

Phenomenology 2018 Symposium



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Charged Higgs bosons in supersymmetric extended Higgs sectors at the LHC

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We focus on the triplet and singlet extensions of minimal supersymmetric scenario, where we can see that the electro-weak contributions coming from the additional triplet and singlet are also important and comparable to the strong contributions. In the context of the observed Higgs like particle around 125 GeV, we look into the status of other Higgs bosons in the model. The possibility of light pseudo-scalar gives rise to interesting phenomenology. Doublet-triplet and doublet-singlet mixings in the Higgs sector have implications in the flavour sector as well as give interesting charged Higgs phenomenology. A triplet type charged Higgs boson can be missed in standard searches at collider and we propose some promising channels to distinguish different types of charged Higgs bosons.

Summary

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