

Abstract Submitted  
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**Search for pair production of doubly charged Higgs bosons in the  $H^{++}H^{--} \rightarrow \tau^+\tau^+\tau^-\tau^-$  final state at D0** LOUISE SUTER, University of Manchester, D0 COLLABORATION — The first search at a hadron collider for pair production of doubly charged Higgs bosons decaying into a  $\tau^+\tau^+\tau^-\tau^-$  final state is presented. The search was performed in  $p\bar{p}$  collisions at a center-of-mass energy of 1.96 TeV with an integrated luminosity of  $6.2 \text{ fb}^{-1}$  as collected by the D0 experiment at the Fermilab Tevatron Collider during Run IIb. The results are used to set 95% C.L. upper limits on the doubly charged Higgs production cross section.

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