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Measurement of the Higgs boson in the $WW^{(*)}$ dilepton decay mode with the ATLAS detector at the LHC

This poster presents the results of the measurements of the Higgs boson in the $H \rightarrow WW^{(*)} \rightarrow \ell\nu\ell\nu$ decay mode using the ATLAS detector at the CERN Large Hadron Collider. The results are obtained using the proton-proton collisions dataset which corresponds to an integrated luminosity of 20.7 fb^{-1} at centre of mass energy of 8 TeV and 4.6 fb^{-1} at 7 TeV. An excess over the expected number of background events is observed in the data. The significance of the excess for the Higgs boson mass of 125 GeV is estimated to be 3.8 standard deviations, while the expected value is 3.7. The signal strength μ , defined as a ratio of the observed cross-section for the signal to the cross section predicted for a Standard Model Higgs boson with a mass of 125 GeV, is measured to be $\mu = 1.01 \pm 0.31$.

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