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NMR measurement of spin-spin relaxation (T_2) of URu_2Si_2 TOD CALDWELL, Los Alamos National Laboratory, NICHOLAS CURRO, Los Alamos National Laboratory — We report detailed temperature dependences of the 29Si spin-spin relaxation rate T2 in the heavy fermion superconductor URu_2Si_2 as a function of field and temperature. All experimental work was carried out on an aligned powder sample. Both Carr-Purcell-Meiboom-Gill (CPMG) and Hahn-Echo pulse sequence techniques were employed to examine differences in spin-spin relaxation. We find unusual enhancements of the relaxation rate near the hidden order transition, and will discuss our results in the context of various theoretical scenarios.

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