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Search for Associated Production of Z and Higgs Bosons in $\nu\nu bb$ Final States in $p\bar{p}$ Collisions at $\sqrt{s}$=1.96 TeV GABRIEL FACINI, Northeastern 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 $Z \to \nu\nu$ branching ratio, but is experimentally very challenging because of the large QCD backgrounds and absence of visible leptons in the final state. As well as the inclusion of the full data set, up to 4 fb^{-1}, recent improvements to the sensitivity will be discussed.

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