

Higgs search in $H \rightarrow WW$ decay channels with the CMS detector

The prospects for the search of the Standard Model Higgs boson in the decay channel $H \rightarrow WW^* \rightarrow l \nu l' \nu'$ (l or $l' = e$ or μ) with the CMS experiment at the LHC is presented. The analysis relies on a full simulation of the detector response and emphasis is put on explicit strategies for the measurement of experimental and background systematics from data. The discovery reach is presented as a function of the Higgs mass. A new complete strategy is presented for the early searches and for the control of systematics at very low luminosities of $O(1 \text{ fb}^{-1})$

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