



Contribution ID: 374

Type: **Poster**

## **Measuring particle momenta via Multiple Coulomb Scattering with the MicroBooNE Time Projection Chamber**

Liquid Argon Time Projection Chambers (LArTPCs) are a novel detector concept, well-suited for neutrino physics experiments.

MicroBooNE will be the largest LArTPC ever to be built in the United States. The main motivation for designing and constructing MicroBooNE is the investigation of the low-energy excess observed by MiniBooNE and further advancement of the LArTPC technology. Additionally, MicroBooNE will be able to perform precise and detailed neutrino cross section measurements on argon and study the backgrounds relevant to proton decay searches with LArTPCs. The energy of those particles that stop in the MicroBooNE TPC (fully contained events) can be determined from calorimetric information on the collection anode wires.

In this poster, alternative techniques to measure particle momenta via Multiple Coulomb Scattering will be presented.

These methods will be most important in the study of partially contained events.

**Primary author:** Dr KALOUSIS, Leonidas (Virginia Tech)

**Presenter:** Dr KALOUSIS, Leonidas (Virginia Tech)

**Track Classification:** Short Baseline Oscillations / Sterile Neutrinos / Non-standard Oscillations