

Abstract Submitted
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Top Quark Mass Measurement in the Lepton+Jets Channel at CDF using a Template Method YOUNG-JANG LEE, Seoul National University — We present a measurement of the top quark mass in top quark pair production events decaying into the lepton+jets channel. The measurement uses proton-antiproton collision data at $\sqrt{s} = 1.96$ TeV collected by CDF Run II detector at Fermilab. We reconstruct a top quark mass in each event by using kinematic constraints on the pair of top quarks and the mass of the hadronic decaying W boson to calibrate the energy response of the detector. We determine the top quark mass and an *in situ* measurement of the jet energy scale from a simultaneous likelihood fit to the reconstructed top quark mass and W boson invariant mass distributions in the data to distributions from Monte Carlo simulation.

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