

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Nonequilibrium Fractional Hall Response After a Topological Quench¹ NUR UNAL, Max Planck Institute PKS, ERICH MUELLER, Cornell University, M. O. OKTEL, Bilkent University — When a system is suddenly driven between two topologically different phases, aspects of the original topology survive the quench, but most physical observables (edge currents, Hall conductivity) appear to be non-universal. I will present the non-equilibrium Hall response of a Chern insulator following a quench where the mass term of a single Dirac cone changes sign. In the limit where the physics is dominated by a single Dirac cone, we theoretically find that the Hall conductivity universally changes by two-thirds of the quantum of conductivity. I will analyze this universal behavior by considering the Haldane model, and discuss experimental aspects for its observation in cold atoms.

¹This work is supported by TUBITAK, NSFPHY-1508300, ARO-MURI W9111NF-14-1-0003.

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Date submitted: 04 Nov 2016

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