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Status of the Type-II 2HDM

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The precise determination of the Higgs boson couplings (and their comparison with the SM predictions) will be one of the major goals of future collider experiments. To estimate the possible size of signals for physics beyond the SM, such as models with an extended Higgs sector, global analyses of all currently available data are necessary. In this talk I report on the results of our global
fits of flavour, electroweak precision and LHC Higgs data in the context of the the type-II two Higgs doublet model (2HDM). Within the 2HDM, I discuss the allowed regions of parameter space and the possible deviations of the Higgs couplings to SM fermions and vector bosons from their SM values. I will also comment on the possible enhancements of triple Higgs couplings in the type-II 2HDM and the implications for heavy Higgs searches and (light) Higgs pair production at the LHC.

Summary

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