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# CINDU

CATALOGUE OF NUMERICAL NEUTRON DATA  
AVAILABLE FROM THE IAEA NUCLEAR DATA UNIT



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IAEA NUCLEAR DATA UNIT, KÄRNTNER RING 11, A-1010 VIENNA

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CATALOG OF NUMERICAL NEUTRON DATA  
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- Completely supersedes all earlier issues of CINDU -

This catalog is the bibliographical part of 'DASTAR', the Data Storage And Retrieval System of the IAEA Nuclear Data Unit. It is written in a slightly modified CINDA format and should be read with the help of the abbreviation tables given in the 2nd supplement to CINDA-66. The catalog lists all neutron experiments and calculations, the numerical data from which are entered in DASTAR. For each experiment the bibliographic references are given together with the DASTAR accession number of the relevant numerical data. Any of the data listed is available to everybody on request.

This issue of CINDU is distributed to data centers, INDC members, non-OECD correspondents to the IAEA Nuclear Data Unit, and certain people who have expressed their interest. (Some of the earlier issues, CINDU-1, 2 and 4, had been distributed to data centers and INDC members only.)

Entries which have been added since the issue of CINDU-3, which had the same distribution as the present issue, are marked with "\*" following the entry date.

IAEA Nuclear Data Unit, Kärntnerring 11, A-1010 Vienna  
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As a consequence of the progress in the field of international data exchange, and in compliance with the recommendations of the International Nuclear Data Committee (INDC) to the Director General of the IAEA, the Nuclear Data Unit has established a neutron data compilation center for the purpose of promoting international acquisition and exchange of basic neutron data.

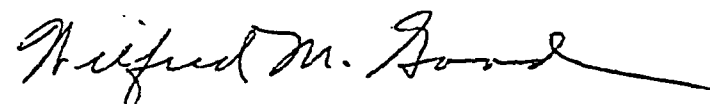
A specific orientation was given to this activity last year with the adoption of Operation Post-Box, according to which other major data centers submit either voluntarily or on request contributions of data to a fund held by the IAEA Nuclear Data Unit, which is in turn freely distributed to the remaining major data centers and to individuals. In the course of the last 12 months, this fund of data, embodied in the Nuclear Data Unit DASTAR file, has increased considerably as a result of the contributions by the data centers of Brookhaven, Obninsk and Saclay, as well as from collections from the IAEA Nuclear Data Unit service area (see page 4).

The CINDU catalog, submitted herewith, is an index of the current data holdings of the IAEA Nuclear Data Unit as of first August 1967. It serves a dual function: firstly, to act as an essential aid in the operation of the Post-Box concept, and secondly to inform data users within the IAEA Nuclear Data Unit service area of the current holdings in Vienna.

A method to locate available data at any one of the data centers, including the IAEA Nuclear Data Unit, exists now in CINDA in the form of an indicator at the right hand side of the page (see CINDA-66, 2nd supplement). In addition to the external reference function filled by CINDA, the present CINDU catalog serves an internal function as the bibliographic part of DASTAR as well. This internal function required slight modifications of the CINDA format, in order to provide more comprehensive information and retrieval capabilities in the overall operation of the DASTAR system. The present form of the CINDU catalog is working satisfactorily; however, suggestions and comments on the system, and in particular corrections to the contents, are welcome.

It is hoped that this bibliographical and reference catalog to the neutron data file of the IAEA Nuclear Data Unit will be of value to laboratories and scientists, help promote international data exchange, and stimulate further voluntary contributions in the spirit of Operation Post-Box.

The IAEA Nuclear Data Unit wishes to acknowledge the advice and cooperation of the data centers at Brookhaven, Obninsk and Saclay, and of the CINDA centers, the contributions of numerous individual scientists, and, in particular, the efforts of the originators of CINDA, on which the present catalog is based.

A handwritten signature in cursive script, reading "Wilfred M. Good". The signature is written in dark ink and extends horizontally across the page.

