Physics of Hadronic Structure and QCD Phase Structure at HIAF

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The new accelerator complex: Highly Intensive Accelerator Facility (HIAF) has been under construction since 2018 at Huizhou, China and its commissioning is scheduled at the end of 2025. In the range of few GeV per nucleon, the HIAF will accelerate protons and ions, up to uranium, with intensities of $5x10^{13}/ppp$ and $10^{11}/ppp$, respectively.

In this talk, we will discuss the physics program, including both hadron structure with proton induced interactions as well as the physics of the QCD phase structure with high-energy nuclear collisions, and future upgrade options with the HIAF.