

Formation and evolution of DM Halos in different environment

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Abstract According to the hierarchical scenario, galaxies form in dark matter halos, which grow via merging and accretion of small objects. Using new N-body simulations with very high mass and force resolution we study the clustering of dark matter halos hosting galaxies in LCDM cosmology with $\Omega_m = 0.3$. We follow the evolution of halos, which end up in such different cosmological environment as the high density environment of clusters and the low density environment of voids. We discuss the formation and merging history of these halos and, using correlation functions, the relation of their spatial distribution to merging history. We discuss the distribution of halos in clusters and voids.