

Seminarium Szkoły Doktorskiej NCBJ

Thursday, 3 March, 9:00

<https://www.gotomeet.me/NCBJmeetings/phd-seminar>

Speaker:

Kamil Skwarczyński (Szkoła Doktorska NCBJ)

Title:

T2K Near Detector Fit

Abstract:

T2K (Tokai to Kamioka) is a long-baseline neutrino oscillation experiment located in Japan.

One of the most challenging tasks of T2K is to study whether CP is violated in the lepton sector, which is suggested by recent T2K results. By utilizing the near detector (ND280) data, T2K can constrain neutrino interaction and flux uncertainties by fitting a parameterized model to data. This allows for a significant reduction of the systematic uncertainties in neutrino oscillation analyses. One of two fitters responsible for ND fit uses Bayesian Markov Chain Monte Carlo (MCMC) method. New T2K ND fit introduces many improvements, including new samples with proton and photon tag. Talk will present preliminary T2K results and method used including posteriori predictive distribution etc.