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The chiral magnetic effect in relativistic heavy ion collisions—an experimental perspective

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The chiral magnetic effect (CME) refers to a charge separation along an external magnetic field arising from an imbalance of quark chirality in quantum chromodynamics. The CME has been searched for in relativistic heavy ion collisions where such a chirality imbalance has been predicted and a strong magnetic field is created. No firm conclusion has been reached so far because of a large background contribution to mimic a charge separation signal. Many novel observables and techniques have been invented, some of which are more promising than others. In this talk, I will discuss some of these observables and techniques, with pros and cons, and present a perspective on the experimental search for the CME.

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