IPAC'25 - the 16th International Particle Accelerator Conference



Contribution ID: 2249 Contribution code: SUPM073

Type: Student Poster Presentation

Low-power test of bridge coupler in disk-and-washer structure for muon acceleration

Sunday 1 June 2025 14:00 (2 hours)

A muon linear accelerator is under development at J-PARC for precise measurement of the muon anomalous magnetic moment (g-2) and electric dipole moment (EDM). A disk-and-washer (DAW) structure is employed to accelerate muons from 30% of the speed of light (kinetic energy = 4 MeV) to 70% (40 MeV) at 1296 MHz. The muon DAW consists of tanks accelerating the muons and bridge couplers that couple the tanks and focus the beam using an internal quadrupole doublet. A bridge-coupler prototype is currently being fabricated and will be tested. This paper presents the design and performance evaluation of the bridge coupler prototype.

Footnotes

Paper preparation format

LaTeX

Region represented

Asia

Funding Agency

Author: KONDO, Ayaka (Nagoya University)

Co-authors: IIJIMA, Toru (Nagoya University); SUMI, Kazumichi (Nagoya University); TAKEUCHI, Yusuke (Shanghai Jiao Tong University); CICEK, Ersin (High Energy Accelerator Research Organization); EGO, Hiroyasu (High Energy Accelerator Research Organization); OTANI, Masashi (High Energy Accelerator Research Organization); NAKAZAWA, Yuga (High Energy Accelerator Research Organization); FUTATSUKAWA, Kenta (High Energy Accelerator Research Organization); SOSHIDA, Mitsuhiro (High Energy Accelerator Research Organization); MOR-ISHITA, Takatoshi (Japan Atomic Energy Agency); IWASHITA, Yoshihisa (Kyoto University)

Presenter: KONDO, Ayaka (Nagoya University)

Session Classification: Student Poster

Track Classification: MC4: Hadron Accelerators: MC4.A09 Muon Accelerators, Neutrino Factories, Muon Colliders