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## Physical start-up test of China Experimental Fast Reactor

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China Experimental Fast Reactor (abbr. CEFR) is a pool-type sodium-cooled fast reactor in China Institute of Atomic Energy (abbr. CIAE), with a thermal power of 65MW and an electric power of 20MW. The construction started in 2000 and the first criticality was reached in July 2010. On December 15th 2014, CEFR reached full power for the first time and was successfully operated for 72 hours.

During the physical start-up of CEFR, a series of tests were carried out in four aspects, i.e., fuel loading and first criticality, control rod worth measurements, reactivity coefficient measurements, and foil activation measurements. A large amount of experiment data was obtained in the process.

In order to compile and reserve the experimental data in a standard and refined form, and to benefit the worldwide fast reactor society on the validation of codes and nuclear data, China Institute of Atomic Energy proposed an IAEA Coordinated Research Project, and got approved preliminarily.

The specific objectives of the project lie in 4 aspects: firstly, to collect and evaluate experiment data obtained from CEFR physics start-up experiments mentioned above; secondly, to establish a simplified model of the CEFR core and give the correction factors and descriptions of associated methods; thirdly, to share the experiment data and the simplified core model with CRP participants for joint calculations and analysis; fourthly, to gather and analyze the calculation results, and to publish a benchmark analysis report.

China Institute of Atomic Energy would like to take this great opportunity to express their welcome to all organizations to participate in this project!

### Country/Int. Organization

China P.R./China Institute of Atomic Energy

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