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INTRODUCTION TO THE FIRST ISSUE

The main function of the IAEA Nuclear Data Section (NDS) is to serve as an international data centre for nuclear and atomic data required for the development of nuclear science and technology for peaceful purposes. The centre coordinates the production and compilation of needed nuclear and atomic data, and distributes these data on a costfree basis to the Agency's Member States, particularly to developing countries.

This Nuclear Data Newsletter has been created to improve the flow of nuclear data information from the IAEA nuclear data center to the continuously increasing number of its customers. This Newsletter is planned to be issued as required at irregular intervals.

Until recently, NDS has advertised the availability of nuclear data files through the CINDU catalogue (see CINDU-11, distributed in March 1976, and its Supplement distributed in April 1977). The function of the CINDU catalogue was to describe the contents and formats of nuclear data files available from NDS. With the ceasing of the CINDU publication, its function will be assumed by a new report series entitled "IAEA Nuclear Data Services" (IAEA-NDS-...). Each of these reports will contain the format and content description of a nuclear file available from the IAEA Nuclear Data Section, and will be announced in the Nuclear Data Newsletter. Thus all nuclear data files available from NDS will be documented in the IAEA-NDS report series, which will be available on request from the Nuclear Data Section.

In addition the Newsletter will contain news on CINDA, EXFOR, and the status of existing and new nuclear data files and libraries, as well as titles of new nuclear data reports published or received by the Nuclear Data Section.

New Mailing Address

As of 8 October 1979 our mailing address will be

Nuclear Data Section  
International Atomic Energy Agency  
P. O. Box 100  
A-1400 Vienna, Austria

During our move in the month of October our activities will be interrupted. We wish to apologize for delays.

### CINDA

A thoroughly revised and completed cumulative issue of CINDA has appeared in June 1979. It consists of two parts:

CINDA-A, consisting of two volumes comprising 2000 pages, covers the years 1935 to 1976. The price is 1050.- Austrian Schillings.

CINDA-79 comprising 400 pages covers the period of 1977 to 1979. A Supplement will be published in December 1979. The cost of these two volumes will be 350.- Austrian Schillings.

As in the case of other priced Agency publications, CINDA can be ordered at a reduced price through the Permanent Mission of your country to the IAEA in Vienna.

CINDA is a bibliography to neutron nuclear data and serves at the same time as an index to the EXFOR neutron data library.

In addition to the published books up-to-date selective computer retrievals from the CINDA file are available upon request.

### EXFOR

EXFOR is the agreed exchange format for the magnetic tape exchange of experimental nuclear reaction data between national and international nuclear data centers. The EXFOR computer library, which comprises several million data records, contains:

- neutron nuclear reaction data: this part of the library has reached a high degree of completeness, and accession-numbers of the data sets are indexed in CINDA.
- charged-particle nuclear reaction data: for integral cross-sections  $\sigma(E)$  and thick-target yields the contents of the library is growing at a fast pace. The bibliography and data-index are contained in the U.S. report ENL-NCS-50640, 3rd ed., 1979.
- photonuclear reaction data: this part of the library is in a starting phase; however, a number of photoneutron data are already available.

### ENDF/B

The following parts of ENDF/B-5 (1979) are available:

- 7 Standards (H-1, He-3, Li-6, B-10, C-12, Au-197, U-235)
- Actinides (see report IAEA-NDS-13)
- Fission-products (documentation in preparation)
- Dosimetry reactions (expected soon)

Other parts of ENDF/B-5 will not be available, but the entire ENDF/B-4 library has been received and is available on request.

The 7 Standards are also available in ENDF/C format. This is a revision of ENDF/B to facilitate the inclusion of evaluated charged-particle nuclear data.

Other ENDF/B formatted libraries received since the last issue of CINDU:

ENDL-78: The 1978 version of this Livermore Evaluated Nuclear Data Library containing neutron cross-sections for 95 nuclides. Documentation see: UCRL-50400 Vol. 15. The format of the library is identical with ENDF/B except that cross-sections are given as point data and not in the form of resonance-parameters.

The contents is summarized in report IAEA-NDS-11.

