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## Spin correlation in ttbar production (D0)

Thursday 5 July 2012 16:00 (15 minutes)

We present a measurement of the ratio of events with correlated t and tbar spins to the total number of ttbar events. This ratio f is evaluated using a matrix-element-based approach in events with a single lepton (electron or muon) and at least four jets and in events with two leptons (ee, emu, mumu) and at least two jets. We analyze ppbar collisions data corresponding to an integrated luminosity of 5.3-5.4 fb-1 collected with the D0 detector at the Fermilab Tevatron collider operating at a center of mass energy sqrt(s)=1.96\$ TeV. Combining the results of the single lepton and dilepton final states, we find f in agreement with the standard model. In addition, the combination provides evidence for the presence of spin correlation in ttbar events with a significance of more than three standard deviations.

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