

Simulation of RF Stacking Combined with Cooling Effects, Y.J. YUAN, IMP; K. OHTOMO, RIKEN; T. KATAYAMA, INS, Univ. of Tokyo - The Radioactive Isotope Beam Factory is being proposed at RIKEN, which consists of a Superconductive Ring Cyclotron (SRC) and a complex of ACcumulator Ring (ACR), Booster Synchrotron Ring (BSR) and Double Storage Ring collider (DSR). This Multi-Use Experimental Storage Rings (MUSES) will be constructed for the production of high flux RI beams and the experiments of nuclear physics and related science. This paper concentrated on the RF stacking method combined with cooling effects that will be used for accumulating radioactive beams (with transverse emittance 5π mmmrad and $\Delta p/p = \pm 0.5\%$) extracted from SRC into ACR. The procedure of RF stacking was simulated. The cooling effect, in which the coupling effect of longitudinal cooling and transverse cooling was considered, was taken into the simulation. The possibility of this method to be used in beam accumulation of ACR was discussed.