



Contribution ID: 39

Type: **not specified**

Precise calculations of charged Higgs boson decays in NMSSM

Tuesday 16 March 2021 18:00 (20 minutes)

Despite the discovery of the Higgs boson with a mass of 125 GeV, the structure of the Higgs sector remains unknown. In light of the current situation that a second Higgs boson has not been discovered, indirect searches of such a new particle through observables for Higgs bosons are more and more important. This requires accurate theoretical predictions for such observables in order to compare them with the precision measurements in experiments. In this study, we calculated the full one-loop corrections to the decay widths for various charged Higgs boson decays in the framework of Next-to-Minimal Supersymmetric Model (NMSSM) with CP violation. In this talk, we discuss the impact of the NLO corrections for the branching ratio of each decay mode in a wide range of parameter space that is compatible with the experimental constraints.

Time Zone

Europe/Africa/Middle East

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Session Classification: PD1: Theoretical Developments

Track Classification: Physics and Detectors Tracks: PD1: Theoretical Developments