

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Magnetic excitations probed by ^{77}Se T_1 at Magic angles in $(\text{TMTSF})_2\text{PF}_6$ STUART BROWN, Department of Physics, UCLA, WEIDA WU, Department of Physics, UT Austin, JUN SHINAGAWA, Department of Physics, UCLA, PAUL CHAIKIN, Department of Physics, Princeton University — We report ^{77}Se spin-lattice relaxation T_1 measurements of $(\text{TMTSF})_2\text{PF}_6$ at different field orientations with $B=7.3\text{T}$ ($f=60\text{MHz}$) and $P=8\text{kbar}$. We want to see whether T_1 changes at the Lebed magic angles and whether the field induced spin density wave (FISDW) critical temperature changes for field applied along the magic angles. Our temperature range was 300mK to 20K. In situ resistance measurements (R_{zz}) were used to identify the experimental conditions and give precise sample alignment information. Our T_1 data show no significant change as magnetic field is rotated through the magic angles, i.e. no effect in the spin channel. Unexpectedly we also find that the FISDW transition temperature, seen by both T_1 and transport (R_{zz}) is not enhanced at the magic angles.

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Date submitted: 30 Nov 2004

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