

Challenges and Implications of Hidden Order

P. Chandra, Rutgers University, Piscataway, USA

The possibility of new classes of emergent order in strongly correlated systems continues to be a key motivation for their study. The hidden order that develops below 17.5 K in URu_2Si_2 has eluded identification for more than thirty years. Here I'll review recent experiments, the constraints they place on the theory of hidden order and why these measurements combined with previous ones support the presence of a novel spinorial order parameter. The broader symmetry implications of this radical proposal will also be discussed.

"Implications of the Measured Angular Anisotropy at the Hidden Order Transition of URu_2Si_2 ", P. Chandra, P. Coleman, R. Flint, J. Trinh and A.P. Ramirez, arXiv:1708.00589 and references therein.