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Top quark mass measurement in the lepton+jets and dilepton channels at CDF using m_T2 JIAN TANG, University of Chicago, CDF COLLABORATION — A measurement of top quark mass at CDF will be presented using a 3.0 fb^{-1} data sample in both lepton+jets and dilepton channels. In the lepton+jets channel, we determine the reconstructed top quark mass by minimizing the χ^2 for the overconstrained kinematic system, and we also measure the hadronically decaying W boson mass to provide an $in-situ$ improvement in the determination of jet energy scale. In the dilepton channel, we replace our old observable H_T, which is the scalar sum of transverse energy of all particles in one event, with a new observable m_T^2, which is used in W mass measurements and SUSY searches. We find a satisfying improvement in our result of top quark mass measurement using this new observable.

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