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New Insights into Galaxy Evolution: the Atlas3D project¹

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Nearby galaxies have preserved the records of their formation and evolution in the details of their structures, stellar populations, and gas contents. Drawing on the work of the Atlas3D team, I will review some recent insights into the evolution of early-type (elliptical and lenticular) galaxies. For example, observations of the stellar kinematics are coupled with numerical simulations to understand what kinds of galaxy mergers have built up the galaxies we see today. Stellar populations can be used to read the star formation histories of the galaxies, and observations of the cold gas contents of early-type galaxies also reveal their interactions with their environments.

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