

Abstract Submitted  
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**Search for a SM Higgs Boson in the all-hadronic decay channel at CDF** ANKUSH MITRA, Academia Sinica (Taiwan), CDF COLLABORATION — We present a search for the standard model (SM) Higgs boson in the  $VH \rightarrow qq'\bar{b}\bar{b}$  ( $V = W, Z$ ) and  $Hqq' \rightarrow \bar{b}\bar{b}qq'$  (vector boson fusion) production modes using  $4\text{fb}^{-1}$  of  $p\bar{p}$  collisions recorded with the CDF detector. These channels contain significant acceptance from a potential signal as a result of the large hadronic branching ratios for the  $W$  and  $Z$  bosons. However, the analysis of this channel is difficult due to the presence of very large multi-jet backgrounds. The most recent result in this channels which is presented here yields a factor of two improvement over the previous  $2\text{fb}^{-1}$  analysis. We describe new techniques used for data-based modelling of the multi-jet backgrounds and for incorporating jet shapes to suppress some of these backgrounds.

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