

Abstract Submitted
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Non-universal local critical exponents at a non-equilibrium phase transition¹ MICHEL PLEIMLING, HYUNHANG PARK, Virginia Tech — We study the dynamic phase transition in the two-dimensional semi-infinite kinetic Ising model in an oscillating field. We focus on the critical regime where the competition between the half-period of the oscillating field $t_{1/2}$ and the metastable lifetime $\langle\tau\rangle$ is most pronounced. We focus on layer-dependent quantities, such as the period-averaged magnetization per layer $Q(z)$ and the layer susceptibility $\chi_Q(z)$, and determine surface critical exponents through finite size scaling. We find that the values of these non-equilibrium exponents are non-universal as they depend on the strength of the surface couplings. Results for the three-dimensional model are also briefly discussed and compared to the two-dimensional case.

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