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Accelerator-based Searches for Light DM

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The origin and observed abundance of Dark Matter can be explained elegantly by the thermal freeze-out mechanism, leading to a preferred mass range for Dark Matter particles in the MeV-TeV region. The GeV-TeV mass range is being explored intensively by a variety of experiments searching for Weakly Interacting Massive Particles. The sub-GeV region, however, in which the masses of most of the building blocks of stable matter lie, is experimentally open territory. This mass range for particles and force carriers occurs naturally in Hidden Sector Dark Matter models. This talk gives an overview of accelerator-based experiments searching for MeV - GeV Dark Matter, targeting as a benchmark a model with a Dark Photon mixing kinetically with the SM photon. It will focus on searches for invisibly decaying Dark Photons.

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