



International Atomic Energy Agency

Centre Report - IAEA NDS

R.A. Forrest

**Nuclear Data Section
Department of Nuclear Sciences and Applications**

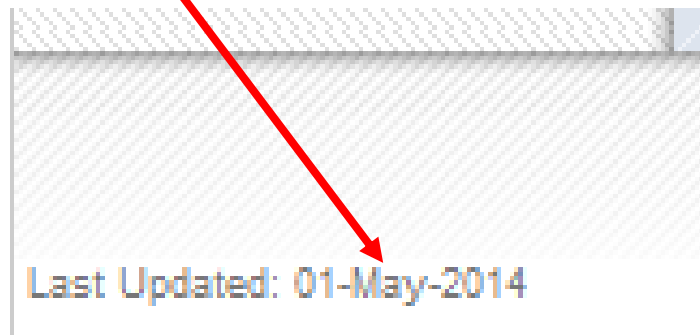
Staff

- **12 Professional + 4 Support staff**
- **Lost 1 Support staff post, reassignments and temporary absences giving some problems**
- **For the P staff:**
 - **Vivian Dimitriou started June 2012**
 - **Daniel Abriola left March 2013**
 - **Roberto Capote, Unit Head, April 2013**
 - **Andras Vasaros, started August 2013**
 - **Andrej Trkov started January 2014**



Computing

- **Web servers in the cloud**
- **Many applications rewritten**
- **Security is major concern**
- **Main page updated daily**
- **'Mirror' sites in India and China, regularly updated (particularly important for EXFOR)**
- **High availability**



Data Compilations

- **17 final TRANS tapes transmitted:**
 - 5 neutron tapes (25 new, 54 revised)
 - 9 CPND tapes (106 new, 71 revised)
 - 3 PhND tapes (14 new, 23 revised)
- **65 final TRANS tapes received:**
 - 460 neutron entries (59 new, 401 revised)
 - 516 CPND entries (326 new, 168 revised)
 - 201 PhND entries (29 new, 172 revised)



Data Compilations (2)

- **Finalized TRANS tapes → EXFOR Master File created and distributed each month**
- **3 transmission of EXFOR/CINDA dictionaries in:**
 - **TRANS**
 - **DANIEL (backup)**
 - **Archive format**
- **68 preliminary TRANS tapes received and checked**



EXFOR coverage control

- **EXFOR compilation control system:**
 - ~ 70 journals regularly scanned
 - ~ 850 journal issues scanned and added to compilation control database since last NRDC
 - Completeness checking against NACRE II, IBANDL, Mughabghab's "Atlas of Neutron Resonances" performed
 - PDFs of registered articles collected, ~36,000
 - > 20,000 experiments
 - More information see presentations by Valentina Semkova



CINDA

- **Latest CINDA Master File available**
- **Automatic update using the EXFOR and NSR databases (done 2 times)**
- **MySQL dump of complete CINDA sent to NNDC**



Services

- **Web - See Viktor Zerkin presentation:**
 - **New libraries**
 - **DVD downloading**
 - **View Archives**
 - **X4Plot**
- **Media: 942 DVD, 193 hardcopies**
- **Documents:**
 - **~2,600 available as PDFs**
 - **2 Newsletters per year**



Meetings

- **Data for IBANDL**
- **Radiation Damage (CRP)**
- **PIGE (CRP)**
- **Benchmarking of Digitizing Software**
- **Nuclear Data for Medical applications (CRP)**
- **NSDD Network meeting**
- **Validating Dosimetry file IRDFF (CRP)**
- **Neutron standards**
- **Beta-delayed Neutron emission (CRP)**
- **EXFOR compilation workshop**
- **EXFOR data in Resonance Region**
- **PFNS of actinides (CRP)**
- **Compilation of Gamma-ray data**
- **Fission parameters and RIPL**



Publications

International Atomic Energy Agency
Nuclear Data Services
Sección Datos Nucleares, OIEA

IAEA.org | NDS Mission | About Us | Mirrors: India | China

Search

Hot Topics » ENDF/B-VII.1 • TENDL-2012 • JENDL-4 • IBANDL **News** » 2013/08/27 New NDS Mirror-site in China <http://www.nds.iaea.ac.cn/>

Quick Links
ADS-Lib
Atomic Mass Data Centre
CINDA
Charged particle reference cross section
DROSG-2000
EMPIRE-3.2
ENDF Archive
ENDF Retrieval
ENDF-6 Codes
ENDF-6 Format
ENDVER
ENSDF
ENSDF ASCII Files
ENSDF programs
EXFOR
FENDL 3.0
Fission Yields
GANDR
Geant4 Libraries
IBANDL
INDL/TSL

Publications

Reports are grouped according to series title. The search engine provides keyword-search across all series.

