

Joint International Workshop on Hadron Structure and Spectroscopy (IWHSS 2025) and the QCD Structure of the Nucleon (QCD-N'25)



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Jefferson Lab: Present and Future

Tuesday 2 September 2025 14:50 (20 minutes)

Jefferson Lab's Continuous Electron Beam Accelerator Facility (CEBAF) continues to be a global hub for nuclear physics research, with a very strong and specific focus on hadron physics. This presentation will highlight selected key achievements from the 12 GeV CEBAF program, which provides a unique window into the fundamental structure of matter.

Looking to the future, I will outline the exciting plans to expand Jefferson Lab's scientific capabilities. These include a potential energy upgrade to 22 GeV to push the kinematic boundaries of our experiments, and the development of a high-quality positron beam. An initial investigation of potential secondary beams of muons and neutrinos produced by the interaction of the Jefferson Lab 11 GeV intense electron beam with the experimental Hall-A beam dump has also started. These new capabilities would enable a host of new physics opportunities, from the exploration of nucleon structure with unprecedented precision to precision tests of the Standard Model. The talk will provide an overview of the facility's current progress and its ambitious vision for the next generation of physics research.

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