

Abstract Submitted  
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**Cluster Analysis of Particle Jumps in SiO<sub>2</sub> Glass<sup>1</sup>** JONATHAN COOKMEYER, Haverford College, KATHARINA VOLLMAYR-LEE, Bucknell University, HORACIO CASTILLO, Ohio University, JUERGEN HORBACH, Heinrich-Heine-University Düsseldorf, Germany — With a Molecular Dynamics simulation, we study the behavior of 115248 SiO<sub>2</sub> particles after a quench from a fully equilibrated configuration at a high temperature to a temperature below the glass transition. By analyzing single particle trajectories, we identified “jumps” when particles moved significantly relative to their fluctuations. We consider the collective motion of these jump events by identifying jumps that occur close in space and time. We will show preliminary results of the cluster size distribution for different temperatures (i.e. 2500 K, 2750 K, and 3000 K), as well as the dependence of this distribution on waiting time.

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