

Abstract Submitted
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Signal-width Analysis of the E-906/SeaQuest Hodoscope Data

NOAH KITTS, Abilene Christian University — SeaQuest, Fermilab E906, is a fixed target experiment that measures the Drell-Yan cross-section ratio of proton-proton to proton-deuterium collisions in order to extract the sea anti-quark structure of the proton. SeaQuest will extend the measurements made by E866/NuSea with greater precision at higher Bjorken- x . The SeaQuest detector has 8 hodoscope arrays which are used as input for the primary trigger. SeaQuest receives a proton beam extracted from Fermilab's Main Injector with a RF structure of 19 ns. According to the hodoscope setup, signals with a width of 10 ns to 15 ns have been expected. During the commissioning run in 2012 signals much longer than the expected signal width were observed. Data are analyzed in order to investigate the source of these signals. Through plotting the signal width versus the number of counts in each station and at individual hodoscopes, it is clear these long signals are more abundant in Station 1, more specifically towards the center where the beam is located. This presentation will focus on the analysis of these long signal pulses.

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