

Expected results

Contract IDEI 42/01.10.2011

TITLE: **Binary nuclear systems**

Financing source: IDEI contract 42/05.11.2011, UEFISCDI.

1. Charge density variation function of the geometrical evolution of the binary nuclear configuration.
2. Shell and pairing corrections as a function of spin-orbit strength and pairing interaction gap variation and intermediary nuclear masses in nuclear binary processes.
3. Calculation of the tensor of inertia within the cranking model specialized according to the dynamics of binary nuclear processes.
4. Sub-barrier fusion cross sections for the most favored low energy reactions and synthesis of superheavy compound nuclei in a final close to the ground state.