

Abstract Submitted
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Sticky Dark Matter in the Effective Field Theory Approach¹ AN-DRIY BADIN, Duke University, ALEXEY PETROV, Wayne State — There is experimental evidence that Dark Matter (DM) makes up about 25% of the Universe's mass and is expected to be nonrelativistic in most models. We explore the possibility of the creation and existence of a bound state of Dark Matter and standard model (SM) particles. Such bound states can potentially be created and detected during direct DM search experiments (DAMA, CDMS, XENON etc.). We work in a model-independent approach to determine conditions under which such bound states can be created. Our results appear to be dependent upon the nuclei used in the DM direct detection experiments. In this scenario we determine the region of DM parameter space that provides a simultaneous fit to DAMA and CDMS data.

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