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Searches for the exclusive double diffractive Higgs

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The exclusive Higgs could be a clean channel to study Higgs properties. The most popular theoretical model for the exclusive Higgs predicts a total cross section of 3 fb at p-p 8 TeV collision energy. This study summarizes a search for the exclusive Higgs boson using ATLAS 8 TeV data, using the channel in which the Higgs decays to a pair of W bosons with different flavor leptons in the final state. Selection criteria are developed to isolate exclusive processes from inclusive processes. Selection criteria that isolate Higgs-like events that are inherited from previous Higgs searches are utilized. A limit of 770 fb on the total cross section of the exclusive Higgs production is obtained.

Oral or Poster Presentation

Oral

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