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Measurement of top pair production cross section in Lepton plus Jets events at CDF with event kinematics. KEVIN LANNON, Ohio State University, CDF COLLABORATION — A major goal of the CDF physics program at the Tevatron is the precise measurement of the properties of the top quark. We present a measurement of the $t\bar{t}$ production cross section in $p\bar{p}$ collisions at $\sqrt{s} =$ 1.96 TeV, using 340 pb^{-1} of data collected by the CDFII detector at the Fermilab Tevatron. We select events with a high transverse momentum electron or muon, 3 or more jets, and missing E_T. We develop an artifical neural network method that uses a variety of kinematic quantities to distinguish $t\bar{t}$ events from the primary background of W boson production with associated jets.

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