

Abstract Submitted
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Concentrations of Simulated Dark Matter Halos¹ HILLARY CHILD, The University of Chicago — We present the concentration-mass (c - M) relation of dark matter halos in two new high-volume high-resolution cosmological N -body simulations, Q Continuum and Outer Rim. Concentration describes the density of the central regions of halos; it is highest for low-mass halos at low redshift, decreasing at high mass and redshift. The shape of the c - M relation is an important probe of cosmology. We discuss the redshift dependence of the c - M relation, several different methods to determine concentrations of simulated halos, and potential sources of bias in concentration measurements. To connect to lensing observations, we stack halos, which also allows us to assess the suitability of the Navarro-Frenk-White profile and other profiles, such as Einasto, with an additional shape parameter.

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