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MODELLING OF TWO-ZONE ACCELERATOR-DRIVEN SYSTEMS

Neutron-physical modelings of two-zone subcritical reactor driven by high-intensity neutron generator are considered. The cascade principle in subcritical reactors, the use of which can hypothetically substantially amplify the neutron flux from the external source is discussed in this article. The theoretical preconditions of the cascade principle are discussed, and the directions of practical realization of the cascade subcritical system are considered, namely the possible methods of neutron feedback between reactor sections elimination. The results of Monte Carlo neutron-physical modeling of the cascade subcritical systems are presented and discussed.

Keywords: accelerator-driven systems, subcritical core.