

Abstract Submitted
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**Dynamics in the normal ground state of dense relativistic matter
in magnetic field**¹ IGOR SHOVKOVY, E.V. GORBAR, V.A. MIRANSKY —

The dynamical generation of the chiral shift parameter Δ is studied in the normal phase of magnetized relativistic matter. By making use of the gauge invariant point-splitting regularization, we show that the presence of Δ essentially modifies the form of the axial current, but does not affect the conventional axial anomaly relation. A nonzero chiral shift parameter leads to a relative shift of the longitudinal momenta in the dispersion relations of opposite chirality fermions. This is expected to play an important role in transport and emission properties of matter in various types of compact stars as well as in heavy ion collisions.

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