Abstract Submitted
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Correlated Clusters in Aging Colloidal Glass[1] DOMINIC ROBE, STEFAN BOETTCHER[2], Emory University, PETER YUNKER[3], Georgia Tech — A numerical model of correlated domains in glassy colloids is recreated, following its development by Becker, et. al.[4]. The model is a course grained representation of 2D colloidal systems inspired by record dynamics, and produces emergent dynamic heterogeneity and aging. Results from the original development are reproduced, and compared to the same observables in an experimental system of bidisperse microgel spheres studied by Yunker, et. al.[5]. Basic observables such as particle persistence and mean square displacement are measured at different waiting times to observe aging. Four-point correlation lengths are also examined for signs of dynamic heterogeneity. Results from both the numerical and experimental systems are consistent with the predictions of record dynamics, that aging systems evolve on a logarithmic time scale.

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[4]N Becker, et. al. Mesoscopic model of temporal and spatial heterogeneity in aging colloids 2014 *J. Phys.: Condens. Matt.* http://arxiv.org/abs/1401.6521v1
[5]P Yunker, et. al. Irreversible rearrangements, correlated domains, and local structure in aging glasses 2009 *Phys. Rev. Lett.* http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.103.115701

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