

KARLSRUHE CHARGED PARTICLE GROUP

Information

KERNFORSCHUNGSZENTRUM · D-7500 KARLSRUHE · POSTFACH 3640 · TELEX 7826-484

Memo CP-B/15

31.8.1977

Subject: Printed version of the KACHAPAG-File

The goal of the printed version of the KACHAPAG-File is to make the reaction data more easily available to users of accelerators etc. Of course, with respect to retrievals such a publication cannot replace the magnetic tape version. However, selections according to the most important search parameters must still be possible. There are in principle two approaches to this goal:

- a) The sequence of the reactions in the written version is the same as in the master file. The main disadvantage of this approach is that for all search parameters an index register has to be provided, which must be kept up to date.
- b) The reactions are arranged according to one or two of the search parameters, like target nuclide and projectile. This at first very appealing version has several severe disadvantages: (i) It is difficult to keep the printout up to date, i.e. adding new data, (ii) for a long time only a small part of the master file will be available, because the data are compiled publication by publication and not according to search parameters chosen for ordering, and (iii) for additional search parameters, like product nuclide, an index register has also to be provided.

After an extensive discussion we prefer now the first approach. Accordingly, the publication will be subdivided in data section, index register and explanations.

1. Data section

1.1 The data section consists of a collection of loose pages, like the original Nuclear Data Sheets.

1.2 Each page contains

- one subentry
- the corresponding subentry 1

cc/ A. Hree
Lemond
Lessler
Foreuz
Okamoto
Schmidt
Schwever
Yaphurian
Marin Gupman
Smith

- a graphical representation of the data, whenever this is instructive.

1.3 The coded information will be at least partially expanded.

1.4 New entries of the KACHAPAG-File shall be made available in regular intervals, probably every half year.

2. Index register

2.1 The register will be subdivided into 3 lists, in which the order of the reactions is defined by the following sequence of search parameters:

list 1	list 2	list 3
target (Z,A;i)	projectile (Z,A;i)	product (Z,A;i)
projectile (Z,A;i)	# neutrons, protons (i)	projectile (Z,A;i)
product (Z,A;d)	target (Z,A;i)	target (Z,A;d)

number of emitted neutrons and protons (obtained by balancing target, projectile and product)

A,Z nucleon and proton number

i,d increasing or decreasing order

Each list will contain all reactions. List 3 in addition those reactions in which a composite particle heavier than ⁴He is given in Subfield 3 in the 'REACTION'-coding. These reactions would then appear twice with both heavy nuclides treated as end products.

2.2 Each line in the lists will give

- reaction A(B,C)D
- type of data, e.g. SIG, SUM, EXP ...
- projectile energy interval
- page number

2.3 The register shall be revised in regular intervals, for instance every year. If new data pages are send out twice a year each second shipment will contain a partial register covering only the reactions added.

3. Explanations

- 3.1 The file (scope, ordering) as well as the keywords (meaning, content) will be described on additional pages.
- 3.2 Dictionaries will be provided for all codes which are not expanded.

4. Distribution

- 4.1 At present we hope that we can provide a fixed number of copies free of charge to the Data Centers at least for some time. We are just checking this question.
- 4.2 We assume that the distribution will be done by the 5 Data Centers which now already receive the master file, like it was done with the NNDC-Bibliography.
- 4.3 We would appreciate to receive from the Data Centers an information about the number of copies (minimum, maximum) they would like to obtain.

5. Compilation priorities

The form of the publication chosen leaves very much freedom in the order in which the publications shall be compiled. Nevertheless, we will still go ahead as announced at the Kiev-Meeting. The priorities are given in general by the following sequence:

1. Proton reactions
2. Target nuclei with $Z > 28$; increasing order
3. all projectile energies

If the data available from literature for a target-projectile-combination are completely compiled

- this will be indicated in the register, and
- any new data will be added currently thus keeping the file for this combination up to date.

Distribution:

- | | |
|---------------------------|---------------------------|
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| B. H. Münzel, KaChaPaG | G. H. Behrens, ZAED |
| C. S. Pearlstein, NNCSN | H. A. Marcinkowski, IBJ |
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| E. H. Tanaka, Study Group | K. D.C. Agrawal, Varanasi |
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