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Future Accelerators Projects

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While the HL-LHC will be the only high-energy collider running in the next decade, the need for a deeper understanding of the electroweak symmetry breaking and the searches for physics beyond the Standard Model call for a next generation of accelerators. The consensus in the particle physics community is that of a Higgs factory and an exploration machine in the 10-TeV energy regime.

The ongoing process of the Update of the European Strategy for Particle Physics provides an opportunity to compare these projects for the post-LHC era: circular e^+e^- and hadron colliders, linear e^+e^- colliders, and muon colliders.

This presentation will review the various future accelerator projects proposed, in terms of physics programme, challenges, and timescales. A particular focus will be put on CERN's Future Circular Collider, whose feasibility study was successfully completed for the Strategy Update.

Auteur: MORANGE, Nicolas (IJCLab)

Orateur: MORANGE, Nicolas (IJCLab)