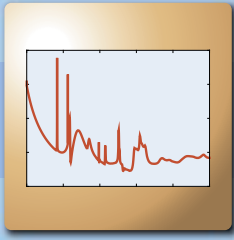




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Nuclear Data Newsletter

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All services provided to users are free of charge. Please contact us on the following addresses:

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Online News

At the end of June 2004, the Web and Database service of the Nuclear Data Section was moved from our DEC Alpha/Open VMS to powerful Intel/Linux machine. Our planned migration of CINDA, EXFOR and ENDF databases and retrieval systems to platform-independent and cost-effective environment has been successfully implemented. A new architecture based on relational database and new Web technologies (implemented on MySQL database and Java-Servlets) allows users to formulate flexible and universal requests from integrated database. It includes intelligent help system and plotting capabilities. New versions of MIRD and NuDat 2.0 software packages has been also installed for the presentation of data from ENSDF as developed by the NNDC/BNL, USA.

NDS front Web page has been re-designed according to the IAEA standards and all documents, files and libraries were moved on to the new server. The address of the front Web page is the same as for the old server:

<http://www-nds.iaea.org>.

The following INDC Reports are available online at http://www-nds.iaea.org/indc_sel.html: INDC(CCP)-439 and 440, INDC(NDS)-421 (Rev. 1), 450, 455, 457, 458, 459, 460 and 461, INDC(USA)-107. Many archived INDC reports are available now electronically at http://www-nds.iaea.org/indc_sel.html.

Draft of handbook on Reference Input Parameters Library (RIPL-2) is available online at <http://www-nds.iaea.org/RIPL-2/handbook.html>.

Computer Codes and Packages

These databases and libraries are free available on CD-ROM on request:

EXFOR-CINDA Database and Retrieval System, version 1.62, data updated as of June 2004.

- CINDA extended by charged-particle data
- EXFOR and CINDA as MS-Access databases
- Can run from CD
- Integrated CINDA and EXFOR
- Advanced interactive search
- Works with local and remote databases
- Interactive graphics with ZVView

Developed by V. Zerkin, Nuclear Data Section, IAEA, 2004.

CINDA - Library contains bibliographical references to experimental nuclear reaction data and to calculations, reviews, compilations and evaluations of neutron reaction and spontaneous fission data and contains 340,000 lines, 63,700 publications and 154,600 blocks.

EXFOR - Is a comprehensive library of experimental nuclear reaction data induced by neutrons, charged particles and photons and contains 14,752 entries and 96,817 tables.

EXFOR – CINDA for Applications Databases and Retrieval Systems on Linux and Windows, version 1.62, June 2004

- Integrated CINDA and EXFOR
- Advanced interactive search
- Help based on Dictionaries
- Interactive graphics with ZVView
- Can run from CD
- Works with local and remote databases
- Includes Non-Interactive EXFOR retrievals
- CINDA extended by charged particle reactions

Developed by V. Zerkin, Nuclear Data Section, IAEA, 2004.

ENDVER/GUI and EXFOR-CINDA PACKAGE:

- PostScript graphics with PlotC4
- Interactive graphics with ZVView
- Non-interactive EXFOR retrievals
- Does not need installation, works from CD-ROM
- Advanced interactive search
- Help based on Dictionaries
- Integrated based on Dictionaries
- CINDA with charged particle reactions

EndVer – Integrated Tools for ENDF-Evaluators. Version 1.0, June 2004. EndVer/GUI is an integrated software package for comparison of evaluated nuclear data files with experimental data from the EXFOR database and contains interactive plotting.

Developed by A. Trkov and V. Zerkin, NDS, IAEA, 2004.

In Memoriam

With great regret, we have learnt of the tragic death of Yurdanur Akovali (Oak Ridge National Laboratory, USA). Yurdanur was a member of the International Network of Nuclear Structure and Decay Data Evaluators for many years. Her many excellent works include more than 70 mass chains evaluations for ENSDF and Nuclear Data Sheets, and many theoretical studies undertaken in cooperation with experimentalists and published in reputable physics journals. Several reviews prepared by Yurdanur were the basis for the creation of the rules describing the various quantum decays. Extremely pleasant and

friendly, she helped us all at NDS in many ways, and we will miss her.

Coordinated Research Projects

IAEA Coordinated Research Projects (CRPs) are a valuable mechanism for stimulating research in IAEA Member States of relevance to Agency programmes. CRPs of the Nuclear Data Section, both active and recently completed and additional information can be found at:

www.iaea.org/programmes/ripc/nd/crps.htm.

