Abstract Submitted
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Design and Construction of the Beam Intensity Monitors for SeaQuest NOAH KITTS, Abilene Christian University, SEAQUEST COLLABORATION — 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 produce results far more precise than the previous E866/NuSea measurements and extend the results to higher Bjorken-x. SeaQuest receives a 120-GeV proton beam from the Fermilab Main Injector in 5 second pulses at an extremely high intensity of 1×10^{13} protons per pulse. This beam intensity is too high to be measured directly. Therefore, it is monitored by a four element hodoscope counter that views the beam from the side, picking up scattering off a beam line component. This provides a low enough intensity to stay below the rate limits of each counter. The rates in the beam monitor hodoscope will be used to provide feedback to the accelerator operators and be used to determine the relative integrated luminosity for each target. This poster will describe the design, and construction of the improved beam monitor hodoscopes.

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