Phenomenology 2025 Symposium



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Dark Matter and Gravitational Wave Production in 2HDMS

Tuesday 20 May 2025 15:45 (15 minutes)

We investigate dark matter and gravitational wave production in a type II 2HDM with the addition of an inert complex singlet. A Z'_2 symmetry is imposed under which the doublets are even and the singlet is odd to ensure the stability of the dark matter candidate. Before the first order phase transition, finite temperature effects provide a window where thermal bath interactions produce dark matter through channels kinematically forbidden at zero temperature. At zero temperature, the lightest dark matter candidate is stable. The gravitational waves produced by this phase transition could be observed by future experiments.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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