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IAEA Nuclear Data Section (NDS)  
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Note: The quoted data, documents or codes are available costfree upon request (unless indicated otherwise).

#### New data libraries received

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JENDL-2, (Rev. 1), the 1984 version of the Japanese Evaluated Nuclear Data Library. It contains evaluations of cross-section data for 89 nuclides from hydrogen up to Cm-245 for incident neutrons from 0 to 20 MeV. The data are presented in ENDF/B-4 format. JENDL-2 (Rev. 1) supersedes both JENDL-1 and a preliminary version of JENDL-2 with 8 nuclides issued in 1982. Several fission-product nuclides that were included in JENDL-1 were omitted from JENDL-2 but are included in a separate JENDL library for fission-product cross-sections that was issued in 1977. For a summary of contents and documentation of JENDL-2 see the document IAEA-NDS-18 Rev. 2. A more extensive guidebook to JENDL-2 is expected to be published as a JAERI report.

EXFOR-V, the IAEA library for Various International Evaluated Neutron ("VIEN") data in EXFOR format. The contents of this collection are documented in IAEA-NDS-34 Rev. 2. Recent additions include

- neutron emission and photon production cross-sections induced by 14.5 MeV neutrons on molybdenum isotopes, by Herman and Marcinkowski, Poland;
- neutron capture, fission,  $\nu$ -bar, (n,2n) and scattering cross-section evaluations for several actinide isotopes in the keV and MeV range by Chinese authors between 1977 and 1982.

Atomic Mass Table by A.H. Wapstra, 1984 version. This new version of the table of atomic masses supersedes earlier versions published in Atomic Data and Nuclear Data Tables. Available on magnetic tape or as a printed listing.

ENDF/B-5: Revised versions have been received of the following subfiles.

- Dosimetry reactions: Significant revisions made.
- Gas production reactions: Revised evaluation for Li-7.
- Fission-product data: Revised decay data for some nuclei.

- Activation cross-sections: Revised decay data for some materials, three new materials added, several miscellaneous corrections.
- Actinides: New evaluations for Cm-242 and Bk-249, revised decay data for some materials.

The revised files are available upon request. The magnetic tapes are accompanied by "IAEA-NDS-documents" summarizing the changes made compared to the earlier version of ENDF/B-5.

#### ENDF/B data processing

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 The following reports of the Brazilian Nuclear Data Centre in Sao José dos Campos have been received in Portuguese language. If there is sufficient interest, they could be translated into English. Therefore, if you wish to receive a copy, write us and indicate whether a copy of the Portuguese original will be satisfactory or whether you require an English translation.

- IEAV/NT-007/83. R. Paviotti Corcuera, about the treatment of ENDF/B covariance data to obtain multigroup covariances.
- IEAV/NT-013/84. Shizuca Ono, R. Paviotti Corcuera, about the calculation of lumped fission-product cross-sections from ENDF/B-V data to obtain multigroup data with the code NJOY.
- IEAV/NT-014/84. Ezzat Selim Chalhoub, R. Paviotti Corcuera, about a 70-group library "AMZ" produced from ENDF/B-IV data with NJOY and comparisons with CSEWG benchmark critical assemblies.

#### Nuclear Data Handbooks

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Recommended Heavy Element Radionuclide Decay Data: Half-lives, alpha spectra gamma-ray spectra, Dec. 1983 edition, A. Lorenz (ed.), INDC(NDS)-149, costfree.

Nuclear Theory for Applications, proceedings of the course on advances in nuclear theory and nuclear data for reactor applications, Trieste, 25 Jan. - 19 Feb, 1982. Report IAEA-SMR-93 (1984), 340 pages, costfree. Also available are the earlier proceedings under the same title,

- from the 1978 course: IAEA-SMR-43
- from the 1980 course: IAEA-SMR-68

Chart of Nuclides. The 13th edition (revised to July 1983) of the US Chart of Nuclides by F.W. Walker et al. (Knolls Atomic Power Lab.) has been issued. It displays for all known nuclides values such as spin, parity, half-lives and decay properties for ground and metastable states, thermal neutron capture cross-sections and resonance-integrals, isotopic mass and other data. Also included are yields of fission products and transuranium isotopes for thermal reactors. - The Wall Chart with an Information Booklet (or desk copy version) is available from General Electric Company, 175 Curtner Ave, Mail Code 684, San José, California, USA-85125 at a price of US\$8.- (Not available from IAEA Nuclear Data Section.)

#### Data indexes and Bibliographies

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Neutron Nuclear Data: CINDA. The complete set of CINDA books consists now of

- CINDA-A, covering literature up to 1976, published 1979, 2 volumes, sales price 1050 Austrian Schillings.
- CINDA-B, covering literature for 1977 to 1981, published 1984, sales price 700 AS.

- CINDA 84, covering literature from 1982 to 1984, published in May 1984, with a Supplement published in Nov. 1984, sales price 440 AS.

