KEK Theory Meeting on Particle Physics Phenomenology (KEK-PH2018 winter) and 3rd KIAS-NCTS-KEK workshop on Particle Physics Phenomenology

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Current status of the singlet-doublet dark matter model

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Weakly interacting massive particle (WIMP) has been a popular candidate of dark matter (DM) in our universe. However, many WIMP models are now severely constrained from the DM direct detection experiments. The singlet-doublet model is one of the models that can evade the strong constraints from the DM direct detection experiments. The model predicts interesting phenomenology due to the CP violation in the dark sector. In this talk, I will discuss the current status of the singlet-doublet dark matter model from viewpoints of DM indirect detection experiments, LHC constraints, and the stability of the Higgs potential.

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Session Classification: Parallel Session 1