

Understanding and Calibrating the Calorimeter for the T2K Near Detector

T2K (Tokai-to-Kamioka) is a long-baseline neutrino experiment with the primary purpose of measuring the mixing angle θ_{13} , using a muon-neutrino beam which is produced at the J-PARC accelerator facility and aimed towards the far detector, Super-Kamiokande. A near detector located 280m from the neutrino production target, the ND280, will be used to measure the neutrino energy spectrum, flavour content and interaction rates of the un-oscillated beam and to predict the neutrino interactions at Super-Kamiokande. The downstream module of the ND280 electromagnetic calorimeter, the DS-ECal, is now in situ and taking data. Work on calibrating and understanding the DS-ECal is ongoing and this poster will present the attenuation correction method employed in the calibration chain using cosmic ray data from the detector's commissioning days at CERN and with data from Tokai.

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