

UNIVERSITY OF NOTRE DAME  
DEPARTMENT OF PHYSICS

# SPECIAL NUCLEAR SEMINAR

Tuesday, May 1

## *Total Absorption Spectroscopy in the A=70 and A=100-110 Mass Regions*

Alexander Dombos  
Michigan State University

Accurate modeling of the rapid neutron capture process requires knowledge of properties related to the  $\beta$  decay of neutron-rich nuclei, including  $\beta$ -decay half-lives and  $\beta$ -delayed neutron emission probabilities. These properties are related to the  $\beta$ -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  $\beta$ -decay strength distribution.

A new experimental program that employs the total absorption spectroscopy technique to study the  $\beta$  decays of radioactive nuclides with both thermalized and fast beams has been initiated at the National Superconducting Cyclotron Laboratory. Results from this experimental program will be presented for  $\beta$  decays in the A=70 and A=100-110 mass regions.

**4 pm – 5 pm**  
**Nuclear  
Science  
Laboratory**

**124 Nieuwland  
Science Hall**

~~~~~

All interested  
persons are  
cordially invited  
to attend

~~~~~

Refreshments will be  
served prior to the  
seminar in room 124