

# Electroweak multi-Higgs production in the 2HDM

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Gluon-induced processes are often the most important production channels for double Higgs production in models with extended Higgs sectors, but we demonstrate that in some parts of the parameter space of the Type I 2HDM, electroweak pair production of neutral or charged Higgs states can dominate over QCD-initiated production. We study such regions of parameter space and highlight some specific double Higgs signatures that can be probed at the LHC and discuss which couplings that can potentially be accessed through these signatures.

Based on arXiv:1605.02498, arXiv:1706.01964 and arXiv:1812.01147

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