

MICROSCOPIC DESCRIPTION
OF NONEXTENSIVE SYSTEMS
IN THE FRAMEWORK OF THE ISING MODEL

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S u m m a r y

To describe the behavior of nonextensive systems, the deformed Ising Hamiltonian is introduced by substituting the spin variable s_i by the deformed one s_i^q . In the framework of mean-field theory, the phase transition paramagnet–ferromagnet is investigated for the deformed partition function. The influence of the non-extensive parameter q on the free-energy density and the steady-state value of order parameter is studied in the Landau approximation.