Contribution ID: **299** Type: **Poster new technologies**

Neutrino event detection with nuclear emulsion in the NINJA experiment

It is essential for the T2K experiment to measure low momentum protons and understand multi-nucleon interactions in the sub-multi GeV region in order to reduce systematic uncertainty. The NINJA experiment aims to measure neutrino-nucleus interactions on a water target precisely using nuclear emulsion. Since nuclear emulsion has sub-micron position resolution, it allows us to observe the interaction vertex clearly. Therefor, the emulsion detector is expected to provide far more precise information on short-track particles that are hard to reconstruct in the current T2K detectors.
We have carried out several detector test run at J-PARC so far. In the latest run, started in Oct 2017, we placed a water target emulsion detector (ECC) in front of the T2K on-axis near detector INGRID. A newly-constructed scintillating fiber tracker placed between ECC and INGRID enables a hybrid analysis using both detectors. We will present the detector performance and analysis status for the latest run.

Authorship annotation

for the NINJA collaboration

Session and Location

Monday Session, Poster Wall #103 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)