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Conduction-cooled operation of an SRF multi-cell cavity

Monday 22 September 2025 14:30 (3 hours)

The development of compact, SRF-based accelerators for applications beyond research is experiencing notable advancements due to the use of cryocoolers for conduction cooling instead of traditional liquid cryogens. Following the successful demonstration of a single-cell cavity operated through conduction cooling with three two-stage cryocoolers, Jefferson Lab has made strides in the operation of a multi-cell resonator. This milestone paves the way for high-energy applications of compact, conduction-cooled SRF machines. The demonstration, carried out in collaboration with General Atomics, took place in a dedicated horizontal test cryostat (HTC) at their San Diego facility. This presentation will highlight the technological developments, the latest results, and valuable lessons learned.

I have read and accept the Privacy Policy Statement

Yes

Footnotes

Funding Agency

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