

Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

Total absorption spectroscopy of neutron-rich nuclei around the A=100 mass region ALEXANDER DOMBOS, NSCL, Michigan State University, ALEJANDRO ALGORA, IFIC (CSIC-Univ. of Valencia), THOMAS BAUMANN, NSCL, Michigan State University, JACLYN BRETT, Hope College, BENJAMIN CRIDER, TOM GINTER, ULRIKE HAGER, ELAINE KWAN, SEAN LIDDICK, NSCL, Michigan State University, BRADEN MARKS, Hope College, FARHEEN NAQVI, WEI JIA ONG, JORGE PEREIRA, CHRISTOPHER PROKOP, STEPHEN QUINN, NSCL, Michigan State University, ANNA SIMON, University of Notre Dame, DUSTIN SCRIVEN, ARTEMIS SPYROU, CHANDANA SUMITHRARACHCHI, NSCL, Michigan State University, PAUL DEYOUNG, Hope College — Accurate modeling of the r-process requires knowledge of properties related to the β -decay of neutron-rich nuclei, such as β -decay half-lives and β -delayed neutron emission probabilities. These properties are related to the β -decay strength distribution, which can provide a sensitive constraint on theoretical models. Total absorption spectroscopy is a powerful technique to accurately measure quantities needed to calculate the β -decay strength distribution. In an effort to improve models of the r-process, the total absorption spectra of neutron-rich nuclei in the mass region around A=100 were recently measured using the Summing NaI(Tl) (SuN) detector at the NSCL in the first ever total absorption spectroscopy measurement performed in a fragmentation facility. Total absorption spectra will be presented and the extracted β -decay feeding intensities will be compared to theoretical calculations.

Alexander Dombos
NSCL / Michigan State University

Date submitted: 30 Jun 2015

Electronic form version 1.4