



Asymmetry measurements in t - t bar at CDF

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The most intriguing property of top-quark physics observed so far is the forward-backward asymmetry in the production of top-quark pairs in proton anti-proton collisions at the Fermilab Tevatron. An unexpectedly sizable effect has been observed in both the semi-leptonic and the all-leptonic decay channels of top-quark pairs, exceeding significantly the standard model predictions, and has motivated intensive theoretical investigations. Several models have already been proposed so far to explain the data, none of them fully successful. We present measurements of the asymmetry in both decay channels and studies of the asymmetry as a function of various kinematics variables, as well as related measurements of the top-quark pair production cross section differential in sensitive variables.

We also present, for the first time, measurements of the asymmetry in bottom-quark pair production, which allows for exploring the asymmetry production mechanism in both the top and the bottom flavor sectors. All measurements are using the full CDF Run II sample.

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