

## X54a Exploring the onset conditions of galactic winds in dwarf galaxies of the Local Group

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The Local Group is a group of galaxies including the Milky Way. Most of the members are dwarf galaxies. Dwarf galaxies are considered to have evolved through a number of internal mechanisms and external processes. For example, internal mechanisms include star formation, stellar feedback from supernova explosions, and galactic winds. External processes include tidal effects and the influence of star formation by nearby massive galaxies. Dwarf spheroidal galaxies (dSphs), which are the main target of this study, are a class of galaxies with the lowest luminosities completely devoid of interstellar gas. Previous studies have suggested that the lack of interstellar gas is due in particular to the fact that some or most of the interstellar gas has been blown away by galactic winds in the past. Galactic winds are phenomena in which gas is partially or entirely blown away/out of a galaxy when a large number of supernova explosions occur in a short period of time. In this study, the timing of the onset of the galactic wind is calculated from multiple approaches using observed data, compared with the star formation history, and discussed. The results show that galactic winds blew away/out in many dwarf galaxies, and that star formation was temporarily or almost completely stopped. However, there were some dwarf galaxies for which no galactic wind was supposed to have blown, depending on the assumed conditions. In addition, a comparison with several galactic wind models and the relationship with the tidal effects due to the Milky Way gravitational potential will be discussed.