

LEXFOR “Thermonuclear Reaction Rate”

(N. Otsuka, CP-D/810, 2013-10-03)

There are now 140 data sets of reaction rates (SF6=SGV without SF8=SF_C). LEXFOR “Thermonuclear reaction rate” asks REACTION SF8=MXW, but more than half (80) of the data sets are coded without MXW. (Compare C2007 and C2026 in PRELIM.C132).

The reaction rate in EXFOR is defined for projectiles thermally equilibrated to the temperature kT , and therefore the spectrum modifier MXW is redundant. This could be the reason why we have so many reaction rates coded without MXW. In order to keep the consistency with less effort, I propose to delete MXW from the REACTION coding sample of the LEXFOR entry, namely,

REACTION Coding: (... , SGV₇, MXW)

Additional Remark:

There are reaction rates not coded with the spectrum temperature. Probably the compiler decided to compile them because the author declares it as *reaction rate*. Some of them seem like data from integral experiments (*e.g.*, EXFOR 41147), and must be deleted.