Integral Test for JENDL-4

- Benchmark Results with Preliminary Version of JENDL Actinoid File -

Keisuke OKUMURA and Go CHIBA

Nuclear Science and Engineering Directorate, Japan Atomic Energy Agency, Tokai-mura, Naka-gun, Ibaraki-ken, 319-1195

The JENDL Actinoid File (JENDL/AC) is under developing at Japan Atomic Energy Agency. Most of the evaluations in JENDL/AC will be taken over to a part of the next general purpose file JENDL-4. In order to confirm present performances of JENDL/AC and to polish it more and more, we have carried out benchmark calculations for the following various type of reactors:

- Uranium fueled thermal reactors (LEU-COMP-THERM series in the ICSBEP handbook, TRX, KRITZ, and so on),
- MOX fueled thermal reactors (MIX-COMP-THERM, KRITZ, TCA-MOX),
- Low/Highly enriched uranium or plutonium fueled solution systems (LEU-SOL-THERM, HEU-SOL-THERM, PU-SOL-THERM in ICSBEP),
- Fast Reactors (Godiva, Flattop, Bigten, Jezebel, ZPPR, BFS, JOYO, etc),
- > Benchmark for minor actinides (SPEC-MET-FAST in ICSBEP),
- Analysis of Post Irradiation Examination (PIE) for the PWR spent fuel composition.

Good performance of JENDL/AC was confirmed by comparison with the results of other recent nuclear data files, JENDL-3.3, JEFF-3.1, and ENDF/B-VII.0.