

Deep Inelastic Scattering 2025



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The Forward Physics Facility at the HL-LHC

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The Forward Physics Facility (FPF) is a proposed new facility to house several far-forward experiments at the High Luminosity LHC at CERN. The FPF experiments will detect more than a million neutrinos in the TeV energy range covering all neutrino flavours, as well as search for a host of new particles. The FPF has a broad physics programme covering BSM searches, neutrino physics, and QCD studies, with important implications for astroparticle physics. In terms of QCD studies, the FPF neutrino measurements will allow studies of proton structure both through DIS neutrino interactions in the target and from the production of neutrinos from far-forward charm decays. In addition, these measurements can shed light on intrinsic charm, BFKL dynamics, and the onset of gluon saturation. This talk will summarise the physics motivation for the FPF and give an overview of the status of studies on the facility and the proposed experiments.

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