Study Group: Light-ion physics with EIC

Online lecture/tutorial 01-Apr-2026. Introduction by Wim Cosyn, Dien Nguyen, Christian Weiss

Light-ion physics

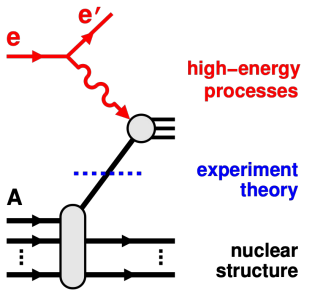
High-energy electromagnetic scattering on light nuclei

Science: Neutron + proton for hadron spin/mass, QCD origin of nuclear interactions, nuclear quarks/gluons, 3D imaging of nuclei, coherence and diffraction…

Intersection: Low-energy nuclear structure high-energy process

Unique features: Initial state from nuclear theory, final state nuclear breakup detection, polarized beams, complex observables

Evolution: JLab 6/12 GeV EIC



More information: Summer School "Light-ion physics with EIC", FIU, 19-27 Jun 2025 [Webpage]

Study group

Goals: Provide training in specific theoretical and experimental methods for high-energy scattering on light nuclei. Develop community in light-ion physics with EIC

Target audience: Graduate students / postdocs / researchers in theoretical and experimental nuclear physics and related areas

Activities: Online lectures + discussion: 1 topic per session, ~1.5 h.
Interactive learning with notebooks/code

Communication: Indico pages: https://indico.jlab.org/event/1058
Slack channel: [Invite link]

Each event in series has own Indico page, cross linked

Upcoming lectures

Wed 29 Apr, 11 AM ET

Polarized ion beams at EIC (Vadim Ptitsyn, BNL)

Today

Holly Szumila-Vance (Florida Intl. U.)
Stephen Kay (U. York)

ePIC simulation/analysis software for light-ion physics

Lecture/tutorial + self-guided learning

Indico: https://indico.jlab.org/event/1060

Further lectures planned: polarized deuteron physics, nuclear structure theory…

Announcements will be distributed: E-mail, Slack, Mailing lists (EICUG)

Please suggest topics/lecturers/activities!

Dates/times can be adjusted for schedule and timezones

Please join us!