

Abstract Submitted
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Microwave Spectroscopy of Heavy Fermion Superconductors at MilliKelvin Temperatures COLIN TRUNCIK, WENDELL HUTTEMA, PAUL CARRIERE, PATRICK TURNER, DAVID BROUN, Simon Fraser University, JOHN SARRAO, Los Alamos National Laboratory, CEDOMIR PETROVIC, Brookhaven National Laboratory — Heavy fermion metals are of immense interest due to the extreme renormalization of quasiparticle mass, the possibility of non-Fermi-liquid physics, and the appearance of superconductivity on the verge of magnetic order, in the vicinity of quantum critical points. We have setup a novel system for high resolution microwave spectroscopy at milliKelvin temperatures, across the frequency range 2 to 40 GHz. We are using this to study the unconventional superconducting states in a number of Ce- and U-based heavy fermion compounds. I will present an overview of the microwave spectroscopy system, and a summary of some of the interesting physics we have observed in these systems.

Colin Truncik
Simon Fraser University

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