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Particle Physics at LPTHE

Mardi 3 Juillet 2018, 14 :00
LPTHE, Library
Domaines : hep-ph

Titre : *Probe of shape of the Higgs sector by precise calculation of Higgs decay rates*

Orateur : **Kodai Sakurai (Osaka U.)**

Résumé : *Precision measurements of observables for the discovered Higgs boson, such as decay rates and production cross sections, play a crucial role in examining structure of the Higgs sectors. By making use of precise data of Higgs observables in future collider experiments, we aim to comprehensively test various extended Higgs models. In this study, we focus on the Higgs singlet model and 4 types of two Higgs doublet models as a simplest extended Higgs model. To achieve such our goal, we recently computed decay rates of the Higgs boson with NLO EW and NLO QCD corrections in those models. In this talk, we discuss whether or not these models can be discriminated with deviations from the SM for the Higgs decay rates and how we extract information of mass scale of extra Higgs bosons from the deviations. This talk is based on arXiv :1803.01456.*