Abstract Submitted for the DNP11 Meeting of The American Physical Society

Fission product  ${}^{87}$ Kr studied with Modular Total Absorption Spectrometer at the HRIBF<sup>1</sup> A. KUŹNIAK, UTK, UW, M. KARNY, ORNL, ORAU, UW, K. RYKACZEWSKI, C.J. GROSS, J. JOHNSON, ORNL, M. WOLINSKA-CICHOCKA, ORNL, ORAU, R. GRZYWACZ, UTK, ORNL, D. MILLER, UTK, B.C. RASCO, LSU — Modeling of the decay heat of uranium and plutonium fission products is one of the main challenges of contemporary applied nuclear physics. The differences between measured and calculated values are believed to be due to the incorrect or incomplete decay schemes measured with low efficiency detectors. Recently, a very efficient Modular Total Absorption Spectrometer, has been constructed at the Holifield Radioactive Ion Beam Facility (HRIBF) at Oak Ridge National Laboratory. Its full energy peak efficiency reaches 90% for 300 keV and over 75% for 5 MeV gamma rays. Results of the first test measurements of the 238-Uranium fission product  ${}^{87}$ Kr will be presented.

<sup>1</sup>This work was supported by DOE Office of Nuclear Physics.

Krzysztof Rykaczewski ORNL

Date submitted: 29 Jun 2011

Electronic form version 1.4