

MonPE13

Prototyping of beam position monitor for medium energy beam transport (MEBT) section of RAON heavy ion accelerator

Hyojae Jang, Hyunchang Jin, Ji-Ho Jang and In-Seok Hong

Rare Isotope Science Project, Institute for Basic Science, Daejeon, Korea

Corresponding Author: Hyojae Jang, e-mail address: lkcom@ibs.re.kr

A heavy ion accelerator, RAON is going to be built by Rare Isotope Science Project (RISP) in Korea. Its target is to accelerate various stable ions such as uranium, proton, xenon from electron cyclotron resonance ion source (ECR-IS) and some rare isotopes from isotope separation on-line (ISOL). The beam shaping, charge selection and modulation should be applied to the ions from these ion sources because RAON adopts a superconducting linear accelerator structure for beam acceleration. For such treatment, low energy beam transport (LEBT), radio frequency quadrupole (RFQ) and medium energy transport (MEBT) will be installed in injector part of RAON accelerator. Recently development of a prototype of stripline beam position monitor(BPM)to measure the position of ion beams in MEBT section is under way. In this presentation, design of stripline, electromagnetic simulation results and RF measurement test results performed on the prototyped BPM will be described.