

HEP 2013 Stockholm 18-24 July 2013



Contribution ID: 234

Type: Poster Presentation

Search for the standard model Higgs boson decaying to tau pairs produced in association with a W or Z boson with the CMS experiment in pp collisions at LHC

A search for the standard model Higgs boson produced in association with a W or Z boson is presented using data collected in 2011 and 2012 with the CMS detector at the LHC. The topologies studied have three or four leptons final states. The Higgs boson decay channel analysed is the ditau one where the tau can decay via an electron, a muon or hadronically. The W and Z boson decays used to enhance the signal events are into electron or muon and the dielectrons or dimuons, respectively.

The analysis uses pp collision data samples corresponding to integrated luminosities of 5.0/fb collected at 7 TeV and 19.5\fb of 8 TeV. An interpretation of the results in terms of an upper limit on the production cross-section \times decay branching ratio for a Higgs boson decaying with standard model couplings is presented.

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Track Classification: Higgs and New Physics