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Silicon-Strip Detectors for the Array for Nuclear Astrophysics Studies with Exotic Nuclei[1] L.L. MONDELLO, J.C. BLACKMON, L. LINHARDT, M. MATOS, E.F. ZGANJAR, Louisiana State University, E. JOHNSON, G. ROGACHEV, I. WIEDENHOVER, Florida State University — The Array for Nuclear Astrophysics Studies with Exotic Nuclei (ANASEN) is a charged-particle detector array that is targeted towards reaction studies with radioactive ion beams at FSU and the NSCL, primarily to help improve understanding of the nuclear reactions important in stellar explosions. New resistive, double-sided silicon-strip detectors were designed and constructed for ANASEN that aim for precise position and energy resolution using a modest number of channels. The first 12 (of 40) detectors for ANASEN were tested at LSU with a 241Am alpha source to characterize the position resolution, energy resolution, and effective length for each detector element, as well as the optimum operating voltage. A custom 72-channel preamplifier unit has also been constructed for silicon-strip detectors, and the performance of the preamplifier as a function of input series resistance was also studied. We will present the results of the source tests and plans for commissioning with ion beams.

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