

Nuclear Data Efforts at LANSCE

presented by Aaron Couture, LANL

Nuclear Data Experiments have been made/planned with several instruments:

- GEANIE ($n, x\gamma$)
- DANCE (n, γ)
- LSDS
- Ion Chambers
- Chi-Nu (n, xn)
- LENZ ($Z=p, d, \alpha$, neutron-induced charged-particle reactions)
- TPC (fission research)
- SPIDER (fission yields)

Neutron Capture Data inferred from Beta Decay with Total Absorption Spectroscopy

presented by Sean Liddick, NSCL/MSU

- Measure beta decay of nucleus and infer neutron capture.
Extract level densities and gamma-ray strength function
 - Need total excitation energy of the daughter isotope.
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- Need to know initial excitation energy
 - Can't use beta-decay electron (three body process).
 - Measure total γ -ray energy.
 - Require high detection efficiency (low resolution detector).
 - Knowledge of multiplicities.
- Wide range of applicability
 - Short lifetimes
 - Low production rates
 - Bounded by
 - Q values
 - Delayed neutron emission

Submission of Supplementary Nuclear Data along with Journal Publication

presented by Jun Chen, NSCL

- Most authors don't submit supplementary data, while these data are also useful for researchers and data evaluators
- There are two options for submission of those data
 - Submit to journals with paper manuscript (refereed)
 - Submit to XUNDL database at NNDC (not refereed)
- Authors are strongly encouraged to submit supplementary data to XUNDL database for better visibility and archiving
- Authors are concerned about data submission to XUNDL not refereed. The XUNDL coordinator (Balraj Singh/Libby McCutchan) should make a clarification on that.
- XUNDL should collaborate with journals to have more people to submit supplementary nuclear data.