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Search for SM Higgs in $ZH \to ZWW$ incorporating hadronic decays of the W boson at CDF GEUMBONG YU, Duke University, CDF COLLABORATION — We present a search for standard model (SM) Higgs production in association with a Z boson at the Tevatron. We increase the signal acceptance for a potential Higgs boson by exploiting the large branching ratio for $W \to q\bar{q}$. The multi-jet backgrounds are highly suppressed by requiring that the Z boson decays into a pair of charged leptons. The search is thus performed in two separate final states: $H \to WW$ decays resulting in four hadronic jets and $H \to WW$ decays leading to one charged lepton, missing transverse energy (from the neutrino), and two hadronic jets. Further discrimination between signal and backgrounds is obtained using an artificial neural network. Using 4.8fb^{-1} of CDF data, we set 95% C.L. upper limits on the production cross section for a potenital Higgs boson with masses between 110 and 200 GeV/c^2.

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