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## eA collisions at the LHeC and the FCC

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The LHeC [1] is a proposed upgrade of the LHC to study ep/eA collisions in the TeV regime, by adding a 60 GeV electron beam through an Energy Recovery Linac. This electron beam can be combined with the FCC hadron beams in the further future. A Conceptual Design Report [2,3,4] was released in 2012, and present studies focus on producing a technical design for the next European Strategy for Particle Physics in 2018. In this talk the proposal will be presented, the CDR content on eA collisions reviewed, and new results on the physics prospects on energy frontier eA collisions with these machines will be shown, with emphasis on the precise determination of nuclear parton densities.

[1] <http://lhec.web.cern.ch/>.

[2] J. L. Abelleira Fernandez et al. [LHeC Study Group], J. Phys. G39 (2012) 075001, arXiv:1206.2913 [physics.acc-ph].

[3] J. L. Abelleira Fernandez et al. [LHeC Study Group], arXiv:1211.4831 [hep-ex].

[4] J. L. Abelleira Fernandez et al. [LHeC Study Group], arXiv:1211.5102 [hep-ex].

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