

Abstract Submitted  
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**Search for Supersymmetric Top Quark Production with R-parity Violating Decays at CDF** VADIM KHOTILOVICH, Texas A&M University, CDF COLLABORATION — We perform a search for the supersymmetric partner of the top quark (stop) using an integrated luminosity about  $200 \text{ pb}^{-1}$  of data collected with the CDF Run 2 detector in proton-antiproton collisions at  $\sqrt{s} = 1.96$  TeV. Within a framework of R-parity violation where the stop decays into a  $\tau$  lepton and a bottom quark, pair-produced stop quarks result in the final state of one electron or muon (from a leptonic  $\tau$  decay), one hadronic tau decay, and two jets. With no excess of events observed over the Standard Model prediction, we set an upper limit on the production cross-section and a lower limit on the stop mass. These limits are also directly applicable to third generation scalar leptoquarks decaying to  $\tau$  lepton and a bottom quark.

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