

Search for Higgs with $H \rightarrow WW (*) \rightarrow l\nu l\nu$ ($l = e, \mu$) decay mode with the ATLAS detector at LHC

Using about 1 fb⁻¹ of ATLAS data at 7 TeV proton-proton centre-of-mass energy taken in 2011, Higgs boson searches in the Higgs decay mode $H \rightarrow WW (*) \rightarrow l\nu l\nu$ ($l = e, \mu$) have been performed with sensitivity exceeding anything currently available. Important sensitivity to Higgs bosons masses between about 140 and 180 GeV is available. The results are also interpreted in a model with a fourth sequential generation of fermions with heavy masses where enhanced production gives greater sensitivity.

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