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Aging of the generalized density susceptibility in a strong glass
AZITA PARSAEIAN, HORACIO E. CASTILLO, Department of Physics and Astronomy, Ohio University, KATHARINA VOLLMAYR-LEE, Department of Physics and Astronomy, Bucknell University — We investigate dynamical heterogeneities in a strong glass below the glass transition temperature. Our model is produced by molecular dynamics simulations of an amorphous silica system, where the atoms interact via the BKS potential. We quantify the heterogeneous dynamics by measuring the four-point generalized dynamic susceptibility, i.e., the volume integral of the spatial correlations. We study this quantity as a function of the waiting time and as a function of the global intermediate scattering function. We test for universality by comparing the fluctuations in this model to those of fragile glasses which consist of either small molecules or polymers.

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