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**Full quantum theory of the chiral anomaly transport in a Weyl semimetal**<sup>1</sup> WOO-RAM LEE, KWON PARK, Korea Inst for Advanced Study, KIAS TEAM — In relativistic field theory, the chiral anomaly means a violation of the number conservation of chiral fermions. In condensed matter physics, the chiral anomaly can be manifested in a Weyl semimetal as a negative magnetoresistance in the presence of parallel electric and magnetic fields. In this work, we use the Keldysh-Floquet Greens function formalism to develop a full quantum theory of the chiral anomaly transport, which can be valid in a broad range of both electric and magnetic field strengths.

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