

Abstract Submitted  
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**The Inert Dark Matter** ETHAN DOLLE, SHUFANG SU, University of Arizona — The lightest neutral scalar in the Inert Higgs Doublet Model is a natural candidate for WIMP dark matter. In this paper, we analyzed the dark matter relic density in the Inert Higgs Doublet model. Various theoretical and experimental constraints are taken into account. We found that there are five distinctive regions that could provide the right amount of the relic density in the Universe. Four out of those five regions have a light particle spectrum which could be studied at the Large Hadron Collider.

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