

## DAM and RAB as General Quantity Modifiers

(N. Otsuka, 2016-05-20, Memo CP-D/905)

I foresee that two modifiers

- DAM Divided by atomic mass
- RAB times natural isotopic abundance, divided by isotopic

may be combined with various quantity codes, and I propose to treat them as general quantity modifiers.

For clarification, I also propose a minor modification to the expansion of the modifier DAM:

### Dictionary 34 (Modifiers)

DAM Divided by atomic mass of the target nucleus

Below is a proposed addition to LEXFOR “General Quantity Modifiers”:

#### DAM-modifier

Used when the data have been divided by the atomic mass of the target nuclide or element.

#### *Example:*

(29-CU-0 (A, X) 31-GA-66, , SIG, , DAM)

$^{nat}\text{Cu}(\alpha, x)^{66}\text{Ga}$  cross section divided by the atomic mass of natural copper (~63.5).

#### RAB-modifier

Used when the data for a target of natural isotopic abundance is divided by the isotopic abundance of a target nuclide, but contribution of the other target nuclide is not negligible.

#### *Example:*

(22-TI-47 (N, P) 21-SC-47, , SIG) + (22-TI-48 (N, X) 21-SC-47, , SIG, , RAB)

$^{nat}\text{Ti}(n, x)^{47}\text{Sc}$  cross section divided by the isotopic abundance of  $^{47}\text{Ti}$ , and the contribution of  $^{48}\text{Ti}$  is not negligible. (This may be symbolically written as  $^{47}\text{Ti}(n, x)^{47}\text{Sc} + ^{48}\text{Ti}(n, x)^{47}\text{Sc}$  in the literature.