Contribution ID: **194** Contribution code: **FRXA003** Type: **Invited Oral Presentation**

SRF coaxial resonators for hadron acceleration

Friday 30 August 2024 09:10 (20 minutes)

SRF technology using niobium accelerating cavities enables high performance and efficient acceleration for modern accelerator projects. While electron linacs accelerate particles with common structures designed for relativistic acceleration hadron linacs require acceleration over a broad velocity range. SRF technology is now being adopted at hadron energies in some cases starting from the RFQ exit but with top end energies such that a velocity range of a factor of ten has to be considered in the linac configuration and cavity design. Different structures in the TEM mode (coaxial) class (QWR, HWR, SSR, DSR) are employed with customized rf frequency, design beta and cavity structure. The coaxial cavities are now operating at very high performance rivaling the achievements in the 1.3GHz elliptical cavities. The talk should give an overview of the state of the art in the field.

Footnotes

Funding Agency

Primary author: KOLB, Philipp (TRIUMF)

Presenter: KOLB, Philipp (TRIUMF)

Session Classification: Main Session FRX

Track Classification: MC4: Technology: MC4.8 Superconducting RF