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WIMPS : How to hunt them and how to save them

jeudi 23 mars 2017 11:05 (15 minutes)

The non-observation of new physics at the LHC and in direct detection experiments puts significant pressure on the idea that dark matter consists of weakly-interacting massive particles (WIMPs) produced from thermal freeze-out. In light of these results I will discuss ways to extend the WIMP idea by introducing new mediators and/or additional states in the dark sector. Doing so affects the phenomenology of WIMP models in important ways, leading to additional constraints but also offering new ways to avoid thermal overproduction of dark matter. I will discuss how to constrain such models with the LHC and how to answer the question whether thermal dark matter can still be viable.

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Classification de Session: Dark Matter & Axions

Classification de thématique: Theory