

New Physics Reach through Precision at Future Colliders

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I will present projections for the sensitivity of near-term electron-positron colliders, FCC-ee, LEP3, and the Linear Collider Facility, to new physics through precision measurements of Standard Model interactions. These projections are interpreted within three complementary frameworks of increasing generality: Higgs coupling modifiers, effective Higgs and electroweak couplings, and global SMEFT fits incorporating renormalisation-group evolution, linear and quadratic EFT contributions, and NLO corrections where available. Matching the EFT description to UV-complete models, I will show how these results translate into projected sensitivities to representative newphysics scenarios, including composite Higgs models and single-particle extensions of the SM. The talk will also introduce the accompanying public release of an updated SMEFT framework, allowing the community to reproduce, extend, and adapt these results.

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Clasificación de la sesión : Theory and analysis