

1014-60-688

Peter T. Otto* (ottop@union.edu), Department of Mathematics, Union College, Schenectady, NY 12308, **Marius Costeniuc** (marius@mathstat.umass.edu), Max-Planck Inst for Math in the Sciences, Leipzig, Germany, and **Richard S. Ellis** (rsellis@math.umass.edu), Department of Mathematics and Statistics, Lederle Graduate Research Towers, University of Massachusetts, Amherst, MA 01003. *The Mean-Field Blume-Emery-Griffiths Model with Varying Parameters.*

In a recent paper, we proved that the mean-field Blume-Emery-Griffiths model undergoes a continuous phase transition for sufficiently large values of the interaction parameter. Furthermore, we proved weak convergence results for the model that differed depending on whether the temperature parameter was below or equal to the continuous phase transition critical value. In this talk, we present follow-up results where the temperature and interaction parameters are allowed to converge to the continuous phase transition critical values in the thermodynamic limit. (Received September 22, 2005)