Evaluation of theoretical conversion coefficients using BrIcc

Tibor Kibédi

Australian National University

The electromagnetic de-excitation of nuclei can involve the emission of gamma-rays, conversion electrons and electron positron pairs. The probability of these processes can be used to characterise transition multipolarities, determine spin-parities of excited state and is essential to establish the intensity balance of nuclear decay schemes.

This lecture I will briefly describe the physics behind BrIcc and through selected examples I will demonstrate how to solve problems using internal conversion coefficients.

Reading material:

T. Kibédi, et al., Nucl. Instr. And Meth. A 589 (2008) 202; main publication on BrIcc
https://doi.org/10.1016/j.nima.2008.02.051

A. Akber, et al., Phys. Rev. C 91, 031301(R) (2015); conversion coefficient of H-like ions
http://link.aps.org/doi/10.1103/PhysRevC.91.031301

BrIcc can be downloaded from https://www-nds.iaea.org/public/ensdf_pgm/ or accessed at the ANU web site: https://bricc.anu.edu.au