



Contribution ID: 31

Type: **Oral Presentation**

The LHC, HL-LHC and FCC

Tuesday 3 July 2018 14:00 (25 minutes)

The LHC is in its sixth year of operation and performing well. The HL-LHC is major upgrade of the existing machine due to come into operation in 2026. Aiming at delivering an annual integrated luminosity of around 250 fb⁻¹ a year to both ATLAS and CMS, it is now in the prototype and construction phase. The essential principles of LHC operation are recalled, and the key aims and components of the upgrade are discussed.

The Future Circular Collider (FCC) is a CERN led study investigating the possibilities of constructing a 98 km circular tunnel housing, in the first instance, a electron-positron collider (FCC-ee) with a centre-of-mass energy range spanning the range from the Z pole (90 GeV) to above the top pair threshold (~400 GeV). The lepton machine would make way for a proton-proton collider (FCC-hh) with a centre-of-mass energy of 100 TeV. A brief outline of the goals and challenges is presented.

Presenter: LAMONT, Mike (CERN)

Session Classification: Accelerator, Medical and Radiation Physics