The 8th International Conference on Chirality, Vorticity and Magnetic Field in Quantum Matter



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Chiral Magnetic and Vortical Effect in the Chiral Kinetic Approach using AMPT model (online)

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Built upon the state-of-the-art model a multiphase transport (AMPT), we develop a new module of chiral anomaly transport (CAT) to trace the evolution of the initial topological charge of gauge field created through sphaleron transition at finite temperature and external magnetic field in heavy ion collisions. The eventual experimental signals of chiral magnetic effect(CME) has been measured. The CAT explicitly shows the generation and evolution of the charge separation, and the signals of CME through the CAT are quantitatively in agreement with the experimental measurements in Au+Au collision and isobar collision at $\sqrt{s} = 200 \text{GeV}$, and the centrality dependence of the CME fraction .

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