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Search for LFV Higgs and Flavon decays at future colliders

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Models with extended Higgs sector predict that the diagonal Higgs couplings to fermions could deviate from the SM predictions, while non-diagonal flavor-violating Higgs couplings could appear too. We describe these possibilities within the context of multi-Higgs doublet models that employ the Froggatt-Nielsen mechanism to generate the Yukawa hierarchies. The mixing of the Higgs doublets with the Flavon field induces plenty of interesting signals, including: corrections to the diagonal couplings of the SM-like Higgs, LFV Higgs decay $h \rightarrow \tau \mu$ and the FCNC top decay $t \rightarrow ch$. Here we discuss the reach of LHC and VLHC to search for the LFV signals from the flavon decays.

Parallel Session

Electroweak, Top and Higgs Physics

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