As in the case of other IAEA publications, CINDA can be ordered at half the price through the Permanent Mission of your country to the IAEA in Vienna. A very limited number of copies is available free of charge to scientists in developing countries. In addition to the published CINDA books, up-to-date selective computer retrievals from the CINDA file, or tape copies of the entire file can be sent, costfree, upon request. Note that the CINDA computer file may contain corrections to CINDA-A and CINDA-B. It also includes references of secondary importance (e.g. old progress reports) that are not included in the books.

Charged Particle Nuclear Data: From 1977 to 1981 the USA National Nuclear Data Center (NNDC) had published a bibliography under the report code BNL-NCS-50640, which was then discontinued. It is now published again in a revised format as BNL-NCS-51771, First edition, April 1984. Due to the courtesy of NNDC, costfree copies are available upon request. The new Charged Particle Nuclear Data Bibliography includes, as before, cross-sections and thick-target yields (but excluding angular distributions, energy spectra, polarization data) plus some related quantities such as fission yields or isomeric ratios. It does no longer include cross-references to data compiled in EXFOR. (EXFOR retrievals are available from NDS upon request.)

Photonuclear Data: The Photonuclear Data Center in Moscow, USSR, continues to publish annual indexes to the literature on photonuclear data. The last issue received is No. 6 (literature of 1982, publ. in 1983). Furthermore, a second series under the same title "Fotojadernye Dannye/Photonuclear Data" was started containing data reviews on selected topics of which the first is "Fission of heavy nuclei" containing theory and nuclear data tables. The text is in Russian and in English. Due to the courtesy of the USSR Center, costfree copies are available upon request.

A Brief Index of Nuclear Data Libraries held at the IAEA Nuclear Data Section is available as document IAEA-NDS-7 Rev. 84/11. More detailed documentations exist for each of the data libraries; please contact us for more specific information.

Selected new publications of interest

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- \*\* = document available costfree from IAEA/NDS upon request
  - \* = limited number of copies available costfree from IAEA/NDS upon request
  - = available from the originator, or from the INIS Microfiche Service (IAEA, P.O. Box 100, A-1400 Vienna, Austria)
  - o = to be purchased from publisher
- BNL-51778. Proceedings of the NEANDC Specialists Meeting on Yields and Decay Data of Fission Product Nuclides, held at Brookhaven National Laboratory, USA, 24 - 27 Oct. 1983, R.E. Chrien, T.W. Burrows editors.
  - \*\* INDC(NDS)-152. Nuclear Data for Structural Materials. Proceedings of a Consultants' Meeting, Vienna, 2-4 Nov. 1983, edited by D.E. Cullen.
  - \*\* INDC(NDS)-155. Progress in Fission Product Nuclear Data, No. 10, Sept. 1984. M. Lammer, editor. Also available: No. 9, Aug. 1983.
  - \*\* INDC(NDS)-153. M. Allab, A Survey of Neutron Energy Spectra and Angular Distributions of the Be-9(p,n)B-9 Reaction for Fast Neutron Radiotherapy.

- \*\* INDC(CCP)-215. G.V. Ancipov, V.A. Konshin, E.Sh. Sukhovickij, Neutron Nuclear Data for Pu-240. Note: The data in ENDF/B format are available as INDL/A-9431 Rev. 2.
- \*\* INDC(CCP)-220. O.T. Grudzevich et al., Radiative Capture Cross-Sections of U-236 for 150 keV - 1.1 MeV Neutrons.
- \*\* INDC(CCP)-223. O.A. Salnikov, Inelastic Scattering of Neutrons (Review).
- ANL/NDM-84. W.P. Poenitz, J.W. Meadows, U-235 and Pu-239 Sample-Mass Determinations and Intercomparisons.
- \*\* INDC(YUG)-9. A Trkov et al., FEDGROUP-C 84, an improved and modified CDC version of the programme package for processing evaluated nuclear data in KEDAK, UKNDL and ENDF/B format. The programme package itself is available from the NEA Data Bank.
- \*\* EGG-PHYS-5735. R.G. Helmer, Precise Efficiency Calibration of Ge Semiconductor Detectors for 30 - 2800 keV Gamma-rays.
- \* UCRL-52559 (1978). R.S. Devoto, J.D. Hanson, SIGV - a code to evaluate plasma reaction rates to a specified accuracy. Report with attached microfiche.
- \*\* INDC(SEC)-90 (Aug. 1984). New index to all INDC documents, plus a list of other nuclear data documents recently received. (All documents listed are available free of charge.)
- \*\* INDC(SEC)-89 (July 1984). INDC correspondents. (Names and addresses of nuclear data scientists that are on the distribution lists of INDC documents.)

Nuclear Geophysics: A new distribution list for INDC documents about geophysics applications of nuclear data is being prepared. Let us know whether you and/or one of your colleagues wish to be placed on this distribution. First reports in this series are:

- \*\* INDC(NDS)-151. K. Okamoto (ed.), Proceedings of the IAEA Consultants' Meeting on Nuclear Data for Bore-hole and Bulk-media Assay Using Nuclear Techniques, Krakow, Poland, 14-18 Nov. 1983.
- \*\* INDC(NDS)-162. K. Przewlocki, W.R. Mills, W.W. Givens, High Resolution Gamma-Ray Spectroscopy for Well Logging, (Nov. 1984).

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