Theory of Paramagnetic Susceptibility of Heavy-Fermion Systems PRASANTA MISRA, Mesa State College, B.G. MAHANTY, GOURI TRIPATHI, Berhampur University, India — We consider a periodic Anderson Hamiltonian in the presence of an applied magnetic field. We derive an expression for the paramagnetic susceptibility of an itinerant electron system in the presence of conduction electron moment and localized moment (c-l)hybridization. We derive an expression for the spin susceptibility of the itinerant electron system and express it as a sum of the exchange enhanced Pauli spin susceptibility and a part which is written as a product of electron paramagnetic resonance (EPR) shift and the Curie-Weiss susceptibilty. The EPR shift is very much similar to the Knight shift, if a contact interaction for the c-l hybridization is assumed. There is good qualitative agreement with the experimental results for CeRu2Si2.

Prasanta Misra
Mesa State College

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