

Deep-inelastic scattering with TeV neutrinos at the Forward Physics Facility

Wednesday 4 May 2022 12:30 (20 minutes)

The Forward Physics Facility (FPF) is a proposal to create a cavern with the space and infrastructure to support a suite of far-forward experiments at the HL-LHC. The FPF would make possible a wide range of QCD studies, from proton structure at extremely low- x values to testing BFKL dynamics and modelling hadron and charm production as required by high-energy astrophysics experiments. Furthermore, the FPF would be effectively a neutrino DIS experiment on a nuclear target with a variable bandwidth beam including neutrinos of energies in the TeV range, hence providing a novel handle on quark flavour separation in nucleons and nuclei complementary to that provided e.g. by the Electron Ion Collider. In this talk we summarise the very rich program of QCD and proton/nuclear structure studies that would become available with the realisation of the FPF.

Submitted on behalf of a Collaboration?

Yes

Author: ROJO, Juan (VU Amsterdam and Nikhef)

Presenter: ROJO, Juan (VU Amsterdam and Nikhef)

Session Classification: WG6: Future Experiments

Track Classification: WG6: Future Experiments