

Abstract Submitted
for the SES16 Meeting of
The American Physical Society

The Distribution of Star Formation in Interacting Dwarf Galaxies¹ SANDRA LISS, KELSEY JOHNSON, Univ of Virginia, SABRINA STIERWALT, National Radio Astronomy Observatory, NITYA KALLIVAYALIL, Univ of Virginia, GURTINA BESLA, Univ of Arizona, DAVID PATTON, Trent University, GEORGE PRIVON, Pontifica Universidad Catolica de Chile — We present H α imaging of the interacting dwarf galaxies from the TiNy Titans (TNT) survey, providing an unparalleled view of the ongoing star formation in the first systematic study of these systems. Galaxy interactions are of fundamental importance to the evolution of massive galaxies - they impact morphology, star formation rates (SFRs), and interstellar medium composition. Although the majority of mergers at all redshifts are expected to occur between low mass galaxies, little is known about the extent of these effects in their shallow gravitational potentials. Early TNT results include the finding that fiber-based H α fluxes suggest an enhancement in the SFRs of paired versus unpaired dwarf galaxies, and that this enhancement may be more significant than in their more massive counterparts. To develop a more comprehensive view of the star formation in these interacting dwarf galaxies, we have obtained H α observations with the 8.1m Gemini North Telescope. These compelling images reveal the clumpy morphology and asymmetric distribution of the ongoing star formation in the TNT sample. We present a quantitative analysis of this morphology and discuss the impact of the clustered star formation on these low mass dwarf galaxies and their environments.

¹Based upon work supported by the National Science Foundation Graduate Research Fellowship under Grant No. DDGE-1315231

Sandra Liss
Univ of Virginia

Date submitted: 07 Oct 2016

Electronic form version 1.4