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A WIMP Status Report: Constraints and Discovery Prospects for Singlet-Doublet Dark Matter

Thursday 16 May 2024 16:00 (15 minutes)

For many years, models of weakly interacting massive particles (WIMPs) have been a useful target for direct detection experiments and other probes of dark matter. However, increasingly precise experimental probes have severely constrained the viable parameter space for these models. In this talk, I will review a paradigmatic WIMP model, Singlet-Doublet dark matter. I will introduce the model and discuss the remaining parameter space in light of contemporary experiments. In order to evade constraints, the model must live in special regions of parameter space. I will discuss these special regions, the prospects for probing them in the future, and explain how one might arrange for the model parameters to naturally inhabit them.

Mini Symposia (Invited Talks Only)

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