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Particle Physics at LPTHE

Mardi 9 Octobre 2018, 14 :00
LPTHE, Library
Domaines : hep-ph

Titre : *Paleo Detectors - Using Ancient Minerals to Search for Dark Matter*

Orateur : **Sebastian Baum (Stockholm University)**

Résumé : *Direct detection experiments have delivered impressive limits on the interaction strength of Dark Matter with nuclei in the recent years. A large experimental program is underway to extend the sensitivity of direct detection experiments, however, such experiments are becoming increasingly difficult and costly. Recently, we proposed Paleo Detectors as an alternative approach to the direct detection of Dark Matter : Instead of searching for DM induced nuclear recoils in a real-time laboratory experiment, we propose to search for the traces of DM interactions recorded in ancient minerals over geological time- scales. In this talk I will discuss this proposal, including ways to mitigate backgrounds and methods to read out tracks from ancient minerals.*