

Abstract Submitted  
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**Low-Temperature Normal State Hall Effect in High- $T_c$   $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$** <sup>1</sup> FEDOR BALAKIREV, Los Alamos National Laboratory, Los Alamos, NM 87545, USA, JONATHAN BETTS, Los Alamos National Laboratory, Los Alamos, NM 87545, USA, ALBERT MIGLIORI, Los Alamos National Laboratory, Los Alamos, NM 87545, USA, ICHIRO TSUKADA, Central Research Institute of Electric Power Industry, Komae, Tokyo 201-8511, Japan, YOICHI ANDO, Central Research Institute of Electric Power Industry, Komae, Tokyo 201-8511, Japan, GREGORY BOEBINGER, National High Magnetic Field Laboratory, Tallahassee, FL 32310, USA — We report Hall effect measurements in the normal state of the high- $T_c$  superconductor  $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ . The Hall resistivity was measured by suppressing superconductivity in 60T magnetic field, thus revealing the normal-state behavior in the low temperature limit. The carrier concentration is varied from overdoped to underdoped regimes by partially substituting La with Sr in a set of thin film samples. We find a discontinuity in the doping dependence of the Hall coefficient suggestive of a phase transition near optimal doping.

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