

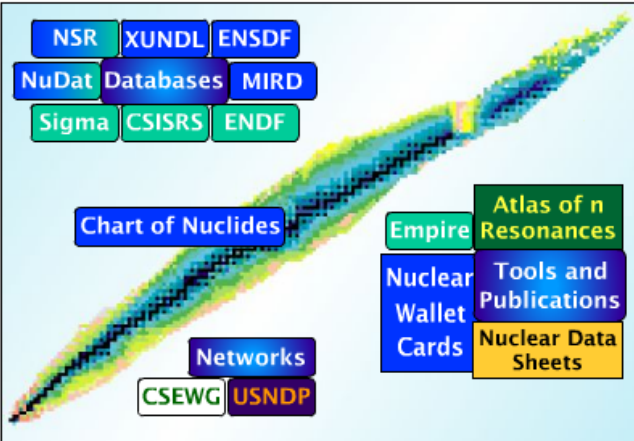



USNDP Web Services

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USNDP Web & Database Services







National Nuclear Data Center

BROOKHAVEN
NATIONAL LABORATORY




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- [Nuclear Structure and Decay Tools](#)
- [Nuclear Reaction Databases](#)
- [Nuclear Reaction Tools](#)
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- [Meetings](#)




Covariance Workshop Talks **New** CSEWG-USNDP Meetings, Nov 4-7

[Site Index](#) - Search the NNDC:

<p>AMDC Atomic Mass Data Center, Q-value Calculator</p> <p>CINDA Computer Index of Nuclear (reaction) Data</p> <p>ENDF Evaluated Nuclear (reaction) Data File, Sigma</p> <p>NMSS & DoE NMIRD Safeguards & inventory decay data standards</p> <p>NucRates MACS & Astro-physical reaction rates</p>	<p>Atlas of Neutron Resonances Parameters & thermal values</p> <p>CSEWG Cross Section Evaluation Working Group</p> <p>ENSDF Evaluated Nuclear Structure Data File</p> <p>NSR Nuclear Science References</p> <p>NuDat Nuclear structure & decay Data</p>	<p>CapGam Thermal Neutron Capture γ-rays</p> <p>CSISRS alias EXFOR Nuclear reaction experimental data</p> <p>IRDF International Reactor Dosimetry File</p> <p>Nuclear Data Sheets Nuclear structure & decay data journal, Special Issues on reaction data</p> <p>USNDP U.S. Nuclear Data Program</p>	<p>Chart of Nuclides Basic properties of atomic nuclei</p> <p>Empire Nuclear reaction model code system, Reference paper</p> <p>MIRD Medical Internal Radiation Dose</p> <p>Nuclear Wallet Cards Ground & isomeric states properties, Homeland Security version</p> <p>XUNDL Experimental Un-evaluated Nuclear Data List</p>
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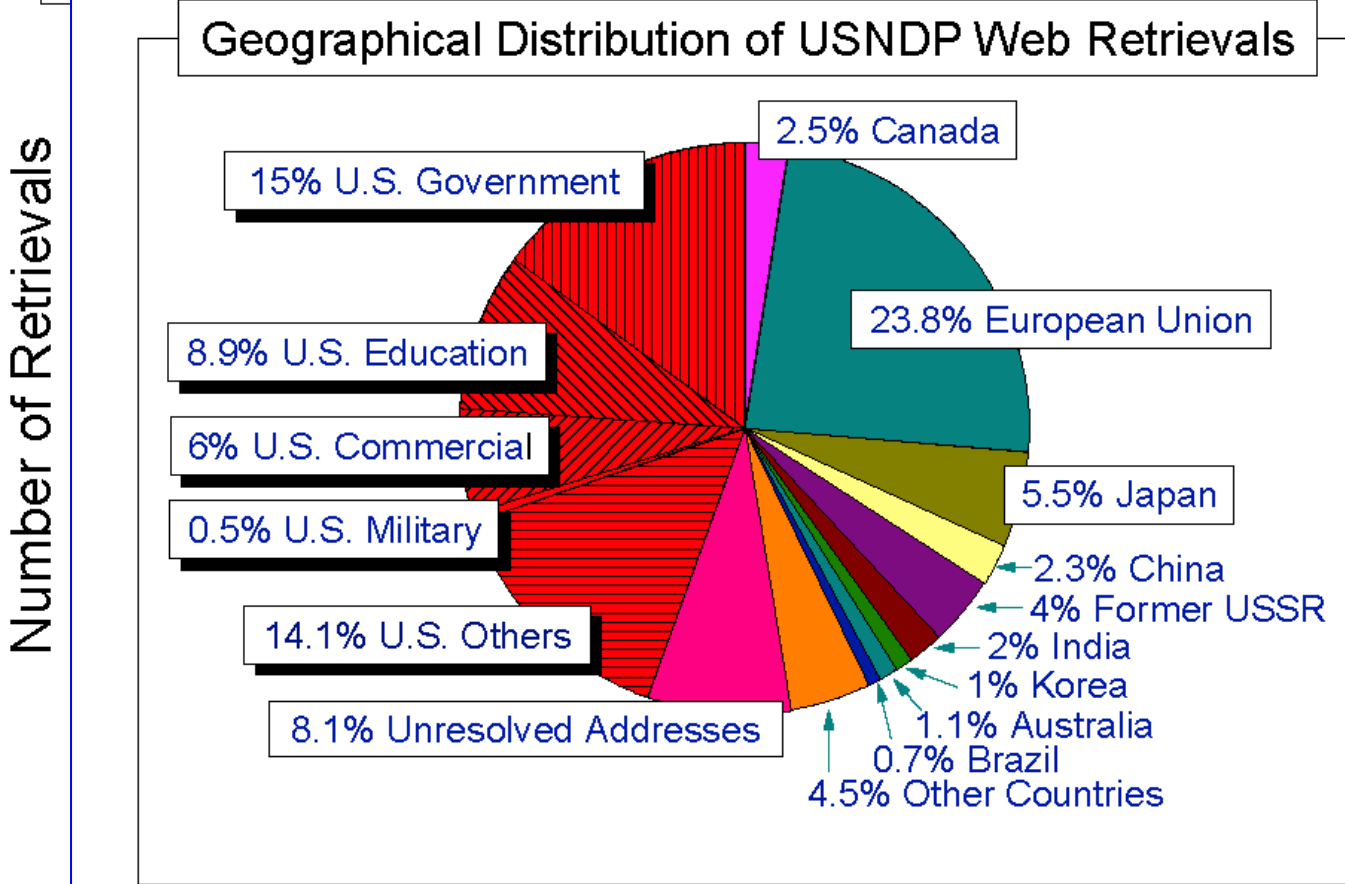
[Acknowledgments](#) - [Comments/Questions](#) - [Disclaimer](#)

