

X30a Investigation of Galaxies with a Kinematically Distinct Core Using MaNGA Data

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Galaxy interactions and mergers can create disturbances in galaxies. Thus, we expect to find complex and disturbed kinematics in interacting galaxies, such as asymmetries and distortions. One particular disturbance is a kinematically distinct core (KDC), where the inner region of the galaxy has a distinctly different kinematic behaviour compared to the main outer body. Such a feature is thought to be a relic of an external gas accretion event (Bertola et al. 1992), such as a galaxy merger. We have identified, through visual inspection of two-dimensional galaxy kinematic maps, galaxies from the Mapping Nearby Galaxies at APO (MaNGA: Bundy et al. 2015) catalogue, and studied their spatially resolved physical properties and stellar populations. We have discovered that there is a relationship existing between galaxy properties and the source of ionisation of the galaxy. If the galaxy is an AGN-host, the stellar population gradients are consistent with that of previous works, such as Coccato et al. (2011, 2013, 2015), and the gas and main body of the galaxy were co-rotating. In contrast, if the galaxy is a starforming galaxy, we found that the stellar populations do not show a clear gradient, and the gas was co-rotating with the KDC. We will discuss this, other findings, and future prospects of galaxy classification using spatially resolved kinematics.