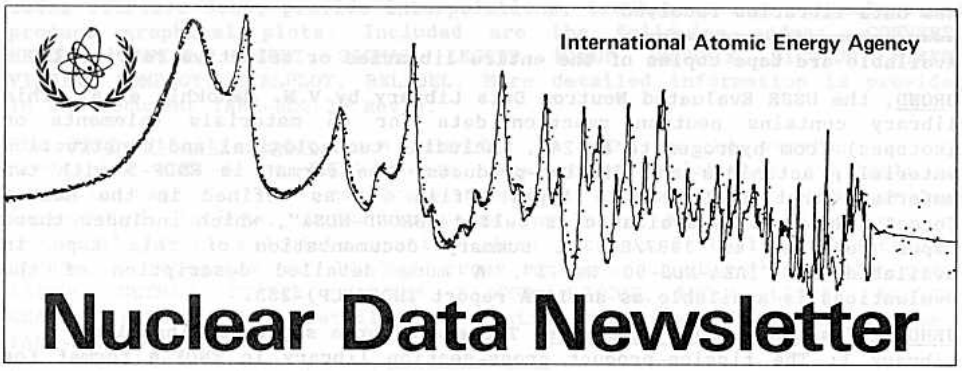

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Note: Unless indicated otherwise, the quoted data, documents or codes are available costfree upon request. – When requesting data on magnetic tape, kindly specify the acceptable density (800, 1600 or 6250 bpi), maximum block size, and whether the data should be in EBCDIC or ASCII code. Only 9 track tapes are used. Not too large data files or computer codes can also be sent on DOS standard diskettes (either 5.25 inch, 1.2 Mb or 3.5 inch, 1.44 Mb).

Data indexes and bibliographies

CINDA-89. The bibliography and data index for microscopic neutron data. In print. The sales price will be around 1100,- AS. (How to buy IAEA publications at reduced price, see Nuclear Data Newsletter No. 10).

Important note: This is the last issue of CINDA to be published in book form. Compilation into the CINDA file, however, will continue, and up-to-date CINDA information can be obtained as a computer retrieval for specified parameters. When you request such a computer retrieval, kindly specify the parameters carefully, including nuclei, range of incident neutron energy, quantities, range of publication dates, etc. Such computer retrievals are costfree.

Integral Charged-Particle Nuclear Data Bibliography, BNL-NCS-51771 first ed., suppl. 4, Dec. 1988, for literature scanned from April 1987 to Nov. 1988, by N. Holden and S. Ramavataram, Brookhaven National Laboratory. Costfree.

Fotojadernye Dannye – Photonuclear Data, a bibliography with abstracts in Russian and English, issues 10 and 11 covering the literature of 1986 and 1987. Costfree. (Also some copies of earlier issues are still available!).

IAEA-NDS-7 (Rev. 89/5): Index of data libraries available on magnetic tape from the IAEA Nuclear Data Section. H.D. Lemmel (ed.).
IAEA-NDS-0 (Rev. 89/5): Index to the IAEA-NDS-Documentation Series.

New data libraries received

Available are tape copies of the entire libraries or selective retrievals.

BROND, the USSR Evaluated Neutron Data Library by V.N. Manokhin et al. This library contains neutron reaction data for 65 materials (elements or isotopes) from hydrogen to Am-243, including technological and construction materials, actinides and fission-products. The format is ENDF-5 with two materials that include data types ("file 6") as defined in the ENDF-6 format. The version available is called "BROND-NDS1", which includes three tapes received in 1987/88. A summary documentation of this tape is available as "IAEA-NDS-90 Rev.1". A more detailed description of the evaluations is available as an IAEA report INDC(CCP)-283.

JENDL-2 fission product libraries. There are three separate libraries.
Library 1: The fission-product cross-section library in ENDF-4 format for 100 fission-product nuclides from 36-Kr-83 to 65-Tb-159, giving for each nuclide resonance-parameters, neutron cross-sections, angular distributions, and energy distributions of inelastic neutrons; in addition to the original version this library is also available in a "RESENDD output" version where resonance parameters have been converted to pointwise cross-section data;
Library 2: the JNDC fission-product decay-data library;
Library 3: the JNDC fission-product decay and yield data library, containing a subset of the decay-data of Library 2, cumulative yield data, and independent yield data for 10 fissioning systems.

