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Athermal Jamming Vs Thermalized Glassiness in a Simple Model of Soft-Core Interacting Particles[1] STEPHEN TEITEL, University of Rochester, PETER OLSSON, Umeå University — Numerical simulations of soft-core frictionless disks in two dimensions are carried out to study shear viscosity η and pressure p of a simple model liquid, as a function of thermal temperature T, packing fraction ϕ, and uniform applied shear strain rate $\dot{\gamma}$. We find that viscosity in the athermal hard-core limit, $\lim_{\dot{\gamma}\to 0}[\lim_{T\to 0}\eta]$, is singularly disconnected from viscosity in the hard-core thermal limit, $\lim_{T\to 0}[\lim_{\dot{\gamma}\to 0}\eta]$, demonstrating that thermal glassy behavior is not governed by the athermal jamming critical point, "point J".

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