

Vorticity and Chaos in Heavy Ion Collisions

P-odd effects related to medium vorticity are discussed. In particular, we suggest studying a separation of baryonic charge due to the large baryonic chemical potential. This separation could be manifested in neutron asymmetries in heavy ion collisions in the FAIR and NICA energy range. We analyze the vorticity in various chaotic flows in detail. Chaotic flows are generalized in a nontrivial way relevant to heavy ion collisions. We pay special attention to their symmetry properties, both discrete and continuous. The bounds for vorticity production in heavy ion collisions are obtained.

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Track Classification: New theoretical developments