Abstract

In this talk, we present an overview of the scientific opportunities that would be addressed by the China Electron-Ion-Collider (EIC). In the first phase the China EIC will be 3 \sim 5 GeV polarized electron on 12 \sim 23 GeV polarized proton (and ions about 12 GeV/nucleon), with luminosity 1 \sim 2 \times 10 $^{33}cm^{-2}s^{-1}$.

we will focus on discuss the EIC plan and its exciting physics potentials with the lowest experimental conditions. It converges towards a set of golden experiments that illustrate the science reach on such a facility. It will open up a new window to study the three dimensions (3D) nucleon structure for both sea and valence quarks in both momentum and coordinate space and help fully understand the strong interaction.