

Abstract Submitted  
for the MAR11 Meeting of  
The American Physical Society

**Quantum critical point in  $\text{UCo}_{1-x}\text{Fe}_x\text{Ge}$** <sup>1</sup> NORAVEE KANCHANAVATEE, KEVIN HUANG, JAMES HAMLIN, RYAN BAUMBACH, DIEGO ZOCCO, M. BRIAN MAPLE, Department of Physics, University of California, San Diego, La Jolla, California 92093, USA — We have carried out a comprehensive study of the  $\text{UCo}_{1-x}\text{Fe}_x\text{Ge}$  series across the entire range of compositions  $0 \leq x \leq 1$ , and report the results of x-ray diffraction, magnetization, specific heat, and electrical resistivity measurements to uncover the magnetic and superconducting phase diagram. Substitution of Fe into UCoGe initially results in an increase in the Curie temperature and a rapid destruction of the superconducting state. Near  $x = 0.2$ , the ferromagnetic transition is suppressed to zero temperature at an apparent quantum critical point, and the temperature dependences of the electrical resistivity and specific heat suggest non-Fermi liquid behavior.

<sup>1</sup>DOE: DE-FG02-04ER46105, NSF: DMR-0802478

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Date submitted: 21 Nov 2010

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