

JAERI-Data/Code
97-044



CD-ROM STORING JENDL-3.2 PLOTS AND DATA

January 1998

**Tokio FUKAHORI, Osamu IWAMOTO, Tsuneo NAKAGAWA, Keiichi SHIBATA,
Tsutomu NARITA, Jun-ichi KATAKURA and Akira HASEGAWA**

日本原子力研究所
Japan Atomic Energy Research Institute

本レポートは、日本原子力研究所が不定期に公刊している研究報告書です。
入手の問合わせは、日本原子力研究所研究情報部研究情報課（〒319-1195 茨城県那珂郡
東海村）あて、お申し越してください。なお、このほかに財団法人原子力弘済会資料センター
〒319-1195 茨城県那珂郡東海村日本原子力研究所内）で複写による実費領布をおこなっ
ております。

This report is issued irregularly.

Inquiries about availability of the reports should be addressed to Research
Information Division, Department of Intellectual Resources, Japan Atomic Energy
Research Institute, Tokai-mura, Naka-gun, Ibaraki-ken 319-1195, Japan.

© Japan Atomic Energy Research Institute, 1998

編集兼発行 日本原子力研究所
印刷 (株)原子力資料サービス

CD-ROM Storing JENDL-3.2 Plots and Data

Tokio FUKAHORI, Osamu IWAMOTO, Tsuneo NAKAGAWA, Keiichi SHIBATA,
Tsutomu NARITA, Jun-ichi KATAKURA and Akira HASEGAWA

Department of Reactor Engineering
Tokai Research Establishment
Japan Atomic Energy Research Institute
Tokai-mura, Naka-gun, Ibaraki-ken

(Received October 15, 1997)

Numerical data and graphs of Japanese Evaluated Nuclear Data Library, Version 3, Revision 2 (JENDL-3.2) have been stored into CD-ROM.

JENDL-3.2 is an evaluated nuclear data library which is highly rated in the world, and consists of neutron nuclear data and secondary gamma-ray data for 340 nuclides. JENDL-3.2 has been already released through World Wide Web (WWW, <http://cracker.tokai.jaeri.go.jp>) . For users' convenience and to promote further utilization, this CD-ROM has been produced.

The data stored in CD-ROM are the original data and point-wise data (0 °K and 300 °K) of JENDL-3.2 and graphs of cross sections in gif, PostScript and PDF formats. These data can be retrieved by users' personal computers and engineering workstations, and also can be seen by using WWW browsers. This CD-ROM makes user completely free from downloading, which takes a lot of time, and tedious management such a treating big amount of data.

Keywords: Nuclear Data, JENDL-3.2, Database, Evaluation, CD-ROM, Plots
World Wide Web

CD-ROM 版 JENDL-3.2 グラフ及びデータ集

日本原子力研究所東海研究所原子炉工学部

深堀 智生・岩本 修・中川 庸雄

柴田 恵一・成田 孟・片倉 純一

長谷川 明

(1997 年 10 月 15 日受理)

核データセンターで整備を続けている汎用評価済核データライブラリー第 3.2 版 (Japanese Evaluated Nuclear Data Library, Version 3, Revision 2: JENDL-3.2) の数値データ及びプロット図を CD-ROM 化した。

JENDL-3.2 は、340 核種にのぼる標的核の中性子入射反応による様々な核反応データ及び γ 線生成データを網羅した、世界的に高い評価を受けている標準的な評価済核データライブラリーである。JENDL-3.2 は既に同センターの World Wide Web ホームページ (<http://cracker.tokai.jaeri.go.jp/>) で公開されているが、利用者の便宜を考慮し、さらなる普及を図るため、新たに CD-ROM を作成した。

CD-ROM に収録されているデータは、JENDL-3.2 のオリジナルデータ、絶対温度 0 K 及び 300 K (室温) で展開したポイントワイズデータ及び gif、Post Script 及び PDF 形式で格納された断面積のグラフである。これらのデータは、利用者のパソコンやワークステーションで閲覧できるほか、種々の WWW ブラウザーで検索可能な形式になっている。この CD-ROM 化により、WWW による時間のかかるダウンロード作業が不要になり、大量データ利用の利便性が著しく向上する。

Contents

1. Copyright and Reference	1
2. File Structure	2
3. How to Use this CD-ROM	4
3.1 Brows gif Figures	4
3.2 PostScript Figures	4
3.3 PDF Figures	4
3.4 Data Files	4
3.5 Utilities	5
4. Known problems in this CD-ROM	5
5. Contacting Address for Questions and Comments	5

