

Abstract Submitted  
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**Background Evaluation of the Chiral Vortical Effect Using a Multiphase Transport Model**<sup>1</sup> ZO WEBB-MACK, Columbia University — A possible chirality imbalance within the quark-gluon plasma (QGP) created in high-energy heavy-ion collisions could produce the chiral vortical effect (CVE) [1]. This effect predicts baryon number separation along the vorticity or angular momentum of a chiral QGP fluid with finite baryon chemical potential. Evidence of the CVE-induced separation has been observed in the azimuthal angular correlations between two baryons, Lambda and proton, in experimental data [2]. However, non-CVE background effects must be modeled in order to determine to what extent this separation may be attributed to the CVE. We shall apply the analysis method to heavy-ion events generated by a multiphase transport model (AMPT) [3], estimate pure background contributions to the azimuthal correlations, and help determine the fraction of the CVE in the observed baryonic charge separation. 1. D. E. Kharzeev and D. T. Son, Phys. Rev. Lett.106 (2011) 062301. 2. F. Zhao [STAR Collaboration], Nucl. Phys. A931 (2014) 746. 3. Z.W. Lin et al., Phys. Rev. C72 (2005) 064901.

<sup>1</sup>Background Evaluation of the Chiral Vortical Effect Using a Multiphase Transport Model

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