Abstract Submitted
for the SES09 Meeting of
The American Physical Society

Search for the SM Higgs in semi-leptonic WW* decays at Dzero
SHANNON ZELITCH, MARC BUEHLER, BOB HIROSKY, Univ. of Virginia, LIDIJA ZIVKOVIC, GUSTAAF BROOIJMANS, Columbia Univ., DZERO COLLABORATION — We present a search for the Standard Model Higgs boson produced via the $H \to WW^* \to l\bar{\nu}jj$ process at a center-of-mass energy of $\sqrt{s} = 1.96$ TeV using up to 5 fb^{-1} of data collected with the DØ detector at the Fermilab Tevatron collider. We search in events with one lepton (electron or muon), two jets and missing transverse energy. A Higgs particle with a mass greater than 140 GeV primarily decays into a pair of W bosons. While the di-lepton channels provide a cleaner signature, the semi-leptonic decay mode has a significantly larger cross section $\times$ branching ratio. Procedures used to identify signal-like events and to overcome the large W+jets background will be discussed.

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Date submitted: 17 Aug 2009 Electronic form version 1.4