Physics at LHC 2012



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Combined results of SM Higgs searches at CMS

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Results are presented on the search for the Standard Model Higgs combining all decay channels. The combination has been updated with the latest results released for the 2012 winter conferences, including additional channels with respect to the results released end of December 2011. The full data sample of 4.7 pb-1 of pp collisions collected in 2011 with the CMS experiment at the LHC have been analysed. An excess with a local p-value of around 3 sigma is seen at low mass, which reduces to less than 2 sigma significance when the look elsewhere effect is taken into account. The search results are translated into 95% exclusion limits for the Higgs boson, as function of the Higgs mass, excluding a SM Higgs in the region of 127 GeV to 600 GeV.

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