

Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Bilinear-biquadratic anisotropic Heisenberg model on a triangular lattice¹ ANTONIO PIRES, Universidade Federal de Minas Gerais — Motivated by the fact that the study of disordered phases at zero temperature is of great interest, I study the spin-one quantum Heisenberg antiferromagnet with a next-nearest neighbor interaction on a triangular lattice with bilinear and biquadratic exchange interaction and a single ion anisotropy using a SU(3) Schwinger boson mean field theory. I calculate the critical properties, at zero temperature, in the disordered phase. This is, for values of the single ion anisotropy parameter D above a critical value D_c where a quantum phase transition takes place to a lower D phase.

¹CNPQ-FAPEMIG

Antonio Pires
Universidade Federal de Minas Gerais

Date submitted: 10 Oct 2012

Electronic form version 1.4