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Standard Higgs boson search in the $H \rightarrow WW \rightarrow 2l2\nu$ decay channel with the CMS detector

The search of the standard model Higgs boson in the $H \rightarrow WW \rightarrow 2l2\nu$ channel with the CMS detector is described. This analysis is performed in categories, depending of the number of jets and the leptons flavour, in order to enhance the Higgs signal respect to the expected irreducible backgrounds. The largest backgrounds are estimated with data-driven methods. In some categories a fit with a 2D template, using kinematics variables, is performed to improve the sensitivity and to be sensitive to the Higgs boson spin and parity. The result with the 5.1fb⁻¹ of data recorded in 2011 with 7 TeV in the center of mass and with 19.5 fb⁻¹ recorded at 8 TeV in 2012 is presented.

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