Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Search for a Standard Model-like Higgs boson decaying into WW to lnu qqbar in pp collisions at sqrt s = 8 TeV BIBHUTI PARIDA, Tata Institute of Fundamental Research, Mumbai — 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 inverse femtobarn 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. Advanced 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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Date submitted: 08 Jan 2015 Electronic form version 1.4