

# EIC Meeting

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# JLab beyond the 12 GeV upgrade

- JLab community hopes to articulate a comprehensive physics program using an electron ion collider that will complement, extend, and complete (?) our current physics program and our plans for 12 GeV.
- The community, together with the Lab is planning to have a series of workshops to assess the physics potential of such a facility (all are welcome to participate in this endeavor).
- An important part of this effort will be a clarification of the machine and detector specifications that are optimal for completing this program.
- Deliverables for each workshop: Parts of a white paper that will be put together after the June 10 JLab Users Meeting to produce a **white paper**.
- Time scale: **Summer 2010**.

# Physics Areas to be Investigated and Workshops

- Study group on Hadronic Physics
  - 3D mapping of the glue and sea quarks in the nucleon  
(**Electron-Nucleon Exclusive reactions**: [workshop at Rutgers, March 14-15, 2010](#))  
R. Gilman et al.  
<http://www.physics.rutgers.edu/np/2010rueic-home.html>
  - Nucleon spin and quark-gluon correlations: Transverse spin, quark and gluon orbital motion, semi-inclusive processes  
(**Partonic Transverse Momentum in Hadrons**: Quark Spin-Orbit Correlations and Quark Gluons Interactions: [workshop at Duke University, March 12-13, 2010](#))  
H. Gao et al.  
<http://michael.tunl.duke.edu/workshop>
- Study group on Nuclear Physics
  - 3D tomography of nuclei, quark/gluon propagation and the gluon/sea quark EMC effect  
(**EIC Nuclear Chromodynamics**: [workshop at Argonne National Lab, April 7-9, 2010](#))  
K. Hafidi, et al.  
<http://www.phy.anl.gov/mep/EIC-NUC2010/>
- Study group on Electroweak Physics
  - Electroweak structure of the nucleon and tests of the Standard Model  
([workshop at UVA/W&M, likely in May](#))  
K. Kumar et al.
- Study group on interaction region and detectors
  - EIC Detectors/Instrumentation  
([workshop at JLab: Work in progress to finalize the meeting.](#))  
C. Hyde et al.