# Research Facility Development Division
# Research Instruments Group

## 1. Abstract

The Research Instruments Group is the driving force at RI Beam Factory (RIBF) for continuous enhancement of activities and competitiveness of experimental research. Consisting of four teams, we are in charge of the operation, maintenance, and improvement of the core research instruments at RIBF, such as the BigRIPS in-flight RI separator, ZeroDegree spectrometer and SAMURAI spectrometer, and the related infrastructure and equipment. We are also in charge of the production and delivery of RI beams using the BigRIPS separator. The group also conducts related experimental research as well as R&D studies on the research instruments.

## 2. Major Research Subjects

Design, construction, operation, maintenance, and improvement of the core research instruments at RIBF and related R&D studies. Experimental studies on exotic nuclei.

## 3. Summary of Research Activity

The current research subjects are summarized as follows:

(1) Production and delivery of RI beams and related research;
(2) Design, construction, operation, maintenance, and improvement of the core research instruments at RIBF and their related infrastructure and equipment;
(3) R&D studies on the core research instruments and their related equipment at RIBF;
(4) Experimental research on exotic nuclei using the core research instruments at RIBF.

## Members

**Director**

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## List of Publication

**Publication**

**[Original Paper]**

Y. Shimizu, T. Kubo, T. Sumikama, N. Fukuda, H. Takeda, H. Suzuki, D. S. Ahn, N. Inabe, K. Kusaka, M. Ohtake, Y. Yanagisawa, K. Yoshida, Y. Ichikawa, T. Isobe, H. Otsu, H. Sato, T. Sonoda, D. Murai, N. Iwasa, N. Imai, Y. Hirayama, S. C. Jeong, S. Kimura, H. Miyatake, M. Mukai, D. G. Kim, E. Kim, and A. Yagi, "Production of new neutron-rich isotopes near $N = 60$ isotones $^{92}$Ge and $^{93}$As by in-flight fission of a 345 MeV/nucleon $^{238}$U beam," Phys. Rev. C **109**, 044313 (2022), DOI: 10.1103/PhysRevC.109.044313.