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**Cluster Dynamical Mean Field Theory of the Mott Transition**

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— We address the nature of the Mott transition in the Hubbard model at half-filling using cluster dynamical mean field theory (DMFT). We compare cluster DMFT results with those of single site DMFT. We show that inclusion of the short range correlations on top of the on-site correlations does not change the order of the transition between the paramagnetic metal and the paramagnetic Mott insulator, which remains first order. However, the short range correlations reduce substantially the critical  $U$  and modify the shape of the transition lines. Moreover, they lead to very different physical properties of the metallic and insulating phases near the transition point. Approaching the transition from the metallic side, we find an anomalous metallic state with very low coherence scale. The insulating state is characterized by the narrow Mott gap with pronounced peaks at the gap edge.

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