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Type: 5 minutes talk

## Higher-form symmetry, chiral magnetohydrodynamics, and holography

Thursday, 16 December 2021 14:15 (7 minutes)

In this talk, we shall discuss the finite temperature physics of a magnetohydrodynamic chiral plasma. This can be understood as a system with an axial  $U(1)_A$  current that is afflicted by an Adler-Bell-Jackiw (ABJ) anomaly, where the corresponding vector  $U(1)_V$  current has been coupled to dynamical electromagnetism. In modern language, the system has a 1-form global symmetry associated with the conservation of magnetic flux and the global axial 0-form symmetry is broken by the ABJ anomaly. We will study this problem by analyzing a holographic model with the above symmetry structure.

### Could you please give the most relevant category for your talk?

Holography

### Will you be pre-recording your talk?

No

### Are you happy for your talk to be recorded?

Yes

### Would you be interested in receiving feedback on your presentation?

Yes

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**Session Classification:** Gong show talks