

The upgrade project of the T2K near detector

The T2K collaboration has launched the upgrade project for its near detector ND280 with the aim of reducing the overall uncertainties at better than 4%. In January 2018 the proposal has been submitted to the CERN SPSC (CERN-SPSC-P357) and to the JPARC PAC. The project aims at installing innovative detectors to significantly increase the physics capabilities. It includes two High-Angle TPCs, a highly segmented Scintillator Detector built with the Super-FGD technology (arXiv:1707.01785), and TOF detectors.

The rectangular TPCs will be built with a light field cage and resistive Micromegas detectors for the charge readout. The SuperFGD is based on small plastic scintillator cubes (appr. 1cm side) read-out by three WLS fibers, providing informations for tracking and PID. TOF will complement the TPC and SuperFGD information. We will report on the project and its development program including prototypes, beam tests at CERN and in Japan in 2018, and projected performances.

Session and Location

Wednesday Session, Poster Wall #40 (Auditorium Gallery Right)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)