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On the Relation of the LHeC and the LHC

The present note relies on the recently published conceptual design report of the LHeC and extends the first contribution to the European strategy debate in emphasizing the role of the LHeC to complement and complete the high luminosity LHC programme. The brief discussion therefore focusses on the importance of high precision PDF and α_s determinations for the physics beyond the Standard Model (GUTs, SUSY, Higgs). Emphasis is also given to the importance of high parton density phenomena in nuclei and their relevance to the heavy ion physics programme at the LHC.

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