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ALMA ACA CO Observations in Isolated Galaxy Pairs: the Low Mass Picture SWETHA SANKAR, University of California, Los Angeles, GEORGE PRIVON, National Radio Astronomy Observatory, SABRINA STIERWALT, Occidental College — Analyses of pair galaxy interactions provide a critical picture of dynamics influencing gas and stellar buildup in low-mass, metal-poor environments. Previous probing of low-redshift TiNY Titans dwarf galaxy pairs (10^7 $M_\odot$ < M < $10^{9.7}$ $M_\odot$; 8.0 < Z < 8.9) via the Sloan Digital Sky Survey found enhanced star formation rates with separation distances R_{sep} < 100 kpc. Whether this star formation is a result of an increased H_2 mass or efficiency in which the H_2 is converted to stars remains unclear. For the first time, we present ALMA Atacama Compact Array molecular gas quantities of these dwarf galaxy pair systems with close separations (6 kpc < R_{sep} < 48 kpc) via the CO tracer. CO is detected in four galaxies, and an application of the Milky Way accepted α_{CO} results in molecular gas calculations of 10^8 $M_\odot$. A comparison of molecular gas and stellar formation rate to the xCOLDGASS (10^9 $M_\odot$ < M < $10^{11.5}$ $M_\odot$) data set does not identify higher H_2 nor efficiency in these dwarfs. This preliminary study thus demonstrates the feasibility of measuring H_2 reservoirs in dwarfs, with future studies aimed at constraining molecular gas mass at lower metallicity environments.

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