Contribution ID: **80** Type: **Parallel talk**

Parton structure at the LHeC and FCC-he

Tuesday 3 May 2022 12:50 (20 minutes)

The LHeC and the FCC-he are the cleanest, high resolution microscopes that the world can build in the nearer future. Through a combination of neutral and charged currents and heavy quark tagging, they will unfold the parton structure of the proton with full flavour decomposition and unprecedented precision. In this talk we will present the most recent studies on the determination of proton parton densities. We will also present the results on the determination of the strong coupling constant through the measurement of total and jet cross sections. Finally, we will also comment on diffraction, both inclusive and exclusive, as a tool to get more differential information on the proton.

Reference: P. Agostini et al. (LHeC Study Group), The Large Hadron-Electron Collider at the HL-LHC, J. Phys. G 48 (2021) 11, 110501, e-Print: 2007.14491 [hep-ex].

Submitted on behalf of a Collaboration?

Yes

Primary authors: ARMESTO PEREZ, Nestor (Universidade de Santiago de Compostela (ES)); GWENLAN, Claire (University of Oxford (GB))

Presenter: GWENLAN, Claire (University of Oxford (GB))

Session Classification: WG6: Future Experiments

Track Classification: WG6: Future Experiments