

On the CP Properties of spin-0 dark matter

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Aiming to uncover the CP properties of spin-0 particle Dark Matter (DM), we explore a two-component DM scenario within the framework of 3-Higgs Doublet Models (3HDMs), a well-motivated set-up previously studied due to the complementarity of its collider and astrophysical probes. We devise benchmark points in which the two components of DM have same CP in one case and opposite CP in another. We then show several cross section distributions of observables at collider experiments where the two cases are clearly distinguishable.

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