Title: Star Formation in Undergraduate ALFALFA Team Galaxy Groups and Clusters

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Abstract

The Undergraduate ALFALFA Team (UAT) Groups project is a coordinated study of gas and star formation properties of galaxies in and around 36 nearby (z<0.03) groups and clusters of varied richness, morphological type mix, and X-ray luminosity. By studying a large range of environments and considering the spatial distributions of star formation, we probe mechanisms of gas depletion and morphological transformation. The project uses ALFALFA HI observations, optical observations, and digital databases like SDSS, and incorporates work undertaken by faculty and students at different institutions within the UAT. Here we present results from our wide area Hα and broadband R imaging project carried out with the WIYN 0.9m+MOSAIC/HDI at KPNO, including an analysis of radial star formation rates and extents of galaxies in the NGC 5846, Abell 779, NRGb331, and HCG 69 groups/clusters. This work has been supported by NSF grant AST-1211005 and AST-1637339.