Selected Reports and Documents

Chart of the Nuclides. *Wall chart of the Nuclides from KAPL and General Electric Co, 15th edition (revision to 1996).* Available cost free on request by users from developing countries.

Karlsruher Nuklidkarte. *Wall Chart of the Nuclides from Karlsruhe, 6th edition (1995).* Available cost free on request by users from developing countries.

Nuclear Wallet Cards for Radioactive Nuclides, March 2004, by J.K. Tuli, is available on request as hardcopy.

INDC(CCP)-439. *Atlas of Rotational Bands in Odd-Mass Nuclei,* T.V. Alenicheva, L.P. Kabina, I.A. Mitropolsky, T.M. Tyukavina. Data Center of the Petersburg Nuclear Physics Institute, Gatchina, Russia. July 2004.

This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(CCP)-440. *Articles translated for Journal Yadernye Konstanty (Nuclear Constants).* (Series: Nuclear Constants, Issue No. 1-2, 2003), September 2004. This report contains the full English version of Nuclear Constants journal and includes 4 papers translated from Russian:

-*Evaluation of the Resolved Resonance Region for ²³³Pa* by G.B. Morogovskij and L.A. Bakhanovich.

-*Modelling Reactor Kinetics using Different Sets of Delayed Neutron Data* by B.D. Abramov.

-Consistent Evaluation of Photoneutron Reaction Cross-Sections using Data obtained in Experiments with Quasi-monoenergetic Annihilation Photon Beams at Livermore (USA) and Saclay (France) by V.V. Varlamov et al..

-Interactive Information System on the Transmutation of Nuclides in Nuclear Reactors by V.I. Plvaskin et al..

This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(CPR)-060. *Communication of Nuclear Data Progress No. 29.* China Nuclear Data Center, December 2003. This report is available as hard copy on request.

INDC(JPN)-192. *Proceedings of the 2003 Symposium on Nuclear Data, November 27-28, 2003.* Prepared by Takaaki Ohsawa and Tokio Fukahori, Japan Atomic Energy Research Institute. April 2004. This report is available as hard copy on request.

INDC(JPN)-193. *Progress Report (January 2003 to December 2003).* Prepared by A. Ichihara, Japanese Nuclear Data Committee. March 2004. This report is available as hard copy on request.

INDC(NDS)-421 (Rev. 1). *Nuclear Structure and Decay Data (NSDD) Evaluator's Network.* Prepared by V.G. Pronyaev, A.L. Nichols and J. Tuli. IAEA Nuclear Data Section, Vienna, Austria and NNDC, Brookhaven National Laboratory, USA, March 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-450. IAEA Technical Meeting on "Technical Aspects of Atomic and Molecular Data Processing and Exchange". Prepared by D. Humbert, IAEA Headquarters, Vienna. March 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-455. *Report on the IAEA Nuclear Data Section to the International Nuclear Data Committee, January 2002 – December 2003.* Edited by A.L. Nichols, IAEA Nuclear Data Section, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-457. *Franck-Condon Factors, Transition Probabilities and Radiative Lifetimes for Hydrogen Molecules and their Isotopomers.* By U. Fantz, Universität Augsburg, Germany and D. Wuenderlich, Institut fuer Plasmaphysik, Garching, Germany, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-458. *2nd IAEA Research Coordination Meeting on "Data for Molecular Processes in Edge Plasmas" 12-14 May 2003.* IAEA Headquarters, Vienna, Austria. Summary report prepared by R.E.H. Clark, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-459. *2nd IAEA Research Coordination Meeting on "Atomic and Molecular Data for Fusion Plasma Diagnostics".* 16-18 June 2003, Vienna, Austria. Prepared by R.E.H. Clark, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-460. *IAEA Workshop on "Atomic and Molecular Data for Fusion in Energy Research", 8-12 September 2003, ICTP, Trieste, Italy.* Prepared by R.E. H. Clark, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

INDC(NDS)-461. *IAEA Technical Meeting: Assess and Coordinate Modelling Needs and Data Providers, 4-5 December 2003,* IAEA, Vienna, Austria. Prepared by R.E.H. Clark, May 2004. This report is available as hard copy or online at:

http://www-nds.iaea.org/indc_sel.html

RIKEN Accelerator Progress Report 2003, Vol. 37, 2004.

Produced by The Institute of Physical and Chemical Research, Japan. Available on CD Rom.

