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Chart of the Nuclides

NUCHART for Windows version 1.2, Feb. 1995

PC code by V. Osorio and H. Peraza,
IAEA Physics Section

Abstract: The PC package NUCHART is described which displays nuclear decay data, including a search routine for assigning gamma-ray energies to radionuclides. The package is available upon request, costfree, from the IAEA.

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Citation:

The PC package described and data retrieved from it should be cited as follows:

V. Osorio, H. Peraza, "NUCHART for Windows", report IAEA-NDS-161 (International Atomic Energy Agency, Vienna, 1995). PC package, version 1.2, Feb. 1995, received from the IAEA Nuclear Data Section (or: retrieved from the FTP Service of the IAEA Physics Section).

**Chart of the Nuclides
NUCHART for Windows
version 1.2, Feb. 1995**

PC code by V. Osorio and H. Peraza,
IAEA Physics Section

This PC package consists of 3 diskettes.

Installation: Insert the first diskette. Under the MS Windows File Manager, click on 'SETUP.EXE' and follow the instructions.

Features:

The Chart of Nuclides is represented graphically in a manner similar to the Karlsruhe Wall-Chart edition 1981. The normal way to look for an information is based on a "point-and-click" mode using a pointing device (e.g. mouse).

1. Nuclide information:
For each nuclide: abundance, mass excess, (main) decay mode, half-life and uncertainty, branching ratio, decay Q.
2. Decay radiations:
For each nuclide: tables of radiation energy, intensity and equivalent dose for the 5 most intense decay radiations of β^+ , β^- , conversion electrons, gammas, alphas, and X-rays, including Electron Augers.
3. Adopted gammas:
For each nuclide: table containing energy, relative intensity, energy level of the main gamma lines and year of publication in the journal the Nuclear Data Sheets.
4. Search gamma energies:
For a specified interval of gamma-line energies all known gamma-lines and their nuclides are displayed. The database contains 132 000 gamma lines.
5. A search mode by specific nuclide is also available.

Source of data:

The numerical data were taken from the online database "NUDAT", version of March 1994.

[C.L. Dunford, T.W. Burrows, "NUDAT", report IAEA-NDS-150 Rev. 94/9 (International Atomic Energy Agency, Vienna, 1994) chapter 8. The NUDAT database by the US National Nuclear Data Center was retrieved from the online Nuclear Data Information System, IAEA Nuclear Data Section.]

Note: Not yet all features of the system have been implemented. For example, "Help" does not function, but it will hardly be needed. Comments and proposals to be included in the next version, should be addressed to V. Osorio, IAEA Physics Section, P.O. Box 100, A-1400 Vienna, Austria.

The set of 3 diskettes is available upon request, costfree, from the IAEA Nuclear Data Section. The package can also be retrieved online through the INTERNET file transfer, FTP, under the address:

IAEAND.IAEA.OR.AT, user NDSOPEN (no password),
subdirectory PHYSICS.NUCHRT