

MEETING OF THE AMERICAN PHYSICAL SOCIETY DIVISION OF PARTICLES AND FIELDS

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New T2K Neutrino Oscillation Results

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In summer 2016, T2K reported the measurements of neutrino oscillation parameters based on the data corresponding to 7.5x10²⁰ protons-on-target (POT) for each of the "neutrino-mode" beam run and the "antineutrinomode" beam run. One of the highlights then was an indication of a potential violation of the CP symmetry in neutrinos at 90% CL. Since then, the experiment has accumulated additional data (7.2x10²⁰ POT), almost doubling the statistics in neutrino-mode. In addition, approximately a 30% effective increase in statistics was achieved by improvements to the event reconstruction and selection at Super-Kamiokande, the T2K far detector. In this very brief talk, we will present the highlights of the neutrino oscillation measurements with all of the data collected up to now and with the new event reconstruction and selection.

Presenter: Prof. JUNG, Chang Kee (Stony Brook University)

Session Classification: Plenary