

# XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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## The LHeC as Part of the HL-LHC Programme

*Tuesday, 24 March 2020 11:20 (20 minutes)*

The LHeC provides a comprehensive physics programme with strong implications on that of the HL-LHC. We will present a chapter of the 2020 LHeC White Paper, that is firstly the implications of the precise determination of proton PDFs at the LHeC on the measurement of key SM parameters at the HL-LHC: EW mixing angle,  $W$  mass and their impact on EW precision measurements. Then we will address the impact of the LHeC PDFs on Higgs measurements at the HL-LHC, and the results for Higgs couplings from a joint ep+pp analysis. We then discuss the impact of LHeC results on high-mass searches. Finally we discuss the impact of ep and eA measurement on the heavy-ion programme at the HL-LHC.

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