Abstract Submitted
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Utilizing Modern Light Detectors as Novel Tools to Advance Community College STEM Students[1] SEWAN FAN, Hartnell College — From 2010 to 2016, we have provided research training and mentoring for STEM students at Hartnell College in the form of 8 weeks of in-depth, hands-on physics research projects supported by funding awarded by the US Department of Education. At this conference meeting, we would describe our methods in training and practically equipping community college students to assemble, test and apply modern light detectors such as silicon photomultiplier, conventional photomultiplier (PMT), micro PMT and the associated electronics. To record the detector waveforms for subsequent analysis of the arrival time and amplitude in the detector signals, we used 5Gsample/sec digitizer, the DRS4. The data analysis work flow included using the CERN software package PAW and application of image processing techniques to determine the precise timing of signal events. Through these training, the students at Hartnell College were equipped with research skills to move forward and contribute in the STEM fields.

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Sewan Fan
Hartnell College

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