Contribution ID: **169** Type: **Poster accelerator**

The Neutrino Beam of Experimental Muon Source at China Spallation Neutron Source

In this poster, the neutrino beam produced at the Experimental Muon Source (EMuS) at China Spallation Neutron Source (CSNS) is presented. EMuS is foreseen to produce intense muon beams for muon science using the CSNS accelerator complex. EMuS could be also operated in neutrino mode in order to achieve neutrino cross section measurements and to search for new physics. The layout and the optimization of the EMuS target station for the neutrino beam-line are described, and the obtained neutrino spectra from both pion and muon beams are shown. The latter assuming an experimental extension of EMuS in order to accommodate future accelerator R&D related to intense neutrino beams produced only by muons. Results show potential and novel measurements of neutrino cross sections at energies between 100 and 500 MeV, while new physics potentialities are being under investigation.

Authorship annotation

for the EMuS collaboration

Session and Location

Wednesday Session, Poster Wall #46 (Auditorium Gallery Right)

Poster included in proceedings:

yes

Primary author: Dr VASSILOPOULOS, Nikolaos (IHEP, CAS)

Presenter: Dr VASSILOPOULOS, Nikolaos (IHEP, CAS)

Track Classification: Poster (participating in poster prize competition)