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# Measurement of top quark polarization in ttbar lepton+jets final states at D0

We present a measurement of top quark polarization in ttbar pair production in ppbar collisions at $\sqrt(s) =$ 1.96 TeV using data corresponding to 9.7 fb$^{-1}$ of integrated luminosity recorded with the D0 detector at the Fermilab Tevatron Collider. We consider the final state containing a lepton and at least three jets. The polarization is measured through the distribution of lepton angles along three axes: the beam axis, the helicity axis, and the transverse axis normal to the ttbar production plane. This is the first measurement of top quark polarization at Tevatron using lepton+jet final state and the first measurement of the transverse polarization in ttbar production. The observed distributions are consistent with standard model predictions of nearly no polarization.

## Summary

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