

Abstract Submitted
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The effects of sudden changes in environmental conditions on the non-equilibrium relaxation of ecological systems¹ SHADI ESMAEILI, MICHEL PLEIMLING, Virginia Tech — We study the responses of predator-prey systems to temporary changes in environmental conditions. Such changes can cause a variation in species' predatory preferences which in our model appears as a perturbation in a many-species system. The type of perturbation that we consider in this study is a sudden change in the interaction scheme. We focus on systems evolving on a two-dimensional lattice and discuss the way the systems transition from one steady state to another. Using Monte Carlo simulations we monitor these transitions via the space-time correlation function and the derived correlation length.

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