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Electronic interaction effects on the topological phase of the 1D topological Kondo insulator JASON PILLAY, IAN MCCULLOCH, The University of Queensland — The effects of electronic interactions on the topological phase of the one-dimensional topological Kondo insulator is numerically investigated using the matrix-product state density-matrix renormalization group algorithm. We find that the electronic interactions which favors having one electron per site, suppresses electron hopping and thus reduces the effect of the p-wave Kondo coupling. In the presence of the conventional s-wave Kondo coupling, this leads to a topological phase transition from a topological phase into a non-topological phase.

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