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Overview of the T2K Near Detector Upgrade

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The T2K collaboration is currently upgrading the near detector for the experiment. The upgraded near detector include the Super Fine Grained Detector (SuperFGD) which is a 3D scintillator tracker and serves as the primary target for neutrino interactions. The SuperFGD is sandwiched by two time-projection chambers (HA-TPC) and the three detectors are then enclosed by time-of-flight detectors (ToF). With this configuration, the upgraded near detector can provide full polar angle acceptance of charged particles emitted from neutrino interactions as in the far detector which is the SuperKamiokande detector (SK). The SuperFGD also allows for lower momentum threshold for protons and enhanced detection capability of neutrons. In this presentation, an overview on the T2K near detector upgrade will be presented.

Mini Symposia (Invited Talks Only)

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