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Higgs Boson Studies at the Tevatron

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Searches for Higgs bosons took place at the Tevatron collider for more than a decade, continuing after the end of Tevatron operations in 2011. These searches evolved and steadily improved over this time, reaching the sensitivity required to exclude Higgs masses in the range of 90-200 GeV. These searches covered a large range of production and decay modes, and were highly complementary to the Higgs boson search at the LHC. On July 2, 2012, the two Tevatron, CDF and D0, together reported evidence for a new particle decaying to bottom quarks. The mass of this new resonance was highly compatible with the Higgs discovery announced by the LHC two days later, at 125 GeV. Since this time, the Tevatron experiments have been performing measurements of the Higgs properties, including sensitive probes of the dominant bbH coupling for this mass. This presentation will discuss the results of the Tevatron's Higgs studies and the potential future directions of study with their data.

[1]Speaking on behalf of the CDF and D0 experiments from the Tevatron collider program.