U20a **Evolution of the Pairwise Velocity Distribution Function in Lagrangian Perturbation Theory**

The statistical distribution of the radial pairwise peculiar velocity of galaxies is known to have an exponential form as implied by observations and explicitly shown in $N-$body simulations. Here we calculate its statistical distribution function using the Lagrangian perturbation theory, assuming that the primordial density fluctuations are Gaussian distributed. We show that the exponential distribution is realized as a transient phenomena on megaparsec scales in the standard cold-dark-matter model.