Galaxy correlation functions in the CANDELS fields

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Abstract

Galaxy angular clustering statistics contain information about how galaxies populate halos. It has been found that nearby galaxies' clustering is dependent on color: redder galaxies are more strongly clustered than blue galaxies, implying that red galaxies tend to live in denser environments than blue galaxies. Galaxies also tend to be the same color as their neighbors, an effect known as galaxy conformity. We will present the clustering statistics of galaxies in the CANDELS fields at higher redshifts, $2 < z < 6$, specifically auto- and cross-correlations of galaxies in bins of color and luminosity. The presence or absence of the low redshift trends at higher redshift will shed light on how galaxies form and cluster over most of the age of the universe.