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NMR study of the Cd-doped $CeCoIn_5$ heavy-fermion superconductor R.R. URBANO, N.J. CURRO, J.D. THOMPSON, Los Alamos National Laboratory, Los Alamos, New Mexico, 87545, U.S.A., BEN-LI YOUNG, Department of Electrophysics, National Chiao Tung University, Hsinchu 300, Taiwan, LONG D. PHAM, University of California, Davis, CA 95616, U.S.A., Z. FISK, University of California, Irvine, CA 92697, U.S.A. — We have investigated the local environment of In and Co sites of the heavy fermion compound $CeCo(In_{1-x}Cd_x)_5$ ($x = 0.0$, 0.10 and 0.15) using Nuclear Magnetic Resonance (NMR) and Nuclear Quadrupole Resonance (NQR) measurements. Recently, it was found that Cd-doping acts as an electronic tuning agent in $CeCoIn_5$ and that superconductivity (SC) and antiferromagnetism (AFM) coexist at ambient-pressure for $0.05 < x < 0.15$. The NMR/NQR spectra of In and Co indicate the presence of electronic inhomogeneity, and the spin-lattice relaxation rate $1/T_1$ shows dramatic change in the spin dynamics only below $T \simeq 2T_c$.

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