Particle Jumps in SiO$_2$: A Computer Simulation$^1$ ROBIN BJORKQUIST, Reed College, KATHARINA VOLLMAYR-LEE, Bucknell University, JUERGEN HORBACH, DLR, Koeln, Germany — We use molecular dynamics simulations to investigate the aging dynamics of SiO$_2$ modeled by the BKS potential. The system is well equilibrated at temperature $T_{\text{high}}$ and then quenched to $T_{\text{low}}$. We characterize the dynamics by means of jumps in single-particle trajectories and measure the number of jump events, the number of jumping particles, and jump size. All measured quantities increase with increasing $T_{\text{low}}$ and decrease with increasing waiting time. For the largest investigated temperatures $T_{\text{low}}$ and for long enough waiting times the system reaches equilibrium and all measured quantities become independent of $T_{\text{high}}$ and waiting time.

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