

Abstract Submitted
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Gain-Matching and Efficiency Tests On Double- and Single-Ended Hodoscope Arrays¹ ANDREW MILLER, Abilene Christian University, SEAQUEST COLLABORATION — E-906/SeaQuest is a fixed target experiment analyzing the ratio of anti-down to anti-up quarks in the nucleon sea of the proton as well as studying shadowing, anti-shadowing, and energy loss effects using the Drell-Yan process. The muon detector consists of a two-magnet spectrometer and 4 stations of drift chamber and hodoscope combinations. The hodoscopes are used to produce the fast trigger system for the spectrometer. In order to prepare the station 3 and 4 hodoscope arrays for the experiment, the PMTs were initially gain-matched by using a multichannel analyzer to record the spectra from a Cs137 radiation source and adjusting the voltage so the Compton edge occurred in the same channel. Once this was completed, cosmic ray rate tests were performed using various discriminator thresholds values to verify the chosen PMT voltages. This is critical as each 16-channel discriminator to be used must have a single threshold. Interesting effects observed in these rates due to nearby shielding will also be shown to illustrate the special difficulties in using cosmic ray muons for these tests.

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