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Jessica Christian, David Green, Peter Huston* (huston.195@osu.edu) and **David Penneys**. *A lattice model for condensation in Levin-Wen systems.*

Levin-Wen string-net models provide a construction of (2+1)D topological phases of matter with localized excitations (anyons) described by the Drinfeld center of a unitary fusion category. Anyon condensation is a mechanism for phase transitions between (2+1)D topological phases. We present an extension of Levin-Wen models based on an idea of Corey Jones in which tuning a parameter implements anyon condensation and use a variant of the tube algebra to classify low-energy localized excitations after the phase transition. Finally, we describe the effects of the phase transition on the ground-state space of our model. (Received August 30, 2021)