目 次

1. 著作権及び参考文献	1
2. ファイル構造	2
3. この CD-ROM の使用法	4
3.1 gif 形式のファイル	4
3.2 PostScript 形式のファイル	4
3.3 PDF 形式のファイル	4
3.4 数値データファイル	4
3.5 ユーティリティー	5
4. この CD-ROM 使用上の既知の問題点	5
5. 質問及びコメントなどの連絡先	5

CD-ROM of JENDL-3.2 Plots & Data

1. Copyright and Reference

Copyright (c) 1997 by the Japan Atomic Energy Research Institute (JAERI)

All rights are reserved by JAERI. Permission to copy and distribute this material for any purpose is hereby granted, provided that the above copyright notice and this permission notice appear in all copies and that the name of JAERI must not be used in advertising or publicity pertaining to this material without the specific, prior written permission of authorized representatives of JAERI. If you write any documents using the information of this CD-ROM, you must attach following reference.

JENDL-3.2:

Nakagawa T., Shibata S., Chiba S., Fukahori T., Nakajima Y., Kikuchi Y., Kawano T., Kanda Y., Ohsawa T., Matsunobu H., Kawai M., Zukeran A., Watanabe T., Igarasi S., Kosako K. and Asami T.; J. Nucl. Sci. Technol., **32(12)**, 1259-1271 (1995).

NO WARRANTY

THERE IS NO WARRANTY FOR THE MATERIAL, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE MATERIAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY OF THE MATERIAL IS WITH YOU. SHOULD THE MATERIAL PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE MATERIAL AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF

THE USE OR INABILITY TO USE THE MATERIAL (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE MATERIAL TO OPERATE WITH ANY OTHER MATERIALS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

2. File Structure

Descriptions of directory and file names are written in the way MS-Windows™ like “Root Directory” is written as “¥” which appears as “Japanese Yen symbol” or “back slash” depending on your platform.

Figure Directory (¥fig)

GIF File Directory (¥fig ¥gif)

PostScript^R File Directory (¥fig ¥ps)

PDF File Directory (¥fig ¥pdf)

¥fig¥index.htm:	main index file for WWW browser
¥fig¥j32fig01.htm:	index of gif figures for Z=1-10
¥fig¥j32fig02.htm:	index of gif figures for Z=11-20
¥fig¥j32fig03.htm:	index of gif figures for Z=21-30
¥fig¥j32fig04.htm:	index of gif figures for Z=31-40
¥fig¥j32fig05.htm:	index of gif figures for Z=41-50
¥fig¥j32fig06.htm:	index of gif figures for Z=51-60
¥fig¥j32fig07.htm:	index of gif figures for Z=61-70
¥fig¥j32fig08.htm:	index of gif figures for Z=71-80
¥fig¥j32fig09.htm:	index of gif figures for Z=81-90
¥fig¥j32fig10.htm:	index of gif figures for Z=91-100

Data Directory (¥data)

Directory of Original JENDL-3.2 (¥data ¥original)

JENDL-3.2 Original Files are stored as isotope by isotope and compressed by gzip.

THE USE OR INABILITY TO USE THE MATERIAL (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE MATERIAL TO OPERATE WITH ANY OTHER MATERIALS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

2. File Structure

Descriptions of directory and file names are written in the way MS-Windows™ like “Root Directory” is written as “¥” which appears as “Japanese Yen symbol” or “back slash” depending on your platform.

Figure Directory (¥fig)

GIF File Directory (¥fig ¥gif)

PostScript^R File Directory (¥fig ¥ps)

PDF File Directory (¥fig ¥pdf)

¥fig¥index.htm:	main index file for WWW browser
¥fig¥j32fig01.htm:	index of gif figures for Z=1-10
¥fig¥j32fig02.htm:	index of gif figures for Z=11-20
¥fig¥j32fig03.htm:	index of gif figures for Z=21-30
¥fig¥j32fig04.htm:	index of gif figures for Z=31-40
¥fig¥j32fig05.htm:	index of gif figures for Z=41-50
¥fig¥j32fig06.htm:	index of gif figures for Z=51-60
¥fig¥j32fig07.htm:	index of gif figures for Z=61-70
¥fig¥j32fig08.htm:	index of gif figures for Z=71-80
¥fig¥j32fig09.htm:	index of gif figures for Z=81-90
¥fig¥j32fig10.htm:	index of gif figures for Z=91-100

Data Directory (¥data)

Directory of Original JENDL-3.2 (¥data ¥original)

JENDL-3.2 Original Files are stored as isotope by isotope and compressed by gzip.

