

# REACTOR PHYSICS BENCHMARKS FOR VALIDATION OF COMPUTER CODES AND NUCLEAR DATA

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## Abstract

In the era of fewer experiments and rapidly developing computers and computational methods benchmark experiments are becoming more and more important for validation of computer codes and evaluation of nuclear data. The need for benchmark experiments has already been identified in the international community resulting in several international projects, some of them coordinated by the OECD Nuclear Energy Agency, that is the International Criticality Safety Benchmark Evaluation Project (ICSBEP) [1], International Reactor Physics Experiment Evaluation (IRPhE) Project [2], Shielding Integral Benchmark Archive and Database (SINBAD) [3]. In the presentation I will present the concept of a benchmark experiment together with the process of evaluation of experimental and computational uncertainties. This will be illustrated by examples from the KRITZ-2 benchmark experiments series [4] and experiments performed at the Jozef Stefan Institute TRIGA reactor [5].

## References:

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- [4] L. Snoj et al. , “Evaluation of the KRITZ-2 criticality and reaction rate benchmark experiments”. *Nuclear science and engineering*, Volume **178**, Number 4, November 2014, pp. 496-508
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