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Searches for Long-Lived Particles at the Future FCC-ee

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The electron-positron stage of the Future Circular Collider, FCC-ee, is a frontier factory for Higgs, top, electroweak, and flavour physics. It is designed to operate in a 100 km circular tunnel built at CERN, and will serve as the first step towards ≥ 100 TeV proton-proton collisions. In addition to an essential and unique Higgs program, it offers powerful opportunities to discover direct or indirect evidence of physics beyond the Standard Model. Direct searches for long-lived particles at FCC-ee could be particularly fertile in the high-luminosity Z run and at other collision energies. Several physics cases producing long-lived signatures at FCC-ee are highlighted in this contribution: heavy neutral leptons (HNLs), axion-like particles (ALPs), and exotic decays of the Higgs boson.

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Primary author: DE FILIPPIS, Nicola (Politecnico e INFN, Bari (IT))

Presenter: DE FILIPPIS, Nicola (Politecnico e INFN, Bari (IT))

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