Title:	Topological transitions in a model for proximity-induced superconductivity
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Abstract:	Using a prototype model for proximity-induced superconductivity on a bilayer square lattice, we show that interlayer tunneling can drive change in topology of the Bogoliubov quasiparticle bands. Starting with topologically trivial superconductors, transitions to a nontrivial px+ipy state and back to another trivial state are discovered. We characterize these phases in terms of edge-state spectra and Chern indices. We show that these transitions can also be controlled by experimentally viable control parameters, the bandwidth of the metallic layer, and the gate potential. Insights from our results on a simple model for proximity-induced superconductivity may open up a new route to discover topological superconductors.
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