

New Perspectives 2016



Contribution ID: 58

Type: **not specified**

Impact of Size and Number of Horns on the DUNE Neutrino Flux

Monday, 13 June 2016 15:45 (15 minutes)

Increasing the neutrino flux in a long-baseline experiment such as the Deep Underground Neutrino Experiment (DUNE) at Fermilab is essential for precision measurement of neutrino oscillation and CP violation parameters. The goal of this study is to optimize the horn and decay pipe geometry for neutrino flux and physics sensitivity in a cost effective fashion. The DUNE collaboration is currently considering an optimized horn and target system that includes three focusing horns. We have studied the impact of reducing the number of horns, reducing the size of the horns, and modifying the decay pipe size. The overall goal is to understand the relationship between these parameters and the physics capability of the DUNE experiment.

Primary author: Ms AVILA, Monica (University of Texas at Arlington)

Presenter: Ms AVILA, Monica (University of Texas at Arlington)

Session Classification: Session 3