

Study of Substructure of High Transverse Momentum Jets Produced in Proton-Antiproton Collisions at $\sqrt{s} = 1.96$ TeV

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We present a study of the substructure of jets with transverse momentum greater than 400 GeV/c produced in proton-antiproton collisions at a center-of-mass energy of 1.96 TeV at the Fermilab Tevatron Collider and recorded by the CDF II detector. We measure for the first time the distributions of the jet mass, angularity and planar flow in a 5.95/fb data sample.

The observed substructure for high mass jets are found to be consistent with predictions from perturbative quantum chromodynamics.

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