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Characterising the Detector Response of the SuperFGD as part of the T2K Near Detector Upgrade

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The upgrade of the T2K near detector, ND280, will improve the physics capabilities of the experiment, including a reduced proton momentum threshold, increased angular acceptance, and the ability to reconstruct neutron kinematics on an event by event basis. Central to the near detector upgrade is the Super Fine Grained Detector (SuperFGD), which consists of approximately two million optically isolated 1 cm scintillator cubes.

The SuperFGD has been assembled and installed at J-PARC, commissioned using LED, cosmic and T2K neutrino beam data, and is now taking physics data in the T2K neutrino beam. This poster presents the efforts in commissioning the detector and characterisation of the detector response, which is critical for making use of data in physics analyses. Plans for the first analyses are also presented.

Poster prize

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