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Searches for additional scalars with two photons in the final state at CMS

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Although the Higgs boson discovered is so far compatible with the Standard Model Higgs boson, within the experimental uncertainties there is still room for BSM (such as 2HDM and NMSSM) which allow the presence of a Higgs boson with a mass lighter than the discovered Higgs boson. Some latest results of the searches for additional Higgs bosons with two photons included in the final state at CMS will be presented. The searches include a search for a standard model-like Higgs boson in the mass range between 70 and 110 GeV in the diphoton final state, and for a Higgs boson decaying into scalar(s) with at least one scalar decaying into two photons. Some of these searches are performed for the first time based on all LHC data collected by CMS at a center-of-mass energy of 13 TeV.

Author: TAO, Junquan (Institute of High Energy Physics, Chinese Academy of Sciences (CN))

Presenter: TAO, Junquan (Institute of High Energy Physics, Chinese Academy of Sciences (CN))

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