

Abstract Submitted
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Spinfull bosons in an optical lattice SARA BERGKVIST, KTH, Stockholm, Sweden, IAN MCCULLOCH, RWTH, Aachen, Germany, ANDERS ROSENGREN, KTH, Stockholm, Sweden — We have studied the phase diagram of spinfull bosons in a one-dimensional optical lattice, using DMRG. Correlation functions and the dimerization are calculated. We also present results for energy gap to excited states and magnetization energies. We confirm the expected phase diagram with a dimerized phase in the insulating regions with an odd density and on-site singlets in the other insulating systems.

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