

Abstract Submitted
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Search for Flavor Changing Neutral Currents in Top Decays at CDF ALEXANDER PARAMONOV, HENRY FRISCH, University of Chicago, CDF COLLABORATION — We present a direct upper limit on the branching ratio of the flavor-changing top quark decay $t \rightarrow Zc$ using 1.5 pb^{-1} of $p\bar{p}$ collision data. We parametrize the upper limit as a function of the Z boson's helicity to cover the full range of possible decay structures. The analysis is based on the comparison of two processes: $p\bar{p} \rightarrow t\bar{t} \rightarrow WbWb \rightarrow l \cancel{E}_T b b j j$ and $p\bar{p} \rightarrow t\bar{t} \rightarrow ZcWb \rightarrow l^+ l^- c b j j$. The use of these two decay modes together allows cancellation of dominant systematic uncertainties on acceptance, efficiency, and luminosity. We validate the MC modeling of acceptance and efficiency for lepton identification over the multi-year dataset with a measurement of the ratio of the inclusive production of W and Z bosons. The upper limit on the $Br(t \rightarrow Zc)$ is estimated from a simultaneous fit to the $l^+ l^- c b j j$ mass distribution and the number of lepton + \cancel{E}_T + 4 jets events.

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