

Abstract Submitted  
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**Time evolution of local fluctuations in the aging of a simple glass**

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— We report results of molecular dynamics simulations of the out of equilibrium dynamics of a simple glass former, a binary Lennard-Jones system, after a quench to low temperatures. We explore in detail the fluctuations in the mean square displacement and local correlator describing small, coarse grained regions of the system. We evaluate the probability distribution function (PDF) of those local quantities, as a function of waiting time  $t_w$  and final time  $t$ . We find that both probability distribution functions show very good scaling when the waiting time and final time are chosen to keep the global incoherent scattering function  $C_q(t, t_w)$  at a constant value. In fact, the global incoherent scattering function is a better predictor for both probability distribution functions than the ratio of the final and waiting times  $t/t_w$  or the value of the global mean square displacement of the particles  $\Delta(t, t_w)$ .

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