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High-precision Monte-Carlo study of the two-dimensional contact process[1] STEPHEN KRAUS, THOMAS VOJTA, Missouri University of Science and Technology — We investigate the absorbing-state nonequilibrium phase transition in the two-dimensional contact process by means of large-scale Monte-Carlo simulations. We perform spreading runs starting from a single active site in an otherwise inactive host and combine a reweighting technique with a careful extrapolation of the effective exponents to infinite time. This allows us to determine the critical behavior in the two-dimensional directed percolation universality class with unprecedented accuracy.

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Thomas Vojta
Missouri Univ of Sci & Tech

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