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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). - When requesting data on magnetic tape, kindly specify the acceptable density (800, 1600 or 6250 bpi), maximum block size, and if the data should be in EBCDIC or ASCII code. Tapes will be 9 track tapes. Not too large data files or computer codes can also be sent on IBM PC (Personal Computer) standard (DOS formatted) diskettes: 5.25 inch 2HC (double sided, high capacity) at 1.2 Mbytes per diskette. No other type of computer readable media can be provided at present.

New data libraries received

ENDF/E-6 Standards, a file in ENDF-6 format containing new recommended standard reference data for the following reactions: H-1(n,n) integral and differential, He-3(n,p), Li-6(n,t), B-10(n, α), C(n,n) integral and differential, Au-197(n, γ), U-235(n,f). A second file contains cross-section uncertainties and recommended values for the 2200 m/s neutron cross-sections of U-233, 235, Pu-239, 241, and nu-bar of Cf-252.

Cf-252 Neutron Spectrum, a new evaluation of the californium-252 spontaneous fission neutron spectrum, by W. Mannhart, PTB Braunschweig, FRG. ENDF similar format. Two files: a) pointwise for logarithmic resp. linear interpolation, b) data in 70 energy steps together with a covariance matrix. Documented in IAEA-NDS-98. The International Nuclear Data Committee recommended to use this evaluation, for the time being, as international reference standard.

Chinese Evaluated Fission-Product Yield Library, preliminary version of 1987, by Wang Dao and Zhang Dongming, ENDF-5 format. Ten fissioning systems of Th-232, U-233, 235, 238, Pu-239, 241. Documented in IAEA-NDS-91.

DROSG-87 Charged-particle induced neutron source reactions, evaluated data for angular dependences of neutron energies and cross-sections, by M. Drosch, Vienna, Austria. Documented in IAEA-NDS-87. Data available on magnetic tape or on floppy diskettes.

RSIC Photon Interaction Library of 1983, evaluated in ENDF-5 format for the ENDF/B-5 library. Contains pair and triplet cross-sections, photoelectric cross-sections, atom form factors, coherent scattering cross-sections, etc, for elements 1-100. Documented in IAEA-NDS-58 Rev. 1, same as ORNL/RSIC-46 by R.W. Roussin, J.R. Knight, J.H. Hubbell, R.J. Howerton, Dec. 1983.

DAMSIG84. Radiation damage cross-section library in a SAND-2 type 640 group structure, by W.L. Zijp et al., documented in ECN-159 (Oct. 1984).

DOSCROS84. Activation cross-section library for dosimetry by foil activation, by W.L. Zijp et al., documented in ECN-160 (Oct. 1984).

Nuclear data processing computer codes

ENDF-6 Formats Manual. A first version, still incomplete, is available as IAEA-NDS-76.

Program PLOTTAB. (D.E. Cullen) General plotting program. On magnetic tape with document IAEA-NDS-82, or on a floppy diskette with document IAEA-NDS-83.

LINTAB, HEATER and PLOTTAB code package for model parameters and cross-section data. (D.E. Cullen and J.J. Smith). On magnetic tape with document IAEA-NDS-84, or on a set of floppy diskettes with document IAEA-NDS-85.

Handbooks

Nuclear and Atomic Data for Radiotherapy and Related Radiobiology. Proceedings of an IAEA meeting, Rijswijk, Netherlands, 16-20 Sept. 1985. IAEA, 1987. K. Okamoto (ed.). Contains 27 papers and 3 working group reports covering topics such as physical basis of biological radiation effects, beam production, dosimetry, interactions of neutrons, pions, charged particles, and others. - Available for 950.- Austrian Schillings from the IAEA Division of Publications, Box 100, A-1400 Vienna, Austria. (Compare the note in Nucl. Data Newsletter No. 10 how to buy priced IAEA publications.)

Properties of Neutron Sources, IAEA-TECDOC-410. Proceedings of an IAEA meeting on Properties of Neutron Sources, Leningrad, USSR, 9-13 June 1986. Includes chapters on pulsed white neutron sources, fast neutron fields, Cf-252, monoenergetic sources, filtered beams, 14 MeV neutron sources, medical applications, and others. Available costfree upon request.

Applications in Nuclear Data and Reactor Physics. D.E. Cullen, R. Muranaka, J.J. Schmidt (ed.). Proceedings of a workshop held at the International Centre for Theoretical Physics, Trieste, Italy, 17.2.-21.3. 1986, in co-operation with the IAEA Nuclear Data Section. Contains 26 lectures on reactor physics and related computer codes. Published by World Scientific Publishing Co., P.O. Box 128, Farrer Road, Singapore, 994 pages, 1986. Not available from IAEA.

Nuclear Standard Reference Data, IAEA-TECDOC-335 (1985), as advertised in Nucl. Data Newsletter No. 9. Some copies are still available, costfree.

Photodisintegration of Lithium, evaluated cross-sections. V.V. Varlamov et al., Photonuclear Data Centre Moscow, USSR, series Fotojadernye Dannye - Photonuclear Data, 1986, in Russian and English. It contains tabular and graphical evaluated data based on the atlas of cross-sections published in the same report-series in 1984. - Limited number of copies available free of charge.

Review of ($\gamma, X\gamma'$) reactions. V.V. Varlamov et al., same series as the preceding quotation, 1985.

Data indexes and bibliographies

CINDA-87. The bibliography and data index for microscopic neutron data, available for 840.- Austrian Schillings, including a supplement to be published in November. It covers the period 1982-1987. See also CINDA A (1935-1976) and CINDA-B (1977-1981). (Compare the note in Nucl. Data Newsletter No. 10 how to buy priced IAEA publications.)

