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Correlations of structure and dynamics in colloidal supercooled liquids MOYOSORE ODUNSI, ERIC WEEKS, Emory Univ — We are studying the correlations between measured quantities in colloidal samples that are in equilibrium. We track the movement of particles in systems using confocal microscopy. We see correlations between a particle's displacement during short time scales and its long term displacement. In addition, we look at correlations between a particle's displacement during between a particle's displacement during between a particle's displacement during different time scales and structural variables such as its voronoi volume or local volume fraction. We study how these correlations vary as the colloidal volume fraction approaches the glass transition volume fraction.

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