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Nuclear magnetic resonance investigation of the novel heavy fermion system $Ce_2CoAl_7Ge_4$ ADAM DIOGUARDI, Los Alamos National Laboratory, PEDRO GUZMAN, University of California Los Angeles, NIRMAL GHIMIRE, Argonne National Laboratory, STUART BROWN, University of California Los Angeles, JOE THOMPSON, ERIC BAUER, FILIP RONNING, Los Alamos National Laboratory — We present nuclear magnetic resonance (NMR) measurements performed on single crystalline $Ce_2CoAl_7Ge_4$. This material is a member of a recently discovered family of heavy fermion materials $Ce_2MAl_7Ge_4$, where M = Co, Ir, Ni, or Pd that crystallize in the noncentrosymmetric tetragonal space group P4 -21m. Previous measurements indicated a strong Kondo interaction, as well as magnetic ordering at 1.75 K. Our ^{59}Co NMR spectral measurements reveal a Knight shift anomaly at T* ˜17.5 K for H_0 ||c, and 12.5 K for H_0 ||a associated with f-electron conduction electron coherence. Spin-lattice relaxation rate measurements indicate diverging spin fluctuations at a magnetic ordering temperature of 1.6 K. An analysis of the Korringa enhancement factor suggests that the character of the spin fluctuations is dominantly ferromagnetic.

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