

## Search for a low mass standard model Higgs boson in ppbar collisions at $\sqrt{s}=1.96$ TeV

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We present a search for a low mass standard model Higgs boson in proton-antiproton collisions at a center-of mass energy of 1.96 TeV with the D0 detector at the Fermilab Tevatron collider. The search is performed using the associated production of the Higgs boson with a W or a Z boson which decay, resulting in final state with one or two b-tagged jets in association with either two charged leptons, one leptons plus missing transverse energy or just missing transverse energy. We also present a combination of these searches with those exploiting the decay of the Higgs boson in tau pairs and photon pairs. Recent improvements to the sensitivity of these searches, including the extension to the full dataset corresponding to an integrated luminosity of 6.7 fb<sup>-1</sup>, will also be discussed.

**Primary author:** Dr CHAN, Kwok Ming (University of Notre Dame)

**Presenter:** Dr CHAN, Kwok Ming (University of Notre Dame)

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