

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Search for the Higgs boson in the four lepton final state RACHEL WILKEN, University of California Riverside, CMS COLLABORATION — The discovery potential for a Standard Model Higgs boson decaying to $ZZ^{(*)} \rightarrow 4$ leptons (electrons and muons) by the CMS detector at the LHC will be presented. The strategy for selecting signal and rejecting background using full simulation of the detector response will be discussed. The analysis has been performed for a Higgs mass range from 120 to 250 GeV/c². We will also give projections of how Higgs boson exclusion limits are effected by LHC center-of-mass collision energy changing from 14 to 10 TeV.

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Date submitted: 19 Oct 2009

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