<h3>INDC Reports</h3> <p>International Nuclear Data Committee reports Further divided by organization and region</p> <p>go to</p>	<h3>INDC NDS</h3> <p>Nuclear Data Section reports INDC series reports authored by NDS staff members and consultants</p> <p>go to</p>	<h3>IAEA-NDS</h3> <p>Documentation Series of the IAEA Nuclear Data Section Set of reports authored by the IAEA Nuclear Data Section</p> <p>go to</p>
<h3>Tecdoks</h3> <p>The IAEA Technical Documents (IAEA-TECDOC) series Subset relevant to Nuclear Data Services. Includes Proceedings of the Symposia on Physics and Chemistry of Fission 1969, 1973 and 1979</p> <p>go to</p>	<h3>Conference Proceedings</h3> <p>Documents from various sources INDC Special series - IAEA Tecdoks - Proceedings of the Symposia on Physics and Chemistry of Fission 1969, 1973 and 1979</p> <p>go to</p>	<h3>NDS Staff Publications</h3> <p>List of references Publications authored or co-authored by the NDS staff members.</p> <p>go to</p>

Search

Thousands of papers are available in the NDS database
Find what you are looking for searching on any field: author, title, abstract, code

Search for

use multiple keywords separated by space

Order by
 Reference Code Author Publication Date

New Additions

last on 2014-03-27

Validation of the International Reactor Dosimetry and Fusion File
S. Simakov, L. Greenwood, R. Capote Noy, Proc. 12th Int. Conf. on Radiation Shielding (ICRS-12), 2-7 September 2012, Nara, Japan; to be published in Progress in Nuclear Science and Technology

Proceedings of Neutron Physics Conference, Kiev, 24-28 May 1971, Vol 2
See document.

Proceedings of Neutron Physics Conference, Kiev, 24-28 May 1971, Vol 1
See document.

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Publications

INDC Reports

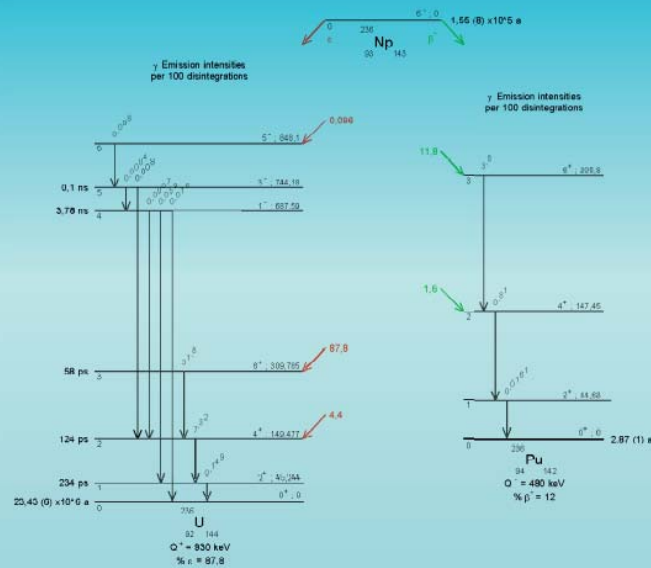
QuickSearch - all fields Number of matching entries: 660/660.

 INDC(NDS)-0658	Table of Nuclear Magnetic Dipole and Electric Quadrupole Moments	N.J. Stone
 INDC(NDS)-0657	Evaluation of Some (n,n'), (n,γ), (n,p), (n,2n) and (n,3n) Reaction Excitation Functions for Fission and Fusion Reactors Dosimetry Application	K.I. Zolotarev, P.K. Zolotarev
 INDC(NDS)-0656	ADS-HE: Evaluated Nuclear Data Library up to 1 GeV for ²⁰²Hg, ²⁰⁸Pb, ²⁰⁹Bi, ²³²Th, ²³⁵U, ²³⁸U, ²³⁷Np, ²³⁹Pu, ²⁴²Am and ²⁴⁵Cm Summary Report of the Special Service Agreement	D. Lopez Aldama
INDC(NDS)-0655	Prompt Fission Neutron Spectra of Actinides Summary Report of the Third Research Coordination Meeting, 21-24 October 2013, Vienna, Austria	R. Capote Noy
INDC(NDS)-0654	Recommended Input Parameters for Fission Cross Section Calculation Summary Report of the Consultants' Meeting, 17-18 December 2013, Vienna, Austria	R. Capote Noy
 INDC(NDS)-0653	Evaluation of Data for Collisions of Electrons with the Nitrogen Molecule and Nitrogen Molecular Ion Summary Report of the Consultants' Meeting, 5-6 December 2013, Vienna, Austria	H.K. Chung, N.J. Mason



