

## **FAIR – A facility for Antiproton and Ion Research at GSI**

Yvonne Leifels, GSI Helmholzzentrum für Schwerionenforschung

FAIR, the Facility for Antiproton and Ion Research, is a new particle accelerator complex being presently built at GSI site in Darmstadt, Germany. The research topics which will be addressed in FAIR cover a wide range in nuclear and hadron physics, atomic physics, plasmas at high densities and applications in condensed matter physics, biology and medical sciences. Two rapidly cycling synchrotrons of 100 and 300 Tm rigidity are the central accelerators of FAIR. They will supply not only high intensity primary beams of protons and heavy ions to various experimental set-ups, but will also be used to produce secondary beams of antiprotons and radioactive nuclei. A subsequent series of storage rings for beam cooling and deceleration will deliver heavy ion and antiproton beams of unprecedented quality. Large experiments are presently being designed by various international collaborations. Details of FAIR, the physics projects and the FAIR detectors will be presented in this contribution.