

Search for supersymmetric neutral Higgs bosons using the LHC run 1 data recorded by CMS

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A new boson of mass 125 GeV has been discovered at the LHC. Within the present experimental uncertainties the properties of the new boson are in good agreement with the expectation for a standard model (SM) Higgs boson. The discovered SM-like Higgs boson may however be just one of several Higgs bosons, predicted by theories beyond the SM. Searches for additional neutral Higgs bosons beyond the discovered SM-like Higgs boson of mass 125 GeV are presented. The searches are based on 4.9/fb of proton-proton collision data recorded by the CMS experiment at 7 TeV center-of-mass energy plus 19.7/fb of data recorded at 8 TeV. The results are interpreted in the context of supersymmetric extensions of the standard model (MSSM and NMSSM). Model independent interpretations are also given.

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