

Pressure Tuned Magnetism

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There are now many examples of phase transitions that can be suppressed to near 0K. At 0K, phase transitions are necessarily from one ordered state to an equally ordered state. This degeneracy of possible ground states leads to quantum mechanical fluctuations in the suppressed order parameter. These fluctuations have a profound effect on the properties of the system and have been proposed as the mediating attractive potential of the novel superconductivity often observed in these quantum critical systems. Magnetisation and resistivity measurements of Fe₂P under hydrostatic pressure will be discussed in this context.