



## Status of the cw-linac project

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GSI and the Helmholtz Institute Mainz have great expertise in the development of advanced superconducting linac accelerating cavities. Compared to normal conducting cavities, the advantage of such superconducting accelerator cavities is their high power efficiency, coupled with high field gradients, which allows the construction of more compact, energy-saving and thus more cost-effective accelerators. With the medium-term goal of designing the superconducting continuous wave (cw) linac **HELIAC** (**HE**lmholtz **L**inear **A**ccelerator) based on this innovative technology for the low-energy program at UNILAC at GSI, so-called 217 MHz crossbar H-mode (CH) accelerating cavities were developed, prototyped and successfully tested. In the next future, these successful developments will be continued with the development, construction and testing of a complete linac accelerator module (cryomodule) for heavy ion energies of up to 4.5 MeV/u. The accelerator comprises three superconducting CH cavities, two solenoid lenses, and a superconducting rebuncher to fully focus the ion beam into short bunches. In order to cool and operate the superconducting components to the low temperatures of 4 degrees Kelvin required to reach the superconducting phase, they will be integrated into a specially designed cryostat. Results of the recent R&D-activities and a brief status of the entire HELIAC project will be presented.