Phenomenology 2023 Symposium



Contribution ID: 199 Type: not specified

The continuum dark matter zoo

Monday 8 May 2023 18:30 (15 minutes)

I will describe some dark matter models, based mainly on 2210.16326, where the dark matter is described by a gapped continuum, rather than by ordinary particles. The unique kinematics of continuum states leads to a strong suppression of direct detection cross sections, rendering minimal WIMP-like continuum Z-portal models phenomenologically viable. Continuum states can decay to lighter continuum states, which has interesting ramifications for the cosmology and collider physics of these models.

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Session Classification: BSM VI

Track Classification: BSM