Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Spin dynamics in the stripe phase of the cuprate superconductors BRIAN ANDERSEN, University of Florida, PER HEDEGARD, Univeristy of Copenhagen — Within a model that supports stripe spin and charge order coexisting with a d-wave superconducting phase, we study the self-consistently obtained electronic structure and the associated transverse dynamical spin susceptibility. In the coexisting phase of superconducting and static stripe order, the resulting particle-hole continuum can strongly damp parts of the low-energy spin wave branches. This provides insight into recent inelastic neutron scattering data revealing the dispersion of the low-energy collective magnetic modes of lanthanum based cuprate superconductors.

Brian Andersen
Univeristy of Florida

Date submitted: 30 Nov 2004 Electronic form version 1.4