

Abstract Submitted
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Dwarf Spheroidal Galaxy Dispersions Calculated with the MOND External Field Effect¹ NOSHIN YESMIN, WILL SNIDER, DR. S. G. ALEXANDER, Miami University — We present calculated dispersion profiles of four Milky Way dwarf spheroidal satellite galaxies, which include the Modified Newtonian Dynamics (MOND) external field effect (EFE). Our model of dwarf spheroidal galaxies (dSphs) contains ten thousand stars, and the internal gravity of the dwarf is modeled as Plummer potential. In addition, we treat the host galaxy as a fixed point mass whose gravitational field is not affected by the dwarf galaxy. We calculate the motion of the 10k stars for several billion years, and then calculate time-averaged bulk dispersion and dispersion profile statistically. We include results for Newtonian gravity, isolated MOND, and EFE MOND and compare them to observations.

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