

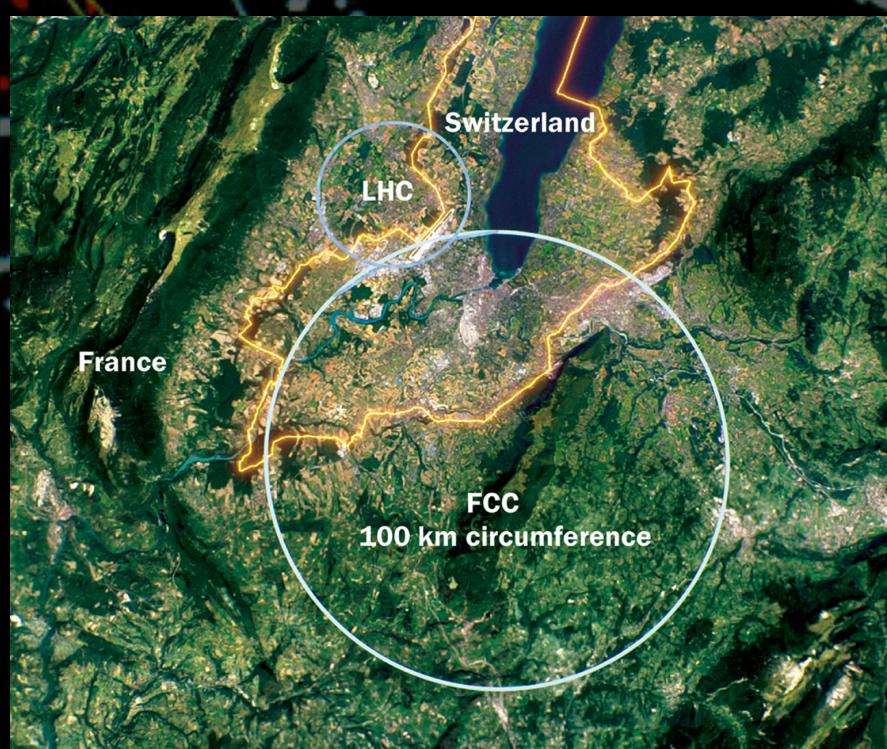
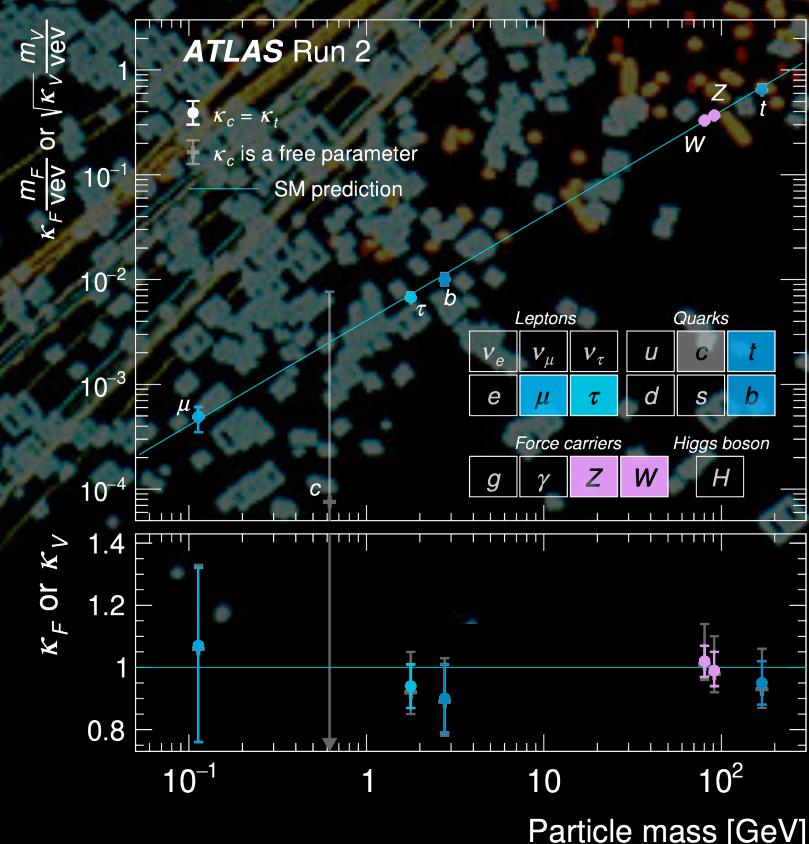
APC colloquium

Wednesday, February 11th at 11am

Room Luc Valentin (454A)

Karl Jakobs
University of Freiburg

Perspective on the Future of High-Energy Collider Physics



After the discovery of the Higgs boson at the LHC particle physics has entered a new era. With the successful data taking over the past decade, many properties of this particle have been established. Despite this, important questions remain open and call for experimental exploration. The Higgs field itself is linked to deep structural questions of the Standard Model of particle physics such as flavour, naturalness and the stability of the vacuum. In addition, the nature of the dark matter in the universe and the origin of the matter-antimatter asymmetry remain unknown.

Over the past year, within the European Strategy for Particle Physics process, the future of European particle physics has been debated, and recommendations have been expressed for the Future Circular Collider (FCC) as the next large flagship collider project at CERN.

In this colloquium, our present understanding of the profile of the Higgs boson and the importance of its further precise exploration are discussed, together with the potential of future colliders in Higgs boson and other areas of physics. The deliberations in the Strategy process and the rationale for the FCC recommendation are summarized.