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IAEA Nuclear Data Unit  
Information on Neutron Data Compilation

page 4\*

GENERAL INFORMATION

1. In the overall activity of neutron data\* compilation, the IAEA Nuclear Data Unit shares the responsibility of data collection and dissemination with three other centers. The following distribution of labour has been established, whereby
  - The Brookhaven National Laboratory Sigma Center services the USA and Canada,
  - The ENEA Neutron Data Compilation Centre at Saclay (France) services countries in Western Europe and Japan,
  - The Informacionnyj Centr po Jadernym Dannym (Nuclear Data Information Center) in Obninsk (USSR) services the USSR,
  - The IAEA Nuclear Data Unit, in Vienna, services all other countries in Eastern Europe, Asia, Africa, South and Central America as well as Australia and New Zealand.
2. A preliminary agreement has been established for center-to-center data exchange between the four centers listed above.
3. Producers of neutron data (by experiment, theory or evaluation) should send their results in numerical form to the data center servicing their country, which will make them available to the other centers on request.
4. Anyone wishing to receive neutron data should send his request to the data center servicing his country. The center will supply the relevant data from its holdings and will also do its best to obtain further data from other centers.
5. References to existing data may be found in CINDA, an index to the literature on microscopic neutron data. This index is regularly published jointly by the ENEA Neutron Data Compilation Centre and the USAEC Division of Technical Information Extension, as a result of the cooperation of the four data centers. Current computer prints on specified isotopes and quantities can be provided upon request.

1. In order to promote the success of the IAEA neutron data compilation, and help keeping the data library up-to-date, all scientists in Eastern Europe, Asia, Africa, South and Central America as well as in Australia and New Zealand are encouraged to send their data to the IAEA Nuclear Data Unit in Vienna. Neutron data resulting from experiment, theory or evaluation are requested to be sent in numerical form, together with descriptions of error analysis and normalization procedures. A list of bibliographical references pertinent to the data is also requested, and any other information which may be of importance will be welcome.
2. Unless otherwise stated, it will be assumed that data received may be freely released. Data status (e.g., preliminary) can be attached to the data being sent in; the disseminated data will then be labelled as such until further notification by the author.
3. The data can be provided to the Nuclear Data Unit in the form of printed lists, on punched cards (in either IBM BCD or USSR Obninsk formats), or on magnetic tape (7-track IBM tape in BCD format).
4. Authors will receive proof-copies of their data as they are entered in the data file.
5. The Nuclear Data Unit will provide data on request in the formats specified in 3 above, and in addition can provide graphical plots in a variety of scales.
6. CINDU, the Catalogue of data stored at the IAEA Nuclear Data Unit, is issued periodically and is available on request.

\* Neutron Data is defined here as measured or deduced microscopic neutron cross sections, related fission, capture and scattering parameters, resonance and reaction parameters, as well as any other quantities which are included in CINDA.

The following page shows an example of a DASTAR-table. Its bibliographic references can be found on page 27 of this catalog, together with reference to additional DASTAR-tables listing other results of the same experiment. Each table is identified by a DASTAR-number, and the numerical data are preceded by comment lines which define the experiment and give brief information on experimental parameters, calibration, accuracy, origin of the data, description of quantities, data formats, etc.

The table shown below, is in its second version. That means: After receiving the proof copy of the first version, the author has sent in some additional information, which was then included in the second version of the DASTAR-table. Anyone who had received the first version in the meantime, will receive any later version automatically.

At present, numerical data are entered into the DASTAR-system, and referred to in this catalog in three different ways:

- DASTAR-00272: normal DASTAR-tables, kept on magnetic tape.
- DASTAR-PO002: supplementary information which is not kept on magnetic tape, and which is available only as a photocopy; the DASTAR-number starts with a "P"; compare, e.g., page 78 of this catalog.
- DASTAR : some single values are, at the moment, only given in the CINDU-catalog, without a DASTAR-number, but with the word "DASTAR" in the reference column; compare, e.g., bottom of page 3, or top of page 12 of this catalog.

Anyone wishing to receive numerical data, needs only to order them by giving the DASTAR-number and a statement, whether printed listings, punched cards, magnetic tapes, or graphical plots are desired.