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Prospects for Beyond Standard Model Physics at CLIC

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The Compact Linear Collider (CLIC) is an attractive option for a future multi-TeV linear electron-positron collider. A staged construction in several centre-of-mass energy steps from a few hundred GeV up to 3 TeV is foreseen. At high energies, CLIC provides sensitivity to a wide range of phenomena beyond the Standard Model through direct observation of new particles and precision measurements. An overview of these opportunities is given in this presentation. CLIC is in particular well suited for the measurement of weakly interacting states due to the clean experimental conditions and low backgrounds compared to hadron colliders. Most studies are based on full detector simulations using Geant4 and considering pileup from gamma gamma -> hadrons interactions. The production of supersymmetric particles like sleptons and gaugions was studied in detail in several different models. The scenarios discussed in this presentation include an extended Higgs sector, Z' physics and other models.

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