

Abstract Submitted
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Search for associated production of Z and Higgs bosons in $\nu\bar{\nu}b\bar{b}$ final states in $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV XIAOWEN LEI, University of Arizona, D0 COLLABORATION — We present a search for a low mass Standard Model Higgs boson produced in association of a Z boson decaying invisibly into a pair of neutrinos at a center-of-mass energy of 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 due to the neutrinos. This channel is very powerful because of the large $Z \rightarrow \nu\bar{\nu}$ branching ratio, but is experimentally very challenging due to the large QCD backgrounds and absence of visible leptons in the final state. Recent improvements, as well as results with the final full data sample, at 9.6 fb^{-1} , will be discussed.

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