

New Results from the DEEP2 Galaxy Redshift Survey: The Role of Environment in Galaxy Evolution from $z \sim 1$ to $z \sim 0$

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Abstract

The DEEP2 Galaxy Redshift Survey is the first project to study the distant Universe by obtaining a data set comparable in size and nature to recent generations of local surveys. Made possible by the largest ground-based optical telescopes and new instrumentation, DEEP2 was designed to measure both the properties of galaxies at $z \sim 1$ and their distribution in space, enabling a number of unique tests of galaxy formation and evolution. In this talk, I will first provide an overview of the survey, including the multiwavelength efforts now underway in one of the four DEEP2 fields, the Extended Groth Strip, which has become the focus of both deep and wide imaging from X-ray to radio wavelengths. I will then present several new results from DEEP2 pertaining to the relationship between galaxy properties and environment at high redshift, focusing on the evolution of star formation, mass assembly, and AGN activity to $z \sim 1$.