

Abstract Submitted
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Examples of the MOND External Field Effect in Dwarf Spheroidal Galaxies: Fornax and Crater II JOSHUA SCHUSSLER, BENJAMIN BLANKARTZ, BENJAMIN AMEND, MICHAEL ZITO, ROHAN RADKE, JENNIFER WALLACE, STEPHEN ALEXANDER, Miami University — The only viable alternative to the Cold Dark Matter (CDM) paradigm to date is Modified Newtonian Dynamics (MOND). The essence of MOND is that Newtonian gravity requires modification at extremely low accelerations (less than 10^{-10} m/s²). MOND has had great success in reproducing the flat rotation curves that are observed for spiral galaxies. Recently, MOND has been used to calculate dispersion profiles for dwarf spheroidal galaxies (dSph) that are satellite galaxies of the Milky Way and Andromeda, and the agreement with observations is encouraging. The external field effect (EFE) is a unique feature of MOND that has not been widely investigated. Here, we present the results of dispersion calculations for dSph's Fornax and Crater II that include the EFE. We compare both the bulk dispersions and the dispersion profiles to observations.

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