

Abstract Submitted  
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**MCP detector development for use in Nab detector characterization** WOLFGANG KLASSEN, University of Manitoba, NAB COLLABORATION — The “Nab” collaboration will perform a precise measurement of the neutron beta decay parameters “a” and “b”, which constitutes a test for physics beyond the standard model. The experiment makes use of the fundamental physics cold neutron beamline at the Spallation Neutron Source at the Fundamental Neutron Physics Beam Line. This experiment requires very efficient and precise detection of low energy (30 keV) protons with large area Si detectors. To this end, a 30 keV proton source has been built at the University of Manitoba to characterize the Si detector with respect to a custom large area (150mm x 150mm) microchannel plate detector, with known detection efficiency. This poster will present the development of the microchannel plate detector, the theory behind its operation, and its implementation at the University of Manitoba.

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