

Abstract Submitted
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The Observed Scaling Relationships between the Dark Matter Halo Parameters and Half-Light Radii of Multiple Galaxy Types.
ZECHARIAH MILLER, HUNTER SOMERS, BEN WOODALL, Millikin University, CASEY WATSON, Professor — We present relationships between the half-light radii and best-fit, Burkert dark matter halo parameters of 12 Milky Way dwarf spheroidal galaxies (dSphs). We then show that these relationships hold for several galaxy types over many orders of magnitude in galaxy size, mass, and luminosity. We determine power-law fits for these relationships that allow astronomers to estimate the properties of a galaxy's dark matter halo simply by measuring its half-light radius.

Zechariah Miller
Millikin University

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