

Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

Application of the Oslo method to high resolution gamma spectra

A. SIMON, University of Notre Dame, M. GUTTORMSEN, A.C. LARSEN, University of Oslo, C.W. BEAUSANG, University of Richmond, P. HUMBY, University of Richmond, University of Surrey — Hauser-Feshbach statistical model is a widely used tool for calculation of the reaction cross section, in particular for astrophysical processes. The HF model requires as an input an optical potential, gamma-strength function (GSF) and level density (LD) to properly model the statistical properties of the nucleus. The Oslo method is a well established technique to extract GSFs and LDs from experimental data, typically used for gamma-spectra obtained with scintillation detectors. Here, the first application of the Oslo method to high-resolution data obtained using the Ge detectors of the STARLITER setup at TAMU is discussed. The GSFs and LDs extracted from (p,d) and (p,t) reactions on $^{152,154}\text{Sm}$ targets will be presented.

A. Simon
University of Notre Dame

Date submitted: 29 Jun 2015

Electronic form version 1.4