

## X22a Examining the Spatially Resolved Star Formation Histories of Local Interacting Galaxies

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In order to understand the physical processes that go on inside interacting galaxies, we must first understand their star formation histories. We have identified interacting galaxies in the Mapping Nearby Galaxies at APO (MaNGA: Bundy et al. 2015) catalogue using the Transfer Learning and Convolutional Neural Network (CNN) models developed by Ackermann et al. (2018), and obtained their star formation histories. The MaNGA FIREFLY Value Added Catalogue (Goddard et al. 2017) applies SED Fitting on spatially binned spectra in galaxies, and allows us to obtain spatially resolved star formation histories. The SED Fitting revealed that many interacting galaxies showed young stellar populations in regions where the galaxies seem to be interacting. Further, we have checked for consistency by applying the PCA method outlined in Rowlands et al. (2018) on galaxy spaxels. This method uses information related to the 4000Å break as PC1 and information related to the total excess Balmer absorption as PC2 to analyze the stellar population in each region. The PCA results showed that the interacting regions have increased recent star formation, which is consistent with the our obtained SFH. We will discuss our findings of the physical properties of these regions, as well as possible underlying relevant physical processes.