

独立行政法人理化学研究所 仁科加速器研究センター 第153回 RIBF核物理セミナー RIKEN Nishina Center for Accelerator Based Science The 153<sup>rd</sup> RIBF Nuclear Physics Seminar

Present status of Rare-RI Ring and mass measurements for R-process

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It is believed that half of heavy stable nuclei beyond ion are produced by R-process. To clarify R-process, mass measurements are indispensable. From this year the construction of Rare-RI Ring started in RIKEN RI Beam Factory. The main purpose of Rare-RI Ring is to measure the masses of rare-RI that are related to R-process. In Rare-RI Ring, there are two innovative apparatus: individual injection, which can realize the injection of 200 A MeV rare RI one-by-one, and a cyclotron-like storage ring, which allows high isochronous magnetic fields with large angular and momentum acceptances. By these devices, we will achieve a 10-6 mass resolution, and will be able to access rare RI, the production rate of which is down to 1 event/day/pnA. In this talk, present status of Rare-RI Ring is given and the mass measurements in Rare-RI Ring are discussed.

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