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**Magnetism in 2D Heavy Fermion Superconductor $CePt_2In_7$** NICHOLAS APROBERTS-WARREN, JOHN CROCKER, ADAM DIOGUARDI, PETER KLAVINS, CHING LIN, KENT SHIRER, ABIGAIL SHOCKLEY, NICHOLAS CURRO, University of California at Davis — $CePt_2In_7$ was first synthesized in 2008, and it was discovered to be a superconductor under pressure shortly thereafter in 2009. It is closely related to the well-studied crystal class $CeMIn_5$ (M = Ir, Co, Rh), but $CePt_2In_7$ is considerably more anisotropic with a c/a ratio more than twice as large as the 115's. We present here nuclear quadrupole resonance results for the $^{115}$In nucleus, and follow it from the paramagnetic heavy fermion state into the anti-ferromagnetic state below $T_N$ = 5.2 K. The NQR data will show a rich magnetic phase diagram, with a commensurate magnetic order parameter directly below $T_N$, and more complex magnetic states emerging as the material is further cooled. Additionally, we will present some additional results on how hydrostatic pressure affects the magnetic order in $CePt_2In_7$.

[X] Prefer Oral Session
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