

Abstract Submitted  
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**Periodically kicked quantum Hall system of cold atoms** MAHMOUD LABABIDI, INDUBALA SATIJA, ERHAI ZHAO, George Mason University — The integer quantum Hall state is characterized by chiral edge modes associated with the topological invariant, the Chern number. We numerically study a non-equilibrium, periodically driven quantum hall system of fermionic atoms in a square optical lattice. We show that periodically modulated tunneling gives rise to new edge states inside the quasi-energy band gaps. We present a phase diagram with a zoo of interesting phases as functions of driving parameters, along with the spectral evolution of the edge states through the topological quantum phase transitions.

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