

Facility for Antiproton and Ion Research (FAIR) Re-Launch – The Project and the Science

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The Facility for Antiproton and Ion Research (FAIR) is being constructed as an extension of the current GSI Helmholtzzentrum für Schwerionenforschung in Darmstadt, Germany. FAIR will be a large international accelerator facility enabling unprecedented research in fundamental hadron, nuclear, atomic and plasma physics as well as in related applied areas. The research is organized in four major collaborations: APPA – performing investigations in atomic and plasma physics as well as in applied sciences, CBM – exploring the phase diagram of nuclear matter, NUSTAR – investigating exotic nuclei with unusual proton-to-neutron ratio, and PANDA – studying hadron structure and form factors via proton-antiproton annihilation. First experiments (FAIR Phase-0) are envisioned for 2018 exploiting newly developed detectors and the upgraded GSI accelerators.

The talk will summarize physics, recent developments and the current status of FAIR.