Abstract Submitted for the MAR05 Meeting of The American Physical Society

Spin-Flop Transition in the Stripe Phase of $La_{1.875}Ba_{0.125}CuO_4$ MARKUS HUECKER, GEN D. GU, JOHN M. TRANQUADA, Brookhaven National Laboratory — The static magnetic properties of the spin stripe phase in $La_{1.875}Ba_{0.125}CuO_4$ were studied by means of magnetization measurements. Two magnetic transitions associated with the stripe order were observed. At the low temperature structural transition, which induces the charge stripe order, the spin dimensionality changes from Heisenberg to XY. Below the spin stripe ordering temperature a spin-flop in the spin stripes is observed for a strong magnetic field applied parallel to the CuO₂-planes, i.e. parallel to the XY- plane. The field and temperature dependence of the spin susceptibility and the spin stripe structure is analyzed. *This work was supported by the U.S. Department of Energy, Division of Material Science, Contract No. DE-AC02-98CH10886.*

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Date submitted: 29 Nov 2004

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