

Abstract Submitted
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The External Field Effect on Milky Way Dwarf Spheroidal Galaxies BENJAMIN BLANKARTZ, JUSTIN MESSINGER, JOSHUA SCHUSSLER, STEPHEN ALEXANDER, Miami University — MODified Newtonian Dynamics is an alternative to the dark matter paradigm which can be used to explain the missing mass problem. The External Field Effect is a feature unique to MOND that has no counterpart in the dark matter paradigm. The EFE comes about when a gravitationally bound system is under the influence of an external gravitational field. We embed several Milky Way dwarf spheroidal galaxies in an external field similar to what they would feel from their host galaxy, the Milky Way. We then calculate the time evolution of the stellar motion under the effects of MOND as well as the EFE. The dispersion profiles are calculated statistically and then compared to observational data and a best fit is estimated.

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