Abstract Submitted
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Finite f-Electron Bandwidth in a Heavy Fermion Model[1] AXEL EUVERTE, Institute non lineaire de Nice, SIMONE CHIESA, College of William and Mary, RICHARD SCALETTAR, UC Davis, GEORGE BATROUNI, Institute non lineaire de Nice — Determinant Quantum Monte Carlo is used to study the effect of non-zero hopping t_f in the localized f-band of the periodic Anderson model in two dimensions. We show that a remnant of the band insulator to metal line at $U_f = 0$ persists in the interacting system, manifesting itself as a maximal tendency toward antiferromagnetic correlations at low temperature. In this optimal t_f region, short- and long-range spin correlations develop at similar temperatures in stark contrast with the more common scenario where short range correlations are stronger and develop at higher temperature. The effect that finite t_f has on Kondo screening is investigated by considering the evolution of the local density of states for selected t_f as a function of V.

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