

RIKEN RI Beam Factory Project, A. GOTO, T. KATAYAMA, Y. YANO, RIKEN - The RARF houses an intermediate-energy heavy-ion accelerator complex consisting of a K540-MeV ring cyclotron (RRC) as a main accelerator. One of remarkable features of this facility is capability of supplying light-atomic-mass RI (radioactive isotope) beams with the world-highest level of intensities by a projectile-fragment separator. RI beams have opened up a quite new heavy-ion science. In order to further promote this new science, the RARF proposes "RIKEN RI Beam Factory" as a next facility-expanding project. The factory takes the aim at providing RI beams covering over the whole atomic-mass range with the world-highest intensities in a wide energy range up to several hundreds MeV/nucleon. To efficiently produce such RI beams by the projectile fragmentation a K2500-MeV superconducting ring cyclotron will be built which boosts output energies of the RRC beams to over 100 MeV/nucleon even for very heavy ions, preserving their beam intensities (typically 1 pμA). A new type of experimental installation called "MUSES" (Multi-USE Experimental Storage rings) will also be constructed. It consists of an accumulator-cooler ring (ACR), booster synchrotron ring (BSR) and double storage rings (DSR). With MUSES, various types of unique colliding experiments will become possible.