Anisotropic spatially heterogeneous dynamics in a model glass-forming binary mixture GRZEGORZ SZAMEL, Department of Chemistry, Colorado State University, ELIJAH FLENNER, Department of Physics, University of Missouri — We used computer simulations to calculate, for a model binary mixture, a four-point correlation function which measures the spatial correlations of the relaxation of different particles and the corresponding structure factor. We found that these four-point functions are anisotropic. The anisotropy is the strongest for times somewhat longer than the β relaxation time, but it is quite pronounced even for times comparable to the α relaxation time. At the lowest temperatures the four-point structure factor is strongly anisotropic even for the smallest wavevector q accessible in our simulation.

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