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Equilibrium Chiral Magnetic Effect: spatial inhomogeneity, finite temperature, interactions

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The chiral magnetic effect is one of the intriguing effects of non-dissipative transport phenomena. Unlike most other members of this family, it most likely does not appear in true equilibrium. Instead, it appears, presumably, in a steady-state out of equilibrium in the presence of both external electric field and external magnetic field.

We discuss equilibrium relativistic fermionic systems in lattice regularization and extend the consideration of chiral magnetic effect to systems with spatial inhomogeneity and finite temperature. Besides, we take into account interactions due to exchange by gauge bosons. We find that the equilibrium chiral magnetic conductivity remains equal to zero.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

Dr. Chitradip Banerjee, Postdoctoral fellow at Department of Physics, Ariel University, Ariel 40700, Israel.

Internet talk

Yes

Primary author: BANERJEE, Chitradip (Ariel University)

Co-authors: Prof. ZUBKOV, Mikhail A. (Ariel University); Prof. LEWKOWICZ, Meir (Ariel University)

Presenter: BANERJEE, Chitradip (Ariel University)

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