

RECENT DEVELOPMENTS IN THE FLUKA NUCLEAR REACTION MODELS

A.Ferrari et al.

The nuclear interactions models embedded in the FLUKA code are constantly developed in order to cope with new applications, or improve their performances.

The latest developments and their implications with respect with experimental data will be discussed. In particular, a first attempt to develop a semi-quantitative approach for the transition from the intermediate energy "cascade-like" approach to the high energy asymptotic Glauber-Gribov cascade will presented and discussed.

Some new developments on evaporation/fission/fragmentation and on the interplay of preequilibrium and equilibrium processes when both are applied to intermediate energy interactions will be also discussed, with particular emphasis on residual nuclei predictions.

Finally, a newly implemented approach for calculating online the evolution of radioactive inventories for arbitrary irradiation profiles and cooling times will be discussed and some application to CERN accelerator problems presented.