

Abstract Submitted
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Timing Improvements of SeaQuest Hodoscope System¹ LACEY MEDLOCK, Abilene Christian University, SEAQUEST COLLABORATION — Experiment 906, SeaQuest, at Fermi National Accelerator Laboratory is a fixed-target experiment studying muon pairs produced through Drell-Yan scattering. The main goal is to determine the anti-down to anti-up quark asymmetry in the nucleon sea at a higher Bjorken- x than its predecessor, E866/NuSea. The SeaQuest detector relies on hodoscope arrays for its fast trigger. The signal pulses received from the hodoscopes last approximately 20 ns, which is an issue because the proton spills occur over a 1 ns period every 19 ns. These long pulses impact our ability to determine which proton spill produced the event. In order to reduce the pulse length to reach single spill resolution, 5 ns clip lines have been added to reflect part of the PMT signal, canceling out the long tail and shortening the pulses from the hodoscopes by a factor of two. This presentation will focus on improvements made to the trigger timing by the use of clip lines.

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