

Abstract Submitted
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Effects of frozen double occupancies on fermions in optical lattices RAJDEEP SENSARMA, EUGENE DEMLER, Harvard University, EHUD ALTMAN, Weizmann Institute — We study the effects of “frozen” double occupancies in metastable states of 3D fermionic Hubbard model in the strongly interacting regime. Such long lived states can be created with ultracold fermions in an optical lattice, as the lattice potential is ramped up to access strongly correlated regimes. We shall discuss how the presence of the double occupancies affect anti-ferromagnetism in these systems. We will also discuss possible “charge” orders in these systems.

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