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## A causal and stable theory of chiral hydrodynamics

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Chirally anomalous matter is expected to exhibit novel transport phenomena arising from the interplay between quantum anomalies and electromagnetic and vortical fields. In order to study these effects in the quark-gluon plasma formed in heavy-ion collisions, it is important to develop a theory of chiral hydrodynamics which captures the anomaly and includes dissipative effects in a consistent manner as previous formulations suffer from acausality, instability, and ill-posedness of the initial value problem. We show how such issues can be fixed by using a suitable definition of the hydrodynamic fields out of equilibrium, which provides a consistent theory that can be readily employed in numerical simulations

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