Comparison of ^{35}Cl NQR Spectra between the Mixed Crystals $K_2Sn_{1-x}Re_xCl_6$ and the Al^{3+} Doped Crystals $K_2SnCl_6:Al^{3+}$ *,+

Y. M. Seo, J. Pelzl[a], and C. Dimitropoulus[b]

Department of Physics, Korea University, Seoul, 136-701, Korea
[a] Institut für Experimentalphysik 3, Ruhr Universität Bochum, Germany
[b] Institute de Physique Experimentale, EPF Lausanne, Switzerland

Z. Naturforsch. **53 a,** 552–558 (1998); received March 24, 1998

^{35}Cl Nuclear Quadrupole Resonance (NQR) has provided a valuable tool for investigating the local structure in mixed crystals $K_2Sn_{1-x}Re_xCl_6$ and Al^{3+} doped crystals $K_2SnCl_6:Al^{3+}$. The measured NQR line shapes and relaxation times of both kinds of impurity containing crystals in the cubic phase of the host K_2SnCl_6 show markedly different impurity effects; static impurity effects in $K_2Sn_{1-x}Re_xCl_6$ and dynamic effects in $K_2SnCl_6:Al^{3+}$. The ^{35}Cl NQR spectra of $K_2SnCl_6:Al^{3+}$ near the transition temperature (T_c) indicate the presence of pretransition of the local structure in the high temperature cubic phase.

Reprint requests to Dr. J. Petzl.