

The MINERvA Low-energy Test Beam Experiment at Fermilab

In order to make precision measurements of neutrino-nucleus interactions, the MINERvA experiment has to be able to reconstruct the kinematics of the interaction products with sufficient accuracy.

The MINERvA Test Beam (TB) experiment is designed to serve as a calibration for the calorimetric observables used in the analysis of interactions in MINERvA. A tertiary beamline has been especially designed for this experiment and will be part of the Fermilab Test Beam facility. It's aimed at providing identified charged particles (electrons, muons, pions and protons) with well-known momentum from around 300 MeV/c. We are in the final stages of commissioning this beamline.

We are also in the process of assembling and installing the TB detector, a replica of the MINERvA detector on a smaller scale. The TB detector configuration is flexible, allowing different sectors (tracker, electromagnetic calorimeter and hadronic calorimeter) of the main detector to be reproduced and studied with the goal of providing MINERvA with a precise calibration of the detector response.

Author: Dr MORFIN, Jorge G. (Fermilab)

Presenter: Dr MORFIN, Jorge G. (Fermilab)