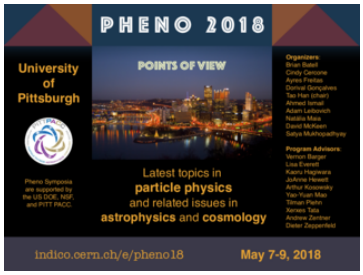

Contribution ID: **538** Type: **parallel talk**

Searching for dark matter bound states at the LHC

Monday 7 May 2018 15:45 (15 minutes)

In this talk, I will discuss the phenomenology of dark matter bound states at the LHC. Dark matter particles could form bound states due to the self-interaction mediated by dark force carriers. For example, we find bound state formation in large parameter space of the self-interacting dark matter (SIDM) model that explains the small scale structure problems in astrophysical observations. The bound states produced at the LHC annihilate into light mediators, which could decay inside the detector if they're long-lived. We use LHC result to put constraints on bound state production rate and mediator lifetime in dark photon model.

Summary

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