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Measurements of Top Quark Production at CDF

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The top quark is the heaviest particle yet observed. With the possibility for the massive top to couple to new physics at high energy scales, CDF has many complementary analyses in each top decay channel which provide strong tests of the standard model and physics beyond. With several fb-1 of data now accumulated at CDF, we are able to measure the top pair production rate with unprecedented precision, and uncertainties comparable to those of theoretical predictions. In this talk we present measurements of the top production cross section in all the decay channels along with their combined result. In addition, the first measurement of the cross section of t-tbar associated with an additional hard jet (tt+jet) will be presented. The measurement is a test of NLO calculations as well as an important first step to understanding top at the LHC, where almost all top is produced as tt+jet.

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