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Particle Physics at LPTHE

Mardi 3 Mars 2020, 14 :00
LPTHE, library
Domaines : hep-ph

Titre : *Dark matter searches with long-lived particles*

Orateur : **Susanne Westhoff (Heidelberg U.)**

Résumé : *In cosmological scenarios beyond thermal freeze-out dark matter interactions with standard-model particles can be tiny. This leads to mediators with a lifetime that is long compared with the scales of particle colliders. In this talk I will discuss two new ideas for collider searches with long-lived mediators : soft displaced objects as signs of compressed dark sectors at the LHC ; and displaced vertices from long- lived light scalars at Belle II. I will show that novel search strategies allow us to explore dark matter interactions ranging over several orders of magnitude.*