

# Connections between Stellar Populations and Disk Dynamics

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Rotating disk galaxies span a vast dynamic range in size, mass, and surface brightness. Stellar populations vary considerably over this range in terms of age, metallicity, gas fraction, and current star formation. Nonetheless, disk galaxies exhibit strong kinematic correlations like the Baryonic Tully-Fisher relation and Renzo's rule that depend on stellar mass and its distribution. These provide considerable insights into stellar populations that are complimentary to traditional photometric studies.