

Abstract Submitted
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High pressure Fermi Surface measurements of the High Temperature Superconductor YBaCuO¹ STAN TOZER, AUDREY GROCKOWIAK, WILLIAM CONIGLIO, National High Magnetic Field Laboratory, LOUIS TAILLEFER, NICOLAS DORION-LEYRAUD, University of Sherbrooke, CYRIL PROUST, LNCMI, ERIK KAMPERT, HLD, DOUG BONN, UBC, WALTER HARDY, RUIXING LIANG, University of British Columbia, NHMFL TEAM, UNIVERSITY OF SHERBROOKE TEAM, LNCMI TEAM, HLD TEAM, UNIVERSITY OF BRITISH COLUMBIA TEAM — Many quantum materials exhibit similar phase diagrams at low temperature, leading to a great deal of interest into a common mechanism for a “universal phase diagram”. The typical ingredients of such phase diagrams include an antiferromagnetic phase, a superconducting dome, and possibly one, or several quantum critical points. Temperature versus chemical doping is one traditional way to look at such materials, however thermodynamic variables such as magnetic field or hydrostatic pressure have proved to be powerful tools to explore this phase diagram. Our group performed static high pressure SdH fermiology studies of YBCO at He-3 temperatures to fields of 70 T using an RF tank circuit based on a tunnel diode oscillator.

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