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Higgs Physics at the Future Circular Colliders (FCC)

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After the Higgs boson discovery, the precision measurements and searches for new phenomena in the Higgs sector are among the most important goals in particle physics. Experiments at the Future circular colliders (FCC) under study are ideal to study these questions. Electron-positron collisions up to an energy of 350 GeV (FCC-ee) provide the ultimate precision in Higgs physics with studies of couplings, mass, total width and CP parameters of the Higgs boson and searches for exotic and invisible decays. A proton collider with a center-of-mass energy of up to 100 TeV (FCC-hh) can further extend this program with precise measurements of the Higgs boson coupling to the top quark and of its self-coupling as well as with searches for rare decays. Direct searches for additional, higher mass scalar resonances can also be performed. In this talk we will discuss the complementary Higgs physics program and projected results for the FCC-ee and FCC-hh colliders.

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