Thermal neutron capture gamma-rays for analytical prompt gamma-ray spectroscopy. On this topic we have two data libraries on magnetic tape, one by M.A. Lone, Chalk River, Canada, originally published in Atomic Data and Nuclear Data Tables vol. 26 (1981), the other by J.K. Tuli, Brookhaven, USA, originally published in the report BNL-NCS-51647(1983). In both cases the data libraries on tape contain more data or more up-to-date data than were included in the publication. Lone's file gives gamma rays for all elements in the energy range from 23 to 10829 KeV, in terms of gamma rays emitted per 100 neutron radiative captures. Tuli's file gives gamma rays for isotopes heavier than A=44, in the energy range from 0.1 to 11447 keV, with emission probabilities expressed in percent of the strongest gamma-ray of the same isotope.

ECPL-86, the evaluated charged-particle reaction data library from the Lawrence Livermore National Laboratory, USA is available in "ENDL Transmittal Format". It contains evaluated data for selected reactions for nuclides from 1-H-1 to 8-O-16 for incident particles p, d, t, He3, α.

A compilation of nuclear reaction data for light isotope charged-particle reactions (Z<6), by R. Feldbacher, Technical University Graz. The data file on magnetic tape is documented in the report INDC(AUS)-12.

ENDF data processing codes

The ENDF-6 Formats Manual by P.F. Rose and C.L. Dunford, US National Nuclear Data Center (NNDC) Brookhaven, is available in its May 1988 version as document IAEA-NDS-76. (Note that Formats Manuals for ENDF-5 and ENDF-4 are available as well. Whereas new evaluated nuclear data files are recommended to be issued in the ENDF-6 format, data libraries in the earlier formats ENDF-4 and -5 will remain in use).

The ENDF Pre-Processing Codes by D.E. Cullen have been amended and the 1989 version is now available in two versions: either on magnetic tape for the mainframe computer, or as a set of 1.2 Mbyte diskettes for an AT-compatible personal computer. This set of codes is needed for the handling of ENDF data in any version, i.e. ENDF-4, -5, or -6. Among other functions, these

codes retrieve data, provide interpolations, treat resonance-parameters, or produce graphical plots. Included are the following codes: CONVERT, MERGER, LINEAR, RECENT, SIGMA1, LEGEND, FIXUP, GROUPIE, DICTION, MIXER, VIRGIN, COMPLOT, EVALPLOT, RELABEL. More detailed information is provided in the document IAEA-NDS-39 Rev.4.

The ENDF Utility Codes were provided by NNDC in the version 6.4 for processing ENDF-6 or ENDF-5 data. The codes, which are available on magnetic tape for the mainframe computer, retrieve ENDF data, produce interpreted listings, check format and physics of the data files, produce graphical plots, calculate specific data such as thermal cross-sections, resonance integrals or 14 MeV cross-sections. Included are the codes SETMDC, GETMAT, STANEF, CHECKER, FIZCON, PSYCHE, INTER, LISTEF, PLOTEF, GRALIB, VERSAT. More detailed information is provided in the document IAEA-NDS-29 Rev.2.

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
o = to be purchased from publisher

o Proceedings of the International Conference on "Nuclear Data for Science and Technology", 30 May - 3 June 1988, Mito, Japan. Editor S. Igarasi, Japan Atomic Energy Research Institute.

* ZFK-646. Proceedings of the 17th International Symposium on Nuclear Physics. 3 sections: 1. Nuclear reactions, 2. Nuclear fission, 3. Nuclear structure. Gaussig, GDR, 9-13 Nov. 1987. D. Seeliger and H. Kalka (ed.).

* ECN-212. Final report on the "REAL-84 exercise" on reactor neutron spectrum metrology and radiation damage predictions. W.L. Zijp et al.

** IAEA-TECDOC-491. Nuclear data for the calculation of thermal reactor reactivity coefficients. Proceedings of an IAEA meeting, Viennna, 7-10 Dec. 1987. H.D. Lemmel (ed.).

** INDC(CCP)-295. Evaluated nuclear constants for uranium-236. English translation of a Russian original. A.B. Klepatskij, V.A. Konshin et al.

** INDC(CCP)-296. Evaluated neutron data for plutonium-238. English translation of a Russian original. A.B. Klepatskij et al.

