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QCD at intensity frontier: 22 GeV electrons at Jefferson Lab

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CEBAF at Jefferson Lab delivers the world's highest intensity and highest precision multi-GeV electron beam to study strong interactions in the nonperturbative regime. The current program at 12 GeV is well underway and the CEBAF community is looking toward its future at the science that could be obtained through a future upgrade at higher beam energy. JLab at 22 GeV will provide unique, world-leading science with high-precision, high-luminosity experiments elucidating the properties of quantum chromodynamics (QCD) in the valence regime ($x_B \ge 0.1$). With a fixed-target program at the "luminosity frontier", large acceptance detection systems, as well as high-precision spectrometers, CEBAF will continue to offer unique opportunities to shed light on the nature of QCD and the emergence of hadron structure. The combination of JLab high-intensity experiments and results obtained by the future Electro Ion in Collider in complementary kinematics will give scientists the full suite of tools to understand how QCD builds hadronic matter.

session

A. Facilities and Detectors

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Session Classification: A. Facilities and Detectors