

PDFs and Low x at LHeC / FCC-he

Tuesday 6 Nov 2018, 16:00 → 19:00 Europe/Zurich

Vidyo (CERN)

Fred Olness (Southern Methodist University (US)), Nestor Armesto Perez (Universidade de Sa
Anna Stasto (Penn State), Claire Gwenlan (University of Oxford (GB)), Paul Richard Newm

Description Meeting of the PDFs and Low x at LHeC.

Only by Vidyo, a link will be set.

Videoconference Rooms PDFs_and_Low_x_at_LHeC

Fred Olness olness@smu.edu

16:00 → 17:50 **Session 1**

16:00 **Overview**

Speakers: Claire Gwenlan (University of Oxford (GB)), Fred Olness

16:10 **NNPDF fits with LHeC data**

Speaker: Dr Juan Rojo (VU Amsterdam and Nikhef)

16:30 **PDFs and LHeC**

Speaker: Max Klein (University of Liverpool (GB))

16:50 **xFitter and LHeC data**

Speaker: Gavin Pownall (University of Oxford (GB), DESY (DE))

17:10 **PDFSense and the LHeC**

Speakers: TIMOTHY J HOBBS (Southern Methodist University), TIMOTHY J HOBBS (S

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17:30 **Discussion**

Timeline:

18 December:

10 Page contributions for Euro2020

January:

TBD: LHeC Workshop

February:

White-paper update

Guidelines for submitting input for the 2020 update of the European Strategy for Particle Physics

Cover page (1 page)

Each document submitted should carry a single cover page containing no more than the title, the contact person(s) and an abstract.

Comprehensive overview (maximum 10 pages)

This core part of the document must be no more than 10 pages long (excluding the cover page) and must provide a comprehensive and self-contained overview of the proposed input. It should address:

- scientific context,
- objectives,
- methodology,
- readiness and expected challenges.

Addendum

A separate addendum is to be provided addressing the following topics (where relevant):

- interested community,
- timeline,
- construction and operational costs (if applicable),
- computing requirements.

Format and deadline for submission

The cover page and the comprehensive overview are to be submitted as a single file, the “main document”, in portable document format (pdf) by 18 December 2018. The addendum is to be submitted as a separate file by the same deadline. A dedicated submission portal will be available on the EPPSU website as of October 2018, once the Strategy update has been formally launched by the Council at its September 2018 Session. The link to the EPPSU website will appear on the CERN Council’s web pages - <https://council.web.cern.ch/en> - and be widely communicated through the appropriate channels.

Distribution

Both documents submitted (main and addendum) will be passed on to the Physics Preparatory Group (PPG) and the European Strategy Group (ESG). Unless explicitly requested otherwise, they will also be made public. The option not to make either document public will be available upon submission via the dedicated portal.

10 page contribution: due 18 December

CERN LHeC Note XXXX (2018)

10+ Strategy Pages: DRAFT October 26, 2018

A Higgs Facility Resolving the Substructure of Matter

–An Energy Recovery Electron Linac Programme for the LHC–

LHeC and PERLE Collaboration

Abstract

1 Particle Physics and Deep Inelastic Lepton-Hadron Scattering

2 Physics

2.1 LHeC - the World’s Cleanest High Resolution Microscope

2.2 Novel Dynamics and Approaches in Quantum Chromodynamics

2.3 Discovery through High Precision Electroweak and Top Physics

2.4 Precision Higgs Measurements

2.5 Beyond the Standard Model with ep and LHC Searches Empowered

2.6 The Case for Energy Frontier Electron-Ion Scattering

3 The LHeC Facility

3.1 Configuration, Components and Civil Engineering

3.2 Parameters, Operation and Luminosity Profile

3.3 Interaction Region

3.4 Detector

3.5 Choice of Electron Beam Energy and Staging Options

3.6 ERL Developments and the PERLE Facility

4 Physics Opportunities with the ERL between HL and HE LHC

CERN-OPEN-2012-015
LHeC-Note-2012-001 GEN
Geneva, June 14, 2012



A Large Hadron Electron Collider at CERN

Report on the Physics and Design
Concepts for Machine and Detector

LHeC Study Group



Submitted to J.Phys. G

CDR Update

LHeC Study Group

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