

Abstract Submitted  
for the HAW14 Meeting of  
The American Physical Society

**Production cross section of neutron-deficient radioactive isotopes produced from a  $^{124}\text{Xe}$  beam at 345 MeV/u by the BigRIPS separator at RIKEN RI Beam Factory** HIROSHI SUZUKI, TOSHIYUKI KUBO, NAOKI FUKUDA, NAOHITO INABE, DAISUKE KAMEDA, HIROYUKI TAKEDA, HIROMI SATO, YOHEI SHIMIZU, DEUKSOON AHN, RIKEN Nishina Center, RIKEN, YOHEI OHKODA, NAOHITO IWASA, Department of Physics, Tohoku University, DAICHI MURAI, Department of Physics, Rikkyo University, BIGRIPS COLLABORATION — The production cross sections of radioactive isotopes (RI) are crucial for designing RI-beam experiments. Systematic measurements of production cross sections are very important to improve models which are used to predict cross sections. In this talk, we will present the cross sections of RIs, which were produced by projectile fragmentation of a  $^{124}\text{Xe}$  beam at 345 MeV/u impinging on a production target of Be. The experiments were performed using the BigRIPS separator at RIKEN RI Beam Factory in 2011 and 2013. We produced neutron-deficient RIs with atomic numbers  $Z = 34\text{--}52$  including a double-magic nucleus  $^{100}\text{Sn}$ . Particle identification was performed by the TOF-*Brho*-*dE* method. The production cross sections were deduced from the measured production yields based on the transmission efficiency of the separator that is calculated by using the LISE<sup>++</sup> code. The experimental cross sections were compared with the empirical cross-section formulae EPAX3. The measurements of the momentum distributions were also performed, and they were compared with the LISE<sup>++</sup> calculation.

Hiroshi Suzuki  
RIKEN Nishina Center, RIKEN

Date submitted: 01 Jul 2014

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