Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Profiling Cesium Iodide Detectors and Using Pulse Shape Discrimination to Identify Alpha Particles, Neutrons, and Gamma Rays[1] EMILY HUDSON, Swarthmore College, GRIGORY ROGACHEV, JOSHUA HOOKER, Texas AM, KAITLIN SALYER, University of Notre Dame — The purpose of this research was to investigate the properties of detectors that are to be used in future experiments. First, we investigated the properties of a cesium iodide detector. We placed a mask over the detector's face and used an alpha source to measure the detector's resolution on different areas of the detector. In the second part, we investigated the pulse shape discrimination capabilities of a plastic scintillator. We used the scintillator to detect alpha particles, neutrons, and gamma rays and applied various analysis techniques to identify the waveforms of each type.

[1]Texas AM, NSF

Emily Hudson
Swarthmore College

Date submitted: 25 Jul 2016 Electronic form version 1.4