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Study of the Kondo lattice on La doped $CeCoIn_5$ G. KOUTROULAKIS, H. YASUOKA, Los Alamos National Laboratory, T. ZHOU, S. E. BROWN, UCLA, E. D. BAUER, J. D. THOMPSON, Los Alamos National Laboratory — The effect of non-magnetic impurities on the properties of the Kondo lattice was investigated through nuclear magnetic/quadrupolar resonance (NMR/NQR) experiments on $Ce_{1-x}La_xCoIn_5$. Specifically, comprehensive ^{115}In, ^{139}La NQR and NMR measurements were carried out on single crystals of various La concentration levels (x=0, 2, 3, and 5%) for temperatures 1.5K-80K and applied magnetic field values 0T-7T. Our results indicate that the ramifications of the Kondo-ion substitution extend well-beyond the vicinity of the particular site, readily affecting the heavy-fermion forming hybridization. It is suggested that the spin polarization around La impurities is modulated on a much larger length scale than that of charge oscillations.

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