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Performance comparison of MoNA and LISA neutron detectors¹ KIMBERLY PURTELL, Cental Michigan University, KAITLYNNE RETHMAN, AUTUMN HAAGSMA, JOSEPH FINCK, Central Michigan University, JENNA SMITH, Michigan State University, JESSE SNYDER, Michigan State University, MONA COLLABORATION — In 2002 eight primarily undergraduate institutions constructed and tested the Modular Neutron Array (MoNA) which has been used to detect high energy neutrons at the National Superconducting Cyclotron Laboratory (NSCL). Nine institutions have now designed, constructed and tested the Large-area multi-Institutional Scintillator Array (LISA) neutron detector which will be used at the NSCL and the future Facility for Rare Isotope Beams (FRIB). Both detectors are comprised of 144 detector modules. Each module is a 200 x 10 x 10 cm³ bar organic plastic scintillator with a photomultiplier tube mounted on each end. Using cosmic rays and a gamma source, we compared the performance of MoNA and LISA by using the same electronics to check light attenuation, position resolution, rise times, and cosmic ray peak widths. Results will be presented.

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