NCNR SEMINAR – JUNE 23, 2023. 10:00 AM (EST)

Current status of Kyoto University Reactor (KUR), Japan Research Reactor-3 (JRR-3) and new research reactor plan at Monju site

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Kyoto University Research Reactor (KUR) is a light-water moderated pool-type light water reactor operated at the maximum thermal power of 5 MW. KUR is widely used for the experimental studies in physics, chemistry, biology, engineering, agriculture, medicine etc. Since its first criticality in 1964, it has been successfully operated for over than 50 years, and has served as one of the most useful inter-university research reactors in Japan. The operation cycle of KUR is about 54 hours and it is not easy to get advanced scientific result of neutron scattering except for neutron imaging and instrumental developments. Recently Kyoto University announced to terminate the operation of KUR within 2026.

JRR-3 achieved its first criticality in 1962 as the first research reactor constructed with domestic technology and has been utilized by a multitude of researchers since the dawn of nuclear research and industry. In 1990, JRR-3 was modified to improve its performance, and it resumed operation as a high-performance and multipurpose research reactor with thermal power of 20 MW. JRR-3 has several facilities for neutron beam experiments, irradiation experiments for nuclear fuel and material, and production of RI and silicon semiconductors.

Recently a plan of new research reactor of 10MW at Monju site in Fukui prefecture is progressed. The basic design is based on the knowledge of JRR-3 and is expected to be the successor to KUR. This talk will introduce current status of KUR, JRR-3 and the plan of new research reactor at Monju site with the brief history.

Friday, June 23, 2023
10:00 AM (UTC-05:00) Eastern Time (US & Canada) | Hybrid format
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