

Abstract Submitted
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Dynamic phase transition in the next nearest neighbor kinetic Ising model¹ WILLIAM BAEZ, TRINANJAN DATTA, Augusta State University — We investigate the effects of next-nearest neighbor interactions on the dynamic phase transition (DPT) of the two-dimensional kinetic Ising model subject to a spatially homogeneous AC field. Using the period-averaged magnetization as the order parameter for the DPT, we study the cross-over from the multi-droplet regime to the strong-field regime. We compute the probability densities of the period averaged magnetization to study the nature of the phase transition, the susceptibility, and the correlation between the external field and the system magnetization. We also explore the effect of frustration in this model.

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