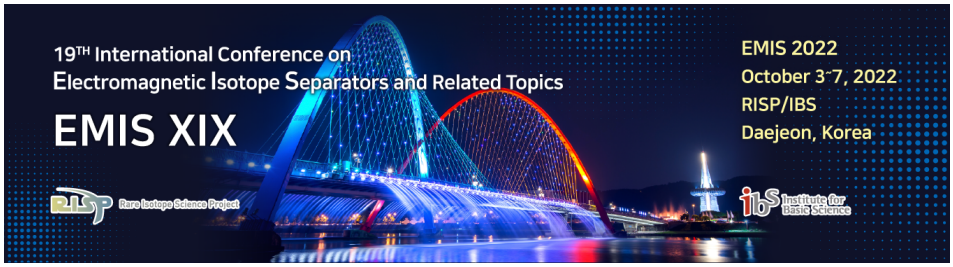

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A multi-purpose experimental instrument KoBRA for low-energy nuclear physics at RAON

Thursday, 6 October 2022 14:30 (30 minutes)

A multi-purpose experimental instrument, named as KoBRA (Korea Broad acceptance Recoil spectrometer and Apparatus), has been constructed for low-energy nuclear physics experiments at RAON (Rare Isotope Accelerator complex for ON-line experiments) in Korea. KoBRA will be utilized to produce rare isotope beams at an energy range of about 5 - 20 MeV/nucleon in early-phase experiments. A test was performed to measure the positions of 4He ions at the dispersive and achromatic focuses of KoBRA, using an 241Am α-source placed at the production target position. The position distributions of 4He ions are nearly consistent with the results of Monte Carlo calculation. The detailed design including ion optics and present status of KoBRA are described, together with the status of detectors for beam diagnostics and particle identification of rare isotopes.

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