Abstract Submitted for the MAR05 Meeting of The American Physical Society

The Exact Solution for the Physical Properties of a Heinsenberg-Kondo Spin Glass, Including the Superconductor Properties of this System BERNARD COQBLIN, Laboratoire de Physique des Solides, Universit Paris-Sud, 91405, Orsay Cedex, France, ROBERT SCHRIEFFER, National High Magnetic Field Laboratory and Department of Physics, Florida State University, Tallahassee, FL 32310 — We have carried out an exact solution for many physical problems of a Heisenberg-Kondo spin glass. Results will be reported over a wide range of system parameters of 1) the tunneling density of states $N_T (eV)$, the arpes cross section $d\sigma/d\omega d\Omega$, the $I.R_{\lambda}$ and optical conductivities, the susceptibility $X_{\alpha\beta}(Q,\omega)$ the Roman cross section $R_{\alpha\beta}\gamma(\omega, v)$, the specific heat $C_v(t)$, thermal conductivity $K_{Th}(T)$, etc. The influence of phonons on the system will be discussed, including the structure of the spin-phonon-polaron and it's propagation.

Robert Se National High Magnetic Field Laboratory and Department of Physics, Florida State University, Tallahassee, FI

Date submitted: 01 Dec 2004

Electronic form version 1.4