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Chiral transport of neutrinos in supernovae

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Chirality of neutrinos modifies the conventional hydrodynamic behavior at the macroscopic scale and leads to anomalous transport phenomena in neutrino matter. We argue that such chiral transport of neutrinos should play important roles in the evolution of core-collapse supernovae, and, in particular, leads to the possible inverse energy cascade from small to large scales, which may be relevant to the origin of the supernova explosion.

Summary

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