Sorting Category: 10.1.6 (C)

Loop condensation in quantum dimer models C.M. HERDMAN, K.B. WHALEY, UC Berkeley — The formation of topological order is well understood in terms of the mechanism of loop condensation in systems with loop-like degrees of freedom. Various quantum dimer models posses exotic liquid states, including topologically ordered phases. Dimer models and can be mapped to loop models and these dimer liquid phases may be described as loop condensates. We present a numerical study of the geometric properties of the loop condensates in quantum dimer models and related models using classical Monte Carlo as well as ground state quantum Monte Carlo calculations.

C.M. Herdman
herdman@berkeley.edu
UC Berkeley

X Prefer Oral Session
☐ Prefer Poster Session

Date submitted: 15 Dec 2011

Electronic form version 1.4