

Abstract Submitted  
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**Magnetic field scaling of the specific heat of  $\text{La}_{1.92}\text{Sr}_{0.08}\text{CuO}_4$  up to 30 Teslas**<sup>1</sup> JONATHON KEMPER, NHMFL-Florida State University — The catalogue of experimental data on cuprate superconductivity has thoroughly characterized multiple different energy scales. Despite this, the complicated relationships between these energy scales remain poorly understood. New specific heat data on the underdoped cuprate  $\text{La}_{1.92}\text{Sr}_{0.08}\text{CuO}_4$ , performed in magnetic fields up to 30 Teslas demonstrates how the specific heat scaling behavior evolves as the cyclotron energy approaches the thermal energy at the superconducting transition temperature,  $T_c$ , and the mean-field calculated upper critical field, known as  $H_{c2}$ . This scaling behavior gives new insight into the complicated relationship of the various energy scales of the cuprate superconductor in the vortex state.

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