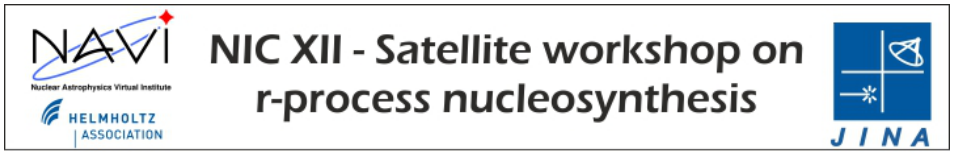

Contribution ID: **21** Type: **not specified**

Sn(d,p) and r-process nucleosynthesis

Sunday, 5 August 2012 12:30 (30 minutes)

R. Surman and colleagues have shown how r-process nucleosynthesis abundances are affected by uncertainties in neutron capture cross sections in relatively long-lived nuclei near the r-process path, such as 130Sn. We have recently
measured the (d,p) reactions with rare isotope beams of 126,128,130,132Sn and 134Te to study the single-neutron structure in these neutron-rich nuclei and inform the direct-semi-direct (DSD) components of neutron capture cross
sections. Preliminary results from recent measurements, including DSD (n,gamma) rates, will be presented, as well as future prospects for informing (n,gamma) cross sections.

This research is a collaboration of scientists from University of Tennessee, Oak Ridge National Laboratory, and Tennessee Technological University, as well as Rutgers. Work supported in part by the U.S. Department of Energy and National Science Foundation.

Primary author: CIZEWSKI, Jolie

Presenter: CIZEWSKI, Jolie

Session Classification: Experiments