Title:	Relaxation dynamics of the three-dimensional Coulomb glass model.
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Abstract:	In this paper, we analyze the dynamics of the Coulomb glass lattice model in three dimensions near a local equilibrium state by using mean-field approximations. We specifically focus on understanding the role of localization length (ξ) and the temperature (T) in the regime where the system is not far from equilibrium. We use the eigenvalue distribution of the dynamical matrix to characterize relaxation laws as a function of localization length at low temperatures. The variation of the minimum eigenvalue of the dynamical matrix with temperature and localization length is discussed numerically and analytically. Our results demonstrate the dominant role played by the localization length on the relaxation laws. For very small localization lengths, we find a crossover from exponential relaxation at long times to a logarithmic decay at intermediate times. No logarithmic decay at the intermediate times is observed for large localization lengths.
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