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**Exact Diagonalization of the Kondo Necklace Model on a Triangular Lattice** ARA GO, Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University, GUN SANG JEON, Department of Physics, Ewha Womans University, MOO YOUNG CHOI, Department of Physics and Astronomy and Center for Theoretical Physics, Seoul National University — We consider the Kondo necklace model on a triangular lattice. The interplay of magnetic ordering and Kondo screening is investigated through the use of exact diagonalization of finite clusters with periodic boundary conditions. In the absence of Kondo screening, the system is in the magnetically ordered phase whereas the magnetic moments reduce monotonically as the screening strength is increased. It is found that the system has a unique ground state in the entire range of the parameters studied, which excludes the possibility of partially ordered degenerate ground states. We also discuss the effects of quantum fluctuations in the model, with emphasis on the lifted degeneracy of partially ordered states.

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