

Abstract Submitted
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Laughlin's argument for the quantized thermal Hall effect RYOTA NAKAI, Tohoku University, SHINSEI RYU, University of Illinois, KENTARO NOMURA, Tohoku University — We have studied an application of the Laughlin's magnetic-flux-threading argument for the quantized thermal Hall effect. Owing to the analogy between electromagnetism and gravito-electromagnetism, there is one-to-one correspondence between Laughlin's argument for the quantum Hall effect and that for the quantized thermal Hall effect. The gravitational counterpart of the magnetic flux induces the global diffeomorphism anomaly of the chiral boundary modes, and simultaneously adiabatic motions of the bulk quantum Hall states. These phenomena directly lead to the quantized thermal Hall effect.

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