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”QCD at FAIR”: Hadron Physics Opportunities at FAIR

Friday, 26 June 2026 09:30 (30 minutes)

A scientific vision is outlined for a decade-long, cross-community hadron-physics program at the GSI/FAIR accelerator complex. Driven by high-intensity proton and secondary pion beams, combined with versatile detector systems, the program will address key questions in ‘strong QCD’. It encompasses precision studies of hadron–hadron interactions, hadron spectroscopy, and the electromagnetic structure of hadrons and their transitions, as well as investigations of in-medium modifications under extreme conditions. These efforts have implications for the nuclear equation of state, neutron star physics, and searches for physics beyond the Standard Model. This talk highlights the planned staged roadmap, from current SIS18 capabilities to SIS100 and, ultimately, toward a hadron-physics program exploiting stored antiproton beams at HESR.

Collaboration

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