

## Search for a SM-like Higgs boson decaying into $W^+W^- \rightarrow \ell\nu qq'$ final state in high mass

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A search for a Standard Model-like Higgs boson decaying into the  $W^+W^-$  final state is performed with an integrated luminosity of  $19.3\text{fb}^{-1}$  of pp collisions data recorded with the CMS detector at  $\sqrt{s} = 8$  TeV. The search is performed in the semileptonic channel in the high mass region  $600 < m_H < 1000$  GeV, where the hadronically decaying W boson is highly boosted and its decay products are contained in one jet. Jet substructure techniques are used in identifying the hadronically decaying W. No evidence for an SM-like Higgs boson has been found in the investigated mass region.

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Yes

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NO

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