FY2008 Highlights I

- ❖ New products:
 - ❖ Sigma 2.0 released in April 2008,
 - ❖ MACS & Astrophysical Reaction Rates released in December 2007,
 - ❖ Electronic Proceedings of CSEWG & USNDP 2007.
- ❖ Improved products in collaboration with the IAEA:
 - ❖ ENDF,
 - ❖ CSISRS,
 - ❖ CINDA released in December 2007.
- ❖ NDS IAEA forwarded ENSDF, NuDat, QCalc and Nuclear Wallet Cards Web requests to NNDC Web server

FY2006 Highlights II

- ❖ Access
- ❖
- ❖
- ❖
- ❖
- ❖ Usage
- ❖ Number
- ❖ 41%
- ❖ Generated
- ❖
- ❖
- ❖
- ❖



8

New Web Products

❖ Sig
❖ MA

National Nuclear Data Center

NND C Databases: NuDat | NSR | XUNDL | ENSDF | MIRD | ENDF | CSISRS | Sigma

Periodic Table Browser

Select first a library, then Data

Library: ENDF/B-VII.0

0	1		
n	H		
	3	4	
	Li	Be	
	11	12	
	Na	Mg	
	19	20	21
	K	Ca	Sc
	37	38	39
	Rb	Sr	Y
	55	56	57
	Cs	Ba	La
	87	88	89
	Fr	Ra	Ac
		58	
		Ce	
		90	
		Th	

Results

GN, ENDF/B-VII.0

$^{122}\text{Te}(n,\gamma)$

ENDF/B-VII.0
MACS

Downloads

Help

Nuclear Astrophysics Resources

JINA (USA)

JENDL-3.3 MACS (Japan)

KADONIS (Karlsruhe)

Nuclear Data for Nuclear Astrophysics (ORNL)

Maxwellian-Averaged Cross Sections and Astrophysical Reaction Rates

Maxwellian-Averaged Cross Sections and Reaction Rates calculated using evaluated cross section libraries ENDF/B-VII.0 (USA, 2006), JEFF-3.1 (Europe, 2005), JENDL-3.3 (Japan, 2002) and ENDF/B-VI.8 (USA, 2001).

Nucleus
 ^{122}Te or te -122


Reaction (n, γ) (n, α) (n,f) (n,p) (n,2n) All

kT (keV)
 30 or 100 or ...


