



Contribution ID : 129

Type : Poster

## The study of the time resolution of the 3D neutrino detector SuperFGD

*Tuesday, 22 October 2024 17:05 (115)*

For further investigation of neutrino oscillations in the T2K experiment, a 3D segmented SuperFGD detector is constructed. It consists of 2 million scintillation cubes of 1 cm<sup>3</sup> size, with wavelength-shifting (WLS) fibers along three orthogonal directions. Each fiber is read out by a Hamamatsu Multi-Pixel Photon Counter S133060-1325PE. The detector main goals are to reduce systematic uncertainties and increase the sensitivity of a search for CP-violations in the lepton sector. Preliminary results of time resolution using upstream and side fibers were received with cosmic run after implementing time offset and time walk calibration. It was obtained that the time resolution is  $\sigma \simeq 1.17$  ns for one fiber readout and a threshold of 40 photoelectrons. The main calibration parameters, the light yield, and the attenuation length obtained during the detector commissioning with cosmics and in the T2K neutrino beam will be also presented in this report.

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**Session Classification** : Poster session

**Track Classification** : Facilities and advanced detector technologies