

Abstract Submitted
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Top Quark Mass Measurement in Lepton+Jets Channel Using a Template Method¹ WOJTEK FEDORKO, Univ. of Chicago, CDF COLLABORATION — We present a measurement of the top quark mass employing the template method with data collected by the CDF Run II detector. We select lepton+jet events to isolate top-antitop pair production in a 690 pb^{-1} sample of proton-antiproton collisions at $\sqrt{s} = 1.96 \text{ TeV}$. In each event we use kinematic constraints on the pair of top quarks and their decay products to determine a reconstructed top quark mass. We simultaneously determine the invariant mass of the decaying W boson to calibrate the energy response of the detector. The reconstructed top quark mass and W boson invariant mass distributions are fit to Monte Carlo derived templates in a simultaneous likelihood fit to extract the top quark mass and an in-situ measurement of the jet energy scale.

¹For the CDF Collaboration

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