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Collider phenomenology of simplified Higgs portal Dark Matter models with gauge symmetry

Monday, 8 May 2017 14:30 (15 minutes)

In this talk, I will discuss the phenomenology of some gauge invariant Higgs portal Dark Matter (DM) models. When DM is fermion, applying the Standard Model (SM) gauge symmetry to simplified DM model will introduce an extra scalar mediator in addition to the SM Higgs. This has two consequences: processes of two scalar mediators will interfere with each other; there will be new signals at collider such as scalar to scalar decay. Moreover, I will discuss how to discriminate the spin of DMs in the gauge invariant Higgs portal scenarios at the ILC.

Summary

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