Abstract Submitted
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NMR evidence for very slow spin density fluctuations in the organic metal $(TMTSF)_2ClO_4$ FAN ZHANG, YOSUKE KUROSAKI, JUN SHINAGAWA, BARAKAT ALAVI, STUART E. BROWN, Department of Physics and Astronomy, UCLA, Los Angeles, California 90095 — $(TMTSF)_2ClO_4$ is a quasi-one dimensional organic conductor and superconductor with $T_c = 1.4K$, which undergoes an anion ordering transition at $T_{AO} = 25K$ with wavevector $\vec{Q} = (0, 1/2, 0)$. We have investigated the spin-echo decay rates for the ^{77}Se nuclear spins in the low-temperature relaxed state and in the vicinity of a pronounced peak in T_2^{-1} near $T = 30K$[1]. By varying the magnetic field orienation, we attribute this increase to the slowing down of fluctuations in the local spin density. The linewidth at low temperatures appears to be dominated by disorder effects, rather than by distinct hyperfine fields of an ordered phase. The inhomogenous broadening of the spectra below $T = 15K$ is consistent with a freezing of domain wall motion.[2]

[1]M. Takigawa and G. Saito, J. Phys. Soc. Jpn. **55**, 1233 (1986).
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