

Abstract Submitted
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Search for the Standard Model Higgs Boson in the $ZH \rightarrow \nu\nu b\bar{b}$ channel at D0 ABHINAV DUBEY, Delhi University, D0 COLLABORATION
— We present a search for a low mass Standard Model Higgs boson produced in association with a Z boson decaying invisibly into a pair of neutrinos at a center-of-mass energy of $\sqrt{s} = 1.96$ TeV with the D0 detector at the Fermilab Tevatron collider. The final state is characterised by the presence of two b -tagged jets from the Higgs boson decay and a large imbalance in the transverse energy of the event. This channel is very powerful because of the large $Z \rightarrow \nu\nu$ branching ratio, but is experimentally very challenging because of the large QCD backgrounds and absence of visible leptons in the final state. The result with a data set up to 7.2 fb^{-1} and recent improvements to the sensitivity will be discussed.

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