



Contribution ID: 723

Type: **Parallel session talk**

Two-component dark matter: how to get the hint at collider?

Monday 21 August 2023 17:42 (18 minutes)

We investigate ways of identifying two kinds of dark matter component particles at high-energy colliders. The strategy is to notice and distinguish double-peaks(humps) in some final state observable. We carried out our analysis in various popular event topologies for dark matter search, such as mono-X and n-leptons+n-jets final state along with missing energy/transverse momenta. It turns out that a lepton-collider is suitable for such analyses. The observables which are best-suited for this purpose have been identified, based on the event topology. The implication of beam-polarization is also explored in detail. Lastly, a quantitative measure of the distinguishability of the two peaks has been established in terms of a few newly-constructed interesting variables.

Collaboration / Activity

Talk

Primary author: LAHIRI, Jayita (UNI/TH (Uni Hamburg, Institut fuer Theoretische Physik))

Presenter: LAHIRI, Jayita (UNI/TH (Uni Hamburg, Institut fuer Theoretische Physik))

Session Classification: T03 Dark Matter

Track Classification: Dark Matter