

Abstract Submitted
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Destruction of spin-nematic order on randomly depleted triangular lattices¹ SIMON LOVELL, JONATHAN DEMIDIO, RIBHU KAUL, Univ of Kentucky — We consider the spin-1 Heisenberg model with biquadratic interactions on a 2-dimensional triangular lattice with random site dilution. It has been shown for this model that the ground state on a clean lattice exhibits spin nematic order. Using the stochastic series expansion (SSE) quantum Monte Carlo (QMC) algorithm, we study the nature of the order-disorder transition in the thermodynamic limit by extrapolating the ground state nematic order averaged over disorder realizations.

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