

## Present Status and Future Plans of KURN/複合研原子 炉施設の現状と今後の計画

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Institute for Integrated Radiation and Nuclear Science, Kyoto University (KURNS) has been operated two research reactors, namely, Kyoto University Research Reactor (KUR) and Kyoto University Critical Assembly (KUCA).

KUR whose maximum power is 5MW starts its operation in 1964 and it has been utilized mainly for supplying fast and thermal neutron in various kinds of research field, however, Kyoto University decided to stop its operation in May-2026 because of several reasons; treatment of spent fuels, facility aging problem, increasing operation cost and so on. After shutdown, we will soon submit decommissioning application of KUR to Nuclear Regulation Authority (NRA) and, firstly, all spent fuels are planning to ship to U.S.A.

KUCA whose maximum power is 100W starts its operation in 1974 and it has been utilized for basic reactor physics experiments and nuclear human resources development through student education experiments. It had used highly enriched uranium (HEU) fuels both at the solid moderated core and the light water moderated core, and according to the reduced enrichment program for research reactors conducted by U.S.A., all HEU fuels was sent back to U.S.A. until 2022 and new low enriched uranium (LEU) fuels have been prepared for KUCA including obtaining license from NRA. For light water moderated core, uranium silicide plate type fuels have been already fabricated in a foreign fuel company and some of them were just transported to KUCA last month. For solid moderated core, world-first uranium-molybdenum alloy coupon type fuels are now under fabrication. We are planning to restart operation of KUCA in 2025 and will utilize it for research and student education.

KURNS owns other radiation facilities such as a hot laboratory where unsealed radioactive material and nuclear materials can be handled for research purpose and operates accelerators; the electron linear accelerator, the proton cyclotron and so on. After shutdown of KUR, we will continue to utilize those unique radiation facilities as joint use research center.

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