

Searches for production of two Higgs bosons using the CMS detector

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Searches for events containing two Higgs bosons are presented using several decay channels of the $h(126)$ boson. The analyses use pp collision data recorded at centre-of-mass energies of 7 and 8 TeV, corresponding to integrated luminosities of 5 fb⁻¹ and 20 fb⁻¹, respectively. Extended Higgs sector scenarios predict the resonant decay of new particles into a pair of $h(126)$ bosons. These resonant di-Higgs processes are searched in different final states and the results are described.

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