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High Field Specific Heat of the Cuprate Superconductor LSCO across the Phase Diagram<sup>1</sup> JONATHON KEMPER, GREGORY BOEBINGER, SCOTT RIGGS, NHMFL- Florida State University, JON BETTS, ALBERT MIGLIORI, NHMFL-LANL — Several samples of superconducting LSCO have been measured in specific heat experiments in magnetic fields up to 45 Teslas. The evolution of the electronic density of states is examined as a function of field and doping to reveal the nature of the vortex and normal state quasi-particle contributions within the zero-field superconducting regime.

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