

Injection Simulation Study at Accumulator Cooler Ring in RI Beam Factory, K. OHTOMO, RIKEN; T. KATAYAMA, CNS, Univ. Tokyo - In the proposed RI beam factory project by RIKEN, Accumulator Cooler Ring (ACR) will be used for the accumulation and cooling of the radioactive isotope (RI) beams which are produced by the beam from a Super-conducting Ring Cyclotron (SRC) and pass through a fragment separator. The momentum spreads of these RI beams will be significantly reduced in short time by the electron cooling and stochastic cooling devices at the ACR. Devices for multi-turn injection and RF stacking are also needed in order to build up the beam current. It is important to study an injection efficiency and status of particle distribution on longitudinal and transverse phase space after cooling and stacking. This paper summarizes the result of the injection simulation including cooling process and suggests methods and devices.