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Presentation Requested: oral

Category: Assembly of Galaxies / Mass & Structure Evolution

Question: Other

Dwarf Galaxies on the Edge of the Local Volume: Mass Assembly and Star Formation in Low Gas Density Environments

I will discuss ongoing work in which we address the mass assembly of galaxies at late times by exploiting observations of their occasionally faintly star-forming neutral hydrogen content. Specifically, we identify tiny dwarf galaxies in the vicinity of the Local Group from two recent surveys of the Galactic plane using their HI signatures. Dwarf galaxies probe not only one of the more easily recognizable methods of ongoing accretion of gas and stars onto galaxies, but they also represent some of the lowest rates (and in many cases the most metal poor examples) of recent star formation. Dwarfs in the vicinity of the Milky Way provide the added advantage of being nearby enough to study at relatively high resolution, which is especially useful in the context of being potential nearby analogs to high redshift, low mass star forming galaxies. The sample I present thus yields insight into the ongoing baryonic mass assembly of the Milky Way and can be compared to high resolution dark matter simulations such as Via Lactea; it also can be used to investigate, with high resolution, star formation in galaxies dominated by pristine atomic gas, which is difficult to observe at high redshift.