

Catherine Ayuso
University of Michigan
Characterizing SQERP, The SeaQuest Event Reconstruction Program.
Poster Presentation
cayuso@umich.edu

The E-906/SeaQuest experiment has a new event reconstruction program available which will be used to perform future experiment analyses and cross-check various existing results. The focus of this poster will be on a dimuon mass spectrum and tracker efficiency study conducted with SQERP, focusing on dimuons produced via the Drell-Yan process. A mass spectrum study will isolate processes that produce dimuons and carefully adjust our measured events relative to background. It will also verify the efficacy of SQERP in relation to the main SeaQuest tracker, kTracker. Efficiencies in tracking vary with beam intensity, hit location in the detectors and whether we are dealing with the detection of single tracks or pairs. A study on these three tracking effects will be conducted, along with an efficiency comparison to kTracker. Both of these studies will contribute to the complete characterization of SQERP for event reconstruction. Moreover, having a good understanding of tracking efficiencies is important for any analysis requiring absolute normalization, such as invariant cross-section measurements.