

Study Group: Light-ion physics with EIC

Online lecture/tutorial 18-Mar-2026. Introduction by Wim Cosyn, Dien Nguyen, Christian Weiss

Light-ion physics

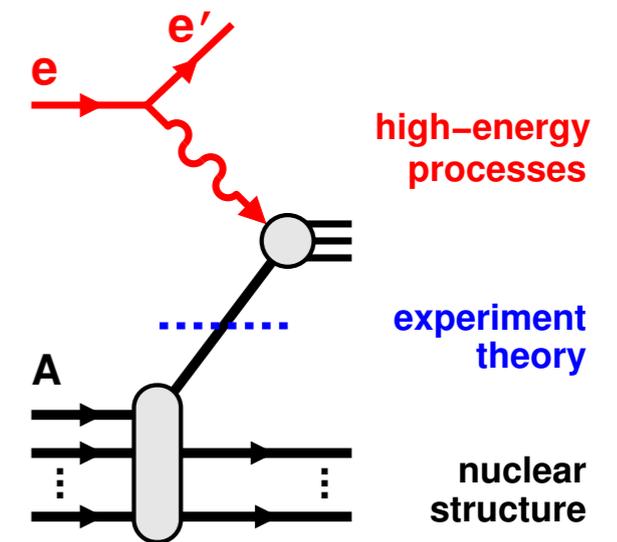
High-energy electromagnetic scattering on light nuclei

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 \leftrightarrow high-energy process

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

Evolution: JLab 6/12 GeV \rightarrow 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 01 Apr, 11 AM ET

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>

Preparations needed:

Install `eic-shell` on your laptop/desktop before the lecture!

Instructions for installation: <https://eic.github.io/tutorial-setting-up-environment/>

Introduction and further information on EIC Software landing page: <https://eic.github.io/>

→ "Get started" → join Mattermost → join software tutorial channels

Further lectures planned: Ion polarization at EIC, 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!

Today's lecture/tutorial

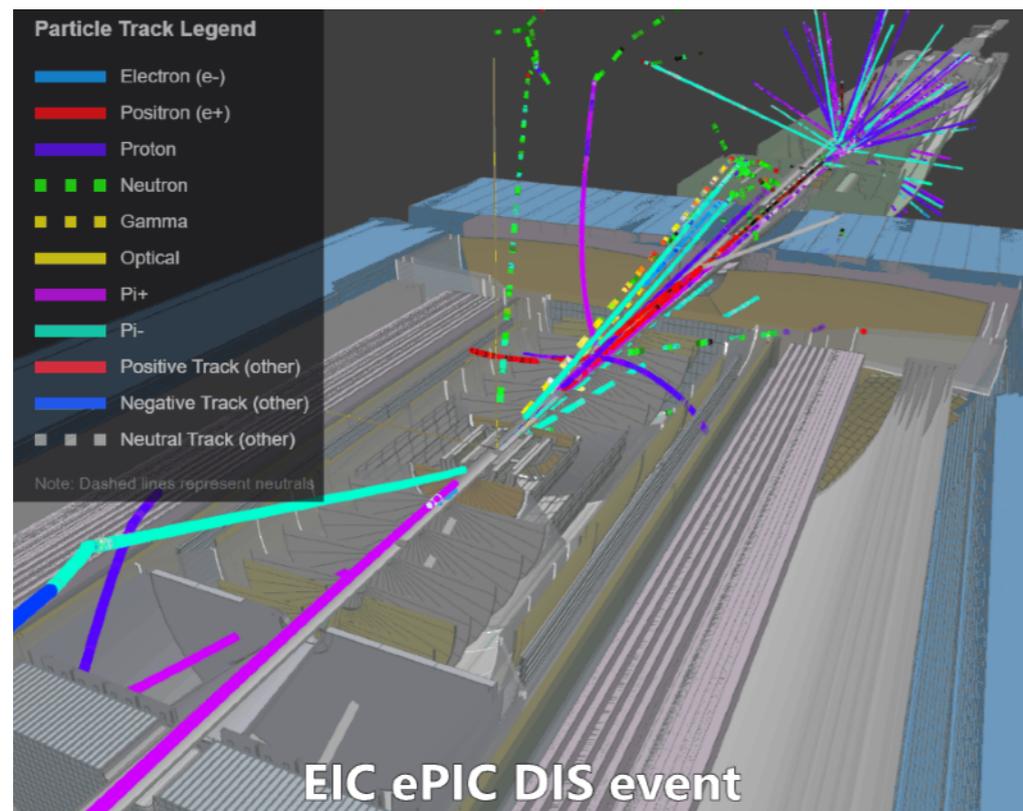
Wed 18 Mar, 11 AM ET

Dmitry Romanov (JLab)

EIC physics with the Firebird Event Display

Lecture/tutorial + self-guided learning

Indico: <https://indico.jlab.org/event/1058>



Firebird EIC event display:
<https://eic.github.io/firebird/>