

Abstract Submitted
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^{195}Pt NMR measurements in the superconducting state of the nearly heavy Fermion metal U_2PtC_2 ¹ ANDREW MOUNCE, G. KOUTROULAKIS, H. YASUOKA, P. RONNING, E.D. BAUER, J.D. THOMPSON, Los Alamos Natl Lab, N. NI, University of California Los Angeles — AC susceptibility and ^{195}Pt nuclear magnetic resonance measurements of the nearly heavy Fermion metal U_2PtC_2 , with $T_c(H_0 = 0) = 1.6$ K and $\gamma = 15$ mJ/mol \cdot K², [1] were taken at temperature down to 10 mK and in magnetic fields up to 12 T. From AC susceptibility, an anisotropic $H_{c2}(T \approx 0)$ of 8 and 10 T has been measured with the external magnetic field $H_0 \parallel c$ and $H_0 \perp c$, respectively. Below T_c , the spectral shift is independent of temperature consistent with spin triplet electron pairing or large spin orbit coupling. Spin-lattice relaxation measurement at temperatures $T_c < T < 20$ K follow a modified Korringa relation which indicate ferromagnetic fluctuations, while below T_c , $1/T_1 \propto T^2$ signifying unconventional superconductivity. [1] G. P. Meisner et al., PRL 53, 1829 (1984).

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