

## An Overview of the Electron-ion collider in China

*Wednesday 4 May 2022 17:30 (20 minutes)*

In this talk, an overview of the physics program, the detector conceptual design, and the project status will be presented. The Electron-Ion Collider in China (EicC) is a proposed high energy nuclear physics facility to be constructed based on the High Intensity heavy-ion Accelerator Facility (HIAF) in Huizhou, China. EicC will be able to place highly polarized ( $\sim 80\%$ ) electrons in collisions with different ions from polarized ( $\sim 70\%$ ) protons and helium-3 to unpolarized heavier nuclei up to uranium with viable center of mass energies from 10 to 20 GeV and with the luminosity of  $(2-4) \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$ . This versatility makes EicC an ideal machine to explore the 3D structure of proton in the sea quark region, the partonic structure of nuclei and the parton interaction with the nuclear environment, the exotic states, and origin of mass. In order to perform above precision measurements, a hermetical detector system will be constructed with the cutting-edge technology.

### Submitted on behalf of a Collaboration?

No

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