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## **Self-similar inverse cascade of magnetic helicity driven by the chiral anomaly, and its signatures in heavy ion collisions**

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For systems with charged chiral fermions, the imbalance of chirality in the presence of magnetic field generates an electric current - this is the Chiral Magnetic Effect (CME). We study the dynamical real-time evolution of electromagnetic fields coupled by the anomaly to the chiral charge density and the CME current by solving the Maxwell-Chern-Simons equations. We show that the CME induces the inverse cascade of magnetic helicity, and that at late times the evolution of magnetic helicity is self-similar and is characterized by universal exponents. We also find that in coordinate space the inverse cascade represents the transition from linked electric and magnetic fields to the knotted configuration of magnetic field (a visualization of this evolution will be presented). We devise a (possibly unique) experimental signature of this phenomenon in heavy ion collisions.

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