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Higgs Boson Results from the Tevatron

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The CDF and D0 collaborations carried out a vigorous program of searches for the Higgs boson(s) predicted by the standard model and selected extensions. All major production modes were included in the searches: production of Higgs bosons in association with a W or a Z boson, gluon-gluon fusion, vector boson fusion, and production in association with a pair of top quarks. Higgs boson decays to $b\bar{b}$, W^+W^-, $\tau^+\tau^-$, ZZ, and $\gamma\gamma$ were explicitly sought, giving sensitivity for Higgs boson masses between 90 GeV/c^2 and 200 GeV/c^2. An excess of candidate events in the mass range 115 GeV/c^2 – 140 GeV/c^2 is observed. The data from all of the separate search channels are consistent with the expectation for a standard model Higgs boson of mass near 125 GeV/c^2, indicated by the recent discovery by the LHC collaborations ATLAS and CMS. Results of searches for a fermiophobic Higgs boson and searches for Higgs bosons in the context of the standard model with a fourth sequential generation of fermions, are also presented.

[1]on behalf of the CDF and D0 Collaborations