

The electron-ion collider: A collider to unravel the mysteries of visible matter. (Block 3)

Tuesday, 13 July 2021 12:30 (1h 15m)

Abstract: Understanding the properties of nuclear matter and its emergence through the underlying partonic structure and dynamics of quarks and gluons requires a new experimental facility in hadronic physics known as the Electron-Ion Collider (EIC). The EIC will address some of the most profound questions concerning the emergence of nuclear properties by precisely imaging gluons and quarks inside protons and nuclei such as the distribution of gluons and quarks in space and momentum, their role in building the nucleon spin and the properties of gluons in nuclei at high energies. In January 2020 EIC received CD-0 and Brookhaven National Laboratory was chosen as site. This presentation will highlight the capabilities of an EIC and discuss its status, accelerator design and the concepts for the experimental equipment.

Presenter: Dr ASCHENAUER, E. C. (BNL)