Abstract Submitted
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Late-time Domain Growth in the Compressible Triangular Ising Net[1] MENG MENG, DAVID LANDAU, Center for Simulational Physics, University of Georgia — We perform large scale Monte Carlo simulations of the long-tme domain growth behavior in a compressible, triangular Ising net. Unlike previous work,[2] our model has no bond angle interactions or lattice mismatch. The system is quenched below the critical temperature from a homogenous disordered state to an ordered phase where multiple domains coexist. We include an elastic energy part in the Hamiltonian to adjust the rigidity of the model. Theory expects the domain size $R(t)$ grows as a power law $R(t) = A + Bt^n$, where t is the time after the quench. For the rigid model we find the late-time domain size growth factor n has Lifshitz-Slozov value of $\frac{1}{3}$. For weak flexible models, we get slight reduction from $\frac{1}{3}$. For the strongly flexible model, we get a bimodal distribution of bond lengths and a dramatically reduced value of n, which has similar behavior as the mismatch model.[3]

[1]Research supported by NSF
[2]Mitchell and DP Landau, PRL 97, 025701 (2006)
[3]Ibid.

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