

Singlet Scalar Dark Matter Model Featuring Dual High-Scale Minima

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We analyze various dark matter models featuring additional scalars and fermions. The scalar quartic and Yukawa couplings play key roles in achieving the correct relic density via Freeze-out and Freeze-in mechanisms. In addition to the SM-like high-scale minimum along the Higgs direction, new minima can arise along the extended scalar direction, depending on the dark matter parameter space. We explore the full parameter space to identify regions of interest.

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