

Z111r The Evolving Landscape In and Around the Field of Nearby Galaxy Studies

Jin Koda (Stony Brook University)

One of the ultimate goals in research into galaxies in the local universe is to understand the interplay among gas, star formation, and galactic structure, and their roles in galaxy evolution. Large-scale galactic dynamics drive gas motions, perturb molecular clouds, and accelerate the growth of dense clumps in the clouds, which then leads to star formation. Feedback from those new stars is also a major player in the energetics of the gas in galaxies. It often triggers next-generation star formation, and when it is excessive, could even expel the gas from galaxies and halt star formation as a whole. These feedback processes are known to play a major role in galaxy formation and evolution. We need multi-wavelength observations to understand these complex interplay. I will attempt to summarize recent progress in observational studies of nearby galaxies. In my view, it is important now, more than ever, to take advantage of the synergy between multi-wavelength observations, to bridge the gaps between studies of nearby galaxies, the Milky Way, and distant galaxies, and to enhance collaborations with a variety of researchers across the world.