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# T2K experiment: status and first results

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The long baseline neutrino oscillation experiment T2K, which uses a high intensity
off-axis muon neutrino beam produced at JPARC, aims at a discovery of oscillation of muon neutrinos into electron neutrinos and measurement of the mixing angle \theta_13, a key parameter for further search of CP violation in the lepton sector. T2K is also designed to precisely measure the oscillation parameters \Delta m^2_23 and \theta_23 in a disappearance oscillation mode.

The major components of T2K include a neutrino beam line, muon monitors, a near detector complex
ND280 located at 280 m from the proton interaction target, and the far detector SuperKamiokande (295 km from the neutrino source), at a 2.5 degree off-axis angle from the beam. The measured neutrino spectrum at ND280 and measurements of the primary proton beam combined with the NA61 hadron production data will be used to predict the unoscillated spectrum at SuperKamiokande. The oscillation analysis will be done by comparing the observed and predicted spectra at the far detector.

The construction of the T2K neutrino beam line and the near neutrino detectors is completed. For first data taking period with the neutrino beam, about 3x1020 30 GeV protons on target were accumulated. The design, performance, current status of the experiment and near future perspectives will be discussed. The results of the first physics run will be presented.

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