

Abstract Submitted
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Investigation of a GEM based neutron detector for the MoNA Collaboration¹ MAYA WATTS, ALDER FULTON, THOMAS BAUMANN, THOMAS REDPATH, Michigan State University, National Superconducting Cyclotron Laboratory, PAUL GUEYE, Michigan State University, National Superconducting Cyclotron Laboratory, Facility for Rare Isotope Beams, MONA COLLABORATION COLLABORATION — The technological advances of gas detector technologies, especially in the areas of micromegas and gas electron multipliers (GEMs), has enabled sub-mm position accuracy and pico-second timing resolution that have impacted greatly the fields of low and high energy nuclear physics research. The MoNA Collaboration is investigating the development of a Gas Photo-Multiplier (GPM) that will be coupled to plastic scintillators for a next generation neutron detector to complement the existing MoNA-LISA neutron array. Preliminary work includes measurement of the light attenuation in a 1 cm x 10 cm x 110 cm BC408 scintillator using an alpha source, comparison of the data with a Geant4 simulation and the construction and testing of a standard GEM detector. We will provide an update on the progress of this work.

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