Directory of JENDL-3.2 at 0 K (¥data ¥0k)

JENDL-3.2 Point-wise Files at 0 K with 0.1 % interpolation accuracy are stored as isotope by isotope and compressed by gzip.

Directory of JENDL-3.2 at 300 K (¥data ¥300k)

JENDL-3.2 Point-wise Files at 300 K with 0.1 % interpolation accuracy are stored as isotope by isotope and compressed by gzip.

Utility Directly (¥util)

Directory for Adobe^R/Acrobat^R Reader (¥util¥acrobat)

This directory includes executable files of Adobe^R/Acrobat^R Reader for several platform (see below), in order to see *.PDF files.

Acrobat ^R Reader 3.01	Windows TM (32 bit)	4,018,104 bytes
Acrobat ^R Reader 3.01	Windows TM (16 bit)	3,916,243 bytes
Acrobat ^R Reader 3.01	Macintosh TM (MacBinary)	5,099,136 bytes
Acrobat ^R Reader 3.0	OS/2 Warp TM	3,902,083 bytes
Acrobat ^R Reader 3.01	IBM-AIX TM (.tar.gz)	3,410,162 bytes
Acrobat ^R Reader 3.01	SGI-IRIX TM (.tar.gz)	4,306,244 bytes
Acrobat ^R Reader 3.01	Sun Solaris TM (.tar.gz)	4,152,973 bytes
Acrobat ^R Reader 3.01	SunOS TM (.tar.gz)	4,136,746 bytes
Acrobat ^R Reader 3.01	HP-UX TM (.tar.gz)	3,851,731 bytes
Acrobat ^R Reader 3.01	Linux (.tar.gz)	3,669,391 bytes
Acrobat ^R Reader 3.01	Digital Unix TM (.tar.gz)	3,656,113 bytes

Directory for "gzip" (¥util ¥gzip)

This directory includes source and executable files of GNU ZIP (gzip) for several platform (see below), in order to extract compressed files (*.gz).

¥util¥gzip¥gunzip.exe:	executable file for DOS
¥util¥gzip¥gzip.tar:	source file for UNIX ^R
¥util¥gzip¥macgzip.sit:	executable file compressed by Stuffit TM for Macintosh TM

¥readme.txt:	this file
¥readme.pdf:	PDF version of this file
¥readme.ps:	PostScript ^R version of this file

3. How to Use this CD-ROM

3.1 Brows gif Figures

First you open your browser and type "<file:///X:/fig/index.htm>" where X is your CD-ROM drive name for "MS-Windows™". For other platform, you can do similarly. After that, you can easily see the gif figures of your selected target material. Figures are divided into three categories; (F1) total, elastic and inelastic scattering, capture and fission cross sections (as file name of *a.gif), (F2) same as F1 but the cross sections are averaged in 70 energy group intervals(as file name of *b.gif), and (F3) threshold reaction cross sections(as file name of *c.gif).

3.2 PostScript^R Figures

PostScript^R files are stored almost same way as gif files in the directory "¥ps". Files are compressed by "gzip" command. You can copy your target file to your preferable directory and extract it by "gunzip" command. If you do not have "gunzip" software, you can install it by using the source or executable file stored in directory "¥util¥gzip" of this CD-ROM. PostScript^R files have the same structure of gif files.

3.3 PDF Figures

By installing Adobe^R/Acrobat^R Reader stored in the directory "¥util¥acrobat" into your platform and/or adding as a plug-in program of your browser, you can see and print out the PDF figures on your browser and/or printer as good as PostScript^R files' quality.

3.4 Data Files

JENDL-3.2 Original Files are stored as isotope by isotope and compressed by gzip as well as their Point-wise Files at 0 and 300 K with 0.1 % interpolation accuracy. Files are separated into isotope by isotope. You can see numerical data of JENDL-3.2 Point-wise File by extracting by "gunzip" or "gzip -d" command at your platform. If your browser has a gzip plug-in, you can see the data on your browser directly.

