

# THE USE OF DATA-CONTAINING CODES FOR THE INTERPRETATION OF NUCLEAR EXPERIMENTAL RESULTS

T.V. Chuvilskaya

*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University*

One of the trends in description of nuclear processes is the creation and the development of codes which, on the one hand, realize various standard theoretical approaches of the nuclear reactions and, on the other hand, contains a large bulk of nuclear data. This development follows the direction of higher capability of the programs and, in addition, makes these codes user-friendly step by step.

Typical examples of such codes namely EMPIRE and TALYS are discussed. The results of the calculations of the reaction cross sections and isomeric ratios are presented for illustration. The experimental data related to the reactions  $^{197}\text{Au}(^6\text{He}, xn\text{ yp}) E_{\text{He}} \leq 120 \text{ MeV}$  and  $^{28}\text{Si}(p, xn\text{ yp}) E_p \leq 100 \text{ MeV}$  are chosen for the interpretation by the discussed codes.

It is shown that in the most cases the programs are capable to describe a complete set of reaction data and thus the results of the calculations may be considered as “a computational full-scale experiment”.