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## Improving the search for extragalactic dark matter using N-body simulations

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Extragalactic galaxies and galaxy clusters are expected to be some of the brightest sources of dark matter annihilation on the sky. Further, catalogs such as the 2MASS survey, tell us where thousands of these objects are. The challenge, however, is that catalogs only detail a subset of the baryonic properties of these galaxies. In this talk I will outline how to map from a catalog of galaxies to map of the extragalactic dark matter distribution on the sky. I will show how the biases and systematics of the method can be understood in the context of an N-body simulation, and demonstrate that the projected sensitivity of this method at Fermi-LAT could produce limits comparable with those coming from the Milky Way Dwarfs.

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