

## Status of Higgs Boson studies in ep collisions

The Large Electron Proton Collider (LHeC) is a project that is envisioned as an upgrade of the Large Hadron Collider (LHC). The physics programme of the LHeC is vast. It plays a critical role for the measurement precise measurement of parton density functions in a wide range of the Bjorken  $x$  and the QCD interaction constant,  $\alpha_s$ . These are essential to fully exploit the physics potential of the LHC. Higgs boson physics is another important part of the physics programme, which complementary to corresponding programme of the LHC and has unique capabilities not available in other type of collisions. Recent progress in Higgs boson studies in ep collisions are reviewed. The capability of studying di-Higgs boson production at the Future Circular Collider with the  $he$  option is also discussed.

### I intend to submit my contribution for the proceedings

Yes

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