

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Measuring beam position for Fermilab experiment E-906/SeaQuest¹ ASHLEY CAVANAGH, Mount Holyoke College, CATHERINE AYUSO, BRYAN RAMSON, CHRISTINE AIDALA, University of Michigan, SEAQUEST COLLABORATION — The SeaQuest experiment at Fermi National Accelerator Laboratory detects pairs of oppositely charged muons (dimuons) produced through interactions of a 120 GeV proton beam with liquid and solid nuclear targets. The detector contains several triggers which select for various muon tracks and one minimum bias trigger which is only correlated with the beam clock. Previous analysis of data from the biased dimuon triggers provided evidence that the proton beam is not positioned at the nominal center of the detector, so this same biased data was analyzed to cross-check previous results and confirm an approximately 1.6 cm beam offset in the y-direction. Then, data from the minimum bias trigger was analyzed to investigate the effects of trigger bias on beam position results. This analysis found a 1.3 ± 0.01 cm beam offset in the y-direction at the target location and a 1.5 ± 0.01 cm beam offset at the beam dump. Uncertainties on these values and the significance of these results are still being evaluated.

¹NSF Award #1452636

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Date submitted: 31 Jul 2017

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