Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

On the dimensionality of spin and charge modulations in 1/8 doped lanthanum cuprates BORIS FINE, Physics Department, University of Tennessee — I compare the standard one-dimensional stripe interpretation of elastic scattering experiments in 1/8 doped lanthanum cuprates with two two-dimensional interpretations. One of them is known as grid[1,2] and the other one is the lattice of magnetic vortices[3]. Both can induce a 4x4 charge modulation similar to the one detected by scanning tunneling spectroscopy. The case of magnetic vortices, however, is favored against grid by a recent spin polarized neutron scattering experiment.

[1] B.V. Fine, Phys. Rev. B, v. 70, p. 224508 (2004)
[2] B.V. Fine, cond-mat/0606300
[3] B.V. Fine, cond-mat/0610748

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Date submitted: 25 Nov 2006 Electronic form version 1.4