JENDL-1: Japanese Evaluated Nuclear Data Library containing neutron cross-sections for 72 nuclides.

Japanese Fission Product Library: Further to the 28 nuclides listed in Suppl. 1 to CINDU-11, a tape with neutron cross-section evaluations for another 34 nuclides has been received. For documentation see J. Nucl. Sci. Technology 14 (3) 161 (1977).

Bologna Neutron Data Library for Fission Products: Under the title "CNEN-CEA Preliminary Evaluation, 1977" a tape containing evaluations for 63 fission product nuclei in ENDF/B format has been received. The term "preliminary" can be ignored, as this library is still valid.

Blachot's Library of Fission Product Data: this contains data for 699 nuclides ranging from Zn to Tm. The main data are half-lives, Q-values, branching ratios, energies and intensities of transitions. Reference: CEA-report to be published 1979. Compare Harwell Conference on Neutron Physics and Nuclear Data September 1978, Proceedings page 215.

French evaluations: Complete evaluation of C-12, Mat. no. 274. Documentation: J. Lachkar et al., NEANDC(E) 168 'L'.

INDL/A: In the frame of an IAEA coordinated research project on the "Intercomparison of Evaluations of Actinide Neutron Nuclear Data" an IAEA Nuclear Data Library for Actinides (INDL/A) has been started presently containing 10 evaluations. See report IAEA-NDS-12.

Libraries in other formats

RCN-2 Fission-Product Cross Section Evaluation: Contains data for 35 materials in KEDAK-format. Documentation (contains also the data in tabular form): Report ECN-13 (Jan. 1977) and ECN-33 (Dec. 77) by H. Gruppelaar, Netherlands Energy Research Foundation.

SOKRATOR Library: New data in this library are neutron cross sections for the Erbium isotopes 162, 164, 166, 167, 168, 170, by Abagyan et al., USSR. Complete evaluation for Nb-93, by Hermsdorf et al., German Democratic Republic.

Format: see INDC(CCP)-97.

EXFOR-VIEN file: See CINDU-11 Suppl. 1 p. 42 for purpose and format of this file, the contents of which is indexed in CINDA. The file as well as the latest summary of contents is available from NDS upon request. The most important recent addition was:

EXFOR-VIEN-V0012, a complete evaluation of the neutron reactions for Barium isotopes 134-138 by B. Strohmeier et al., Nucl. Sci. Eng. 65, 368 (1978).

More detailed information about contents and formats of all of the data files available can be obtained from NDS upon request. Tape copy of a complete library as well as selective retrievals for specified nuclides can be requested, these are available on tape or in the form of print-outs. Other libraries received prior to April 1977 are described in CINDU-11 and its Supplement; copies of these reports are still available.

Selected new documents of interest

- \*\* = document available from NDS
- \* = limited number of copies available from NDS
- = for other documents listed, contact your institute library, the originator, or the INIS Microfiche Service (IAEA, Vienna, P. O. Box 590)
  
- \*\* BNL-NCS-50640, Second Edition: The 1978 Bibliography of Integral Charged Particle Nuclear Data, T.W. Burrows, J.S. Burt, March 1978.
- \*\* INDC(NDS)-102, June 1979, G. Lammer: Progress in Fission Product Nuclear Data, issue no. 5.
- \*\* INDC(HUN)-15, March 1978, P. Vertes: FEDGROUP, a program system for producing group constants from evaluated nuclear data ... Revised version.
- \* KFK-2388, Feb. 1977, I. Broeders et al: MIGROS-3, a code for the generation of group constants for reactor calculations from neutron nuclear data in KEDAK format.
- UCRL-78482, Dec. 1976, B.L. Berman: Atlas of photoneutron cross-sections obtained with monoenergetic photons.
- ENL-NCS-50545 (ENDF-243), August 1976, P.F. Rose, T.W. Burrows: ENDF/B Fission-Product Decay Data.
- RD/B/N-4053 (CNDC(77)P8), A. Tobias: An ordered table of  $\gamma$ -radiation derived from an ENDF/B-4 fission-product data file.

Nuclear Data Section  
International Atomic Energy Agency  
P.O. Box 100  
A-1400 Vienna, Austria

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