Contribution ID: **26** Type: **Poster**

Simulation result of button type Beam Position Monitor based on beam energy of RAON

Thursday, November 14, 2024 1:00 PM (1h 30m)

RAON is a multipurpose accelerator facility that can accelerate various heavy ion beams and rare isotope beams. The maximum energy of the uranium beam at the end of SCL3 is 18.5 MeV/u, 0.2 beta, and the maximum energy of the proton beam would be higher than uranium beam. 54 button beam position monitors with an inner diameter of 40 mm were manufactured for use at SCL3, and the BPMs installed on the beamline after SCL3 have an inner diameter of 50 mm or 60 mm depending on the installed location. The signals induced at each electrode of the button type BPM according to the beam energy were obtained as a result of the CST simulation. The BPM Electronics was developed to measure the position using the IQ method for the 1st, 2nd, and 3rd harmonic frequencies of 81.25 MHz among the signals generated from the button electrodes. In this poster, we describe the results of position calculation according to beam energy obtained using the same method as the electronics algorithm using the signals from the electrodes of BPM based on the CST simulation results.

Paper submission Plan

Best Presentation

Contribution track

ICABU WG2. Beam Physics, Diagnostics & Novel Techniques

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