



Test stand for HELIAC cryomodules at GSI

Tuesday 23 September 2025 14:30 (3 hours)

The Helmholtz Linear Accelerator HELIAC is a superconducting (sc) continuous wave linear accelerator for heavy ions currently under development at GSI in Darmstadt. In order to fully test the new cryomodules a new area was set up. The construction started already in 2018 by clearing the necessary space for a radiation protection bunker near the existing pre-accelerator HLI at GSI. Because of a separate beam line from HLI, HELIAC cryomodules can already be tested with beam, which is crucial as the beam dynamics have to be checked, too. The bunker houses now the first 5 m long HELIAC cryomodule, the differential vacuum pumping chambers and the beam diagnostics. In 2021 the set-up of the cryogenic supply was finished. A 80 m long transferline between the cryogenic plant of GSI and a coldbox next to the bunker were installed for the supply with 4 K and 50 K helium. In the same year a first cryogenic test with the cryomodule was done, using dummy cavities. In 2023 the same module was operated, fully equipped with all srf cavities and sc solenoids, with beam. We will report on the details of the set-up and its installation.

I have read and accept the Privacy Policy Statement

Yes

Footnotes

Funding Agency

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