



PPD Seminar

Physics prospects of the High Luminosity and High Energy LHC

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The Large Hadron Collider (LHC) has been successfully delivering proton-proton collision data at a centre of mass energy of 13 TeV. An upgrade is planned to increase the instantaneous luminosity delivered by the LHC by a factor of 5-7 (HL-LHC) for running in 2026 and beyond and there is also another possible future upgrade considered for running at an energy of 27 TeV at the high-energy LHC (HE-LHC). In the last 1.5 years, the LHC experiments prepared a CERN Yellow Report which summarises the physics reach for HL-LHC and HE-LHC and serves as input to the European Strategy this year. This talk shows some of the highlights of the physics reach at the HL-LHC and HE-LHC reported in the Yellow Report. The physics reach is shown for Higgs couplings measurements, di-Higgs boson production sensitivity, Vector Boson Scattering prospects as well as the discovery potential for electroweak SUSY and other exotic benchmark scenarios.

ALL WELCOME

