

Abstract Submitted  
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**Measuring the Effect of a Transmission Photocathode on Microchannel Plate Quantum Efficiency**<sup>1</sup> BRITNEY BLANKENSHIP, University of Michigan - Ann Arbor, DONNA MARION, MARIANO LOWENSTERN, ELISEO GAMBOA, ERIC HARDING, CAROLYN KURANZ, R.P. DRAKE — Microchannel plates (MCPs) are a vital component in imaging for a variety of high-energy-density experiments. To ensure the highest quality images, particularly in low-photon environments, it is desirable to maximize the quantum efficiency (QE) of the MCP. When secondary electrons are released from the MCP as a result of photons colliding with the inter-pore regions, these electrons do not contribute to the signal. One way to increase the QE is by redirecting these secondary electrons back toward the MCP. By applying a voltage to a 50nm titanium transmission photocathode (TPC) in front of the MCP, theoretically we will create an electric field that will accelerate the electrons back toward the MCP. This is a continuation of similar work done with a nickel mesh grid in place of a TPC. The results presented are the effect of the Ti TPC on the QE of the microchannel plate.

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