## Abstract Submitted for the MAR05 Meeting of The American Physical Society

Redistribution of electronic charges in the spin-Peierls state in  $(TMTTF)_2AsF_6$  observed by  $^{13}C$  NMR SHIGEKI FUJIYAMA $^1$ , TOSHIKAZU NAKAMURA, Inst. for Molecular Science, Japan — We report he results of  $^{13}C$  NMR for a quasi-one-dimensional quarter-filled organic material  $(TMTTF)_2AsF_6$ , which undergoes charge ordering  $(T_{CO} = 102 \text{ K})$  and spin-Peierls phase transitions  $(T_{SP} = 12 \text{ K})$ . The ratio of two  $1/T_1$  for the charge accepting and donating sites which grows from  $T_{CO}$  finally saturates in approaching  $T_{SP}$ , that indicates an opening of single gap for the spin excitation spectra. At  $T_{SP}$ , however, doubly split NMR lines from inequivalently charged molecules merge originated from the variation in *charge* densities. This shows a rearrangement of the charge configuration in the spin-Peierls state.

<sup>1</sup>Present address: Dept. of Applied Physics, Univ of Tokyo, Japan, and CREST

Shigeki Fujiyama Dept. of Applied Physics, Univ. of Tokyo

Date submitted: 30 Nov 2004 Electronic form version 1.4