Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Measurement of High Energy ν_e in the T2K beam using ND280 P0D JAY HYUN JO, JEANINE ADAM, Stony Brook University, T2K COLLABORATION — The T2K experiment is a long baseline neutrino experiment designed to directly measure $\nu_\mu \longrightarrow \nu_e$ oscillation, thereby provide a measurement of the neutrino mixing angle θ_{13}. A firm understanding of the ν_e intrinsic to T2K's predominantly ν_μ beam is vital for an accurate ν_e appearance measurement. To this end, the π^0 detector (P0D) in T2K off-axis near detector (ND280) measured the high energy part ($\geq$1.5 GeV) of the ν_e contamination, which is predominantly from Kaon decays during beam production, and compared this to the prediction used for T2K's latest oscillation results. We present the details of this analysis, including the selection criteria and systematic errors considered, as well as the use of this measurement to confirm the ν_e flux prediction. In addition, we will discuss about preliminary on-water analysis of ν_e interactions, using P0D.

Jay Hyun Jo
Stony Brook University

Date submitted: 11 Jan 2013 Electronic form version 1.4