

Abstract Submitted  
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**Ion-optical studies of BigRIPS separator and ZeroDegree spectrometer at RIKEN RI Beam Factory** HIROYUKI TAKEDA, TOSHIYUKI KUBO, TETSUYA OHNISHI, NAOKI FUKUDA, DAISUKE KAMEDA, KENSUKE KUSAKA, ATSUSHI YOSHIDA, KOICHI YOSHIDA, MASAO OHTAKE, NAOHITO INABE, YOSHIYUKI YANAGISAWA, KANENOBU TANAKA, RIKEN Nishina Center, MASAFUMI MATSUSHITA, Rikkyo University, BIGRIPS/ZERODEGREE COMMISSIONING COLLABORATION — The BigRIPS in-flight separator[1] and the ZeroDegree spectrometer (ZDS) have been commissioned at RIKEN RI Beam Factory (RIBF) recently. Intense radioactive isotope (RI) beams are produced, separated and analyzed by the BigRIPS and the ZDS. Both of them are operated in several optical modes according to experimental conditions. For particle identifications of RI beams, it is essentially important to achieve high resolutions in  $A/Q$  ratio because RI beams are produced in several charge states in our energy region especially for heavy RI beams. Ion optical calculation with realistic magnetic field maps is indispensable for our purpose and we use COSY INFINITY[2] for that. Measured field maps are incorporated in the COSY calculations. In 2008, the ZDS was commissioned for the first time in three different modes. Experimental results and comparison with the COSY calculations will be presented in this report. [1]T. Kubo: Nucl. Instr. Meth. **B204**, 97 (2003). [2]K. Makino, M. Berz: Nucl. Instr. Meth. **A558**, 346 (2006).

Hiroyuki Takeda  
RIKEN Nishina Center

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