

Abstract Submitted  
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**Eliminating the effect of SRC beam-energy spread on the Bi-gRIPS focal plane**<sup>1</sup> YUSUKE GOTO, TAKAHIRO NISHI, The University of Tokyo, PIAF COLLABORATION — At RIKEN RIBF, precise and systematic studies on the 1s binding energies and widths of pionic-Sn atom using the  $\text{Sn}(d, {}^3\text{He})$  pion-transfer reaction are planned, but a relatively large energy spread of the RIKEN Superconducting Ring Cyclotron (SRC) poses a difficulty in achieving the required resolution. “Dispersion matching” is a way of adjusting the optical settings of the beam line to overcome this problem. It makes positions of particles on a focal plane independent of the beam-momentum spread, while ensuring the particles with different Q values focused at the different positions on the focal plane. We recently made an experiment for testing the dispersion matching at RIKEN. In this experiment, a  ${}^{14}\text{N}$  beam of 250 MeV/nucleon was used; the value of energy per nucleon being the same as that of the deuteron which will be used in the experiment on pionic-Sn atom. We tried some ion-optical settings and verified that particles with a finite momentum spread could be focused to one point. In the Hawaii meeting, we will present the detailed analysis of this test experiment.

<sup>1</sup>A test experiment for the pionic-atom precision spectroscopy at RIKEN RIBF.

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