

Abstract Submitted
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Constraints on anomalous HVV couplings of the Higgs boson in proton collisions at 7 and 8TeV CHRISTOPHER MARTIN, Johns Hopkins Univ, CMS COLLABORATION — Under the hypothesis that the resonance is a spin-zero boson, the tensor structure of the interactions of the recently discovered Higgs boson is performed using the $H \rightarrow ZZ, Z\gamma^*, \gamma^*\gamma^* \rightarrow 4\ell$ and $H \rightarrow WW \rightarrow \ell\nu\ell\nu$ decay modes. The full dataset recorded by the CMS experiment during the LHC Run 1 is used, corresponding to an integrated luminosity of up to 5.1fb^{-1} at a center-of-mass energy of 7TeV and up to 19.7fb^{-1} at 8TeV. Limits on eleven anomalous contributions are set. Tighter constraints on anomalous HVV interactions are obtained by combining the HZZ and HWW measurements. All observations are consistent with the expectations for the standard model Higgs boson with the quantum numbers $J^{PC} = 0^{++}$.

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