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The T2K ND280 Detector Upgrade

T2K is a long-baseline experiment measuring neutrino and antineutrino oscillations by observing the disappearance of muon neutrinos, as well as the appearance of electron neutrinos, over a long 295km distance. The ND280 near detector at J-PARC plays a crucial role to minimise the systematic uncertainties related to the neutrino flux and neutrino-nucleus cross-sections as it measures the neutrino beam at a ND site before it oscillates.
The ND280 detector has recently been upgraded with a new suite of sub-detectors: a high granularity Super-FGD with 2 million optically-isolated scintillating cubes read out by wavelength shifting fibres and 55000 Multi-Pixel Photon Counters; two horizontal Time-Projection Chambers instrumented with resistive Micromegas, and additionally six panels of scintillating bars for precise time-of-flight measurements.
New data using the new ND280 detector configuration, and its performance will be discussed and the improvements will be highlighted.

Secondary track

T11 - Detectors

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