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Quantum Criticality in Cd doped CeMIn₅.¹ FILIP RONNING, YOSHI TOKIWA, JOE THOMPSON, ROMAN MOVSHOVICH, Los Alamos National Lab, LONG PHAM, UC Davis, ZACHARY FISK, UC Irvine — In pure CeCoIn₅ the application of magnetic field has revealed a field tuned quantum critical point surprisingly coincident with the superconducting H_{c2} . The application of pressure suppressed the antiferromagnetic fluctuations in the system and pushed the quantum critical field inside the superconducting dome. By substituting Cd for In it was shown that one can quickly induce the antiferromagnetic state. With predominantly thermodynamic probes, such as specific heat, we investigate how the appearance of long range antiferromagnetic order induced by Cd doping influences the field tuned quantum critical behavior. This will also be contrasted with the behavior found for the antiferromagnetic quantum critical point seen in CeRhIn₅ under pressure.

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