

Hall B 12 GeV upgrade science program

Latifa Elouadrhiri

Jefferson Lab, Virginia, United States

The 12 GeV Upgrade of the Continuous Electron Accelerator Facility (CEBAF) at Jefferson Lab, located in Newport News, Virginia, United States, will enable a new and exciting experimental program with substantial discovery potential in nuclear, hadronic and electroweak physics. In this talk, we will focus on the novel construction and operation of the CEBAF Large Acceptance Spectrometer, CLAS12. With the advent of new detector technologies and high rate electronics, this facility offers a powerful combination of experimental tools that far exceed the capabilities of previous experiments. This opens up the study of new landscapes of the nucleon structure and allows us to move far beyond the simple one dimensional parton distribution function of the past. In this talk, we will present the status and plans for the 12 GeV upgrade at Jefferson Lab, and discuss the CLAS12 science program. Its mission is to break new ground in our understanding of the complex structure of the nucleon and the formation of hadrons and their properties with special emphasize on the multi-dimensional imaging of the nucleon.