Web and Programming: Boris Pritychenko, NNDC, Brookhaven National Laboratory
 Data Source:
 ENDF/B-VII.0 and ENDF/B-VI.8: Cross Section Evaluation Working Group (CSEWG)
 JEFF-3.1: Nuclear Energy Agency, Working Party on International Nuclear Data Evaluation Co-operation (WPEC)
 JENDL-3.3: Japanese Atomic Energy Agency (JAEA)

Improved Web Products







National Nuclear Data Center



Experimental Nuclear Reaction Data (EXFOR / CSISRS)

Database Version of October 29, 2008

Search the NNDC:

- NNDC Site Index
- ENDF/B-VII.0
- ENDF/B-VII.0 Home
- Download Sublibrary
- Lists of Materials
- How to Reference?
- Publications
- Processing
- Benchmarking
- Deficiency List
- ACE-Format Files
- ENDF/A
- Index of ENDF/A
- ENDF-6 Formats
- ENDF-6 Formats Manual
- ENDF-6 Formats Tutorial
- ENDF-6 Formats for SAMMY Users
- ENDF Archive
- CSEWG Meetings
- ENDF/B-VI
- ENDF/B-V
- Feedback
- Comments, Questions?
- Previous Comments
- ENDF Discussion List
- ENDF/B-VII.0 Covariances

News

2007/11 Improvements/extensions:

1) General EXFOR Statistics [example]

2) Bibliography (Html and BibTeX) is improved; use link to NSR; [example] [NSR]

[\[History\]](#)

The CSISRS library, pronounced scissors , contains an extensive compilation of experimental nuclear reaction data up to 1 GeV. Neutron reactions have been compiled systematically since the discovery of the neutron, while charged particle (up to carbon) and photon reactions have been covered less extensively. The library contains data from more than 17,568 experiments.

[Help](#) | [CSISRS History](#) | [EXFOR/CSISRS Statistics](#) | [Submit Your Data](#)

(example)

Target(s)

Reaction

Quantity

Author(s)

Publication year

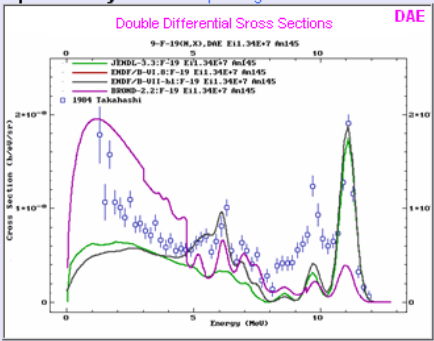
Accession #

Energy from to eV

More Options ...

Tip of the day: Advanced plotting

Double Differential Cross Sections DAE



Feedback

Comments/Questions?
 Previously submitted comments

Database Manager: Michal Herman, NNDC, Brookhaven National Laboratory (mwherman@bnl.gov)

Web and Database Programming: Viktor Zerkov, NDS, International Atomic Energy Agency (V.Zerkov@iaea.org)

Web Programming: Boris Pritychenko, NNDC, Brookhaven National Laboratory (bnlweb@bnl.gov)

Data Source: Network of Nuclear Reaction Data Centres

Communication with Users

❖ Act

❖ M

❖ C

❖ E

❖ M

The screenshot shows the NNDC website interface. At the top, there are navigation links for NSR, XUNDL, ENSDF, NuDat, Databases, Sigma, and CSISRS. A search bar is present with the text "Search the NNDC:" and a "go" button. Below the search bar is a "Recent Comments on NNDC Web Services" section. The first comment is from Tim Meehan, dated 9/30/2008, asking for help with citing an old ENSDF citation. A response from Jag, dated 9/30/2008, provides a detailed answer, suggesting a specific publication for citation and providing the URL for the ENSDF database.

Recent Comments on NNDC Web Services

This page contains comments on NNDC Web Services received via "Comments/Questions" Java servlet or e-mail. Please feel free to submit your own comments or questions.

I have an old citation to ENSDF, and I would like to give you the proper credit ... how should I cite your work?
Thanks in advance,

Tim Meehan

(could you guys put a link/reference at the bottom of the <http://www.nndc.bnl.gov/ensdf/> page with the citation info? that might save you the trouble of answering emails like this in the future) :)

-- Submitted by: Tim on 9/30/2008 (MEEHANBT at nv.doe.gov)

Response to Tim from Jag, 9/30/2008 (tuli at bnl.gov)

Tim,

If the reference is to a particular mass chain, I would suggest reference to its publication which you could get by clicking on the mass number in the Index for ENSDF.
However, if you want to refer to the entire file: I would suggest the following: Evaluated Nuclear Structure Data File (ENSDF) – a computer file of experimental nuclear structure data maintained by the National Nuclear Data Center, Brookhaven National Laboratory (www.nndc.bnl.gov) – file as of date (e.g., September 1, 2008).
With best wishes,

Jag

Conclusion & Outlook

- ❖ Good Results in FY 2008 (1.96 Million Retrievals, 41% increase).
- ❖ Wide range of users & active communication.
- ❖ New & Improved Web Products contributed to the USNDP Web Services.
- ❖ Suggestions for the USNDP Web Services?