Contribution ID: **1062** Type: **Parallel session talk**

A novel highly segmented neutrino detector SuperFGD for the T2K experiment

Thursday 18 July 2024 09:55 (17 minutes)

The T2K neutrino experiment in Japan obtained a first indication of CP violation in neutrino oscillations. To obtain better sensitivity, T2K upgraded the near detector. A novel 3D highly granular scintillator detector called SuperFGD of a mass of about 2 tons will be functioning as a fully-active neutrino target and a 4\pi detector of charged particles from neutrino interactions. It consists of about two millions of small optically-isolated plastic scintillator cubes with a 1 cm side. Each cube is read out in the three orthogonal directions with wave-length shifting fibers coupled to compact photosensors, micro pixel photon counters (MPPCs). SuperFGD was installed into the ND280 magnet and accept the neutrino beam since October 2023. In this talk, the main detector parameters, detection and reconstruction of first neutrino events, and its performance in the neutrino beam will be reported.

Alternate track

1. Neutrino Physics

I read the instructions above

Yes

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