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Study of the gap formation in Kondo insulators

M. A. MAJIDI, University of North Dakota, K. MIKELSONS, A. MACRIDIN, University of Cincinnati, J. MORENO, University of North Dakota, M. JARRELL, University of Cincinnati — Motivated by recent experimental measurements of the temperature-dependent gap formation in the Kondo insulator SmB_6 (Matsunami et al.) we investigate the Periodic Anderson Model at half-filling and in the strong-coupling regime. We solve this model in three dimensions using the Dynamical Cluster Approximation to incorporate non-local correlations and the Maximum Entropy Method to derive the spectral functions. We calculate the temperature dependence of the insulating gap and the screened moment, and discuss how the appearance of the gap is related with the lattice Kondo screening.

Prefer Oral Session
 Prefer Poster Session

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