

Abstract Submitted  
for the DNP19 Meeting of  
The American Physical Society

**RADIOACTIVE BETA-DECAY OF 133 INDIUM FOR NUCLEAR STRUCTURE STUDIES**<sup>1</sup> COREY HALVERSON, MIGUEL MADURGA, University of Tennessee, LOW ENERGY NUCLEAR SCIENCE GROUP TEAM, UNIVERSITY OF WARSAW COLLABORATION — THE RAPID NEUTRON CAPTURE (R-) PROCESS FINAL YIELDS ARE DETERMINED BY WAITING POINT NUCLEI WHERE NEUTRON-CAPTURE AND PHOTO-DISINTEGRATION ARE IN EQUILIBRIUM. THE DECAY PROPERTIES OF THESE NUCLEI, HALF-LIVES AND NEUTRON BRANCHING RATIOS DETERMINE THE PATH OUT OF THESE WAITING POINTS. IN THIS WORK WE STUDY THE NUCLEAR STRUCTURE OF  $^{133}\text{Sn}$  POPULATED IN THE BETA-DECAY OF  $^{133}\text{In}$ . INDIUM 133 WAS CREATED IN INDUCED FISSION OF  $^{238}\text{U}$  AT THE ISOLDE FACILITY CERN. ITS DELAYED GAMMA AND NEUTRON EMISSION WAS OBSERVED AT THE ISOLDE DECAY STATION. PRELIMINARY RESULTS OF GAMMA AND NEUTRON EMISSION FROM UNBOUND STATES IN  $^{133}\text{Sn}$  WILL BE PRESENTED.

<sup>1</sup>Research reported in this presentation was supported by the University of Tennessee, Knoxville and Oak Ridge National Laboratories.

Corey Halverson  
University of Tennessee

Date submitted: 24 Jul 2019

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