

Abstract Submitted  
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**NMR Study of  $\kappa$ -(ET)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Br<sup>1</sup>** TAK-KEI LUI, J.C. GEZO, R.W. GIANNETTA, C.P. SLICHTER, University of Illinois at Urbana-Champaign, IL 61801, J.A. SCHLUETER, Material Sciences Division, Argonne National Laboratory, Argonne, IL 60439 — We report measurements of the <sup>13</sup>C spin-lattice relaxation rate,  $(T_1T)^{-1}$  of  $\kappa$ -(ET)<sub>2</sub>Cu[N(CN)<sub>2</sub>]Br, an organic superconductor with  $T_C = 11.9$  K. The shape of the  $(T_1T)^{-1}$  versus  $T$  graph suggests the existence of a finite spin singlet-triplet gap<sup>2</sup>. Knight shifts were measured to search for a two-component electronic system. We also report measurements using an “S-shape” pulse sequence<sup>3</sup> that inverts half of the absorption line, permitting one to study slow motions and spin density waves.

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<sup>2</sup>C. P. Slichter, Experimental Evidence for Spin Fluctuations in High Temperature Superconductors, in *Strongly Correlated Electronic Materials: A Los Alamos Symposium*, pp. 427-479, ed. K.S. Bedell *et al.*, Addison-Wesley (1994)

<sup>3</sup>L. R. Becerra, C. A. Klug, C. P. Slichter, and J. H. Sinfelt, *J. Phys. Chem.* **97**, 12014 (1993)

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