

Abstract Submitted  
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**Search for a heavy fourth generation  $t'$  quark in Lepton plus Jets channel at CDF** ERIC COCHRAN, Ohio State University, CDF COLLABORATION — We present a search for a heavy  $t'$  quark decaying to  $Wq$  final states in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV, using  $340 \text{ pb}^{-1}$  of data collected by the CDFII detector at the Fermilab Tevatron. We select events with a high transverse momentum electron or muon, 4 or more jets, and missing  $E_T$ . We use the observed total transverse energy ( $H_T$ ) spectrum and an artificial neural network to discriminate the  $t'$  signal from background, and obtain limits on a  $t'$  cross section as a function of hypothetical  $t'$  mass. In addition to the status of the current search, we will present the prospects for the future.

Evelyn Thomson  
University of Pennsylvania

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