

Abstract Submitted
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High-Resolution Optical Scans of Pixelated Silicon Avalanche Photodiodes WILLIAM JOHNSTON, ROBERT WILSON, Colorado State University — Pixelated avalanche photodiodes are being studied for possible use in the International Linear Collider's (ILC) muon system as well as in other applications where photomultiplier tubes have previously been employed. Pixelated avalanche photodiodes have 100's of pixels, which are tens of microns across, which each act as a single-photon detector. A high-resolution optical scanner with a micron sized photon beam has been constructed to measure the gain, efficiency, and cross-talk variations across the photodiode pixels as well as within individual pixels. Measurements performed on Hamamatsu multi-pixel photon counters (MPPC) will be presented.

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