

Parity violation of the weak interaction and supernovae

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Neutrinos play essential roles in the evolution of core-collapse supernovae. However, the conventional neutrino kinetic theory violates the basic tenet of low-energy effective theories in that it does not respect the symmetry (or parity violation) due to the chirality of neutrinos. In this talk, we discuss the formulation of the chiral radiation transport theory for neutrinos with parity violation and its applications to the physics of supernovae and neutron stars.

Presenter: YAMAMOTO, Naoki (Keio University)