3.5 Utilities

Directory "¥acrobat" includes executable files of Adobe^R/Acrobat^R Reader for several platform, in order to see *.PDF files (see chapter 2). By installing the software into your platform and/or adding as a plug-in program of your browser, you can see and print out the PDF figures on your browser and/or printer as good as PostScript^R files' quality.

Directory "¥gzip" includes source and executable files of GNU ZIP (gzip) for several platform, in order to extract compressed files (*.gz). This software can extract *.gz file to ordinary ASCII text file, and you can see the texts by your preferable editor or word processor.

4. Known problems in this CD-ROM

- Netscape Navigator on Machintosh hangs up the system while reading "¥fig¥ps" directory linked from "¥fig¥index.htm".
- On some UNIX systems linked file names may be incorrect because they use capital letters (adding the version number like ".1") for file names in ISO-9660 formatted cd-rom.
- Acrobat Reader of UNIX version can not display the names of Bookmarks in "j32fig.pdf".

5. Contacting Address for Questions and Comments

Mailing Address: Nuclear Data Center, Dept. of Reactor Engineering,
Japan Atomic Energy Research Institute,
Tokai-mura, Naka-gun, Ibaraki-ken, 319-11 Japan

Phone: +81-29-282-5483

FAX: +81-29-282-6122

e-mail: iwamoto@cracker.tokai.jaeri.go.jp

others: If you want to see original WWW page, you can access from the URL as
<http://cracker.tokai.jaeri.go.jp/index.html>.

3.5 Utilities

Directory "¥acrobat" includes executable files of Adobe^R/Acrobat^R Reader for several platform, in order to see *.PDF files (see chapter 2). By installing the software into your platform and/or adding as a plug-in program of your browser, you can see and print out the PDF figures on your browser and/or printer as good as PostScript^R files' quality.

Directory "¥gzip" includes source and executable files of GNU ZIP (gzip) for several platform, in order to extract compressed files (*.gz). This software can extract *.gz file to ordinary ASCII text file, and you can see the texts by your preferable editor or word processor.

4. Known problems in this CD-ROM

- Netscape Navigator on Machintosh hangs up the system while reading "¥fig¥ps" directory linked from "¥fig¥index.htm".
- On some UNIX systems linked file names may be incorrect because they use capital letters (adding the version number like ";1") for file names in ISO-9660 formatted cd-rom.
- Acrobat Reader of UNIX version can not display the names of Bookmarks in "j32fig.pdf".

5. Contacting Address for Questions and Comments

Mailing Address: Nuclear Data Center, Dept. of Reactor Engineering,
Japan Atomic Energy Research Institute,
Tokai-mura, Naka-gun, Ibaraki-ken, 319-11 Japan

Phone: +81-29-282-5483

FAX: +81-29-282-6122

e-mail: iwamoto@cracker.tokai.jaeri.go.jp

others: If you want to see original WWW page, you can access from the URL as
<http://cracker.tokai.jaeri.go.jp/index.html>.

3.5 Utilities

Directory "acrobat" includes executable files of Adobe[®]/Acrobat[®] Reader for several platform, in order to see *.PDF files (see chapter 2). By installing the software into your platform and/or adding as a plug-in program of your browser, you can see and print out the PDF figures on your browser and/or printer as good as PostScript[®] files' quality.

Directory "gzip" includes source and executable files of GNU ZIP (gzip) for several platform, in order to extract compressed files (*.gz). This software can extract *.gz file to ordinary ASCII text file, and you can see the texts by your preferable editor or word processor.

4. Known problems in this CD-ROM

- Netscape Navigator on Machintosh hangs up the system while reading "fig/ps" directory linked from "fig/index.htm".
- On some UNIX systems linked file names may be incorrect because they use capital letters (adding the version number like ".1") for file names in ISO-9660 formatted cd-rom.
- Acrobat Reader of UNIX version can not display the names of Bookmarks in "j32fig.pdf".

5. Contacting Address for Questions and Comments

Mailing Address: Nuclear Data Center, Dept. of Reactor Engineering,
Japan Atomic Energy Research Institute,
Tokai-mura, Naka-gun, Ibaraki-ken, 319-11 Japan

Phone: +81-29-282-5483

FAX: +81-29-282-6122

e-mail: iwamoto@cracker.tokai.jaeri.go.jp

others: If you want to see original WWW page, you can access from the URL as
<http://cracker.tokai.jaeri.go.jp/index.html>.