

X09b Investigation on Local Interacting Galaxies through Analysis of Star Formation Histories

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Galaxy interactions are a very fundamental process when discussing galaxy formation and evolution, but many processes that occur during interactions are not fully understood, and quantitative studies are not trivial. This work aims to aid our understanding of galaxy interactions by investigating properties of local interacting galaxies. In particular, this work focuses on the star formation histories of interacting galaxies, so we can draw a more detailed picture of a galaxy's evolution. In this stage of the work, local interacting galaxies from SDSS Data Release 14 within redshift $0.005 < z < 0.1$, identified through the Galaxy Zoo Project (Darg et al. 2009), were analyzed. Using the SED fitting code FIREFLY (Wilkinson et al. 2017), the quantitative formation histories of each galaxy were obtained. By analyzing the star formation history in conjunction with galaxy properties such as galaxy colour and merging stage, more detailed histories of interacting galaxies were able to make clear. It can be seen that galaxies that seem to be showing visual characteristics of ongoing merging are, in general, bluer in colour and undergoing recent strong bursts of star formation.