

# The CLIC detector

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The proposed Compact Linear Collider (CLIC) will provide electron-positron collisions at centre-of-mass energies from a few hundred GeV up to 3 TeV. CLIC offers a rich precision physics program, and a high sensitivity to a wide range of possible new phenomena. The precision required for such measurements and the specific conditions imposed by the CLIC beam structure put strict requirements on the detector design and technology developments. This includes ultra-low mass vertexing and tracking systems with small cells, highly granular imaging calorimeters, and a precise hit-timing resolution for all subsystems. Ambitious R&D programs for silicon tracking detectors and calorimeters are pursued, addressing the challenging detector requirements with innovative new technologies. A variety of detector optimisation studies have been carried out to establish the overall detector performance and to assess the impact of different technology options. The resulting optimised detector model has been integrated in the CLIC full-detector simulation framework. This contribution reviews the optimisation studies performed for critical parameters of the CLIC detector, presents the detector performance achieved in full-detector simulations, and gives an overview of the ongoing hardware R&D.

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