



Contribution ID: 458 Contribution code: MOPC34

Type: **Poster Presentation**

Performance test for single-spoke resonator superconducting cavities in RAON

Monday, 20 May 2024 16:00 (2 hours)

Single-spoke resonators (SSRs) have been developed and tested for the RAON SCL2 project. The design parameters for the SSRs are provided, and the performance of the superconducting cavities is assessed. The single-spoke resonator cavities, cryogenic systems, cryostats, and human machine interface (HMI) are depicted for a vertical test. Calibration and cavity preparations are demonstrated to evaluate the performance of the superconducting cavities. Testing of the single-spoke resonator type 1 (SSR1) performance is conducted via a vertical test. Q slopes are presented as a function of accelerating field, and Lorentz force detuning (LFD) as well as pressure sensitivity are conducted for the superconducting cavities.

Footnotes

Funding Agency

This work was supported by the National Research Foundation of Korea (NRF) funded by the Ministry of Science and ICT (RS-2022-00214790).

Paper preparation format

Region represented

Asia

Primary author: KIM, Heetae (Institute for Basic Science)

Co-authors: KIM, Juwan (Institute for Basic Science); JEON, Sungmin (Kyungpook National University); JUNG, Yoochul (Institute for Basic Science); PARK, Heecheol (Institute for Basic Science); KIM, Moo Sang (Institute for Basic Science); LEE, Junwoo (Institute for Basic Science)

Presenter: KIM, Heetae (Institute for Basic Science)

Session Classification: Monday Poster Session

Track Classification: MC1: Colliders and other Particle and Nuclear and Physics Accelerators: MC1.A08 Linear Accelerators