

Neutrino clustering in the Milky Way

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The Cosmic Neutrino Background is a prediction of the standard cosmological model, but it has been never observed directly. Experiments with the aim of detecting relic CNB neutrinos are under development. The expected event rate in these detectors depends on the local density of relic neutrinos. Since massive neutrinos can be attracted by the gravitational potential of our galaxy and cluster locally, a local overdensity of cosmic neutrinos should exist. Considering the minimal masses guaranteed by neutrino oscillations, we review the computation of the local density of relic neutrinos and we present realistic prospects for a PTOLEMY-like experiment.

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