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Slow-Motion ^1H NMR Study of κ-$(ET)_2Cu[N(CN)_2]Br$[1] J.C. GEZO, TAK-KEI LUI, R.W. GIANNETTA, C.P. SLICHTER, Loomis Laboratory of Physics, University of Illinois at Urbana-Champaign, J.A. SCHLEUTER, Materials Sciences Division, Argonne National Laboratory — The recent discovery of an anomalous Nernst signal in the pseudogap phase of organic superconductor κ-$(ET)_2Cu[N(CN)_2]Br$ suggests the presence of magnetic flux vortices above T_c.[2] We report spin-locked and line-narrowed proton NMR data on the pseudogap phase of this material. These experiments are sensitive to magnetic fluctuations, and probe far slower timescales (10^{-6}-10^{-3}s) than the previously explored NMR parameter space. Other experiments[3] have suggested that vortices leave an NMR fingerprint at these low frequencies.

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[2]M. S. Nam et al, Nature 449, 584-587 (2007)
[3]C. H. Recchia et al, Phys. Rev. Lett. 78, 3543-3546 (1997)

Joseph Gezo
Loomis Laboratory of Physics, University of Illinois at Urbana-Champaign

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