THE FACILITY FOR ANTIPROTON AND ION RESEARCH FAIR

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The Facility for Antiproton and Ion Research (FAIR) will be constructed in the coming years as an extension of the current GSI Helmholtzzentrum fuer Schwerionenforschung in Darmstadt, Germany. FAIR will be an international accelerator complex allowing for unprecedented research in fundamental questions of atomic, hadron, nuclear and plasma physics as well as in related applied areas. The research is organized in four large experiment collaborations: APPA - performing investigations in atomic and plasma physics as well as in applied sciences like material research and biophysics CBM - exploring the phase diagram of nuclear matter NuSTAR - producing exotic nuclei with unusual proton-to-neutron ratios and determining their properties PANDA - studying hadron structure and form factors via proton-antiproton annihilation.
The talk will summarize the recent developments and current status of the facility. First experiments (FAIR Phase-0) are envisioned for 2018 exploiting newly developed detectors and the upgraded GSI accelerators.