Yadernye Konstanty (Nuclear Constants), Issue No. 1, 2004. *Differential Cross Section of (p,n) Reactions for Isotopes Sn, Pb and Bi* by A.A. Ly-chagin et al.. *Evaluation of ²⁴⁴Cm Resolved Resonance Region* by G.B. Morogovsky and L.A. Bakhanovich. *The Measurement of Effective Reaction Cross Sections of ⁷Be Production by Interaction of Fast Neutrons with Light Nuclei in Electronuclear System* by V.S. Buttsev et al..

Analysis and Evaluation of Neutron Threshold Reaction Cross Sections for Radioactive Long-Lived Isotopes of Mean Atomic Mass Nuclei by A.I. Blokhin et al.. *Evaluation of ^{37}Ar Decay Data and Non-Neutron Radiation Characteristics* by V.P. Chechev.

This document is available as hard copy on request.

Note: Unless indicated otherwise, the quoted data files, printed materials, or computer codes are available cost free on request. When requesting data files or codes, kindly give us your desired specifications.

Co-operating nuclear data service centers

For services to customers in USA and Canada:

US National Nuclear Data Center, Bldg. 197D, Brookhaven National Laboratory, P.O. Box 5000, Upton, NY 11973-5000, USA. Tel. +1 631-344-2902; Fax +1 631-344-2806; E-mail: nndc@bnl.gov; Worldwide Web: <http://www.nndc.bnl.gov/> For information on online services and requests contact: Ms. V. McLane.

For services to customers in OECD countries in Western Europe and Japan:

NEA Data Bank: OECD Nuclear Energy Agency, Le Seine Saint-Germain, 12 blvd des Iles, F-92130 Issy-les-Moulineaux, France. Tel. +33 1 4524 (plus extension); Fax +33 1 45241110; E-mail: (name)@nea.fr or nea@nea.fr; Worldwide Web: <http://www.nea.fr> username: NEADB. Contact: C. Nordborg, ext. 1090.

For services to the countries of the former USSR:

Neutron data: Russia Nuclear Data Center, Centr Jadernykh Dannykh (CJD), Fiziko-Energeticheskij Institut, Ploschad Bondarenko, 249020 Obninsk, Kaluga Region, Russia. Tel. +7 08439-9-8982; Fax +7 095-230-2326; E-mail: manokhin@ippe.obninsk.ru. Worldwide Web <http://rncd.ippe.obninsk.ru/> Contact: V.N. Manokhin.

Charged-particle data: Russia Nuclear Structure and Reaction Data Center (CAJAD), Kurchatov Institute, Kurchatov's Square 1, 123 182 Moscow, Russia. Tel. +7 095-196-9968; Fax +7 095-882-5804; E-mail: feliks@polyn.kiae.su Contact: F.E. Chukreev.

Photonuclear data: Centre for Photonuclear Experiments Data, Centr Dannykh Fotoyadernykh Eksperimentov (CDFE), Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Leninskie Gory, 119 922 Moscow, Russia. Tel. +7 095-939-3483; Fax +7 095-939-0896; E-mail: varlamov@depni.sinp.msu.ru or varlamov@depni.npi.msu.su. Worldwide Web <http://depni.sinp.msu.ru/cdfe/> Contact: V.V. Varlamov.

For services to customers in China:

China Nuclear Data Center, China Institute of Atomic Energy, P.O. Box 275(41), Beijing 102413, China. Tel. +86 10-6935-7275; Fax +86 10-6935-7008; E-mail: gezg@iris.ciae.ac.cn Contact: Ge Zhigang.

Computer codes of US origin to all countries:

Radiation Safety Information Computational Center (RSICC), Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, TN 37831-6362, USA. Tel. +1 865-574-6176; Fax +1 865-574-6182; E-mail: pd@ornl.gov. Worldwide Web <http://epicws.epm.ornl.gov/> (there may be charges and release restrictions)

Computer codes of non-US origin to all countries:

NEA Data Bank, see above, contact: E. Sartori, ext. 1072; E-mail: sartori@nea.fr (there may be release restrictions)

The IAEA Nuclear Data Section offers data centre services primarily to non-OECD countries (except Russia and China, see above). However, most products advertised in this Newsletter, specifically INDC reports, IAEA-NDS-documents, etc., are provided, upon request to customers in all countries. For online services see the first page of this Newsletter. **Users of countries in Latin America and Caribbean** may use IAEA-NDS mirror at Worldwide Web <http://www-nds.ipen.br>

