

Abstract Submitted  
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**Transport Anisotropy due to Spiral Spin Order in Underdoped Cuprates** VALERI KOTOV, Boston University, OLEG SUSHKOV, University of New South Wales — I will discuss the in-plane transport anisotropy in the spin-glass phase of  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$  within a theoretical scenario where the physics is purely spin driven (no charge order is present), and a spiral spin density wave is formed in the ground state. Such an approach is well justified for the extended t-J model at low doping. In the low-temperature, variable-range hopping regime, the calculated anisotropy of 50–80 percent (depending on temperature) is in excellent agreement with experiment [1], demonstrating that charge ordering tendencies are not necessary to explain the observed transport anisotropy. This work is part of a series in which we show that the spiral approach provides a consistent description of the low-doping region.

[1] V.N. Kotov and O.P. Sushkov, Phys. Rev. B 72, 184519 (2005).

Valeri Kotov  
Boston University

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