Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

**Optimization of Target-Dump Separation at Fermilab Seaquest Experiment** MATTHEW WOOD, CHRISTINE AIDALA, JOSHUA RUBIN, University of Michigan, SEAQUEST COLLABORATION — SeaQuest (E906) is a fixed-target Drell-Yan experiment at Fermilab designed to measure the flavor asymmetry of the light sea quarks of the nucleon. Collisions of the 120 GeV proton beam from Fermilab's Main Injector with hydrogen, deuterium, and nuclear targets result in the production of muon pairs; however, muon pairs are also produced in the iron beam dump. Spatial cuts on reconstructed tracks must be used to separate background events originating in the dump from signal events produced by the target. The analysis to optimize the efficiency and purity of target events, based on both simulated and real data, will be presented.

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Date submitted: 24 Jul 2014 Electronic form version 1.4