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Status of Advanced Demonstrator project an futher developments on SRF Technology for HELIAC

Monday 3 November 2025 18:20 (3 minutes)

The superconducting heavy ion HELmholtz LInear ACcelerator (HELIAC) is designed to meet the needs of the Super Heavy Element (SHE) research and material sciences user programs at GSI in Darmstadt. The beam energy can be varied smoothly between 3.5 and 7.3 MeV/u, with an average current of up to 1 emA and a duty cycle of 100~\%. Recently, the first cryomodule CM1, was commissioned and tested w/o beam. CM1 comprises three Crossbar H-mode (CH)-type accelerator cavities, a CH-rebuncher, and two superconducting solenoid lenses. Following the commissioning of the cryogenic supply and the RF-systems, successful beam tests were conducted. A helium as well as an argon ion beam was successfully accelerated to the design energy. This contribution covers the commissioning of the first HELIAC cryomodule and the future activities.

Speed talk:

I am unwilling/unable to present a speed talk

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