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Staggered moments in the vortex cores of $CeCoIn_5^{-1}$ L. LU, G. KOUTROULAKIS, M.D. STEWART, V.F. MITROVIĆ, Department of Physics, Brown University, Providence, Rhode Island 02912, M. HORVATIĆ, C. BERTHIER, Grenoble High Magnetic Field Laboratory, CNRS, B.P. 166, 38042 Grenoble Cedex 9, France, G. LAPERTOT, J. FLOUQUET, CEA, INAC, SPSMS, CEA Grenoble, 38054 Grenoble Cedex 9, France — Our previous nuclear magnetic resonance measurements revealed that magnetic field can induce an exotic superconducting phase, characterized by the presence of strong antiferromagnetic fluctuations. In the low field superconducting state, NMR spectra are determined by the inhomogeneous field distribution of a vortex lattice. In the exotic superconducting phase the NMR spectra broaden well beyond what is expected on the basis of the vortex lattice distribution. Here we explore the possibility that this extra broadening of the NMR spectra arises from the staggered magnetization induced locally around the vortex cores.

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