

## X13b Investigating the onset conditions of galactic winds in dwarf galaxies of the Local Group

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The Local Group, a collection of galaxies including the Milky Way, predominantly consists of dwarf galaxies. Dwarf galaxies have undergone evolutionary processes driven by both internal mechanisms, such as star formation and galactic winds, and external influences, such as tidal effects and the impact of nearby massive galaxies on star formation. This study focuses on dwarf Spheroidal galaxies (dSphs), a specific class of galaxies characterized by their extremely low luminosity and lack of interstellar gas. The lack of interstellar gas in dSphs are considered to be due to some or most of the interstellar gas having been blown away/out by galactic winds in the past. Galactic winds refer to the phenomenon in which gas is expelled from a galaxy when numerous supernova explosions occur within a short timescale. Previous studies (e.g., Ferrara et al. 2000) have associated the initiation of galactic winds with the mass of the galactic halo. Hence, in this study, we estimated the halo mass based on observational data. Furthermore, we calculated the timing of galactic wind initiation by considering the energy from supernovae and the binding energy, comparing it with the star formation history from Weisz et al. (2014). The results reveal that galactic winds have affected numerous dwarf galaxies, leading to a temporary or near-complete stop of star formation. However, there were some dwarf galaxies for which no galactic wind was supposed to have blown, depending on the assumed conditions. We plan to discuss those results. In addition, the results of changing the conditions of halo mass will be presented.