

Partner Institutions

The RIKEN Nishina Center for Accelerator-Based Science (RNC) has collaborated with universities and research institutes since 2008 under the research partnership agreement. This collaboration framework permits an external institute to develop its own projects at the RIKEN Wako Campus in equal partnership with the RNC. At present, two institutes—the Center for Nuclear Study (CNS), the University of Tokyo and the Wako Nuclear Science Center (WNSC), Institute of Particle and Nuclear Studies (IPNS), High Energy Accelerator Research Organization (KEK)—are conducting joint research under the research partnership agreement.

The CNS and RNC signed the research partnership agreement in 2008. Until then, the CNS had collaborated in joint programs with RIKEN under the “Research Collaboration Agreement on Heavy Ion Physics” (collaboration agreement) signed in 1998. The partnership agreement redefines procedures related to the joint programs while keeping the spirit of the collaboration agreement. The joint programs include experimental nuclear-physics activities using CRIB, SHARAQ, OEDO, and GRAPE at the RI Beam Factory (RIBF), accelerator developments, and activities at RHIC PHENIX.

The KEK-WNSC and RNC signed a research partnership agreement on “Low-Energy Unstable Nuclear Beam Science” in 2011. The joint experimental programs are based on the KEK Isotope Separation System (KISS). The KISS has been available for RIBF users since 2015. The research collaboration agreement for the SLOWRI facility and the multi-reflection time-of-flight (MRTOF) mass spectrograph was then signed in 2019, based on which the SLOWRI Joint Operation Committee has been established for the collaborative use and operation of the SLOWRI facility. Under these collaborative activities, the KEK-WNSC and RNC signed a joint research program “RIKEN-KEK collaborative RI stopper and MRTOF-based analyzer and spectroscopy system (CRISMASS)” in 2024.

Experimental proposals that request the use of the above-noted devices of the CNS and KEK, together with other key devices at the RIBF, are screened by the Program Advisory Committee for Nuclear Physics experiments at the RIBF (NP-PAC). The NP-PAC meetings are co-hosted by the CNS and KEK.

Matters necessary for the smooth promotion of joint research based on the research partner agreement are determined at the Collaboration Liaison Council. More specific matters related to the execution of collaborative research are discussed at the Collaboration Liaison Committee established under the Liaison Council. In order to enhance the effectiveness of coordination and information sharing on joint research programs, the Joint Researchers Meeting was established in 2020 under the Collaboration Liaison Committee.

Several members of both institutes have also been invited to participate as external members in RNC committees related to the operation of the RIBF, such as the Machine-Time Committee, the Safety Review Committee, and the RIKEN Accelerator Progress Report Editorial Committee. The activities of the CNS and KEK are reported in the succeeding pages.