

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

Diffraction and forward physics at the LHeC and FCC-he

Thursday 30 March 2023 17:10 (20 minutes)

The Large Hadron-electron Collider and the Future Circular Collider in electron-hadron mode [1] will make possible the study of DIS in the TeV regime providing electron-proton (nucleus) collisions with per nucleon instantaneous luminosities around 10^{34} (10^{33}) $\text{cm}^{-2}\text{s}^{-1}$. In this talk we will review how the study of diffraction, both inclusive and exclusive, will provide information on proton and nuclear structure beyond that contained in collinear parton densities. We will also present ideas on the use of these machines as photon-photon colliders and the required instrumentation for it.

[1] LHeC Collaboration and FCC-he Study Group: P. Agostini et al., J. Phys. G 48 (2021) 11, 110501, e-Print: 2007.14491 [hep-ex].

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

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