

Abstract Submitted
for the APR12 Meeting of
The American Physical Society

Search for the SM Higgs Boson in the lepton and neutrino and four jets final state at D0 RYUJI YAMADA, Fermi National Accelerator Laboratory, D0 COLLABORATION — A search for the standard model Higgs boson is performed in final states with a lepton, neutrino, and four jets with the D0 Detector at the Fermilab Tevatron Collider, using the full Run II data set. This new dedicated search channel is focused on the $WH \rightarrow WWW \rightarrow \ell\nu jjjj$ decay process, but includes significant contributions from $H \rightarrow WW \rightarrow \ell\nu jj + X$ decays. Backgrounds from $t\bar{t}$ production are reduced by removing events with strong b -jet identification tags. Multivariate analysis techniques are used to distinguish between signal and background and improve the sensitivity of the search.

Marco Verzocchi
Fermi National Accelerator Laboratory

Date submitted: 04 Jan 2012

Electronic form version 1.4