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"High-Tc Cuprate Superconductors after 14 years: how much do we really know?"

Despite more than a decade of intense theoretical and experimental effort, the microscopic origin of superconductivity in high-Tc cuprates remains unclear. While this fundamental problem will likely dominate condensed matter physics for years to come, there are many properties of these materials for which we have gained considerable understanding. In this talk I shall review recent progress in the field with particular emphasis on the fascinating phenomena that occur when cuprates are subjected to an external magnetic field. I will introduce and then discuss the vortex state, focusing on the electronic structure of the individual vortex cores and the low-energy, long-wavelength properties of the extended quasiparticle states. I will pay particular attention to relevant experiments, and to results and concepts which have broader implications for the study of strongly correlated electron systems.

REFRESHMENTS AT 3:45 P.M.

For further information call Mark Reeves at 202-994-6279