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Search for Production of Scalar Top Quark Pairs in the Oppositesign Di-lepton Final State at the Tevatron ALEXEI SEDOV, OSCAR GONZALEZ-LOPEZ, Purdue University, CDF COLLABORATION — Using the CDF detector we search for the pair production of the supersymmetric partner of the top quark (stop quark), in proton-antiproton collisions at  $\sqrt{s} = 1.96$  TeV at the Tevatron. Assuming that the stop quark is lighter than the top quark, and R-parity is conserved, the search considers that the stop quark decays into a b-jet, a lepton and an undetected sneutrino. Preliminary results are presented using data collected with the CDF dilepton triggers, and requiring the presence in the final state of two opposite-sign leptons, hadronic jets and missing transverse energy. The analysis is based on an integrated luminosity of about 300 pb<sup>-1</sup>.

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