

# Two-point functions from chiral kinetic theory in magnetized plasma

*Monday, 24 April 2023 15:50 (25 minutes)*

We study the two-point functions from chiral kinetic theory which characterize the response to perturbative vector and axial gauge fields in magnetized chiral plasma. In the lowest Landau level approximation, the solution of chiral kinetic equations gives density waves of electric and axial charges, which contain chiral magnetic wave implied by the axial anomaly and magnetic field. We then obtain the constitutive relations for covariant currents and stress tensor that involving the density waves. By considering the difference between consistent and covariant anomalies explicitly, the correlators of consistent currents and stress tensor satisfy derivative symmetry, and therefore allow an effective action for the perturbative gauge fields as the generating functional of the correlators. We also verify the derivative symmetry of the correlators agrees with the Onsager relations.

## Theory / experiment

Theory

## Group or collaboration name

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**Session Classification:** Parallel Session A

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