



INTERNATIONAL ATOMIC ENERGY AGENCY

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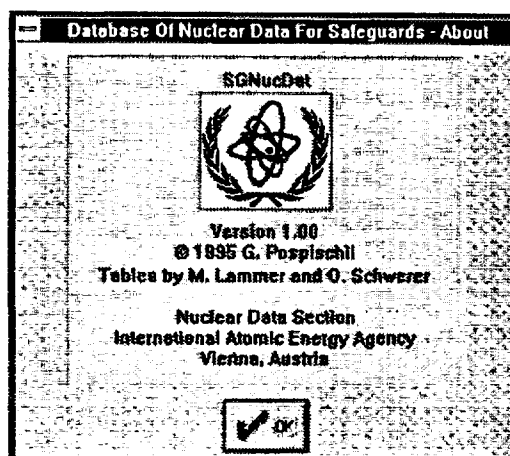
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SGNucDat**Safeguards Nuclear Data for Windows**

PC code by G. Pospischil displaying actinide and fission-product nuclear data
compiled by M. Lammer and O. Schwerer

Summary documentation by H.D. Lemmel and O. Schwerer



Abstract: SGNucDat is a PC code displaying recommended values of nuclear data that are required for nuclear materials analysis by IAEA safeguards. Diskette and report available from the IAEA Nuclear Data Section, costfree upon request.

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Note:

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Neither the originator of the data libraries nor the IAEA assume any liability for their correctness or for any damages resulting from their use.

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Citation guideline:

This database should be quoted as follows:

M. Lammer, O. Schwerer, "Handbook of nuclear data for safeguards", IAEA report INDC(NDS)-248 (1991); PC code "SGNucDat" by G. Pospischil; PC diskette by the IAEA Nuclear Data Section (1996).

SGNucDat

Safeguards Nuclear Data for Windows

PC code by G. Pospischil
displaying actinide and fission-product
nuclear data compiled by
M. Lammer and O. Schwerer

SGNucDat is a PC code displaying recommended values of nuclear data that are required for fissile materials analysis by IAEA Safeguards. The list of nuclear data included is given on the last page. The nuclear data values are based on M. Lammer, O. Schwerer: "Handbook of nuclear data for safeguards", report INDC(NDS)-248 (1991).

The code makes it easy to display the data, and to perform searches, selections, and different sortings.

SGNucDat requires about 1.5 MB of disk space.

The diskette SGNucDat can be used only under Windows and **not** under DOS. It must be properly installed under Windows; instructions about the installation are given in the file \SGNUCDAT\README.TXT.

Note: The installation will function properly only from the original diskette. Additional diskettes can be copied from the diskette (DISKCOPY) but cannot be retrieved from the SGNUCDAT directory of the PC.

Installation:

After putting the diskette into the A: drive, and having Windows on the screen, call the A: drive, search there for SETUP.EXE and run it. The rest should go by itself.

A special routine must be run if your PC does not have the three fonts required, i.e. ARIAL, MS LINEDRAW, SYMBOL. In this case you must load the required fonts from the SGNucDat diskette using the Windows procedures (compare item 2.1 in the README.TXT). You must look for "Fonts" within Windows, go to "ADD", and then select Drive A: You will then see the names of the fonts available on the SGNucDat diskette and can add them to your PC.

After the installation click on the SGNucDat icon. When you get an empty screen, make use of the pull-down menus in the upper left corner and try out their functions.

Overview on the provided features:

- Windows-Based User-Interface
- Help System
- Windows-Based installation
- Maintainable Tables in plain ASCII-Format
- Extended Table-Information by using Description-Files (also plain ASCII)
- All special characters (like alphas, betas, indices, sub- and superscripts) can be displayed
- Printing of the datasheets is supported in many ways
- Sorting by any field
- Powerful search-operations are provided
- Consistent structure for all tables which guarantees future extensibility
- Tables can be viewed on MS-DOS-Machines without Windows
- Specially adapted for Notebooks with small displays

Data contents:

Section A: Actinide nuclear data

- A-1: Half-lives and decay branching fractions
- A-2: Alpha energies and emission probabilities
- A-3: Gamma ray energies and emission probabilities
- A-4: X-ray energies and intensities
- A-5: Thermal neutron cross-sections, resonance integrals and related parameters
- A-6: Average number of neutrons emitted per fission (ν)
- A-7: Prompt neutron multiplicity distributions $P(\nu)$
- A-8: Delayed neutron six-group parameters

Section B: Fission product nuclear data

- B-1: Half-lives and decay branching fractions
- B-2: Gamma ray energies and emission probabilities
- B-3: Thermal neutron capture cross sections and resonance integrals

Section C: Fission product yields

- C-1: Th-232 fast fission chain yields and selected cumulative yields
- C-2: U-233 thermal fission chain yields and selected cumulative yields
- C-3: U-235 thermal fission chain yields and selected cumulative yields
- C-4: U-238 fast fission chain yields and selected cumulative yields
- C-5: Pu-239 thermal fission chain yields and selected cumulative yields
- C-6: Pu-241 thermal fission chain yields and selected cumulative yields
- C-7: Selected independent fission product yields