USSR - Kurchatov Institute DAT/3249-0

MEMO CP-A/22

To: distribution

From: F.E.Chukreev, N.V.Timofeeva

Subject: About coding rules of some reactions.

Among data requests there are good deal of the data connected with cross sections of excited states production.

The latter processes are being coded now by means of the code "PAR" in SF5. The code is used in a very large range and this circumstance creates some difficulties for the search of the data needed.

We would appreciate if the question of generalizing of the "Isomeric states" formalism will be concerned at the next meeting. It will be more adequate to the Centres's aims.

In accordance with the Exchange Format rules the reactions which directly lead to production of residual nucleus in the metastable state marked in the dictionary 27 are coded the following manner:

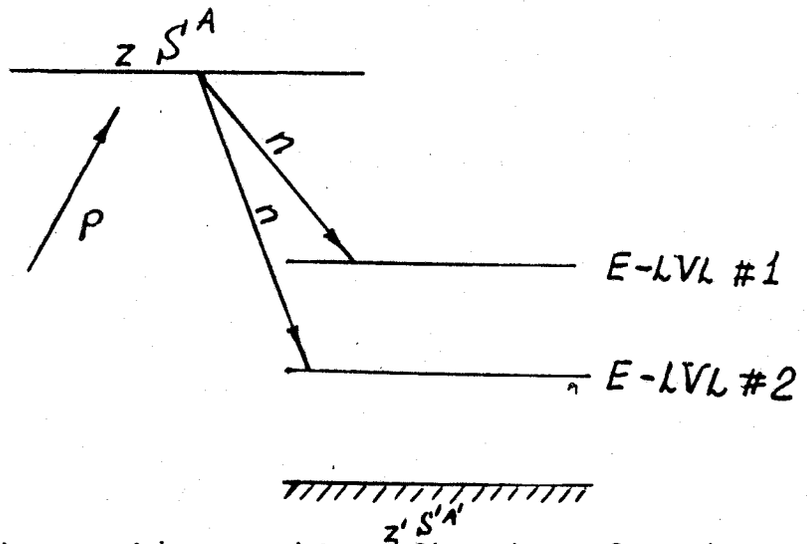
(Z-S-A(SF2,SF3)Z'-S'-A'-Mn,IND,SF6,SF7,SF8,SF9)

It is clear, that an excited state of a nucleus does not differ from metastable state in the physical sense, therefore it seems to us more adequate to code the excited residual nucleus production reactions in the following manner:

1. The reactions, which directly lead to production of product nucleus in the excited state:

(Z-S-A(SF2,SF3)Z'-S'-A'-E,IND,SF6,SF7,SF8,EXP)

for example:

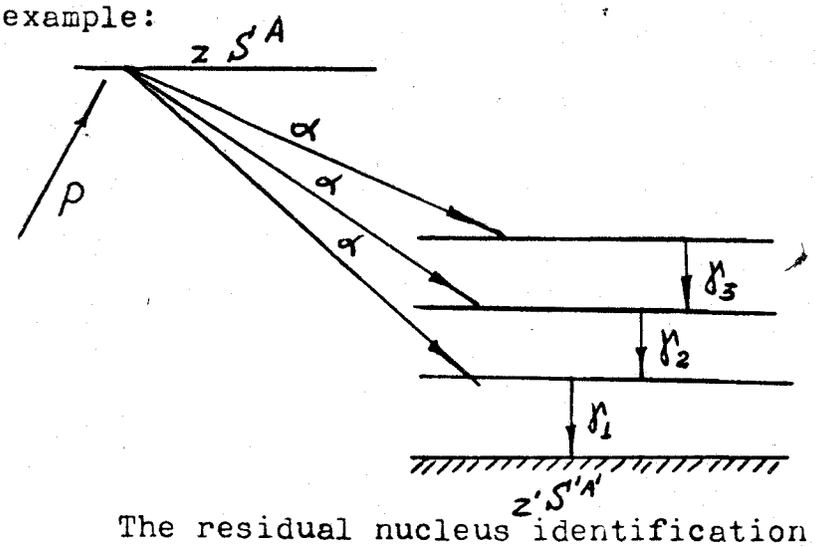


An unambiguous identification of excited level is made by indicating of its energy given under data-heading keyword "E-LVL" in the "DATA" or "COMMON" sections. The nuclide, to which "E-LVL" energy refers, is given under keyword "EN-SEC".

2. The reactions which lead to production of product nucleus in the excited state including formation via higher state transition:

(Z-S-A(SF2,SF3)Z'-S'-A'-E,E+,SF6,G,SF8,EXP)

for example:



The residual nucleus identification is made by indicating of energy of an observable γ-transition (for example γ_2), given under data-heading keyword "E" in "COMMON" or "DATA" sections.

Probably, there are many similar data coded with "PAR" in the neutron EXFOR, therefore we propose to legalize the both coding rules for such reactions (suggested rule and former one).

So all data files would be untouched, but in the new compilations will be applied the updating codes.

We would like to discuss this suggestion at the meeting of Nuclear Reaction Data Centres in october, 1980.

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