Abstract Submitted
for the CAL13 Meeting of
The American Physical Society

Construction of the CLAS12 High-Threshold Cerenkov Counter[1]

DYLAN NICHOLAS, JOHN PRICE, California State University, Dominguez Hills, YOURI SHARABIAN, Thomas Jefferson National Accelerator Facility — As part of the general upgrade of the CLAS detector at the Thomas Jefferson National Accelerator Facility in Newport News, VA, the electron-identification system is being updated. A new subsystem, the CLAS12 High-Threshold Čerenkov Counter (HTCC) is being built for this purpose. The HTCC, together with the existing Low-Threshold Čerenkov Counter (LTCC) is designed to provide highly efficient electron detection as well as the possibility to positively identify pions. The HTCC will use CO_2 (index of refraction = 1.00045) as a radiator, giving it the ability to reject pions up to 5 GeV/c. Much of the preparatory work for the design of this device has been completed, and the construction is underway. There were three main tasks related to the construction this past summer. First, the largest single task involved the construction of the containment vessel of the HTCC, providing the superstructure for the detector. Second, the mirrors for the HTCC were assembled and tested. Third, the reflectivity of the Winston Cones, an integral part of the light collection system for the HTCC, was tested. This talk will introduce the design parameters for the upgrade of the HTCC, and will present the status of the work thus far.

[1]Supported by a grant from the US Department of Energy

John Price
California State University, Dominguez Hills

Date submitted: 03 Oct 2013 Electronic form version 1.4