

Abstract Submitted  
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**Selection of Higgs Boson candidates in the  $WH$  channel decaying into a lepton, neutrino, and a pair of  $b$ -quark jets at D0 detector** RYUJI YAMADA, MICHAEL COOKE, ALEXANDER ABBINANTE, ANTHONY PODKOWA, BENJAMIN RABE, Fermi National Accelerator Laboratory, D0 COLLABORATION — A search is described for Standard Model Higgs boson events in the  $WH$  associated production channel, with subsequent decay into a lepton, a neutrino, and two  $b$  jets, using  $9.7 \text{ fb}^{-1}$  of data collected with the D0 detector at the Fermilab Tevatron collider. The search yields an estimated 33 candidate events decaying in this channel with exactly two jets. Among them we estimate 7.7 Higgs boson events with two tight  $b$ -tagged jets and 11.6 events with one tight  $b$  tag. After pre-selection of data, we determine the most likely Higgs boson candidate events using the results of a multivariate analysis. We will explain the characteristics of these events, and show event displays of the most likely Higgs boson candidate events. The same technique can be applied to other channels.

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