Quantum phase transitions in magnetic metals

ABSTRACT

Changes of state that occur at the absolute zero of temperature are called "quantum" phase transitions. In the vicinity of both continuous and weakly first order quantum phase transitions unusual states arise, including exotic superfluids and non-Fermi-liquid normal states. In this talk I will attempt to give an overview of quantum phase transitions in strongly correlated metals, and then I will focus on thermodynamic, transport, neutron scattering and quantum oscillation measurements that appear to reveal signatures of robust non-Fermi-liquid behaviour near quantum phase transitions.