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Cluster dynamics in pure and doped GGG D.M. SILEVITCH, M. SCHMIDT, James Franck Institute/University of Chicago, S. GHOSH, University of California, Merced, G. AEPPLI, London Centre for Nanotechnology and Department of Physics and Astronomy, UCL, London, T.F. ROSENBAUM, James Franck Institute/University of Chicago — The Heisenberg spin system Gadolinium Gallium Garnet (GGG) exhibits a strong geometrical frustration, giving rise to local regions of correlated spins which largely decouple from the background spin bath. We discuss the effects of introducing low quantities ($\sim$1%) of impurities, which relieve the frustration and hence act to set an upper bound on the characteristic cluster size. AC magnetic susceptibility is used to study the evolution of the system dynamics for a range of dopant concentrations, and the effects on cluster sizes and characteristic timescales are discussed.

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