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Band geometry and electrical response of Chern insulators AL-BERT BROWN, FENNER HARPER, RAHUL ROY, Univ of California - Los Angeles — Band geometry plays an important role in the stability of fractionalized topological phases in partially filled Chern bands. In Landau levels, the response to non-uniform electric fields is related to a geometric quantity, the Hall viscosity. Here we study the connection between quantum band geometry and response to spatially varying electric fields and show that these responses may be used to probe band geometric quantities.

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