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Knight Shift anomaly in anti-ferromagnetic Heavy Fermion, $CeRhIn_5$ ABIGAIL SHOCKLEY, University of California, Davis — Since their discovery, the $CeMIn_5$ (M=Ir, Rh, Co) class of heavy fermion superconductors has attracted a lot of attention for their unusual properties. These compounds all have a scaling behavior which Nakatsuji et al (NPF) proposed is best explained by a two-fluid model. Below a characteristic temperature T*, the f-moments delocalize and form a coherent state with the conduction electrons, similar to superfluid ^{4}He. One of the central questions in the field is which energy scale correlates with the onset of coherence, T_{Kondo} or T_{RKKY}. We will present new data on the Knight Shift anomaly in $CeRhIn_5$ which allows us to learn about the spin correlations as we approach the coherent state. By comparing the Knight shift anomaly in the three cousin compounds, we can explore how the characteristic energy scales of these materials change as we transition from a superconducting to an anti-ferromagnetic ground state.

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