Abstract Submitted
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Quantum criticality in $La_{2-x}Sr_xCuO_4$ cuprates probed with high magnetic fields.[1] ARKADY SHEKHTER, PAULA GIRALDO GALLO, JOSE AUGUSTO GALVIS ECHEVERRI, ZACHARY STEGEN, NHMFL, Tallahassee, FL 32310, USA, KIMBERLY MODIC, FEDOR BALAKIREV, JONATHAN BETTS, NHMFL, LANL, Los Alamos, NM 87545, USA, XIUJUN LIAN, CAMILA MOIR, SCOTT RIGGS, NHMFL, Tallahassee, FL 32310, USA, XI HE, JIE WU, ANTHONY BOLLINGER, IVAN BOZOVIC, BNL, Upton, New York 1197, USA., BRAD RAMSHAW, ROSS MCDONALD, NHMFL, LANL, Los Alamos, NM 87545, USA, GREG BOEBINGER, NHMFL, Tallahassee, FL 32310, USA — We report magnetoresistance measurements at high magnetic fields, up to 80T, in thin-film $La_{2-x}Sr_xCuO_4$ cuprates. At very high fields the resistivity is found to have a linear-in field behavior that mirrors the linear-in temperature behavior at high temperatures. We discuss the implications of linear-in-field magnetoresistance for energy scale competition near quantum critical point in high-temperature superconductors.

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