

Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Charge-dependent elliptic flow from event-by-event anomalous hydrodynamic simulations YUJI HIRONO, Stony Brook University, HONGO MASARU, The University of Tokyo/RIKEN/Sophia University, TETSUFUMI HIRANO, Sophia University, DMITRI KHARZEEV, Stony Brook University — Macroscopic transport effects induced by the quantum anomaly have been attracting much attention. We develop an anomalous-hydrodynamic model for heavy-ion collisions in order to quantify the effects of anomalous transports in the quark-gluon plasma. We perform event-by-event simulations of the anomalous fluids, and we calculate the charge-dependent particle distributions from subsequent hadronizations. According to the distributions, we calculate observables like charge-dependent v_2 using the same methods as experimentalists use. We also take the initial fluctuations in chiral charge into account and see how they affect the final observables.

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Date submitted: 29 Jun 2014

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