

ACCELERATOR SEMINAR

“Nucleon Tomography: Status and Prospects”

Francois-Xavier Girod

With the combination of high luminosity and polarizations, the 6 GeV CEBAF has opened a vast program for the tomography of the nucleon through Deep Exclusive and Semi-Inclusive Processes. We will present the physics case, achievements and future plans for the extraction of Generalized Parton Distributions and Transverse Momentum Dependent distributions at JLab. They are key components of two recommendations in the 2001 Nuclear Science Advisory Committee long-range plan: the upgrade of CEBAF to 12 GeV, and the development of accelerator and detector designs laying the foundation for a polarized Electron-Ion Collider (EIC). While the 6 and 12 GeV CEBAF eras map out the valence region of the nucleon, a medium or higher energy EIC will provide imaging of the sea quarks and gluons. We will present the interplay between spin and flavor decompositions of the nucleon structure of the (M)EIC, with emphasis on the importance of the polarizations of the lepton and ion beams.

Monday, May 9, 2011

3:30 p.m.

CEBAF Center, Room L102/104

Coffee before seminar at 2:45 p.m.