

**ESTIMATION OF THE SYSTEMATIC ERROR CONSTITUENTS IN THE
CALCULATIONS OF THE CRITICAL SYSTEMS
BY THE MONTE CARLO METHOD**

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Analysis of factors which influence on systematic error formation in the calculations of the critical systems by the Monte Carlo method for the MCNP and SCALE computer codes is executed. It has been shown that non-linearity of iteration process of calculation and uncertainty in initial neutron sources distributing effect on a systematic error. The estimation of systematic error constituents is executed on example of calculation model from the benchmark problems. Recommendations are resulted to minimization of the calculations systematic error for critical systems by the Monte Carlo method.

Keywords: critical system, systematic error, Monte Carlo method, non-linearity of iteration process, uncertainty in initial sources distributing.