

Revision of LEXFOR “Partial reactions ” (NRDC 2023 A16)

(V. Devi, N. Otsuka, 2024-05-13, Memo CP-D/1111(Rev.))

We concluded in the NRDC 2023 meeting that

“The coding rules of REACTION SF4-SF7 for the cascade gammas not following quasi-metastable state production (, PAR/L-, DA, G) and for the cascade gammas following quasi-metastable state production (-L, PAR, DA, DG) proposed in CP-D/1057 (Rev.) = WP2023-26 were approved.”

We propose addition of the following paragraph in LEXFOR “Partial reactions”:

Gamma production following quasi-metastable state production

When the reaction leaves a reaction product above a quasi-metastable state, and the product is de-excited by a gamma transition between two levels below the quasi-metastable state, the gamma emission can be classified into two categories:

1. Cascade gammas not following quasi-metastable state (“prompt” component):

REACTION Coding: PAR/L- in SF5 and G in SF7

Example:

REACTION (82-PB-0 (N, X) 82-PB-206, PAR/L-, DA, G)

2. Cascade gammas following quasi-metastable state (“delay” component):

REACTION Coding: A nuclide code with -L in SF4 and DG in SF7

Example:

REACTION (82-PB-0 (N, X) 82-PB-206-L, PAR, DA, DG)