** INDC(BZL)-29. Validation of actinide nuclear data from ENDF/B-5, INDL/A-83 and JENDL-2. R. Paviotti-Corcuera, M. de Moraes.

* JAERI-M-89-008, Evaluation of nuclear data for americium isotopes. T. Nakajawa.

* JAERI-M-88-004. Evaluation of neutron nuclear data for Cf-252 and Bk-250. T. Nakajawa.

** INDC(ROM)-19. S. Mateescu: Cross-section evaluation of transactinides having odd mass numbers in thermal and resonance energy ranges.

* INDC(FR)-67. Coherent evaluation of prompt nu-bar for U-235, U-238, and Pu-239. J. Fréhaut.

** INDC(BZL)-22. Validation and benchmark testing of actinide nuclear data. R. Paviotti-Corcuera and M. de Moraes.

** INDC(BZL)-25. Graphical representation of some evaluated neutron cross-sections from INDL/A-83. M. de Moraes, R. Paviotti-Corcuera.

** INDC(BZL)-28. Intercomparison of integral data derived from evaluated data libraries of the actinides. R. Paviotti-Corcuera, A. Trkov.

** INDC(YUG)-11. Comparison of evaluations for U-235, Pu-239, Pu-240, Pu-241 and Pu-242 with integral measurements. A. Trkov.

** INDC(NDS)-208. Fission yield evaluation. Summary report of an IAEA Meeting, Studsvik, Sweden, 11-15 Sept. 1987. M. Lammer (ed.).

** INDC(NDS)-191. Progress in fission-product nuclear data, issue no. 12 (1988). M. Lammer (ed.).

** INDC(NDS)-193. Methods for the calculation of neutron nuclear data for structural materials. Proceedings of an IAEA meeting, Bologna, Italy, 7-10 Oct. 1986. V. Goulo (ed.).

** INDC(NDS)-214. Methods for the calculation of fast-neutron nuclear data for structural materials of fast and fusion reactors. Papers presented at an IAEA meeting, Vienna, 15-17 Feb. 1988. V. Goulo (ed.).

** INDC(ROM)-20. Pre-equilibrium emission and nuclear level densities in neutron-induced reactions of Fe, Cr and Ni isotopes. M. Ivascu et al.

** INDC(HUN)-25. An analysis of the AL-27(n,t) Mg-25 excitation function. A.V. Ignatjuk, K. Mihaly, O.T. Grudzevich, Z.T. Boedy.

** INDC(IND)-41. Binary and tertiary neutron-induced reaction cross-sections of chromium and iron. S.B. Garg.

* ORNL/TM-10984. Designing a nuclear data base prototype using Oracle and Prolog. R. Paviotti-Corcuera et al.

* Computer Program Abstracts: Nuclear model computer codes. E. Sartori, NEA Data Bank, 1988.

** INDC(CPR)-12. Su Zong Di, P.E. Hodgson: Comparison between the Chinese unified program MUP2 and international nuclear model programs.

* ECN-194. W.L. Zijp: Treatment of measurement uncertainties.

** INDC(CPR)-11. Nuclear data research in the People's Republic of China. Contributed papers at a topical meeting of the International Nuclear Data Committee, Beijing, 19-23 Oct. 1987.

** INDC(NDS)-203. Nuclear data for neutron therapy. K. Okamoto (ed.).

** INDC(NDS)-195. Data requirements for medical radioisotope production. Proceedings of an IAEA meeting Tokyo, Japan, 20-24 April 1987. K. Okamoto (ed.).

** INDC(NDS)-213. Influence of target and sample properties on nuclear data measurements. Summary report of an IAEA meeting, Darmstadt, F.R. of Germany, 5-9 Sept. 1988. K. Okamoto (ed.).

** INDC(NDS)-200. Influence of target and sample properties on nuclear data measurements. Summary report of an IAEA meeting, Geel, Belgium, 21-24 Sept. 1987. K. Okamoto (ed.).

Award

Dr. Syed M. Qaim of the Chemistry Institute of the Nuclear Research Laboratory Jülich, FRG, well-known particularly for the introduction of radiochemistry methods in nuclear cross-section measurements, has been awarded by the Hungarian Physical Society with the "Roland Eötvös Medal" and a Honorary Fellowship, which is limited to a small number of foreign scientists.

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