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Emergence of Hidden Order from the Fano Lattice Electronic Structure of URu_2Si_2: r-space MOHAMMAD HAMIDIAN, ANDREW SCHMIDT, Cornell University, PETER WAHL, Max-Planck-Institut für Festkörperforschung, FOCKO MEIER, Cornell University, ALEXANDER BALATSKY, Los Alamos National Lab, TRAVIS WILLIAMS, GRAEME LUKE, McMaster University, J.C. DAVIS, Cornell University — This talk focuses on the real-space electronic structure of URu_2Si_2 using spectroscopic imaging – STM techniques. The "Fano Lattice" signature, predicted to occur in real space for a Kondo lattice, is observed for the first time. The temperature dependence of the complete density of states as a function of energy both above and below the hidden order transition temperature is reviewed. Andrew R. Schmidt in the following talk will focus on the momentum space structure appearing with the Hidden Order transition as inferred from heavy quasiparticle interference.

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