Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Possible New Physics at Quantum Critical Points: Skyrmions as Elementary Excitations of $2+1$ D Antiferromagnets ZAIRA NAZARIO, DAVID I. SANTIAGO, Stanford University — It has recently been proposed that there are degrees of freedom intrinsic to quantum critical points that can contribute to quantum critical physics. We point out that intrinsic critical degrees of freedom exist quite generally below the upper critical dimension. We show that in $2+1$ D antiferromagnets skyrmion excitations are stable at criticality and identify them as the critical excitations.

Zaira Nazario
Stanford University

Date submitted: 15 Jan 2006 Electronic form version 1.4