

CHALLENGES AND PROGRESS IN THE FAIR ACCELERATOR PROJECT

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Abstract

The proposed project FAIR (Facility for Antiproton and Ion Research) is an international accelerator facility of the next generation. It builds on the experience and technological developments already made at the existing GSI facility and other laboratories, and incorporates new technological concepts.

Its heart is a double ring synchrotron facility SIS100/300 with five times the circumference of the existing SIS18.

A system of cooler storage rings CR, RESR, NESR and HESR for effective beam cooling at high energies and various experimental halls will be connected to the facility. The existing GSI accelerators UNILAC and SIS18 serve as injector for the new facility.