

## Nuclei in the Cosmos (NIC XVII)



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### Current status of KoBRA at RAON

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A multi-purpose experimental instrument, called KoBRA (Korea Broad acceptance Recoil spectrometer and Apparatus), was constructed at the Institute for Rare Isotope Science (IRIS), as a part of the RAON facility in Korea. Stable or rare isotope (RI) beams can be produced using Electron Cyclotron Resonance (ECR) ion sources or the Isotope Separation On-Line (ISOL) system at RAON, and these beams can be delivered to KoBRA at energies of 1 – 40 MeV per nucleon via the Superconducting Linear accelerator 3 (SCL3). Secondary RI beams can be produced by quasi-projectile fragmentation reaction, and KoBRA will be utilized to generate these RI beams for the studies of nuclear reaction, nuclear structure, and nuclear astrophysics.

KoBRA is currently under beam commissioning phase, and the first test with  $^{40}\text{Ar}$  stable ion beam was completed in June 2023. In this presentation, we report on the recent activities of KoBRA from its construction to beam commissioning, together with the detailed design of ion optics and detection system. Additionally, the results from the first beam test will be presented.

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