Experimental Resources Website

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Website URL

- Direct: http://www.td.anl.gov/nrs/
- Indirect: http://www.nndc.bnl.gov/csewg/CSEWG_comm.html

Purpose

- To provide the CSEWG community with links to information about available resources in the U.S. for experimental nuclear data studies
- To keep the CSEWG leadership informed concerning the status of experimental nuclear data activities in the U.S. that could support the ENDF evaluation effort

Recent Changes to this Website

- Some modifications have been made to the general appearance of the website
- Two existing links were recently revised to account for changes in specific URL's
- Twelve new links were added during the past year
- This website is periodically enhanced and updated in order to maintain its currency

Types of Data Sought by CSEWG

- Traditional fast-neutron differential cross sections and angular distributions (< 20 MeV)
- Thermal and epithermal neutron cross sections and resonance properties
- Lower-energy photo-nuclear cross sections (< 20 MeV)
- Integral neutron and photon cross sections in well-characterized spectra
- Decay radiations, intensities, angular distributions, and branching factors
- Higher-energy neutron and photon cross sections (> 20 MeV)
- Certain charged-particle reaction data
- Radiation source-reaction properties

Types of Experiments of Interest to CSEWG

- Neutron and photon cross section measurements (differential and integral)
- Radioactive decay characterizations and quantitative measurements
- Nuclear quantum numbers (for modeling)
- Standards characterizations (for normalization of relative measurements)
- Benchmark measurements (e.g., tritium breeding, trans-plutonium actinide production, induced activation)

Key Experimental Resources

- Experienced personnel and established and well tested methodologies
- Radiation sources: Accelerators, reactors, photo-nuclear sources, intense photon beams
- Detectors: Neutrons, charged nuclear particles, photons, and beta radiation
- Data acquisition apparatus
- Data analysis software
- Funded programs (critical mass)

Summary

- There exists a wide variety of experimental facilities and resources available in the United States
- Many of these are under-utilized for CSEWG-related purposes, mainly due to lack of adequate funding and/or experienced and interested personnel
- Others are used primarily for basic nuclear studies of less relevance to contemporary CSEWG concerns
- The trend toward higher energies has led to the demise of many facilities and capabilities that once produced data of traditional interest and value to CSEWG
- The aging of both facilities and personnel is widespread
- Flat or flat-flat budgets combined with escalating fixed costs will seriously damage our experimental resources if not rectified