

## **THE RESEARCH SUBCRITICAL REACTOR**

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At present, the conception of design and construction of new research reactor and scientific nuclear centre in Ukraine is developed [1]. In this conception the construction of the pool type reactor with heat power 20 - 30 MW and with neutron flux in the core about  $4 \cdot 10^{14}$  n/(cm<sup>2</sup> · s) is provided. The conception development does not assume an analysis of alternative types of reactors and, moreover, the design of a physical project of this alternative reactor. At the same time, the innovation projects of the reactors of forth generation are intensively discussed in the world scientific literature, particularly, the subcritical assemblies driven by accelerators (Accelerated Driven Systems). Even the superficial analysis of such systems shows their perspective using as research reactors. One of the optimal decision for this goal is a reactor consisted with a subcritical assembly and powerful neutron generator.