

## Spin physics at HIAF

The High Intensity heavy-ion Accelerator Facility (HIAF) will be a major workhorse for the accelerator-based (sub)atomic physics in the multi-GeV region in the next decades. As fundamental as the mass, spin plays a profound role in the structure of microscopic particles and interactions among them. Besides, spin has long provided unique approaches to test fundamental symmetries and to search for new physics beyond the Standard Model of particle physics.

In order to extend the discovery potential of HIAF in the fields of spin-dependent dynamics/structure and symmetry tests, developments of tools for spin-polarized experiments, such as polarized ion sources, acceleration of polarized beams and beam polarimetry, are currently ongoing. A variety of experiments with processes  $p\vec{p}$ ,  $p\vec{e}$ ,  $A\vec{e}$ ,  $A\vec{d}$  at different scales, ranging from atomic physics, over nuclear physics, down to hadron physics, can be performed at HIAF. This talk will discuss a few highlighted physical programs and related R&D activities.

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