Abstract Submitted
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Competition between charge and spin orders on a frustrated system: The triangular lattice.[1] B. DAVOUDI, Universite de Sherbrooke and Institute for Studies in Theoretical Physics and Mathematics, Tehran, S.R. HASSAN, A.-M.S. TREMBLAY[2], Universite de Sherbrooke — We study the properties of the extended Hubbard model on a triangular lattice by means of generalized two-particle self consistent approach(GTPSC). We present the structure functions over a wide range of physical parameters. Rapid increase in the charge and spin response functions indicates crossover towards various types of charge and spin orders. The competition between the on-, off-site interaction and the frustration leads to a very rich density dependent phase diagram. We also evaluate the one-particle spectral function in various ranges of physical parameters and find that the pseudo-gap can also appear in the regime where the charge density wave is dominant.

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