

Shedding light onto the dark freeze-out with FIMPs

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In this presentation, I will discuss the concept of “Self Interacting Dark Matter,” a hypothesis positing that the observed abundance of DM can be elucidated through a secluded dark sector engaging in self-number changing reactions. Additionally, I will introduce the freeze-in mechanism, relying on feeble couplings between the Standard Model (SM) and the dark sector. The latter is anticipated to be populated through annihilation/decay processes involving the Higgs boson. Ultimately, I will integrate both concepts, demonstrating how the dark sector can convert kinetic energy into additional dark matter through self-interactions.

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