Publications

Library of Recommended Actinide Decay Data, 2011



Technical Editors
M.A. Kellett, A.L. Nichols

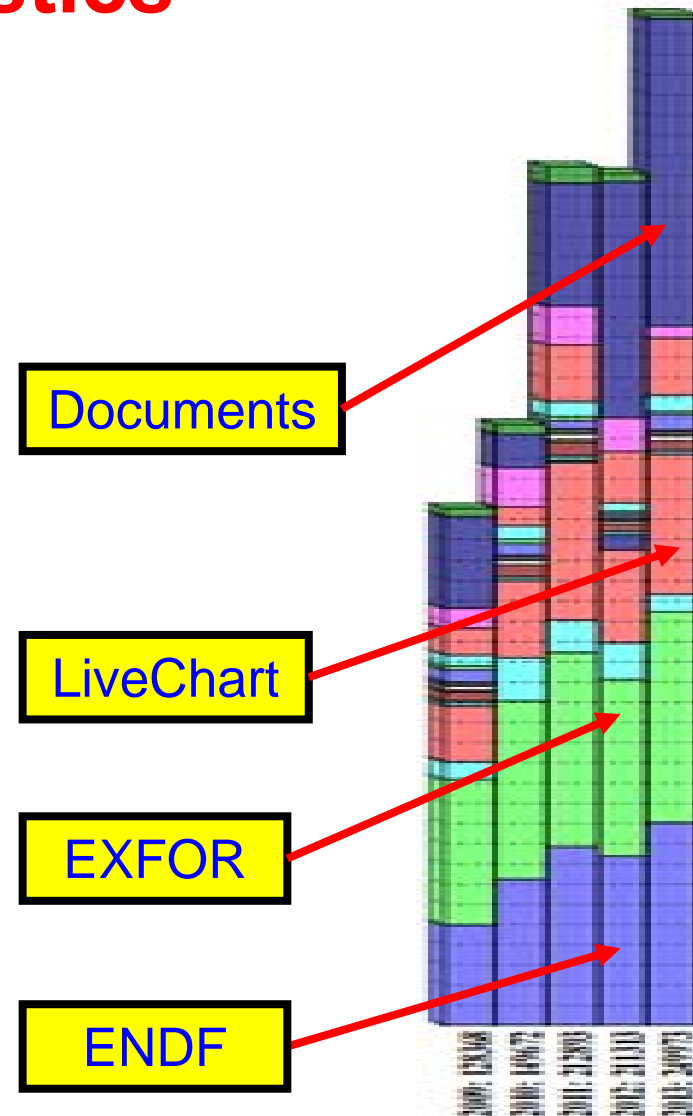


- Results of CRP were published
- 425 pages + CD-ROM



Web Statistics

- Access in 2011; 213,000
- Access in 2013; 250,000
- Drop in 2012 since only operation for 10 months
- EXFOR still very important



On-going CRPs

- **Prompt Fission Neutron Spectra of Actinides (2009-2013)**
- **Development of a Reference Database for Particle-Induced Gamma-ray Emission (PIGE) (2011-2015)**
- **Charged-Particle Monitor Reactions and Nuclear Data for Medical Isotope Production (2012-2016)**
- **Testing and Improving the International Reactor Dosimetry and Fusion File (IRDFF) (2013–2017)**
- **Primary radiation damage cross sections (2013–2017)**
- **Reference database for beta-delayed neutron emission (2013–2017)**



Data Development Projects (DDPs)

- **Maintain the international neutron cross section standards file and evaluation techniques**
- **CIELO collaboration: coordination and technical work**
- **Neutron data evaluation work up to 150 MeV: ^{55}Mn**
- **Ion Beam Analysis Nuclear Data Library (IBANDL)**
- **Development of evaluation methodology and nuclear reaction modelling systems**
- **Input to JEFF project**
- **Evaluation of Charged-Particle-induced Reaction Data in the Resolved-Resonance Region for Applications**
- **Accuracy of Nuclear Reaction Cross Sections for IBA and Benchmarking**
- **Compilation and Evaluation of Gamma-Ray Data**



Android App



- **Isotope Browser**
- **Properties of over 4,000 isotopes**
- **For all android portable devices, - smart phones and tablets**
- **>5,500 downloads**
- **<http://play.google.com/store/apps>**



Visits and Publications

- **3 staff members attend ND-2013 in New York and contributed to 24 papers**
- **Staff attended about 10 international conferences per year**
- **V. Zerkin visited NNDC to deploy and further develop software for the management and the web retrieval of ENDF, EXFOR and CINDA databases**
- **51 INDC(NDS) reports in 2012/13**
- **31 Publications by Staff 2012**
- **47 Publications by Staff 2013**



Training

- Provide outreach in the form of training, especially to developing countries
- Workshops held at **ICTP Trieste** (2 in 2013)
 - ▶ Medical Applications (Sept-Oct)
 - ▶ Analytical Applications (October)
- Workshops held at **Vienna** (2 in 2013)
 - ▶ EXFOR Compilation (August)
 - ▶ Evaluation and EMPIRE code (December)
- Workshops held at **ICTP Trieste** (3 planned for 2014)
 - ▶ Nuclear Structure and Decay Data (*March*)
 - ▶ Nuclear Reaction Data (September)
 - ▶ Plasma-material interactions, A+M (November)



Plans

- **Two new CRPs being considered:**
 - ▶ Improve RIPL, particularly fission parameters
 - ▶ Database of gamma-ray data
- **Meetings of INDC and IFRC A+M subcommittee in 2014**
- **50th Anniversary of NDS**
- **Internal evaluation of NDS**



Thank you!

