

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Charge fluctuations and superconductivity in organic conductors: the case of β'' -(BEDT-TTF) $_2$ SF $_5$ CH $_2$ CF $_2$ SO $_3$ GEORGIOS KOUTROULAKIS, Univ of California - Los Angeles, H. KUHNE, Hochfeld-Magnetlabor Dresden, H.-H. WANG, Univ of California - Los Angeles, J. A. SCHLUETER, Argonne National Laboratory, J. WOSNITZA, Hochfeld-Magnetlabor Dresden, S. E. BROWN, Univ of California - Los Angeles — Superconductivity in most organic charge transfer salts is considered magnetically mediated, in part due to the proximity to antiferromagnetic ground states, as well as the preponderance of spin fluctuations in their normal state. An alternative proposal is based on mediation by charge fluctuations, close to collapsed charge-ordered insulating states. The all-organic salt β'' -(BEDT-TTF) $_2$ SF $_5$ CH $_2$ CF $_2$ SO $_3$, which undergoes a superconducting transition at $T_C=4.5$ K, has been suggested as a candidate material for the realization of charge-fluctuation pairing. Here, we report on a detailed ^{13}C NMR study examining the normal and superconducting states of this material, and we discuss the results in the context of the proposal for charge-fluctuation driven superconductivity.

Georgios Koutroulakis
Univ of California - Los Angeles

Date submitted: 06 Nov 2015

Electronic form version 1.4