



RESEARCH

T2K: GROWING EVIDENCE OF THE ASYMMETRY BETWEEN NEUTRINO AND ANTINEUTRINO OSCILLATIONS

A year after announcing their first findings, the T2K collaboration, of which the INFN is part, has produced new evidence of the asymmetry between neutrino and antineutrino oscillations. At the ICHEP 2016 conference, the T2K collaboration presented the first hints of a possible asymmetry between the oscillations of neutrinos and antineutrinos. Their findings suggested a difference in the oscillation probabilities of neutrinos and their antimatter particles. Although there were not enough data to speak of "discovery", their findings aroused great interest among the international scientific community. Now, the new findings, presented on 4 August at the KEK laboratory in Japan, based on twice the neutrino data compared to the previous results, not only confirm but indeed strengthen the hypothesis announced last summer: the probability of statistical fluctuation being at the origin of the effect measured by T2K is now less than 1 in 20, and it appears increasingly likely that we are on the brink of an important discovery. ■