Abstract Submitted
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Measurement of the properties of a Higgs boson in the four-lepton final state IAN ANDERSON, Johns Hopkins University, CMS COLLABORATION — The properties of a Higgs boson candidate are measured in the $H \to ZZ \to 4l$ decay channel, with l =e,μ, using data from pp collisions corresponding to an integrated luminosity of 5.1 fb^{-1} at center-of-mass energy of $\sqrt{s} = 7$ TeV and 19.7 fb^{-1} at $\sqrt{s} = 8$ TeV, recorded with the CMS detector at the LHC. The mass, width, production cross section and the production mechanism fractions of the new boson are measured. Several hypotheses of spin-0, spin-1, and spin-2 are tested. A fit for the anomalous couplings of a spin-0 hypothesis is performed. All properties of the Higgs boson candidate are found to be consistent with the Standard Model.

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