

Abstract Submitted
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Absorbing-state phase transitions: exact solutions of small systems¹ RONALD DICKMAN, UFMG — I derive precise results for absorbing-state phase transitions using exact (numerically determined) quasistationary (QS) probability distributions for small systems. Analysis of the contact process on rings of 23 or fewer sites yields critical properties (control parameter, order-parameter ratios, and critical exponents z and β/ν_{\perp}) with an accuracy of better than 0.1%; for the exponent ν_{\perp} the accuracy is about 0.5%. Good results are also obtained for the pair contact process. The QS kurtosis exhibits a sharp minimum at the critical point.

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