

Reactor Physics Study related to Subcriticality of Accelerator Driven
System by AESJ/JAERI working party

Tomohiko IWASAKI
Tohoku University
Aoba 01, Aramaki, Aoba
Sendai 980-8579 JAPAN

Abstract

Under Atomic Energy Society of Japan (AESJ) and Japan Atomic Energy Research Institute (JAERI), a Working Party on Reactor Physics of Accelerator-Driven System (ADS-WP) has been set since March 1999 to review and investigate special subjects related to reactor physics research of Accelerator-Driven System (ADS). In the ADS-WP, the extensive and aggressive activity is being made by 25 professional members in the field of reactor physics in Japan. The ADS is now studying three subjects related to subcriticality of ADS: (1) calculation accuracy of subcriticality on ADS, (2) critical safety issues of ADS, and (3) theoretical review of subcriticality and its measurement methods. This paper describes two topics related to the subjects (1) and (2); one is an analysis of maximum reactivity potentially inserted to a subcritical core and the other is a benchmark proposal for checking calculation accuracy of subcriticality on ADS. The full specification of the calculation benchmark will be supplied by June 2002. Researchers from overseas, especially from Korea, are welcome to join this benchmark.