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The IDEA detector concept

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The future circular electron-positron collider (FCCee) is receiving much attention in the context of the FCC Feasibility Study currently in progress in preparation for the next EU strategy update. We present IDEA, a detector concept optimized for FCCee and composed of a vertex detector based on DMAPS, a very light drift chamber, a silicon wrapper, a dual readout calorimeter outside a thin 2 Tesla solenoid and muon chambers inside the magnet yoke. In particular we discuss the physics requirements and the technical solutions chosen to address them. We then describe the detector R&D currently in progress and show the expected performance on some key physics benchmarks.

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