



Contribution ID: 1291 Contribution code: TUPA164

Type: **Poster Presentation**

Simulation and measurement of beam loading effects in magnetic alloy RF cavity of CSNS RCS

Tuesday, 9 May 2023 16:30 (2 hours)

Different from the high Q value of ferrite cavity, the Q value of magnetic alloy cavity in CSNS RCS is only about 1.25, the frequency band of impedance is wide, and the beam loading effects is strong. Based on the impedance measurement results, the influence of the beam load effects on the longitudinal distribution of the magnetic alloy cavity in CSNS RCS is studied by simulation, and the induced voltage measured on the machine is consistent with it.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary authors: HUANG, Liangsheng (Institute of High Energy Physics); LIU, Hanyang (Institute of High Energy Physics); LIU, Yang (Dongguan Neutron Science Center); WANG, Sheng (Institute of High Energy Physics); XU, Shou (Dongguan Neutron Science Center)

Presenter: LIU, Hanyang (Institute of High Energy Physics)

Session Classification: Tuesday Poster Session

Track Classification: MC4: Hadron Accelerators: MC4.A04: Circular Accelerators