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Unusual phase diagram of the generalized contact process with two absorbing states MAN YOUNG LEE, THOMAS VOJTA, Missouri University of Science and Technology — We investigate the generalized contact process with two absorbing states in one and two dimensions by means of large-scale Monte-Carlo simulations. In addition to the conventional active and inactive phases we find a region of the phase diagram where the simple contact process is inactive, but an *infinitesimal* activation rate at the boundary between different inactive domains causes the system to be in the active phase. In this region, the steady state density depends on the boundary activation rate via a stretched exponential. We also study in detail the phase transition between the active and inactive phases focusing on the universality of the critical behavior.

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