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NMR studies of very dilute concentrations of ^3He in solid ^4He SUNG SU KIM, C. HUAN, L. YIN, J. XIA, Department of Physics and National High Magnetic Field Laboratory, University of Florida, D. CANDELA, Department of Physics, University of Massachusetts, N. S. SULLIVAN, Department of Physics and National High Magnetic Field Laboratory, University of Florida — We compare the results of recent measurements of the nuclear spin-lattice relaxation time (T_1) and nuclear spin-spin relaxation time (T_2) for very dilute concentrations of ^3He ($16 \leq x_3 \leq 2000$ ppm) in solid ^4He with results from previous studies in the temperature range where the relaxation is attributed to the quantum tunneling of ^3He atoms in the ^4He lattice. The comparison shows that the results cannot be explained in terms of a unique correlation time and the effects of ^4He lattice are important.

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