Index of Neutron-Induced Gamma-Production Data included in ENDF formatted libraries available from the IAEA Nuclear Data Section. O. Schwerer, H.D. Lemmel. INDC(NDS)-189. Costfree.

Integral Charged Particle Nuclear Data Bibliography, BNL-NCS-51771, first edition, suppl. 3 (April 1987) for literature from April 1986 to March 1987, by N.E. Holden et al., Brookhaven National Laboratory, USA. Costfree.

IAEA-NDS-7 (Rev. 87/11): Index of data libraries available on magnetic tape from the IAEA Nuclear Data Section. H.D. Lemmel (ed.).

IAEA-NDS-0 (Rev. 87/11): Index to the IAEA-NDS-Documentation Series. H.D. Lemmel (ed.).

List of documents received by the INDC Secretariat, INDC(SEC)-94.

INDC List of nuclear data correspondents and national nuclear data committees. INDC(SEC)-93.

Selected new publications of interest

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** = document available costfree from IAEA/NDS upon request
* = few 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

** INDC(NDS)-188. A. Lorenz, J.J. Schmidt: Nuclear Data - Serving basic needs of science and technology.

* ZfK-562. Proceedings of the 14th International Symposium, Gaussig, GDR, 19-23 Nov. 1984, on the Interaction of Fast Neutrons with Nuclei, Neutron Generators and Application. D. Seeliger, U. Jahn (ed.).

* ZfK-592. Proceedings of the 15th International Symposium, Gaussig, GDR, 11-15 Nov. 1985, on Nuclear Physics and Nuclear Fission. D. Seeliger, K. Seidel, H. Märten (ed.).

** INDC(NDS)-195. Proceedings of the IAEA meeting on Data Requirements for Medical Radioisotope Production, Tokyo, 20-24 April 1987. K. Okamoto (ed.). Contains all papers, a summary and recommendations of three working groups on experimental data, data calculation and computer files, data compilation.

** INDC(NDS)-192. Covariance methods and practices in the field of nuclear data. Proceedings of a meeting under this topic, Rome, Italy, 17-19 Nov. 1986. V. Piksaikin, editor. Contains review papers and recommendations about treatment of covariances in evaluated nuclear data files, with emphasis on dosimetry, neutron spectra, actinide cross-sections, fission-product yield data, and others.

- ** INDC(NDS)-198. L. Greenwood et al., Summary of the IAEA meeting on Analysis of the REAL-84 Intercomparison Exercise on spectrum unfolding in dosimetry by foil activation, 27-29 May 1987, Jackson Hole, USA.
- ** INDC(NDS)-190. E.M. Zsolnay et al. Proceedings of the IAEA meeting on the Assessment of the Results of the REAL-84 Exercise, 8-10 Sept. 1986, Budapest, Hungary.
- * JAERI-M-87-025. T. Nakagawa et al. Proceedings of the Seminar on Nuclear data, 26-27 Nov. 1986, Tokai-mura, Japan.
- ** BROND - Biblioteka rekomendovannykh ocenennykh nejtronnykh dannyykh - Library of recommended evaluated neutron data. V.N. Manokhin, Obninsk, 1986. In Russian. English translation by IAEA as IAEA-NDS-90.
- ** INDC(BZL)-22. R. Paviotti Corcuera, Marisa de Moraes. Validation and benchmark testing of actinide nuclear data.
- ** INDC(NDS)-191. M. Lanmer. Progress in fission-product nuclear data, issue no. 12.
- ** INDC(GDR)-47 and -48. G. Pausch et al. Determination of fission fragment counting losses from the fission chamber spectrum. Part 1: Idealized plane targets; Part 2: Scratched targets.
- ** INDC(NDS)-194. M. Märten, R. Böttger et al. The Cf-252 spontaneous fission neutron spectrum in the 5-20 MeV range.
- * INDC(FR)-67. J. Fréhaut. Coherent evaluation of nu-bar prompt for U-235, U-238 and Pu-239.
- * CEA-N-2500. Progress report 1985 of the Centre d'Etudes de Bruyères-le-Châtel. In French.
- ** INDC(BUL)-12. N.B. Janeva et al. Research on neutron resonance parameters of fissile nuclei.
- ** INDC(CCP)-265. I.M. Bondarenko. Evaluation of Li-6 and Li-7 neutron interaction cross-sections for calculating Kerma factors.
- ** INDC(CCP)-266. V.A. Zagryadskij et al. The total absorption method in measurements of 14 MeV neutron multiplication factors.
- ** INDC(CCP)-272. V.A. Zagryadskij et al. Measurement of neutron leakage from U-238, Th-232 and Be spherical assemblies with a central 14 MeV source.
- ** INDC(IND)-38. H.M. Jain et al. Neutron radiative capture cross-section of Th-232 in the energy range 0.1 to 1.2 MeV.
- ** INDC(GDR)-44. T. Elfruth et al. Differential neutron emission cross-sections from lead and carbon bombarded with 14 MeV neutrons.
- ** INDC(CCP)-264. V.M. Novikov et al. Measurement of 14 MeV multiplication factor in spherical lead and bismuth assemblies by the total absorption method.
- ** INDC(CSR)-11. S. Hlavác et al. Discrete gamma-ray production cross-sections and angular distributions in Cr-52(n,xγ) at 14.6 MeV.

Nuclear Geophysics

The papers presented at an IAEA meeting on Nuclear Data for Applied Nuclear Geophysics, Vienna, 7-9 April 1986, have been published in a special issue of the journal "Nuclear Geophysics" vol. 1 No. 3 1987. Some reprints are available costfree from the IAEA Nuclear Data Section (same as INDC(NDS)-184).

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