

Abstract Submitted
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Search for the Higgs Boson in $WW^{(*)} \rightarrow \ell^+\ell^-$ Decays in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV DAVIDE GERBAUDO, Princeton University, DZERO COLLABORATION — We present a search for the Standard Model Higgs boson produced via the $H \rightarrow WW^{(*)} \rightarrow \ell\nu\ell\nu$ process at a center-of-mass energy of $\sqrt{s} = 1.96$ TeV, using 5.4 fb^{-1} of data collected with the D0 detector at the Fermilab Tevatron collider. We consider a final state where the Higgs boson decays into a pair of W bosons which in turn decay leptonically; this channel, with its clear signature of two leptons and missing energy, provides the greatest sensitivity to the Higgs boson at the Tevatron in the high mass region. With the current dataset no excess above the Standard Model predictions is observed, and limits on the Higgs production cross-section are set for m_H in the range $115 - 200$ GeV.

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