

Minimal U(1) two-Higgs-doublet models for quark and lepton flavour

Friday 25 October 2024 14:20 (20 minutes)

In this talk I will discuss our recent paper 2406.03331 [hep-ph] where we study the minimal 2HDM with U(1) flavour symmetries which account for the observed pattern of quark and lepton masses and mixings. The corresponding phenomenology related to flavour processes in both sectors will also be investigated, as well as the constraints imposed in the parameter space. We show that, in some cases, Abelian flavour symmetries provide a natural framework to suppress flavour-changing neutral couplings and lead to scenarios featuring heavy neutral/charged scalar masses below the TeV scale within the reach of current experiments.

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