

Abstract Submitted
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Aging in coarsening ferromagnets with site and bond disorder¹

HYUNHANG PARK, MICHEL PLEIMLING, Virginia Tech — Aging processes during phase ordering are studied in the random-site and random-bond Ising models in two dimensions through Monte-Carlo simulations. The dynamical correlation length $L(t)$ is numerically determined and the behavior of various two-time quantities is investigated. For both models deviations of $L(t)$ from an algebraic growth law $L(t) \sim t^{1/z}$ are observed. Using the correct form of $L(t)$ a simple scaling picture is recovered for the studied disordered ferromagnets in the coarsening regime. Thus various two-time quantities, as for example the autocorrelation function, the space-time correlation function and the time integrated linear response, show a scaling behavior that is fully consistent with simple aging [1]. The similarities and differences between the site-disordered and the bond-disordered models are discussed.

[1] H. Park and M. Pleimling, Phys. Rev. B **82**, 144406 (2010).

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