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12 GeV Upgrade and the study of 3D imaging of nucleon

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The 12 GeV upgrade of Continuous Electron Beam Accelerator Facility (CEBAF) at Jefferson Lab will enable a new experimental program with substantial discovery potential in hadronic and nuclear physics. One of the flagship science programs is the study of multidimensional images of hadrons. A broad experimental program has been developed to map the nucleon's intrinsic correlated spin and momentum distribution through measurement of deeply exclusive and semi- inclusive processes. These multidimensional distributions open a new window on the elusive spin content of the nucleon through observables that are directly related to the orbital angular momentum of quarks and gluons. An overview of the 12 GeV upgrade with focus on the study of the multidimensional imaging of hadrons with the CLAS12 detector will be presented.