

Probing mixed complex scalar WIMP dark matter

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We discuss phenomenology of models extended by introducing an isospin doublet scalar and a complex singlet scalar. In such models, the lighter state of mixed neutral scalars can be WIMP candidate. We point out that some WIMP mass regions are consistent with results of dark matter searches as well as the limit on the dark matter relic density. We show that these allowed regions can be investigated at future collider experiments and dark matter direct detections.

Summary

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