

Current status of the NSR project

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U.S. DEPARTMENT OF
ENERGY

Office of
Science

NSR Operation in FY2013

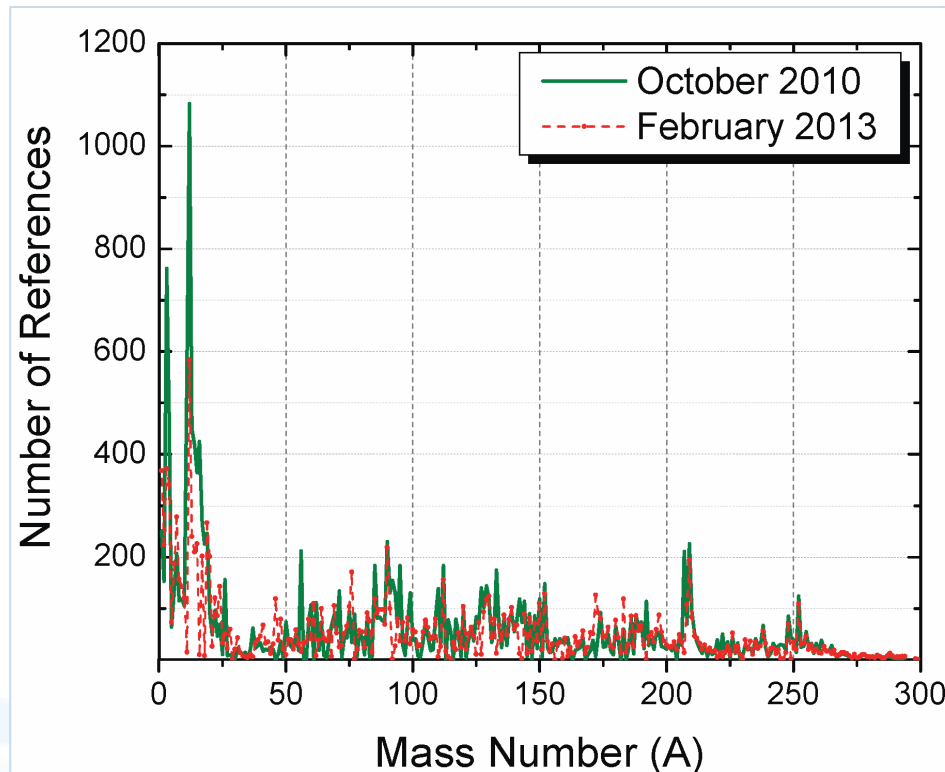
- Four people were directly involved in NSR operation (B. Pritychenko, E. Betak, B. Singh, J. Totans) plus occasional help from the IAEA (V. Zerkina)
- FY 2013 challenges for NSR operation
 - ND 2013 conference
 - NNDC move → Library move
 - NSR staff medical/retirement issues
 - Web Application Migration to new Linux servers
- We successfully operated in spite of all of the above

FY2013 NSR Statistics

- NSR References
 - 3,430 new articles, 90% published in 2012-2013, 10% from the previous years (missing articles)
 - 101 modified (corrected) article entries
 - 1,822 keyworded article abstracts
- NSR computer operation
 - 86 database content updates
 - 211,010 Web retrievals worldwide (>50% by researchers)
- NSR Dictionaries content update
 - 1,683 new authors
 - 10 new journals
 - 166 new reactions
 - 483 new nuclides

NSR & ENSDF Cooperation

- NSR serves as an indicator for new ENSDF mass-chain evaluations
- NSR provides references for ENSDF evaluations



NSR Database Scope

- We compile all low- and intermediate-energy references for broad use, not just nuclear structure and decay as before 90ies
- Nuclear Reactions papers
 - CINDA database is no longer supported
 - Consequently NSR is filling the gap for NRDC network
 - Extended keywords allow to extract statistics on product use, such EMPIRE/TALYS ratio,
- Theoretical papers
 - NSR is the only USNDP database where nuclear theory papers are systematically compiled

NSR Missing References

- NSR was driven by ENSDF project in the past
- NSR scope was changed 20 years ago from nuclear structure references to nuclear science references; It was extended to nuclear reactions and theoretical references, however, no effort was made to incorporate missing articles
- Several deficiencies such as nuclear astrophysics and history articles are already addressed
- Currently we conduct an exploratory work on importing ~6,000 experimental references from EXFOR in collaboration with the NRDC network

NSR Recent References

- In the past they were published in NDS
- Presently, one can retrieve these data with NSR Web Interface

The image displays three overlapping screenshots of the NSR (Nuclear Science References) Web Interface, illustrating the process of retrieving recent references.

Left Screenshot: Shows the "National Nuclear Data Center" homepage. It includes a "Quick Search" button and a list of PDF files for various quarters (e.g., n2011q1.pdf, n2011q2.pdf, n2011q3.pdf, n2010q1.pdf, n2010q2.pdf, n2010q3.pdf, n2010q4.pdf, n2010.pdf, n2009q1.pdf, n2009q2.pdf, n2009q3.pdf, n2009q4.pdf, n2009.pdf, n2008q1.pdf, n2008q2.pdf, n2008q3.pdf, n2008q4.pdf, n2008.pdf).

Middle Screenshot: Shows the "NSR Query Results" page. It displays the "NSR database version of November 19, 2013." and a search result for "Found 536 matches." The "From: 10" is highlighted with a red circle.

Right Screenshot: Shows the "NSR Query Results" page with a list of references. The "Found 536 matches. Showing 1 to 100. [Next]" is highlighted with a red circle. The list includes references such as "1955HA85 Phys.Rev. 112, 169 (1955)", "1948BA01 Phys.Rev. 73, 659 (1948)", "1976AS08 Proc.Roy.Soc. A, 358, 1 (1976)", "1976CH38 Phys.Rev. 155, 1111 (1976)", and "1966SM08 Phys.Rev.Lett. 16, 525 (1966)".

Conclusions

- NSR project is in a good shape
- We will continue to support nuclear structure evaluations and do our best to support nuclear reactions and theory
- We will keep NSR website <http://www.nndc.bnl.gov/nsr> current and up-to-date
- We will continue to improve NSR completeness and address research needs
- We exploring the possibility of importing ~6,000 references from EXFOR database