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Fluctuations in the crossover from aging to equilibrium of a structural glass AZITA PARSAEIAN, HORACIO E. CASTILLO, Department of Physics and Astronomy, Ohio University — We investigate the fluctuations in the aging regime, the equilibrium regime and the crossover between them, for a simple structural glass with purely repulsive Weeks-Chandler-Anderson interactions. We characterize how the fluctuations evolve by studying the probability distributions of local observables such as individual particle displacements Δx and intermediate scattering functions C_r associated with small regions. We compare the results for probability distributions in the different regimes, and we also compare with results obtained previously for the aging regime of a glass with both repulsive and attractive interactions. We discuss the fitting of the probability distributions of local intermediate scattering functions C_r by generalized Gumbel distributions, and the tails of the probability distributions of particle displacements by non-linear exponential forms.

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