. Thus far, all jet-only tests of QCD at a collision energy of 1.96 TeV use either inclusive jet or dijet final states. We extend this effort by investigating the inclusive three-jet final state. Fully describing the three-jet final state requires eight variables. In this analysis, we present the measurement of the inclusive three-jet cross section as a function of three-jet invariant mass in bins of softest jet transverse momenta and in bins of jet rapidities.

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