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Measurement of ^{243}Am(p,tf) as a surrogate for ^{240}Am(n,f) R.J. CASPERSON, J.T. BURKE, Lawrence Livermore National Laboratory, M. MCCLESKEY, A. SAASTAMOINEN, E. SIMMONS, A. SPIRIDON, Texas A&M University, A. RATKIEWICZ, Rutgers University, A. BLANC, CEA-DAM, M. KUROKAWA, RIKEN Nishina Center, R.G. PIZZONE, Laboratori Nazionali del Sud-INFN — The cross sections of (n,f) reactions are of interest in reactor modeling, but short-lived isotopes, such as ^{240}Am, can be very difficult to measure. To avoid the enormous background created by such short-lived isotopes, we use the surrogate ratio method, which allows us to determine the ratio of an unknown cross section relative to a known one. In the case of ^{240}Am(n,f), the ratio is relative to ^{235}U(n,f), and we use (p,t) reactions to populate the relevant compound nuclei. We present preliminary results for measurements of ^{243}Am(p,tf) and ^{238}U(p,tf) using the STARLiTe detector system at the Texas A&M University Cyclotron Institute. The performance of the recently commissioned data acquisition system will also be presented. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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