

Top cross section/SM properties (D0)

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We present the measurement of the top anti-top quark pair production cross section in dilepton, lepton+jets and tau+lepton final states using up to 4 fb^{-1} of data collected with the D0 detector at the Fermilab Tevatron collider. We also present the combination of these channels and extract the top quark mass comparing the measured cross section to calculations in higher order QCD. Furthermore we study properties of the top quark decay products such as helicity fractions of the W bosons. W boson helicity fractions are also sensitive to the ratios of different anomalous Wtb couplings. We set simultaneous limits on left-handed vector and right-handed vector, and left-handed vector and right-handed tensor Wtb couplings and combine this with results from a search for anomalous Wtb couplings in single top production.

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