Contribution ID: **184** Contribution code: **MOP009** Type: **Poster Presentation**

A reactive ferroelectric tuner for microphonics compensation

Monday 11 August 2025 16:00 (2 hours)

Jefferson Lab (JLab) is actively pursuing an extensive research program focused on developing advanced Nb_3Sn superconducting technology for particle accel-eration. Due to the brittle nature of Nb_3Sn coatings, a Ferroelectric Tuner (FRT) currently represents the most viable approach for microphonics compensation in these next-generation cavities. We suggest a novel, fast-responding FRT integrated directly into the main coupler, eliminating the need for an additional RF port. Leveraging a unique RF design based on a magic-T configuration, this advanced FRT will enable micro-phonics compensation in the ±30 Hz range without undesirable changes to the external quality factor.

Please consider my poster for contributed oral presentation

Yes

Would you like to submit this poster in student poster session on Sunday (August 10th)

No

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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