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Search for the Higgs boson in leptonic ZZ* and semileptonic WW* decays in proton-antiproton collisions at 1.96 TeV

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We present a search for the Standard Model Higgs boson produced via the H->WW->*lvjj and H->ZZ->*4l processes at a center-of-mass energy of 1.96 TeV using up to 8.5 fb-1 of data collected with the D0 and CDF detectors at the Fermilab Tevatron collider. We search in events with either four charged leptons, or two jets, one charged lepton, and missing transverse energy. The four lepton channel provides a very clean signature, although at the expense of a low cross section time branching ratio. The semi-leptonic H->WW* channel has a relatively larger cross section times branching ratio, but is overcome by the large W+jets background. The procedures used to perform these searches will be discussed.

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