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The continuum dark matter zoo

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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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