

Measurement of neutrino interactions on water and hydrocarbon with a 3D-grid detector in the WAGASCI experiment

The WAGASCI experiment is being carried out at J-PARC to precisely measure the neutrino cross-section ratio between water and hydrocarbon target. We constructed a new detector which consists of a water target module, hydrocarbon target module, and muon-range detector. Scintillators of the water module have a characteristic 3D-grid structure, which achieves a large solid angle acceptance. We started the anti-neutrino beam measurement in October 2017. We request statistics of 9.0×10^{20} POT (Proton On Target) until May 2018, and about 1000 signal events are expected to be observed by the Monte-Carlo simulation. We collected about 3.7×10^{20} POT so far. Neutrino events were successfully observed and reconstructed in the detector. We report on the detector status and the first results from the anti-neutrino beam measurement.

Session and Location

Wednesday Session, Poster Wall #102 (Auditorium Gallery Left)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)