

Oscillating neutrinos

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Neutrinos are remarkably interesting particles. Neutrinos have three types, i.e., electron-neutrinos, muon-neutrinos and tau-neutrinos. They have no electric charge and interact with matter very rarely. Neutrinos have been assumed to be massless. However, if neutrinos have mass, they change their type while propagating in a medium. For example, a muon neutrino may change to a tau-neutrino. These phenomena are called neutrino oscillations. More than 25 years ago, neutrino oscillations were discovered, and therefore it was found that neutrinos have tiny mass. I will discuss the present and future studies of neutrinos, focusing on experiments in Kamioka, Japan.

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