Poster Session – Submission of Abstract

Submitter: Evangelia Drakopoulou, N.C.S.R. Demokritos liliadrak@inp.demokritos.gr
Author: Evangelia Drakopoulou, Christos Markou, Ekaterini Tzamariudaki
Title of the Poster: Muon and Neutrino Energy Reconstruction for KM3NeT

Abstract Text: (no longer than 800 characters)

KM3NeT is a European deep-sea research infrastructure that will host a neutrino telescope with a volume of several cubic kilometers at the Mediterranean Sea. The telescope will search for galactic and extragalactic neutrinos from distant astrophysical sources. In large water Cherenkov detectors the reconstructed muon is used to approximate the neutrino direction and energy. Muon energy estimation is also critical for the differentiation of muons from neutrinos originating from astrophysical sources from muons and neutrinos generated in the atmosphere which constitute the detector background. We describe a method to determine the muon and neutrino energy employing a Neural Network. An energy resolution of approximately 0.29 has been achieved for muons at the TeV range.

Summary: (no longer than 400 characters. Insert a tag, key word, topic, etc.)

For the KM3NeT detector, an analysis employing a Neural Network to reconstruct the muon and consequently the neutrino energy, in charged current neutrino events, will be presented. The energy resolution achieved is ~0.29 for muon at the TeV range.

KM3NeT, neutrino, muon energy reconstruction

Kindly   follow the instructions above and send the abstract in a .pdf file to the local organizing   committee e-mail address by January 30th.
Response will be sent to the submitter's e-mail address indicated above, by February 10th.
Posters   will be exhibited all week long at the workshop site. Discussion will take place on Thursday 5th, during the Poster Party. At least one author must be available for "question-answer" time.
Best 3 posters will be awarded on Friday 6th, during the closing plenary session of the workshop.